Oklahoma School Testing Program / College- and CareerReadiness Assessment

Grades 3–8, 11

2022-23 Technical Report

Part II—Appendix M through Appendix U

Prepared by Cognia and the Oklahoma Department of Education



APPENDIX M 2017 OSTP STANDARD SETTING REPORT



Oklahoma School Testing Program

Standard Setting Report

August 7- 11, 2017 Oklahoma City, OK

TABLE OF CONTENTS

A	PPENDIC	ES	19
D	EEEDEN	CES	
	5.3	Preparation of Standard Setting Report	
	5.2	Policy Adjustments	
	5.1	Analysis and Review of Panelists' Feedback	
	CHAPTER		
	4.2	Vertical Articulation Results	
	4.1	The Vertical Articulation Process	
	CHAPTER	5	
	3.7		
	3.7		
	3.7	<u> </u>	
	3.7		
	3.7 3.7.	Rating Rounds and Feedback	
	3.6 3.7	Completion of the Item Map Form	
	3.5	Review of Performance Level Descriptors and Definition of Borderline Students	
	3.4	Review of Assessment Materials	_
	3.3	Table Leader Training	
	3.2	General Orientation and Panelist Training	
	3.1	Overview of the Bookmark Method	
	CHAPTER		
	2.6	Selection of Panelists	4
	2.5	Preparation of Systems and Materials for Analysis During the Meeting	
	2.4	Preparation of Instructions for Facilitators	3
	2.3	Preparation of Presentation Materials	
	2.2	Preparation of Materials for Panelists	3
	2.1	Creation of Performance Level Descriptors	2
	CHAPTER	2. TASKS COMPLETED PRIOR TO THE STANDARD SETTING MEETING	2
	CHAPTER	OVERVIEW OF STANDARD SETTING PROCEDURES	

Chapter 1. OVERVIEW OF STANDARD SETTING PROCEDURES

The purpose of this report is to summarize the activities involved in the standard setting process for the Oklahoma School Testing Program (OSTP) assessments in grades 3–8 and high school English languages arts (ELA) and mathematics as well as grades 5 and 8 and high school science on behalf of the Oklahoma State Department of Education (SDE). The need for standard setting arises from the fact that this is a new assessment that was administered for the first time in 2017. For these new assessments, performance standards must be set. The primary goal of the standard setting was to determine the knowledge, skills, and abilities (KSAs) that students must demonstrate in order to be classified into each of the student status levels (performance levels).

The standard setting process used was the bookmark procedure (see, e.g., Lewis et al., 1996; Mitzel et al., 2000; Cizek & Bunch, 2007). There were two main reasons this method was chosen. First, the assessment consists primarily of multiple-choice items but also includes some constructed-response items, and the bookmark procedure is appropriate for use with assessments that contain primarily or exclusively multiple-choice items, scaled using item response theory (IRT; Cizek & Bunch, 2007). Second, the modified bookmark method has been used successfully to establish performance standards for SDE in the past (CTB/McGraw-Hill, 2013, 2014; Measured Progress, 2015).

The standard setting meeting was held between August 7 and August 11, 2017. In all, 111 panelists participated in the process and were organized into eight panels of 8–11 panelists each plus a facilitator provided by Measured Progress.

This report is organized into three major sections, describing tasks completed prior to, during, and after the standard setting meeting.

Chapter 2. TASKS COMPLETED PRIOR TO THE STANDARD SETTING MEETING

2.1 Creation of Performance Level Descriptors

Oklahoma State Statute: Title 70. Schools, Chapter 22 – Testing and Assessment, Section 1210.541 – Student Performance Levels and Cut Scores – Accountability System mandates the adoption of "a series of student performance levels and the corresponding cut scores pursuant to the Oklahoma School Testing Program Act." The law states that performance levels must be labeled and defined as follows:

- Advanced, which shall indicate that students demonstrate superior performance on challenging subject matter;
- 2. Proficient, which shall indicate that students demonstrate mastery over appropriate grade-level subject matter and that students are ready for the next grade, course, or level of education, as applicable;
- 3. Limited knowledge, which shall indicate that students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level or course; and
- 4. Unsatisfactory, which shall indicate that students have not performed at least at the limited knowledge level.

In March 2016, the 62 Oklahoma educators who formed the English language arts (ELA) and mathematics Performance Level Descriptor (PLD) committees, members of the SDE, and six Measured Progress staff members met for a three-day PLD writing meeting in Oklahoma City and two additional two-hour conference calls. In July 2016, the 29 Oklahoma educators who formed the science PLD committees, members of the Oklahoma SDE, and three Measured Progress staff members met for another three-day PLD writing meeting in Oklahoma City. The purpose of the meetings was to write PLDs that describe what students know and are able to display on a statewide assessment of the Oklahoma academic standards. The descriptors are used to provide a common understanding of each performance level for recommending cut scores during standard setting and to inform stakeholders on how to interpret student test scores.

After introductions of those in attendance at the PLD writing meetings, a brief overview of the purpose of PLDs, and an explanation of the PLD writing process, the Oklahoma PLD committees used the standards and the SDE test and item specifications document to begin development of the PLDs. To ensure that the committee members focused on the state-adopted standards and objectives, the committee members were not shown any items that appeared on the assessment.

Independently, PLD committee members filled in the PLD tables by writing down the skills and knowledge students would demonstrate in the Advanced, Proficient, and Limited Knowledge levels for each standard and objective. After the individual work was completed, the group discussed and arrived at a consensus on the wording for the performance levels. As a final step, the PLD committee members

reviewed and revised the suggested wording for each level to ensure appropriateness and consistency, and that each level indicated a trajectory of students' knowledge of the content.

2.2 Preparation of Materials for Panelists

The following materials were assembled for presentation to the panelists at the standard setting meeting:

- PLDs
- Meeting agendas
- Nondisclosure forms
- Test booklets
- Answer keys/scoring rubrics
- Ordered item booklets
- Item map forms
- Rating forms
- Evaluation forms

Copies of the PLDs, meeting agenda, nondisclosure form, sample item map form, sample rating form, and evaluation form are included in Appendices A through F.

2.3 Preparation of Presentation Materials

The PowerPoint presentation used in the opening session was prepared prior to the meeting. A copy of the presentation is included in Appendix G.

2.4 Preparation of Instructions for Facilitators

Scripts were created for the group facilitators to refer to while working through each step of the standard setting process. This document is included in Appendix H. The facilitators also attended a training session, led by a Measured Progress psychometrician, approximately four weeks before the standard setting. The purpose of the training was to prepare the facilitators for the panel activities and to ensure consistency in the implemented procedures.

2.5 Preparation of Systems and Materials for Analysis During the Meeting

The computational programming used to calculate cutpoints and impact data during the standard setting meeting was completed and thoroughly tested prior to the standard setting meeting. See Section 3.3.2, Round 1 Judgments and Results, for a description of the analyses performed during standard setting.

2.6 Selection of Panelists

As emphasized in Cizek and Bunch (2007), regardless of the method used, the selection of panelists is an important factor in determining standard setting outcomes and maximizing the validity of the standard setting process. The guidance provided by *Standards for Educational and Psychological Testing* (AERA et al., 1999) states that "a sufficiently large and representative group of judges should be involved to provide reasonable assurance that results would not vary greatly if the process were repeated." Consistent with the above guidance, as well as practical considerations regarding the maximum size of a group that can be successfully managed, the goal was to recruit standard setting panels each with 10–12 members representing different stakeholder groups to set standards for each grade. Targets for the size and composition of the panels were also consistent with federal guidelines as described in *Standards and Assessment Peer Review Guidance: Information and examples for meeting requirements of the No Child Left Behind Act of 2001* (U.S. Department of Education, 2009).

Panelists were selected by the SDE prior to the standard setting meeting. The goal was for each panel to include participants who are primarily teachers but also to include school administrators, higher education personnel, and stakeholders from other interest groups. Moreover, to the extent possible, panelists were selected to reflect a balance of gender, race/ethnicity, and geographic location. Finally, panelists were selected who were familiar not only with the subject matter but also with the grade for which they would be setting standards. A list of the panelists is included in Appendix I.

Chapter 3. Tasks Completed During the Standard Setting Meeting

3.1 Overview of the Bookmark Method

The bookmark method (Lewis et al., 1996; Mitzel et al., 2000; Cizek & Bunch, 2007) involves rank ordering the items by difficulty and asking the panelists to identify the point in the ordered set of items at which the students at the borderline of two adjacent performance levels no longer have at least a two-thirds chance of answering the item correctly.

3.2 General Orientation and Panelist Training

With regard to panelist training, *Standards for Educational and Psychological Testing* (AERA et al., 2014) states the following:

Care must be taken to assure these persons understand what they are to do and that their judgments are as thoughtful and objective as possible. The process must be such that well-qualified participants can apply their knowledge and experience to reach meaningful and relevant judgments that accurately reflect their understandings and intentions. (p. 101)

The training of the panelists began with a general orientation session at the start of the standard setting meeting. The purpose of the orientation was to ensure that all panelists received the same information about the need for and goals of standard setting and about their part in the process. The orientation consisted of three parts. First, of Education Joy Hofmeister provided an overview of education policy in the followed by more specific assessment context provided by t Assistant Executive for SDE Maria Harris. Next, a Measured Progress psychometrician, Dr. Matthew Gushta, presented a brief overview of the bookmark

Measured Progress psychometrician, Dr. Matthew Gushta, presented a brief overview of the bookmark procedure and the activities that would occur during the standard setting meeting. Finally, Measured Progress Portfolio Manager Julie DiBona provided panelists with various logistical information (e.g., materials review, content security, attendance).

An additional presentation was provided to English language arts (ELA) panelists specifically regarding the writing prompts administered in grades 5, 8, and 10. Student responses to these items were formula-scored based on five substantive rubrics, generating an overall writing composite score. This composite score could be the result of numerous combinations of rubric scores; this formula-scoring approach was described to the panelists, and the most frequent rubric score combinations for each grade and composite score were presented.

Once the general orientation was complete, panelists convened in break-out rooms associated with their specific subject and grade span (i.e., ELA and mathematics, grades 3/4, 5/6, and 7/8) or single grades (i.e., ELA and mathematics 10; science 5, 8, and 10), where they received more detailed training and completed the standard setting activities.

3.3 Table Leader Training

During breakfast on Day 1, the two table leaders identified for each panel attended a brief training session led by Measured Progress Test Development Manager David Harrison. During this training, expectations for the table leaders were set to include: leading panelist review of the ordered item booklet, leading panelist development of borderline descriptors, facilitation of panel discussion, collection and review of standard setting materials, control of secure materials, and attendance at vertical articulation (for ELA and mathematics participants). Table leaders were expected to support the lead facilitators in ensuring that discussion and logistics within panels were conducted fairly and efficiently; introductions were made at this time to the Measured Progress staff members who served as lead facilitators in their respective rooms

3.4 Review of Assessment Materials

The first step after the opening session was for the panelists to take the test. The purpose of this step was to familiarize the panelists with the assessment and what it asks students to do. Once panelists completed the test, the answer key was distributed. At this point, panelists were encouraged to discuss any issues regarding items or scoring. For grade-span panels, review of materials and all subsequent activities proceeded for the lower grade first followed by the upper grade as indicated in the meeting agenda (see Appendix B).

3.5 Review of Performance Level Descriptors and Definition of Borderline Students

Next, panelists reviewed the Performance Level Descriptors (PLDs). This important step was designed to ensure that panelists thoroughly understood the knowledge, skills, and abilities (KSAs) needed for students to be classified into performance levels (Unsatisfactory, Limited Knowledge, Proficient, and Advanced). An initial draft of the PLDs (range PLDs) had been developed by teachers in committee meetings prior to the standard setting under Cognia facilitation. The SDE and Cognia then reviewed/edited and brought them back to the committee for validation and approval.

Panelists first reviewed the PLDs on their own and then participated in group discussion of the PLDs, clarifying each level. Afterward, panelists developed consensus definitions of borderline students—that is, students who have only barely qualified for a particular performance level. Bulleted lists of characteristics for each level were generated based on the whole-group discussion and posted in the room for reference throughout the bookmark process. Note that the purpose of this step was to clarify and add specificity to the PLDs based on the KSAs, paying particular attention to the definitions of the borderline students.

The bulleted lists were developed as working documents to be used by the panelists for the purposes of standard setting. They supplemented the PLDs, which provide the official definition of what it

means for a student to be classified into each performance level, by specifically addressing the KSAs that define the borderline of each level.

The PLDs are provided in Appendix A.

3.6 Completion of the Item Map Form

Each panelist then reviewed the ordered item booklet item by item, considering the KSAs students needed to answer each one. The ordered item booklet contained one item per page, ordered from the easiest item to the most difficult item. The ordered item booklet was created by sorting the items according to their item response theory (IRT)-based difficulty values ($RP_{0.67}$ was used). A three-parameter logistic IRT model was used to calculate the $RP_{0.67}$ values for dichotomous items.

Panelists then completed the item map form. The item map form listed the items in the same order as they were presented in the ordered item booklet; the form included space for the panelists to write in the KSAs required to answer each item correctly as well as indicating why they believed each item was more difficult than the previous one.

Additionally, the item map form was shaded to indicate regions of comparability to NAEP Proficiency (grades 3 through 8) or ACT Benchmark (grade 10), as shown in Table 3-1. Item map entries that would produce percentages of students at or above Proficient comparable to those external assessments were identified as benchmarking items. The shaded region on the item map form was then calculated as +/-2 standard errors around the IRT-based difficulty of the OSTP benchmarking items.

Table 3-1: OSTP Standard Setting Benchmarking Regions

Subject	Grade	External Assessment	Percentage*	OIB Shaded Region
	3	NAEP	34**	25-45
	4	NAEP	33	26-45
	5	NAEP	32	31-51
English Language Arts	6	NAEP	31	33-51
	7	NAEP	30	30-50
	8	NAEP	29	33-51
	10	ACT	37	25-55
	3	NAEP	40.5	33-51
	4	NAEP	37	27-47
	5	NAEP	33.5	29-46
Mathematics	6	NAEP	30	27-41
	7	NAEP	26.5	21-37
	8	NAEP	23	18-40
	10	ACT	25	17-37
	5	NAEP	34	17-38
Science	8	NAEP	28	18-43
	10	ACT	24	12-33

^{*} Percentage of students at or above Proficient (NAEP) or Benchmark (ACT).

After they finished working individually, panelists had the opportunity to discuss the item map form as a group and make necessary additions or adjustments. The purpose of this step was to ensure

^{**} NAEP grades 4 and 8 ELA and mathematics used to generate linear interpolations of grades 3, 5, 6, and 7.

that panelists became familiar with the ordered item booklet and understood the relationships among the ordered items.

3.7 Rating Rounds and Feedback

3.7.1 Practice Round

Next, the panelists completed a practice round of ratings. The purpose of the practice round was to familiarize the panelists with all the materials they would be using for the standard setting process and to walk them through the process of placing bookmarks. In addition to the PLDs and borderline descriptions, panelists were given a practice ordered item booklet, which consisted of 10 items representing the range of difficulty on the test, and a practice rating form.

The facilitator explained what each of the materials was and how panelists would use it to make their ratings. Then, beginning with the first ordered item and considering the skills and abilities needed to complete it, panelists were instructed to ask themselves, "Would at least two out of three students performing at the borderline of Proficient answer this question correctly?" Panelists considered each ordered item in turn, asking themselves the same question until their answer changed from "yes" (or predominantly "yes") to "no" (or predominantly "no"). Each panelist practiced placing the Proficient bookmark in the ordered item booklet. The facilitator then led the panelists in a readiness discussion, asking panelists to share the reasoning behind their bookmark placements with the group and assessing each panelist's understanding of the rating task, borderline students, and the two-thirds rule. At the end of the practice round, panelists completed the practice evaluation form. The evaluation form was designed to ascertain whether the panelists were comfortable moving ahead to the rating task or whether there were lingering questions or issues that needed to be addressed before proceeding to the Round 1 ratings. Facilitators were instructed to glance over each panelist's evaluation can be found in Appendix J.

For panelists who participated in grade-span panels, this practice round was conducted only for the lower grade (i.e., grades 3, 5, and 7).

3.7.2 Round 1 Judgments and Results

In the first round, panelists worked individually with the PLDs, the item map form, and the ordered item booklet. Beginning with the first ordered item in the shaded region described previously and considering the skills and abilities needed to complete it, panelists asked themselves, "Would at least two out of three students performing at the borderline of Proficient answer this question correctly?" Panelists considered each ordered item in turn, asking themselves the same question. They placed the bookmark between the two items where their answer changed from "yes" (or predominantly "yes") to "no" (or predominantly "no"). For the identification of this Proficient cut, panelists were instructed to place their

bookmark within the shaded region; placing a bookmark outside the shaded region required explicit written justification by the panelist. Panelists then repeated the process for the other two cuts and used the rating form to record their ratings for each cut.

After the Round 1 ratings were complete, Measured Progress staff members calculated the median cut points for the group based on Round 1 bookmark placements. First, each panelist's cutpoints were found on the theta scale by averaging the $RP_{0.67}$ values of the items on either side of the bookmark placed by that panelist for each cut. The cutpoints were then determined by calculating the median of the individual cutpoints obtained from each panelist

Results for panelist ratings across all rounds are displayed in Appendix L. Shown are the theta scale cuts along with the Median Absolute Deviation (MAD) of the panelists' cutpoints, which indicates the extent to which judgments were consistent across panelists and reflects the level of agreement among the ratings with each successive round of ratings, as well as the conditional standard error of measurement (SEM) for each of the scale cuts. Finally, impact data—reflecting the percentage of students across the state who would fall into each performance level category according to the Round 1 total group median cutpoints —were calculated.

3.7.3 Round 2 Judgments and Results

The purpose of Round 2 was for panelists to discuss their Round 1 placements and, if necessary, to revise their ratings. Prior to beginning their discussions, the panelists at each table were presented with the median cutpoints based on the Round 1 ratings for the panelists in that subject and grade. A Measured Progress psychometrician presented this information to the group using a projector and laptop and explained how to use it as they completed their Round 2 discussions. The distribution of panelists' cutpoints was presented in terms of location in the ordered item booklet, both as numerical summaries of cutpoints ranges and graphically as histograms.

Panelists were then given the opportunity to share their individual rationales for their bookmark placements in terms of the necessary knowledge and skills for each classification. Panelists were asked to pay particular attention to how their individual ratings compared to those of other panelists in their room and get a sense for whether they were unusually stringent or lenient within the group. Once the discussions were complete, panelists were given the opportunity to revise their Round 1 ratings on the rating form. Panelists were told to set bookmarks according to their *individual* best judgments; consensus among the panelists was not necessary. Panelists were encouraged to listen to the points made by their colleagues but not to feel compelled to change their bookmark placements.

When Round 2 ratings were complete, Measured Progress staff members calculated the median cutpoints and associated impact data and discussed the results with SDE staff. During this discussion, a number of cutpoints were identified that yielded impact data which was notably discrepant from the Benchmarking percentages (see Table 3-1). This provided an opportunity for Measured Progress and SDE staff to return to the panels for the purpose of clarifying and confirming both the judgmental task - for

each item answering, "Would at least two out of three students performing at the borderline of the current PLD answer this item correctly?" - and the policy context, which sought to align OSTP results more closely with nationally-recognized test results such as demonstrated via NAEP and ACT.

3.7.4 Round 3 Judgments and Results

The purpose of Round 3 was for panelists to again discuss their Round 2 placements and, if necessary, to revise their ratings. Prior to the discussions, the panelists were presented with the median cuts based on Round 2 results as well as impact data (i.e., the percentage of students classified into each performance level based on the median cuts). A Measured Progress psychometrician presented the information and explained how to use it, as described in Round 2. Additionally, SDE staff members presented condensed versions of the educational context information originally provided during the opening session.

The lead facilitator then led an extended discussion of the Round 2 results, which walked the panelists through the ordered item booklet, focusing on the KSAs needed for each item and how they related to the PLDs. In addition, the discussion explored the differences in where each panelist and table placed the cuts. After the discussions, panelists were given a final opportunity to revise their bookmark placements. Once again, the facilitator reminded the panelists to place the bookmarks according to their individual best judgment and that it was not necessary for them to reach a consensus. When Round 3 ratings were complete, Measured Progress staff members once again calculated the median cutpoints and associated impact data and reviewed these results with SDE staff.

3.7.5 Round 4 Judgments and Results

While Round 3 marked the completion of standard setting activities for most panelists, an additional round was convened in specific instances after review and consideration by SDE staff, Measured Progress staff, together with the panelists. Described earlier, the results of Round 2 led Measured Progress and SDE staff to identify points in the standard setting process that required further clarification and confirmation. As a result, staff and panelists worked together to identify the need for an additional round in order to produce ratings reflective of panelists understanding of the assessment content and standard setting process. Specifically, ELA grade 5, mathematics grade 3, and science grade 5 conducted a Round 4, where the purpose was again for panelists to further discuss their cutpoint placements and to revise their ratings, if necessary.

Prior to the discussions, a Measured Progress psychometrician presented the panelists with the median cuts based on Round 3 results as well as impact data. The lead facilitator then led an extended discussion of the Round 3 results. After discussion, panelists were given a final opportunity to revise their bookmark placements. When Round 4 ratings were complete, Measured Progress staff members once again calculated the median cutpoints and associated impact data.

A summary of the results is provided in Tables 3-2–3-4, reporting final median cutpoints on the theta scale and impact data (percentage of students in performance level; percentage of students at-orabove performance level), respectively. Note that disaggregated impact data broken down by demographics are provided in Appendix K.

Table 3-2: OSTP Standard Setting: Round 3 Results - Theta Scale Cuts

Subject	Grade	Unsatisfactory	Limited Knowledge	Proficient	Advanced
	3		-0.53135	0.26234	1.39558
	4		-0.52719	0.24183	1.49870
	5		-0.78321	0.27136	1.17231
English Language Arts	6		-0.91412	0.23755	1.39169
	7		-0.49771	0.19463	1.19095
	8		-0.69508	0.53881	1.46111
	10		-1.09572	0.10061	1.40466
	3		-0.85713	0.08600	0.98750
	4		-0.85598	0.21582	1.06199
	5		-1.01408	0.25552	1.16994
Mathematics	6		-0.89687	0.44047	1.51120
	7		-0.00998	0.44732	1.47147
	8		-0.00143	0.75594	1.21172
	10		0.14320	0.70757	1.34848
	5		-0.91364	0.17570	1.32213
Science	8		-0.34011	0.27999	1.32579
	10		0.28292	1.02248	1.77837

Table 3-3: OSTP Standard Setting: Round 3 Results – Percentage of Students At/In Performance Level

Subject_Name	Grade	Unsatisfactory	Limited Knowledge	Proficient	Advanced
	3	29.5	27.6	35.3	7.6
	4	28.8	28.0	36.5	6.7
	5	21.1	39.0	27.7	12.2
English Language Arts	6	18.2	40.0	32.4	9.4
	7	29.2	25.2	33.6	12.0
	8	20.8	42.4	25.2	11.6
	10	13.0	31.5	45.0	10.5
	3	19.7	31.7	31.5	17.0
	4	20.6	36.0	29.3	14.0
	5	16.8	41.2	29.8	12.2
Mathematics	6	18.8	45.5	29.5	6.2
	7	46.8	19.1	27.0	7.1
	8	48.9	27.8	11.4	11.9
	10	53.9	21.3	15.4	9.4
	5	21.5	35.4	33.7	9.4
Science	8	37.7	21.4	30.1	10.8
	10	60.0	21.0	14.7	4.4

Table 3-4: OSTP Standard Setting: Round 3 Results – Percentage of Students At/Above Performance Level

Subject_Name	Grade	Unsatisfactory	Limited Knowledge	Proficient	Advanced
	3	100.0	70.5	42.9	7.6
	4	100.0	71.2	43.1	6.7
	5	100.0	78.9	39.9	12.2
English Language Arts	6	100.0	81.8	41.8	9.4
	7	100.0	70.8	45.6	12.0
	8	100.0	79.2	36.8	11.6
	10	100.0	87.0	55.5	10.5
	3	100.0	80.3	48.5	17.0
	4	100.0	79.4	43.4	14.0
	5	100.0	83.2	42.0	12.2
Mathematics	6	100.0	81.2	35.7	6.2
	7	100.0	53.2	34.1	7.1
	8	100.0	51.1	23.3	11.9
	10	100.0	46.1	24.8	9.4
	5	100.0	78.5	43.0	9.4
Science	8	100.0	62.3	40.9	10.8
	10	100.0	40.0	19.0	4.4

Chapter 4. VERTICAL ARTICULATION

4.1 The Vertical Articulation Process

Following regular standard setting activities, table leaders from the English language arts (ELA) and mathematics panels participated in a vertical articulation meeting. The mathematics articulation panel was convened first and then the ELA articulation panel was convened after the mathematics group completed the articulation process.

An overview PowerPoint was presented that outlined, at a very high level, the steps of the articulation process. Once this was completed, panelists were presented with the same materials available during regular standard setting activities as well as the impact data that were provided during the final round of discussions for each grade level (i.e., the percentage of students at each performance level based on the 2017 administration results). In addition, cutpoint locations (i.e., ordered item booklet item numbers) corresponding to the final ranges indicated by specific panels, benchmarking values (i.e., NAEP or ACT impact data and ordered item booklet locations), and linearly smoothed percentages of students in each performance level across grades were presented. Panelists shared the discussion that had taken place within their grade-span panels with the larger articulation panel, and then were asked to complete the articulation feedback form from the perspe

The full articulation panel conducted a discussio tpoints and impact data and provided individual recommendations for each cutpoint, i e panel-recommended cutpoint when no change was deemed necessary. As in the general process, these ratings were tabulated and presented back to the table leader as well as final impact data associated with median cutpoints resulting from their recommendations. A final opportunity to change any cutpoint was afforded to the vertical articulation panel's given consensus. Discussion and a final individual survey regarding the appropriateness of the adjusted cuts and any comments were finally collected.

Articulation evaluation results are presented in Appendix J.

4.2 Vertical Articulation Results

Cuts that resulted from vertical articulation for ELA and mathematics are included in Table 4-1 and Table 4-2 below. Final cutpoints are presented as the median theta cuts resulting from Round 3, Round 4, and Vertical Articulation, as appropriate; at the time of writing, the reporting scale scores had not yet been defined.

Table 4-1. OSTP Standard Setting: ELA Vertical Articulation Results

Grade	Performance Level	Theta Cut	At %	At or Above %
	Unsatisfactory		29.5	100.0
3	Limited Knowledge	-0.53135	31.8	70.5
3	Proficient	0.34092	31.1	38.7
	Advanced	1.39558	7.6	7.6
	Unsatisfactory		28.8	100.0
4	Limited Knowledge	-0.52719	34.0	71.2
7	Proficient	0.38608	30.5	37.1
	Advanced	1.49870	6.7	6.7
	Unsatisfactory		21.1	100.0
5	Limited Knowledge	-0.78321	39.0	78.9
5	Proficient	0.32533	27.7	39.9
	Advanced	1.17231	12.2	12.2
	Unsatisfactory		18.2	100.0
6	Limited Knowledge	-0.90856	41.5	81.8
U	Proficient	0.28516	31.0	40.3
	Advanced	1.39169	9.4	9.4
	Unsatisfactory		29.2	100.0
7	Limited Knowledge	-0.49771	38.0	70.8
ı	Proficient	0.46660	22.3	32.8
	Advanced	1.25890	10.6	10.6
	Unsatisfactory		20.8	100.0
8	Limited Knowledge	-0.69508	45.5	79.2
Ü	Proficient	0.60707	22.1	33.6
	Advanced	1.46111	11.6	11.6
	Unsatisfactory		16.4	100.0
10	Limited Knowledge	-0.88010	44.6	83.6
.0	Proficient	0.50703	28.5	39.0
	Advanced	1.40466	10.5	10.5

Table 4-2. OSTP Standard Setting: Mathematics Vertical Articulation Results

IDIE 4-2. US	ore Standard Setting.	Mathematics	Vertical A	rticulation Nesul
Grade	Performance Level	Theta Cut	At %	At or Above %
	Unsatisfactory		20.6	100.0
3	Limited Knowledge	-0.84047	35.2	79.4
J	Proficient	0.18660	27.2	44.2
	Advanced	0.98750	17.0	17.0
	Unsatisfactory		23.5	100.0
4	Limited Knowledge	-0.77087	35.9	76.5
4	Proficient	0.26986	26.6	40.6
	Advanced	1.06199	14.0	14.0
	Unsatisfactory		21.6	100.0
5	Limited Knowledge	-0.82901	43.2	78.4
3	Proficient	0.42687	23.1	35.3
	Advanced	1.16994	12.2	12.2
	Unsatisfactory		21.8	100.0
6	Limited Knowledge	-0.75897	42.5	78.2
0	Proficient	0.44047	29.5	35.7
	Advanced	1.51120	6.2	6.2
	Unsatisfactory		46.8	100.0
7	Limited Knowledge	-0.00998	19.1	53.2
1	Proficient	0.44732	27.0	34.1
	Advanced	1.47147	7.1	7.1
	Unsatisfactory		48.9	100.0
8	Limited Knowledge	-0.02698	27.8	51.1
O	Proficient	0.75594	11.4	23.3
	Advanced	1.21172	11.9	11.9
	Unsatisfactory		53.9	100.0
10	Limited Knowledge	0.13593	20.0	46.1
10	Proficient	0.68404	16.7	26.2
	Advanced	1.33423	9.4	9.4

Chapter 5. Tasks Completed After the Standard Setting Meeting

Upon conclusion of the standard setting meeting, several important tasks were completed. These tasks centered on the following: reviewing the standard setting process and addressing issues presented by the outcomes; presenting the results to the SDE; and making any final revisions or adjustments based on policy considerations under direction of the SDE.

The SDE was provided the recommended cuts from the standard setting panels and the recommended adjusted cuts from the articulation panel. In addition, the evaluation results from the crossgrade and articulation panels were provided.

5.1 Analysis and Review of Panelists' Feedback

The measurement literature sometimes considers the evaluation process to be another product of the standard setting process (e.g., Reckase, 2001), as it provides important validity evidence supporting the cutpoints that are obtained. To provide evidence of the participants' views of the standard setting process, panelists were asked to complete questionnaires after the practice round and again after the completion of Round 3.

After the evaluation forms were completed, panelists' responses were reviewed. This review did not reveal any anomalies in the standard setting process or indicate any reason that a particular panelist's data should not be included when the final cutpoints were calculated. In general, participants felt that the recommended cutpoints were appropriate and that their judgments were based on appropriate information and decision making. The results of the evaluations are presented in Appendix J.

5.2 Policy Adjustments

After all standard setting activities had been completed and all materials reviewed, the SDE recommended adjustments to the Limited Knowledge cut for grade 7 mathematics and Advanced cut for grade 8 mathematics that resulted from the standard setting process, as shown in Table 4-3. The full set of cuts, along with the SDE-recommended adjustment, were presented to the CEQA and approved for use on August 16, 2017.

Table 4-3. OSTP Standard Setting: Policy Adjustments to Mathematics

Grade	Grade Performance Level		At %	At or Above %
	Unsatisfactory		34.9	100.0
7	Limited Knowledge	-0.33556	31.0	65.1
,	Proficient	0.44732	27.0	34.1
	Advanced	1.47147	7.1	7.1
	Unsatisfactory		48.9	100.0
8	Limited Knowledge	-0.02698	27.8	51.1
O	Proficient	0.75594	12.6	23.3
	Advanced	1.26746	10.6	10.6

After the policy adjustments, Measured Progress suggested adjustments to SDE for the Proficient and Advanced cutpoints in grade 8 and 10 ELA. These adjustments were suggested to ensure that the cutpoints appropriately represented the total number of score categories associated with each writing prompt instead of the score categories achieved by students during the Spring 2017 administration, which were fewer. To achieve this resolution, the cutpoints were lowered on the theta scale to preserve the student level outcomes as accepted by the standard setting panelists during their reviews of impact data. The final grade 8 and 10 ELA cutpoints are presented in table 4-4.

Table 4-4. OSTP Standard Setting: Writing Prompt Adjustments to ELA

Grade	Performance Level	Theta Cut	At %	At or Above %
	Unsatisfactory		23.1	100.0
8	Limited Knowledge	-0.69508	42.3	76.9
O	Proficient	0.45070	23.4	34.5
	Advanced	1.20801	11.2	11.2
	Unsatisfactory		20.1	100.0
10	Limited Knowledge	-0.88010	44.2	79.9
10	Proficient	0.45602	26.0	35.6
	Advanced	1.25613	9.7	9.7

5.3 Preparation of Standard Setting Report

Following final compilation of standard setting results, Measured Progress prepared this report, which documents the procedures and results of the 2017 standard setting meeting that was held to establish performance standards for the assessment.

REFERENCES

- American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (1999). Standards for educational and psychological testing. Washington, DC: American Educational Research Association.
- American Educational Research Association, American Psychological Association, National Council on Measurement in Education. (2014). Standards for Educational and Psychological Testing. Washington, DC: American Educational Research Association.
- Cizek, G. J., & Bunch, M. B. (2007). Standard setting: Establishing and evaluating performance standards on tests. Thousand Oaks, CA: Sage Publications.
- Lewis, D.M., Mitzel, H.C., & Green, D.R. (1996). Standard setting: A bookmark approach. In D.R. Green (Chair), *IRT-based standard setting procedures utilizing behavioral anchoring*. Symposium conducted at the Council of Chief State School Officers National Conference on Large-Scale Assessment, Phoenix, AZ.
- Measured Progress (2015). *Oklahoma Core Curriculum Tests Geography: Standard Setting Report.*Dover, NH: Measured Progress.
- CTB/McGraw-Hill. (2013). Oklahoma School Testing Program: Standard setting technical report for OCCT Grades 5 and 8 Science and Writing. Monterey, CA: Author.
- CTB/McGraw-Hill. (2014). Oklahoma State Testing Program: Standard setting technical report for OSTP Grade 5 Social Studies, Grade 8 U.S. History, and End-of-Instruction U.S. History. Monterey, CA: Author.
- Mitzel, H.C., Lewis, D.M., Patz, R.J., & Green, D.R. (2000). The Bookmark Procedure: Cognitive Perspectives on Standard Setting. In G.J. Cizek (Ed.), *Setting Performance Standards: Concepts, Methods, and Perspectives*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Reckase, M.D. (2001). Innovative methods for helping standard-setting participants to perform their task: The role of feedback regarding consistency, accuracy, and impact. In G. J. Cizek (Ed.), Setting performance standards: concepts, methods, and perspectives (pp. 159–173). Mahwah, NJ: Lawrence Erlbaum Associates.
- U.S. Department of Education. (2009). Standards and assessments peer review guidance: Information and examples for meeting requirements of the No Child Left Behind Act of 2001. Washington, DC: U.S. Department of Education Office of Elementary and Secondary Education. Retrieved June 10, 2010, from the World Wide Web: www2.ed.gov/policy/elsec/guid/saaprguidance.pdf.

APPENDICES

APPENDIX A—PERFORMANCE LEVEL DESCRIPTORS

Grade 3 ELA Borderline Advanced

- Identify main idea, key details, and summaries
- Infer 1st and 3rd person, point of view in complex texts
- Compare and contrast details to describe genres in text
- Identify characters, setting, plot, characterization, and theme
- Can analyze all objectives in standard 4
- Determine relevance of sources

Grade 3 ELA Borderline Limited Knowledge

- May identify 1st person point of view
- May identify main idea
- May compare within text
- Identify characters, setting
- Use common prefixes or suffixes to determine word meaning
- Identify synonyms
- May use some graphic features to understand a text

Grade 3 ELA Borderline Proficient

- Identify main idea
- May not be able to identify key details
- Choose best summary
- Identify basic genres
- Identify 1st and 3rd person point of view
- Identify author's purpose
- Identify characters, setting, plot
- Find examples of simile and metaphor
- Distinguish between fact and opinion
- · Use prefixes and suffixes to interpret word meaning
- Use synonyms, antonyms, homographs, and homonyms to interpret text meaning
- Use context clues to interpret text meaning within a single sentence ????
- Use dictionary or glossary to clarify word meaning
- Recognize subject/verb agreement
- Identify pronouns, adjectives, verb tense, conjunctions, prepositions ????
- Recognize correct capitalization of titles of respect and geographical names
- Recognize end marks in dialogue
- Recognize simple and compound sentences that are declarative, interrogative, exclamatory, and imperative
- Use graphic features to understand a text
- Identify appropriate reference source to find information

Grade 4 ELA Borderline Advanced

- Analyze details
- Describe genres
- Efficiently use vocabulary knowledge/resources to analyze complex text through context clues

Grade 4 ELA Borderline Limited Knowledge

- Compare NOT contrast
- Inconsistently identify NOT describe or apply (literary elements, author's purpose, point of view)
- Inconsistently use context clues
- Inconsistently identify appropriate grammar
- Inconsistently use graphic features

Grade 4 ELA Borderline Proficient

- Choose best summary
- Identify key details that may or may not support main idea
- Discriminate genres by comparing and contrasting details
- May recognize paraphrase in simple text
- May identify some text structure
- Identify author's purpose, some literary elements, and point of view
- Identify some literary devices
- Identify fact from opinion
- May infer meaning from text
- Use some word parts to interpret word meaning
- Students may apply and identify appropriate grammar and mechanics
- Use graphic features

Grade 5 ELA Borderline Advanced

- DOK 1-2, usually 3; capable of 4
- Compare/contrast details from fiction/nonfiction to describe genre and subgenres
- Use more descriptive vocabulary/better word choice
- Great organization in writing, but may not be as engaging
- Use effective transitions and phrases
- Understand complex ideas, but not abstract ones in a consistent manner
- Can evaluate or analyze, but not always both
- Compare/contrast to support simple inferences within and between texts

Grade 5 ELA Borderline Limited Knowledge

- Can answer some DOK1s, no real DOK 2's 4's
- Can find obvious answers in simple items
- Can find details in a passage, but not categories them
- Knows the topic, but not the main idea
- Inconsistently identifies literary elements
- Can usually eliminate only one distractors get hung up on others
- Have a very limited vocabulary
- Genre: Know Fiction from Non-fiction (no sub-genres)
- Random mechanics probably know first word capitalization and periods
- No transfer of knowledge
- Very little to no structure in writing
- More fragments than complete sentences
- Attempt topic in writing passage
- Cannot generalize

Grade 5 ELA Borderline Proficient

- Can get most DOK 1's, usually 2's, and handful 3's
- Can consistently locate apparent information
- Can identify main ideas, but seldom apply
- Can identify inferences in passages, but can't support the inference
- Partially comprehends text in relationship to length (struggles with longer, more dense passages)
- Can connect between texts that are similar in structure or topic
- Can understand most used/simple genres and subgenres (poetry, fiction, main sub-genre categories)
- May have difficulty eliminating close distractors
- May miss the judgement calls of "best, most, etc."
- Usually comprehends and can sometimes apply
- Makes simple connections within texts, but not implied or complex connections
- Mostly understands context clues, but struggles with word part relationships
- Struggles with but can make obvious generalizations
- May only do 2 of 3 modes of writing; can do narrative writing
- Writing is formulaic
- Can find and locate information, but lacks evidence or content
- Bare-minimum writing information lacks explanations and expansion
- Engages in writing process, but writing is not complex
- Students write on topic, but editing may be inconsistent
- Identifies grammar well in MC items but not in own writing
- Understands main/common grammar (ie verbs, nouns)
- Has organizational structure to writing, but transitions may be the same; repeats words
- Can find/locate the best resources to use, but may not be able to apply or organize it
- Mastered use of simple resources
- Inconsistent judging BEST resource

Grade 6 ELA Borderline Advanced

- Can comprehend and interpret text and inconsistently evaluate
- Know most genres (80-90%)
- Can evaluate or analyze but not always both
- Skillfully Understand context clues
- Use pre-fix suffix to understand unfamiliar language
- Solid command of grammar Only minimal grammar issues
- Recognize thesis statements
- Identify a thesis statement

Grade 6 ELA Borderline Limited Knowledge

- Comprehend simple information in short texts
- Limited response and critical thinking with vocabulary. Understand fundamental vocabulary
- Inconsistently compare/contrast. Compare is easier.
- Struggle with word parts
- Understand major/common genres non fiction
- Recognize blatant main ideas
- Simple inferences within one text
- Can do familiar context clues
- Use dictionary/thesaurus simple research tools
- No transfer of knowledge
- Inconsistently know common grammar should identify noun, verb, adjective, adjectives

Grade 6 ELA Borderline Proficient

- Can comprehend and interpret most genres (most familiar), but may not be able to analyze/evaluate
- Can recognize/determine details that support a stated main idea within 1 text
- Can determine simple main idea within one text but not usually 2
- Can do explicit/obvious compare/contrast between and within texts
- Identity point of view/sometimes can evaluate
- Can breakdown come words parts
- Can do basic /obvious context clues
- Identify basic parts of speech
- Understand simple verb tenses
- Demonstrate basic understanding of grammar, punctuation
- Can find/locate resources but inconsistently apply
- Can get hung up between two close distractors
- Recognize title, author, publisher date
- Can recognize multiple-meaning high frequency words

Grade 7 ELA Borderline Advanced

- Summaries of more complex texts; summary is not as in-depth
- Can create an objective, complete summary, but may be missing some details
- Paraphrase is completely reworded
- Compare/contrast multiple traits
- Can analyze/evaluate literary devices in a more complex text, but their analysis of how it is used is weaker
- Can synthesize across more complex texts go beyond surface level
- Handful of advanced vocabulary words that they repeat
- They bring in prior knowledge, because they are reading more complex words
- They eliminate distractors, because they know more vocabulary

Grade 7 ELA Borderline Limited Knowledge

- Summaries of simple texts, with more complex texts, they focus on details. They try to match words from texts to identify a summary
- Paraphrase is partially a direct quote
- Can compare/contrast directly stated authors' purposes
- Can find evidence, but can't synthesize ideas between texts
- Know a few fact/option code words
- Very little background knowledge to help with decoding
- May have some vocabulary skills, but have difficulty when texts move beyond their experience

Grade 7 ELA Borderline Proficient

- Create a simple summary with fewer, more obvious details. Not enough stamina to get all the details. Main idea is not developed
- Paraphrase not changes many words (not verbatim, but not enough of a paraphrase) Not demonstrating as much connection with text
- Compare and contrast stated/obvious purpose of author's writing
- Can identify literary devices, point of view and perspectives and gain some meaning
- Fact vs. opinion They are dependent on the "code/magic" words that clue fact or opinion
- Obvious, surface level conclusions or inferences from texts that have fewer, less complex details
- Less stamina
- Limited prior knowledge of vocabulary words
- Some understanding of word parts Common prefixes and suffixes
- Can use obvious context clues, often only in the same sentence
- Can understand less nuanced work meanings
- Not good with parallel Structure

Grade 8 ELA Borderline Advanced

- Can analyze/evaluate literary devices in a more complex text, but their analysis of how it is used is weaker
- Can synthesize across more complex texts go beyond surface level
- Can use more evidence to support a claim or inference
- Claim and counter claim
- Use unique reasons or evidence
- Use varied evidence
- Clear organization, consistent voice
- Varied word choice and sentence structure
- Some errors in more complex sentences
- Can recognize research questions without repetitive words

Grade 8 ELA Borderline Limited Knowledge

- Summaries of simple texts, with more complex texts, they focus on details. They try to match words from texts to identify a summary
- Paraphrase is partially a direct quote
- Can compare/contrast directly stated authors' purposes
- Can find evidence, but can't synthesize ideas between texts
- Very little background knowledge to help with decoding
- May have some vocabulary skills, but have difficulty when texts move beyond their experience
- Can use basic prefixes/suffixes
- Familiar only with common sources
- Incomplete understanding of sources
- Can evaluate the main literary devices at a very surface level
- Can find explicit evidence and use it to support simple inferences/conclusions
- Weak organization
- Not varied sentences/simple sentences
- Not enough extension
- Very limited reasons and evidence
- Have a lot of difficulty recognizing good research questions

Grade 8 ELA Borderline Proficient

- Can identify literary devices, point of view and perspectives and gain some meaning
- Can make simple evaluations of literary devices, but misses big impacts on text
- Obvious, surface level conclusions or inferences from texts that have fewer, less complex details
- Less stamina
- Some understanding of word parts Common prefixes and suffixes
- Can use obvious context clues, often only in the same sentence
- Can understand less nuanced work meanings
- Can make simple evaluations of literary devices, with more complex texts
- Draws purposeful conclusions or inferences and can identify obvious support
- Mostly complex sentences; some sentence variety
- More obvious transition words
- Paragraph structure
- Organizational structure is attempted
- Recognize different types of writing
- Introduce a claim
- An attempt at recognizing an opposing viewpoint
- Organization is there, but may contain errors. Reason that are so close, the support all seems the same
- Organization can be muddled or out-of-order
- Can use appropriate voice for 1 or 2 situations
- Start focused, lose it on the body of the writing
- Repetitive limited word choice/figurative language
- Familiar with a wider variety of sources
- Can do a limited evaluation of sources
- Should know which sources are "no-no's"
- Should know gov. edu, etc. are more credible
- Can identify good research questions mostly when the words are repetitive

Grade 10 ELA Borderline Advanced

- Comprehend, analyze, and make connections within and between texts
- Summarize, paraphrase, and synthesize texts
- Identify and connect genres to author's purpose
- Evaluate effectiveness of differing perspectives and rhetorical devices
- Distinguish different types of evidence to support conclusions and inferences
- Purposefully engage in the writing process to create writing that is focused, organized, and coherent... for multiple purposes.
- Use context clues, word parts, and reference tools to determine or clarify precise word meaning
- Select effective vocabulary to communicate complex ideas
- Effectively evaluate the reliability and validity of evidence and synthesize relevant information
- Purposefully integrate and cite evidence
- Intentionally apply knowledge of grammatical and rhetorical style choices
- Strong command of standard English
- Recognize strong research questions and thesis statements

Grade 10 ELA Borderline Limited Knowledge

- Inconsistently comprehend texts
- Recognize a basic summary
- Recognize basic genres
- Attempt to determine author's basic purpose
- Recognize different perspectives and common rhetorical devices
- Recognize evidence and attempt to support conclusions
- Attempt parts of the writing process
- Create a piece of writing that lacks focus
- · Attempt to use context clues, word parts or reference tools to determine word meaning
- Use limited vocabulary to communicate simple ideas
- Limited recognition of basic grammatical choices
- Limited use of standard English
- May recognize a thesis sentence
- Recognize evidence
- Attempt to use and cite evidence

Grade 10 ELA Borderline Proficient

- Comprehend and make simple connections within and between texts
- Recognize and/or generate a basic summary
- Identify some genres
- Determine author's basic purpose
- Identify differing perspectives and rhetorical devices
- Distinguish different types of evidence to sometimes support conclusions or inferences
- Engage in parts of the writing process
- Create a coherent piece of writing with focus, for multiple purposes
- Use context clues, word part, and reference tools to determine or clarify word meaning
- Select vocabulary intentionally
- Recognize grammatical and rhetorical style choices
- General command of standard English
- Distinguish between strong and weak research Qs and Ts.
- Distinguish between reliable/unreliable and valid/invalid evidence to include relevant information
- Students will cite evidence used

Grade 5 & 6 Math Parking Lot Questions

- Question # 22: Has a pictograph no pictographs in 5th grade only line and double bar
- Triangle prisms are not in the limits of the item specs
- #15 Questions # 15 & 17 address estimate multiplication; not our objective 4th graders do that
- #52 we do not convert in 5th grade
- Why does question #12 go to the ten millions when objective is to the millions place?
- 6th grade #38 Several ways to correctly estimate and come up with an answer given that not correct
- The following guestions do not meet the item spec requirements:
 - # 1 Triangle prisms not assessed per item spec
 - #19 Fractional rules not assessed per item spec
 - > #14 Triangular pyramids not assessed per item specs
 - > #16 Conversions should not be assessed
- Find a rule limited to whole #5
- #52 conversions should not be assessed
- Estimator there needs to be a greater rang within the answer choices
- How do we deal with the backlash from administration regarding low scores?
- Will all schools, administrators, parents, etc. have access or be given the letter info regarding scores from Superintendent Hofmeister?
- 6th direction #50 poorly explained
- 6th #55 could measures be skewed on computer screen?

Grade 8 science parking lot

- CO2 in glucose question said provided but not in stimulus (requires prior knowledge?)
 - o Form B1 item 16 (listed as an assessment boundary as not tested)
- NAEO Limited knowledge is too high, esp. for barely limited (critique is higher level)
- Form B1 item 30 add (70 kg) after rider 3

Grade 3 Math Borderline Advanced

- Complex: addition, subtraction, multiplication
 - With more than one regrouping (addition and subtraction)
 - Multiply 2 by 1 with regrouping
 - o Modeling division and show the relationship between multiplication and division
 - o Identify the unknown using the relationship between multiplication and division
- Fractions
 - o Comparing fractions with a number line and order
 - Composing fractions
- Extend number patters using multiplication by 5 or less
- Solve for an unknown in a basic multiplication problem
- Determine volume by counting unit cubes
- Solving elapsed time problems within 5 minute increments up to an hour
- Solve a complex real work problem using multi-steps to draw logical conclusions
- Compare data in 2 different representations
- Identify the next step in a geometric pattern
- Apply knowledge about angles

Grade 3 Math Borderline Limited Knowledge

- Simplify estimating to solve basic +, -, x, / one step word problems
- Simple equivalent fractions using models (1/2 = 2/4 = 3/6)
- Compare and order whole numbers and fractions with a model
- Decompose fractions (3/4 = ¼ + ¼+ ¼)
- Read and write decimals to the tenths place
- Compare and order simple whole numbers and decimals
- Make changes with whole dollars
- Determine rule for a simple patter and extend
- Determine missing value of unknown
- Identify quads and simply polygons and their area of squares and rectangles with a grid
- Select appropriate unit of measurement
- Solve one step problem using data sets

Grade 3 Math Borderline Proficient

- Addition and subtraction with regrouping in the 1's place without word problems
- Represent whole numbers
- Multiplication facts: 1s, 2s, 3s, 5s, 10s
- Match a simple fraction to a model
- Identify the value of dollar bills
- Adding coins of like values
- Extend shape patterns (A,B,C) 2s, 5s, 10s
- Solving an unknown using a basic addition problem
- Identify a right angle
- Use appropriate tool for measurement
- Read a digital clock

Grade 4 Math Borderline Advanced

- Determine rule and extend pattern with one step (x,/ with larger numbers)
- Measure angles using a protractor
- Measurement problems using more than one operations
- Solve two step problems using data that include decimals and fractions. One line plots and frequency tables
- Determine volume with cubes, cm³
- Compose and decompose shapes to find the area
- Estimate and solve complex problems
- Determine the unknown in a non-equivalent fraction
- Compare decimals and fractions
- Find the change in complex money problems, providing change when given \$20, in dollar bills and coins

Grade 4 Math Borderline Limited Knowledge

- Simplify estimating to solve basic +, -, x, / one step word problems
- Simple equivalent fractions using models (1/2 = 2/4 = 3/6)
- Compare and order whole numbers and fractions with a model
- Decompose fractions (3/4 = ¼ + ¼+ ¼)
- Read and write decimals to the tenths place
- Compare and order simple whole numbers and decimals
- Make changes with whole dollars
- Determine rule for a simple patter and extend
- Determine missing value of unknown
- Identify quads and simply polygons and their area of squares and rectangles with a grid
- Select appropriate unit of measurement
- Solve one step problem using data sets

Grade 4 Math Borderline Limited Proficient

- Simplify estimating to solve basic +, -, x, / one step word problems
- Simple equivalent fractions using models (1/2 = 2/4 = 3/6)
- Compare and order whole numbers and fractions with a model
- Decompose fractions (3/4 = ¼ + ¼+ ¼)
- Read and write decimals to the tenths place
- Compare and order simple whole numbers and decimals
- Make changes with whole dollars
- Determine rule for a simple patter and extend
- Determine missing value of unknown
- Identify quads and simply polygons and their area of squares and rectangles with a grid
- Select appropriate unit of measurement
- Solve one step problem using data sets

Grade 5 Math Borderline Advanced

- Recognize nets. SA with given nets
- Mean no remainders
- Graphics with fraction and decimal
- Single increments
- Represent remainder as a decimal
- Order decimals or fractions
- Any algebra with multi steps and expressions given

Grade 5 Math Borderline Limited Knowledge

- Any algebra with a single operation including addition or subtraction
- Identify right or equilateral triangles. Identify cube/rectangular prism
- GM2 Find perimeter of regular polygons with given side lengths
- Basic angle identification, measure to nearest 1/2 inch
- Read simple line or bar graphs

Grade 5 Math Borderline Proficient

- Graph an ordered pair; find a single operation (all) rule from a table
- Two step order of operation (no dist prep), Single step with variables given, Single step inequalities
- Classify triangles by 1 descriptor; classify cubes and prism (rectangular)
- Volume with filled in cubes (by counting cubes)
- Measure angles with ray pointing to 0, to nearest 5 degree
- Measure with ruler starting at 0
- Nearest centimeter Nearest centimeter
- Choosing appropriate unit of measure
- Division: all division with basic algorithm with "r" represented as fraction
- Single step word problems all operations
- Range, mode, and median. Line and double bar graphs with whole numbers
- decimal <-> fraction/mixed number 1/10, 1/4, 1/5, 1/2 with number lines in single intervals and labeled.
- Compare not order
- Read/write/represent numbers whole to thousandths without a zero place holder
- Add and subtract fractions <1 with one den a factor of the other (answer doesn't need to be reduced)
- Estimate +/- decimals 0.1, 0.01, 0.001, if all places are already established

Grade 6 Math Borderline Advanced

- Multi-step unit conversion with length
- Use distance between points to prove congruency
- Analyze difference between two outcomes of simple experiments
- Cannot justify solutions

Grade 6 Math Borderline Limited Knowledge

- Read and represent all rational numbers
- All Prime factorizations not represented with experience
- +/- a positive number from any integer
- Determine a ratio from a given situation
- Find equivalent fractions
- Multiply fractions: X1 ÷ decimals
- Graph whole numbers in all quadrants
- Evaluate with positive whole numbers
- Solve equations with whole numbers
- Area of parallelograms and triangles with whole numbers
- Identify vertical angles
- Identify translation, reflection and rotation
- Identify lines of symmetry
- Identify sample space of simple experiments and identify possible outcomes

Grade 6 Math Borderline Proficient

- Use equivalent fractions to solve ratio problems
- Unit rate should be a whole number
- Units need to be defined (example: 65 miles per 1 hour)
- Estimate (to nearest whole number) x/÷ problems for fractions and mixed numbers using benchmark fraction
- Estimate (to nearest whole number) x/÷ problems with decimal
- Limit exponents to squares in order of op
- Limit order of op to only include +/- of fraction and decimals
- Limit evaluating an expression with a variable to all operations with decimals and +/- with fractions
- Solve one step equations with nonnegative rational numbers
- Polygons can be decomposed into at most 2 simple shapes ($\square \Delta \square$)
- All necessary info is given to find area
- Apply the definition for vertical angle
- Given a simple triangle with angle measures for two of the angles, find missing angle
- Convert length in metric/customary system
- Predict translations and reflections
- Analyze lines of symmetry
- Identify minimum, maximum, and median for box-and-whisker plot
- Use "impossible" and "certain" to describe probability

Grade 7 Math Borderline Advanced

- Interprets equations involving variables and rational numbers
- Make connections between circumference and area to solve problems involving full circles
- Analyze, apply and display the effect of dilations and mult. trans. on a coordinate plane
- Solve complex and non-routine real world problems

Grade 7 Math Borderline Limited Knowledge

- Compare and order fractions or decimals in isolation
- Calculate problems involving rational numbers and exponents
- Identify a proportional relationship
- Solve and write simple equations
- Write a simple inequality
- Calculate area and circumference of circles in terms of pi or using 3.14

Grade 7 Math Borderline Proficient

- Identify constant of proportionality and proportional relationships
- Identify the graph/table of inversely proper relationships
- Interpret simple theoretical probability using decimals, fractions or percents
- Solve problems using estimations of whole numbers and decimals or fractions
- Solve 2-step equations of real world problems
- Solve and graph one step inequalities
- Identify the unit rate on a graph when the y-intercept equals zero
- Define a transformation and apply a 1-step transformation

Grade 8 Math Borderline Advanced

- Generate, simplify or evaluate complex equivalent expressions
- Compare the volume and surface area of different solids
- Describe the impact on central tendencies of a data set with one outlier
- Solve complex and non-routine real world problems and draw logical conclusions

Grade 8 Math Borderline Limited Knowledge

- Interprets equations involving variables and rational numbers
- Make connections between circumference and area to solve problems involving full circles
- Analyze, apply and display the effect of dilations and mult. trans. on a coordinate plane
- Solve complex and non-routine real world problems

Grade 8 Math Borderline Proficient

- Generate, simplify and evaluate simple equivalent expressions
- Classify rational and irrational
- Describe, analyze and represent linear functions with 2 variables using a graph or equation
- Successfully solve Pythagorean theorem in Pythagorean triple format
- Solve central tendency problems with one outlier affecting one measure of central tend. given all fata and relevant information
- Interpret a scatterplot and determine rate of change
- Solve problems involving theoretical or experimental probability

Grade 10 Math Borderline Advanced

- Applying radicals in real world
- Multiply polynomials
- Factor with GCF and coefficient of 1
- Items with multiple standards (algebra 1)
- Polygons
- Calculate experimental probabilities of multiple complex events

Grade 10 Math Borderline Limited Knowledge

- Simplify numerical
- Square roots
- Add polynomials and multiply by constant
- Graph given slope (any info)
- Identify y-intercept from a graph or slope-intercept form
- Convert between graph and slope –intercept form
- Calculate simple probability and sample space
- Simplify simple linear, ABS, rational
- Solve linear equations and inequalities
- Extend both types of sequences
- Identify parallel lines
- Relation/function given table or graph

Grade 10 Math Borderline Proficient

- Radicals (square roots not cube roots)
 - o Simplify
 - o Add/subtract
 - o Multiply
- Polynomial expressions
 - o Add, subtract, multiply, factor, mon
- Evaluate all expressions
- Transfer on linear only
- Add functions algebraically
- Represent equations not inequalities or absolute value; =, +, >, <
- Simple literal
- Recognize create interpret arithmetic sequence only
- Can translate various representations only slope-intercept form
- Identify form
- Identify line of best fit
- Apply simple probability
- Lines and angles

Grade 5 Science Borderline Advanced

- Make predictions on a basic model
- Expand a basic model
- Modify a basic model
- Scale up and down models (basic)
- Analyze simple exchange/transfer of matter and energy between organisms and between ecosystems/spheres
- Analyze scale, proportion, quantity and pattern for data for understanding distribution of water, cons. of matter Earth's relationship with the sun, moon and stars
- Analyze or compare evidence, data or model to engage in argument to explain cause and effect relationships (Earth's gravity, apparent brightness of sun/stars, how plants use matter)
- Observe or measure phenom. to interpret or evaluate patterns that classify materials based on properties
- Describe cause-effect relationships when mixing substances in an investigation

Grade 5 Science Borderline Limited Knowledge

- Identify most of the components within a system
 - o Organization
 - o Energy flow
- Identify structure/function
- Use provided data to support explanations and claims
 - Cycling of matter
 - o Natural selection
 - o Diversity
 - o Structure and function
- Describe arguments based on evidence about stability and change
 - o Ecosystem dynamics and adaptation
 - Social interaction

OR

- Identify explanations related to matter and energy cycling
- Describe, measure, classify phenomena at different scales for living systems
- Critique studies
- Critique solutions

Grade 5 Science Borderline Proficient

- recognize/identify/use basic models
- transfer of energy (and matter) between organisms in a simple/familiar food web or a food chain
- simple description of biosphere
- will not be able to scale up or down or describe the outcomes
- recognize and apply simple scale, patterns, quantity
- recognize proportion
- know Earth's relationship to the sun, moon and stars
- limited knowledge of water on the Earth
- Can identify familiar/simple conservation of matter examples
- Can identify evidence but use only in a limited fashion to support argument
- Limited ability to identify cause and effect
- Identify patters and classify matter based on simple physical properties (color, texture, size, shape, smell)
- In familiar contexts, make simple predictions

Grade 8 Science Borderline Advanced

- Multiple scales
- Describe/explain evidence of relationships
- Evaluation of evidence of relationships without complex/in-depth reasoning
- Can synthesize a design solution with prompting
- Missing proper, relative weight for the "best" answer with multiple variables
- Inferences from cause and effect relationships
- Apply cause /effect to other simple scenarios
- Critique, improve and modify an investigate
- Applying ungiven principles to an investigation
- Given picture is not needed/can create mental picture
- Simple analysis but maybe con complex or multi-step
- Decipher importance of complex data consistently
- Grasp and use of higher and more frequent academic language
- Evaluate complex and revise simple models and design solutions
- Develop a model (create, build, etc.) with previous information provided
- Apply model to simpler concepts
- Make predictions either forward or backward using given data
- Draw conclusions from multiple sets of inferred data/patterns

Grade 8 Science Borderline Limited Knowledge

- Identify basic invest. steps
- Can identify cause or effect only if given the other with a picture or diagram
- Pattern given linearly can agree/disagree
- Associate vocabulary to the topic but not connections between
- Require image stimulus but with misconceptions
- Agree/disagree with a description of a basic, provided argument/explanation
- Struggle with scale but can maybe work with single provided scale
- Understand some of the basic components in a model or design
- Can use a simple pre-identified pattern/relationship
- Can identify there was a change in a model
- Qualitative, not quantitative
- Use inappropriate descriptions
- Use single set of data/variable partially
- Cannot pick which data set to use
- Cannot apply vocabulary but can recognize

Grade 8 Science Borderline Proficient

- Multiple scales
- Describe/explain evidence of relationships
- Evaluation of evidence of relationships without complex/in-depth reasoning
- Can synthesize a design solution with prompting
- Missing proper, relative weight for the "best" answer with multiple variables
- Inferences from cause and effect relationships
- Apply cause /effect to other simple scenarios
- Critique, improve and modify an investigate
- Applying ungiven principles to an investigation
- Given picture is not needed/can create mental picture
- Simple analysis but maybe con complex or multi-step
- Decipher importance of complex data consistently
- Grasp and use of higher and more frequent academic language
- Evaluate complex and revise simple models and design solutions
- Develop a model (create, build, etc.) with previous information provided
- Apply model to simpler concepts
- Make predictions either forward or backward using given data
- Draw conclusions from multiple sets of inferred data/patterns

Grade 10 Science Borderline Advanced

- Develop and use models to interpret or evaluate components and relationships within complex systems
- Plan and conduct an investigation to produce accurate data
- Interpret complex data sets
- Support or defend arguments based on evidence
- Ask questions to analyze relationships
- Construct and evaluate based on valid and reliable evidence
- Evaluate explanations from evidence from more than 1 source
- Use alternative models to generate predictions or explanations
- Explain differences using evidence
- Compare risks and benefits on a global scale

Grade 10 Science Borderline Limited Knowledge

- Identify most of the components within a system
 - o Organization of matter
 - Energy flow
- Identify structure/function
- Use provided data to support explanation and claims
 - Cycling of matter
 - o Natural selection
 - o Diversity
 - o Structure and function
- Describe arguments based on evidence about stability and change in
 - o Ecosystem dynamics and adaptation
 - Social interaction
 - o Cause and effect
- Identify basic relationships based on evidence of
 - o Natural selection
 - AdaptationOR

Identify explanations and matter and energy cycling

- Describe, measure, classify phenomena at multiple scales for living systems
- Critique studies
- Critique solutions

Grade 10 Science Borderline Proficient

- Use models but not develop models independently
- Interpret provided data
- · Conduct investigations to produce reliable data
- Interpret for patterns, trends
- Plan investigations
- Barely proficient average = analysis
- Determine patterns in data trends
- Calculate averages, not density, expectations
- Identify increasing or decreasing slope
- Scale inter/intra
- Population vs. community level
- Limiting factors competition at different levels
 - Among species
 - Within speciesTerminology difference conceptually
- Abstract scale is difficult
- Ecology is easiest competition
- Energy flow in food web
- Revise explanations about organization/cycling/transferring of energy using evidence from sources
- Recognize sources are valid and reliable
- Revise explanation based on sources
- Revise explanation about cause and effect complex relationships (DNA -> protein)
- Ask questions to clarify simple relationships about cause and effect about structure and function of inherited traits

OR

Evaluate arguments based on evidence (but not synthesize understanding)

- Demonstrate relationships (but not compare alternative models)
- Recognize and control variables
- Choose conclusions best supported by evidence
- Compare risks and benefits on small scale

Grade 5 Science Borderline Advanced

- Develop and use models to interpret or evaluate components and relationships within complex systems
- Plan and conduct investigations to produce accurate data
- Interpret complex data sets
- Support or defend arguments based on evidence
- Ask questions to analyze relationships
- Construct and evaluate explanations based on valid and reliable evidence
- Evaluate explanations from evidence from more than 1 source
- Use alternative models to generate predictions or explanations
- Explore differences using evidence
- Compare risks and benefits on a global scale

Grade 5 Science Borderline Limited Knowledge

- Identify most of the components within a system
 - o Organization
 - o Energy flow
- Identify structure/function
- Use provided data to support explanations and claims
 - o Cycling of matter
 - o Natural selection
 - o Diversity
 - o Structure and function
- Describe arguments based on evidence about stability and change
 - o Ecosystem dynamics and adaptation
 - Social interaction

OR

- Identify explanations related to matter and energy cycling
- Describe, measure, classify phenomena at different scales for living systems
- Critique studies
- Critique solutions

Grade 5 Science Borderline Proficient

- Use (but not develop) models independently
- Interpret provided data (look for patterns, trends)
- Conduct, investigations to produce reliable data
- Plan investigations
- Determine patters in data, trends
- Calculate averages
- Increasing or decreasing slope
- Scale: At conceptual level versus terminology; ecology, competition is easiest, energy flow in food web
- Revise explanations about organization/cycles transfer of energy using evidence from sources
- Recognize sources are valid and reliable
- Revise explanations based on sources
- Reuse explanations about cause and effect relations about structure and functions of inherited traits
 OR
 - evaluate arguments based on evidence (but not compare alternative models)
- Recognize and control variables
- Choose conclusions best supported by evidence
- Compare risks and benefits on a small scale

APPENDIX B—MEETING AGENDA





Oklahoma School Test Program Standard Setting Panelists Agenda: Grades 3-8, 10

August 8-10, 2017

Day 1 (Tuesday, August 8) All times are approximate. Breaks will take place as needed.

Time	Activity/Presentation	Location	Presenter
8:00 am – 8:55 am	Registration & Breakfast 8:30 – Table Lead training	Room 14 & 15 The Native American Room	Karen Paavola and Matthew Gushta, Measured Progress
9:00 am – 9:20 am	Welcome and Introductions	Room 14 & 15	Superintendent Hofmeister Oklahoma State Department of Education, Measured Progress
9:20 am –	General Orientation Role of Panelists	Room 14 & 15	Craig Walker, Oklahoma State Department of Education
9:50 am	Review Agenda and Materials	Room 14 & 15	Julie DiBona, Measured Progress
9:50 am – 10:50 am	Standard-Setting Process Overview	Room 14 & 15	Matthew Gushta, Measured Progress
10:50 am – 11:00 am	Break (transition to break-out rooms, refer to the Room Map for panel room assignments)		
11:00 am – 12:00 pm	Individual Group Introductions Review Performance Level Descriptors (for first grade level in multiple grade rooms[3, 5, or 7]) Performance Level Discussions	Room 1 – Math, Grades 3 and 4 Room 2 – Math, Grades 5 and 6 Room 3 – Math, Grades 7 and 8 Room 4 – Math, High School Room 5 – ELA, Grades 3 and 4 Room 7 – ELA, Grades 5 and 6 Room 8 – ELA, Grades 7 and 8 Room 9 – ELA, High School Room 10 – Science, Grade 5 Room 11 – Science, Grade 8 Room 12 – Science, High School	Measured Progress Facilitator
12:00 pm – 1:00 pm	Lunch	Room 14 & 15	
1:00 pm – 2:30 pm	Standard-Setting Process (for first grade level in multiple grade rooms [3, 5, or 7])	See above	Measured Progress Facilitator
2:30 pm – 2:45 pm	Break	Breakout Room Pre-Function Area	





2:45 pm – 5:00 pm	Continue Standard-Setting Process (for first grade level in multiple grade rooms [3, 5, or 7])	See above	Measured Progress Facilitator
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Day 2 (Wednesday, August 9) All times are approximate. Breaks will take place as needed.

Time	Activity/Presentation	Location	Presenter
8:00 am – 9:00 am	Breakfast	Room 14 & 15	
9:00 am – 12:00 pm	Standard-Setting Process Completed (for first grade level in multiple grade rooms [3, 5 or 7])	Room 1 – Math, Grades 3 and 4 Room 2 – Math, Grades 5 and 6 Room 3 – Math, Grades 7 and 8 Room 4 – Math, High School Room 5 – ELA, Grades 3 and 4 Room 7 – ELA, Grades 5 and 6 Room 8 – ELA, Grades 7 and 8 Room 9 – ELA, High School Room 10 – Science, Grade 5 Room 11 – Science, Grade 8 Room 12 – Science, High School	Measured Progress Facilitator
12:00 pm – 1:00 pm	Lunch	Room 14 & 15	
1:00 pm – 2:00 pm	Review Achievement Level Descriptors (for second grade level in multiple grade rooms [4,6, or 8]) Performance Level Discussions	See above	Measured Progress Facilitator
2:00 pm – 2:15 pm	Break	Breakout Room Pre-Function Area	
2:15 pm – 5:00 pm	Standard-Setting Process (for second grade level in multiple grade rooms [4, 6, or 8])	See above	Measured Progress Facilitator

Dav 3 (Thursday, August 10) All times are approximate. Breaks will take place as needed.

Time	Activity/Presentation	Location	Presenter
8:00 am – 9:00 am	Breakfast	Room 15	
8:30 am – 12:00 pm	Standard-Setting Process (for second grade level in multiple grade rooms [4, 6, or 8])	Room 1 – Math, Grades 3 and 4 Room 2 – Math, Grades 5 and 6 Room 3 – Math, Grades 7 and 8 Room 5 – ELA, Grades 3 and 4 Room 7 – ELA, Grades 5 and 6 Room 8 – ELA, Grades 7 and 8	Measured Progress Facilitator
12:00 pm – 1:00 pm	Lunch	Room 15	
1:00 pm – 2:15 pm	Standard-Setting Process Completed (for second grade level in multiple grade rooms [4, 6, or 8])	See above	Measured Progress Facilitator
2:15 pm – 2:30 pm	Break	Breakout Room Pre-Function Area	

2:30 pm – Continue Standard-Setting Process Completed (for second grade level in multiple grade rooms [4, 6, or 8])	See above	Measured Progress Facilitator
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APPENDIX C—NONDISCLOSURE FORM





Nondisclosure Agreement

Grades 3-8 & HS State Assessment Standard Setting Meeting August $8^{th} - 11^{th}$

The undersigned is an employee, contractor, assessment committee member, or person otherwise authorized to view secure state assessment materials. The undersigned hereby agrees to be bound to the terms of this agreement restricting the disclosure of said materials.

It is essential to the integrity of this item development project and testing program that all test items remain secure. To maintain this security, only authorized persons are permitted to view the test questions. With the exception of materials released by the Oklahoma State Department of Education for informational purposes, all test questions (draft or final) in hardcopy or electronic format and associated materials must be regarded as secure documents. As a result, such materials may not be reproduced, electronically transmitted, discussed, used in classroom instruction, or in any way released or distributed to unauthorized persons. All materials including items and item drafts must be returned at the end of the meeting.

I understand that I am responsible for test materials security. By breaching test materials security as described here, I am breaching professional testing ethics.

Name:	
Signature:	
Date:	
Grade	
Content	

APPENDIX D—SAMPLE ITEM LIST FORM

Item Order	What knowledge and skills does this item measure?	Why is this item more difficult than the preceding item?
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		

Item Order	What knowledge and skills does this item measure?	Why is this item more difficult than the preceding item?
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		

Item Order	What knowledge and skills does this item measure?	Why is this item more difficult than the preceding item?
35		
36		
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		
51		

Item Order	What knowledge and skills does this item measure?	Why is this item more difficult than the preceding item?
52		
53		
54		
55		
56		
57		
58		

APPENDIX E—SAMPLE RATING FORM

OSTP Assessments Practice Rating Form

ID:	

Practice Round

Limited Knowledge		Proficient	
Ordered Item Numbers		Ordered Item Numbers	
First	Last	First	Last
1			10

<u>Directions</u>: Please enter the range of ordered item numbers that fall into each criteria student status level category according to where you placed your bookmark.

Note: The ranges must be adjacent to each other. For example: Limited Knowledge: 1-5, Proficient: 6-

OSTP Assessments Rating Form

	Rating	5 FOIII	
Content Area: Grade: ID Number:			
Round 1			
Unsatisfactory Ordered Item Numbers	Limited Knowledge Ordered Item Numbers	Proficient Ordered Item Numbers	Advanced Ordered Item Numbers
First Last 1	First Last ——	First Last	First Last
Round 2			
Unsatisfactory Ordered Item Numbers	Limited Knowledge Ordered Item Numbers	Proficient Ordered Item Numbers	Advanced Ordered Item Numbers
First Last 1	First Last ——	First Last ——	First Last
Round 3			
Unsatisfactory Ordered Item Numbers	Limited Knowledge Ordered Item Numbers	Proficient Ordered Item Numbers	Advanced Ordered Item Numbers
First Last 1	First Last	First Last	First Last

<u>Directions</u>: Please enter the range of ordered item numbers that fall into each criteria student status level category according to where you placed your bookmark.

<u>Note</u>: The ranges must be adjacent to each other. For example: Unsatisfactory 1-12, Limited Knowledge: 13-23, Proficient: 24-36, Advanced 37-50. The Advanced Last is the last page in the OIB.

APPENDIX F—EVALUATION FORM

Content Area: _	
Grade:	



Standard Setting Practice Evaluation

The purpose of this evaluation form is to obtain your feedback about the training you have received through the Practice Round. Please complete the information below. **Do not put your name on the form.** We want your feedback to be confidential.

Please mark the appropriate box for each statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I understand the goals of the standard setting meeting.					
I understand the procedures we are using to set standards.					
I understand how to use the standard setting materials.					
I understand the differences between the performance levels.					
I understand how to make the bookmark placements.					
I know what tasks to expect for the remainder of the meeting.					
I am confident in my understanding of the standard setting task.					
I am ready to proceed with the standard setting process.		□Ye	s]No
Please indicate any areas in which you would like more information	n before yo	ou conti	nue.		

Please indicate any questions you may have about the remainder of the standard setting meeting.

Content Area: Grade:				meas prog i	ured ress
Standard Setting Procedural Ev	aluation	1			
The purpose of this evaluation form is to obtain your feedback about Please complete the information below. Do not put your name on be confidential.					ick to
Please mark the appropriate box for each statement:					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I understood how to make the bookmark placements.					
I understood how to use the materials provided.					
I understood how to record my judgments.					
I thought the procedures made sense.					
I was sufficiently familiar with the assessment.					
I understood the differences between the performance levels.					
Please rate the influence of the following when setting standard	s:				
	Not at all influential	Somewhat not influential	Neutral	Somewhat influential	Extremely influential
The Performance Level Definitions.					
My expectations of students.					
The difficulty of the test materials.					
My experience in the field.					
Discussions with other participants.					

What materials, information, or procedures were most influential in your placement of the cut scores? Why?

Decisions of other participants.

Impact data.



Do you believe the final recommended cut score for the performance Somewhat Low, About Right, Somewhat High, or Too High?	levels fo	or this g	grade wa	s Too L	юw,
	Too Low	Somewhat	Low About Right	Somewhat High	Too High
Advanced/Proficient					
Proficient/Limited Knowledge					
Limited Knowledge/Unsatisfactory					
Please provide any additional comments about the cut score placement	nts for th	is grad	e.		

Content Area: _	
Grade:	



Standard Setting Final Evaluation

Please complete the information below. Your feedback will provide a basis for evaluating the training,
methods, and materials. Do not put your name on the form. We want your feedback to be confidential.

methods, and m	aterials. Do 1	not put	your n	ame on th	ne form. Wo	e want your	feedbacl	to be	confide	ential.
Gender:	Male \square	Femal	le □							
Race/ethnicity:	White \square	Black	□ Hi	ispanic 🗆	Asian \square	Pacific Isla	nder 🗆	Ame	rican Inc	lian 🗆
Years of experie	ence in educa	tion:	0-5		6-10 🗆	11-15		N	Iore that	n 15 □
Area of Experti	se (Check all	that ap	ply):	S	Students wit	h Disabilitie	es			
				S	Students wit	h Limited E	nglish P	roficie	ncy	
				E	Economicall	ly Disadvant	aged Stu	idents		
				(Gifted and T	Calented Stud	dents			
				(General Edu	cation				
Please rate the	usefulness o	of each	of the f	following:						
						Not at all useful	Somewhat not useful	Neutral	Somewhat useful	Extremely useful
The opening ses	ssion.									
Completing the	practice test.									
Completing the	item map.									
Discussions wit	h other partic	cipants.								
Impact data.										



Please mark the appropriate box for each statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I understood the goals of the standard setting meeting.					
The facilitator helped me understand the process.					
The materials contained the information needed to set standards.					
I understood how to use the impact data.					
I understood how the cut scores were calculated.					
The facilitator was able to provide answers to my questions.					
Sufficient time was allotted for training on the standard setting tasks.					
Sufficient time was allotted to complete the standard setting tasks.					
The facilitator helped the standard setting process run smoothly.					
Overall, the standard setting process produced credible results.					

Please provide any additional comments about the standard setting process or suggestions as to how the training and process could be improved.

Standard Setting Articulation Evaluation:

Prior to Discussion

Think about the KSAs that each grade-content group came to consensus on for each performance
level, the profiles, and your knowledge of the students and the content. When you look across all

grades, do you judge the cut scores for each of the performance levels as too low, somewhat low,

about right, somewhat high, or too high?

Content Area: _____

Grade		3	4	5	6	7	8	9	10
	Too Low								
	Somewhat Low								
Advanced/ Proficient	About Right								
	Somewhat High								
	Too High								
	Too Low								
D (" : //	Somewhat Low								
Proficient/ Limited Knowledge	About Right								
	Somewhat High								
	Too High								
	Too Low								
7	Somewhat Low								
Limited Knowledge/ Unsatisfactory	About Right								
	Somewhat High								
	Too High								

Please provide any additional comments about the cut score placements across grades.

Standard Setting Articulation Evaluation:

Post Discussion

Think about the KSAs that each grade-content group came to consensus on for each performance
level, the profiles, and your knowledge of the students and the content. When you look across all

grades, do you judge the adjusted cut scores for each of the performance levels as too low,

somewhat low, about right, somewhat high, or too high?

Content Area: _____

Grade		3	4	5	6	7	8	9	10
Advanced/ Proficient	Too Low								
	Somewhat Low								
	About Right								
	Somewhat High								
	Too High								
Proficient/ Limited Knowledge	Too Low								
	Somewhat Low								
	About Right								
	Somewhat High								
	Too High								
Limited Knowledge/ Unsatisfactory	Too Low								
	Somewhat Low								
	About Right								
	Somewhat High								
	Too High								

Please provide any additional comments about the cut score placements across grades.

APPENDIX G—POWERPOINT PRESENTATION

Welcome!



Oklahoma State Testing Program (OSTP)

Standard Setting
ELA (3-8 and 10), Math (3-8 and 10), and Science (5, 8 and 10)
August 8-11, 2017

Today's Agenda

- 1. Context and Policy Introduction
- 2. Georgetown Study: Providing Context
- 3. Standard Setting Process



Oklahoma State Department of Education Staff

- Superintendent Joy Hofmeister
- Dr. Jeanene Barnett Deputy Superintendent of Assessment & Accountability
- Craig Walker Executive Director of State Assessments
- Maria Harris Assistant Executive Director of State Assessments
- Elizabeth Warren Director of ELPA
- Vacant Director of Assessment & Data Literacy
- Sarah Owens Math Assessment Specialist
- Cora James Science Assessment Specialist
- Christy McCreary ELA/Social Studies Assessment Specialist
- Rebecca Logan Executive Director of NAEP
- Dr. Maridyth McBee Assessment & Accountability Systems Consultant
- Dr. Marianne Perie External Standard Setting Evaluator



Measured Progress Staff

- Margie McCaw Vice President, Client Services
- Tammy Bullock Director, Client Services
- Julie DiBona Portfolio Manager, Client Services
- Matthew Gushta Director, Psychometrics
- Xi Wang Psychometrician
- Karen Paavola Director, Content, Design and Development
- Jim Kroening Manager, Content, Design, and Development: ELA, Social Studies, Alternate Assessments (also facilitator ELA Grade 10)
- David Harrison STEM Manager, Content, Design and Development
- Sharman Lyons Program Coordinator, Client Services
- Andrew Martin Statistical Analyst
- Michelle Boazeman Statistical Analyst



Measured Progress Staff - Facilitators

- Eva Villagrana Math Grades 3 and 4
- Tim Pozdol Math Grades 5 and 6
- Robert Hodgman Math Grades 7 and 8
- Richard Sedillo Math Grade 10
- Debbie Hamilton ELA Grades 3 and 4
- Leslie Ruff ELA Grades 5 and 6
- Lisa Jones Kennedy ELA Grades 7 and 8
- Nandita Dangoria Science Grade 5
- Paul Ritchie Science Grade 8
- Veronica Zonick Science Grade 10



Oklahoma Statute on Performance Levels

- The Commission for Educational Quality and Accountability shall determine and adopt a series of student performance levels and the corresponding cut scores pursuant Oklahoma School Testing Program Act.
- The Commission for Educational Quality and Accountability shall have the authority to set cut scores using any method which the State Board of Education was authorized to use in setting cut scores prior to July 1, 2013.



Oklahoma Statute on Performance Levels

- The performance levels shall be set by a method that indicates students are ready for the next grade, course, or level of education, as applicable.
- The Commission for Educational Quality and Accountability shall establish panels to review and revise the performance level descriptors for each subject and grade level. The Commission shall ensure that the criterion-referenced tests developed and administered by the State Board of Education pursuant to the Oklahoma School Testing Program Act in grades three through eight and the tests administered at the high school level are vertically aligned by content across grade levels to ensure consistency, continuity, alignment and clarity.



Transitioning to Oklahoma Academic Standards (OAS)

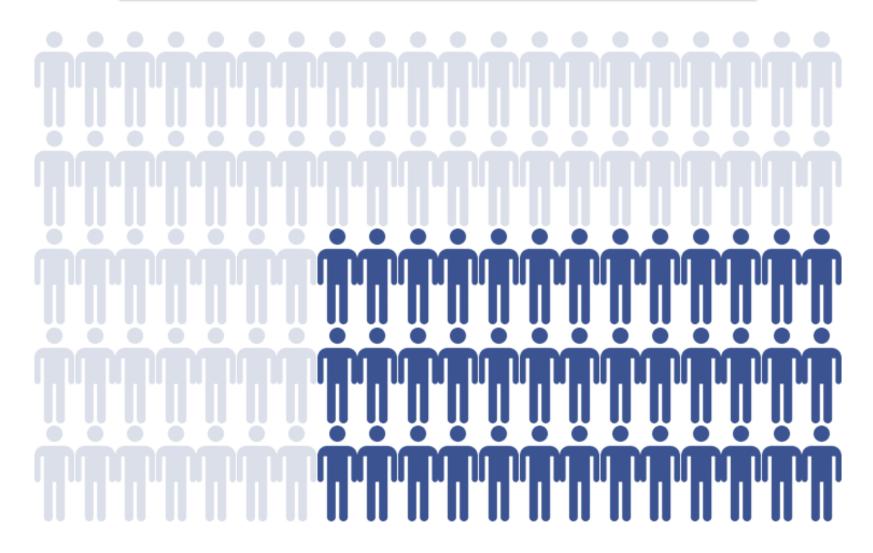
- Oklahoma is transitioning to more challenging standards and assessments
- This transition provides Oklahoma with an <u>opportunity</u> to ensure our students are College and Career Ready
- Why is this transition needed?



Oklahoma 2017 CCRA Results

ACT	SAT
English:	Reading & Writing:
• 46% met benchmark (18)	 45% met benchmark (480)
Mathematics	Mathematics
• 25% met benchmark (22)	• 23% met benchmark (530)
Reading	
• 37% met benchmark (22)	

39% of 2015 High School Graduates had to Take College Remediation Classes

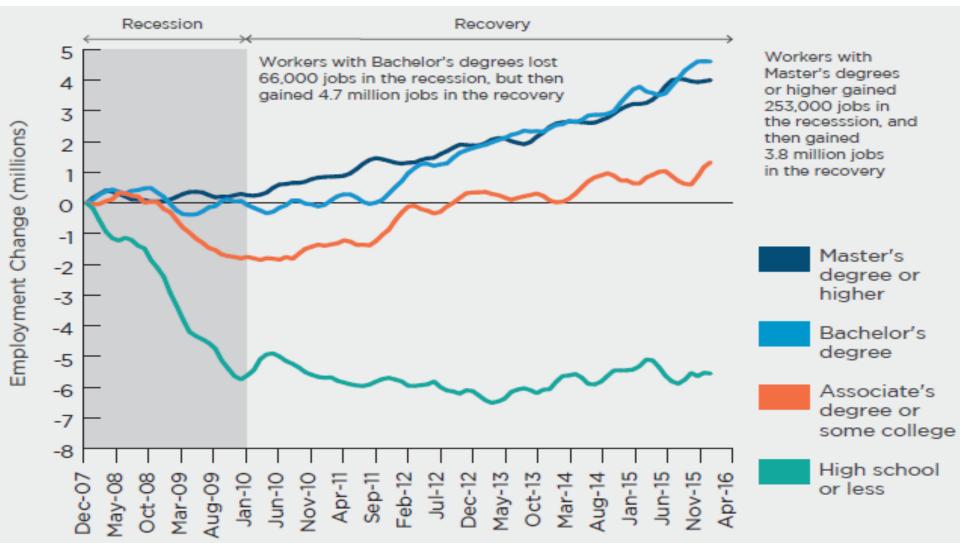


Remediation Courses Impact Student Success

- **Eighty-one percent** of Oklahoma community college students who are required to take a math remediation class **fail to graduate** within three years. Around 70 percent of students who take a math remediation class at a four-year university fail to graduate within six years.
- Remediation courses costs students tuition —
 \$22.2 million annually in Oklahoma but do not go toward college credit.

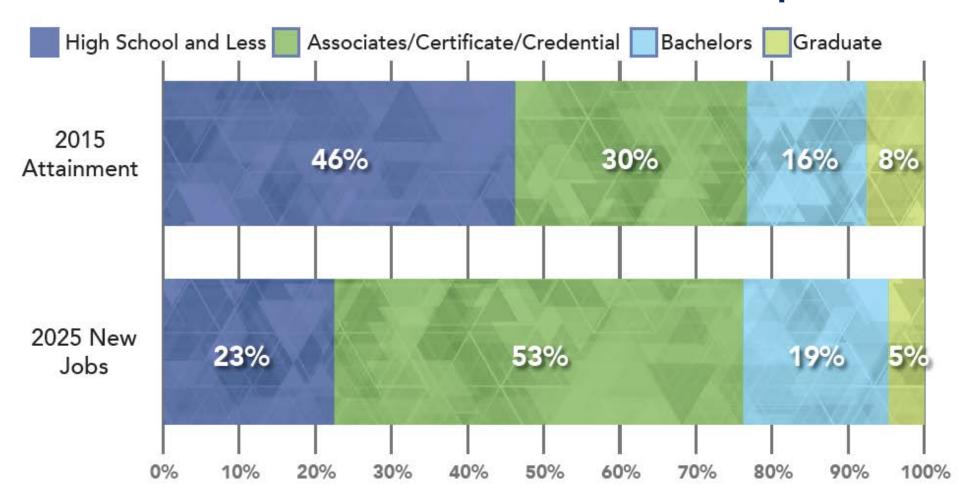


Post Great Recession Workforce Trends





Oklahoma's Workforce Gap



Source: OK Office of Workforce Development EMSI Q2, 2015



Assessment Report 2017

Oklahoma Legislature directed the State Board of Education:

- to evaluate Oklahoma's current state assessment system, and
- make recommendations for its future.

As a result, Oklahoma State Department of Education:

- held regional meetings across the state to determine stakeholder concerns
- convened the Oklahoma Assessment & Accountability Task Force to develop recommendations
- followed the federal requirements and rules as described in ESSA



Recommendations from the Task Force <u>Assessments in Grades 3-8</u>

- Score Interpretation
 - Provide a measure of performance indicative of being on track to <u>College and Career Readiness</u> (CCR).
- Reporting and State Comparability
 - Utilize the existing National Assessment of Educational Progress (NAEP) data to establish statewide comparisons at grades 4 and 8. NAEP data should also be used during standard-setting activities to ensure the CCR cut score is set using national and other state data.



Goals for Oklahoma Schools

- Focus on college and career readiness:
 - College and career ready means that students graduate from high school prepared to enter and succeed in postsecondary opportunities whether college or career.
- Students should graduate high school ready for postsecondary success and need to demonstrate they are on-track towards that goal in grades 3–8.



Rigor of State Proficiency Standards

- Since 2011, **45 states** have raised their standards for student proficiency in reading and math, with the greatest gains between 2013 and 2015.
- Most states set only mediocre expectations for students for nearly 10 years after the passage of the federal No Child Left Behind Act (2001).

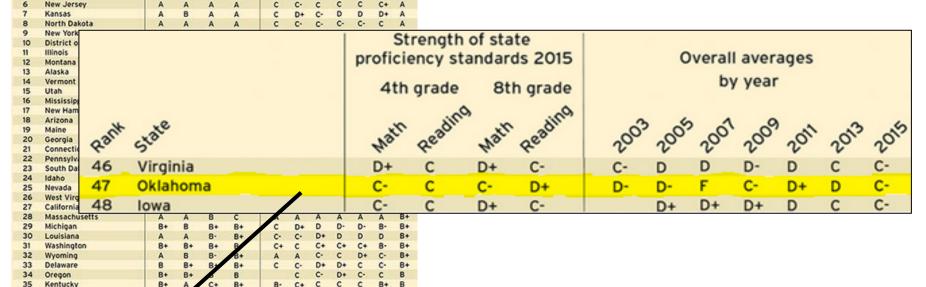


Rigor of State Proficiency Standards (Table 1)

Standards have strengthened in the majority of states over time, and roughly half of the states received a grade of "A" for their standards in 2015.

Strength of state proficiency standards 2015 Overall averages by year 4th grade Rhode Island Colorado Maryland **New Mexico** Arkansas

The differences between state and NAEP proficiency rates



*2005 data are missing; change is calculated from 2007.

Tennessee

Alabama

Missouri

Indiana

Nebraska

Oklahoma

Wisconsin

Virginia

Ohio

lowa

Texas Florida

43

44 45

46

48

North Carolina

South Carolina

Hawaii Minnesota

NOTE: A positive number indicates narrowing the difference between the NAEP and state exams. SOURCE: Authors' calculations based on NAEP and state exam-

B+

B

B+

B

C

C

D+

8

В B-

B-C+

8+ D+

8-

C-C-

D+

C-D+

D+ C-

C

C

C-

C-





Understanding NAEP

- First administered in 1969, the National Assessment of Educational Progress (NAEP) also known as the Nation's Report Card, is the largest nationally representative and continuing assessment of what America's students know and can do in various subjects areas such as, math, reading, science, and writing.
- Elected officials, policymakers, educators, and researchers all use NAEP resources and results to develop ways to improve education in the United States.



Transition to Oklahoma Academic Standards

Ensure our Students are College & Career Ready





What is Depth of Knowledge (DOK)?

- > DOK **measures** the degree to which knowledge is elicited from students.
- > DOK is a common language educators use to describe the complexity of learning tasks and test items.



Oklahoma State Department of Education Academic Affairs and Planning



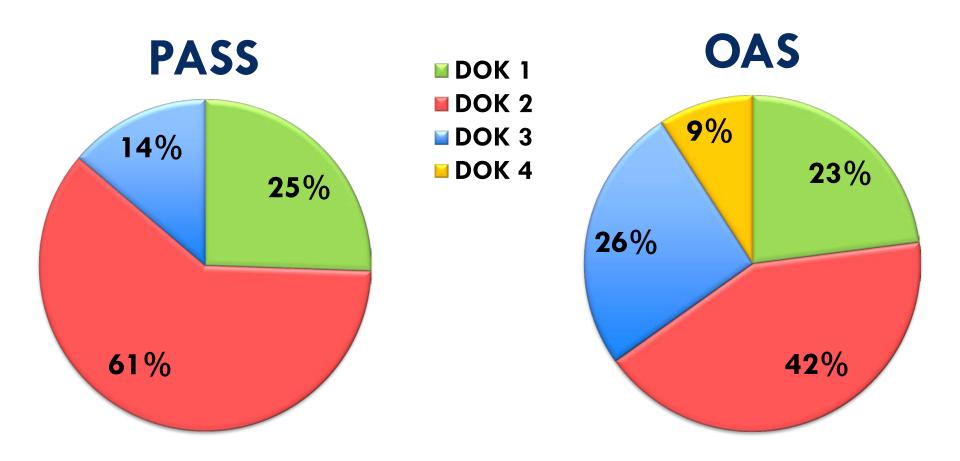
What is Depth of Knowledge (DOK) DOK is About Complexity

- Level 1 requires students to use <u>simple skills</u> or abilities.
- Level 2 includes the engagement of some mental processing beyond recalling.
- Level 3 requires some higher level mental processing like reasoning, planning, and using evidence.
- Level 4 requires <u>complex reasoning</u>, <u>planning</u>, <u>developing</u>, and thinking over an extended period of time.

Oklahoma State Department of Education Academic Affairs and Planning

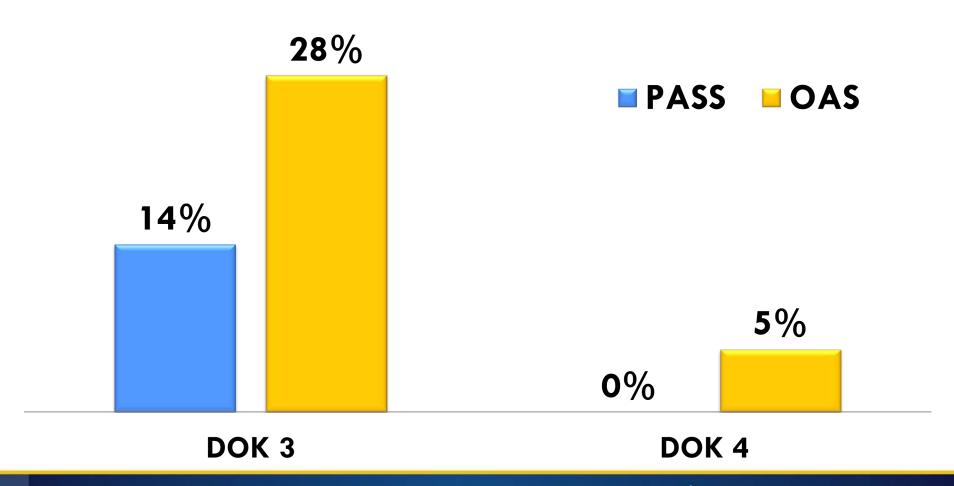


DOK Distribution for Assessed ELA Standards





DOK Distribution for ALL Assessed Standards (3-8)





The Standard Setting Process



Content Standards vs. Performance Standards

- Content standards = "What"
 - Describe the knowledge and skills students are expected to demonstrate by content area and grade
- Performance standards = "How well"
 - Describe attributes of student performance based on Performance Level descriptors

What is Your Job?

 To recommend cut scores for each of the performance levels that will be used to report results:

Unsatisfactory

Cut Score

Limited Knowledge

——— Cut Score

Proficient

Cut Score

Advanced

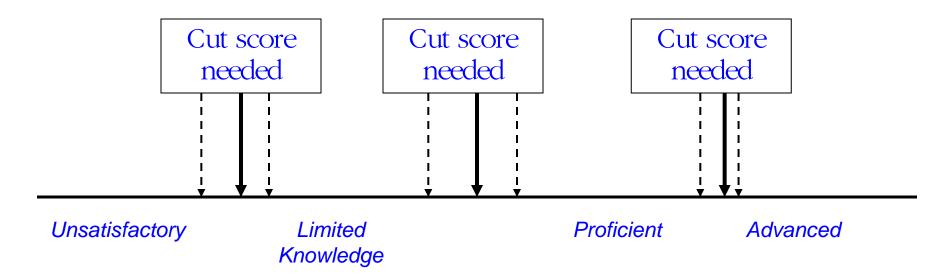
We are Trying to Determine?

- What knowledge, skills, and abilities (KSAs) need to be demonstrated to be classified in each Performance Level?
- How much is enough?
- What test performance corresponds to:
 - Unsatisfactory
 - Limited Knowledge
 - Proficient
 - Advanced

Performance Continuum

Limited
Unsatisfactory Knowledge Proficient Advanced

Based on **Proficiency Levels**, You will Recommend a Cut Score...



Performance Continuum

General Phases of Standard Setting

Data-collection



Policy-making/Decision-making

Final Recommendations

- Your recommendations will be reviewed and presented to the policy makers, responsible for final adoption of the cut scores.
- The recommendations may be accepted, rejected, or modified by the Commission for Educational Quality and Accountability (CEQA).

Overview of Standard Setting Method

- We will cover
 - Implementation of the Bookmark procedure
- Note
 - This session is intended to be an overview
 - Your facilitator will give you more details and guide you through the process step by step

Factors that Influence Selection of Standard-Setting Method

- Prior usage/history
- Recommendation/requirement by policy-making authority
- Type of assessments

Bookmark method chosen

What is the Bookmark Method and How Does It Work?

- A collection of test items is ordered in a ordered item book from easiest to most difficult.
- Panelists place one or more "bookmarks" in that book of items.

Important Terms to Know

- Performance Levels
- Test items
- "Borderline" students
- Knowledge, skills, and abilities (KSAs) needed to answer each test question
- Cut scores

Performance Levels

- Individual review of Performance Levels
- Group Discussion of what student performance in each Performance Level looks like.
- Focus on the "borderline" students, i.e., students who just barely make it into Performance Level.

Review Performance Levels and Develop Borderline Descriptions

- Create bulleted lists of
 - the knowledge, skills, and abilities a student must demonstrate to be classified in each Performance Level, and
 - the knowledge, skills, and abilities that distinguish one Performance Level from another.
- You must reach consensus as a group about the KSAs that define borderline student performance.

How to Place a Bookmark

- Start at the beginning of the ordered item booklet.
- Evaluate whether at least two thirds of the students who demonstrate knowledge and skills at the borderline of Proficient would correctly answer the item: If Yes, move on to the next item.
- Place the bookmark where you think at least two thirds of the Proficient "borderline" students would no longer correctly answer the item.

How to Place a Bookmark

Item Number	Would at least two-thirds of the students who demonstrate skills at the Does Not Limited Knowledge- Proficient "borderline" correctly answer this item?
1	Yes
2	Yes
3	Yes
4	Yes
5	Yes
6	No
7	Yes
8	Yes
9	No
10	No
11	No
12	No
13	No
14	No
15	No
• • •	No

How to Place a Bookmark

- In this example, the bookmark would go between items 8 and 9.
- You will have opportunities to discuss your bookmark placements and change them, if desired.
- Place one bookmark for each cut score (between the Performance Levels).

Before You Place the Bookmarks...

- Take the test to familiarize yourself with the test taking experience.
- Review the ordered item book.
- Complete the item map form, involves identifying the knowledge, skills, and abilities specific to each item.

Item Order	What knowledge and skills does this item measure?	Why is this item more difficult than the preceding item?
1		
2		
3		
4		
5		
6		
7		
8		

- Review and discuss Performance Levels.
- Develop definition of "borderline" for Limited Knowledge, Proficient, and Advanced.

Bookmarking the Ordered Item Booklet: Practice Round

- Before the actual rating rounds occur you will have an opportunity to practice the bookmark method with a set of practice items.
- You will be given a ordered item book with approximately 10 items to practice the bookmark placement for the cut point between Limited Knowledge and Proficient.

Check for Understanding

- Your facilitator will check with you for understanding and answer any questions you may have during and after the practice round.
- You will then complete a training evaluation form.
- This evaluation form will be used as a check for readiness before proceeding.

Actual Bookmarking: Three Rounds

- Round 1 (Without Discussion)
 - Work through the ordered item booklet.
- Place bookmarks between the items as appropriate.
- Round 2 (With Group Discussion)
 - Discuss the first-round bookmark placements (focus on the KSAs).
 - Examine your cut points in relation to the group results.
- Review and revise placement of bookmarks as appropriate.
- Round 3 (With Group Discussion)
 - Discuss the second-round bookmark placements (focus on the KSAs).
- Examine your cut points in relation to the group results and impact data.
- Review and revise placement of bookmarks as appropriate.

External Assessment Data

- Comparability to external assessments important as validity check.
- External benchmark data will be included as follows:

Subject	Grade	External Benchmark Data
Math	3-8	NAEP Proficiency
Math	10	ACT National College Readiness Benchmark
ELA	3-8	NAEP Proficiency
ELA	10	ACT National College Readiness Benchmark (Reading)
Science	5	NAEP Grade 4 Proficiency
Science	8	NAEP Grade 8 Proficiency
Science	10	ACT National College Readiness Benchmark

External Assessment Data

- For each grade, a region will be shaded in the item map that corresponds to NAEP proficiency or ACT college readiness with a range of +/- 2SEMs around that point.
- For NAEP Proficiency, a linear relationship was determined between grades 4 and 8 and extended to other grades 3-8.
- Within this region is where the Proficient bookmark will be placed.
- Your facilitator will give additional training and guidance on the usage of this data.

External Assessment Data

Example Item Map with Shading

Item	What knowledge and skills	Why is this item more difficult than the preceding
Order	does this item measure?	item?
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		

Role of the Facilitator

- Lead and keep the group on track.
- Ensure that all panelists clearly understand the procedures.
- Ensure that the evaluation forms are completed.
 - Your honest feedback is important!

A Few Reminders

- It is **not** necessary for panelists to reach consensus as to how the items should be categorized.
- You should be open-minded when listening to your colleagues' rationales for their ratings.
- You may or may not change your mind as a result of the discussions.
- We want each panelist to use his or her own best judgment in each round of rating.

Ground Rules

- Process is focused solely on recommending performance labels (cut scores).
- Role of facilitator is to lead and keep the group on track.
- The Performance Levels and their definitions are not open for debate.
- Panelists' recommendations are vital, but final cut score decisions will be made by the Commission of Educational Quality and Accountability.
- Each panelist must complete an evaluation form at the end of the process.
- Each panelist must participate in the entire process or his/her judgments will be discounted.
- No cell phone use except during breaks.
- Please be sure to arrive on time each day.

What's Next?

- Take the Test
- Discuss the Performance Levels
- Complete Item Map Form
- Practice Round
- Round 1
- Round 2
- Round 3
- Evaluation

Any Questions?

Housekeeping

- Folder review
 - Content material
 - Administrative forms
- Secure materials
 - Signing out
 - No electronics
- Signing in for the remainder of the week
- Varied end times
- Importance of attendance

Thank you.

APPENDIX H—INSTRUCTIONS FOR FACILITATORS

GENERAL INSTRUCTIONS FOR OSTP ASSESSMENTS STANDARD SETTING GROUP FACILITATORS

ELA and Math 3-8 August 8-11, 2017

The Standard Setting activities begin with all panelists in one large group, facilitated by one facilitator.

Preliminaries

Introductions:

- 1. Welcome group, introduce yourself (name, affiliation, a little selected background information).
- 2. Have each participant introduce him/herself.
- 3. Ask each participant to sign a nondisclosure form. Do not proceed until a signed nondisclosure form has been collected from each participant.
- 4. Note that while panelists are making their recommendation for the cut scores, the Commission for Education Quality and Accountability make the final cut decision. The decision is almost always within a range around the recommended cut.

Take the Test

Overview: In order to establish an understanding of the test items and for panelists to gain an understanding of the experience of the students who take the test, each participant will take the test. Panelists may wish to discuss or take issue with the items in the test. Tell them we will gladly take their feedback to the SDE. However, this is the actual assessment that students took and it is the set of items on which we must set standards.

- 1) Introduce the assessment and convey/do each of the following:
 - a. Tell panelists that they are about to take an actual OSTP assessment.
 - b. The purpose of the exercise is to help them establish a good understanding of the test items and to gain an understanding of the experience of the students who take the assessment.
- 2) Give each panelist a test booklet.
- 3) Tell panelists to try to take on the perspective of a student as they complete the test.
- 4) When the majority of the panelists have finished, pass out the answer key/scoring rubrics.

<u>Discuss Performance Definitions and Describe Characteristics of the</u> "Borderline" Student

Overview: In order to establish an understanding of the expected performance of borderline students on the test, panelists must have a clear understanding of:

- 1) The definition of the four performance levels, and
- 2) Characteristics of students who are "just able enough" to be classified into each level above Unsatisfactory. These students will be referred to as borderline students, since they are right on the border between levels.

The purpose of this activity is for the panelists to obtain an understanding of the Performance Definitions with an emphasis on characteristics that describe students at the borderline -- both what these students can and cannot do.

This activity is critical since the ratings panelists will be making will be based on these understandings.

Preparation:

1. Use 3 sheets of chart paper and label the top of each one: Borderline Limited Knowledge, Borderline Proficient and Borderline Advanced.

Activities:

- 1) Introduce the task. In this activity they will:
 - a. individually review the Performance Level Descriptors again as needed;
 - b. generate group descriptions of borderline Limited Knowledge, Proficient and Advanced students.

The facilitator should compile the descriptions as bulleted lists on chart paper; the chart paper will then be posted so the panelists can refer to the lists as they go through the bookmark process.

- 2) Check to see if panelists want to discuss the performance levels again. Once they have a solid understanding of the PLDs, have them focus their discussion on the knowledge, skills, and abilities of students who are in the Proficient category, but just barely. The focus should be on those characteristics and KSAs that best describe the lowest level of performance necessary to warrant Proficient classification.
- 3) After discussing Proficient, have the panelists discuss characteristics of the borderline Limited Knowledge student and then characteristics of the borderline Advanced student. Panelists should be made aware of the importance of the Proficient cut. This is the cut from non- proficient to just barely proficient.
- 4) Using chart paper, generate a bulleted list of characteristics for each of the levels. Post these on the wall of the room. Make sure that panelists agree on the bulleted characteristics and have a common understanding.

Fill Out Item Map Form

Overview: The primary purpose of this activity is for panelists to think about what knowledge, skills and abilities (KSAs) are measured by each item as well as what makes one question harder or easier than another. The notes panelists take here will be useful in helping them place their bookmarks and in discussions during the rounds of ratings.

On the item map form there is a shaded region comparable to NAEP proficiency. This is the region panelists should consider for the placement of the Proficient bookmark. The shaded region corresponds to NAEP proficiency with a range of +/- 2 SEMs around that point.

- 1. Pass out the following materials:
 - a. Item map form
 - b. Ordered item book
- 2. Review the ordered item book and item map form with the panelists. Explain what each is, and point out the correspondence of the ordered items between the two. Explain that the items are statistically ordered from easiest to hardest, based on student performance from the most recent administration of the assessment.
- 3. Tell panelists that the shaded region is comparable to NAEP proficiency, and that the Proficient bookmark placement will be set in this range.
- 4. Tell panelists they will work individually at first. After they have completed the item map form, they will then discuss it as a group.
- 5. Starting with the first item, they will record for each item:
 - a. The knowledge, skills and abilities (KSAs) the item measures, and
 - b. their thoughts about what makes that question harder than the previous question.
- 6. Panelists should not agonize over these decisions. It may be that the second item is only slightly harder than the first. Panelists should keep in mind that the purpose of the task is to record notes that will be useful to them in completing their ratings and not necessarily to fill in every space on the form.
- 7. Once panelists have completed the item map form, they should discuss them as a group.
- 8. Based on the group discussion, the panelists should modify their own item map form (make additional notes, cross things out, etc...)

Practice Round (FIRST GRADE ONLY)

Overview of Practice Round: The primary purpose of the Practice Round is for panelists to become familiar with the task of placing the bookmarks. The facilitator will walk the panelists through the Proficient bookmark placement on the practice set, engage the panelists in a readiness discussion and check for understanding. If any of the panelists indicate an incomplete understanding of the practice rating task, then the facilitator will continue to work with the panelists to clarify any misconceptions before proceeding to Round 1.

Activities:

- 1. Make sure panelists have the following materials:
 - a. Practice ordered item set
 - b. Performance Definitions
- 2. Orient panelists to the practice ordered item set. Point out the following:
 - a. Items are organized by difficulty from easiest to hardest;
 - b. The items represent the full range of difficulty included on the test.
 - c. Identify the items on the item map form that correspond to the practice ordered item set. Panelists can note this on the Item Map Form as desired.
- 3. Give the panelists a few minutes to read through the items.
- 4. The facilitator leads the group through a discussion of the Proficient bookmark placement in the practice OIB.
 - a. Referring to the ten ordered items in the practice set, the Performance Definitions, and the bulleted lists of characteristics posted on chart paper, the facilitator will lead a discussion about the placement of the Proficient bookmark.
 - b. Panelists should consider the question: would at least two-thirds of the students performing at the borderline of Proficient answer the item correctly?
 - c. Where the answer changes from yes to no is where the bookmark should be placed.
 - d. Panelists should answer question for all items to check for anomalies.
 - e. Using a show of hands, indicate on chart paper where each panelist placed their bookmark. Have a discussion of their ratings in the context of the ratings made by other members of their group. The panelists with the highest and lowest ratings should comment on why they gave the ratings they did. The group should get a sense of how much variation there is in the ratings.

Readiness Discussion (FIRST GRADE ONLY)

After the panelists have placed bookmarks in the practice ordered item set, lead a readiness discussion by posing the following seven questions.

The purpose of this discussion is to determine how well each panelist understands the bookmark task, to correct any misunderstandings, and if necessary, to identify panelists whose ratings should be excluded from the standard setting if their understanding doesn't improve.

The "correct" answers for each of the questions are listed directly under each question. Some common misunderstandings are also listed for questions one and two. Please watch for these typical misunderstandings and if they arise, redirect the panelists to the correct responses.

Make sure any questions or concerns are resolved prior to moving on.

- 1. What questions should you ask for each item?
 - Would at least two-thirds of the borderline students get this item correct?
 - Would at least two-thirds of the students who just barely fall in the criteria level of interest get this item correct?

Please watch for and correct the following misconceptions.

- Omission of two-thirds (stating all students is also incorrect)
- Omission of borderline (stating all students, or all students in the criteria level of interest is also incorrect)
- 2. What is meant by the "at least two-thirds" rule?
 - At least two-thirds of the borderline students would get items like this correct Please watch for and correct the following misconceptions.
 - All students falling in the criteria level of interest have a one out of two chance of getting this item correct.
- 3. What population of students should you consider for each item?
 - Borderline students
 - Students who just barely fall in the performance level of interest
 - a. Does the target population of borderline students change as I progress through the items for the first bookmark? (NO)
 - b. Does the target population change as I progress to the next bookmark? (YES)
- 4. As you approach a bookmark, how do answers change?
 - The answer to "Would at least two-thirds of the borderline students get this item correct" should change from a "yes" to a "no"
 - The confidence the panelist has in the yes/no answer will decrease as he/she approaches the bookmark placement
- 5. How should your confidence in the answers affect your bookmark placement?
 - As you become less confident in a "yes" answer, the bookmark placement should be approaching.
 - Where you are least confident in your answers is typically where the bookmark will be placed.

- 6. Does placing a bookmark after a certain page mean the student needs to get that many items correct on the assessment? (NO. The OIB page number is only an ordered index, and does not correspond to the number correct).
- 7. Should the population you are thinking about be the students in your classroom or school? (NO. You should be thinking about all of the students in the state)

NOTE: Make sure you collect all of the 'training' OIBs!

Standard Setting Practice Evaluation (FIRST GRADE ONLY)

After the panelists have placed bookmarks in the practice ordered item set and you've completed the readiness discussion and answered any questions, have panelists fill out the training evaluation form. Before you start the Round 1 activities, scan the completed evaluations to see if there are any problems or concerns that need to be addressed before proceeding. **Make sure any questions or concerns are resolved prior to moving on.** Return the completed evaluations to the data analysis work room at the next convenient opportunity.

Round 1

Overview of Round 1: The primary purpose of Round 1 is to ask the panelists to make their initial judgments as to where the bookmark should be placed for each cut. For this round, panelists will work individually, without consulting with their colleagues. Beginning with the first ordered item in the OIB, panelists will evaluate each item in turn. The panelists will gauge the level of difficulty of each of the items for those students who barely meet the definition of Proficient. The task that panelists are asked to do is to estimate whether a student performing at the borderline of Proficient, would answer each question correctly. More specifically, panelists should answer:

• Would *at least* two-thirds of the students performing at the borderline of Proficient answer the question correctly?

On the item map form there is a shaded region comparable to NAEP proficiency. This is the region panelists should consider for the placement of the Proficient bookmark. The shaded region corresponds to NAEP proficiency with a range of +/- 2 SEMs around that point.

The Proficient bookmark placement must be between two shaded items.

The same process is then repeated for the [Unsatisfactory/Limited Knowledge] and [Proficient/Advanced] cuts.

- 1. Panelists should have their ordered item booklets, item map forms, and Performance Definitions. Pass out one rating form to each panelist.
- 2. Have panelists write their Content area, grade, and ID number on the rating form. The ID number is on the back of their name tags.
- 3. Provide an overview of Round 1, covering each of the following:
 - a. Orient panelists to the ordered-item book. Remind them that the items are presented in order of difficulty, from easiest to hardest.
 - b. Remind panelists that the shaded region is comparable to NAEP proficiency, and that the Proficient bookmark placement will be set in this range. The Proficient bookmark must be between two shaded items.
 - c. The primary purpose of this activity is for the panelists to make their initial determination as to whether students whose performance is barely Proficient would correctly answer each item, and to place their bookmark where they believe the answer of 'yes' turns to 'no'. Remind panelists that they should be thinking about at least two-thirds of the borderline students. Once they have completed the process for the [Limited Knowledge/Proficient] cut, they will

- proceed to the remaining two cut points starting with [Unsatisfactory/Limited Knowledge] and then the [Proficient/Advanced] cut.
- d. Each panelist needs to base his/her judgments on his/her experience with the content, understanding of students, and the definitions of the borderline students generated previously.
- e. One bookmark will be placed for each cut point. For OSTP assessments there are 3 cut points and, therefore, three bookmarks will be placed.
- f. If panelists are struggling with placing a particular bookmark, they should use their best judgment and move on. They will have an opportunity to discuss their ratings and make revisions in Rounds 2 and 3.
- 4. Tell panelists that they will be discussing each cut point with the other panelists during Round 2 but that they will be placing the bookmarks individually. It is not necessary for the panelists to come to consensus about where the bookmarks should be placed.
- 5. Go over the rating form with panelists.
 - a. Lead panelists through a step-by-step demonstration of how to fill in the rating form.
 - b. Answer questions the panelists may have about the work in Round 1.
 - c. Once everyone understands what they are to do in Round 1, tell them to begin.
- 6. Starting with the first ordered item in the OIB and the cut between Limited Knowledge and Proficient, the panelists will work through the OIB item by item and make their initial bookmark placements. Have panelists examine five items past their placement to check for anomalies.
- 7. As panelists complete the task, ask them to carefully inspect their rating forms to ensure they are filled out properly.
 - a. The Content area, grade, and ID number must be filled in.
 - b. The item numbers identifying each cut score must be adjacent.
 - c. The Proficient bookmark placement must be between two shaded items on the item map form.
 - d. Check each panelist's rating form before you allow them to leave for a short break.
 - e. When all the rating forms have been collected, the group will take a break. Order the rating forms by ID number and immediately bring the rating forms to the data analysis work room for tabulation.

<u>Tabulation of Round 1 Results</u>
Tabulation of Round 1 results will be completed by the data analysis team as quickly as possible after receipt of the rating forms.

Round 2

Overview of Round 2: In Round 2, the panelists will discuss their Round 1 placements as a group and then revise their ratings on the basis of that discussion. They will discuss their ratings in the context of the ratings made by other members of their group. The panelists with the highest and lowest ratings should comment on why they gave the ratings they did. The group should get a sense of how much variation there is in the ratings. Panelists should also consider the question, "How tough or easy a rater are you?" The purpose here is to allow panelists to examine their individual expectations (in terms of their experiences) and to share these expectations and experiences in order to attain a better understanding of how their experiences impact their decision-making.

To aid with the discussion, the panelists will be provided with the median Round 1 bookmark placements for their group.

Once panelists have reviewed and discussed their bookmark placements, they will be given the opportunity to change or revise their Round 1 ratings.

- 1. Make sure the panelists have their ordered item booklets, item map forms, and Performance Definitions. Return the rating form to each panelist.
- 2. A psychometrician will present and explain the following information to the panelists:
 - a. the median bookmark placements for the group based on the Round 2 ratings. Based on their Round 2 rating form, panelists will know where they fall relative to the group median. This information is provided so panelists can get a sense if they are more stringent or more lenient than other panelists.
- 3. Provide an overview of Round 2. Remind panelists of the following:
 - a. As in Round 1, the primary purpose is to place bookmarks where you feel the criteria levels are best distinguished, considering the additional information and discussion.
 - b. Each panelist needs to base his/her judgments on his/her experience with the content area, understanding of students, the definitions of the borderline students generated previously, discussions with other panelists and the knowledge, skills, and abilities (KSAs) required to answer each item.
- 4. The panelists will discuss their Round 1 ratings as a group, beginning with the Proficient cut point and followed by the Limited Knowledge and Advanced cuts.
 - a. The discussion should focus on differences in where individual panelists in the group placed their bookmarks.
 - b. Panelists should be encouraged to listen to their colleagues as well as express their own points of view.

- c. If the panelists hear a logic/rationale/argument that they did not consider and that they feel is compelling, then they may adjust their ratings to incorporate that information.
- d. On the basis of the discussions, panelists should make a second round of ratings.
- e. Remind panelists that the shaded region is comparable to NAEP proficiency, and that the Proficient bookmark placement will be set in this range. The Proficient bookmark must be between two shaded items.
- f. When placing their Round 2 bookmarks, panelists should not feel compelled to change their ratings.
- g. The group does not have to achieve consensus. If panelists honestly disagree, that is fine. We are trying to get the best judgment of each panelist. Panelists should not feel compelled or coerced into making a rating they disagree with.

Encourage the panelists to use the discussion and feedback to assess how stringent or lenient a judge they are. If a panelist is consistently higher or lower than the group, they may have a different understanding of the borderline student than the rest of the group, or a different understanding of the Performance Definitions, or both. It is O.K. for panelists to disagree, but that disagreement should be based on a common understanding of the Performance Definitions.

- 5. As the group is conducting their discussions, circulate around the room to ensure that the discussions are staying on topic, the panelists understand the task, and that all panelists are participating appropriately in the discussion.
- 6. When all panelists at each group have completed their second ratings, collect the rating forms. When you collect the rating forms **carefully inspect them** to ensure they are filled out properly.
 - a. The Content area, grade, and ID number must be filled in.
 - b. The item numbers identifying each cut score must be adjacent.
 - c. The Proficient bookmark placement must be between two shaded items on the item map form.
 - d. Check each panelist's rating form before you allow them to leave for a short break.
 - e. When all the rating forms have been collected, the group will take a break. Sort rating forms by ID number, and immediately bring the rating forms to the data analysis work room for tabulation.

Round 3

Overview of Round 3: The primary purpose of Round 3 is to ask the panelists to discuss their Round 2 placements as a group and to give them one last opportunity to revise their ratings on the basis of that discussion. As in Round 2, they will discuss their ratings in the context of the ratings made by other members of the group.

To aid with the discussion, a psychometrician will present the following information to the panelists:

- 1. The group median Round 2 bookmark placements, and
- 2. Impact data, showing the approximate percentage of students statewide that would be classified into each performance level category based on the room median bookmark placements from Round 2.
- 3. Standard error information, this will demonstrate to the panelists the amount of variability present in the cut scores expressed in real-world terms.

Once panelists have reviewed and discussed their bookmark placements and the impact data, they will be given the opportunity to change or revise their Round 2 ratings.

- 4. Make sure the panelists have their ordered item booklets, item map forms, and Performance Definitions. Return the rating form to each panelist.
- 5. A psychometrician will present and explain the following information to the panelists:
 - a. the median bookmark placements for the group based on the Round 2 ratings. Based on their Round 2 rating form, panelists will know where they fall relative to the group median. This information is provided so panelists can get a sense if they are more stringent or more lenient than other panelists.
 - b. Impact data, showing the approximate percentage of students statewide that would be classified into each performance level category based on the room median bookmark placements. Panelists will use this information as a "reasonableness check." In other words, they will discuss whether the percentages in each level seem reasonable, based on their knowledge of the test and the current status of students across the state relative to the Performance Definitions. If the answer is no, panelists may choose to make adjustments to one or more of their bookmark placements.
 - c. Standard error information, this will demonstrate to the panelists the amount of variability present in the cut scores expressed in real-world terms. Both Median Absolute Deviation (How much disagreement among panelists) and Conditional Standard Error (Measure of error in assessment) data will be provided. A range of impact data for each cut will be determined for +/-1 SE around the cut score for each of these.

- 6. Provide an overview of Round 3. Remind panelists of the following:
 - a. As in Round 2, the primary purpose is to place bookmarks where you feel the performance levels are best distinguished, considering the additional information and further discussion.
 - b. Each panelist needs to base his/her judgments on his/her experience with the content area, understanding of students, the definitions of the borderline students generated previously, discussions with other panelists and the knowledge, skills, and abilities required to answer each item.
 - a. The panelists will discuss their Round 2 ratings, beginning with the Proficient cut point and followed by the Limited Knowledge and Advanced cuts.
 - b. The discussion should focus on differences in where individual panelists placed their bookmarks.
 - c. Panelists should be encouraged to listen to their colleagues as well as express their own points of view.
 - d. If the panelists hear a logic/rationale/argument that they did not consider and that they feel is compelling, then they may adjust their ratings to incorporate that information.
 - e. On the basis of the discussions, panelists should make a third round of ratings.
 - f. Remind panelists that the shaded region is comparable to NAEP proficiency, and that the Proficient bookmark placement will be set in this range. The Proficient bookmark must be between two shaded items.
 - g. When placing their Round 3 bookmarks, panelists should not feel compelled to change their ratings.
 - h. The group does not have to achieve consensus. If panelists honestly disagree, that is fine. We are trying to get the best judgment of each panelist. Panelists should not feel compelled or coerced into making a rating they disagree with.
 - i. Write brief notes on any notable discussions of the process, any particular sticking points or issues, or key rationales had in their judgments. These do not need to formal, but will be useful if the client has questions regarding the process.
- 7. When the group has completed their final ratings, collect the rating forms. When you collect the rating forms **carefully inspect them** to ensure they are filled out properly.
 - a. The panelist Content area, grade, and ID number must be filled in.

- b. The item numbers identifying each cut score must be adjacent.
- c. The Proficient bookmark placement must be between two shaded items on the item map form.
- d. Sort rating forms by ID number, and immediately provide the completed rating forms to the data analysis team.

Complete Procedural Evaluation Form for the Grade

Make sure panelists fill out the procedural evaluation for the grade. Emphasize that their honest feedback is important. Return the completed evaluations to the data analysis work room at the next convenient opportunity.

Collect the materials from the grade and mark them off on the Materials Tracking sheet.

Complete Second Grade Standard Setting Activities

Begin the standard setting process for the second grade assigned to the panel. Follow the same steps with the exception of the Practice Round, Readiness Discussion, and Practice Evaluation steps.

Complete Final Evaluation Forms

Make sure panelists fill out the final evaluations before they leave. Emphasize that their honest feedback is important.

GENERAL INSTRUCTIONS FOR OSTP ASSESSMENTS STANDARD SETTING GROUP FACILITATORS

ELA 10 and Math 10 August 8-11, 2017

The Standard Setting activities begin with all panelists in one large group, facilitated by one facilitator.

Preliminaries

Introductions:

- 1. Welcome group, introduce yourself (name, affiliation, a little selected background information).
- 2. Have each participant introduce him/herself.
- 3. Ask each participant to sign a nondisclosure form. Do not proceed until a signed nondisclosure form has been collected from each participant.
- 4. Note that while panelists are making their recommendation for the cut scores, the Commission for Education Quality and Accountability make the final cut decision. The decision is almost always within a range around the recommended cut.

Take the Test

Overview: In order to establish an understanding of the test items and for panelists to gain an understanding of the experience of the students who take the test, each participant will take the test. Panelists may wish to discuss or take issue with the items in the test. Tell them we will gladly take their feedback to the SDE. However, this is the actual assessment that students took and it is the set of items on which we must set standards.

- 1) Introduce the assessment and convey/do each of the following:
 - a. Tell panelists that they are about to take an actual OSTP assessment.
 - b. The purpose of the exercise is to help them establish a good understanding of the test items and to gain an understanding of the experience of the students who take the assessment.
- 2) Give each panelist a test booklet.
- 3) Tell panelists to try to take on the perspective of a student as they complete the test.
- 4) When the majority of the panelists have finished, pass out the answer key/scoring rubrics.

<u>Discuss Performance Definitions and Describe Characteristics of the</u> "Borderline" Student

Overview: In order to establish an understanding of the expected performance of borderline students on the test, panelists must have a clear understanding of:

- 1) The definition of the four performance levels, and
- 2) Characteristics of students who are "just able enough" to be classified into each level above Unsatisfactory. These students will be referred to as borderline students, since they are right on the border between levels.

The purpose of this activity is for the panelists to obtain an understanding of the Performance Definitions with an emphasis on characteristics that describe students at the borderline -- both what these students can and cannot do.

This activity is critical since the ratings panelists will be making will be based on these understandings.

Preparation:

1. Use 3 sheets of chart paper and label the top of each one: Borderline Limited Knowledge, Borderline Proficient and Borderline Advanced.

Activities:

- 1) Introduce the task. In this activity they will:
 - a. individually review the Performance Level Descriptors again as needed;
 - b. generate group descriptions of borderline Limited Knowledge, Proficient and Advanced students.

The facilitator should compile the descriptions as bulleted lists on chart paper; the chart paper will then be posted so the panelists can refer to the lists as they go through the bookmark process.

- 2) Check to see if panelists want to discuss the performance levels again. Once they have a solid understanding of the PLDs, have them focus their discussion on the knowledge, skills, and abilities of students who are in the Proficient category, but just barely. The focus should be on those characteristics and KSAs that best describe the lowest level of performance necessary to warrant Proficient classification.
- 3) After discussing Proficient, have the panelists discuss characteristics of the borderline Limited Knowledge student and then characteristics of the borderline Advanced student. Panelists should be made aware of the importance of the Proficient cut. This is the cut from non- proficient to just barely proficient.
- 4) Using chart paper, generate a bulleted list of characteristics for each of the levels. Post these on the wall of the room. Make sure that panelists agree on the bulleted characteristics and have a common understanding.

Fill Out Item Map Form

Overview: The primary purpose of this activity is for panelists to think about what knowledge, skills and abilities (KSAs) are measured by each item as well as what makes one question harder or easier than another. The notes panelists take here will be useful in helping them place their bookmarks and in discussions during the rounds of ratings.

On the item map form there is a shaded region comparable to the ACT college readiness benchmark. This is the region panelists should consider for the placement of the Proficient bookmark. The shaded region corresponds to the ACT college readiness benchmark with a range of \pm 2 SEMs around that point.

- 1. Pass out the following materials:
 - a. Item map form
 - b. Ordered item book
- 2. Review the ordered item book and item map form with the panelists. Explain what each is, and point out the correspondence of the ordered items between the two. Explain that the items are statistically ordered from easiest to hardest, based on student performance from the most recent administration of the assessment.
- 3. Tell panelists that the shaded region is comparable to the ACT college readiness benchmark, and that the Proficient bookmark placement will be set in this range.
- 4. Tell panelists they will work individually at first. After they have completed the item map form, they will then discuss it as a group.
- 5. Starting with the first item, they will record for each item:
 - a. The knowledge, skills and abilities (KSAs) the item measures, and
 - b. their thoughts about what makes that question harder than the previous question.
- 6. Panelists should not agonize over these decisions. It may be that the second item is only slightly harder than the first. Panelists should keep in mind that the purpose of the task is to record notes that will be useful to them in completing their ratings and not necessarily to fill in every space on the form.
- 7. Once panelists have completed the item map form, they should discuss them as a group.
- 8. Based on the group discussion, the panelists should modify their own item map form (make additional notes, cross things out, etc...)

Practice Round

Overview of Practice Round: The primary purpose of the Practice Round is for panelists to become familiar with the task of placing the bookmarks. The facilitator will walk the panelists through the Proficient bookmark placement on the practice set, engage the panelists in a readiness discussion and check for understanding. If any of the panelists indicate an incomplete understanding of the practice rating task, then the facilitator will continue to work with the panelists to clarify any misconceptions before proceeding to Round 1.

Activities:

- 1. Make sure panelists have the following materials:
 - a. Practice ordered item set
 - b. Performance Definitions
- 2. Orient panelists to the practice ordered item set. Point out the following:
 - a. Items are organized by difficulty from easiest to hardest;
 - b. The items represent the full range of difficulty included on the test.
 - c. Identify the items on the item map form that correspond to the practice ordered item set. Panelists can note this on the Item Map Form as desired.
- 3. Give the panelists a few minutes to read through the items.
- 4. The facilitator leads the group through a discussion of the Proficient bookmark placement in the practice OIB.
 - a. Referring to the ten ordered items in the practice set, the Performance Definitions, and the bulleted lists of characteristics posted on chart paper, the facilitator will lead a discussion about the placement of the Proficient bookmark.
 - b. Panelists should consider the question: would at least two-thirds of the students performing at the borderline of Proficient answer the item correctly?
 - c. Where the answer changes from yes to no is where the bookmark should be placed.
 - d. Panelists should answer question for all items to check for anomalies.
 - e. Using a show of hands, indicate on chart paper where each panelist placed their bookmark. Have a discussion of their ratings in the context of the ratings made by other members of their group. The panelists with the highest and lowest ratings should comment on why they gave the ratings they did. The group should get a sense of how much variation there is in the ratings.

Readiness Discussion

After the panelists have placed bookmarks in the practice ordered item set, lead a readiness discussion by posing the following seven questions.

The purpose of this discussion is to determine how well each panelist understands the bookmark task, to correct any misunderstandings, and if necessary, to identify panelists whose ratings should be excluded from the standard setting if their understanding doesn't improve.

The "correct" answers for each of the questions are listed directly under each question. Some common misunderstandings are also listed for questions one and two. Please watch for these typical misunderstandings and if they arise, redirect the panelists to the correct responses.

Make sure any questions or concerns are resolved prior to moving on.

- 1. What questions should you ask for each item?
 - Would at least two-thirds of the borderline students get this item correct?
 - Would at least two-thirds of the students who just barely fall in the criteria level of interest get this item correct?

Please watch for and correct the following misconceptions.

- Omission of two-thirds (stating all students is also incorrect)
- Omission of borderline (stating all students, or all students in the criteria level of interest is also incorrect)
- 2. What is meant by the "at least two-thirds" rule?
 - At least two-thirds of the borderline students would get items like this correct Please watch for and correct the following misconceptions.
 - All students falling in the criteria level of interest have a one out of two chance of getting this item correct.
- 3. What population of students should you consider for each item?
 - Borderline students
 - Students who just barely fall in the performance level of interest
 - a. Does the target population of borderline students change as I progress through the items for the first bookmark? (NO)
 - b. Does the target population change as I progress to the next bookmark? (YES)
- 4. As you approach a bookmark, how do answers change?
 - The answer to "Would at least two-thirds of the borderline students get this item correct" should change from a "yes" to a "no"
 - The confidence the panelist has in the yes/no answer will decrease as he/she approaches the bookmark placement
- 5. How should your confidence in the answers affect your bookmark placement?
 - As you become less confident in a "yes" answer, the bookmark placement should be approaching.
 - Where you are least confident in your answers is typically where the bookmark will be placed.

- 6. Does placing a bookmark after a certain page mean the student needs to get that many items correct on the assessment? (NO. The OIB page number is only an ordered index, and does not correspond to the number correct).
- 7. Should the population you are thinking about be the students in your classroom or school? (NO. You should be thinking about all of the students in the state)

NOTE: Make sure you collect all of the 'training' OIBs!

Standard Setting Practice Evaluation

After the panelists have placed bookmarks in the practice ordered item set and you've completed the readiness discussion and answered any questions, have panelists fill out the training evaluation form. Before you start the Round 1 activities, scan the completed evaluations to see if there are any problems or concerns that need to be addressed before proceeding. **Make sure any questions or concerns are resolved prior to moving on.** Return the completed evaluations to the data analysis work room at the next convenient opportunity.

Round 1

Overview of Round 1: The primary purpose of Round 1 is to ask the panelists to make their initial judgments as to where the bookmark should be placed for each cut. For this round, panelists will work individually, without consulting with their colleagues. Beginning with the first ordered item in the OIB, panelists will evaluate each item in turn. The panelists will gauge the level of difficulty of each of the items for those students who barely meet the definition of Proficient. The task that panelists are asked to do is to estimate whether a student performing at the borderline of Proficient, would answer each question correctly. More specifically, panelists should answer:

• Would *at least* two-thirds of the students performing at the borderline of Proficient answer the question correctly?

On the item map form there is a shaded region comparable to the ACT college readiness benchmark. This is the region panelists should consider for the placement of the Proficient bookmark. The shaded region corresponds to the ACT college readiness benchmark with a range of \pm 2 SEMs around that point.

The Proficient bookmark placement must be between two shaded items.

The same process is then repeated for the [Unsatisfactory/Limited Knowledge] and [Proficient/Advanced] cuts.

- 1. Panelists should have their ordered item booklets, item map forms, and Performance Definitions. Pass out one rating form to each panelist.
- 2. Have panelists write their Content area, grade, and ID number on the rating form. The ID number is on the back of their name tags.
- 3. Provide an overview of Round 1, covering each of the following:
 - a. Orient panelists to the ordered-item book. Remind them that the items are presented in order of difficulty, from easiest to hardest.
 - b. Remind panelists that the shaded region is comparable to the ACT college readiness benchmark, and that the Proficient bookmark placement will be set in this range. The Proficient bookmark must be between two shaded items.
 - c. The primary purpose of this activity is for the panelists to make their initial determination as to whether students whose performance is barely Proficient would correctly answer each item, and to place their bookmark where they believe the answer of 'yes' turns to 'no'. Remind panelists that they should be thinking about at least two-thirds of the borderline students. Once they have

- completed the process for the [Limited Knowledge/Proficient] cut, they will proceed to the remaining two cut points starting with [Unsatisfactory/Limited Knowledge] and then the [Proficient/Advanced] cut.
- d. Each panelist needs to base his/her judgments on his/her experience with the content, understanding of students, and the definitions of the borderline students generated previously.
- e. One bookmark will be placed for each cut point. For OSTP assessments there are 3 cut points and, therefore, three bookmarks will be placed.
- f. If panelists are struggling with placing a particular bookmark, they should use their best judgment and move on. They will have an opportunity to discuss their ratings and make revisions in Rounds 2 and 3.
- 4. Tell panelists that they will be discussing each cut point with the other panelists during Round 2 but that they will be placing the bookmarks individually. **It is not necessary for the panelists to come to consensus about where the bookmarks should be placed.**
- 5. Go over the rating form with panelists.
 - a. Lead panelists through a step-by-step demonstration of how to fill in the rating form.
 - b. Answer questions the panelists may have about the work in Round 1.
 - c. Once everyone understands what they are to do in Round 1, tell them to begin.
- 6. Starting with the first ordered item in the OIB and the cut between Limited Knowledge and Proficient, the panelists will work through the OIB item by item and make their initial bookmark placements. Have panelists examine five items past their placement to check for anomalies.
- 7. As panelists complete the task, ask them to carefully inspect their rating forms to ensure they are filled out properly.
 - a. The Content area, grade, and ID number must be filled in.
 - b. The item numbers identifying each cut score must be adjacent.
 - c. The Proficient bookmark placement must be between two shaded items on the item map form.
 - d. Check each panelist's rating form before you allow them to leave for a short break.
 - e. When all the rating forms have been collected, the group will take a break. Order the rating forms by ID number and immediately bring the rating forms to the data analysis work room for tabulation.

Tabulation of Round 1 Results

Tabulation of Round 1 results will be completed by the data analysis team as quickly as possible after receipt of the rating forms.

Round 2

Overview of Round 2: In Round 2, the panelists will discuss their Round 1 placements as a group and then revise their ratings on the basis of that discussion. They will discuss their ratings in the context of the ratings made by other members of their group. The panelists with the highest and lowest ratings should comment on why they gave the ratings they did. The group should get a sense of how much variation there is in the ratings. Panelists should also consider the question, "How tough or easy a rater are you?" The purpose here is to allow panelists to examine their individual expectations (in terms of their experiences) and to share these expectations and experiences in order to attain a better understanding of how their experiences impact their decision-making.

To aid with the discussion, the panelists will be provided with the median Round 1 bookmark placements for their group.

Once panelists have reviewed and discussed their bookmark placements, they will be given the opportunity to change or revise their Round 1 ratings.

- 1. Make sure the panelists have their ordered item booklets, item map forms, and Performance Definitions. Return the rating form to each panelist.
- 2. A psychometrician will present and explain the following information to the panelists:
 - a. the median bookmark placements for the group based on the Round 2 ratings. Based on their Round 2 rating form, panelists will know where they fall relative to the group median. This information is provided so panelists can get a sense if they are more stringent or more lenient than other panelists.
- 3. Provide an overview of Round 2. Remind panelists of the following:
 - a. As in Round 1, the primary purpose is to place bookmarks where you feel the criteria levels are best distinguished, considering the additional information and discussion.
 - b. Each panelist needs to base his/her judgments on his/her experience with the content area, understanding of students, the definitions of the borderline students generated previously, discussions with other panelists and the knowledge, skills, and abilities (KSAs) required to answer each item.
- 4. The panelists will discuss their Round 1 ratings as a group, beginning with the Proficient cut point and followed by the Limited Knowledge and Advanced cuts.
 - a. The discussion should focus on differences in where individual panelists in the group placed their bookmarks.

- b. Panelists should be encouraged to listen to their colleagues as well as express their own points of view.
- c. If the panelists hear a logic/rationale/argument that they did not consider and that they feel is compelling, then they may adjust their ratings to incorporate that information.
- d. On the basis of the discussions, panelists should make a second round of ratings.
- e. Remind panelists that the shaded region is comparable to the ACT college readiness benchmark, and that the Proficient bookmark placement will be set in this range. The Proficient bookmark must be between two shaded items.
- f. When placing their Round 2 bookmarks, panelists should not feel compelled to change their ratings.
- g. The group does not have to achieve consensus. If panelists honestly disagree, that is fine. We are trying to get the best judgment of each panelist. Panelists should not feel compelled or coerced into making a rating they disagree with.

Encourage the panelists to use the discussion and feedback to assess how stringent or lenient a judge they are. If a panelist is consistently higher or lower than the group, they may have a different understanding of the borderline student than the rest of the group, or a different understanding of the Performance Definitions, or both. It is O.K. for panelists to disagree, but that disagreement should be based on a common understanding of the Performance Definitions.

- 5. As the group is conducting their discussions, circulate around the room to ensure that the discussions are staying on topic, the panelists understand the task, and that all panelists are participating appropriately in the discussion.
- 6. When all panelists at each group have completed their second ratings, collect the rating forms. When you collect the rating forms **carefully inspect them** to ensure they are filled out properly.
 - a. The Content area, grade, and ID number must be filled in.
 - b. The item numbers identifying each cut score must be adjacent.
 - c. The Proficient bookmark placement must be between two shaded items on the item map form.
 - d. Check each panelist's rating form before you allow them to leave for a short break.



Round 3

Overview of Round 3: The primary purpose of Round 3 is to ask the panelists to discuss their Round 2 placements as a group and to give them one last opportunity to revise their ratings on the basis of that discussion. As in Round 2, they will discuss their ratings in the context of the ratings made by other members of the group.

To aid with the discussion, a psychometrician will present the following information to the panelists:

- 1. The group median Round 2 bookmark placements, and
- 2. Impact data, showing the approximate percentage of students statewide that would be classified into each performance level category based on the room median bookmark placements from Round 2.
- 3. Standard error information, this will demonstrate to the panelists the amount of variability present in the cut scores expressed in real-world terms.
- 4. Remediation Data, this will show percentage of college students requiring remediation in appropriate subjects.

Once panelists have reviewed and discussed their bookmark placements and the impact data, they will be given the opportunity to change or revise their Round 2 ratings.

- 5. Make sure the panelists have their ordered item booklets, item map forms, and Performance Definitions. Return the rating form to each panelist.
- 6. A psychometrician will present and explain the following information to the panelists:
 - a. the median bookmark placements for the group based on the Round 2 ratings. Based on their Round 2 rating form, panelists will know where they fall relative to the group median. This information is provided so panelists can get a sense if they are more stringent or more lenient than other panelists.
 - b. Impact data, showing the approximate percentage of students statewide that would be classified into each performance level category based on the room median bookmark placements. Panelists will use this information as a "reasonableness check." In other words, they will discuss whether the percentages in each level seem reasonable, based on their knowledge of the test and the current status of students across the state relative to the Performance Definitions. If the answer is no, panelists may choose to make adjustments to one or more of their bookmark placements.
 - c. Standard error information, this will demonstrate to the panelists the amount of variability present in the cut scores expressed in real-world terms. Both Median Absolute Deviation (How much disagreement among panelists) and Conditional Standard Error (Measure of error in assessment) data will be provided. A range

- of impact data for each cut will be determined for +/-1 SE around the cut score for each of these.
- d. Remediation Data, this will show percentage of Oklahoma college students requiring remediation in appropriate subjects.
- 7. Provide an overview of Round 3. Remind panelists of the following:
 - a. As in Round 2, the primary purpose is to place bookmarks where you feel the performance levels are best distinguished, considering the additional information and further discussion.
 - b. Each panelist needs to base his/her judgments on his/her experience with the content area, understanding of students, the definitions of the borderline students generated previously, discussions with other panelists and the knowledge, skills, and abilities required to answer each item.
 - a. The panelists will discuss their Round 2 ratings, beginning with the Proficient cut point and followed by the Limited Knowledge and Advanced cuts.
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 - d. If the panelists hear a logic/rationale/argument that they did not consider and that they feel is compelling, then they may adjust their ratings to incorporate that information.
 - e. On the basis of the discussions, panelists should make a third round of ratings.
 - f. Remind panelists that the shaded region is comparable to the ACT college readiness benchmark, and that the Proficient bookmark placement will be set in this range. The Proficient bookmark must be between two shaded items.
 - g. When placing their Round 3 bookmarks, panelists should not feel compelled to change their ratings.
 - h. The group does not have to achieve consensus. If panelists honestly disagree, that is fine. We are trying to get the best judgment of each panelist. Panelists should not feel compelled or coerced into making a rating they disagree with.
 - Write brief notes on any notable discussions of the process, any particular sticking points or issues, or key rationales had in their judgments. These do not need to formal, but will be useful if the client has questions regarding the process.

- 8. When the group has completed their final ratings, collect the rating forms. When you collect the rating forms **carefully inspect them** to ensure they are filled out properly.
 - a. The panelist Content area, grade, and ID number must be filled in.
 - b. The item numbers identifying each cut score must be adjacent.
 - c. The Proficient bookmark placement must be between two shaded items on the item map form.
 - d. Sort rating forms by ID number, and immediately provide the completed rating forms to the data analysis team.

Complete Procedural Evaluation Form

Make sure panelists fill out the procedural evaluation for the grade. Emphasize that their honest feedback is important. Return the completed evaluations to the data analysis work room at the next convenient opportunity.

Collect the materials from the grade and mark them off on the Materials Tracking sheet.

Complete Final Evaluation Forms

Make sure panelists fill out the final evaluations before they leave. Emphasize that their honest feedback is important.

GENERAL INSTRUCTIONS FOR OSTP ASSESSMENTS STANDARD SETTING GROUP FACILITATORS

Science 5, 8, and 10 August 8-11, 2017

The Standard Setting activities begin with all panelists in one large group, facilitated by one facilitator.

Preliminaries

Introductions:

- 1. Welcome group, introduce yourself (name, affiliation, a little selected background information).
- 2. Have each participant introduce him/herself.
- 3. Ask each participant to sign a nondisclosure form. Do not proceed until a signed nondisclosure form has been collected from each participant.
- 4. Note that while panelists are making their recommendation for the cut scores, the Commission for Education Quality and Accountability make the final cut decision. The decision is almost always within a range around the recommended cut.

Take the Test

Overview: In order to establish an understanding of the test items and for panelists to gain an understanding of the experience of the students who take the test, each participant will take the test. Panelists may wish to discuss or take issue with the items in the test. Tell them we will gladly take their feedback to the SDE. However, this is the actual assessment that students took and it is the set of items on which we must set standards.

- 1) Introduce the assessment and convey/do each of the following:
 - a. Tell panelists that they are about to take an actual OSTP assessment.
 - b. The purpose of the exercise is to help them establish a good understanding of the test items and to gain an understanding of the experience of the students who take the assessment.
- 2) Give each panelist a test booklet.
- 3) Tell panelists to try to take on the perspective of a student as they complete the test.
- 4) When the majority of the panelists have finished, pass out the answer key/scoring rubrics.

<u>Discuss Performance Definitions and Describe Characteristics of the</u> "Borderline" Student

Overview: In order to establish an understanding of the expected performance of borderline students on the test, panelists must have a clear understanding of:

- 1) The definition of the four performance levels, and
- 2) Characteristics of students who are "just able enough" to be classified into each level above Unsatisfactory. These students will be referred to as borderline students, since they are right on the border between levels.

The purpose of this activity is for the panelists to obtain an understanding of the Performance Definitions with an emphasis on characteristics that describe students at the borderline -- both what these students can and cannot do.

This activity is critical since the ratings panelists will be making will be based on these understandings.

Preparation:

1. Use 3 sheets of chart paper and label the top of each one: Borderline Limited Knowledge, Borderline Proficient and Borderline Advanced.

Activities:

- 1) Introduce the task. In this activity they will:
 - a. individually review the Performance Level Descriptors again as needed;
 - b. generate group descriptions of borderline Limited Knowledge, Proficient and Advanced students.

The facilitator should compile the descriptions as bulleted lists on chart paper; the chart paper will then be posted so the panelists can refer to the lists as they go through the bookmark process.

- 2) Check to see if panelists want to discuss the performance levels again. Once they have a solid understanding of the PLDs, have them focus their discussion on the knowledge, skills, and abilities of students who are in the Proficient category, but just barely. The focus should be on those characteristics and KSAs that best describe the lowest level of performance necessary to warrant Proficient classification.
- 3) After discussing Proficient, have the panelists discuss characteristics of the borderline Limited Knowledge student and then characteristics of the borderline Advanced student. Panelists should be made aware of the importance of the Proficient cut. This is the cut from non- proficient to just barely proficient.
- 4) Using chart paper, generate a bulleted list of characteristics for each of the levels. Post these on the wall of the room. Make sure that panelists agree on the bulleted characteristics and have a common understanding.

Fill Out Item Map Form

Overview: The primary purpose of this activity is for panelists to think about what knowledge, skills and abilities (KSAs) are measured by each item as well as what makes one question harder or easier than another. The notes panelists take here will be useful in helping them place their bookmarks and in discussions during the rounds of ratings.

On the item map form there is a shaded region comparable to NAEP proficiency. This is the region panelists should consider for the placement of the Proficient bookmark. The shaded region corresponds to NAEP proficiency with a range of +/- 2 SEMs around that point.

- 1. Pass out the following materials:
 - a. Item map form
 - b. Ordered item book
- 2. Review the ordered item book and item map form with the panelists. Explain what each is, and point out the correspondence of the ordered items between the two. Explain that the items are statistically ordered from easiest to hardest, based on student performance from the most recent administration of the assessment.
- 3. Tell panelists that the shaded region is comparable to NAEP proficiency, and that the Proficient bookmark placement will be set in this range.
- 4. Tell panelists they will work individually at first. After they have completed the item map form, they will then discuss it as a group.
- 5. Starting with the first item, they will record for each item:
 - a. The knowledge, skills and abilities (KSAs) the item measures, and
 - b. their thoughts about what makes that question harder than the previous question.
- 6. Panelists should not agonize over these decisions. It may be that the second item is only slightly harder than the first. Panelists should keep in mind that the purpose of the task is to record notes that will be useful to them in completing their ratings and not necessarily to fill in every space on the form.
- 7. Once panelists have completed the item map form, they should discuss them as a group.
- 8. Based on the group discussion, the panelists should modify their own item map form (make additional notes, cross things out, etc...)

Practice Round

Overview of Practice Round: The primary purpose of the Practice Round is for panelists to become familiar with the task of placing the bookmarks. The facilitator will walk the panelists through the Proficient bookmark placement on the practice set, engage the panelists in a readiness discussion and check for understanding. If any of the panelists indicate an incomplete understanding of the practice rating task, then the facilitator will continue to work with the panelists to clarify any misconceptions before proceeding to Round 1.

Activities:

- 1. Make sure panelists have the following materials:
 - a. Practice ordered item set
 - b. Performance Definitions
- 2. Orient panelists to the practice ordered item set. Point out the following:
 - a. Items are organized by difficulty from easiest to hardest;
 - b. The items represent the full range of difficulty included on the test.
 - c. Identify the items on the item map form that correspond to the practice ordered item set. Panelists can note this on the Item Map Form as desired.
- 3. Give the panelists a few minutes to read through the items.
- 4. The facilitator leads the group through a discussion of the Proficient bookmark placement in the practice OIB.
 - a. Referring to the ten ordered items in the practice set, the Performance Definitions, and the bulleted lists of characteristics posted on chart paper, the facilitator will lead a discussion about the placement of the Proficient bookmark.
 - b. Panelists should consider the question: would at least two-thirds of the students performing at the borderline of Proficient answer the item correctly?
 - c. Where the answer changes from yes to no is where the bookmark should be placed.
 - d. Panelists should answer question for all items to check for anomalies.
 - e. Using a show of hands, indicate on chart paper where each panelist placed their bookmark. Have a discussion of their ratings in the context of the ratings made by other members of their group. The panelists with the highest and lowest ratings should comment on why they gave the ratings they did. The group should get a sense of how much variation there is in the ratings.

Readiness Discussion

After the panelists have placed bookmarks in the practice ordered item set, lead a readiness discussion by posing the following seven questions.

The purpose of this discussion is to determine how well each panelist understands the bookmark task, to correct any misunderstandings, and if necessary, to identify panelists whose ratings should be excluded from the standard setting if their understanding doesn't improve.

The "correct" answers for each of the questions are listed directly under each question. Some common misunderstandings are also listed for questions one and two. Please watch for these typical misunderstandings and if they arise, redirect the panelists to the correct responses.

Make sure any questions or concerns are resolved prior to moving on.

- 1. What questions should you ask for each item?
 - Would at least two-thirds of the borderline students get this item correct?
 - Would at least two-thirds of the students who just barely fall in the criteria level of interest get this item correct?

Please watch for and correct the following misconceptions.

- Omission of two-thirds (stating all students is also incorrect)
- Omission of borderline (stating all students, or all students in the criteria level of interest is also incorrect)
- 2. What is meant by the "at least two-thirds" rule?
 - At least two-thirds of the borderline students would get items like this correct Please watch for and correct the following misconceptions.
 - All students falling in the criteria level of interest have a one out of two chance of getting this item correct.
- 3. What population of students should you consider for each item?
 - Borderline students
 - Students who just barely fall in the performance level of interest
 - a. Does the target population of borderline students change as I progress through the items for the first bookmark? (NO)
 - b. Does the target population change as I progress to the next bookmark? (YES)
- 4. As you approach a bookmark, how do answers change?
 - The answer to "Would at least two-thirds of the borderline students get this item correct" should change from a "yes" to a "no"
 - The confidence the panelist has in the yes/no answer will decrease as he/she approaches the bookmark placement
- 5. How should your confidence in the answers affect your bookmark placement?
 - As you become less confident in a "yes" answer, the bookmark placement should be approaching.
 - Where you are least confident in your answers is typically where the bookmark will be placed.

- 6. Does placing a bookmark after a certain page mean the student needs to get that many items correct on the assessment? (NO. The OIB page number is only an ordered index, and does not correspond to the number correct).
- 7. Should the population you are thinking about be the students in your classroom or school? (NO. You should be thinking about all of the students in the state)

NOTE: Make sure you collect all of the 'training' OIBs!

Standard Setting Practice Evaluation

After the panelists have placed bookmarks in the practice ordered item set and you've completed the readiness discussion and answered any questions, have panelists fill out the training evaluation form. Before you start the Round 1 activities, scan the completed evaluations to see if there are any problems or concerns that need to be addressed before proceeding. **Make sure any questions or concerns are resolved prior to moving on.** Return the completed evaluations to the data analysis work room at the next convenient opportunity.

Round 1

Overview of Round 1: The primary purpose of Round 1 is to ask the panelists to make their initial judgments as to where the bookmark should be placed for each cut. For this round, panelists will work individually, without consulting with their colleagues. Beginning with the first ordered item in the OIB, panelists will evaluate each item in turn. The panelists will gauge the level of difficulty of each of the items for those students who barely meet the definition of Proficient. The task that panelists are asked to do is to estimate whether a student performing at the borderline of Proficient, would answer each question correctly. More specifically, panelists should answer:

• Would *at least* two-thirds of the students performing at the borderline of Proficient answer the question correctly?

On the item map form there is a shaded region comparable to NAEP proficiency. This is the region panelists should consider for the placement of the Proficient bookmark. The shaded region corresponds to NAEP proficiency with a range of +/- 2 SEMs around that point.

The Proficient bookmark placement must be between two shaded items.

The same process is then repeated for the [Unsatisfactory/Limited Knowledge] and [Proficient/Advanced] cuts.

- 1. Panelists should have their ordered item booklets, item map forms, and Performance Definitions. Pass out one rating form to each panelist.
- 2. Have panelists write their Content area, grade, and ID number on the rating form. The ID number is on the back of their name tags.
- 3. Provide an overview of Round 1, covering each of the following:
 - a. Orient panelists to the ordered-item book. Remind them that the items are presented in order of difficulty, from easiest to hardest.
 - b. Remind panelists that the shaded region is comparable to NAEP proficiency, and that the Proficient bookmark placement will be set in this range. The Proficient bookmark must be between two shaded items.
 - c. The primary purpose of this activity is for the panelists to make their initial determination as to whether students whose performance is barely Proficient would correctly answer each item, and to place their bookmark where they believe the answer of 'yes' turns to 'no'. Remind panelists that they should be thinking about at least two-thirds of the borderline students. Once they have completed the process for the [Limited Knowledge/Proficient] cut, they will

- proceed to the remaining two cut points starting with [Unsatisfactory/Limited Knowledge] and then the [Proficient/Advanced] cut.
- d. Each panelist needs to base his/her judgments on his/her experience with the content, understanding of students, and the definitions of the borderline students generated previously.
- e. One bookmark will be placed for each cut point. For OSTP assessments there are 3 cut points and, therefore, three bookmarks will be placed.
- f. If panelists are struggling with placing a particular bookmark, they should use their best judgment and move on. They will have an opportunity to discuss their ratings and make revisions in Rounds 2 and 3.
- 4. Tell panelists that they will be discussing each cut point with the other panelists during Round 2 but that they will be placing the bookmarks individually. It is not necessary for the panelists to come to consensus about where the bookmarks should be placed.
- 5. Go over the rating form with panelists.
 - a. Lead panelists through a step-by-step demonstration of how to fill in the rating form.
 - b. Answer questions the panelists may have about the work in Round 1.
 - c. Once everyone understands what they are to do in Round 1, tell them to begin.
- 6. Starting with the first ordered item in the OIB and the cut between Limited Knowledge and Proficient, the panelists will work through the OIB item by item and make their initial bookmark placements. Have panelists examine five items past their placement to check for anomalies.
- 7. As panelists complete the task, ask them to carefully inspect their rating forms to ensure they are filled out properly.
 - a. The Content area, grade, and ID number must be filled in.
 - b. The item numbers identifying each cut score must be adjacent.
 - c. The Proficient bookmark placement must be between two shaded items on the item map form.
 - d. Check each panelist's rating form before you allow them to leave for a short break.
 - e. When all the rating forms have been collected, the group will take a break. Order the rating forms by ID number and immediately bring the rating forms to the data analysis work room for tabulation.

Tabulation of Round 1 Results

Tabulation of Round 1 results will be completed by the data analysis team as quickly as possible after receipt of the rating forms.

Round 2

Overview of Round 2: In Round 2, the panelists will discuss their Round 1 placements as a group and then revise their ratings on the basis of that discussion. They will discuss their ratings in the context of the ratings made by other members of their group. The panelists with the highest and lowest ratings should comment on why they gave the ratings they did. The group should get a sense of how much variation there is in the ratings. Panelists should also consider the question, "How tough or easy a rater are you?" The purpose here is to allow panelists to examine their individual expectations (in terms of their experiences) and to share these expectations and experiences in order to attain a better understanding of how their experiences impact their decision-making.

To aid with the discussion, the panelists will be provided with the median Round 1 bookmark placements for their group.

Once panelists have reviewed and discussed their bookmark placements, they will be given the opportunity to change or revise their Round 1 ratings.

- 1. Make sure the panelists have their ordered item booklets, item map forms, and Performance Definitions. Return the rating form to each panelist.
- 2. A psychometrician will present and explain the following information to the panelists:
 - a. the median bookmark placements for the group based on the Round 2 ratings. Based on their Round 2 rating form, panelists will know where they fall relative to the group median. This information is provided so panelists can get a sense if they are more stringent or more lenient than other panelists.
- 3. Provide an overview of Round 2. Remind panelists of the following:
 - a. As in Round 1, the primary purpose is to place bookmarks where you feel the criteria levels are best distinguished, considering the additional information and discussion.
 - b. Each panelist needs to base his/her judgments on his/her experience with the content area, understanding of students, the definitions of the borderline students generated previously, discussions with other panelists and the knowledge, skills, and abilities (KSAs) required to answer each item.
- 4. The panelists will discuss their Round 1 ratings as a group, beginning with the Proficient cut point and followed by the Limited Knowledge and Advanced cuts.
 - a. The discussion should focus on differences in where individual panelists in the group placed their bookmarks.

- b. Panelists should be encouraged to listen to their colleagues as well as express their own points of view.
- c. If the panelists hear a logic/rationale/argument that they did not consider and that they feel is compelling, then they may adjust their ratings to incorporate that information.
- d. On the basis of the discussions, panelists should make a second round of ratings.
- e. Remind panelists that the shaded region is comparable to NAEP proficiency, and that the Proficient bookmark placement will be set in this range. The Proficient bookmark must be between two shaded items.
- f. When placing their Round 2 bookmarks, panelists should not feel compelled to change their ratings.
- g. The group does not have to achieve consensus. If panelists honestly disagree, that is fine. We are trying to get the best judgment of each panelist. Panelists should not feel compelled or coerced into making a rating they disagree with.

Encourage the panelists to use the discussion and feedback to assess how stringent or lenient a judge they are. If a panelist is consistently higher or lower than the group, they may have a different understanding of the borderline student than the rest of the group, or a different understanding of the Performance Definitions, or both. It is O.K. for panelists to disagree, but that disagreement should be based on a common understanding of the Performance Definitions.

- 5. As the group is conducting their discussions, circulate around the room to ensure that the discussions are staying on topic, the panelists understand the task, and that all panelists are participating appropriately in the discussion.
- 6. When all panelists at each group have completed their second ratings, collect the rating forms. When you collect the rating forms **carefully inspect them** to ensure they are filled out properly.
 - a. The Content area, grade, and ID number must be filled in.
 - b. The item numbers identifying each cut score must be adjacent.
 - c. The Proficient bookmark placement must be between two shaded items on the item map form.
 - d. Check each panelist's rating form before you allow them to leave for a short break.



Round 3

Overview of Round 3: The primary purpose of Round 3 is to ask the panelists to discuss their Round 2 placements as a group and to give them one last opportunity to revise their ratings on the basis of that discussion. As in Round 2, they will discuss their ratings in the context of the ratings made by other members of the group.

To aid with the discussion, a psychometrician will present the following information to the panelists:

- 1. The group median Round 2 bookmark placements, and
- 2. Impact data, showing the approximate percentage of students statewide that would be classified into each performance level category based on the room median bookmark placements from Round 2.
- 3. Standard error information, this will demonstrate to the panelists the amount of variability present in the cut scores expressed in real-world terms.

Once panelists have reviewed and discussed their bookmark placements and the impact data, they will be given the opportunity to change or revise their Round 2 ratings.

- 4. Make sure the panelists have their ordered item booklets, item map forms, and Performance Definitions. Return the rating form to each panelist.
- 5. A psychometrician will present and explain the following information to the panelists:
 - a. the median bookmark placements for the group based on the Round 2 ratings. Based on their Round 2 rating form, panelists will know where they fall relative to the group median. This information is provided so panelists can get a sense if they are more stringent or more lenient than other panelists.
 - b. Impact data, showing the approximate percentage of students statewide that would be classified into each performance level category based on the room median bookmark placements. Panelists will use this information as a "reasonableness check." In other words, they will discuss whether the percentages in each level seem reasonable, based on their knowledge of the test and the current status of students across the state relative to the Performance Definitions. If the answer is no, panelists may choose to make adjustments to one or more of their bookmark placements.
 - c. Standard error information, this will demonstrate to the panelists the amount of variability present in the cut scores expressed in real-world terms. Both Median Absolute Deviation (How much disagreement among panelists) and Conditional Standard Error (Measure of error in assessment) data will be provided. A range of impact data for each cut will be determined for +/-1 SE around the cut score for each of these.

- 6. Provide an overview of Round 3. Remind panelists of the following:
 - a. As in Round 2, the primary purpose is to place bookmarks where you feel the performance levels are best distinguished, considering the additional information and further discussion.
 - b. Each panelist needs to base his/her judgments on his/her experience with the content area, understanding of students, the definitions of the borderline students generated previously, discussions with other panelists and the knowledge, skills, and abilities required to answer each item.
 - a. The panelists will discuss their Round 2 ratings, beginning with the Proficient cut point and followed by the Limited Knowledge and Advanced cuts.
 - b. The discussion should focus on differences in where individual panelists placed their bookmarks.
 - c. Panelists should be encouraged to listen to their colleagues as well as express their own points of view.
 - d. If the panelists hear a logic/rationale/argument that they did not consider and that they feel is compelling, then they may adjust their ratings to incorporate that information.
 - e. On the basis of the discussions, panelists should make a third round of ratings.
 - f. Remind panelists that the shaded region is comparable to NAEP proficiency, and that the Proficient bookmark placement will be set in this range. The Proficient bookmark must be between two shaded items.
 - g. When placing their Round 3 bookmarks, panelists should not feel compelled to change their ratings.
 - h. The group does not have to achieve consensus. If panelists honestly disagree, that is fine. We are trying to get the best judgment of each panelist. Panelists should not feel compelled or coerced into making a rating they disagree with.
 - i. Write brief notes on any notable discussions of the process, any particular sticking points or issues, or key rationales had in their judgments. These do not need to formal, but will be useful if the client has questions regarding the process.
- 7. When the group has completed their final ratings, collect the rating forms. When you collect the rating forms **carefully inspect them** to ensure they are filled out properly.
 - a. The panelist Content area, grade, and ID number must be filled in.

- b. The item numbers identifying each cut score must be adjacent.
- c. The Proficient bookmark placement must be between two shaded items on the item map form.
- d. Sort rating forms by ID number, and immediately provide the completed rating forms to the data analysis team.

Complete Procedural Evaluation Form

Make sure panelists fill out the procedural evaluation for the grade. Emphasize that their honest feedback is important. Return the completed evaluations to the data analysis work room at the next convenient opportunity.

Collect the materials from the grade and mark them off on the Materials Tracking sheet.

Complete Final Evaluation Forms

Make sure panelists fill out the final evaluations before they leave. Emphasize that their honest feedback is important.

APPENDIX I—PANELISTS

Panelists

Grade 3 and 4 English Language Arts

Jackaline ChapmanJordan ShaffAndrea CookPenny DilgCharity CoveyTrier DavenportKristen JonesSarah Price

Grade 3 and 4 Mathematics

Amy Wingard Codi Barnett Annabelle Randall
Amy Schachle Mendy Shepard Lauren Coleman
Andrea Andrade Candice Raines Mindy Englett
Shannon Ashong Sandra Garner

Angela McElhiney

Danny Sipes

Jennifer McLemore

Grade 5 and 6 English Language Arts

Delaney ChidesterLezlie KropfCharolette UzzelCarnie CullenRay RobinsonTammie RichardsonKay WilliamsBobbie ReevesGina TaylorAllie NoblesAudra Plummer

Grade 5 and 6 Mathematics

Jamie SchulzeBetsie PolkJennifer NestelroadHolly CrawfordBobbi PeeryPaula StewartSondra HardinMeagan Habluetzel

Grade 5 Science

Angela Ervin Karla White Toni Humphrey
Alecia Jarvis Lisa Pitts Megan Veldhuizen
Teresa Johnson Susan Wray

Theresa Balan

Grade 7 and 8 English Language Arts

Rachel Magaw

Jennie LowtherJamie CargillAshley PiersonChristy TeelErica NailBecky TivisVanessa SticeClassie NolanVicki Donley

Grade 7 and 8 Mathematics

Brooke Alley Katie Brown Brenda Reading
Sandra Brierton Sara Hyde Emily Seymour
Angela Farris Mary Kendrick Abbie Wasson
Michael Rohler Angela Bilyeu

Grade 8 Science

Danielle Ebert Susan O'Dell
Teri Kimble Andrea Farriester
Theresa Miller Amie Sellers
Ashleigh Morton Leiha Chaisson

Tishina Mindemann

Wes Ankrom

Grade 10 English Language Arts

Michelle Baldwin Katherine Boydston Denise Clark Jacy Goostree Dana Turpin Barbara Scherich Debby Yarbrough Lauren Pena Shona Willis Sheena Walker

Grade 10 Mathematics

Angela Archer Tricia Compton Barbara Aylworth Stephanie Garis Nita Cochran Donna Hogan Courtney Keck

Kari Smith Rebecca Welch Melinda Wallace

Grade 10 Science

Cheryl Fentress Nathan Friesen Zach Murray Bob Melton Kristi Nelson Chanda Peters Erin Regier Lori Pettijohn Kurtis Rowan Jennifer Ellis

APPENDIX J—EVALUATION RESULTS

Training Evaluation Results - ELA

Grades 3-4

	N	Average	%SD	%D	%N	%A	%SA
I understand the goals of the standard setting meeting	11	4.55	0%	0%	0%	45%	55%
I understand the procedures we are using to set standards	11	4.36	0%	0%	0%	64%	36%
I understand how to use the standard setting material	11	4.45	0%	0%	0%	55%	45%
I understand the differences between the performance levels	11	4.55	0%	0%	0%	45%	55%
I understand how to make bookmark placements	11	4.36	0%	0%	0%	64%	36%
I know what tasks to expect for the remainder of the meeting	11	3.91	0%	9%	18%	45%	27%
I am confident in my understanding of the standard setting task	11	4.36	0%	0%	0%	64%	36%
I am ready to proceed with the standard setting process	11					100%	

Grades 5-6

	N	Average	%SD	%D	%N	%A	%SA
I understand the goals of the standard setting meeting	11	4.64	0%	0%	0%	36%	64%
I understand the procedures we are using to set standards	11	4.45	0%	0%	0%	55%	45%
I understand how to use the standard setting material	11	4.45	0%	0%	0%	55%	45%
I understand the differences between the performance levels	11	4.55	0%	0%	0%	45%	55%
I understand how to make bookmark placements	11	4.64	0%	0%	0%	36%	64%
I know what tasks to expect for the remainder of the meeting	11	4.64	0%	0%	0%	36%	64%
I am confident in my understanding of the standard setting task	11	4.64	0%	0%	0%	36%	64%
I am ready to proceed with the standard setting process	11					100%	

Grades 7-8

	N	Average	%SD	%D	%N	%A	%SA
I understand the goals of the standard setting meeting	9	5.00	0%	0%	0%	0%	100%
I understand the procedures we are using to set standards	9	4.89	0%	0%	0%	11%	89%
I understand how to use the standard setting material	9	4.89	0%	0%	0%	11%	89%
I understand the differences between the performance levels	9	4.89	0%	0%	0%	11%	89%
I understand how to make bookmark placements	9	4.89	0%	0%	0%	11%	89%
I know what tasks to expect for the remainder of the meeting	9	4.67	0%	0%	11%	11%	78%
I am confident in my understanding of the standard setting task	9	4.78	0%	0%	0%	22%	78%
I am ready to proceed with the standard setting process	9					100%	

Grade 10

	N	Average	%SD	%D	%N	%A	%SA
I understand the goals of the standard setting meeting	10	4.90	0%	0%	0%	10%	90%
I understand the procedures we are using to set standards	10	4.90	0%	0%	0%	10%	90%
I understand how to use the standard setting material	10	4.90	0%	0%	0%	10%	90%
I understand the differences between the performance levels	10	4.90	0%	0%	0%	10%	90%
I understand how to make bookmark placements	10	4.90	0%	0%	0%	10%	90%
I know what tasks to expect for the remainder of the meeting	10	4.80	0%	0%	0%	20%	80%
I am confident in my understanding of the standard setting task	10	5.00	0%	0%	0%	0%	100%
I am ready to proceed with the standard setting process	10					100%	

Training Evaluation Results - Math

Grades 3-4

	N	Average	%SD	%D	%N	%A	%SA
I understand the goals of the standard setting meeting	11	4.45	0%	0%	0%	55%	45%
I understand the procedures we are using to set standards	11	4.64	0%	0%	0%	36%	64%
I understand how to use the standard setting material	11	4.64	0%	0%	0%	36%	64%
I understand the differences between the performance levels	11	4.55	0%	0%	0%	45%	55%
I understand how to make bookmark placements	11	4.64	0%	0%	0%	36%	64%
I know what tasks to expect for the remainder of the meeting	11	4.64	0%	0%	0%	36%	64%
I am confident in my understanding of the standard setting task	11	4.64	0%	0%	0%	36%	64%
I am ready to proceed with the standard setting process	11					100%	

Grades 5-6

	N	Average	%SD	%D	%N	%A	%SA
I understand the goals of the standard setting meeting	9	4.78	0%	0%	0%	22%	78%
I understand the procedures we are using to set standards	9	4.78	0%	0%	0%	22%	78%
I understand how to use the standard setting material	9	4.78	0%	0%	0%	22%	78%
I understand the differences between the performance levels	9	4.78	0%	0%	0%	22%	78%
I understand how to make bookmark placements	9	4.56	0%	0%	0%	44%	56%
I know what tasks to expect for the remainder of the meeting	9	4.78	0%	0%	0%	22%	78%
I am confident in my understanding of the standard setting task	9	4.67	0%	0%	0%	33%	67%
I am ready to proceed with the standard setting process	9					100%	

Grades 7-8

	N	Average	%SD	%D	%N	%A	%SA
I understand the goals of the standard setting meeting	11	4.64	9%	0%	0%	0%	91%
I understand the procedures we are using to set standards	11	4.64	9%	0%	0%	0%	91%
I understand how to use the standard setting material	11	4.64	9%	0%	0%	0%	91%
I understand the differences between the performance levels	11	4.64	9%	0%	0%	0%	91%
I understand how to make bookmark placements	11	4.64	9%	0%	0%	0%	91%
I know what tasks to expect for the remainder of the meeting	11	4.45	9%	0%	0%	18%	73%
I am confident in my understanding of the standard setting task	11	4.55	9%	0%	0%	9%	82%
I am ready to proceed with the standard setting process	11					100%	

Grade 10

	N	Average	%SD	%D	%N	%A	%SA
I understand the goals of the standard setting meeting	10	5.00	0%	0%	0%	0%	100%
I understand the procedures we are using to set standards	10	5.00	0%	0%	0%	0%	100%
I understand how to use the standard setting material	10	5.00	0%	0%	0%	0%	100%
I understand the differences between the performance levels	10	5.00	0%	0%	0%	0%	100%
I understand how to make bookmark placements	10	5.00	0%	0%	0%	0%	100%
I know what tasks to expect for the remainder of the meeting	10	5.00	0%	0%	0%	0%	100%
I am confident in my understanding of the standard setting task	10	5.00	0%	0%	0%	0%	100%
I am ready to proceed with the standard setting process	10					100%	

Training Evaluation Results - Science

Grade 5

	N	Average	%SD	%D	%N	%A	%SA
I understand the goals of the standard setting meeting	10	4.80	0%	0%	0%	20%	80%
I understand the procedures we are using to set standards	10	4.80	0%	0%	0%	20%	80%
I understand how to use the standard setting material	10	4.80	0%	0%	0%	20%	80%
I understand the differences between the performance levels	10	4.80	0%	0%	0%	20%	80%
I understand how to make bookmark placements	10	4.90	0%	0%	0%	10%	90%
I know what tasks to expect for the remainder of the meeting	10	4.90	0%	0%	0%	10%	90%
I am confident in my understanding of the standard setting task	10	4.80	0%	0%	0%	20%	80%
I am ready to proceed with the standard setting process	10					100%	

Grade 8

	N	Average	%SD	%D	%N	%A	%SA
I understand the goals of the standard setting meeting	9	4.89	0%	0%	0%	11%	89%
I understand the procedures we are using to set standards	9	5.00	0%	0%	0%	0%	100%
I understand how to use the standard setting material	9	5.00	0%	0%	0%	0%	100%
I understand the differences between the performance levels	9	4.89	0%	0%	0%	11%	89%
I understand how to make bookmark placements	9	5.00	0%	0%	0%	0%	100%
I know what tasks to expect for the remainder of the meeting	9	4.78	0%	0%	0%	22%	78%
I am confident in my understanding of the standard setting task	9	4.89	0%	0%	0%	11%	89%
I am ready to proceed with the standard setting process	9					100%	

Grade 10

	N	Average	%SD	%D	%N	%A	%SA
I understand the goals of the standard setting meeting	10	4.70	0%	0%	0%	30%	70%
I understand the procedures we are using to set standards	10	4.70	0%	0%	0%	30%	70%
I understand how to use the standard setting material	10	4.80	0%	0%	0%	20%	80%
I understand the differences between the performance levels	10	4.60	0%	0%	0%	40%	60%
I understand how to make bookmark placements	10	4.80	0%	0%	0%	20%	80%
I know what tasks to expect for the remainder of the meeting	10	4.70	0%	0%	0%	30%	70%
I am confident in my understanding of the standard setting task	10	4.80	0%	0%	0%	20%	80%
I am ready to proceed with the standard setting process	10					100%	

Procedural Evaluation Results - ELA

Grade 3

Please rate the usefulness of each of the following:	N	Mean	% SD	% D	% N	% A	% SA
I understood how to make the bookmark placements.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%
I understood how to use the materials provided.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%
I understood how to record my judgments.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%
I think the procedures make sense.	11	4.55	0.00%	0.00%	9.09%	27.27%	63.64%
I am sufficiently familiar with the assessment.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%
I understand the differences between the criteria student status levels.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%

Please rate the influence of the following when setting standards.	N	Mean	Not at all Influential- l	2	3	4	Extremely Influential -5
The Criteria Student Status Defintions.	11	4.73	0.00%	0.00%	9.09%	9.09%	81.82%
My expectations of students.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%
The difficulty of the test materials.	11	4.27	0.00%	0.00%	18.18%	36.36%	45.45%
My experience in the field.	11	4.64	0.00%	0.00%	0.00%	36.36%	63.64%
							continued

Discussions with other participants.	11	4.45	0.00%	0.00%	0.00%	54.55%	45.45%
Decisions of other participants.	11	3.55	0.00%	27.27%	18.18%	27.27%	27.27%
Impact data.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%

Do you believe the final recommended cut score for each of the achievement levels is too low, about right, or too high?	N	Mean	Too Low -1	Somewhat Low	About Right	Somewhat High	Too High -5
Advanced/Proficient	11	3.00	0.00%	0.00%	100.00%	0.00%	0.00%
Proficient/Limited Knowledge	11	3.00	0.00%	0.00%	100.00%	0.00%	0.00%
Limited Knowledge/Unsatisfactory	11	3.09	0.00%	0.00%	90.91%	9.09%	0.00%

Grade 4

Please rate the usefulness of each of the following:	N	Mean	% SD	% D	% N	% A	% SA
I understood how to make the bookmark placements.	11	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
I understood how to use the materials provided.	11	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
I understood how to record my judgments.	11	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
I think the procedures make sense.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%
I am sufficiently familiar with the assessment.	11	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
I understand the differences between the criteria student status levels.	11	4.82	0.00%	0.00%	0.00%	18.18%	81.82%

Please rate the influence of the following when setting standards.	N	Mean	Not at all Influential- l	2	3	4	Extremely Influential -5
The Criteria Student Status Defintions.	11	4.64	0.00%	0.00%	0.00%	36.36%	63.64%
My expectations of students.	11	4.36	0.00%	0.00%	9.09%	45.45%	45.45%
The difficulty of the test materials.	11	4.27	0.00%	0.00%	9.09%	54.55%	36.36%
My experience in the field.	11	4.45	0.00%	0.00%	0.00%	54.55%	45.45%
Discussions with other participants.	11	4.36	0.00%	0.00%	0.00%	63.64%	36.36%
Decisions of other participants.	11	3.73	0.00%	18.18%	18.18%	36.36%	27.27%
Impact data.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%

Do you believe the final recommended cut score for each of the achievement levels is too low, about right, or too high?	N	Mean	Too Low -1	Somewhat Low	About Right	Somewhat High	Too High -5
Advanced/Proficient	9	3.00	0.00%	0.00%	100.00%	0.00%	0.00%
Proficient/Limited Knowledge	9	3.00	0.00%	0.00%	100.00%	0.00%	0.00%
Limited Knowledge/Unsatisfactory	9	3.11	0.00%	0.00%	88.89%	11.11%	0.00%

Grade 5

Please rate the usefulness of each of the following:	N	Mean	% SD	% D	% N	% A	% SA
I understood how to make the bookmark placements.	10	4.50	0.00%	0.00%	0.00%	50.00%	50.00%
I understood how to use the materials provided.	10	4.60	0.00%	0.00%	0.00%	40.00%	60.00%
I understood how to record my judgments.	10	4.60	0.00%	0.00%	0.00%	40.00%	60.00%
I think the procedures make sense.	10	4.50	0.00%	0.00%	10.00%	30.00%	60.00%
I am sufficiently familiar with the assessment.	10	4.70	0.00%	0.00%	0.00%	30.00%	70.00%
I understand the differences between the criteria student status levels.	10	4.60	0.00%	0.00%	0.00%	40.00%	60.00%

Please rate the influence of the following when setting standards.	N	Mean	Not at all Influential- I	2	3	4	Extremely Influential -5
The Criteria Student Status Defintions.	10	4.60	0.00%	10.00%	0.00%	10.00%	80.00%
My expectations of students.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%
The difficulty of the test materials.	10	4.40	0.00%	0.00%	0.00%	60.00%	40.00%
My experience in the field.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%
Discussions with other participants.	10	4.70	0.00%	0.00%	0.00%	30.00%	70.00%
Decisions of other participants.	10	4.20	0.00%	10.00%	10.00%	30.00%	50.00%
Impact data.	10	4.10	0.00%	10.00%	10.00%	40.00%	40.00%

Do you believe the final recommended cut score for each of the achievement levels is too low, about right, or too high?	N	Mean	Too Low -1	Somewhat Low	About Right	Somewhat High	Too High -5
Advanced/Proficient	10	3.05	0.00%	0.00%	90.00%	0.00%	0.00%
Proficient/Limited Knowledge	10	3.50	0.00%	0.00%	50.00%	50.00%	0.00%
Limited Knowledge/Unsatisfactory	10	3.20	0.00%	0.00%	80.00%	20.00%	0.00%

Grade 6

Please rate the usefulness of each of the following:	N	Mean	% SD	% D	% N	% A	% SA
I understood how to make the bookmark placements.	11	4.82	0.00%	0.00%	0.00%	18.18%	81.82%
I understood how to use the materials provided.	11	4.82	0.00%	0.00%	0.00%	18.18%	81.82%
I understood how to record my judgments.	11	4.73	0.00%	0.00%	9.09%	9.09%	81.82%
I think the procedures make sense.	11	4.64	0.00%	0.00%	0.00%	36.36%	63.64%
I am sufficiently familiar with the assessment.	11	4.64	0.00%	0.00%	9.09%	18.18%	72.73%
I understand the differences between the criteria student status levels.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%

Please rate the influence of the following when setting standards.	N	Mean	Not at all Influential- l	2	3	4	Extremely Influential -5
The Criteria Student Status Defintions.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%
My expectations of students.	11	4.64	0.00%	0.00%	0.00%	36.36%	63.64%
The difficulty of the test materials.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%
My experience in the field.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%
Discussions with other participants.	10	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
Decisions of other participants.	10	4.50	0.00%	0.00%	0.00%	50.00%	50.00%
Impact data.	10	4.50	0.00%	0.00%	10.00%	30.00%	60.00%

Do you believe the final recommended cut score for each of the achievement levels is too low, about right, or too high?	N	Mean	Too Low -1	Somewhat Low	About Right	Somewhat High	Too High -5
Advanced/Proficient	10	3.70	0.00%	0.00%	50.00%	30.00%	20.00%
Proficient/Limited Knowledge	10	3.50	0.00%	0.00%	70.00%	10.00%	20.00%
Limited Knowledge/Unsatisfactory	10	3.40	0.00%	0.00%	70.00%	20.00%	10.00%

Grade 7

Please rate the usefulness of each of the following:	N	Mean	% SD	% D	% N	% A	% SA
I understood how to make the bookmark placements.	9	4.89	0.00%	0.00%	0.00%	11.11%	88.89%
I understood how to use the materials provided.	9	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
I understood how to record my judgments.	9	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
I think the procedures make sense.	9	4.67	0.00%	0.00%	0.00%	33.33%	66.67%
I am sufficiently familiar with the assessment.	9	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
I understand the differences between the criteria student status levels.	9	5.00	0.00%	0.00%	0.00%	0.00%	100.00%

Please rate the influence of the following when setting standards.	N	Mean	Not at all Influential- 1	2	3	4	Extremely Influential -5
The Criteria Student Status Defintions.	9	4.67	0.00%	0.00%	0.00%	33.33%	66.67%
My expectations of students.	9	4.67	0.00%	0.00%	0.00%	33.33%	66.67%
The difficulty of the test materials.	9	4.67	0.00%	0.00%	0.00%	33.33%	66.67%
My experience in the field.	9	4.89	0.00%	0.00%	0.00%	11.11%	88.89%
Discussions with other participants.	9	4.44	0.00%	0.00%	11.11%	33.33%	55.56%
Decisions of other participants.	9	3.56	0.00%	11.11%	33.33%	44.44%	11.11%
Impact data.	9	3.89	0.00%	11.11%	22.22%	33.33%	33.33%

Do you believe the final recommended cut score for each of the achievement levels is too low, about right, or too high?	N	Mean	Too Low -1	Somewhat Low	About Right	Somewhat High	Too High -5
Advanced/Proficient	9	3.00	0.00%	0.00%	100.00%	0.00%	0.00%
Proficient/Limited Knowledge	9	3.11	0.00%	11.11%	66.67%	22.22%	0.00%
Limited Knowledge/Unsatisfactory	9	3.33	0.00%	11.11%	44.44%	44.44%	0.00%

Please rate the usefulness of each of the following:	N	Mean	% SD	% D	% N	% A	% SA
I understood how to make the bookmark placements.	9	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
I understood how to use the materials provided.	9	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
I understood how to record my judgments.	9	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
I think the procedures make sense.	9	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
I am sufficiently familiar with the assessment.	9	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
I understand the differences between the criteria student status levels.	9	5.00	0.00%	0.00%	0.00%	0.00%	100.00%

Please rate the influence of the following when setting standards.	N	Mean	Not at all Influential- 1	2	3	4	Extremely Influential -5
The Criteria Student Status Defintions.	9	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
My expectations of students.	9	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
The difficulty of the test materials.	9	4.78	0.00%	0.00%	0.00%	22.22%	77.78%
My experience in the field.	9	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
Discussions with other participants.	9	4.44	0.00%	0.00%	11.11%	33.33%	55.56%
Decisions of other participants.	9	4.11	0.00%	0.00%	33.33%	22.22%	44.44%
Impact data.	9	4.56	0.00%	0.00%	22.22%	0.00%	77.78%

Do you believe the final recommended cut score for each of the achievement levels is too low, about right, or too high?	N	Mean	Too Low -1	Somewhat Low	About Right	Somewhat High	Too High -5
Advanced/Proficient	9	3.33	0.00%	0.00%	66.67%	33.33%	0.00%
Proficient/Limited Knowledge	9	3.44	0.00%	11.11%	55.56%	11.11%	22.22%
Limited Knowledge/Unsatisfactory	9	3.00	0.00%	0.00%	100.00%	0.00%	0.00%

Grade 10

Please rate the usefulness of each of the following:	N	Mean	% SD	% D	% N	% A	% SA
I understood how to make the bookmark placements.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%
I understood how to use the materials provided.	10	4.50	0.00%	10.00%	0.00%	20.00%	70.00%
I understood how to record my judgments.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%
I think the procedures make sense.	10	4.10	0.00%	10.00%	10.00%	40.00%	40.00%
I am sufficiently familiar with the assessment.	10	4.90	0.00%	0.00%	0.00%	10.00%	90.00%
I understand the differences between the criteria student status levels.	10	4.50	10.00%	0.00%	0.00%	10.00%	80.00%

Please rate the influence of the following when setting standards.	N	Mean	Not at all Influential- l	2	3	4	Extremely Influential -5
The Criteria Student Status Defintions.	10	4.40	10.00%	0.00%	10.00%	0.00%	80.00%
My expectations of students.	10	4.30	0.00%	0.00%	10.00%	50.00%	40.00%
The difficulty of the test materials.	10	4.30	0.00%	0.00%	10.00%	50.00%	40.00%
My experience in the field.	10	4.60	0.00%	0.00%	10.00%	20.00%	70.00%
Discussions with other participants.	10	4.60	0.00%	0.00%	10.00%	20.00%	70.00%
Decisions of other participants.	10	4.00	0.00%	0.00%	20.00%	60.00%	20.00%
Impact data.	10	3.60	0.00%	20.00%	20.00%	40.00%	20.00%

Do you believe the final recommended cut score for each of the achievement levels is too low, about right, or too high?	N	Mean	Too Low -1	Somewhat Low	About Right	Somewhat High	Too High -5
Advanced/Proficient	10	3.00	0.00%	0.00%	100.00%	0.00%	0.00%
Proficient/Limited Knowledge	10	2.90	0.00%	10.00%	90.00%	0.00%	0.00%
Limited Knowledge/Unsatisfactory	10	3.10	0.00%	0.00%	90.00%	10.00%	0.00%

Procedural Evaluation Results - Math

Grade 3

Please rate the usefulness of each of the following:	N	Mean	% SD	% D	% N	% A	% SA
I understood how to make the bookmark placements.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%
I understood how to use the materials provided.	11	4.64	0.00%	0.00%	0.00%	36.36%	63.64%
I understood how to record my judgments.	11	4.64	0.00%	0.00%	0.00%	36.36%	63.64%
I think the procedures make sense.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%
I am sufficiently familiar with the assessment.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%
I understand the differences between the criteria student status levels.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%

Please rate the influence of the following when setting standards.	N	Mean	Not at all Influential- l	2	3	4	Extremely Influential -5
The Criteria Student Status Defintions.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%
My expectations of students.	11	4.55	0.00%	0.00%	0.00%	45.45%	54.55%
The difficulty of the test materials.	11	4.36	0.00%	0.00%	18.18%	27.27%	54.55%
My experience in the field.	11	4.82	0.00%	0.00%	0.00%	18.18%	81.82%
Discussions with other participants.	11	4.55	0.00%	0.00%	9.09%	27.27%	63.64%
Decisions of other participants.	11	3.91	0.00%	9.09%	18.18%	45.45%	27.27%
Impact data.	11	4.55	0.00%	0.00%	0.00%	45.45%	54.55%

Do you believe the final recommended cut score for each of the achievement levels is too low, about right, or too high?	N	Mean	Too Low -1	Somewhat Low	About Right	Somewhat High	Too High -5
Advanced/Proficient	11	3.00	0.00%	0.00%	100.00%	0.00%	0.00%
Proficient/Limited Knowledge	11	3.00	0.00%	9.09%	81.82%	9.09%	0.00%
Limited Knowledge/Unsatisfactory	11	3.09	0.00%	0.00%	90.91%	9.09%	0.00%

Please rate the usefulness of each of the following:	N	Mean	% SD	% D	% N	% A	% SA
I understood how to make the bookmark placements.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%
I understood how to use the materials provided.	11	4.64	0.00%	0.00%	0.00%	36.36%	63.64%
I understood how to record my judgments.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%
I think the procedures make sense.	11	4.55	0.00%	0.00%	0.00%	45.45%	54.55%
I am sufficiently familiar with the assessment.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%
I understand the differences between the criteria student status levels.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%

Please rate the influence of the following when setting standards.	N	Mean	Not at all Influential- 1	2	3	4	Extremely Influential -5
The Criteria Student Status Defintions.	11	4.64	0.00%	0.00%	0.00%	36.36%	63.64%
My expectations of students.	11	4.27	0.00%	9.09%	9.09%	27.27%	54.55%
The difficulty of the test materials.	11	4.45	0.00%	0.00%	18.18%	18.18%	63.64%
My experience in the field.	11	4.91	0.00%	0.00%	0.00%	9.09%	90.91%
Discussions with other participants.	11	4.73	0.00%	0.00%	9.09%	9.09%	81.82%
Decisions of other participants.	11	4.09	0.00%	0.00%	27.27%	36.36%	36.36%
Impact data.	11	4.45	0.00%	0.00%	0.00%	54.55%	45.45%

Do you believe the final recommended cut score for each of the achievement levels is too low, about right, or too high?	N	Mean	Too Low -1	Somewhat Low	About Right	Somewhat High	Too High -5
Advanced/Proficient	11	3.00	0.00%	0.00%	100.00%	0.00%	0.00%
Proficient/Limited Knowledge	11	2.82	0.00%	18.18%	81.82%	0.00%	0.00%
Limited Knowledge/Unsatisfactory	11	3.45	0.00%	0.00%	54.55%	45.45%	0.00%

Grade 5

Please rate the usefulness of each of the following:	N	Mean	% SD	% D	% N	% A	% SA
I understood how to make the bookmark placements.	9	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
I understood how to use the materials provided.	9	4.89	0.00%	0.00%	0.00%	11.11%	88.89%
I understood how to record my judgments.	9	4.89	0.00%	0.00%	0.00%	11.11%	88.89%
I think the procedures make sense.	9	4.56	0.00%	0.00%	0.00%	44.44%	55.56%
I am sufficiently familiar with the assessment.	9	4.67	0.00%	0.00%	0.00%	33.33%	66.67%
I understand the differences between the criteria student status levels.	9	4.89	0.00%	0.00%	0.00%	11.11%	88.89%

Please rate the influence of the following when setting standards.	N	Mean	Not at all Influential- 1	2	3	4	Extremely Influential -5
The Criteria Student Status Defintions.	9	4.89	0.00%	0.00%	0.00%	11.11%	88.89%
My expectations of students.	9	4.33	0.00%	0.00%	11.11%	44.44%	44.44%
The difficulty of the test materials.	9	4.00	0.00%	0.00%	33.33%	33.33%	33.33%
My experience in the field.	9	4.44	0.00%	0.00%	0.00%	55.56%	44.44%
Discussions with other participants.	9	4.11	0.00%	0.00%	22.22%	44.44%	33.33%
Decisions of other participants.	9	2.78	11.11%	33.33%	22.22%	33.33%	0.00%
Impact data.	9	3.33	11.11%	11.11%	33.33%	22.22%	22.22%

Do you believe the final recommended cut score for each of the achievement levels is too low, about right, or too high?	N	Mean	Too Low -1	Somewhat Low	About Right	Somewhat High	Too High -5
Advanced/Proficient	9	2.28	22.22%	11.11%	55.56%	0.00%	0.00%
Proficient/Limited Knowledge	9	3.00	11.11%	11.11%	55.56%	11.11%	11.11%
Limited Knowledge/Unsatisfactory	9	3.11	0.00%	0.00%	88.89%	11.11%	0.00%

Please rate the usefulness of each of the following:	N	Mean	% SD	% D	% N	% A	% SA
I understood how to make the bookmark placements.	9	4.89	0.00%	0.00%	0.00%	11.11%	88.89%
I understood how to use the materials provided.	9	4.78	0.00%	0.00%	0.00%	22.22%	77.78%
I understood how to record my judgments.	9	4.89	0.00%	0.00%	0.00%	11.11%	88.89%
I think the procedures make sense.	9	4.56	0.00%	0.00%	0.00%	44.44%	55.56%
I am sufficiently familiar with the assessment.	9	4.78	0.00%	0.00%	0.00%	22.22%	77.78%
I understand the differences between the criteria student status levels.	9	4.78	0.00%	0.00%	0.00%	22.22%	77.78%

Please rate the influence of the following when setting standards.	N	Mean	Not at all Influential- l	2	3	4	Extremely Influential -5
The Criteria Student Status Defintions.	9	4.67	0.00%	0.00%	0.00%	33.33%	66.67%
My expectations of students.	9	4.44	0.00%	0.00%	11.11%	33.33%	55.56%
The difficulty of the test materials.	9	3.89	0.00%	0.00%	33.33%	44.44%	22.22%
My experience in the field.	9	4.33	0.00%	0.00%	11.11%	44.44%	44.44%
Discussions with other participants.	9	4.56	0.00%	0.00%	0.00%	44.44%	55.56%
Decisions of other participants.	9	3.00	11.11%	22.22%	22.22%	44.44%	0.00%
Impact data.	9	3.56	0.00%	0.00%	55.56%	33.33%	11.11%

Do you believe the final recommended cut score for each of the achievement levels is too low, about right, or too high?	N	Mean	Too Low -1	Somewhat Low	About Right	Somewhat High	Too High -5
Advanced/Proficient	9	2.89	0.00%	11.11%	88.89%	0.00%	0.00%
Proficient/Limited Knowledge	9	3.56	0.00%	11.11%	33.33%	44.44%	11.11%
Limited Knowledge/Unsatisfactory	9	2.67	11.11%	11.11%	77.78%	0.00%	0.00%

Grade 7

Please rate the usefulness of each of the following:	N	Mean	% SD	% D	% N	% A	% SA
I understood how to make the bookmark placements.	11	4.91	0.00%	0.00%	0.00%	9.09%	90.91%
I understood how to use the materials provided.	11	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
I understood how to record my judgments.	11	4.91	0.00%	0.00%	0.00%	9.09%	90.91%
I think the procedures make sense.	11	4.91	0.00%	0.00%	0.00%	9.09%	90.91%
I am sufficiently familiar with the assessment.	11	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
I understand the differences between the criteria student status levels.	11	5.00	0.00%	0.00%	0.00%	0.00%	100.00%

Please rate the influence of the following when setting standards.	N	Mean	Not at all Influential- l	2	3	4	Extremely Influential -5
The Criteria Student Status Defintions.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%
My expectations of students.	11	4.45	0.00%	0.00%	9.09%	36.36%	54.55%
The difficulty of the test materials.	11	4.18	0.00%	0.00%	36.36%	9.09%	54.55%
My experience in the field.	11	4.64	0.00%	0.00%	0.00%	36.36%	63.64%
Discussions with other participants.	11	4.64	0.00%	0.00%	0.00%	36.36%	63.64%
Decisions of other participants.	11	3.73	9.09%	0.00%	27.27%	36.36%	27.27%
Impact data.	11	3.82	0.00%	9.09%	27.27%	36.36%	27.27%

Do you believe the final recommended cut score for each of the achievement levels is too low, about right, or too high?	N	Mean	Too Low -1	Somewhat Low	About Right	Somewhat High	Too High -5
Advanced/Proficient	11	3.18	9.09%	9.09%	36.36%	45.45%	0.00%
Proficient/Limited Knowledge	11	3.00	0.00%	9.09%	81.82%	9.09%	0.00%
Limited Knowledge/Unsatisfactory	11	3.18	0.00%	0.00%	81.82%	18.18%	0.00%

Please rate the usefulness of each of the following:	N	Mean	% SD	% D	% N	% A	% SA
I understood how to make the bookmark placements.	11	4.91	0.00%	0.00%	0.00%	9.09%	90.91%
I understood how to use the materials provided.	11	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
I understood how to record my judgments.	11	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
I think the procedures make sense.	11	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
I am sufficiently familiar with the assessment.	11	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
I understand the differences between the criteria student status levels.	11	4.91	0.00%	0.00%	0.00%	9.09%	90.91%

Please rate the influence of the following when setting standards.	N	Mean	Not at all Influential- 1	2	3	4	Extremely Influential -5
The Criteria Student Status Defintions.	11	4.64	0.00%	0.00%	0.00%	36.36%	63.64%
My expectations of students.	11	4.45	0.00%	0.00%	9.09%	36.36%	54.55%
The difficulty of the test materials.	11	4.09	0.00%	0.00%	36.36%	18.18%	45.45%
My experience in the field.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%
Discussions with other participants.	11	4.64	0.00%	0.00%	0.00%	36.36%	63.64%
Decisions of other participants.	11	4.00	9.09%	0.00%	9.09%	45.45%	36.36%
Impact data.	11	4.00	0.00%	9.09%	18.18%	36.36%	36.36%

Do you believe the final recommended cut score for each of the achievement levels is too low, about right, or too high?	N	Mean	Too Low -1	Somewhat Low	About Right	Somewhat High	Too High -5
Advanced/Proficient	11	3.09	0.00%	18.18%	63.64%	9.09%	9.09%
Proficient/Limited Knowledge	11	2.91	9.09%	9.09%	63.64%	18.18%	0.00%
Limited Knowledge/Unsatisfactory	11	3.18	0.00%	0.00%	81.82%	18.18%	0.00%

Grade 10

Please rate the usefulness of each of the following:	N	Mean	% SD	% D	% N	% A	% SA
I understood how to make the bookmark placements.	10	4.90	0.00%	0.00%	0.00%	10.00%	90.00%
I understood how to use the materials provided.	10	4.90	0.00%	0.00%	0.00%	10.00%	90.00%
I understood how to record my judgments.	10	4.90	0.00%	0.00%	0.00%	10.00%	90.00%
I think the procedures make sense.	10	4.90	0.00%	0.00%	0.00%	10.00%	90.00%
I am sufficiently familiar with the assessment.	10	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
I understand the differences between the criteria student status levels.	10	4.90	0.00%	0.00%	0.00%	10.00%	90.00%

Please rate the influence of the following when setting standards.	N	Mean	Not at all Influential- l	2	3	4	Extremely Influential -5
The Criteria Student Status Defintions.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%
My expectations of students.	10	4.70	0.00%	0.00%	10.00%	10.00%	80.00%
The difficulty of the test materials.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%
My experience in the field.	10	4.70	0.00%	0.00%	0.00%	30.00%	70.00%
Discussions with other participants.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%
Decisions of other participants.	10	4.50	0.00%	0.00%	10.00%	30.00%	60.00%
Impact data.	10	4.20	0.00%	0.00%	20.00%	40.00%	40.00%

Do you believe the final recommended cut score for each of the achievement levels is too low, about right, or too high?	N	Mean	Too Low -1	Somewhat Low	About Right	Somewhat High	Too High -5
Advanced/Proficient	9	3.00	0.00%	11.11%	77.78%	11.11%	0.00%
Proficient/Limited Knowledge	10	3.00	0.00%	20.00%	60.00%	20.00%	0.00%
Limited Knowledge/Unsatisfactory	10	2.90	0.00%	20.00%	70.00%	10.00%	0.00%

Procedural Evaluation Results - Science

Grade 5

Please rate the usefulness of each of the following:	N	Mean	% SD	% D	% N	% A	% SA
I understood how to make the bookmark placements.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%
I understood how to use the materials provided.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%
I understood how to record my judgments.	10	4.70	0.00%	0.00%	0.00%	30.00%	70.00%
I think the procedures make sense.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%
I am sufficiently familiar with the assessment.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%
I understand the differences between the criteria student status levels.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%

Please rate the influence of the following when setting standards.	N	Mean	Not at all Influential- I	2	3	4	Extremely Influential -5
The Criteria Student Status Defintions.	10	4.90	0.00%	0.00%	0.00%	10.00%	90.00%
My expectations of students.	9	4.22	0.00%	0.00%	22.22%	33.33%	44.44%
The difficulty of the test materials.	10	4.40	0.00%	0.00%	0.00%	60.00%	40.00%
My experience in the field.	10	4.70	0.00%	0.00%	0.00%	30.00%	70.00%
Discussions with other participants.	10	4.60	0.00%	0.00%	10.00%	20.00%	70.00%
Decisions of other participants.	10	3.75	10.00%	0.00%	20.00%	30.00%	30.00%
Impact data.	10	3.95	10.00%	0.00%	0.00%	50.00%	30.00%

Do you believe the final recommended cut score for each of the achievement levels is too low, about right, or too high?	N	Mean	Too Low -1	Somewhat Low	About Right	Somewhat High	Too High -5
Advanced/Proficient	10	3.00	0.00%	10.00%	80.00%	10.00%	0.00%
Proficient/Limited Knowledge	10	3.10	0.00%	0.00%	90.00%	10.00%	0.00%
Limited Knowledge/Unsatisfactory	10	3.00	0.00%	0.00%	100.00%	0.00%	0.00%

Please rate the usefulness of each of the following:	N	Mean	% SD	% D	% N	% A	% SA
I understood how to make the bookmark placements.	9	4.78	0.00%	0.00%	0.00%	22.22%	77.78%
I understood how to use the materials provided.	9	4.89	0.00%	0.00%	0.00%	11.11%	88.89%
I understood how to record my judgments.	9	4.89	0.00%	0.00%	0.00%	11.11%	88.89%
I think the procedures make sense.	9	4.67	0.00%	0.00%	0.00%	33.33%	66.67%
I am sufficiently familiar with the assessment.	9	4.78	0.00%	0.00%	0.00%	22.22%	77.78%
I understand the differences between the criteria student status levels.	9	4.89	0.00%	0.00%	0.00%	11.11%	88.89%

Please rate the influence of the following when setting standards.	N	Mean	Not at all Influential- I	2	3	4	Extremely Influential -5
The Criteria Student Status Defintions.	9	4.56	0.00%	11.11%	0.00%	11.11%	77.78%
My expectations of students.	9	4.78	0.00%	0.00%	0.00%	22.22%	77.78%
The difficulty of the test materials.	9	4.44	0.00%	0.00%	0.00%	55.56%	44.44%
My experience in the field.	9	4.67	0.00%	0.00%	0.00%	33.33%	66.67%
Discussions with other participants.	9	4.67	0.00%	0.00%	0.00%	33.33%	66.67%
Decisions of other participants.	9	4.00	0.00%	11.11%	11.11%	44.44%	33.33%
Impact data.	8	4.25	0.00%	0.00%	25.00%	25.00%	50.00%

Do you believe the final recommended cut score for each of the achievement levels is too low, about right, or too high?	N	Mean	Too Low -1	Somewhat Low	About Right	Somewhat High	Too High -5
Advanced/Proficient	8	3.00	0.00%	0.00%	100.00%	0.00%	0.00%
Proficient/Limited Knowledge	8	3.13	0.00%	12.50%	62.50%	25.00%	0.00%
Limited Knowledge/Unsatisfactory	8	3.13	0.00%	12.50%	62.50%	25.00%	0.00%

Grade 10

Please rate the usefulness of each of the following:	N	Mean	% SD	% D	% N	% A	% SA
I understood how to make the bookmark placements.	10	4.90	0.00%	0.00%	0.00%	10.00%	90.00%
I understood how to use the materials provided.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%
I understood how to record my judgments.	10	4.90	0.00%	0.00%	0.00%	10.00%	90.00%
I think the procedures make sense.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%
I am sufficiently familiar with the assessment.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%
I understand the differences between the criteria student status levels.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%

Please rate the influence of the following when setting standards.	N	Mean	Not at all Influential- l	2	3	4	Extremely Influential -5
The Criteria Student Status Defintions.	10	4.90	0.00%	0.00%	0.00%	10.00%	90.00%
My expectations of students.	10	4.30	0.00%	0.00%	0.00%	70.00%	30.00%
The difficulty of the test materials.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%
My experience in the field.	10	4.60	0.00%	0.00%	10.00%	20.00%	70.00%
Discussions with other participants.	10	4.70	0.00%	0.00%	0.00%	30.00%	70.00%
Decisions of other participants.	10	3.90	0.00%	0.00%	20.00%	70.00%	10.00%
Impact data.	10	4.20	0.00%	0.00%	20.00%	40.00%	40.00%

Do you believe the final recommended cut score for each of the achievement levels is too low, about right, or too high?	N	Mean	Too Low -1	Somewhat Low	About Right	Somewhat High	Too High -5
Advanced/Proficient	10	3.00	0.00%	0.00%	100.00%	0.00%	0.00%
Proficient/Limited Knowledge	10	2.90	0.00%	10.00%	90.00%	0.00%	0.00%
Limited Knowledge/Unsatisfactory	10	2.90	0.00%	10.00%	90.00%	0.00%	0.00%

Final Evaluation Results - ELA

Grades 3/4

Panelist Demographics	Count (N=11)	%
Gender:		
Male	1	9.09%
Female	10	90.91%
Race/Ethnicity:		
White	9	81.82%
Black	0	0.00%
Hispanic	0	0.00%
Asian	0	0.00%
Pacific Islander	0	0.00%
American Indian	2	18.18%
Years of Experience:		
0-5	0	0.00%
5-10	2	18.18%
10-15	6	54.55%
More than 15	2	18.18%
Professional Experience:		
Students with Disabilities	5	45.45%
Students with Limited English Proficiency	3	27.27%
Economically Disadvantaged Students	9	81.82%
Gifted and Talented Students	4	36.36%
General Education	10	90.91%

Please rate the usefulness of each of the following:	N	Mean	Not Useful at All 1	2	3	4	Extremely Useful 5
The opening session.	11	4.09	0.00%	0.00%	9.09%	72.73%	18.18%
Completing the practice test	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%
Completing the item map	11	4.91	0.00%	0.00%	0.00%	9.09%	90.91%
Discussions with other participants.	11	4.82	0.00%	0.00%	0.00%	18.18%	81.82%
Impact data.	11	4.82	0.00%	0.00%	0.00%	18.18%	81.82%

Please mark the appropriate box for each statement.	N	Mean	% SD	% D	% N	% A	% SA
I understood the goals of the standard setting meeting.	11	4.73	0.00%	0.00%	9.09%	9.09%	81.82%
The facilitator helped me understand the process.	11	4.27	0.00%	0.00%	18.18%	36.36%	45.45%
The materials contained the information needed to set standards.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%
I understood how to use the impact data.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%
I understood how the cut scores were calculated.	11	4.82	0.00%	0.00%	0.00%	18.18%	81.82%
The facilitator was able to provide answers to my questions.	11	4.27	0.00%	0.00%	18.18%	36.36%	45.45%
Sufficient time was allotted for training on the standard setting tasks.	11	4.64	0.00%	0.00%	0.00%	36.36%	63.64%
Sufficient time was allotted to complete the standard setting tasks.	11	4.64	0.00%	0.00%	0.00%	36.36%	63.64%
The facilitator helped the standard setting process run smoothly.	11	4.18	0.00%	9.09%	18.18%	18.18%	54.55%
Overall the standard setting process produced credible results.	10	4.60	0.00%	0.00%	10.00%	20.00%	70.00%

Grades 5/6

Panelist Demographics	<i>Count</i> (<i>N</i> =11)	%
Gender:		
Male	1	9.09%
Female	10	90.91%
Race/Ethnicity:		
White	10	90.91%
Black	0	0.00%
Hispanic	0	0.00%
Asian	0	0.00%
Pacific Islander	0	0.00%
American Indian	0	0.00%
Years of Experience:		
0-5	1	9.09%
5-10	3	27.27%
10-15	1	9.09%
More than 15	4	36.36%
Professional Experience:		
Students with Disabilities	4	36.36%
Students with Limited English Proficiency	2	18.18%
Economically Disadvantaged Students	3	27.27%
Gifted and Talented Students	6	54.55%
General Education	11	100.00%

Please rate the usefulness of each of the following:	N	Mean	Not Useful at All 1	2	3	4	Extremely Useful 5
The opening session.	11	3.64	0.00%	18.18%	27.27%	27.27%	27.27%
Completing the practice test	11	4.91	0.00%	0.00%	0.00%	9.09%	90.91%
Completing the item map	11	3.45	9.09%	27.27%	9.09%	18.18%	36.36%
Discussions with other participants.	11	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
Impact data.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%

Please mark the appropriate box for each statement.	N	Mean	% SD	% D	% N	% A	% SA
I understood the goals of the standard setting meeting.	11	4.55	0.00%	0.00%	0.00%	45.45%	54.55%
The facilitator helped me understand the process.	11	4.45	0.00%	0.00%	0.00%	54.55%	45.45%
The materials contained the information needed to set standards.	11	4.45	0.00%	0.00%	0.00%	54.55%	45.45%
I understood how to use the impact data.	11	4.45	0.00%	0.00%	0.00%	54.55%	45.45%
I understood how the cut scores were calculated.	11	4.27	0.00%	0.00%	9.09%	54.55%	36.36%
The facilitator was able to provide answers to my questions.	11	4.55	0.00%	0.00%	9.09%	27.27%	63.64%
Sufficient time was allotted for training on the standard setting tasks.	11	4.45	0.00%	0.00%	9.09%	36.36%	54.55%
Sufficient time was allotted to complete the standard setting tasks.	11	4.45	0.00%	0.00%	9.09%	36.36%	54.55%
The facilitator helped the standard setting process run smoothly.	11	4.45	0.00%	0.00%	9.09%	36.36%	54.55%
Overall the standard setting process produced credible results.	11	4.09	0.00%	0.00%	27.27%	36.36%	36.36%

Grades 7/8

Panelist Demographics	Count $(N=9)$	%
Gender:		
Male	0	0.00%
Female	9	100.00%
Race/Ethnicity:		
White	9	100.00%
Black	1	11.11%
Hispanic	0	0.00%
Asian	0	0.00%
Pacific Islander	0	0.00%
American Indian	0	0.00%
Years of Experience:		
0-5	1	11.11%
5-10	2	22.22%
10-15	1	11.11%
More than 15	4	44.44%
Professional Experience:		
Students with Disabilities	2	22.22%
Students with Limited English Proficiency	3	33.33%
Economically Disadvantaged Students	7	77.78%
Gifted and Talented Students	5	55.56%
General Education	9	100.00%

Please rate the usefulness of each of the following:	N	Mean	Not Useful at All 1	2	3	4	Extremely Useful 5
The opening session.	9	4.00	11.11%	0.00%	11.11%	33.33%	44.44%
Completing the practice test	9	4.22	0.00%	11.11%	11.11%	22.22%	55.56%
Completing the item map	9	4.78	0.00%	0.00%	11.11%	0.00%	88.89%
Discussions with other participants.	9	4.89	0.00%	0.00%	0.00%	11.11%	88.89%
Impact data.	9	4.78	0.00%	0.00%	0.00%	22.22%	77.78%

Please mark the appropriate box for each statement.	N	Mean	% SD	% D	% N	% A	% SA
I understood the goals of the standard setting meeting.	9	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
The facilitator helped me understand the process.	9	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
The materials contained the information needed to set standards.	9	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
I understood how to use the impact data.	9	4.78	0.00%	0.00%	11.11%	0.00%	88.89%
I understood how the cut scores were calculated.	9	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
The facilitator was able to provide answers to my questions.	9		0.00%	0.00%	0.00%	0.00%	100.00%
Sufficient time was allotted for training on the standard setting tasks.	9	-	0.00%	0.00%	0.00%	0.00%	100.00%
Sufficient time was allotted to complete the standard setting tasks.	9	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
The facilitator helped the standard setting process run smoothly.	9	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
Overall the standard setting process produced credible results.	9	4.78	0.00%	0.00%	0.00%	22.22%	77.78%

Grade 10

Panelist Demographics	Count (N=10)	%
Gender:		
Male	0	0.00%
Female	10	100.00%
Race/Ethnicity:		
White	10	100.00%
Black	0	0.00%
Hispanic	0	0.00%
Asian	0	0.00%
Pacific Islander	0	0.00%
American Indian	0	0.00%
Years of Experience:		
0-5	2	20.00%
5-10	1	10.00%
10-15	3	30.00%
More than 15	4	40.00%
Professional Experience:		
Students with Disabilities	2	20.00%
Students with Limited English Proficiency	3	30.00%
Economically Disadvantaged Students	5	50.00%
Gifted and Talented Students	4	40.00%
General Education	10	100.00%

Please rate the usefulness of each of the following:	N	Mean	Not Useful at All 1	2	3	4	Extremely Useful 5
The opening session.	10	4.00	0.00%	10.00%	10.00%	50.00%	30.00%
Completing the practice test	10	4.70	0.00%	0.00%	0.00%	30.00%	70.00%
Completing the item map	10	3.50	10.00%	20.00%	10.00%	30.00%	30.00%
Discussions with other participants.	10	4.80	0.00%	0.00%	10.00%	0.00%	90.00%
Impact data.	10	4.30	0.00%	10.00%	0.00%	40.00%	50.00%

Please mark the appropriate box for each statement.	N	Mean	% SD	% D	% N	% A	% SA
I understood the goals of the standard setting meeting.	10	4.70	0.00%	0.00%	0.00%	30.00%	70.00%
The facilitator helped me understand the process.	10	4.20	10.00%	0.00%	10.00%	20.00%	60.00%
The materials contained the information needed to set standards.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%
I understood how to use the impact data.	10	4.70	0.00%	0.00%	0.00%	30.00%	70.00%
I understood how the cut scores were calculated.	10	4.40	0.00%	0.00%	0.00%	60.00%	40.00%
The facilitator was able to provide answers to my questions.	10	4.30	10.00%	0.00%	0.00%	30.00%	60.00%
Sufficient time was allotted for training on the standard setting tasks.	10	4.50	0.00%	0.00%	0.00%	50.00%	50.00%
Sufficient time was allotted to complete the standard setting tasks.	10	4.40	0.00%	10.00%	0.00%	30.00%	60.00%
The facilitator helped the standard setting process run smoothly.	10	4.20	10.00%	0.00%	0.00%	40.00%	50.00%
Overall the standard setting process produced credible results.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%

Final Evaluation Results - Math

Grades 3/4

Panelist Demographics	<i>Count</i> (<i>N</i> =11)	%
Gender:		
Male	0	0.00%
Female	11	100.00%
Race/Ethnicity:		
White	8	72.73%
Black	1	9.09%
Hispanic	0	0.00%
Asian	0	0.00%
Pacific Islander	0	0.00%
American Indian	3	27.27%
Years of Experience:		
0-5	2	18.18%
5-10	4	36.36%
10-15	3	27.27%
More than 15	2	18.18%
Professional Experience:		
Students with Disabilities	5	45.45%
Students with Limited English Proficiency	3	27.27%
Economically Disadvantaged Students	7	63.64%
Gifted and Talented Students	5	45.45%
General Education	11	100.00%

Please rate the usefulness of each of the following:	N	Mean	Not Useful at All 1	2	3	4	Extremely Useful 5
The opening session.	11	4.09	0.00%	0.00%	18.18%	54.55%	27.27%
Completing the practice test	11	4.82	0.00%	0.00%	0.00%	18.18%	81.82%
Completing the item map	11	4.27	0.00%	0.00%	18.18%	36.36%	45.45%
Discussions with other participants.	11	4.91	0.00%	0.00%	0.00%	9.09%	90.91%
Impact data.	11	4.82	0.00%	0.00%	0.00%	18.18%	81.82%

Please mark the appropriate box for each statement.	N	Mean	% SD	% D	% N	% A	% SA
I understood the goals of the standard setting meeting.	11	4.55	0.00%	0.00%	0.00%	45.45%	54.55%
The facilitator helped me understand the process.	11	4.45	0.00%	0.00%	9.09%	36.36%	54.55%
The materials contained the information needed to set standards.	11	4.82	0.00%	0.00%	0.00%	18.18%	81.82%
I understood how to use the impact data.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%
I understood how the cut scores were calculated.	11	4.27	9.09%	0.00%	0.00%	36.36%	54.55%
The facilitator was able to provide answers to my questions.	11	4.55	0.00%	9.09%	0.00%	18.18%	72.73%
Sufficient time was allotted for training on the standard setting tasks.	11	4.91	0.00%	0.00%	0.00%	9.09%	90.91%
Sufficient time was allotted to complete the standard setting tasks.	11	4.82	0.00%	0.00%	0.00%	18.18%	81.82%
The facilitator helped the standard setting process run smoothly.	11	4.73	0.00%	0.00%	0.00%	27.27%	72.73%
Overall the standard setting process produced credible results.	11	4.27	0.00%	9.09%	0.00%	45.45%	45.45%

Grades 5/6

·		
Panelist Demographics	Count (N=9)	%
Gender:		
Male	0	0.00%
Female	9	100.00%
Race/Ethnicity:		
White	8	88.89%
Black	0	0.00%
Hispanic	1	11.11%
Asian	0	0.00%
Pacific Islander	0	0.00%
American Indian	0	0.00%
Years of Experience:		
0-5	1	11.11%
5-10	2	22.22%
10-15	3	33.33%
More than 15	3	33.33%
Professional Experience:		
Students with Disabilities	2	22.22%
Students with Limited English	3	33.33%
Proficiency	3	33.3370
Economically Disadvantaged	4	44.44%
Students	-	
Gifted and Talented Students	4	44.44%
General Education	9	100.00%

Please rate the usefulness of each of the following:	N	Mean	Not Useful at All 1	2	3	4	Extremely Useful 5
The opening session.	9	2.56	11.11%	33.33%	44.44%	11.11%	0.00%
Completing the practice test	9	4.33	0.00%	11.11%	0.00%	33.33%	55.56%
Completing the item map	9	4.22	0.00%	0.00%	11.11%	55.56%	33.33%
Discussions with other participants.	9	4.89	0.00%	0.00%	0.00%	11.11%	88.89%
Impact data.	9	4.33	0.00%	0.00%	11.11%	44.44%	44.44%

Please mark the appropriate box for each statement.	N	Mean	% SD	% D	% N	% A	% SA
I understood the goals of the standard setting meeting.	9	4.89	0.00%	0.00%	0.00%	11.11%	88.89%
The facilitator helped me understand the process.	9	4.78	0.00%	0.00%	0.00%	22.22%	77.78%
The materials contained the information needed to set standards.	9	4.33	0.00%	11.11%	0.00%	33.33%	55.56%
I understood how to use the impact data.	9	4.56	0.00%	0.00%	11.11%	22.22%	66.67%
I understood how the cut scores were calculated.	9	4.67	0.00%	0.00%	0.00%	33.33%	66.67%
The facilitator was able to provide answers to my questions.	9	4.78	0.00%	0.00%	0.00%	22.22%	77.78%
Sufficient time was allotted for training on the standard setting tasks.	9	4.78	0.00%	0.00%	0.00%	22.22%	77.78%
Sufficient time was allotted to complete the standard setting tasks.	9	4.78	0.00%	0.00%	0.00%	22.22%	77.78%
The facilitator helped the standard setting process run smoothly.	9	4.78	0.00%	0.00%	0.00%	22.22%	77.78%
Overall the standard setting process produced credible results.	9	4.33	0.00%	0.00%	11.11%	44.44%	44.44%

Grades 7/8

Panelist Demographics	<i>Count</i> (<i>N</i> =11)	%
Gender:		
Male	1.1	10.00%
Female	9.9	90.00%
Race/Ethnicity:		
White	9	81.82%
Black	0	0.00%
Hispanic	0	0.00%
Asian	1	9.09%
Pacific Islander	0	0.00%
American Indian	2	18.18%
Years of Experience:		
0-5	1	9.09%
5-10	2	18.18%
10-15	4	36.36%
More than 15	4	36.36%
Professional Experience:		
Students with Disabilities	6	54.55%
Students with Limited English	3	27.27%
Proficiency	J	21.2170
Economically Disadvantaged	8	72.73%
Students	-	12.13/0
Gifted and Talented Students	8	72.73%
General Education	11	100.00%

Please rate the usefulness of each of the following:	N	Mean	Not Useful at All 1	2	3	4	Extremely Useful 5
The opening session.	11	3.91	0.00%	9.09%	18.18%	45.45%	27.27%
Completing the practice test	11	4.09	18.18%	0.00%	0.00%	18.18%	63.64%
Completing the item map	11	4.64	0.00%	0.00%	0.00%	36.36%	63.64%
Discussions with other participants.	11	4.91	0.00%	0.00%	0.00%	9.09%	90.91%
Impact data.	11	4.36	0.00%	0.00%	18.18%	27.27%	54.55%

Please mark the appropriate box for each statement.	N	Mean	% SD	% D	% N	% A	% SA
I understood the goals of the standard setting meeting.	11	4.91	0.00%	0.00%	0.00%	9.09%	90.91%
The facilitator helped me understand the process.	11	4.82	0.00%	0.00%	0.00%	18.18%	81.82%
The materials contained the information needed to set standards.	11	4.91	0.00%	0.00%	0.00%	9.09%	90.91%
I understood how to use the impact data.	11	4.82	0.00%	0.00%	0.00%	18.18%	81.82%
I understood how the cut scores were calculated.	11	4.82	0.00%	0.00%	0.00%	18.18%	81.82%
The facilitator was able to provide answers to my questions.	11	4.91	0.00%	0.00%	0.00%	9.09%	90.91%
Sufficient time was allotted for training on the standard setting tasks.	11	4.82	0.00%	0.00%	0.00%	18.18%	81.82%
Sufficient time was allotted to complete the standard setting tasks.	11	4.82	0.00%	0.00%	0.00%	18.18%	81.82%
The facilitator helped the standard setting process run smoothly.	11	4.82	0.00%	0.00%	0.00%	18.18%	81.82%
Overall the standard setting process produced credible results.	11	4.82	0.00%	0.00%	0.00%	18.18%	81.82%

Grade 10

Panelist Demographics	<i>Count</i> (<i>N</i> =10)	%		
Gender:				
Male	0	0.00%		
Female	10	100.00%		
Race/Ethnicity:				
White	8	80.00%		
Black	0	0.00%		
Hispanic	1	10.00%		
Asian	0	0.00%		
Pacific Islander	0	0.00%		
American Indian	1	10.00%		
Years of Experience:				
0-5	0	0.00%		
5-10	1	10.00%		
10-15	4	40.00%		
More than 15	5	50.00%		
Professional Experience:				
Students with Disabilities	2	20.00%		
Students with Limited English	4	40.00%		
Proficiency	7	40.0070		
Economically Disadvantaged	3	30.00%		
Students	_			
Gifted and Talented Students	3	30.00%		
General Education	9	90.00%		

Please rate the usefulness of each of the following:	N	Mean	Not Useful at All 1	2	3	4	Extremely Useful 5
The opening session.	10	4.40	0.00%	0.00%	10.00%	40.00%	50.00%
Completing the practice test	10	4.70	0.00%	0.00%	0.00%	30.00%	70.00%
Completing the item map	10	4.60	0.00%	0.00%	10.00%	20.00%	70.00%
Discussions with other participants.	10	4.90	0.00%	0.00%	0.00%	10.00%	90.00%
Impact data.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%

Please mark the appropriate box for each statement.	N	Mean	% SD	% D	% N	% A	% SA
I understood the goals of the standard setting meeting.	8	4.88	0.00%	0.00%	0.00%	12.50%	87.50%
The facilitator helped me understand the process.	8	4.63	0.00%	0.00%	0.00%	37.50%	62.50%
The materials contained the information needed to set standards.	8	4.75	0.00%	0.00%	0.00%	25.00%	75.00%
I understood how to use the impact data.	8	4.75	0.00%	0.00%	0.00%	25.00%	75.00%
I understood how the cut scores were calculated.	8	4.88	0.00%	0.00%	0.00%	12.50%	87.50%
The facilitator was able to provide answers to my questions.	8	4.63	0.00%	0.00%	0.00%	37.50%	62.50%
Sufficient time was allotted for training on the standard setting tasks.	8	4.63	0.00%	0.00%	0.00%	37.50%	62.50%
Sufficient time was allotted to complete the standard setting tasks.	8	4.75	0.00%	0.00%	0.00%	25.00%	75.00%
The facilitator helped the standard setting process run smoothly.	8	4.75	0.00%	0.00%	0.00%	25.00%	75.00%
Overall the standard setting process produced credible results.	8	4.75	0.00%	0.00%	0.00%	25.00%	75.00%

Final Evaluation Results - Science

Grade 5

Panelist Demographics	<i>Count</i> (<i>N</i> =10)	%
Gender:		
Male	0	0.00%
Female	10	100.00%
Race/Ethnicity:		
White	9	90.00%
Black	0	0.00%
Hispanic	0	0.00%
Asian	0	0.00%
Pacific Islander	0	0.00%
American Indian	1	10.00%
Years of Experience:		
0-5	1	10.00%
5-10	3	30.00%
10-15	1	10.00%
More than 15	5	50.00%
Professional Experience:		
Students with Disabilities	3	30.00%
Students with Limited English	3	30.00%
Proficiency	3	30.00%
Economically Disadvantaged	5	50.00%
Students	J	30.0070
Gifted and Talented Students	2	20.00%
General Education	10	100.00%

Please rate the usefulness of each of the following:	N	Mean	Not Useful at All 1	2	3	4	Extremely Useful 5
The opening session.	10	4.40	0.00%	0.00%	10.00%	40.00%	50.00%
Completing the practice test	10	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
Completing the item map	10	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
Discussions with other participants.	10	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
Impact data.	10	4.90	0.00%	0.00%	0.00%	10.00%	90.00%

Please mark the appropriate box for each statement.	N	Mean	% SD	% D	% N	% A	% SA
I understood the goals of the standard setting meeting.	10	4.90	0.00%	0.00%	0.00%	10.00%	90.00%
The facilitator helped me understand the process.	10	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
The materials contained the information needed to set standards.	10	4.90	0.00%	0.00%	0.00%	10.00%	90.00%
I understood how to use the impact data.	10	4.70	0.00%	0.00%	10.00%	10.00%	80.00%
I understood how the cut scores were calculated.	10	4.60	0.00%	0.00%	0.00%	40.00%	60.00%
The facilitator was able to provide answers to my questions.	10	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
Sufficient time was allotted for training on the standard setting tasks.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%
Sufficient time was allotted to complete the standard setting tasks.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%
The facilitator helped the standard setting process run smoothly.	10	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
Overall the standard setting process produced credible results.	10	4.90	0.00%	0.00%	0.00%	10.00%	90.00%

Grade 8

Panelist Demographics	Count (N=9)	%
Gender:		
Male	1	11.11%
Female	8	88.89%
Race/Ethnicity:		
White	8	88.89%
Black	0	0.00%
Hispanic	0	0.00%
Asian	0	0.00%
Pacific Islander	0	0.00%
American Indian	1	11.11%
Years of Experience:		
0-5	2	22.22%
5-10	4	44.44%
10-15	0	0.00%
More than 15	3	33.33%
Professional Experience:		
Students with Disabilities	3	33.33%
Students with Limited English	3	33.33%
Proficiency	3	33.3370
Economically Disadvantaged	6	66.67%
Students	-	
Gifted and Talented Students	5	55.56%
General Education	7	77.78%

Please rate the usefulness of each of the following:	N	Mean	Not Useful at All I	2	3	4	Extremely Useful 5
The opening session.	9	3.33	22.22%	11.11%	22.22%	0.00%	44.44%
Completing the practice test	9	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
Completing the item map	9	4.44	0.00%	0.00%	0.00%	55.56%	44.44%
Discussions with other participants.	9	4.89	0.00%	0.00%	0.00%	11.11%	88.89%
Impact data.	8	4.63	0.00%	0.00%	0.00%	37.50%	62.50%

Please mark the appropriate box for each statement.	N	Mean	% SD	% D	% N	% A	% SA
I understood the goals of the standard setting meeting.	9	4.89	0.00%	0.00%	0.00%	11.11%	88.89%
The facilitator helped me understand the process.	9	4.67	0.00%	0.00%	0.00%	33.33%	66.67%
The materials contained the information needed to set standards.	9	4.67	0.00%	0.00%	11.11%	11.11%	77.78%
I understood how to use the impact data.	9	4.56	0.00%	0.00%	0.00%	44.44%	55.56%
I understood how the cut scores were calculated.	9	4.22	0.00%	0.00%	11.11%	55.56%	33.33%
The facilitator was able to provide answers to my questions.	9	4.67	0.00%	0.00%	11.11%	11.11%	77.78%
Sufficient time was allotted for training on the standard setting tasks.	9	4.67	0.00%	0.00%	0.00%	33.33%	66.67%
Sufficient time was allotted to complete the standard setting tasks.	9	4.67	0.00%	0.00%	0.00%	33.33%	66.67%
The facilitator helped the standard setting process run smoothly.	9	4.78	0.00%	0.00%	0.00%	22.22%	77.78%
Overall the standard setting process produced credible results.	9	4.78	0.00%	0.00%	0.00%	22.22%	77.78%

Grade 10

Panelist Demographics	<i>Count</i> (<i>N</i> =10)	%
Gender:		
Male	4	40.00%
Female	6	60.00%
Race/Ethnicity:		
White	10	100.00%
Black	0	0.00%
Hispanic	0	0.00%
Asian	0	0.00%
Pacific Islander	0	0.00%
American Indian	0	0.00%
Years of Experience:		
0-5	0	0.00%
5-10	2	20.00%
10-15	3	30.00%
More than 15	5	50.00%
Professional Experience:		
Students with Disabilities	4	40.00%
Students with Limited English	2	20.00%
Proficiency	2	20.0070
Economically Disadvantaged	5	50.00%
Students	_	
Gifted and Talented Students	6	60.00%
General Education	10	100.00%

Please rate the usefulness of each of the following:	N	Mean	Not Useful at All 1	2	3	4	Extremely Useful 5
The opening session.	10	3.60	0.00%	10.00%	30.00%	50.00%	10.00%
Completing the practice test	10	4.60	0.00%	0.00%	10.00%	20.00%	70.00%
Completing the item map	10	4.60	0.00%	0.00%	0.00%	40.00%	60.00%
Discussions with other participants.	10	5.00	0.00%	0.00%	0.00%	0.00%	100.00%
Impact data.	10	4.10	0.00%	0.00%	10.00%	70.00%	20.00%

Please mark the appropriate box for each statement.	N	Mean	% SD	% D	% N	% A	% SA
I understood the goals of the standard setting meeting.	10	4.80	0.00%	0.00%	0.00%	20.00%	80.00%
The facilitator helped me understand the process.	10	4.70	0.00%	0.00%	0.00%	30.00%	70.00%
The materials contained the information needed to set standards.	10	4.90	0.00%	0.00%	0.00%	10.00%	90.00%
I understood how to use the impact data.	10	4.60	0.00%	0.00%	0.00%	40.00%	60.00%
I understood how the cut scores were calculated.	10	4.60	0.00%	0.00%	0.00%	40.00%	60.00%
The facilitator was able to provide answers to my questions.	10	4.60	0.00%	0.00%	10.00%	20.00%	70.00%
Sufficient time was allotted for training on the standard setting tasks.	10	4.50	0.00%	10.00%	0.00%	20.00%	70.00%
Sufficient time was allotted to complete the standard setting tasks.	10	4.50	0.00%	10.00%	0.00%	20.00%	70.00%
The facilitator helped the standard setting process run smoothly.	10	4.60	0.00%	0.00%	10.00%	20.00%	70.00%
Overall the standard setting process produced credible results.	10	4.70	0.00%	0.00%	0.00%	30.00%	70.00%

Vertical Articulation Evaluation - ELA

Pre-Articulation

FIE-AI (ICUIACIOII	T	T	Т	ı	1	ı
Do you believe the final recommended cut score for						
each of the performance						
levels is too low, about right,		Too	Somewhat	About	Somewhat	Too
or too high?	Grade	Low -1	Low	Right	High	High -5
Advanced Proficient	3	0%	0%	88%	13%	0%
	4	0%	0%	75%	25%	0%
	5	0%	13%	63%	25%	0%
	6	0%	0%	88%	13%	0%
	7	0%	38%	50%	13%	0%
	8	0%	13%	88%	0%	0%
	10	0%	0%	63%	38%	0%
Proficient/Knowledge	3	0%	50%	25%	25%	0%
	4	0%	63%	13%	25%	0%
	5	0%	38%	38%	25%	0%
	6	13%	63%	0%	25%	0%
	7	25%	38%	13%	25%	0%
	8	0%	50%	13%	38%	0%
	10	75%	0%	0%	25%	0%
Limited Knowledge/Unsatisfactory	3	0%	0%	63%	38%	0%
	4	0%	0%	63%	38%	0%
	5	0%	25%	75%	0%	0%
	6	13%	25%	50%	13%	0%
	7	0%	0%	75%	25%	0%
	8	0%	25%	38%	38%	0%
	10	38%	50%	13%	0%	0%

Post-Articulation

Do you believe the final recommended cut score for each of the performance levels is too low, about right,		Too	Somewhat	About	Somewhat	Too
, , , , ,	_		Somewhat	,	•	
or too high?	Grade	Low -1	Low	Right	High	High -5
Advanced/Proficient	3	0%	0%	100%	0%	0%
	4	0%	0%	100%	0%	0%
	5	0%	0%	100%	0%	0%
	6	0%	0%	100%	0%	0%
		•			(continued

	7	0%	0%	100%	0%	0%
	8	0%	0%	100%	0%	0%
	10	13%	0%	88%	0%	0%
Proficient/Limited Knowledge	3	0%	0%	100%	0%	0%
	4	0%	0%	100%	0%	0%
	5	0%	0%	100%	0%	0%
	6	0%	0%	100%	0%	0%
	7	0%	63%	38%	0%	0%
	8	0%	0%	100%	0%	0%
	10	63%	0%	38%	0%	0%
Limited	3					
Knowledge/Unsatisfactory	3	0%	0%	100%	0%	0%
	4	0%	0%	100%	0%	0%
	5	0%	0%	100%	0%	0%
	6	0%	0%	88%	13%	0%
	7	0%	13%	88%	0%	0%
	8	0%	0%	100%	0%	0%
	10	0%	0%	100%	0%	0%

Vertical Articulation Evaluation - Math

Pre-Articulation

Do you believe the final						
recommended cut score for						
each of the performance		_				_
levels is too low, about right,		Too	Somewhat	About	Somewhat	Too
or too high?	Grade	Low -1	Low	Right	High	High -5
Advanced Proficient	3	0%	33%	50%	17%	0%
	4	17%	33%	33%	17%	0%
	5	0%	20%	80%	0%	0%
	6	0%	33%	67%	0%	0%
	7	0%	40%	40%	20%	0%
	8	0%	0%	100%	0%	0%
	10	0%	0%	83%	17%	0%
Proficient/Knowledge	3	17%	50%	33%	0%	0%
	4	17%	50%	33%	0%	0%
	5	0%	67%	33%	0%	0%
	6	0%	33%	67%	0%	0%
	7	0%	33%	67%	0%	0%
	8	0%	17%	67%	17%	0%
	10	0%	0%	83%	17%	0%
Limited Knowledge/Unsatisfactory	3	0%	50%	33%	0%	17%
-	4	0%	33%	50%	0%	17%
	5	0%	50%	33%	0%	17%
	6	33%	17%	17%	17%	17%
	7	17%	33%	17%	33%	0%
	8	17%	17%	50%	17%	0%
	10	17%	17%	33%	33%	0%

Post-Articulation

Do you believe the final recommended cut score for each of the performance levels is too low, about right, or too high?	Grade	Too Low -1	Somewhat	About Right	Somewhat High	Too
or too nigh?	Grade	LOW -1	Low	Rigiit	підіі	High -5
Advanced Proficient	3	0%	0%	75%	13%	13%
	4	0%	0%	75%	13%	13%
	5	0%	13%	63%	25%	0%
	6	0%	13%	88%	0%	0%
	7	0%	13%	88%	0%	0%
	8	0%	25%	50%	25%	0%
				•	С	ontinued

	10	0%	13%	75%	13%	0%
Proficient/Knowledge	3	0%	0%	88%	13%	0%
	4	0%	0%	100%	0%	0%
	5	0%	0%	88%	13%	0%
	6	0%	0%	100%	0%	0%
	7	0%	0%	100%	0%	0%
	8	0%	0%	100%	0%	0%
	10	0%	0%	100%	0%	0%
Limited	3					
Knowledge/Unsatisfactory	3	0%	0%	88%	13%	0%
	4	0%	0%	88%	13%	0%
	5	0%	13%	63%	25%	0%
	6	0%	13%	63%	25%	0%
	7	0%	0%	100%	0%	0%
	8	0%	13%	88%	0%	0%
	10	0%	0%	100%	0%	0%

APPENDIX K—DISAGGREGATED IMPACT DATA

		ı	Number a	and Percen	t in Eacl	n Performa	nce Leve	els	
	Total	Unsatisf	actory	Limit Knowle		Profic	ient	Advan	ced
English Language Arts - Grade 03	N	N	%	N	%	N	%	N	%
Total									
All	52,060	13,909	26.7	7,920	15.2	22,836	43.9	7,395	14.2
Form									
Form 1	17,400	4,661	26.8	2,784	16.0	7,456	42.9	2,499	14.4
Form 2	17,356	4,591	26.5	2,556	14.7	7,780	44.8	2,429	14.0
Form 3	17,304	4,657	26.9	2,580	14.9	7,600	43.9	2,467	14.3
Ethnicity									
Hispanic or Latino	9,553	3,804	39.8	1,699	17.8	3,382	35.4	668	7.0
Race									
American Indian/:Alaskan Native	6,741	1,778	26.4	1,120	16.6	3,037	45.1	806	12.0
Asian	944	165	17.5	112	11.9	432	45.8	235	24.9
Black/:African American	4,531	2,116	46.7	778	17.2	1,395	30.8	242	5.3
Pacific Islander	170	72	42.4	34	20.0	57	33.5	7	4.1
White/:Caucasian	24,798	4,692	18.9	3,350	13.5	12,079	48.7	4,677	18.9
Two or More Races	5,323	1,282	24.1	827	15.5	2,454	46.1	760	14.3
Gender									
Female	25,490	5,901	23.2	3,846	15.1	11,572	45.4	4,171	16.4
Male	26,560	8,004	30.1	4,073	15.3	11,259	42.4	3,224	12.1
Not Indicated	10	4	40.0	1	10.0	5	50.0	0	0.0
Other									
ELL 1st Yr: Proficient	575	34	5.9	62	10.8	385	67.0	94	16.4
ELL 2nd Yr: Proficient	268	14	5.2	20	7.5	152	56.7	82	30.6
Econ. Disadv.	33,483	11,171	33.4	5,724	17.1	13,606	40.6	2,982	8.9
Non-Econ. Disadv.	18,577	2,738	14.7	2,196	11.8	9,230	49.7	4,413	23.8
Migrant	30	8	26.7	4	13.3	15	50.0	3	10.0
Non-Migrant	52,030	13,901	26.7	7,916	15.2	22,821	43.9	7,392	14.2
Individualized Education Plan (IEP)									
IEP	9,331	5,497	58.9	1,272	13.6	2,140	22.9	422	4.5
IEP w/ Accomm.	5,034	3,689	73.3	632	12.6	653	13.0	60	1.2
IEP w/o Accomm.	4,297	1,808	42.1	640	14.9	1,487	34.6	362	8.4
Plan 504	971	268	27.6	172	17.7	447	46.0	84	8.7
Plan 504 w/ Accomm.	481	170	35.3	87	18.1	194	40.3	30	6.2
Plan 504 w/o Accomm.	490	98	20.0	85	17.4	253	51.6	54	11.0
English Language Learners (ELL)									
ELL	6,076	3,162	52.0	1,200	19.8	1,551	25.5	163	2.7
ELL w/ Accomm.	1,818	1,133	62.3	353	19.4	318	17.5	14	0.8
ELL w/o Accomm.	4,258	2,029	47.7	847	19.9	1,233	29.0	149	3.5
Non-English Language Learners (Non-ELL)									
Non-ELL	45,984	10,747	23.4	6,720	14.6	21,285	46.3	7,232	15.7
Military									

		1	Number	and Percen	t in Eacl	n Performai	nce Leve	els	
	Total	Unsatisfactory		Limited Knowledge		Proficient		Advanced	
English Language Arts - Grade 03	N	N	%	N	%	N	%	N	%
Military	232	38	16.4	23	9.9	115	49.6	56	24.1
Non-Military	51,828	13,871	26.8	7,897	15.2	22,721	43.8	7,339	14.2
Foster									
Foster	390	136	34.9	74	19.0	155	39.7	25	6.4
Non-Foster	51,670	13,773	26.7	7,846	15.2	22,681	43.9	7,370	14.3

		1	Number	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limite Knowle		Profic	ient	Advan	ced
English Language Arts - Grade 04	N	N	%	N	%	N	%	N	%
Total									
All	50,512	13,485	26.7	14,434	28.6	19,228	38.1	3,365	6.7
Form									
Form 1	16,954	4,524	26.7	4,851	28.6	6,549	38.6	1,030	6.1
Form 2	16,758	4,629	27.6	4,782	28.5	6,163	36.8	1,184	7.1
Form 3	16,800	4,332	25.8	4,801	28.6	6,516	38.8	1,151	6.9
Ethnicity									
Hispanic or Latino	9,168	3,541	38.6	2,879	31.4	2,474	27.0	274	3.0
Race									
American Indian/:Alaskan Native	6,650	1,835	27.6	2,057	30.9	2,431	36.6	327	4.9
Asian	960	170	17.7	217	22.6	433	45.1	140	14.6
Black/:African American	4,344	1,922	44.2	1,285	29.6	1,050	24.2	87	2.0
Pacific Islander	164	67	40.9	49	29.9	45	27.4	3	1.8
White/:Caucasian	24,207	4,713	19.5	6,469	26.7	10,818	44.7	2,207	9.1
Two or More Races	5,019	1,237	24.7	1,478	29.5	1,977	39.4	327	6.5
Gender									
Female	24,786	5,908	23.8	7,133	28.8	9,866	39.8	1,879	7.6
Male	25,691	7,558	29.4	7,292	28.4	9,355	36.4	1,486	5.8
Not Indicated	35	19	54.3	9	25.7	7	20.0	0	0.0
Other									
ELL 1st Yr: Proficient	1,799	409	22.7	778	43.3	568	31.6	44	2.5
ELL 2nd Yr: Proficient	584	50	8.6	194	33.2	298	51.0	42	7.2
Econ. Disadv.	31,744	10,544	33.2	9,942	31.3	10,128	31.9	1,130	3.6
Non-Econ. Disadv.	18,768	2,941	15.7	4,492	23.9	9,100	48.5	2,235	11.9
Migrant	29	13	44.8	8	27.6	8	27.6	0	0.0
Non-Migrant	50,483	13,472	26.7	14,426	28.6	19,220	38.1	3,365	6.7
Individualized Education Plan (IEP)									
IEP	8,795	5,390	61.3	1,939	22.1	1,312	14.9	154	1.8
IEP w/ Accomm.	5,296	3,849	72.7	1,023	19.3	405	7.7	19	0.4
IEP w/o Accomm.	3,499	1,541	44.0	916	26.2	907	25.9	135	3.9
Plan 504	965	257	26.6	307	31.8	356	36.9	45	4.7
Plan 504 w/ Accomm.	471	136	28.9	152	32.3	169	35.9	14	3.0
Plan 504 w/o Accomm.	494	121	24.5	155	31.4	187	37.9	31	6.3
English Language Learners (ELL)									
ELL	4,027	2,526	62.7	1,086	27.0	399	9.9	16	0.4
ELL w/ Accomm.	1,260	903	71.7	287	22.8	69	5.5	1	0.1
ELL w/o Accomm.	2,767	1,623	58.7	799	28.9	330	11.9	15	0.5
Non-English Language Learners (Non-ELL)									
Non-ELL	46,485	10,959	23.6	13,348	28.7	18,829	40.5	3,349	7.2

		1	Number	and Percen	t in Eacl	n Performai	nce Leve	els	
	Total	Unsatisfactory		Limited Knowledge		Proficient		Advanced	
English Language Arts - Grade 04	N	N	%	N	%	N	%	N	%
Military									
Military	253	36	14.2	67	26.5	121	47.8	29	11.5
Non-Military	50,259	13,449	26.8	14,367	28.6	19,107	38.0	3,336	6.6
Foster									
Foster	362	140	38.7	109	30.1	102	28.2	11	3.0
Non-Foster	50,150	13,345	26.6	14,325	28.6	19,126	38.1	3,354	6.7

		١	Number a	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limite Knowle		Profic	ient	Advan	ced
English Language Arts - Grade 05	N	N	%	N	%	N	%	N	%
Total									
All	48,449	9,260	19.1	13,920	28.7	19,359	40.0	5,910	12.2
Form									
Form 1	16,248	3,154	19.4	4,832	29.7	6,429	39.6	1,833	11.3
Form 2	16,143	3,127	19.4	4,472	27.7	6,712	41.6	1,832	11.4
Form 3	16,058	2,979	18.6	4,616	28.8	6,218	38.7	2,245	14.0
Ethnicity									
Hispanic or Latino	8,678	2,327	26.8	2,912	33.6	2,886	33.3	553	6.4
Race									
American Indian/:Alaskan Native	6,657	1,279	19.2	2,078	31.2	2,618	39.3	682	10.2
Asian	917	104	11.3	210	22.9	372	40.6	231	25.2
Black/:African American	4,253	1,419	33.4	1,487	35.0	1,139	26.8	208	4.9
Pacific Islander	159	49	30.8	54	34.0	44	27.7	12	7.6
White/:Caucasian	23,316	3,276	14.1	5,930	25.4	10,416	44.7	3,694	15.8
Two or More Races	4,469	806	18.0	1,249	28.0	1,884	42.2	530	11.9
Gender									
Female	23,909	3,806	15.9	6,850	28.7	10,001	41.8	3,252	13.6
Male	24,497	5,439	22.2	7,051	28.8	9,349	38.2	2,658	10.9
Not Indicated	43	15	34.9	19	44.2	9	20.9	0	0.0
Other									
ELL 1st Yr: Proficient	1,417	267	18.8	616	43.5	494	34.9	40	2.8
ELL 2nd Yr: Proficient	1,715	258	15.0	695	40.5	678	39.5	84	4.9
Econ. Disadv.	30,004	7,373	24.6	9,811	32.7	10,667	35.6	2,153	7.2
Non-Econ. Disadv.	18,445	1,887	10.2	4,109	22.3	8,692	47.1	3,757	20.4
Migrant	31	6	19.4	10	32.3	14	45.2	1	3.2
Non-Migrant	48,418	9,254	19.1	13,910	28.7	19,345	40.0	5,909	12.2
Individualized Education Plan (IEP)									
IEP	8,316	4,498	54.1	2,286	27.5	1,320	15.9	212	2.6
IEP w/ Accomm.	5,301	3,327	62.8	1,388	26.2	536	10.1	50	0.9
IEP w/o Accomm.	3,015	1,171	38.8	898	29.8	784	26.0	162	5.4
Plan 504	1,061	186	17.5	333	31.4	445	41.9	97	9.1
Plan 504 w/ Accomm.	520	119	22.9	168	32.3	201	38.7	32	6.2
Plan 504 w/o Accomm.	541	67	12.4	165	30.5	244	45.1	65	12.0
English Language Learners (ELL)									
ELL	2,462	1,380	56.1	779	31.6	270	11.0	33	1.3
ELL w/ Accomm.	746	483	64.8	216	29.0	45	6.0	2	0.3
ELL w/o Accomm.	1,716	897	52.3	563	32.8	225	13.1	31	1.8
Non-English Language Learners (Non-ELL)									
Non-ELL	45,987	7,880	17.1	13,141	28.6	19,089	41.5	5,877	12.8

		1	Number	and Percen	t in Eacl	n Performai	nce Leve	els	
	Total	Total Unsatisfactory		Limited Knowledge		Proficient		Advanced	
English Language Arts - Grade 05	N	N	%	N	%	N	%	N	%
Military									
Military	247	24	9.7	50	20.2	111	44.9	62	25.1
Non-Military	48,202	9,236	19.2	13,870	28.8	19,248	39.9	5,848	12.1
Foster									
Foster	299	86	28.8	114	38.1	85	28.4	14	4.7
Non-Foster	48,150	9,174	19.1	13,806	28.7	19,274	40.0	5,896	12.3

			Number a	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisf	actory	Limit Knowle		Profic	ient	Advan	ced
English Language Arts - Grade 06	N	N	%	N	%	N	%	N	%
Total									
All	46,499	8,461	18.2	18,606	40.0	13,345	28.7	6,087	13.1
Form									
Form 1	15,973	3,207	20.1	6,263	39.2	4,265	26.7	2,238	14.0
Form 2	15,254	2,683	17.6	5,860	38.4	4,759	31.2	1,952	12.8
Form 3	15,272	2,571	16.8	6,483	42.5	4,321	28.3	1,897	12.4
Ethnicity									
Hispanic or Latino	7,593	1,910	25.2	3,398	44.8	1,730	22.8	555	7.3
Race									
American Indian/:Alaskan Native	6,745	1,324	19.6	2,870	42.6	1,821	27.0	730	10.8
Asian	871	92	10.6	250	28.7	272	31.2	257	29.5
Black/:African American	3,837	1,117	29.1	1,743	45.4	765	19.9	212	5.5
Pacific Islander	139	42	30.2	59	42.5	31	22.3	7	5.0
White/:Caucasian	23,366	3,279	14.0	8,776	37.6	7,525	32.2	3,786	16.2
Two or More Races	3,948	697	17.7	1,510	38.3	1,201	30.4	540	13.7
Gender									
Female	22,695	3,484	15.4	9,198	40.5	6,777	29.9	3,236	14.3
Male	23,726	4,945	20.8	9,382	39.5	6,552	27.6	2,847	12.0
Not Indicated	78	32	41.0	26	33.3	16	20.5	4	5.1
Other									
ELL 1st Yr: Proficient	638	122	19.1	384	60.2	110	17.2	22	3.5
ELL 2nd Yr: Proficient	916	177	19.3	508	55.5	188	20.5	43	4.7
Econ. Disadv.	28,339	6,744	23.8	12,406	43.8	6,846	24.2	2,343	8.3
Non-Econ. Disadv.	18,160	1,717	9.5	6,200	34.1	6,499	35.8	3,744	20.6
Migrant	28	12	42.9	12	42.9	3	10.7	1	3.6
Non-Migrant	46,471	8,449	18.2	18,594	40.0	13,342	28.7	6,086	13.1
Individualized Education Plan (IEP)									
IEP	7,443	4,101	55.1	2,431	32.7	718	9.7	193	2.6
IEP w/ Accomm.	4,019	2,467	61.4	1,264	31.5	246	6.1	42	1.1
IEP w/o Accomm.	3,424	1,634	47.7	1,167	34.1	472	13.8	151	4.4
Plan 504	1,091	168	15.4	504	46.2	304	27.9	115	10.5
Plan 504 w/ Accomm.	332	67	20.2	161	48.5	78	23.5	26	7.8
Plan 504 w/o Accomm.	759	101	13.3	343	45.2	226	29.8	89	11.7
English Language Learners (ELL)									
ELL	1,658	1,025	61.8	513	30.9	101	6.1	19	1.2
ELL w/ Accomm.	293	220	75.1	66	22.5	7	2.4	0	0.0
ELL w/o Accomm.	1,365	805	59.0	447	32.8	94	6.9	19	1.4
Non-English Language Learners (Non-ELL)									
Non-ELL	44,841	7,436	16.6	18,093	40.4	13,244	29.5	6,068	13.5

		1	Number	and Percen	t in Eacl	n Performai	nce Leve	els	
	Total	Unsatisfa	Unsatisfactory		Limited Knowledge		Proficient		ced
English Language Arts - Grade 06	N	N	%	N	%	N	%	N	%
Military									
Military	260	27	10.4	88	33.9	91	35.0	54	20.8
Non-Military	46,239	8,434	18.2	18,518	40.1	13,254	28.7	6,033	13.1
Foster									
Foster	279	81	29.0	132	47.3	50	17.9	16	5.7
Non-Foster	46,220	8,380	18.1	18,474	40.0	13,295	28.8	6,071	13.1

		N	lumber a	and Percen	t in Eacl	n Performai	nce Leve	els	
	Total	Unsatisfa	actory	Limite Knowle		Profici	ent	Advan	ced
English Language Arts - Grade 07	N	N	%	N	%	N	%	N	%
Total									
All	48,035	13,581	28.3	11,849	24.7	15,653	32.6	6,952	14.5
Form									
Form 1	16,436	4,978	30.3	3,770	22.9	5,291	32.2	2,397	14.6
Form 2	15,795	4,386	27.8	3,874	24.5	5,191	32.9	2,344	14.8
Form 3	15,804	4,217	26.7	4,205	26.6	5,171	32.7	2,211	14.0
Ethnicity									
Hispanic or Latino	8,086	3,175	39.3	2,149	26.6	2,119	26.2	643	8.0
Race									
American Indian/:Alaskan Native	7,027	2,067	29.4	1,861	26.5	2,210	31.5	889	12.7
Asian	997	167	16.8	203	20.4	328	32.9	299	30.0
Black/:African American	4,178	1,940	46.4	1,044	25.0	931	22.3	263	6.3
Pacific Islander	146	67	45.9	35	24.0	36	24.7	8	5.5
White/:Caucasian	23,684	5,099	21.5	5,555	23.5	8,716	36.8	4,314	18.2
Two or More Races	3,917	1,066	27.2	1,002	25.6	1,313	33.5	536	13.7
Gender									
Female	23,357	5,767	24.7	5,808	24.9	8,069	34.6	3,713	15.9
Male	24,622	7,784	31.6	6,030	24.5	7,572	30.8	3,236	13.1
Not Indicated	56	30	53.6	11	19.6	12	21.4	3	5.4
Other									
ELL 1st Yr: Proficient	200	58	29.0	73	36.5	58	29.0	11	5.5
ELL 2nd Yr: Proficient	440	150	34.1	164	37.3	109	24.8	17	3.9
Econ. Disadv.	29,593	10,779	36.4	7,871	26.6	8,227	27.8	2,716	9.2
Non-Econ. Disadv.	18,442	2,802	15.2	3,978	21.6	7,426	40.3	4,236	23.0
Migrant	32	18	56.3	4	12.5	7	21.9	3	9.4
Non-Migrant	48,003	13,563	28.3	11,845	24.7	15,646	32.6	6,949	14.5
Individualized Education Plan (IEP)									
IEP	8,153	5,640	69.2	1,403	17.2	878	10.8	232	2.9
IEP w/ Accomm.	4,211	3,167	75.2	641	15.2	321	7.6	82	2.0
IEP w/o Accomm.	3,942	2,473	62.7	762	19.3	557	14.1	150	3.8
Plan 504	1,009	257	25.5	256	25.4	361	35.8	135	13.4
Plan 504 w/ Accomm.	233	76	32.6	65	27.9	68	29.2	24	10.3
Plan 504 w/o Accomm.	776	181	23.3	191	24.6	293	37.8	111	14.3
English Language Learners (ELL)									
ELL	2,173	1,689	77.7	349	16.1	119	5.5	16	0.7
ELL w/ Accomm.	287	256	89.2	25	8.7	6	2.1	0	0.0
ELL w/o Accomm.	1,886	1,433	76.0	324	17.2	113	6.0	16	0.9
Non-English Language Learners (Non-ELL)									
Non-ELL	45,862	11,892	25.9	11,500	25.1	15,534	33.9	6,936	15.1

		ı	Number	and Percen	t in Eacl	n Performa	nce Leve	els	
	Total	Unsatisf	actory	Limit Knowle		Profici	ent	Advan	ced
English Language Arts - Grade 07	N	N	%	N	%	N	%	N	%
Military									
Military	228	40	17.5	59	25.9	82	36.0	47	20.6
Non-Military	47,807	13,541	28.3	11,790	24.7	15,571	32.6	6,905	14.4
Foster									
Foster	260	114	43.9	64	24.6	51	19.6	31	11.9
Non-Foster	47,775	13,467	28.2	11,785	24.7	15,602	32.7	6,921	14.5

		١	Number a	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limite Knowle		Profic	ient	Advan	ced
English Language Arts - Grade 08	N	N	%	N	%	N	%	N	%
Total									
All	47,893	9,972	20.8	16,338	34.1	16,038	33.5	5,545	11.6
Form									
Form 1	16,470	3,786	23.0	5,599	34.0	5,300	32.2	1,785	10.8
Form 2	15,698	3,256	20.7	5,472	34.9	5,311	33.8	1,659	10.6
Form 3	15,725	2,930	18.6	5,267	33.5	5,427	34.5	2,101	13.4
Ethnicity									
Hispanic or Latino	7,816	2,353	30.1	2,943	37.7	2,019	25.8	501	6.4
Race									
American Indian/:Alaskan Native	6,990	1,470	21.0	2,570	36.8	2,292	32.8	658	9.4
Asian	943	124	13.2	220	23.3	351	37.2	248	26.3
Black/:African American	4,196	1,569	37.4	1,496	35.7	936	22.3	195	4.7
Pacific Islander	167	62	37.1	50	29.9	48	28.7	7	4.2
White/:Caucasian	24,041	3,662	15.2	7,751	32.2	9,120	37.9	3,508	14.6
Two or More Races	3,740	732	19.6	1,308	35.0	1,272	34.0	428	11.4
Gender									
Female	23,511	3,864	16.4	7,789	33.1	8,479	36.1	3,379	14.4
Male	24,312	6,072	25.0	8,520	35.0	7,556	31.1	2,164	8.9
Not Indicated	70	36	51.4	29	41.4	3	4.3	2	2.9
Other									
ELL 1st Yr: Proficient	183	27	14.8	100	54.6	50	27.3	6	3.3
ELL 2nd Yr: Proficient	242	23	9.5	115	47.5	83	34.3	21	8.7
Econ. Disadv.	29,058	8,035	27.7	10,903	37.5	8,207	28.2	1,913	6.6
Non-Econ. Disadv.	18,835	1,937	10.3	5,435	28.9	7,831	41.6	3,632	19.3
Migrant	37	18	48.7	8	21.6	8	21.6	3	8.1
Non-Migrant	47,856	9,954	20.8	16,330	34.1	16,030	33.5	5,542	11.6
Individualized Education Plan (IEP)									
IEP	7,713	4,697	60.9	2,185	28.3	718	9.3	113	1.5
IEP w/ Accomm.	4,247	2,870	67.6	1,044	24.6	302	7.1	31	0.7
IEP w/o Accomm.	3,466	1,827	52.7	1,141	32.9	416	12.0	82	2.4
Plan 504	986	161	16.3	385	39.1	335	34.0	105	10.7
Plan 504 w/ Accomm.	211	42	19.9	90	42.7	63	29.9	16	7.6
Plan 504 w/o Accomm.	775	119	15.4	295	38.1	272	35.1	89	11.5
English Language Learners (ELL)									
ELL	2,127	1,460	68.6	529	24.9	124	5.8	14	0.7
ELL w/ Accomm.	360	296	82.2	53	14.7	11	3.1	0	0.0
ELL w/o Accomm.	1,767	1,164	65.9	476	26.9	113	6.4	14	0.8
Non-English Language Learners (Non-ELL)									
Non-ELL	45,766	8,512	18.6	15,809	34.5	15,914	34.8	5,531	12.1

		ı	Number	and Percen	t in Eacl	n Performai	nce Leve	els	
	Total	Unsatisf	actory	Limit Knowle		Profici	ent	Advan	ced
English Language Arts - Grade 08	N	N	%	N	%	N	%	N	%
Military									
Military	226	29	12.8	74	32.7	88	38.9	35	15.5
Non-Military	47,667	9,943	20.9	16,264	34.1	15,950	33.5	5,510	11.6
Foster									
Foster	241	91	37.8	102	42.3	42	17.4	6	2.5
Non-Foster	47,652	9,881	20.7	16,236	34.1	15,996	33.6	5,539	11.6

		N	lumber	and Percen	t in Eacl	n Performai	nce Leve	els	
	Total	Unsatisfa	actory	Limite Knowle		Profici	ient	Advan	ced
English Language Arts - Grade 10	N	N	%	N	%	N	%	N	%
Total									
All	45,802	5,938	13.0	14,440	31.5	15,156	33.1	10,268	22.4
Form									
Form 1	15,658	2,125	13.6	5,022	32.1	5,136	32.8	3,375	21.6
Form 2	15,095	1,863	12.3	4,752	31.5	5,332	35.3	3,148	20.9
Form 3	15,049	1,950	13.0	4,666	31.0	4,688	31.2	3,745	24.9
Ethnicity									
Hispanic or Latino	6,942	1,258	18.1	2,588	37.3	2,096	30.2	1,000	14.4
Race									
American Indian/:Alaskan Native	6,809	921	13.5	2,314	34.0	2,326	34.2	1,248	18.3
Asian	1,073	118	11.0	238	22.2	311	29.0	406	37.8
Black/:African American	3,981	952	23.9	1,604	40.3	1,023	25.7	402	10.1
Pacific Islander	149	24	16.1	60	40.3	42	28.2	23	15.4
White/:Caucasian	23,604	2,267	9.6	6,627	28.1	8,240	34.9	6,470	27.4
Two or More Races	3,244	398	12.3	1,009	31.1	1,118	34.5	719	22.2
Gender									
Female	22,529	2,004	8.9	6,770	30.1	7,857	34.9	5,898	26.2
Male	23,246	3,927	16.9	7,662	33.0	7,290	31.4	4,367	18.8
Not Indicated	27	7	25.9	8	29.6	9	33.3	3	11.1
Other									
ELL 1st Yr: Proficient	581	81	13.9	318	54.7	159	27.4	23	4.0
ELL 2nd Yr: Proficient	212	29	13.7	85	40.1	75	35.4	23	10.9
Econ. Disadv.	25,078	4,410	17.6	9,380	37.4	7,700	30.7	3,588	14.3
Non-Econ. Disadv.	20,724	1,528	7.4	5,060	24.4	7,456	36.0	6,680	32.2
Migrant	32	5	15.6	10	31.3	10	31.3	7	21.9
Non-Migrant	45,770	5,933	13.0	14,430	31.5	15,146	33.1	10,261	22.4
Individualized Education Plan (IEP)									
IEP	6,868	2,878	41.9	2,924	42.6	898	13.1	168	2.5
IEP w/ Accomm.	2,369	1,057	44.6	992	41.9	282	11.9	38	1.6
IEP w/o Accomm.	4,499	1,821	40.5	1,932	42.9	616	13.7	130	2.9
Plan 504	898	98	10.9	308	34.3	314	35.0	178	19.8
Plan 504 w/ Accomm.	80	7	8.8	35	43.8	23	28.8	15	18.8
Plan 504 w/o Accomm.	818	91	11.1	273	33.4	291	35.6	163	19.9
English Language Learners (ELL)									
ELL	1,601	851	53.2	602	37.6	112	7.0	36	2.3
ELL w/ Accomm.	262	162	61.8	86	32.8	13	5.0	1	0.4
ELL w/o Accomm.	1,339	689	51.5	516	38.5	99	7.4	35	2.6
Non-English Language Learners (Non-ELL)									
Non-ELL	44,201	5,087	11.5	13,838	31.3	15,044	34.0	10,232	23.2

		1	Number	and Percen	t in Eacl	n Performai	nce Leve	els	
	Total	Unsatisfa	actory	Limit Knowle		Profici	ent	Advan	ced
English Language Arts - Grade 10	N	N	%	N	%	N	%	N	%
Military									
Military	131	10	7.6	29	22.1	56	42.8	36	27.5
Non-Military	45,671	5,928	13.0	14,411	31.6	15,100	33.1	10,232	22.4
Foster									
Foster	194	43	22.2	79	40.7	52	26.8	20	10.3
Non-Foster	45,608	5,895	12.9	14,361	31.5	15,104	33.1	10,248	22.5

	Number and Percent in Each Performance Levels										
	Total	Unsatisf	actory	Limit Knowle		Profic	ient	Advan	ced		
English Language Arts - Grade 03	N	N	%	N	%	N	%	N	%		
Total											
All	52,060	13,909	26.7	7,920	15.2	24,019	46.1	6,212	11.9		
Form											
Form 1	17,400	4,661	26.8	2,784	16.0	8,036	46.2	1,919	11.0		
Form 2	17,356	4,591	26.5	2,556	14.7	8,383	48.3	1,826	10.5		
Form 3	17,304	4,657	26.9	2,580	14.9	7,600	43.9	2,467	14.3		
Ethnicity											
Hispanic or Latino	9,553	3,804	39.8	1,699	17.8	3,504	36.7	546	5.7		
Race											
American Indian/:Alaskan Native	6,741	1,778	26.4	1,120	16.6	3,175	47.1	668	9.9		
Asian	944	165	17.5	112	11.9	467	49.5	200	21.2		
Black/:African American	4,531	2,116	46.7	778	17.2	1,437	31.7	200	4.4		
Pacific Islander	170	72	42.4	34	20.0	58	34.1	6	3.5		
White/:Caucasian	24,798	4,692	18.9	3,350	13.5	12,791	51.6	3,965	16.0		
Two or More Races	5,323	1,282	24.1	827	15.5	2,587	48.6	627	11.8		
Gender											
Female	25,490	5,901	23.2	3,846	15.1	12,213	47.9	3,530	13.9		
Male	26,560	8,004	30.1	4,073	15.3	11,801	44.4	2,682	10.1		
Not Indicated	10	4	40.0	1	10.0	5	50.0	0	0.0		
Other											
ELL 1st Yr: Proficient	575	34	5.9	62	10.8	397	69.0	82	14.3		
ELL 2nd Yr: Proficient	268	14	5.2	20	7.5	164	61.2	70	26.1		
Econ. Disadv.	33,483	11,171	33.4	5,724	17.1	14,154	42.3	2,434	7.3		
Non-Econ. Disadv.	18,577	2,738	14.7	2,196	11.8	9,865	53.1	3,778	20.3		
Migrant	30	8	26.7	4	13.3	16	53.3	2	6.7		
Non-Migrant	52,030	13,901	26.7	7,916	15.2	24,003	46.1	6,210	11.9		
Individualized Education Plan (IEP)											
IEP	9,331	5,497	58.9	1,272	13.6	2,204	23.6	358	3.8		
IEP w/ Accomm.	5,034	3,689	73.3	632	12.6	661	13.1	52	1.0		
IEP w/o Accomm.	4,297	1,808	42.1	640	14.9	1,543	35.9	306	7.1		
Plan 504	971	268	27.6	172	17.7	463	47.7	68	7.0		
Plan 504 w/ Accomm.	481	170	35.3	87	18.1	198	41.2	26	5.4		
Plan 504 w/o Accomm.	490	98	20.0	85	17.4	265	54.1	42	8.6		
English Language Learners (ELL)											
ELL	6,076	3,162	52.0	1,200	19.8	1,594	26.2	120	2.0		
ELL w/ Accomm.	1,818	1,133	62.3	353	19.4	321	17.7	11	0.6		
ELL w/o Accomm.	4,258	2,029	47.7	847	19.9	1,273	29.9	109	2.6		
Non-English Language Learners (Non-ELL)											
Non-ELL	45,984	10,747	23.4	6,720	14.6	22,425	48.8	6,092	13.3		
Military											

		1	Number	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisfa	Unsatisfactory		ed edge	Proficient		Advanced	
English Language Arts - Grade 03	N	N	%	N	%	N	%	N	%
Military	232	38	16.4	23	9.9	126	54.3	45	19.4
Non-Military	51,828	13,871	26.8	7,897	15.2	23,893	46.1	6,167	11.9
Foster									
Foster	390	136	34.9	74	19.0	163	41.8	17	4.4
Non-Foster	51,670	13,773	26.7	7,846	15.2	23,856	46.2	6,195	12.0

	Number and Percent in Each Performance Levels									
	Total	Unsatisfa	actory	Limite Knowle		Profici	ient	Advan	ced	
English Language Arts - Grade 04	N	N	%	N	%	N	%	N	%	
Total										
All	50,512	14,564	28.8	13,355	26.4	19,228	38.1	3,365	6.7	
Form										
Form 1	16,954	4,994	29.5	4,381	25.8	6,549	38.6	1,030	6.1	
Form 2	16,758	4,629	27.6	4,782	28.5	6,163	36.8	1,184	7.1	
Form 3	16,800	4,941	29.4	4,192	25.0	6,516	38.8	1,151	6.9	
Ethnicity										
Hispanic or Latino	9,168	3,802	41.5	2,618	28.6	2,474	27.0	274	3.0	
Race										
American Indian/:Alaskan Native	6,650	2,006	30.2	1,886	28.4	2,431	36.6	327	4.9	
Asian	960	185	19.3	202	21.0	433	45.1	140	14.6	
Black/:African American	4,344	2,037	46.9	1,170	26.9	1,050	24.2	87	2.0	
Pacific Islander	164	71	43.3	45	27.4	45	27.4	3	1.8	
White/:Caucasian	24,207	5,132	21.2	6,050	25.0	10,818	44.7	2,207	9.1	
Two or More Races	5,019	1,331	26.5	1,384	27.6	1,977	39.4	327	6.5	
Gender										
Female	24,786	6,420	25.9	6,621	26.7	9,866	39.8	1,879	7.6	
Male	25,691	8,125	31.6	6,725	26.2	9,355	36.4	1,486	5.8	
Not Indicated	35	19	54.3	9	25.7	7	20.0	0	0.0	
Other										
ELL 1st Yr: Proficient	1,799	464	25.8	723	40.2	568	31.6	44	2.5	
ELL 2nd Yr: Proficient	584	62	10.6	182	31.2	298	51.0	42	7.2	
Econ. Disadv.	31,744	11,342	35.7	9,144	28.8	10,128	31.9	1,130	3.6	
Non-Econ. Disadv.	18,768	3,222	17.2	4,211	22.4	9,100	48.5	2,235	11.9	
Migrant	29	14	48.3	7	24.1	8	27.6	0	0.0	
Non-Migrant	50,483	14,550	28.8	13,348	26.4	19,220	38.1	3,365	6.7	
Individualized Education Plan (IEP)										
IEP	8,795	5,614	63.8	1,715	19.5	1,312	14.9	154	1.8	
IEP w/ Accomm.	5,296	3,992	75.4	880	16.6	405	7.7	19	0.4	
IEP w/o Accomm.	3,499	1,622	46.4	835	23.9	907	25.9	135	3.9	
Plan 504	965	290	30.1	274	28.4	356	36.9	45	4.7	
Plan 504 w/ Accomm.	471	153	32.5	135	28.7	169	35.9	14	3.0	
Plan 504 w/o Accomm.	494	137	27.7	139	28.1	187	37.9	31	6.3	
English Language Learners (ELL)										
ELL	4,027	2,651	65.8	961	23.9	399	9.9	16	0.4	
ELL w/ Accomm.	1,260	936	74.3	254	20.2	69	5.5	1	0.1	
ELL w/o Accomm.	2,767	1,715	62.0	707	25.6	330	11.9	15	0.5	
Non-English Language Learners (Non-ELL)										
Non-ELL	46,485	11,913	25.6	12,394	26.7	18,829	40.5	3,349	7.2	

		1	Number	and Percen	t in Eacl	n Performai	nce Leve	els	
	Total	Unsatisfa	actory	Limited Knowledge		Proficient		Advanced	
English Language Arts - Grade 04	N	N	%	N	%	N	%	N	%
Military									
Military	253	41	16.2	62	24.5	121	47.8	29	11.5
Non-Military	50,259	14,523	28.9	13,293	26.5	19,107	38.0	3,336	6.6
Foster									
Foster	362	147	40.6	102	28.2	102	28.2	11	3.0
Non-Foster	50,150	14,417	28.8	13,253	26.4	19,126	38.1	3,354	6.7

			Number a	and Percen	t in Eacl	n Performa	nce Leve	els	
	Total	Unsatisf	actory	Limit Knowle		Profic	ient	Advan	ced
English Language Arts - Grade 05	N	N	%	N	%	N	%	N	%
Total									
All	48,449	7,966	16.4	15,214	31.4	19,359	40.0	5,910	12.2
Form									
Form 1	16,248	2,857	17.6	5,129	31.6	6,429	39.6	1,833	11.3
Form 2	16,143	2,475	15.3	5,124	31.7	6,712	41.6	1,832	11.4
Form 3	16,058	2,634	16.4	4,961	30.9	6,218	38.7	2,245	14.0
Ethnicity									
Hispanic or Latino	8,678	2,001	23.1	3,238	37.3	2,886	33.3	553	6.4
Race									
American Indian/:Alaskan Native	6,657	1,089	16.4	2,268	34.1	2,618	39.3	682	10.2
Asian	917	92	10.0	222	24.2	372	40.6	231	25.2
Black/:African American	4,253	1,251	29.4	1,655	38.9	1,139	26.8	208	4.9
Pacific Islander	159	46	28.9	57	35.9	44	27.7	12	7.6
White/:Caucasian	23,316	2,794	12.0	6,412	27.5	10,416	44.7	3,694	15.8
Two or More Races	4,469	693	15.5	1,362	30.5	1,884	42.2	530	11.9
Gender									
Female	23,909	3,186	13.3	7,470	31.2	10,001	41.8	3,252	13.6
Male	24,497	4,766	19.5	7,724	31.5	9,349	38.2	2,658	10.9
Not Indicated	43	14	32.6	20	46.5	9	20.9	0	0.0
Other									
ELL 1st Yr: Proficient	1,417	203	14.3	680	48.0	494	34.9	40	2.8
ELL 2nd Yr: Proficient	1,715	194	11.3	759	44.3	678	39.5	84	4.9
Econ. Disadv.	30,004	6,382	21.3	10,802	36.0	10,667	35.6	2,153	7.2
Non-Econ. Disadv.	18,445	1,584	8.6	4,412	23.9	8,692	47.1	3,757	20.4
Migrant	31	6	19.4	10	32.3	14	45.2	1	3.2
Non-Migrant	48,418	7,960	16.4	15,204	31.4	19,345	40.0	5,909	12.2
Individualized Education Plan (IEP)									
IEP	8,316	4,144	49.8	2,640	31.8	1,320	15.9	212	2.6
IEP w/ Accomm.	5,301	3,089	58.3	1,626	30.7	536	10.1	50	0.9
IEP w/o Accomm.	3,015	1,055	35.0	1,014	33.6	784	26.0	162	5.4
Plan 504	1,061	158	14.9	361	34.0	445	41.9	97	9.1
Plan 504 w/ Accomm.	520	102	19.6	185	35.6	201	38.7	32	6.2
Plan 504 w/o Accomm.	541	56	10.4	176	32.5	244	45.1	65	12.0
English Language Learners (ELL)									
ELL	2,462	1,255	51.0	904	36.7	270	11.0	33	1.3
ELL w/ Accomm.	746	441	59.1	258	34.6	45	6.0	2	0.3
ELL w/o Accomm.	1,716	814	47.4	646	37.7	225	13.1	31	1.8
Non-English Language Learners (Non-ELL)									
Non-ELL	45,987	6,711	14.6	14,310	31.1	19,089	41.5	5,877	12.8

		1	Number	and Percen	t in Eacl	n Performa	nce Leve	els	
	Total	Unsatisfa	Unsatisfactory		Limited Knowledge		Proficient		ced
English Language Arts - Grade 05	N	N	%	N	%	N	%	N	%
Military									
Military	247	17	6.9	57	23.1	111	44.9	62	25.1
Non-Military	48,202	7,949	16.5	15,157	31.4	19,248	39.9	5,848	12.1
Foster									
Foster	299	74	24.8	126	42.1	85	28.4	14	4.7
Non-Foster	48,150	7,892	16.4	15,088	31.3	19,274	40.0	5,896	12.3

	Number and Percent in Each Performance Levels								
	Total	tal Unsatisfactory		Limited Knowledge		Proficient		Advanced	
English Language Arts - Grade 06	N	N	%	N	%	N	%	N	%
Total									
All	46,499	8,461	18.2	19,293	41.5	12,658	27.2	6,087	13.1
Form									
Form 1	15,973	3,207	20.1	6,263	39.2	4,265	26.7	2,238	14.0
Form 2	15,254	2,683	17.6	6,547	42.9	4,072	26.7	1,952	12.8
Form 3	15,272	2,571	16.8	6,483	42.5	4,321	28.3	1,897	12.4
Ethnicity									
Hispanic or Latino	7,593	1,910	25.2	3,506	46.2	1,622	21.4	555	7.3
Race									
American Indian/:Alaskan Native	6,745	1,324	19.6	2,965	44.0	1,726	25.6	730	10.8
Asian	871	92	10.6	261	30.0	261	30.0	257	29.5
Black/:African American	3,837	1,117	29.1	1,792	46.7	716	18.7	212	5.5
Pacific Islander	139	42	30.2	62	44.6	28	20.1	7	5.0
White/:Caucasian	23,366	3,279	14.0	9,133	39.1	7,168	30.7	3,786	16.2
Two or More Races	3,948	697	17.7	1,574	39.9	1,137	28.8	540	13.7
Gender									
Female	22,695	3,484	15.4	9,552	42.1	6,423	28.3	3,236	14.3
Male	23,726	4,945	20.8	9,714	40.9	6,220	26.2	2,847	12.0
Not Indicated	78	32	41.0	27	34.6	15	19.2	4	5.1
Other									
ELL 1st Yr: Proficient	638	122	19.1	392	61.4	102	16.0	22	3.5
ELL 2nd Yr: Proficient	916	177	19.3	527	57.5	169	18.5	43	4.7
Econ. Disadv.	28,339	6,744	23.8	12,821	45.2	6,431	22.7	2,343	8.3
Non-Econ. Disadv.	18,160	1,717	9.5	6,472	35.6	6,227	34.3	3,744	20.6
Migrant	28	12	42.9	12	42.9	3	10.7	1	3.6
Non-Migrant	46,471	8,449	18.2	19,281	41.5	12,655	27.2	6,086	13.1
Individualized Education Plan (IEP)									
IEP	7,443	4,101	55.1	2,469	33.2	680	9.1	193	2.6
IEP w/ Accomm.	4,019	2,467	61.4	1,278	31.8	232	5.8	42	1.1
IEP w/o Accomm.	3,424	1,634	47.7	1,191	34.8	448	13.1	151	4.4
Plan 504	1,091	168	15.4	520	47.7	288	26.4	115	10.5
Plan 504 w/ Accomm.	332	67	20.2	165	49.7	74	22.3	26	7.8
Plan 504 w/o Accomm.	759	101	13.3	355	46.8	214	28.2	89	11.7
English Language Learners (ELL)									
ELL	1,658	1,025	61.8	523	31.5	91	5.5	19	1.2
ELL w/ Accomm.	293	220	75.1	68	23.2	5	1.7	0	0.0
ELL w/o Accomm.	1,365	805	59.0	455	33.3	86	6.3	19	1.4
Non-English Language Learners (Non-ELL)									
Non-ELL	44,841	7,436	16.6	18,770	41.9	12,567	28.0	6,068	13.5

	Number and Percent in Each Performance Levels								
	Total	Unsatisfactory		Limited Knowledge		Proficient		Advanced	
English Language Arts - Grade 06	N	N	%	N	%	N	%	N	%
Military									
Military	260	27	10.4	93	35.8	86	33.1	54	20.8
Non-Military	46,239	8,434	18.2	19,200	41.5	12,572	27.2	6,033	13.1
Foster									
Foster	279	81	29.0	138	49.5	44	15.8	16	5.7
Non-Foster	46,220	8,380	18.1	19,155	41.4	12,614	27.3	6,071	13.1

	Number and Percent in Each Performance Levels									
English Language Arts - Grade 07	Total	Total Unsatisfactory		Limited Knowledge		Proficient		Advanced		
	N	N	%	N	%	N	%	N	%	
Total										
All	48,035	12,184	25.4	13,246	27.6	16,862	35.1	5,743	12.0	
Form										
Form 1	16,436	4,486	27.3	4,262	25.9	5,910	36.0	1,778	10.8	
Form 2	15,795	3,921	24.8	4,339	27.5	5,781	36.6	1,754	11.1	
Form 3	15,804	3,777	23.9	4,645	29.4	5,171	32.7	2,211	14.0	
Ethnicity										
Hispanic or Latino	8,086	2,894	35.8	2,430	30.1	2,243	27.7	519	6.4	
Race										
American Indian/:Alaskan Native	7,027	1,845	26.3	2,083	29.6	2,382	33.9	717	10.2	
Asian	997	150	15.1	220	22.1	365	36.6	262	26.3	
Black/:African American	4,178	1,799	43.1	1,185	28.4	975	23.3	219	5.2	
Pacific Islander	146	63	43.2	39	26.7	38	26.0	6	4.1	
White/:Caucasian	23,684	4,484	18.9	6,170	26.1	9,457	39.9	3,573	15.1	
Two or More Races	3,917	949	24.2	1,119	28.6	1,402	35.8	447	11.4	
Gender										
Female	23,357	5,120	21.9	6,455	27.6	8,716	37.3	3,066	13.1	
Male	24,622	7,035	28.6	6,779	27.5	8,132	33.0	2,676	10.9	
Not Indicated	56	29	51.8	12	21.4	14	25.0	1	1.8	
Other										
ELL 1st Yr: Proficient	200	48	24.0	83	41.5	60	30.0	9	4.5	
ELL 2nd Yr: Proficient	440	126	28.6	188	42.7	113	25.7	13	3.0	
Econ. Disadv.	29,593	9,768	33.0	8,882	30.0	8,756	29.6	2,187	7.4	
Non-Econ. Disadv.	18,442	2,416	13.1	4,364	23.7	8,106	44.0	3,556	19.3	
Migrant	32	16	50.0	6	18.8	8	25.0	2	6.3	
Non-Migrant	48,003	12,168	25.4	13,240	27.6	16,854	35.1	5,741	12.0	
Individualized Education Plan (IEP)										
IEP	8,153	5,380	66.0	1,663	20.4	918	11.3	192	2.4	
IEP w/ Accomm.	4,211	3,043	72.3	765	18.2	339	8.1	64	1.5	
IEP w/o Accomm.	3,942	2,337	59.3	898	22.8	579	14.7	128	3.3	
Plan 504	1,009	208	20.6	305	30.2	391	38.8	105	10.4	
Plan 504 w/ Accomm.	233	61	26.2	80	34.3	74	31.8	18	7.7	
Plan 504 w/o Accomm.	776	147	18.9	225	29.0	317	40.9	87	11.2	
English Language Learners (ELL)										
ELL	2,173	1,622	74.6	416	19.1	120	5.5	15	0.7	
ELL w/ Accomm.	287	245	85.4	36	12.5	6	2.1	0	0.0	
ELL w/o Accomm.	1,886	1,377	73.0	380	20.2	114	6.0	15	0.8	
Non-English Language Learners (Non-ELL)										
Non-ELL	45,862	10,562	23.0	12,830	28.0	16,742	36.5	5,728	12.5	

	Number and Percent in Each Performance Levels								
	Total	Unsatisfactory		Limited Knowledge		Proficient		Advanced	
English Language Arts - Grade 07	N	N	%	N	%	N	%	N	%
Military									
Military	228	30	13.2	69	30.3	90	39.5	39	17.1
Non-Military	47,807	12,154	25.4	13,177	27.6	16,772	35.1	5,704	11.9
Foster									
Foster	260	105	40.4	73	28.1	57	21.9	25	9.6
Non-Foster	47,775	12,079	25.3	13,173	27.6	16,805	35.2	5,718	12.0

Oklahoma School Testing Program (OSTP)
English Language Arts - Standard Setting - Round 2 Committee Results

		ı	Number a	and Percen	t in Eacl	n Performa	nce Leve	els	
	Total	Unsatisf	actory	Limit Knowle		Profic	ient	Advanced	
English Language Arts - Grade 08	N	N	%	N	%	N	%	N	%
Total									
All	47,893	9,972	20.8	20,292	42.4	12,084	25.2	5,545	11.6
Form									
Form 1	16,470	3,786	23.0	7,095	43.1	3,804	23.1	1,785	10.8
Form 2	15,698	3,256	20.7	6,285	40.0	4,498	28.7	1,659	10.6
Form 3	15,725	2,930	18.6	6,912	44.0	3,782	24.1	2,101	13.4
Ethnicity									
Hispanic or Latino	7,816	2,353	30.1	3,525	45.1	1,437	18.4	501	6.4
Race									
American Indian/:Alaskan Native	6,990	1,470	21.0	3,168	45.3	1,694	24.2	658	9.4
Asian	943	124	13.2	294	31.2	277	29.4	248	26.3
Black/:African American	4,196	1,569	37.4	1,761	42.0	671	16.0	195	4.7
Pacific Islander	167	62	37.1	62	37.1	36	21.6	7	4.2
White/:Caucasian	24,041	3,662	15.2	9,876	41.1	6,995	29.1	3,508	14.6
Two or More Races	3,740	732	19.6	1,606	42.9	974	26.0	428	11.4
Gender									
Female	23,511	3,864	16.4	9,751	41.5	6,517	27.7	3,379	14.4
Male	24,312	6,072	25.0	10,511	43.2	5,565	22.9	2,164	8.9
Not Indicated	70	36	51.4	30	42.9	2	2.9	2	2.9
Other									
ELL 1st Yr: Proficient	183	27	14.8	122	66.7	28	15.3	6	3.3
ELL 2nd Yr: Proficient	242	23	9.5	143	59.1	55	22.7	21	8.7
Econ. Disadv.	29,058	8,035	27.7	13,169	45.3	5,941	20.5	1,913	6.6
Non-Econ. Disadv.	18,835	1,937	10.3	7,123	37.8	6,143	32.6	3,632	19.3
Migrant	37	18	48.7	9	24.3	7	18.9	3	8.1
Non-Migrant	47,856	9,954	20.8	20,283	42.4	12,077	25.2	5,542	11.6
Individualized Education Plan (IEP)									
IEP	7,713	4,697	60.9	2,468	32.0	435	5.6	113	1.5
IEP w/ Accomm.	4,247	2,870	67.6	1,176	27.7	170	4.0	31	0.7
IEP w/o Accomm.	3,466	1,827	52.7	1,292	37.3	265	7.7	82	2.4
Plan 504	986	161	16.3	475	48.2	245	24.9	105	10.7
Plan 504 w/ Accomm.	211	42	19.9	104	49.3	49	23.2	16	7.6
Plan 504 w/o Accomm.	775	119	15.4	371	47.9	196	25.3	89	11.5
English Language Learners (ELL)									
ELL	2,127	1,460	68.6	582	27.4	71	3.3	14	0.7
ELL w/ Accomm.	360	296	82.2	59	16.4	5	1.4	0	0.0
ELL w/o Accomm.	1,767	1,164	65.9	523	29.6	66	3.7	14	0.8
Non-English Language Learners (Non-ELL)									
Non-ELL	45,766	8,512	18.6	19,710	43.1	12,013	26.3	5,531	12.1

		1	Number	and Percen	t in Eacl	n Performa	nce Leve	els				
	Total	Unsatisfa	actory	Limited Knowledge		Proficient		Advanced				
English Language Arts - Grade 08	N	N N % N % N										
Military												
Military	226	29	12.8	91	40.3	71	31.4	35	15.5			
Non-Military	47,667	9,943	20.9	20,201	42.4	12,013	25.2	5,510	11.6			
Foster												
Foster	241	91	37.8	108	44.8	36	14.9	6	2.5			
Non-Foster	47,652	9,881	20.7	20,184	42.4	12,048	25.3	5,539	11.6			

Oklahoma School Testing Program (OSTP)
English Language Arts - Standard Setting - Round 2 Committee Results

		١	Number a	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limite Knowle		Profic	ient	Advan	ced
English Language Arts - Grade 10	N	N	%	N	%	N	%	N	%
Total									
All	45,802	5,938	13.0	14,440	31.5	16,797	36.7	8,627	18.8
Form									
Form 1	15,658	2,125	13.6	5,022	32.1	5,521	35.3	2,990	19.1
Form 2	15,095	1,863	12.3	4,752	31.5	5,729	38.0	2,751	18.2
Form 3	15,049	1,950	13.0	4,666	31.0	5,547	36.9	2,886	19.2
Ethnicity									
Hispanic or Latino	6,942	1,258	18.1	2,588	37.3	2,293	33.0	803	11.6
Race									
American Indian/:Alaskan Native	6,809	921	13.5	2,314	34.0	2,554	37.5	1,020	15.0
Asian	1,073	118	11.0	238	22.2	347	32.3	370	34.5
Black/:African American	3,981	952	23.9	1,604	40.3	1,110	27.9	315	7.9
Pacific Islander	149	24	16.1	60	40.3	45	30.2	20	13.4
White/:Caucasian	23,604	2,267	9.6	6,627	28.1	9,231	39.1	5,479	23.2
Two or More Races	3,244	398	12.3	1,009	31.1	1,217	37.5	620	19.1
Gender									
Female	22,529	2,004	8.9	6,770	30.1	8,760	38.9	4,995	22.2
Male	23,246	3,927	16.9	7,662	33.0	8,027	34.5	3,630	15.6
Not Indicated	27	7	25.9	8	29.6	10	37.0	2	7.4
Other									
ELL 1st Yr: Proficient	581	81	13.9	318	54.7	165	28.4	17	2.9
ELL 2nd Yr: Proficient	212	29	13.7	85	40.1	79	37.3	19	9.0
Econ. Disadv.	25,078	4,410	17.6	9,380	37.4	8,369	33.4	2,919	11.6
Non-Econ. Disadv.	20,724	1,528	7.4	5,060	24.4	8,428	40.7	5,708	27.5
Migrant	32	5	15.6	10	31.3	11	34.4	6	18.8
Non-Migrant	45,770	5,933	13.0	14,430	31.5	16,786	36.7	8,621	18.8
Individualized Education Plan (IEP)									
IEP	6,868	2,878	41.9	2,924	42.6	935	13.6	131	1.9
IEP w/ Accomm.	2,369	1,057	44.6	992	41.9	290	12.2	30	1.3
IEP w/o Accomm.	4,499	1,821	40.5	1,932	42.9	645	14.3	101	2.2
Plan 504	898	98	10.9	308	34.3	347	38.6	145	16.2
Plan 504 w/ Accomm.	80	7	8.8	35	43.8	24	30.0	14	17.5
Plan 504 w/o Accomm.	818	91	11.1	273	33.4	323	39.5	131	16.0
English Language Learners (ELL)									
ELL	1,601	851	53.2	602	37.6	117	7.3	31	1.9
ELL w/ Accomm.	262	162	61.8	86	32.8	13	5.0	1	0.4
ELL w/o Accomm.	1,339	689	51.5	516	38.5	104	7.8	30	2.2
Non-English Language Learners (Non-ELL)									
Non-ELL	44,201	5,087	11.5	13,838	31.3	16,680	37.7	8,596	19.5

		ı	Number	and Percen	t in Each	n Performai	nce Leve	els	
	Total	Unsatisf	actory	Limited Knowledge		Proficient		Advanced	
English Language Arts - Grade 10	N	N	%	N	%				
Military									
Military	131	10	7.6	29	22.1	62	47.3	30	22.9
Non-Military	45,671	5,928	13.0	14,411	31.6	16,735	36.6	8,597	18.8
Foster									
Foster	194	43	22.2	79	40.7	61	31.4	11	5.7
Non-Foster	45,608	5,895	12.9	14,361	31.5	16,736	36.7	8,616	18.9

Oklahoma School Testing Program (OSTP)
English Language Arts - Standard Setting - Round 3 Committee Results

		1	Number	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advanced	
English Language Arts - Grade 03	N	N	%	N	%	N	%	N	%
Total									
All	52,060	15,361	29.5	14,370	27.6	18,356	35.3	3,973	7.6
Form									
Form 1	17,400	5,190	29.8	4,916	28.3	5,878	33.8	1,416	8.1
Form 2	17,356	5,048	29.1	4,729	27.3	6,321	36.4	1,258	7.3
Form 3	17,304	5,123	29.6	4,725	27.3	6,157	35.6	1,299	7.5
Ethnicity									
Hispanic or Latino	9,553	4,140	43.3	2,754	28.8	2,331	24.4	328	3.4
Race									
American Indian/:Alaskan Native	6,741	1,974	29.3	2,037	30.2	2,315	34.3	415	6.2
Asian	944	181	19.2	229	24.3	396	42.0	138	14.6
Black/:African American	4,531	2,274	50.2	1,227	27.1	910	20.1	120	2.7
Pacific Islander	170	81	47.7	45	26.5	40	23.5	4	2.4
White/:Caucasian	24,798	5,276	21.3	6,563	26.5	10,387	41.9	2,572	10.4
Two or More Races	5,323	1,435	27.0	1,515	28.5	1,977	37.1	396	7.4
Gender									
Female	25,490	6,565	25.8	7,073	27.8	9,545	37.5	2,307	9.1
Male	26,560	8,792	33.1	7,294	27.5	8,808	33.2	1,666	6.3
Not Indicated	10	4	40.0	3	30.0	3	30.0	0	0.0
Other									
ELL 1st Yr: Proficient	575	43	7.5	189	32.9	298	51.8	45	7.8
ELL 2nd Yr: Proficient	268	17	6.3	60	22.4	146	54.5	45	16.8
Econ. Disadv.	33,483	12,280	36.7	9,835	29.4	9,923	29.6	1,445	4.3
Non-Econ. Disadv.	18,577	3,081	16.6	4,535	24.4	8,433	45.4	2,528	13.6
Migrant	30	8	26.7	9	30.0	12	40.0	1	3.3
Non-Migrant	52,030	15,353	29.5	14,361	27.6	18,344	35.3	3,972	7.6
Individualized Education Plan (IEP)									
IEP	9,331	5,768	61.8	1,887	20.2	1,454	15.6	222	2.4
IEP w/ Accomm.	5,034	3,836	76.2	826	16.4	347	6.9	25	0.5
IEP w/o Accomm.	4,297	1,932	45.0	1,061	24.7	1,107	25.8	197	4.6
Plan 504	971	307	31.6	314	32.3	313	32.2	37	3.8
Plan 504 w/ Accomm.	481	190	39.5	152	31.6	127	26.4	12	2.5
Plan 504 w/o Accomm.	490	117	23.9	162	33.1	186	38.0	25	5.1
English Language Learners (ELL)									
ELL	6,076	3,426	56.4	1,702	28.0	879	14.5	69	1.1
ELL w/ Accomm.	1,818	1,207	66.4	470	25.9	132	7.3	9	0.5
ELL w/o Accomm.	4,258	2,219	52.1	1,232	28.9	747	17.5	60	1.4
Non-English Language Learners (Non-ELL)									
Non-ELL	45,984	11,935	26.0	12,668	27.6	17,477	38.0	3,904	8.5
Military									

		1	Number	and Percen	t in Eacl	n Performa	nce Leve	els			
				Limit Knowle		Profic	ient	ent Advanced			
English Language Arts - Grade 03	N	N N % N % N									
Military	232	41	17.7	55	23.7	109	47.0	27	11.6		
Non-Military	51,828	15,320	29.6	14,315	27.6	18,247	35.2	3,946	7.6		
Foster											
Foster	390	150	38.5	123	31.5	107	27.4	10	2.6		
Non-Foster	51,670	15,211	29.4	14,247	27.6	18,249	35.3	3,963	7.7		

Oklahoma School Testing Program (OSTP)
English Language Arts - Standard Setting - Round 3 Committee Results

		١	Number	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced
English Language Arts - Grade 04	N	N	%	N	%	N	%	N	%
Total									
All	50,512	14,564	28.8	14,161	28.0	18,422	36.5	3,365	6.7
Form									
Form 1	16,954	4,994	29.5	4,381	25.8	6,549	38.6	1,030	6.1
Form 2	16,758	4,629	27.6	4,782	28.5	6,163	36.8	1,184	7.1
Form 3	16,800	4,941	29.4	4,998	29.8	5,710	34.0	1,151	6.9
Ethnicity									
Hispanic or Latino	9,168	3,802	41.5	2,740	29.9	2,352	25.7	274	3.0
Race									
American Indian/:Alaskan Native	6,650	2,006	30.2	1,984	29.8	2,333	35.1	327	4.9
Asian	960	185	19.3	212	22.1	423	44.1	140	14.6
Black/:African American	4,344	2,037	46.9	1,224	28.2	996	22.9	87	2.0
Pacific Islander	164	71	43.3	45	27.4	45	27.4	3	1.8
White/:Caucasian	24,207	5,132	21.2	6,489	26.8	10,379	42.9	2,207	9.1
Two or More Races	5,019	1,331	26.5	1,467	29.2	1,894	37.7	327	6.5
Gender									
Female	24,786	6,420	25.9	7,008	28.3	9,479	38.2	1,879	7.6
Male	25,691	8,125	31.6	7,144	27.8	8,936	34.8	1,486	5.8
Not Indicated	35	19	54.3	9	25.7	7	20.0	0	0.0
Other									
ELL 1st Yr: Proficient	1,799	464	25.8	744	41.4	547	30.4	44	2.5
ELL 2nd Yr: Proficient	584	62	10.6	198	33.9	282	48.3	42	7.2
Econ. Disadv.	31,744	11,342	35.7	9,651	30.4	9,621	30.3	1,130	3.6
Non-Econ. Disadv.	18,768	3,222	17.2	4,510	24.0	8,801	46.9	2,235	11.9
Migrant	29	14	48.3	8	27.6	7	24.1	0	0.0
Non-Migrant	50,483	14,550	28.8	14,153	28.0	18,415	36.5	3,365	6.7
Individualized Education Plan (IEP)									
IEP	8,795	5,614	63.8	1,792	20.4	1,235	14.0	154	1.8
IEP w/ Accomm.	5,296	3,992	75.4	914	17.3	371	7.0	19	0.4
IEP w/o Accomm.	3,499	1,622	46.4	878	25.1	864	24.7	135	3.9
Plan 504	965	290	30.1	289	30.0	341	35.3	45	4.7
Plan 504 w/ Accomm.	471	153	32.5	143	30.4	161	34.2	14	3.0
Plan 504 w/o Accomm.	494	137	27.7	146	29.6	180	36.4	31	6.3
English Language Learners (ELL)									
ELL	4,027	2,651	65.8	991	24.6	369	9.2	16	0.4
ELL w/ Accomm.	1,260	936	74.3	259	20.6	64	5.1	1	0.1
ELL w/o Accomm.	2,767	1,715	62.0	732	26.5	305	11.0	15	0.5
Non-English Language Learners (Non-ELL)									
Non-ELL	46,485	11,913	25.6	13,170	28.3	18,053	38.8	3,349	7.2

		1	Number	and Percen	t in Eacl	n Performa	nce Leve	els				
	Total	Unsatisfa	Unsatisfactory		Limited Knowledge		Proficient		ced			
English Language Arts - Grade 04	N	N N % N % N										
Military												
Military	253	41	16.2	68	26.9	115	45.5	29	11.5			
Non-Military	50,259	14,523	28.9	14,093	28.0	18,307	36.4	3,336	6.6			
Foster												
Foster	362	147	40.6	107	29.6	97	26.8	11	3.0			
Non-Foster	50,150	14,417	28.8	14,054	28.0	18,325	36.5	3,354	6.7			

Oklahoma School Testing Program (OSTP) English Language Arts - Standard Setting - Round 3 Committee Results

		ı	Number	and Percen	t in Eacl	n Performa	nce Leve	els	
	Total	Unsatisf	actory	Limit Knowle		Profic	ient	Advanced	
English Language Arts - Grade 05	N	N	%	N	%	N	%	N	%
Total									
All	48,449	7,966	16.4	14,643	30.2	19,930	41.1	5,910	12.2
Form									
Form 1	16,248	2,857	17.6	5,129	31.6	6,429	39.6	1,833	11.3
Form 2	16,143	2,475	15.3	4,553	28.2	7,283	45.1	1,832	11.4
Form 3	16,058	2,634	16.4	4,961	30.9	6,218	38.7	2,245	14.0
Ethnicity									
Hispanic or Latino	8,678	2,001	23.1	3,134	36.1	2,990	34.5	553	6.4
Race									
American Indian/:Alaskan Native	6,657	1,089	16.4	2,202	33.1	2,684	40.3	682	10.2
Asian	917	92	10.0	213	23.2	381	41.6	231	25.2
Black/:African American	4,253	1,251	29.4	1,613	37.9	1,181	27.8	208	4.9
Pacific Islander	159	46	28.9	53	33.3	48	30.2	12	7.6
White/:Caucasian	23,316	2,794	12.0	6,117	26.2	10,711	45.9	3,694	15.8
Two or More Races	4,469	693	15.5	1,311	29.3	1,935	43.3	530	11.9
Gender									
Female	23,909	3,186	13.3	7,184	30.1	10,287	43.0	3,252	13.6
Male	24,497	4,766	19.5	7,439	30.4	9,634	39.3	2,658	10.9
Not Indicated	43	14	32.6	20	46.5	9	20.9	0	0.0
Other									
ELL 1st Yr: Proficient	1,417	203	14.3	659	46.5	515	36.3	40	2.8
ELL 2nd Yr: Proficient	1,715	194	11.3	727	42.4	710	41.4	84	4.9
Econ. Disadv.	30,004	6,382	21.3	10,424	34.7	11,045	36.8	2,153	7.2
Non-Econ. Disadv.	18,445	1,584	8.6	4,219	22.9	8,885	48.2	3,757	20.4
Migrant	31	6	19.4	10	32.3	14	45.2	1	3.2
Non-Migrant	48,418	7,960	16.4	14,633	30.2	19,916	41.1	5,909	12.2
Individualized Education Plan (IEP)									
IEP	8,316	4,144	49.8	2,580	31.0	1,380	16.6	212	2.6
IEP w/ Accomm.	5,301	3,089	58.3	1,596	30.1	566	10.7	50	0.9
IEP w/o Accomm.	3,015	1,055	35.0	984	32.6	814	27.0	162	5.4
Plan 504	1,061	158	14.9	349	32.9	457	43.1	97	9.1
Plan 504 w/ Accomm.	520	102	19.6	178	34.2	208	40.0	32	6.2
Plan 504 w/o Accomm.	541	56	10.4	171	31.6	249	46.0	65	12.0
English Language Learners (ELL)									
ELL	2,462	1,255	51.0	887	36.0	287	11.7	33	1.3
ELL w/ Accomm.	746	441	59.1	254	34.1	49	6.6	2	0.3
ELL w/o Accomm.	1,716	814	47.4	633	36.9	238	13.9	31	1.8
Non-English Language Learners (Non-ELL)									
Non-ELL	45,987	6,711	14.6	13,756	29.9	19,643	42.7	5,877	12.8

		1	Number	and Percen	t in Eacl	n Performa	nce Leve	els				
	Total	Unsatisfa	actory	Limited Knowledge		Proficient		Advanced				
English Language Arts - Grade 05	N	N N % N % N										
Military												
Military	247	17	6.9	56	22.7	112	45.3	62	25.1			
Non-Military	48,202	7,949	16.5	14,587	30.3	19,818	41.1	5,848	12.1			
Foster												
Foster	299	74	24.8	125	41.8	86	28.8	14	4.7			
Non-Foster	48,150	7,892	16.4	14,518	30.2	19,844	41.2	5,896	12.3			

Oklahoma School Testing Program (OSTP)
English Language Arts - Standard Setting - Round 3 Committee Results

		ı	Number a	and Percen	t in Eacl	n Performa	nce Leve	els	
	Total	Unsatisf	actory	Limit Knowle		Profic	ient	Advanced	
English Language Arts - Grade 06	N	N	%	N	%	N	%	N	%
Total									
All	46,499	8,461	18.2	18,606	40.0	15,079	32.4	4,353	9.4
Form									
Form 1	15,973	3,207	20.1	6,263	39.2	4,924	30.8	1,579	9.9
Form 2	15,254	2,683	17.6	5,860	38.4	5,261	34.5	1,450	9.5
Form 3	15,272	2,571	16.8	6,483	42.5	4,894	32.1	1,324	8.7
Ethnicity									
Hispanic or Latino	7,593	1,910	25.2	3,398	44.8	1,902	25.1	383	5.0
Race									
American Indian/:Alaskan Native	6,745	1,324	19.6	2,870	42.6	2,040	30.2	511	7.6
Asian	871	92	10.6	250	28.7	336	38.6	193	22.2
Black/:African American	3,837	1,117	29.1	1,743	45.4	836	21.8	141	3.7
Pacific Islander	139	42	30.2	59	42.5	33	23.7	5	3.6
White/:Caucasian	23,366	3,279	14.0	8,776	37.6	8,550	36.6	2,761	11.8
Two or More Races	3,948	697	17.7	1,510	38.3	1,382	35.0	359	9.1
Gender									
Female	22,695	3,484	15.4	9,198	40.5	7,668	33.8	2,345	10.3
Male	23,726	4,945	20.8	9,382	39.5	7,393	31.2	2,006	8.5
Not Indicated	78	32	41.0	26	33.3	18	23.1	2	2.6
Other									
ELL 1st Yr: Proficient	638	122	19.1	384	60.2	114	17.9	18	2.8
ELL 2nd Yr: Proficient	916	177	19.3	508	55.5	205	22.4	26	2.8
Econ. Disadv.	28,339	6,744	23.8	12,406	43.8	7,579	26.7	1,610	5.7
Non-Econ. Disadv.	18,160	1,717	9.5	6,200	34.1	7,500	41.3	2,743	15.1
Migrant	28	12	42.9	12	42.9	3	10.7	1	3.6
Non-Migrant	46,471	8,449	18.2	18,594	40.0	15,076	32.4	4,352	9.4
Individualized Education Plan (IEP)									
IEP	7,443	4,101	55.1	2,431	32.7	781	10.5	130	1.8
IEP w/ Accomm.	4,019	2,467	61.4	1,264	31.5	260	6.5	28	0.7
IEP w/o Accomm.	3,424	1,634	47.7	1,167	34.1	521	15.2	102	3.0
Plan 504	1,091	168	15.4	504	46.2	337	30.9	82	7.5
Plan 504 w/ Accomm.	332	67	20.2	161	48.5	86	25.9	18	5.4
Plan 504 w/o Accomm.	759	101	13.3	343	45.2	251	33.1	64	8.4
English Language Learners (ELL)									
ELL	1,658	1,025	61.8	513	30.9	106	6.4	14	0.8
ELL w/ Accomm.	293	220	75.1	66	22.5	7	2.4	0	0.0
ELL w/o Accomm.	1,365	805	59.0	447	32.8	99	7.3	14	1.0
Non-English Language Learners (Non-ELL)									
Non-ELL	44,841	7,436	16.6	18,093	40.4	14,973	33.4	4,339	9.7

		1	Number	mber and Percent in Each Performance Levels								
	Total	Unsatisfactory		Limited Knowledge		Proficient		Advanced				
English Language Arts - Grade 06	N	N N % N % N										
Military												
Military	260	27	10.4	88	33.9	99	38.1	46	17.7			
Non-Military	46,239	8,434	18.2	18,518	40.1	14,980	32.4	4,307	9.3			
Foster												
Foster	279	81	29.0	132	47.3	56	20.1	10	3.6			
Non-Foster	46,220	8,380	18.1	18,474	40.0	15,023	32.5	4,343	9.4			

Oklahoma School Testing Program (OSTP)
English Language Arts - Standard Setting - Round 3 Committee Results

		١	Number a	and Percen	t in Eacl	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced
English Language Arts - Grade 07	N	N	%	N	%	N	%	N	%
Total									
All	48,035	14,029	29.2	12,126	25.2	16,137	33.6	5,743	12.0
Form									
Form 1	16,436	4,978	30.3	4,495	27.4	5,185	31.6	1,778	10.8
Form 2	15,795	4,386	27.8	3,874	24.5	5,781	36.6	1,754	11.1
Form 3	15,804	4,665	29.5	3,757	23.8	5,171	32.7	2,211	14.0
Ethnicity									
Hispanic or Latino	8,086	3,278	40.5	2,170	26.8	2,119	26.2	519	6.4
Race									
American Indian/:Alaskan Native	7,027	2,144	30.5	1,897	27.0	2,269	32.3	717	10.2
Asian	997	173	17.4	208	20.9	354	35.5	262	26.3
Black/:African American	4,178	1,978	47.3	1,067	25.5	914	21.9	219	5.2
Pacific Islander	146	68	46.6	38	26.0	34	23.3	6	4.1
White/:Caucasian	23,684	5,286	22.3	5,721	24.2	9,104	38.4	3,573	15.1
Two or More Races	3,917	1,102	28.1	1,025	26.2	1,343	34.3	447	11.4
Gender									
Female	23,357	5,983	25.6	5,958	25.5	8,350	35.8	3,066	13.1
Male	24,622	8,015	32.6	6,158	25.0	7,773	31.6	2,676	10.9
Not Indicated	56	31	55.4	10	17.9	14	25.0	1	1.8
Other									
ELL 1st Yr: Proficient	200	61	30.5	73	36.5	57	28.5	9	4.5
ELL 2nd Yr: Proficient	440	159	36.1	165	37.5	103	23.4	13	3.0
Econ. Disadv.	29,593	11,113	37.6	7,966	26.9	8,327	28.1	2,187	7.4
Non-Econ. Disadv.	18,442	2,916	15.8	4,160	22.6	7,810	42.4	3,556	19.3
Migrant	32	18	56.3	4	12.5	8	25.0	2	6.3
Non-Migrant	48,003	14,011	29.2	12,122	25.3	16,129	33.6	5,741	12.0
Individualized Education Plan (IEP)									
IEP	8,153	5,711	70.1	1,391	17.1	859	10.5	192	2.4
IEP w/ Accomm.	4,211	3,202	76.0	632	15.0	313	7.4	64	1.5
IEP w/o Accomm.	3,942	2,509	63.7	759	19.3	546	13.9	128	3.3
Plan 504	1,009	268	26.6	264	26.2	372	36.9	105	10.4
Plan 504 w/ Accomm.	233	81	34.8	66	28.3	68	29.2	18	7.7
Plan 504 w/o Accomm.	776	187	24.1	198	25.5	304	39.2	87	11.2
English Language Learners (ELL)									
ELL	2,173	1,714	78.9	332	15.3	112	5.2	15	0.7
ELL w/ Accomm.	287	258	89.9	24	8.4	5	1.7	0	0.0
ELL w/o Accomm.	1,886	1,456	77.2	308	16.3	107	5.7	15	0.8
Non-English Language Learners (Non-ELL)									
Non-ELL	45,862	12,315	26.9	11,794	25.7	16,025	34.9	5,728	12.5

		Number and Percent in Each Performance Levels										
	Total	Unsatisf	Unsatisfactory		Limited Knowledge		Proficient		ced			
English Language Arts - Grade 07	N	N	%	N	%	N	%	N	%			
Military												
Military	228	43	18.9	57	25.0	89	39.0	39	17.1			
Non-Military	47,807	13,986	29.3	12,069	25.3	16,048	33.6	5,704	11.9			
Foster												
Foster	260	114	43.9	65	25.0	56	21.5	25	9.6			
Non-Foster	47,775	13,915	29.1	12,061	25.3	16,081	33.7	5,718	12.0			

Oklahoma School Testing Program (OSTP)
English Language Arts - Standard Setting - Round 3 Committee Results

		1	Number a	and Percen	t in Eacl	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced
English Language Arts - Grade 08	N	N	%	N	%	N	%	N	%
Total									
All	47,893	9,972	20.8	20,292	42.4	12,084	25.2	5,545	11.6
Form									
Form 1	16,470	3,786	23.0	7,095	43.1	3,804	23.1	1,785	10.8
Form 2	15,698	3,256	20.7	6,285	40.0	4,498	28.7	1,659	10.6
Form 3	15,725	2,930	18.6	6,912	44.0	3,782	24.1	2,101	13.4
Ethnicity									
Hispanic or Latino	7,816	2,353	30.1	3,525	45.1	1,437	18.4	501	6.4
Race									
American Indian/:Alaskan Native	6,990	1,470	21.0	3,168	45.3	1,694	24.2	658	9.4
Asian	943	124	13.2	294	31.2	277	29.4	248	26.3
Black/:African American	4,196	1,569	37.4	1,761	42.0	671	16.0	195	4.7
Pacific Islander	167	62	37.1	62	37.1	36	21.6	7	4.2
White/:Caucasian	24,041	3,662	15.2	9,876	41.1	6,995	29.1	3,508	14.6
Two or More Races	3,740	732	19.6	1,606	42.9	974	26.0	428	11.4
Gender									
Female	23,511	3,864	16.4	9,751	41.5	6,517	27.7	3,379	14.4
Male	24,312	6,072	25.0	10,511	43.2	5,565	22.9	2,164	8.9
Not Indicated	70	36	51.4	30	42.9	2	2.9	2	2.9
Other									
ELL 1st Yr: Proficient	183	27	14.8	122	66.7	28	15.3	6	3.3
ELL 2nd Yr: Proficient	242	23	9.5	143	59.1	55	22.7	21	8.7
Econ. Disadv.	29,058	8,035	27.7	13,169	45.3	5,941	20.5	1,913	6.6
Non-Econ. Disadv.	18,835	1,937	10.3	7,123	37.8	6,143	32.6	3,632	19.3
Migrant	37	18	48.7	9	24.3	7	18.9	3	8.1
Non-Migrant	47,856	9,954	20.8	20,283	42.4	12,077	25.2	5,542	11.6
Individualized Education Plan (IEP)									
IEP	7,713	4,697	60.9	2,468	32.0	435	5.6	113	1.5
IEP w/ Accomm.	4,247	2,870	67.6	1,176	27.7	170	4.0	31	0.7
IEP w/o Accomm.	3,466	1,827	52.7	1,292	37.3	265	7.7	82	2.4
Plan 504	986	161	16.3	475	48.2	245	24.9	105	10.7
Plan 504 w/ Accomm.	211	42	19.9	104	49.3	49	23.2	16	7.6
Plan 504 w/o Accomm.	775	119	15.4	371	47.9	196	25.3	89	11.5
English Language Learners (ELL)									
ELL	2,127	1,460	68.6	582	27.4	71	3.3	14	0.7
ELL w/ Accomm.	360	296	82.2	59	16.4	5	1.4	0	0.0
ELL w/o Accomm.	1,767	1,164	65.9	523	29.6	66	3.7	14	0.8
Non-English Language Learners (Non-ELL)									
Non-ELL	45,766	8,512	18.6	19,710	43.1	12,013	26.3	5,531	12.1

		1	Number	and Percen	t in Eacl	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limited Knowledge		Proficient		Advanced	
English Language Arts - Grade 08	N	N	%	N	%	N	%	N	%
Military									
Military	226	29	12.8	91	40.3	71	31.4	35	15.5
Non-Military	47,667	9,943	20.9	20,201	42.4	12,013	25.2	5,510	11.6
Foster									
Foster	241	91	37.8	108	44.8	36	14.9	6	2.5
Non-Foster	47,652	9,881	20.7	20,184	42.4	12,048	25.3	5,539	11.6

Oklahoma School Testing Program (OSTP)
English Language Arts - Standard Setting - Round 3 Committee Results

	Number and Percent in Each Performance Levels									
	Total	Unsatisfa	actory	Limite Knowle		Profic	ient	Advan	ced	
English Language Arts - Grade 10	N	N	%	N	%	N	%	N	%	
Total										
All	45,802	5,938	13.0	14,440	31.5	20,622	45.0	4,802	10.5	
Form										
Form 1	15,658	2,125	13.6	5,022	32.1	6,930	44.3	1,581	10.1	
Form 2	15,095	1,863	12.3	4,752	31.5	7,032	46.6	1,448	9.6	
Form 3	15,049	1,950	13.0	4,666	31.0	6,660	44.3	1,773	11.8	
Ethnicity										
Hispanic or Latino	6,942	1,258	18.1	2,588	37.3	2,697	38.9	399	5.8	
Race										
American Indian/:Alaskan Native	6,809	921	13.5	2,314	34.0	3,045	44.7	529	7.8	
Asian	1,073	118	11.0	238	22.2	472	44.0	245	22.8	
Black/:African American	3,981	952	23.9	1,604	40.3	1,281	32.2	144	3.6	
Pacific Islander	149	24	16.1	60	40.3	57	38.3	8	5.4	
White/:Caucasian	23,604	2,267	9.6	6,627	28.1	11,590	49.1	3,120	13.2	
Two or More Races	3,244	398	12.3	1,009	31.1	1,480	45.6	357	11.0	
Gender										
Female	22,529	2,004	8.9	6,770	30.1	10,905	48.4	2,850	12.7	
Male	23,246	3,927	16.9	7,662	33.0	9,705	41.8	1,952	8.4	
Not Indicated	27	7	25.9	8	29.6	12	44.4	0	0.0	
Other										
ELL 1st Yr: Proficient	581	81	13.9	318	54.7	174	30.0	8	1.4	
ELL 2nd Yr: Proficient	212	29	13.7	85	40.1	92	43.4	6	2.8	
Econ. Disadv.	25,078	4,410	17.6	9,380	37.4	9,860	39.3	1,428	5.7	
Non-Econ. Disadv.	20,724	1,528	7.4	5,060	24.4	10,762	51.9	3,374	16.3	
Migrant	32	5	15.6	10	31.3	12	37.5	5	15.6	
Non-Migrant	45,770	5,933	13.0	14,430	31.5	20,610	45.0	4,797	10.5	
Individualized Education Plan (IEP)										
IEP	6,868	2,878	41.9	2,924	42.6	1,012	14.7	54	0.8	
IEP w/ Accomm.	2,369	1,057	44.6	992	41.9	307	13.0	13	0.6	
IEP w/o Accomm.	4,499	1,821	40.5	1,932	42.9	705	15.7	41	0.9	
Plan 504	898	98	10.9	308	34.3	409	45.6	83	9.2	
Plan 504 w/ Accomm.	80	7	8.8	35	43.8	30	37.5	8	10.0	
Plan 504 w/o Accomm.	818	91	11.1	273	33.4	379	46.3	75	9.2	
English Language Learners (ELL)										
ELL	1,601	851	53.2	602	37.6	129	8.1	19	1.2	
ELL w/ Accomm.	262	162	61.8	86	32.8	13	5.0	1	0.4	
ELL w/o Accomm.	1,339	689	51.5	516	38.5	116	8.7	18	1.3	
Non-English Language Learners (Non-ELL)										
Non-ELL	44,201	5,087	11.5	13,838	31.3	20,493	46.4	4,783	10.8	

		ı	Number	and Percen	t in Eacl	n Performa	nce Leve	els	
	Total	Unsatisf	Unsatisfactory		Limited Knowledge		Proficient		ced
English Language Arts - Grade 10	N	N	%	N	%	N	%	N	%
Military									
Military	131	10	7.6	29	22.1	77	58.8	15	11.5
Non-Military	45,671	5,928	13.0	14,411	31.6	20,545	45.0	4,787	10.5
Foster									
Foster	194	43	22.2	79	40.7	66	34.0	6	3.1
Non-Foster	45,608	5,895	12.9	14,361	31.5	20,556	45.1	4,796	10.5

Oklahoma School Testing Program (OSTP)
English Language Arts - Standard Setting - Round 4 Committee Results

		1	Number	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced
English Language Arts - Grade 03	N	N	%	N	%	N	%	N	%
Total									
All	52,060	15,361	29.5	14,370	27.6	18,356	35.3	3,973	7.6
Form									
Form 1	17,400	5,190	29.8	4,916	28.3	5,878	33.8	1,416	8.1
Form 2	17,356	5,048	29.1	4,729	27.3	6,321	36.4	1,258	7.3
Form 3	17,304	5,123	29.6	4,725	27.3	6,157	35.6	1,299	7.5
Ethnicity									
Hispanic or Latino	9,553	4,140	43.3	2,754	28.8	2,331	24.4	328	3.4
Race									
American Indian/:Alaskan Native	6,741	1,974	29.3	2,037	30.2	2,315	34.3	415	6.2
Asian	944	181	19.2	229	24.3	396	42.0	138	14.6
Black/:African American	4,531	2,274	50.2	1,227	27.1	910	20.1	120	2.7
Pacific Islander	170	81	47.7	45	26.5	40	23.5	4	2.4
White/:Caucasian	24,798	5,276	21.3	6,563	26.5	10,387	41.9	2,572	10.4
Two or More Races	5,323	1,435	27.0	1,515	28.5	1,977	37.1	396	7.4
Gender									
Female	25,490	6,565	25.8	7,073	27.8	9,545	37.5	2,307	9.1
Male	26,560	8,792	33.1	7,294	27.5	8,808	33.2	1,666	6.3
Not Indicated	10	4	40.0	3	30.0	3	30.0	0	0.0
Other									
ELL 1st Yr: Proficient	575	43	7.5	189	32.9	298	51.8	45	7.8
ELL 2nd Yr: Proficient	268	17	6.3	60	22.4	146	54.5	45	16.8
Econ. Disadv.	33,483	12,280	36.7	9,835	29.4	9,923	29.6	1,445	4.3
Non-Econ. Disadv.	18,577	3,081	16.6	4,535	24.4	8,433	45.4	2,528	13.6
Migrant	30	8	26.7	9	30.0	12	40.0	1	3.3
Non-Migrant	52,030	15,353	29.5	14,361	27.6	18,344	35.3	3,972	7.6
Individualized Education Plan (IEP)									
IEP	9,331	5,768	61.8	1,887	20.2	1,454	15.6	222	2.4
IEP w/ Accomm.	5,034	3,836	76.2	826	16.4	347	6.9	25	0.5
IEP w/o Accomm.	4,297	1,932	45.0	1,061	24.7	1,107	25.8	197	4.6
Plan 504	971	307	31.6	314	32.3	313	32.2	37	3.8
Plan 504 w/ Accomm.	481	190	39.5	152	31.6	127	26.4	12	2.5
Plan 504 w/o Accomm.	490	117	23.9	162	33.1	186	38.0	25	5.1
English Language Learners (ELL)									
ELL	6,076	3,426	56.4	1,702	28.0	879	14.5	69	1.1
ELL w/ Accomm.	1,818	1,207	66.4	470	25.9	132	7.3	9	0.5
ELL w/o Accomm.	4,258	2,219	52.1	1,232	28.9	747	17.5	60	1.4
Non-English Language Learners (Non-ELL)									
Non-ELL	45,984	11,935	26.0	12,668	27.6	17,477	38.0	3,904	8.5
Military									

		1	Number	and Percen	t in Eacl	n Performa	nce Leve	els	
	Total	Unsatisfa	Unsatisfactory		ed edge	Proficient		Advanced	
English Language Arts - Grade 03	N	N	%	N	%	N	%	N	%
Military	232	41	17.7	55	23.7	109	47.0	27	11.6
Non-Military	51,828	15,320	29.6	14,315	27.6	18,247	35.2	3,946	7.6
Foster									
Foster	390	150	38.5	123	31.5	107	27.4	10	2.6
Non-Foster	51,670	15,211	29.4	14,247	27.6	18,249	35.3	3,963	7.7

Oklahoma School Testing Program (OSTP) English Language Arts - Standard Setting - Round 4 Committee Results

	Number and Percent in Each Performance Levels									
	Total	Unsatisfa	actory	Limite Knowle		Profici	ient	Advanced		
English Language Arts - Grade 04	N	N	%	N	%	N	%	N	%	
Total										
All	50,512	14,564	28.8	14,161	28.0	18,422	36.5	3,365	6.7	
Form										
Form 1	16,954	4,994	29.5	4,381	25.8	6,549	38.6	1,030	6.1	
Form 2	16,758	4,629	27.6	4,782	28.5	6,163	36.8	1,184	7.1	
Form 3	16,800	4,941	29.4	4,998	29.8	5,710	34.0	1,151	6.9	
Ethnicity										
Hispanic or Latino	9,168	3,802	41.5	2,740	29.9	2,352	25.7	274	3.0	
Race										
American Indian/:Alaskan Native	6,650	2,006	30.2	1,984	29.8	2,333	35.1	327	4.9	
Asian	960	185	19.3	212	22.1	423	44.1	140	14.6	
Black/:African American	4,344	2,037	46.9	1,224	28.2	996	22.9	87	2.0	
Pacific Islander	164	71	43.3	45	27.4	45	27.4	3	1.8	
White/:Caucasian	24,207	5,132	21.2	6,489	26.8	10,379	42.9	2,207	9.1	
Two or More Races	5,019	1,331	26.5	1,467	29.2	1,894	37.7	327	6.5	
Gender										
Female	24,786	6,420	25.9	7,008	28.3	9,479	38.2	1,879	7.6	
Male	25,691	8,125	31.6	7,144	27.8	8,936	34.8	1,486	5.8	
Not Indicated	35	19	54.3	9	25.7	7	20.0	0	0.0	
Other										
ELL 1st Yr: Proficient	1,799	464	25.8	744	41.4	547	30.4	44	2.5	
ELL 2nd Yr: Proficient	584	62	10.6	198	33.9	282	48.3	42	7.2	
Econ. Disadv.	31,744	11,342	35.7	9,651	30.4	9,621	30.3	1,130	3.6	
Non-Econ. Disadv.	18,768	3,222	17.2	4,510	24.0	8,801	46.9	2,235	11.9	
Migrant	29	14	48.3	8	27.6	7	24.1	0	0.0	
Non-Migrant	50,483	14,550	28.8	14,153	28.0	18,415	36.5	3,365	6.7	
Individualized Education Plan (IEP)										
IEP	8,795	5,614	63.8	1,792	20.4	1,235	14.0	154	1.8	
IEP w/ Accomm.	5,296	3,992	75.4	914	17.3	371	7.0	19	0.4	
IEP w/o Accomm.	3,499	1,622	46.4	878	25.1	864	24.7	135	3.9	
Plan 504	965	290	30.1	289	30.0	341	35.3	45	4.7	
Plan 504 w/ Accomm.	471	153	32.5	143	30.4	161	34.2	14	3.0	
Plan 504 w/o Accomm.	494	137	27.7	146	29.6	180	36.4	31	6.3	
English Language Learners (ELL)										
ELL	4,027	2,651	65.8	991	24.6	369	9.2	16	0.4	
ELL w/ Accomm.	1,260	936	74.3	259	20.6	64	5.1	1	0.1	
ELL w/o Accomm.	2,767	1,715	62.0	732	26.5	305	11.0	15	0.5	
Non-English Language Learners (Non-ELL)										
Non-ELL	46,485	11,913	25.6	13,170	28.3	18,053	38.8	3,349	7.2	

		1	Number	and Percen	t in Eacl	n Performa	nce Leve	els	
	Total	Unsatisfa	Unsatisfactory		Limited Knowledge		Proficient		ced
English Language Arts - Grade 04	N	N	%	N	%	N	%	N	%
Military									
Military	253	41	16.2	68	26.9	115	45.5	29	11.5
Non-Military	50,259	14,523	28.9	14,093	28.0	18,307	36.4	3,336	6.6
Foster									
Foster	362	147	40.6	107	29.6	97	26.8	11	3.0
Non-Foster	50,150	14,417	28.8	14,054	28.0	18,325	36.5	3,354	6.7

Oklahoma School Testing Program (OSTP) English Language Arts - Standard Setting - Round 4 Committee Results

		N	lumber a	and Percen	t in Each	n Performai	nce Leve	els	
	Total	Unsatisfa	actory	Limite Knowle		Profici	ient	Advan	ced
English Language Arts - Grade 05	N	N	%	N	%	N	%	N	%
Total									
All	48,449	10,229	21.1	18,897	39.0	13,413	27.7	5,910	12.2
Form									
Form 1	16,248	3,491	21.5	6,509	40.1	4,415	27.2	1,833	11.3
Form 2	16,143	3,448	21.4	6,023	37.3	4,840	30.0	1,832	11.4
Form 3	16,058	3,290	20.5	6,365	39.6	4,158	25.9	2,245	14.0
Ethnicity									
Hispanic or Latino	8,678	2,564	29.6	3,749	43.2	1,812	20.9	553	6.4
Race									
American Indian/:Alaskan Native	6,657	1,428	21.5	2,752	41.3	1,795	27.0	682	10.2
Asian	917	115	12.5	289	31.5	282	30.8	231	25.2
Black/:African American	4,253	1,545	36.3	1,800	42.3	700	16.5	208	4.9
Pacific Islander	159	55	34.6	66	41.5	26	16.4	12	7.6
White/:Caucasian	23,316	3,648	15.7	8,480	36.4	7,494	32.1	3,694	15.8
Two or More Races	4,469	874	19.6	1,761	39.4	1,304	29.2	530	11.9
Gender									
Female	23,909	4,257	17.8	9,456	39.6	6,944	29.0	3,252	13.6
Male	24,497	5,956	24.3	9,417	38.4	6,466	26.4	2,658	10.9
Not Indicated	43	16	37.2	24	55.8	3	7.0	0	0.0
Other									
ELL 1st Yr: Proficient	1,417	312	22.0	774	54.6	291	20.5	40	2.8
ELL 2nd Yr: Proficient	1,715	305	17.8	913	53.2	413	24.1	84	4.9
Econ. Disadv.	30,004	8,102	27.0	12,785	42.6	6,964	23.2	2,153	7.2
Non-Econ. Disadv.	18,445	2,127	11.5	6,112	33.1	6,449	35.0	3,757	20.4
Migrant	31	7	22.6	14	45.2	9	29.0	1	3.2
Non-Migrant	48,418	10,222	21.1	18,883	39.0	13,404	27.7	5,909	12.2
Individualized Education Plan (IEP)									
IEP	8,316	4,742	57.0	2,591	31.2	771	9.3	212	2.6
IEP w/ Accomm.	5,301	3,493	65.9	1,490	28.1	268	5.1	50	0.9
IEP w/o Accomm.	3,015	1,249	41.4	1,101	36.5	503	16.7	162	5.4
Plan 504	1,061	208	19.6	449	42.3	307	28.9	97	9.1
Plan 504 w/ Accomm.	520	130	25.0	229	44.0	129	24.8	32	6.2
Plan 504 w/o Accomm.	541	78	14.4	220	40.7	178	32.9	65	12.0
English Language Learners (ELL)									
ELL	2,462	1,474	59.9	824	33.5	131	5.3	33	1.3
ELL w/ Accomm.	746	516	69.2	212	28.4	16	2.1	2	0.3
ELL w/o Accomm.	1,716	958	55.8	612	35.7	115	6.7	31	1.8
Non-English Language Learners (Non-ELL)									
Non-ELL	45,987	8,755	19.0	18,073	39.3	13,282	28.9	5,877	12.8

		1	Number	and Percen	t in Eacl	n Performai	nce Leve	els	
	Total	Unsatisfa	actory	Limited Knowledge		Proficient		Advanced	
English Language Arts - Grade 05	N	N	%	N	%	N	%	N	%
Military									
Military	247	25	10.1	70	28.3	90	36.4	62	25.1
Non-Military	48,202	10,204	21.2	18,827	39.1	13,323	27.6	5,848	12.1
Foster									
Foster	299	96	32.1	138	46.2	51	17.1	14	4.7
Non-Foster	48,150	10,133	21.0	18,759	39.0	13,362	27.8	5,896	12.3

Oklahoma School Testing Program (OSTP) English Language Arts - Standard Setting - Round 4 Committee Results

		ı	Number a	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limite Knowle		Profic	ient	Advanced	
English Language Arts - Grade 06	N	N	%	N	%	N	%	N	%
Total									
All	46,499	8,461	18.2	18,606	40.0	15,079	32.4	4,353	9.4
Form									
Form 1	15,973	3,207	20.1	6,263	39.2	4,924	30.8	1,579	9.9
Form 2	15,254	2,683	17.6	5,860	38.4	5,261	34.5	1,450	9.5
Form 3	15,272	2,571	16.8	6,483	42.5	4,894	32.1	1,324	8.7
Ethnicity									
Hispanic or Latino	7,593	1,910	25.2	3,398	44.8	1,902	25.1	383	5.0
Race									
American Indian/:Alaskan Native	6,745	1,324	19.6	2,870	42.6	2,040	30.2	511	7.6
Asian	871	92	10.6	250	28.7	336	38.6	193	22.2
Black/:African American	3,837	1,117	29.1	1,743	45.4	836	21.8	141	3.7
Pacific Islander	139	42	30.2	59	42.5	33	23.7	5	3.6
White/:Caucasian	23,366	3,279	14.0	8,776	37.6	8,550	36.6	2,761	11.8
Two or More Races	3,948	697	17.7	1,510	38.3	1,382	35.0	359	9.1
Gender									
Female	22,695	3,484	15.4	9,198	40.5	7,668	33.8	2,345	10.3
Male	23,726	4,945	20.8	9,382	39.5	7,393	31.2	2,006	8.5
Not Indicated	78	32	41.0	26	33.3	18	23.1	2	2.6
Other									
ELL 1st Yr: Proficient	638	122	19.1	384	60.2	114	17.9	18	2.8
ELL 2nd Yr: Proficient	916	177	19.3	508	55.5	205	22.4	26	2.8
Econ. Disadv.	28,339	6,744	23.8	12,406	43.8	7,579	26.7	1,610	5.7
Non-Econ. Disadv.	18,160	1,717	9.5	6,200	34.1	7,500	41.3	2,743	15.1
Migrant	28	12	42.9	12	42.9	3	10.7	1	3.6
Non-Migrant	46,471	8,449	18.2	18,594	40.0	15,076	32.4	4,352	9.4
Individualized Education Plan (IEP)									
IEP	7,443	4,101	55.1	2,431	32.7	781	10.5	130	1.8
IEP w/ Accomm.	4,019	2,467	61.4	1,264	31.5	260	6.5	28	0.7
IEP w/o Accomm.	3,424	1,634	47.7	1,167	34.1	521	15.2	102	3.0
Plan 504	1,091	168	15.4	504	46.2	337	30.9	82	7.5
Plan 504 w/ Accomm.	332	67	20.2	161	48.5	86	25.9	18	5.4
Plan 504 w/o Accomm.	759	101	13.3	343	45.2	251	33.1	64	8.4
English Language Learners (ELL)									
ELL	1,658	1,025	61.8	513	30.9	106	6.4	14	0.8
ELL w/ Accomm.	293	220	75.1	66	22.5	7	2.4	0	0.0
ELL w/o Accomm.	1,365	805	59.0	447	32.8	99	7.3	14	1.0
Non-English Language Learners (Non-ELL)									
Non-ELL	44,841	7,436	16.6	18,093	40.4	14,973	33.4	4,339	9.7

		1	Number	and Percen	t in Eacl	n Performai	nce Leve	els	
	Total	Unsatisfa	Unsatisfactory		Limited Knowledge		Proficient		ced
English Language Arts - Grade 06	N	N	%	N	%	N	%	N	%
Military									
Military	260	27	10.4	88	33.9	99	38.1	46	17.7
Non-Military	46,239	8,434	18.2	18,518	40.1	14,980	32.4	4,307	9.3
Foster									
Foster	279	81	29.0	132	47.3	56	20.1	10	3.6
Non-Foster	46,220	8,380	18.1	18,474	40.0	15,023	32.5	4,343	9.4

Oklahoma School Testing Program (OSTP) English Language Arts - Standard Setting - Round 4 Committee Results

	Number and Percent in Each Performance Levels									
	Total	Unsatisfa	actory	Limite Knowle		Profic	ient	Advan	ced	
English Language Arts - Grade 07	N	N	%	N	%	N	%	N	%	
Total										
All	48,035	14,029	29.2	12,126	25.2	16,137	33.6	5,743	12.0	
Form										
Form 1	16,436	4,978	30.3	4,495	27.4	5,185	31.6	1,778	10.8	
Form 2	15,795	4,386	27.8	3,874	24.5	5,781	36.6	1,754	11.1	
Form 3	15,804	4,665	29.5	3,757	23.8	5,171	32.7	2,211	14.0	
Ethnicity										
Hispanic or Latino	8,086	3,278	40.5	2,170	26.8	2,119	26.2	519	6.4	
Race										
American Indian/:Alaskan Native	7,027	2,144	30.5	1,897	27.0	2,269	32.3	717	10.2	
Asian	997	173	17.4	208	20.9	354	35.5	262	26.3	
Black/:African American	4,178	1,978	47.3	1,067	25.5	914	21.9	219	5.2	
Pacific Islander	146	68	46.6	38	26.0	34	23.3	6	4.1	
White/:Caucasian	23,684	5,286	22.3	5,721	24.2	9,104	38.4	3,573	15.1	
Two or More Races	3,917	1,102	28.1	1,025	26.2	1,343	34.3	447	11.4	
Gender										
Female	23,357	5,983	25.6	5,958	25.5	8,350	35.8	3,066	13.1	
Male	24,622	8,015	32.6	6,158	25.0	7,773	31.6	2,676	10.9	
Not Indicated	56	31	55.4	10	17.9	14	25.0	1	1.8	
Other										
ELL 1st Yr: Proficient	200	61	30.5	73	36.5	57	28.5	9	4.5	
ELL 2nd Yr: Proficient	440	159	36.1	165	37.5	103	23.4	13	3.0	
Econ. Disadv.	29,593	11,113	37.6	7,966	26.9	8,327	28.1	2,187	7.4	
Non-Econ. Disadv.	18,442	2,916	15.8	4,160	22.6	7,810	42.4	3,556	19.3	
Migrant	32	18	56.3	4	12.5	8	25.0	2	6.3	
Non-Migrant	48,003	14,011	29.2	12,122	25.3	16,129	33.6	5,741	12.0	
Individualized Education Plan (IEP)										
IEP	8,153	5,711	70.1	1,391	17.1	859	10.5	192	2.4	
IEP w/ Accomm.	4,211	3,202	76.0	632	15.0	313	7.4	64	1.5	
IEP w/o Accomm.	3,942	2,509	63.7	759	19.3	546	13.9	128	3.3	
Plan 504	1,009	268	26.6	264	26.2	372	36.9	105	10.4	
Plan 504 w/ Accomm.	233	81	34.8	66	28.3	68	29.2	18	7.7	
Plan 504 w/o Accomm.	776	187	24.1	198	25.5	304	39.2	87	11.2	
English Language Learners (ELL)										
ELL	2,173	1,714	78.9	332	15.3	112	5.2	15	0.7	
ELL w/ Accomm.	287	258	89.9	24	8.4	5	1.7	0	0.0	
ELL w/o Accomm.	1,886	1,456	77.2	308	16.3	107	5.7	15	0.8	
Non-English Language Learners (Non-ELL)										
Non-ELL	45,862	12,315	26.9	11,794	25.7	16,025	34.9	5,728	12.5	

		Number and Percent in Each Performance Levels										
	Total Unsatisfactor		actory	Limited tory Knowledge		Proficient		Advanced				
English Language Arts - Grade 07	N	N	%	N	%	N	%	N	%			
Military												
Military	228	43	18.9	57	25.0	89	39.0	39	17.1			
Non-Military	47,807	13,986	29.3	12,069	25.3	16,048	33.6	5,704	11.9			
Foster												
Foster	260	114	43.9	65	25.0	56	21.5	25	9.6			
Non-Foster	47,775	13,915	29.1	12,061	25.3	16,081	33.7	5,718	12.0			

Oklahoma School Testing Program (OSTP) English Language Arts - Standard Setting - Round 4 Committee Results

		١	Number a	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limite Knowle		Profic	ient	Advan	ced
English Language Arts - Grade 08	N	N	%	N	%	N	%	N	%
Total									
All	47,893	9,972	20.8	20,292	42.4	12,084	25.2	5,545	11.6
Form									
Form 1	16,470	3,786	23.0	7,095	43.1	3,804	23.1	1,785	10.8
Form 2	15,698	3,256	20.7	6,285	40.0	4,498	28.7	1,659	10.6
Form 3	15,725	2,930	18.6	6,912	44.0	3,782	24.1	2,101	13.4
Ethnicity									
Hispanic or Latino	7,816	2,353	30.1	3,525	45.1	1,437	18.4	501	6.4
Race									
American Indian/:Alaskan Native	6,990	1,470	21.0	3,168	45.3	1,694	24.2	658	9.4
Asian	943	124	13.2	294	31.2	277	29.4	248	26.3
Black/:African American	4,196	1,569	37.4	1,761	42.0	671	16.0	195	4.7
Pacific Islander	167	62	37.1	62	37.1	36	21.6	7	4.2
White/:Caucasian	24,041	3,662	15.2	9,876	41.1	6,995	29.1	3,508	14.6
Two or More Races	3,740	732	19.6	1,606	42.9	974	26.0	428	11.4
Gender									
Female	23,511	3,864	16.4	9,751	41.5	6,517	27.7	3,379	14.4
Male	24,312	6,072	25.0	10,511	43.2	5,565	22.9	2,164	8.9
Not Indicated	70	36	51.4	30	42.9	2	2.9	2	2.9
Other									
ELL 1st Yr: Proficient	183	27	14.8	122	66.7	28	15.3	6	3.3
ELL 2nd Yr: Proficient	242	23	9.5	143	59.1	55	22.7	21	8.7
Econ. Disadv.	29,058	8,035	27.7	13,169	45.3	5,941	20.5	1,913	6.6
Non-Econ. Disadv.	18,835	1,937	10.3	7,123	37.8	6,143	32.6	3,632	19.3
Migrant	37	18	48.7	9	24.3	7	18.9	3	8.1
Non-Migrant	47,856	9,954	20.8	20,283	42.4	12,077	25.2	5,542	11.6
Individualized Education Plan (IEP)									
IEP	7,713	4,697	60.9	2,468	32.0	435	5.6	113	1.5
IEP w/ Accomm.	4,247	2,870	67.6	1,176	27.7	170	4.0	31	0.7
IEP w/o Accomm.	3,466	1,827	52.7	1,292	37.3	265	7.7	82	2.4
Plan 504	986	161	16.3	475	48.2	245	24.9	105	10.7
Plan 504 w/ Accomm.	211	42	19.9	104	49.3	49	23.2	16	7.6
Plan 504 w/o Accomm.	775	119	15.4	371	47.9	196	25.3	89	11.5
English Language Learners (ELL)									
ELL	2,127	1,460	68.6	582	27.4	71	3.3	14	0.7
ELL w/ Accomm.	360	296	82.2	59	16.4	5	1.4	0	0.0
ELL w/o Accomm.	1,767	1,164	65.9	523	29.6	66	3.7	14	0.8
Non-English Language Learners (Non-ELL)									
Non-ELL	45,766	8,512	18.6	19,710	43.1	12,013	26.3	5,531	12.1

		1	Number	and Percen	t in Eacl	n Performa	nce Leve	els	
	Total Unsatisfactory		actory	Limited y Knowledge		Proficient		Advanced	
English Language Arts - Grade 08	N	N	%	N	%	N	%	N	%
Military									
Military	226	29	12.8	91	40.3	71	31.4	35	15.5
Non-Military	47,667	9,943	20.9	20,201	42.4	12,013	25.2	5,510	11.6
Foster									
Foster	241	91	37.8	108	44.8	36	14.9	6	2.5
Non-Foster	47,652	9,881	20.7	20,184	42.4	12,048	25.3	5,539	11.6

Oklahoma School Testing Program (OSTP) English Language Arts - Standard Setting - Round 4 Committee Results

		1	Number a	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced
English Language Arts - Grade 10	N	N	%	N	%	N	%	N	%
Total									
All	45,802	5,938	13.0	14,440	31.5	20,622	45.0	4,802	10.5
Form									
Form 1	15,658	2,125	13.6	5,022	32.1	6,930	44.3	1,581	10.1
Form 2	15,095	1,863	12.3	4,752	31.5	7,032	46.6	1,448	9.6
Form 3	15,049	1,950	13.0	4,666	31.0	6,660	44.3	1,773	11.8
Ethnicity									
Hispanic or Latino	6,942	1,258	18.1	2,588	37.3	2,697	38.9	399	5.8
Race									
American Indian/:Alaskan Native	6,809	921	13.5	2,314	34.0	3,045	44.7	529	7.8
Asian	1,073	118	11.0	238	22.2	472	44.0	245	22.8
Black/:African American	3,981	952	23.9	1,604	40.3	1,281	32.2	144	3.6
Pacific Islander	149	24	16.1	60	40.3	57	38.3	8	5.4
White/:Caucasian	23,604	2,267	9.6	6,627	28.1	11,590	49.1	3,120	13.2
Two or More Races	3,244	398	12.3	1,009	31.1	1,480	45.6	357	11.0
Gender									
Female	22,529	2,004	8.9	6,770	30.1	10,905	48.4	2,850	12.7
Male	23,246	3,927	16.9	7,662	33.0	9,705	41.8	1,952	8.4
Not Indicated	27	7	25.9	8	29.6	12	44.4	0	0.0
Other									
ELL 1st Yr: Proficient	581	81	13.9	318	54.7	174	30.0	8	1.4
ELL 2nd Yr: Proficient	212	29	13.7	85	40.1	92	43.4	6	2.8
Econ. Disadv.	25,078	4,410	17.6	9,380	37.4	9,860	39.3	1,428	5.7
Non-Econ. Disadv.	20,724	1,528	7.4	5,060	24.4	10,762	51.9	3,374	16.3
Migrant	32	5	15.6	10	31.3	12	37.5	5	15.6
Non-Migrant	45,770	5,933	13.0	14,430	31.5	20,610	45.0	4,797	10.5
Individualized Education Plan (IEP)									
IEP	6,868	2,878	41.9	2,924	42.6	1,012	14.7	54	0.8
IEP w/ Accomm.	2,369	1,057	44.6	992	41.9	307	13.0	13	0.6
IEP w/o Accomm.	4,499	1,821	40.5	1,932	42.9	705	15.7	41	0.9
Plan 504	898	98	10.9	308	34.3	409	45.6	83	9.2
Plan 504 w/ Accomm.	80	7	8.8	35	43.8	30	37.5	8	10.0
Plan 504 w/o Accomm.	818	91	11.1	273	33.4	379	46.3	75	9.2
English Language Learners (ELL)									
ELL	1,601	851	53.2	602	37.6	129	8.1	19	1.2
ELL w/ Accomm.	262	162	61.8	86	32.8	13	5.0	1	0.4
ELL w/o Accomm.	1,339	689	51.5	516	38.5	116	8.7	18	1.3
Non-English Language Learners (Non-ELL)									
Non-ELL	44,201	5,087	11.5	13,838	31.3	20,493	46.4	4,783	10.8

		ı	Number	and Percen	t in Eacl	n Performa	nce Leve	els	
	Total	Unsatisf	Unsatisfactory		Limited Knowledge		Proficient		ced
English Language Arts - Grade 10	N	N	%	N	%	N	%	N	%
Military									
Military	131	10	7.6	29	22.1	77	58.8	15	11.5
Non-Military	45,671	5,928	13.0	14,411	31.6	20,545	45.0	4,787	10.5
Foster									
Foster	194	43	22.2	79	40.7	66	34.0	6	3.1
Non-Foster	45,608	5,895	12.9	14,361	31.5	20,556	45.1	4,796	10.5

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 1 Committee Results

	Number and Percent in Each Performance Levels										
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced		
Mathematics - Grade 03	N	N	%	N	%	N	%	N	%		
Total											
All	52,518	1,734	3.3	7,552	14.4	18,507	35.2	24,725	47.1		
Form											
Form 1	17,526	651	3.7	2,730	15.6	6,237	35.6	7,908	45.1		
Form 2	17,553	537	3.1	2,391	13.6	6,149	35.0	8,476	48.3		
Form 3	17,439	546	3.1	2,431	13.9	6,121	35.1	8,341	47.8		
Ethnicity											
Hispanic or Latino	9,684	465	4.8	2,132	22.0	3,873	40.0	3,214	33.2		
Race											
American Indian/:Alaskan Native	6,764	188	2.8	912	13.5	2,568	38.0	3,096	45.8		
Asian	972	13	1.3	71	7.3	249	25.6	639	65.7		
Black/:African American	4,567	439	9.6	1,267	27.7	1,729	37.9	1,132	24.8		
Pacific Islander	178	5	2.8	44	24.7	84	47.2	45	25.3		
White/:Caucasian	24,881	454	1.8	2,370	9.5	8,013	32.2	14,044	56.4		
Two or More Races	5,472	170	3.1	756	13.8	1,991	36.4	2,555	46.7		
Gender											
Female	25,718	853	3.3	3,942	15.3	9,249	36.0	11,674	45.4		
Male	26,758	878	3.3	3,600	13.5	9,241	34.5	13,039	48.7		
Not Indicated	42	3	7.1	10	23.8	17	40.5	12	28.6		
Other											
ELL 1st Yr: Proficient	574	1	0.2	24	4.2	174	30.3	375	65.3		
ELL 2nd Yr: Proficient	268	0	0.0	11	4.1	65	24.3	192	71.6		
Econ. Disadv.	33,722	1,447	4.3	6,012	17.8	13,256	39.3	13,007	38.6		
Non-Econ. Disadv.	18,796	287	1.5	1,540	8.2	5,251	27.9	11,718	62.3		
Migrant	33	2	6.1	5	15.2	11	33.3	15	45.5		
Non-Migrant	52,485	1,732	3.3	7,547	14.4	18,496	35.2	24,710	47.1		
Individualized Education Plan (IEP)											
IEP	9,382	886	9.4	2,608	27.8	3,456	36.8	2,432	25.9		
IEP w/ Accomm.	5,073	637	12.6	1,728	34.1	1,932	38.1	776	15.3		
IEP w/o Accomm.	4,309	249	5.8	880	20.4	1,524	35.4	1,656	38.4		
Plan 504	974	16	1.6	137	14.1	429	44.1	392	40.3		
Plan 504 w/ Accomm.	485	8	1.7	90	18.6	234	48.3	153	31.6		
Plan 504 w/o Accomm.	489	8	1.6	47	9.6	195	39.9	239	48.9		
English Language Learners (ELL)											
ELL	6,236	411	6.6	1,684	27.0	2,658	42.6	1,483	23.8		
ELL w/ Accomm.	1,894	136	7.2	601	31.7	816	43.1	341	18.0		
ELL w/o Accomm.	4,342	275	6.3	1,083	24.9	1,842	42.4	1,142	26.3		
Non-English Language Learners (Non-ELL)											
Non-ELL	46,282	1,323	2.9	5,868	12.7	15,849	34.2	23,242	50.2		
Military											

		N	Number	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisfa	Unsatisfactory		ed edge	Proficient		Advanced	
Mathematics - Grade 03	N	N	%	N	%	N	%	N	%
Military	234	3	1.3	19	8.1	67	28.6	145	62.0
Non-Military	52,284	1,731	3.3	7,533	14.4	18,440	35.3	24,580	47.0
Foster									
Foster	394	25	6.4	80	20.3	158	40.1	131	33.3
Non-Foster	52,124	1,709	3.3	7,472	14.3	18,349	35.2	24,594	47.2

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 1 Committee Results

		N	lumber a	and Percen	t in Eacl	n Performai	nce Leve	els	
	Total	Unsatisfa	actory	Limite Knowle		Profici	ient	Advan	ced
Mathematics - Grade 04	N	N	%	N	%	N	%	N	%
Total									
All	50,677	10,455	20.6	18,251	36.0	14,863	29.3	7,108	14.0
Form									
Form 1	16,913	3,573	21.1	5,856	34.6	5,273	31.2	2,211	13.1
Form 2	16,920	3,392	20.1	5,899	34.9	5,079	30.0	2,550	15.1
Form 3	16,844	3,490	20.7	6,496	38.6	4,511	26.8	2,347	13.9
Ethnicity									
Hispanic or Latino	9,251	2,683	29.0	3,657	39.5	2,193	23.7	718	7.8
Race									
American Indian/:Alaskan Native	6,646	1,318	19.8	2,639	39.7	1,939	29.2	750	11.3
Asian	988	90	9.1	207	21.0	342	34.6	349	35.3
Black/:African American	4,355	1,768	40.6	1,630	37.4	733	16.8	224	5.1
Pacific Islander	166	48	28.9	66	39.8	37	22.3	15	9.0
White/:Caucasian	24,235	3,598	14.9	8,134	33.6	8,098	33.4	4,405	18.2
Two or More Races	5,036	950	18.9	1,918	38.1	1,521	30.2	647	12.9
Gender									
Female	24,869	5,353	21.5	9,359	37.6	7,094	28.5	3,063	12.3
Male	25,770	5,086	19.7	8,878	34.5	7,764	30.1	4,042	15.7
Not Indicated	38	16	42.1	14	36.8	5	13.2	3	7.9
Other									
ELL 1st Yr: Proficient	1,798	311	17.3	766	42.6	545	30.3	176	9.8
ELL 2nd Yr: Proficient	584	40	6.9	215	36.8	215	36.8	114	19.5
Econ. Disadv.	31,870	8,179	25.7	12,731	40.0	8,240	25.9	2,720	8.5
Non-Econ. Disadv.	18,807	2,276	12.1	5,520	29.4	6,623	35.2	4,388	23.3
Migrant	30	7	23.3	14	46.7	7	23.3	2	6.7
Non-Migrant	50,647	10,448	20.6	18,237	36.0	14,856	29.3	7,106	14.0
Individualized Education Plan (IEP)									
IEP	8,789	3,725	42.4	3,199	36.4	1,450	16.5	415	4.7
IEP w/ Accomm.	5,293	2,632	49.7	1,954	36.9	608	11.5	99	1.9
IEP w/o Accomm.	3,496	1,093	31.3	1,245	35.6	842	24.1	316	9.0
Plan 504	964	202	21.0	388	40.3	266	27.6	108	11.2
Plan 504 w/ Accomm.	469	113	24.1	190	40.5	132	28.1	34	7.3
Plan 504 w/o Accomm.	495	89	18.0	198	40.0	134	27.1	74	15.0
English Language Learners (ELL)									
ELL	4,144	1,817	43.9	1,632	39.4	580	14.0	115	2.8
ELL w/ Accomm.	1,354	668	49.3	507	37.4	154	11.4	25	1.9
ELL w/o Accomm.	2,790	1,149	41.2	1,125	40.3	426	15.3	90	3.2
Non-English Language Learners (Non-ELL)									
Non-ELL	46,533	8,638	18.6	16,619	35.7	14,283	30.7	6,993	15.0

		1	Number	and Percen	t in Each	n Performar	nce Leve	els	
	Total	Total Unsatisfactory		Limit Knowle		Profici	Proficient		ced
Mathematics - Grade 04	N	N	%	N	%	N	%	N	%
Military									
Military	254	16	6.3	86	33.9	80	31.5	72	28.4
Non-Military	50,423	10,439	20.7	18,165	36.0	14,783	29.3	7,036	14.0
Foster									
Foster	360	117	32.5	135	37.5	79	21.9	29	8.1
Non-Foster	50,317	10,338	20.6	18,116	36.0	14,784	29.4	7,079	14.1

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 1 Committee Results

		N	lumber a	and Percen	t in Eacl	n Performai	nce Leve	els	
	Total	Unsatisfa	actory	Limite Knowle		Profici	ent	Advan	ced
Mathematics - Grade 05	N	N	%	N	%	N	%	N	%
Total									
All	48,460	9,029	18.6	14,472	29.9	19,057	39.3	5,902	12.2
Form									
Form 1	16,146	3,141	19.5	5,049	31.3	6,206	38.4	1,750	10.8
Form 2	16,160	2,968	18.4	4,631	28.7	6,343	39.3	2,218	13.7
Form 3	16,154	2,920	18.1	4,792	29.7	6,508	40.3	1,934	12.0
Ethnicity									
Hispanic or Latino	8,760	2,126	24.3	2,981	34.0	3,016	34.4	637	7.3
Race									
American Indian/:Alaskan Native	6,644	1,256	18.9	2,197	33.1	2,573	38.7	618	9.3
Asian	951	83	8.7	172	18.1	378	39.8	318	33.4
Black/:African American	4,250	1,522	35.8	1,394	32.8	1,152	27.1	182	4.3
Pacific Islander	164	41	25.0	50	30.5	58	35.4	15	9.2
White/:Caucasian	23,245	3,226	13.9	6,325	27.2	10,076	43.4	3,618	15.6
Two or More Races	4,446	775	17.4	1,353	30.4	1,804	40.6	514	11.6
Gender									
Female	23,927	4,347	18.2	7,364	30.8	9,564	40.0	2,652	11.1
Male	24,490	4,666	19.1	7,096	29.0	9,478	38.7	3,250	13.3
Not Indicated	43	16	37.2	12	27.9	15	34.9	0	0.0
Other									
ELL 1st Yr: Proficient	1,420	247	17.4	532	37.5	558	39.3	83	5.9
ELL 2nd Yr: Proficient	1,711	298	17.4	597	34.9	665	38.9	151	8.8
Econ. Disadv.	30,007	6,979	23.3	10,148	33.8	10,696	35.7	2,184	7.3
Non-Econ. Disadv.	18,453	2,050	11.1	4,324	23.4	8,361	45.3	3,718	20.2
Migrant	31	4	12.9	11	35.5	14	45.2	2	6.5
Non-Migrant	48,429	9,025	18.6	14,461	29.9	19,043	39.3	5,900	12.2
Individualized Education Plan (IEP)									
IEP	8,228	3,489	42.4	2,817	34.2	1,657	20.1	265	3.2
IEP w/ Accomm.	5,220	2,477	47.5	1,830	35.1	838	16.1	75	1.4
IEP w/o Accomm.	3,008	1,012	33.6	987	32.8	819	27.2	190	6.3
Plan 504	1,048	202	19.3	359	34.3	392	37.4	95	9.1
Plan 504 w/ Accomm.	514	115	22.4	195	37.9	173	33.7	31	6.0
Plan 504 w/o Accomm.	534	87	16.3	164	30.7	219	41.0	64	12.0
English Language Learners (ELL)									
ELL	2,600	1,146	44.1	902	34.7	494	19.0	58	2.2
ELL w/ Accomm.	863	416	48.2	285	33.0	150	17.4	12	1.4
ELL w/o Accomm.	1,737	730	42.0	617	35.5	344	19.8	46	2.7
Non-English Language Learners (Non-ELL)									
Non-ELL	45,860	7,883	17.2	13,570	29.6	18,563	40.5	5,844	12.7

		1	Number	and Percen	t in Eacl	n Performai	nce Leve	els	
	Total Unsatisfactor		actory	Limited Knowledge		Proficient		Advanced	
Mathematics - Grade 05	N	N	%	N	%	N	%	N	%
Military									
Military	246	19	7.7	59	24.0	124	50.4	44	17.9
Non-Military	48,214	9,010	18.7	14,413	29.9	18,933	39.3	5,858	12.2
Foster									
Foster	299	92	30.8	111	37.1	84	28.1	12	4.0
Non-Foster	48,161	8,937	18.6	14,361	29.8	18,973	39.4	5,890	12.2

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 1 Committee Results

		1	Number a	and Percen	t in Eacl	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced
Mathematics - Grade 06	N	N	%	N	%	N	%	N	%
Total									
All	45,876	11,055	24.1	17,714	38.6	14,273	31.1	2,834	6.2
Form									
Form 1	18,114	5,446	30.1	6,663	36.8	5,109	28.2	896	5.0
Form 2	13,898	2,731	19.7	5,604	40.3	4,589	33.0	974	7.0
Form 3	13,864	2,878	20.8	5,447	39.3	4,575	33.0	964	7.0
Ethnicity									
Hispanic or Latino	7,529	2,401	31.9	3,078	40.9	1,814	24.1	236	3.1
Race									
American Indian/:Alaskan Native	6,604	1,677	25.4	2,711	41.1	1,957	29.6	259	3.9
Asian	884	104	11.8	218	24.7	369	41.7	193	21.8
Black/:African American	3,774	1,720	45.6	1,423	37.7	572	15.2	59	1.6
Pacific Islander	143	71	49.7	41	28.7	23	16.1	8	5.6
White/:Caucasian	23,074	4,227	18.3	8,710	37.8	8,287	35.9	1,850	8.0
Two or More Races	3,868	855	22.1	1,533	39.6	1,251	32.3	229	5.9
Gender									
Female	22,439	5,625	25.1	9,064	40.4	6,523	29.1	1,227	5.5
Male	23,363	5,402	23.1	8,628	36.9	7,729	33.1	1,604	6.9
Not Indicated	74	28	37.8	22	29.7	21	28.4	3	4.1
Other									
ELL 1st Yr: Proficient	634	201	31.7	285	45.0	139	21.9	9	1.4
ELL 2nd Yr: Proficient	903	260	28.8	427	47.3	199	22.0	17	1.9
Econ. Disadv.	27,891	8,563	30.7	11,476	41.2	6,941	24.9	911	3.3
Non-Econ. Disadv.	17,985	2,492	13.9	6,238	34.7	7,332	40.8	1,923	10.7
Migrant	30	11	36.7	12	40.0	7	23.3	0	0.0
Non-Migrant	45,846	11,044	24.1	17,702	38.6	14,266	31.1	2,834	6.2
Individualized Education Plan (IEP)									
IEP	6,891	4,040	58.6	2,003	29.1	749	10.9	99	1.4
IEP w/ Accomm.	3,600	2,323	64.5	971	27.0	280	7.8	26	0.7
IEP w/o Accomm.	3,291	1,717	52.2	1,032	31.4	469	14.3	73	2.2
Plan 504	1,072	264	24.6	435	40.6	318	29.7	55	5.1
Plan 504 w/ Accomm.	319	92	28.8	136	42.6	81	25.4	10	3.1
Plan 504 w/o Accomm.	753	172	22.8	299	39.7	237	31.5	45	6.0
English Language Learners (ELL)									
ELL	1,667	1,054	63.2	499	29.9	99	5.9	15	0.9
ELL w/ Accomm.	297	208	70.0	76	25.6	11	3.7	2	0.7
ELL w/o Accomm.	1,370	846	61.8	423	30.9	88	6.4	13	1.0
Non-English Language Learners (Non-ELL)									
Non-ELL	44,209	10,001	22.6	17,215	38.9	14,174	32.1	2,819	6.4

		1	Number	and Percen	nt in Each Performance Levels						
	Total Un		otal Unsatisfactory I		Limited Knowledge		Proficient		ced		
Mathematics - Grade 06	N	N	%	N	%	N	%	N	%		
Military											
Military	258	42	16.3	85	33.0	102	39.5	29	11.2		
Non-Military	45,618	11,013	24.1	17,629	38.6	14,171	31.1	2,805	6.2		
Foster											
Foster	266	92	34.6	120	45.1	47	17.7	7	2.6		
Non-Foster	45,610	10,963	24.0	17,594	38.6	14,226	31.2	2,827	6.2		

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 1 Committee Results

		N	lumber a	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limite Knowle		Profici	ient	Advan	ced
Mathematics - Grade 07	N	N	%	N	%	N	%	N	%
Total									
All	47,554	23,487	49.4	8,372	17.6	12,321	25.9	3,374	7.1
Form									
Form 1	19,110	10,746	56.2	3,065	16.0	4,227	22.1	1,072	5.6
Form 2	14,221	6,416	45.1	2,626	18.5	4,006	28.2	1,173	8.3
Form 3	14,223	6,325	44.5	2,681	18.9	4,088	28.7	1,129	7.9
Ethnicity									
Hispanic or Latino	8,024	4,826	60.1	1,364	17.0	1,546	19.3	288	3.6
Race									
American Indian/:Alaskan Native	6,910	3,606	52.2	1,265	18.3	1,679	24.3	360	5.2
Asian	1,021	246	24.1	159	15.6	373	36.5	243	23.8
Black/:African American	4,170	3,028	72.6	541	13.0	523	12.5	78	1.9
Pacific Islander	151	98	64.9	29	19.2	20	13.3	4	2.7
White/:Caucasian	23,411	9,797	41.9	4,317	18.4	7,167	30.6	2,130	9.1
Two or More Races	3,867	1,886	48.8	697	18.0	1,013	26.2	271	7.0
Gender									
Female	23,187	11,395	49.1	4,265	18.4	6,066	26.2	1,461	6.3
Male	24,312	12,062	49.6	4,094	16.8	6,245	25.7	1,911	7.9
Not Indicated	55	30	54.6	13	23.6	10	18.2	2	3.6
Other									
ELL 1st Yr: Proficient	199	98	49.3	51	25.6	39	19.6	11	5.5
ELL 2nd Yr: Proficient	432	254	58.8	88	20.4	77	17.8	13	3.0
Econ. Disadv.	29,240	17,508	59.9	5,006	17.1	5,741	19.6	985	3.4
Non-Econ. Disadv.	18,314	5,979	32.7	3,366	18.4	6,580	35.9	2,389	13.0
Migrant	30	19	63.3	4	13.3	5	16.7	2	6.7
Non-Migrant	47,524	23,468	49.4	8,368	17.6	12,316	25.9	3,372	7.1
Individualized Education Plan (IEP)									
IEP	7,705	6,389	82.9	674	8.8	537	7.0	105	1.4
IEP w/ Accomm.	3,877	3,378	87.1	303	7.8	167	4.3	29	0.8
IEP w/o Accomm.	3,828	3,011	78.7	371	9.7	370	9.7	76	2.0
Plan 504	995	518	52.1	175	17.6	232	23.3	70	7.0
Plan 504 w/ Accomm.	229	140	61.1	41	17.9	39	17.0	9	3.9
Plan 504 w/o Accomm.	766	378	49.4	134	17.5	193	25.2	61	8.0
English Language Learners (ELL)									
ELL	2,185	1,816	83.1	221	10.1	129	5.9	19	0.9
ELL w/ Accomm.	294	247	84.0	33	11.2	12	4.1	2	0.7
ELL w/o Accomm.	1,891	1,569	83.0	188	9.9	117	6.2	17	0.9
Non-English Language Learners (Non-ELL)									
Non-ELL	45,369	21,671	47.8	8,151	18.0	12,192	26.9	3,355	7.4

		Number and Percent in Each Performance Levels										
	Total	Unsatisf	actory	Limit Knowl		Profici	ent	Advan	ced			
Mathematics - Grade 07	N	N	%	N	%	N	%	N	%			
Military												
Military	228	94	41.2	41	18.0	75	32.9	18	7.9			
Non-Military	47,326	23,393	49.4	8,331	17.6	12,246	25.9	3,356	7.1			
Foster												
Foster	245	162	66.1	34	13.9	36	14.7	13	5.3			
Non-Foster	47,309	23,325	49.3	8,338	17.6	12,285	26.0	3,361	7.1			

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 1 Committee Results

		N	lumber a	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limite Knowle		Profic	ient	Advan	ced
Mathematics - Grade 08	N	N	%	N	%	N	%	N	%
Total									
All	47,141	24,124	51.2	12,826	27.2	4,577	9.7	5,614	11.9
Form									
Form 1	18,715	10,795	57.7	4,493	24.0	1,394	7.5	2,033	10.9
Form 2	14,218	6,601	46.4	4,470	31.4	1,313	9.2	1,834	12.9
Form 3	14,208	6,728	47.4	3,863	27.2	1,870	13.2	1,747	12.3
Ethnicity									
Hispanic or Latino	7,722	4,776	61.9	1,882	24.4	547	7.1	517	6.7
Race									
American Indian/:Alaskan Native	6,814	3,816	56.0	1,846	27.1	570	8.4	582	8.5
Asian	960	232	24.2	239	24.9	143	14.9	346	36.0
Black/:African American	4,098	2,832	69.1	873	21.3	212	5.2	181	4.4
Pacific Islander	164	104	63.4	40	24.4	12	7.3	8	4.9
White/:Caucasian	23,721	10,511	44.3	6,928	29.2	2,720	11.5	3,562	15.0
Two or More Races	3,662	1,853	50.6	1,018	27.8	373	10.2	418	11.4
Gender									
Female	23,200	11,302	48.7	6,770	29.2	2,367	10.2	2,761	11.9
Male	23,870	12,770	53.5	6,045	25.3	2,206	9.2	2,849	11.9
Not Indicated	71	52	73.2	11	15.5	4	5.6	4	5.6
Other									
ELL 1st Yr: Proficient	183	90	49.2	65	35.5	18	9.8	10	5.5
ELL 2nd Yr: Proficient	241	112	46.5	71	29.5	30	12.5	28	11.6
Econ. Disadv.	28,521	17,538	61.5	7,072	24.8	2,083	7.3	1,828	6.4
Non-Econ. Disadv.	18,620	6,586	35.4	5,754	30.9	2,494	13.4	3,786	20.3
Migrant	35	20	57.1	10	28.6	3	8.6	2	5.7
Non-Migrant	47,106	24,104	51.2	12,816	27.2	4,574	9.7	5,612	11.9
Individualized Education Plan (IEP)									
IEP	7,240	6,250	86.3	727	10.0	144	2.0	119	1.6
IEP w/ Accomm.	3,905	3,505	89.8	304	7.8	53	1.4	43	1.1
IEP w/o Accomm.	3,335	2,745	82.3	423	12.7	91	2.7	76	2.3
Plan 504	964	505	52.4	269	27.9	94	9.8	96	10.0
Plan 504 w/ Accomm.	197	115	58.4	51	25.9	17	8.6	14	7.1
Plan 504 w/o Accomm.	767	390	50.9	218	28.4	77	10.0	82	10.7
English Language Learners (ELL)									
ELL	2,105	1,776	84.4	266	12.6	34	1.6	29	1.4
ELL w/ Accomm.	375	324	86.4	44	11.7	5	1.3	2	0.5
ELL w/o Accomm.	1,730	1,452	83.9	222	12.8	29	1.7	27	1.6
Non-English Language Learners (Non-ELL)									
Non-ELL	45,036	22,348	49.6	12,560	27.9	4,543	10.1	5,585	12.4

		1	Number	and Percen	t in Each	n Performai	nce Leve	els	
	Total Unsatisfactory		Limited Knowledge		Proficient		Advanced		
Mathematics - Grade 08	N	N	%	N	%	N	%	N	%
Military									
Military	227	88	38.8	79	34.8	24	10.6	36	15.9
Non-Military	46,914	24,036	51.2	12,747	27.2	4,553	9.7	5,578	11.9
Foster									
Foster	237	158	66.7	60	25.3	12	5.1	7	3.0
Non-Foster	46,904	23,966	51.1	12,766	27.2	4,565	9.7	5,607	12.0

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 1 Committee Results

	Number and Percent in Each Performance Levels								
	Total	Unsatisfa	actory	Limite Knowle		Profic	ient	Advan	ced
Mathematics - Grade 10	N	N	%	N	%	N	%	N	%
Total									
All	45,352	21,574	47.6	12,523	27.6	6,985	15.4	4,270	9.4
Form									
Form 1	16,973	8,448	49.8	4,592	27.1	2,421	14.3	1,512	8.9
Form 2	14,163	6,929	48.9	3,682	26.0	2,200	15.5	1,352	9.6
Form 3	14,216	6,197	43.6	4,249	29.9	2,364	16.6	1,406	9.9
Ethnicity									
Hispanic or Latino	6,933	3,939	56.8	1,870	27.0	776	11.2	348	5.0
Race									
American Indian/:Alaskan Native	6,690	3,435	51.4	1,946	29.1	920	13.8	389	5.8
Asian	1,096	288	26.3	227	20.7	244	22.3	337	30.8
Black/:African American	3,934	2,687	68.3	834	21.2	295	7.5	118	3.0
Pacific Islander	155	82	52.9	43	27.7	20	12.9	10	6.5
White/:Caucasian	23,341	9,601	41.1	6,748	28.9	4,235	18.1	2,757	11.8
Two or More Races	3,203	1,542	48.1	855	26.7	495	15.5	311	9.7
Gender									
Female	22,336	10,063	45.1	6,670	29.9	3,583	16.0	2,020	9.0
Male	22,991	11,496	50.0	5,846	25.4	3,399	14.8	2,250	9.8
Not Indicated	25	15	60.0	7	28.0	3	12.0	0	0.0
Other									
ELL 1st Yr: Proficient	584	368	63.0	153	26.2	48	8.2	15	2.6
ELL 2nd Yr: Proficient	218	119	54.6	62	28.4	23	10.6	14	6.4
Econ. Disadv.	24,793	14,451	58.3	6,439	26.0	2,722	11.0	1,181	4.8
Non-Econ. Disadv.	20,559	7,123	34.7	6,084	29.6	4,263	20.7	3,089	15.0
Migrant	32	16	50.0	5	15.6	7	21.9	4	12.5
Non-Migrant	45,320	21,558	47.6	12,518	27.6	6,978	15.4	4,266	9.4
Individualized Education Plan (IEP)									
IEP	6,532	5,601	85.8	727	11.1	147	2.3	57	0.9
IEP w/ Accomm.	2,173	1,903	87.6	220	10.1	38	1.8	12	0.6
IEP w/o Accomm.	4,359	3,698	84.8	507	11.6	109	2.5	45	1.0
Plan 504	882	435	49.3	260	29.5	116	13.2	71	8.1
Plan 504 w/ Accomm.	77	41	53.3	22	28.6	9	11.7	5	6.5
Plan 504 w/o Accomm.	805	394	48.9	238	29.6	107	13.3	66	8.2
English Language Learners (ELL)									
ELL	1,625	1,364	83.9	189	11.6	48	3.0	24	1.5
ELL w/ Accomm.	278	246	88.5	23	8.3	4	1.4	5	1.8
ELL w/o Accomm.	1,347	1,118	83.0	166	12.3	44	3.3	19	1.4
Non-English Language Learners (Non-ELL)									
Non-ELL	43,727	20,210	46.2	12,334	28.2	6,937	15.9	4,246	9.7

		Number and Percent in Each Performance Levels										
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced			
Mathematics - Grade 10	N	N	%	N	%	N	%	N	%			
Military												
Military	130	54	41.5	32	24.6	27	20.8	17	13.1			
Non-Military	45,222	21,520	47.6	12,491	27.6	6,958	15.4	4,253	9.4			
Foster												
Foster	196	124	63.3	51	26.0	16	8.2	5	2.6			
Non-Foster	45,156	21,450	47.5	12,472	27.6	6,969	15.4	4,265	9.5			

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 2 Committee Results

	Number and Percent in Each Performance Levels								
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced
Mathematics - Grade 03	N	N	%	N	%	N	%	N	%
Total									
All	52,518	8,573	16.3	13,178	25.1	17,146	32.7	13,621	25.9
Form									
Form 1	17,526	3,034	17.3	4,555	26.0	5,183	29.6	4,754	27.1
Form 2	17,553	2,928	16.7	4,083	23.3	6,039	34.4	4,503	25.7
Form 3	17,439	2,611	15.0	4,540	26.0	5,924	34.0	4,364	25.0
Ethnicity									
Hispanic or Latino	9,684	2,390	24.7	3,013	31.1	2,830	29.2	1,451	15.0
Race									
American Indian/:Alaskan Native	6,764	1,017	15.0	1,805	26.7	2,369	35.0	1,573	23.3
Asian	972	76	7.8	153	15.7	308	31.7	435	44.8
Black/:African American	4,567	1,620	35.5	1,384	30.3	1,069	23.4	494	10.8
Pacific Islander	178	46	25.8	67	37.6	45	25.3	20	11.2
White/:Caucasian	24,881	2,576	10.4	5,371	21.6	8,688	34.9	8,246	33.1
Two or More Races	5,472	848	15.5	1,385	25.3	1,837	33.6	1,402	25.6
Gender									
Female	25,718	4,432	17.2	6,685	26.0	8,312	32.3	6,289	24.5
Male	26,758	4,129	15.4	6,479	24.2	8,822	33.0	7,328	27.4
Not Indicated	42	12	28.6	14	33.3	12	28.6	4	9.5
Other									
ELL 1st Yr: Proficient	574	24	4.2	104	18.1	244	42.5	202	35.2
ELL 2nd Yr: Proficient	268	10	3.7	38	14.2	103	38.4	117	43.7
Econ. Disadv.	33,722	6,902	20.5	9,729	28.9	10,824	32.1	6,267	18.6
Non-Econ. Disadv.	18,796	1,671	8.9	3,449	18.4	6,322	33.6	7,354	39.1
Migrant	33	7	21.2	8	24.2	9	27.3	9	27.3
Non-Migrant	52,485	8,566	16.3	13,170	25.1	17,137	32.7	13,612	25.9
Individualized Education Plan (IEP)									
IEP	9,382	3,287	35.0	2,747	29.3	2,191	23.4	1,157	12.3
IEP w/ Accomm.	5,073	2,230	44.0	1,601	31.6	950	18.7	292	5.8
IEP w/o Accomm.	4,309	1,057	24.5	1,146	26.6	1,241	28.8	865	20.1
Plan 504	974	135	13.9	325	33.4	326	33.5	188	19.3
Plan 504 w/ Accomm.	485	88	18.1	184	37.9	133	27.4	80	16.5
Plan 504 w/o Accomm.	489	47	9.6	141	28.8	193	39.5	108	22.1
English Language Learners (ELL)									
ELL	6,236	1,944	31.2	2,145	34.4	1,565	25.1	582	9.3
ELL w/ Accomm.	1,894	674	35.6	695	36.7	400	21.1	125	6.6
ELL w/o Accomm.	4,342	1,270	29.3	1,450	33.4	1,165	26.8	457	10.5
Non-English Language Learners (Non-ELL)									
Non-ELL	46,282	6,629	14.3	11,033	23.8	15,581	33.7	13,039	28.2
Military									

		N	Number	and Percen	t in Eacl	n Performai	nce Leve	els	
	Total	Unsatisfa	Unsatisfactory		ed edge	Proficient		Advanced	
Mathematics - Grade 03	N	N	%	N	N	%	N	%	
Military	234	21	9.0	44	18.8	82	35.0	87	37.2
Non-Military	52,284	8,552	16.4	13,134	25.1	17,064	32.6	13,534	25.9
Foster									
Foster	394	97	24.6	121	30.7	118	30.0	58	14.7
Non-Foster	52,124	8,476	16.3	13,057	25.1	17,028	32.7	13,563	26.0

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 2 Committee Results

		1	Number a	and Percen	t in Eacl	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced
Mathematics - Grade 04	N	N	%	N	%	N	%	N	%
Total									
All	50,677	10,455	20.6	19,624	38.7	13,490	26.6	7,108	14.0
Form									
Form 1	16,913	3,573	21.1	6,490	38.4	4,639	27.4	2,211	13.1
Form 2	16,920	3,392	20.1	6,638	39.2	4,340	25.7	2,550	15.1
Form 3	16,844	3,490	20.7	6,496	38.6	4,511	26.8	2,347	13.9
Ethnicity									
Hispanic or Latino	9,251	2,683	29.0	3,904	42.2	1,946	21.0	718	7.8
Race									
American Indian/:Alaskan Native	6,646	1,318	19.8	2,840	42.7	1,738	26.2	750	11.3
Asian	988	90	9.1	230	23.3	319	32.3	349	35.3
Black/:African American	4,355	1,768	40.6	1,721	39.5	642	14.7	224	5.1
Pacific Islander	166	48	28.9	75	45.2	28	16.9	15	9.0
White/:Caucasian	24,235	3,598	14.9	8,796	36.3	7,436	30.7	4,405	18.2
Two or More Races	5,036	950	18.9	2,058	40.9	1,381	27.4	647	12.9
Gender									
Female	24,869	5,353	21.5	10,028	40.3	6,425	25.8	3,063	12.3
Male	25,770	5,086	19.7	9,581	37.2	7,061	27.4	4,042	15.7
Not Indicated	38	16	42.1	15	39.5	4	10.5	3	7.9
Other									
ELL 1st Yr: Proficient	1,798	311	17.3	832	46.3	479	26.6	176	9.8
ELL 2nd Yr: Proficient	584	40	6.9	230	39.4	200	34.3	114	19.5
Econ. Disadv.	31,870	8,179	25.7	13,583	42.6	7,388	23.2	2,720	8.5
Non-Econ. Disadv.	18,807	2,276	12.1	6,041	32.1	6,102	32.5	4,388	23.3
Migrant	30	7	23.3	14	46.7	7	23.3	2	6.7
Non-Migrant	50,647	10,448	20.6	19,610	38.7	13,483	26.6	7,106	14.0
Individualized Education Plan (IEP)									
IEP	8,789	3,725	42.4	3,374	38.4	1,275	14.5	415	4.7
IEP w/ Accomm.	5,293	2,632	49.7	2,039	38.5	523	9.9	99	1.9
IEP w/o Accomm.	3,496	1,093	31.3	1,335	38.2	752	21.5	316	9.0
Plan 504	964	202	21.0	415	43.1	239	24.8	108	11.2
Plan 504 w/ Accomm.	469	113	24.1	206	43.9	116	24.7	34	7.3
Plan 504 w/o Accomm.	495	89	18.0	209	42.2	123	24.9	74	15.0
English Language Learners (ELL)									
ELL	4,144	1,817	43.9	1,712	41.3	500	12.1	115	2.8
ELL w/ Accomm.	1,354	668	49.3	537	39.7	124	9.2	25	1.9
ELL w/o Accomm.	2,790	1,149	41.2	1,175	42.1	376	13.5	90	3.2
Non-English Language Learners (Non-ELL)									
Non-ELL	46,533	8,638	18.6	17,912	38.5	12,990	27.9	6,993	15.0

		1	Number	and Percen	t in Each	n Performai	nce Leve	els					
	Total	Unsatisfa	actory	Limited Knowledge		Proficient		Advanced					
Mathematics - Grade 04	N	N N % N % N N											
Military													
Military	254	16	6.3	93	36.6	73	28.7	72	28.4				
Non-Military	50,423	10,439	20.7	19,531	38.7	13,417	26.6	7,036	14.0				
Foster													
Foster	360	117	32.5	140	38.9	74	20.6	29	8.1				
Non-Foster	50,317	10,338	20.6	19,484	38.7	13,416	26.7	7,079	14.1				

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 2 Committee Results

		N	lumber a	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced
Mathematics - Grade 05	N	N	%	N	%	N	%	N	%
Total									
All	48,460	9,029	18.6	14,472	29.9	16,868	34.8	8,091	16.7
Form									
Form 1	16,146	3,141	19.5	5,049	31.3	5,385	33.4	2,571	15.9
Form 2	16,160	2,968	18.4	4,631	28.7	5,825	36.1	2,736	16.9
Form 3	16,154	2,920	18.1	4,792	29.7	5,658	35.0	2,784	17.2
Ethnicity									
Hispanic or Latino	8,760	2,126	24.3	2,981	34.0	2,750	31.4	903	10.3
Race									
American Indian/:Alaskan Native	6,644	1,256	18.9	2,197	33.1	2,316	34.9	875	13.2
Asian	951	83	8.7	172	18.1	298	31.3	398	41.9
Black/:African American	4,250	1,522	35.8	1,394	32.8	1,060	24.9	274	6.5
Pacific Islander	164	41	25.0	50	30.5	53	32.3	20	12.2
White/:Caucasian	23,245	3,226	13.9	6,325	27.2	8,794	37.8	4,900	21.1
Two or More Races	4,446	775	17.4	1,353	30.4	1,597	35.9	721	16.2
Gender									
Female	23,927	4,347	18.2	7,364	30.8	8,519	35.6	3,697	15.5
Male	24,490	4,666	19.1	7,096	29.0	8,335	34.0	4,393	17.9
Not Indicated	43	16	37.2	12	27.9	14	32.6	1	2.3
Other									
ELL 1st Yr: Proficient	1,420	247	17.4	532	37.5	508	35.8	133	9.4
ELL 2nd Yr: Proficient	1,711	298	17.4	597	34.9	601	35.1	215	12.6
Econ. Disadv.	30,007	6,979	23.3	10,148	33.8	9,683	32.3	3,197	10.7
Non-Econ. Disadv.	18,453	2,050	11.1	4,324	23.4	7,185	38.9	4,894	26.5
Migrant	31	4	12.9	11	35.5	13	41.9	3	9.7
Non-Migrant	48,429	9,025	18.6	14,461	29.9	16,855	34.8	8,088	16.7
Individualized Education Plan (IEP)									
IEP	8,228	3,489	42.4	2,817	34.2	1,520	18.5	402	4.9
IEP w/ Accomm.	5,220	2,477	47.5	1,830	35.1	799	15.3	114	2.2
IEP w/o Accomm.	3,008	1,012	33.6	987	32.8	721	24.0	288	9.6
Plan 504	1,048	202	19.3	359	34.3	356	34.0	131	12.5
Plan 504 w/ Accomm.	514	115	22.4	195	37.9	160	31.1	44	8.6
Plan 504 w/o Accomm.	534	87	16.3	164	30.7	196	36.7	87	16.3
English Language Learners (ELL)									
ELL	2,600	1,146	44.1	902	34.7	472	18.2	80	3.1
ELL w/ Accomm.	863	416	48.2	285	33.0	143	16.6	19	2.2
ELL w/o Accomm.	1,737	730	42.0	617	35.5	329	18.9	61	3.5
Non-English Language Learners (Non-ELL)									
Non-ELL	45,860	7,883	17.2	13,570	29.6	16,396	35.8	8,011	17.5

		ı	Number	and Percen	t in Each	n Performa	nce Leve	els					
	Total	Unsatisf	actory	Limited Knowledge		Proficient		Advanced					
Mathematics - Grade 05	N	N N % N % N %											
Military													
Military	246	19	7.7	59	24.0	106	43.1	62	25.2				
Non-Military	48,214	9,010	18.7	14,413	29.9	16,762	34.8	8,029	16.7				
Foster													
Foster	299	92	30.8	111	37.1	76	25.4	20	6.7				
Non-Foster	48,161 8,937 18.6 14,361 29.8 16,792 34.9 8,071 16												

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 2 Committee Results

	Number and Percent in Each Performance Levels								
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced
Mathematics - Grade 06	N	N	%	N	%	N	%	N	%
Total									
All	45,876	8,634	18.8	22,163	48.3	12,245	26.7	2,834	6.2
Form									
Form 1	18,114	4,313	23.8	8,513	47.0	4,392	24.3	896	5.0
Form 2	13,898	2,297	16.5	6,725	48.4	3,902	28.1	974	7.0
Form 3	13,864	2,024	14.6	6,925	50.0	3,951	28.5	964	7.0
Ethnicity									
Hispanic or Latino	7,529	1,883	25.0	3,878	51.5	1,532	20.4	236	3.1
Race									
American Indian/:Alaskan Native	6,604	1,284	19.4	3,403	51.5	1,658	25.1	259	3.9
Asian	884	83	9.4	271	30.7	337	38.1	193	21.8
Black/:African American	3,774	1,420	37.6	1,825	48.4	470	12.5	59	1.6
Pacific Islander	143	60	42.0	58	40.6	17	11.9	8	5.6
White/:Caucasian	23,074	3,234	14.0	10,824	46.9	7,166	31.1	1,850	8.0
Two or More Races	3,868	670	17.3	1,904	49.2	1,065	27.5	229	5.9
Gender									
Female	22,439	4,339	19.3	11,335	50.5	5,538	24.7	1,227	5.5
Male	23,363	4,274	18.3	10,795	46.2	6,690	28.6	1,604	6.9
Not Indicated	74	21	28.4	33	44.6	17	23.0	3	4.1
Other									
ELL 1st Yr: Proficient	634	148	23.3	365	57.6	112	17.7	9	1.4
ELL 2nd Yr: Proficient	903	183	20.3	535	59.3	168	18.6	17	1.9
Econ. Disadv.	27,891	6,812	24.4	14,331	51.4	5,837	20.9	911	3.3
Non-Econ. Disadv.	17,985	1,822	10.1	7,832	43.6	6,408	35.6	1,923	10.7
Migrant	30	8	26.7	15	50.0	7	23.3	0	0.0
Non-Migrant	45,846	8,626	18.8	22,148	48.3	12,238	26.7	2,834	6.2
Individualized Education Plan (IEP)									
IEP	6,891	3,536	51.3	2,635	38.2	621	9.0	99	1.4
IEP w/ Accomm.	3,600	2,042	56.7	1,315	36.5	217	6.0	26	0.7
IEP w/o Accomm.	3,291	1,494	45.4	1,320	40.1	404	12.3	73	2.2
Plan 504	1,072	195	18.2	555	51.8	267	24.9	55	5.1
Plan 504 w/ Accomm.	319	68	21.3	174	54.6	67	21.0	10	3.1
Plan 504 w/o Accomm.	753	127	16.9	381	50.6	200	26.6	45	6.0
English Language Learners (ELL)									
ELL	1,667	894	53.6	680	40.8	78	4.7	15	0.9
ELL w/ Accomm.	297	169	56.9	117	39.4	9	3.0	2	0.7
ELL w/o Accomm.	1,370	725	52.9	563	41.1	69	5.0	13	1.0
Non-English Language Learners (Non-ELL)									
Non-ELL	44,209	7,740	17.5	21,483	48.6	12,167	27.5	2,819	6.4

		1	Number	and Percen	t in Each	n Performai	nce Leve	els					
	Total	Unsatisfa	actory	Limited Knowledge		Proficient		Advanced					
Mathematics - Grade 06	N	N N % N % N %											
Military													
Military	258	33	12.8	107	41.5	89	34.5	29	11.2				
Non-Military	45,618	8,601	18.9	22,056	48.4	12,156	26.7	2,805	6.2				
Foster													
Foster	266	75	28.2	140	52.6	44	16.5	7	2.6				
Non-Foster	45,610	45,610 8,559 18.8 22,023 48.3 12,201 26.8 2,827 6.8											

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 2 Committee Results

	Number and Percent in Each Performance Levels										
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced		
Mathematics - Grade 07	N	N	%	N	%	N	%	N	%		
Total											
All	47,554	23,487	49.4	8,372	17.6	12,321	25.9	3,374	7.1		
Form											
Form 1	19,110	10,746	56.2	3,065	16.0	4,227	22.1	1,072	5.6		
Form 2	14,221	6,416	45.1	2,626	18.5	4,006	28.2	1,173	8.3		
Form 3	14,223	6,325	44.5	2,681	18.9	4,088	28.7	1,129	7.9		
Ethnicity											
Hispanic or Latino	8,024	4,826	60.1	1,364	17.0	1,546	19.3	288	3.6		
Race											
American Indian/:Alaskan Native	6,910	3,606	52.2	1,265	18.3	1,679	24.3	360	5.2		
Asian	1,021	246	24.1	159	15.6	373	36.5	243	23.8		
Black/:African American	4,170	3,028	72.6	541	13.0	523	12.5	78	1.9		
Pacific Islander	151	98	64.9	29	19.2	20	13.3	4	2.7		
White/:Caucasian	23,411	9,797	41.9	4,317	18.4	7,167	30.6	2,130	9.1		
Two or More Races	3,867	1,886	48.8	697	18.0	1,013	26.2	271	7.0		
Gender											
Female	23,187	11,395	49.1	4,265	18.4	6,066	26.2	1,461	6.3		
Male	24,312	12,062	49.6	4,094	16.8	6,245	25.7	1,911	7.9		
Not Indicated	55	30	54.6	13	23.6	10	18.2	2	3.6		
Other											
ELL 1st Yr: Proficient	199	98	49.3	51	25.6	39	19.6	11	5.5		
ELL 2nd Yr: Proficient	432	254	58.8	88	20.4	77	17.8	13	3.0		
Econ. Disadv.	29,240	17,508	59.9	5,006	17.1	5,741	19.6	985	3.4		
Non-Econ. Disadv.	18,314	5,979	32.7	3,366	18.4	6,580	35.9	2,389	13.0		
Migrant	30	19	63.3	4	13.3	5	16.7	2	6.7		
Non-Migrant	47,524	23,468	49.4	8,368	17.6	12,316	25.9	3,372	7.1		
Individualized Education Plan (IEP)											
IEP	7,705	6,389	82.9	674	8.8	537	7.0	105	1.4		
IEP w/ Accomm.	3,877	3,378	87.1	303	7.8	167	4.3	29	0.8		
IEP w/o Accomm.	3,828	3,011	78.7	371	9.7	370	9.7	76	2.0		
Plan 504	995	518	52.1	175	17.6	232	23.3	70	7.0		
Plan 504 w/ Accomm.	229	140	61.1	41	17.9	39	17.0	9	3.9		
Plan 504 w/o Accomm.	766	378	49.4	134	17.5	193	25.2	61	8.0		
English Language Learners (ELL)											
ELL	2,185	1,816	83.1	221	10.1	129	5.9	19	0.9		
ELL w/ Accomm.	294	247	84.0	33	11.2	12	4.1	2	0.7		
ELL w/o Accomm.	1,891	1,569	83.0	188	9.9	117	6.2	17	0.9		
Non-English Language Learners (Non-ELL)											
Non-ELL	45,369	21,671	47.8	8,151	18.0	12,192	26.9	3,355	7.4		

		Number and Percent in Each Performance Levels											
	Total	Unsatisf	actory	Limited Knowledge		Proficient		Advanced					
Mathematics - Grade 07	N	N N % N % N %											
Military													
Military	228	94	41.2	41	18.0	75	32.9	18	7.9				
Non-Military	47,326	23,393	49.4	8,331	17.6	12,246	25.9	3,356	7.1				
Foster													
Foster	245	162	66.1	34	13.9	36	14.7	13	5.3				
Non-Foster	47,309	23,325	49.3	8,338	17.6	12,285	26.0	3,361	7.1				

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 2 Committee Results

		1	Number	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced
Mathematics - Grade 08	N	N	%	N	%	N	%	N	%
Total									
All	47,141	23,065	48.9	13,106	27.8	5,356	11.4	5,614	11.9
Form									
Form 1	18,715	10,242	54.7	4,656	24.9	1,784	9.5	2,033	10.9
Form 2	14,218	6,601	46.4	4,081	28.7	1,702	12.0	1,834	12.9
Form 3	14,208	6,222	43.8	4,369	30.8	1,870	13.2	1,747	12.3
Ethnicity									
Hispanic or Latino	7,722	4,615	59.8	1,956	25.3	634	8.2	517	6.7
Race									
American Indian/:Alaskan Native	6,814	3,664	53.8	1,887	27.7	681	10.0	582	8.5
Asian	960	215	22.4	230	24.0	169	17.6	346	36.0
Black/:African American	4,098	2,739	66.8	936	22.8	242	5.9	181	4.4
Pacific Islander	164	101	61.6	41	25.0	14	8.5	8	4.9
White/:Caucasian	23,721	9,970	42.0	7,018	29.6	3,171	13.4	3,562	15.0
Two or More Races	3,662	1,761	48.1	1,038	28.4	445	12.2	418	11.4
Gender									
Female	23,200	10,754	46.4	6,938	29.9	2,747	11.8	2,761	11.9
Male	23,870	12,260	51.4	6,156	25.8	2,605	10.9	2,849	11.9
Not Indicated	71	51	71.8	12	16.9	4	5.6	4	5.6
Other									
ELL 1st Yr: Proficient	183	84	45.9	69	37.7	20	10.9	10	5.5
ELL 2nd Yr: Proficient	241	106	44.0	74	30.7	33	13.7	28	11.6
Econ. Disadv.	28,521	16,868	59.1	7,365	25.8	2,460	8.6	1,828	6.4
Non-Econ. Disadv.	18,620	6,197	33.3	5,741	30.8	2,896	15.6	3,786	20.3
Migrant	35	19	54.3	10	28.6	4	11.4	2	5.7
Non-Migrant	47,106	23,046	48.9	13,096	27.8	5,352	11.4	5,612	11.9
Individualized Education Plan (IEP)									
IEP	7,240	6,143	84.9	795	11.0	183	2.5	119	1.6
IEP w/ Accomm.	3,905	3,439	88.1	351	9.0	72	1.8	43	1.1
IEP w/o Accomm.	3,335	2,704	81.1	444	13.3	111	3.3	76	2.3
Plan 504	964	479	49.7	269	27.9	120	12.5	96	10.0
Plan 504 w/ Accomm.	197	110	55.8	51	25.9	22	11.2	14	7.1
Plan 504 w/o Accomm.	767	369	48.1	218	28.4	98	12.8	82	10.7
English Language Learners (ELL)									
ELL	2,105	1,741	82.7	290	13.8	45	2.1	29	1.4
ELL w/ Accomm.	375	321	85.6	44	11.7	8	2.1	2	0.5
ELL w/o Accomm.	1,730	1,420	82.1	246	14.2	37	2.1	27	1.6
Non-English Language Learners (Non-ELL)									
Non-ELL	45,036	21,324	47.4	12,816	28.5	5,311	11.8	5,585	12.4

		1	Number	and Percen	t in Each	n Performai	nce Leve	els					
	Total	Unsatisfa	nsatisfactory		Limited Knowledge		Proficient		ced				
Mathematics - Grade 08	N	N N % N % N %											
Military													
Military	227	84	37.0	80	35.2	27	11.9	36	15.9				
Non-Military	46,914	22,981	49.0	13,026	27.8	5,329	11.4	5,578	11.9				
Foster													
Foster	237	150	63.3	60	25.3	20	8.4	7	3.0				
Non-Foster	46,904	46,904 22,915 48.9 13,046 27.8 5,336 11.4 5,607 12											

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 2 Committee Results

		١	Number a	and Percen	t in Eacl	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced
Mathematics - Grade 10	N	N	%	N	%	N	%	N	%
Total									
All	45,352	24,439	53.9	9,658	21.3	6,985	15.4	4,270	9.4
Form									
Form 1	16,973	9,421	55.5	3,619	21.3	2,421	14.3	1,512	8.9
Form 2	14,163	7,832	55.3	2,779	19.6	2,200	15.5	1,352	9.6
Form 3	14,216	7,186	50.6	3,260	22.9	2,364	16.6	1,406	9.9
Ethnicity									
Hispanic or Latino	6,933	4,418	63.7	1,391	20.1	776	11.2	348	5.0
Race									
American Indian/:Alaskan Native	6,690	3,902	58.3	1,479	22.1	920	13.8	389	5.8
Asian	1,096	333	30.4	182	16.6	244	22.3	337	30.8
Black/:African American	3,934	2,883	73.3	638	16.2	295	7.5	118	3.0
Pacific Islander	155	92	59.4	33	21.3	20	12.9	10	6.5
White/:Caucasian	23,341	11,059	47.4	5,290	22.7	4,235	18.1	2,757	11.8
Two or More Races	3,203	1,752	54.7	645	20.1	495	15.5	311	9.7
Gender									
Female	22,336	11,576	51.8	5,157	23.1	3,583	16.0	2,020	9.0
Male	22,991	12,846	55.9	4,496	19.6	3,399	14.8	2,250	9.8
Not Indicated	25	17	68.0	5	20.0	3	12.0	0	0.0
Other									
ELL 1st Yr: Proficient	584	411	70.4	110	18.8	48	8.2	15	2.6
ELL 2nd Yr: Proficient	218	136	62.4	45	20.6	23	10.6	14	6.4
Econ. Disadv.	24,793	16,075	64.8	4,815	19.4	2,722	11.0	1,181	4.8
Non-Econ. Disadv.	20,559	8,364	40.7	4,843	23.6	4,263	20.7	3,089	15.0
Migrant	32	17	53.1	4	12.5	7	21.9	4	12.5
Non-Migrant	45,320	24,422	53.9	9,654	21.3	6,978	15.4	4,266	9.4
Individualized Education Plan (IEP)									
IEP	6,532	5,834	89.3	494	7.6	147	2.3	57	0.9
IEP w/ Accomm.	2,173	1,979	91.1	144	6.6	38	1.8	12	0.6
IEP w/o Accomm.	4,359	3,855	88.4	350	8.0	109	2.5	45	1.0
Plan 504	882	503	57.0	192	21.8	116	13.2	71	8.1
Plan 504 w/ Accomm.	77	46	59.7	17	22.1	9	11.7	5	6.5
Plan 504 w/o Accomm.	805	457	56.8	175	21.7	107	13.3	66	8.2
English Language Learners (ELL)									
ELL	1,625	1,438	88.5	115	7.1	48	3.0	24	1.5
ELL w/ Accomm.	278	255	91.7	14	5.0	4	1.4	5	1.8
ELL w/o Accomm.	1,347	1,183	87.8	101	7.5	44	3.3	19	1.4
Non-English Language Learners (Non-ELL)									
Non-ELL	43,727	23,001	52.6	9,543	21.8	6,937	15.9	4,246	9.7

		Number and Percent in Each Performance Levels											
	Total	Unsatisfactory		Limited Knowledge		Proficient		Advanced					
Mathematics - Grade 10	N	N N % N % N											
Military													
Military	130	62	47.7	24	18.5	27	20.8	17	13.1				
Non-Military	45,222	24,377	53.9	9,634	21.3	6,958	15.4	4,253	9.4				
Foster													
Foster	196	134	68.4	41	20.9	16	8.2	5	2.6				
Non-Foster	45,156	24,305	53.8	9,617	21.3	6,969	15.4	4,265	9.5				

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 3 Committee Results

	Number and Percent in Each Performance Levels								
	Total	Unsatisfa	actory	Limit Knowle		Profici	ient	Advan	ced
Mathematics - Grade 03	N	N	%	N	%	N	%	N	%
Total									
All	52,518	8,573	16.3	13,178	25.1	21,842	41.6	8,925	17.0
Form									
Form 1	17,526	3,034	17.3	4,555	26.0	6,922	39.5	3,015	17.2
Form 2	17,553	2,928	16.7	4,083	23.3	7,473	42.6	3,069	17.5
Form 3	17,439	2,611	15.0	4,540	26.0	7,447	42.7	2,841	16.3
Ethnicity									
Hispanic or Latino	9,684	2,390	24.7	3,013	31.1	3,440	35.5	841	8.7
Race									
American Indian/:Alaskan Native	6,764	1,017	15.0	1,805	26.7	2,968	43.9	974	14.4
Asian	972	76	7.8	153	15.7	429	44.1	314	32.3
Black/:African American	4,567	1,620	35.5	1,384	30.3	1,279	28.0	284	6.2
Pacific Islander	178	46	25.8	67	37.6	54	30.3	11	6.2
White/:Caucasian	24,881	2,576	10.4	5,371	21.6	11,321	45.5	5,613	22.6
Two or More Races	5,472	848	15.5	1,385	25.3	2,351	43.0	888	16.2
Gender									
Female	25,718	4,432	17.2	6,685	26.0	10,551	41.0	4,050	15.8
Male	26,758	4,129	15.4	6,479	24.2	11,277	42.1	4,873	18.2
Not Indicated	42	12	28.6	14	33.3	14	33.3	2	4.8
Other									
ELL 1st Yr: Proficient	574	24	4.2	104	18.1	325	56.6	121	21.1
ELL 2nd Yr: Proficient	268	10	3.7	38	14.2	138	51.5	82	30.6
Econ. Disadv.	33,722	6,902	20.5	9,729	28.9	13,296	39.4	3,795	11.3
Non-Econ. Disadv.	18,796	1,671	8.9	3,449	18.4	8,546	45.5	5,130	27.3
Migrant	33	7	21.2	8	24.2	13	39.4	5	15.2
Non-Migrant	52,485	8,566	16.3	13,170	25.1	21,829	41.6	8,920	17.0
Individualized Education Plan (IEP)									
IEP	9,382	3,287	35.0	2,747	29.3	2,637	28.1	711	7.6
IEP w/ Accomm.	5,073	2,230	44.0	1,601	31.6	1,080	21.3	162	3.2
IEP w/o Accomm.	4,309	1,057	24.5	1,146	26.6	1,557	36.1	549	12.7
Plan 504	974	135	13.9	325	33.4	395	40.6	119	12.2
Plan 504 w/ Accomm.	485	88	18.1	184	37.9	167	34.4	46	9.5
Plan 504 w/o Accomm.	489	47	9.6	141	28.8	228	46.6	73	14.9
English Language Learners (ELL)									
ELL	6,236	1,944	31.2	2,145	34.4	1,843	29.6	304	4.9
ELL w/ Accomm.	1,894	674	35.6	695	36.7	469	24.8	56	3.0
ELL w/o Accomm.	4,342	1,270	29.3	1,450	33.4	1,374	31.6	248	5.7
Non-English Language Learners (Non-ELL)									
Non-ELL	46,282	6,629	14.3	11,033	23.8	19,999	43.2	8,621	18.6
Military									

		N	Number	and Percen	t in Eacl	n Performai	nce Leve	els	
	Total	Unsatisfa	Unsatisfactory		Limited Knowledge		Proficient		ced
Mathematics - Grade 03	N	N	%	N	%	N	%	N	%
Military	234	21	9.0	44	18.8	116	49.6	53	22.7
Non-Military	52,284	8,552	16.4	13,134	25.1	21,726	41.6	8,872	17.0
Foster									
Foster	394	97	24.6	121	30.7	143	36.3	33	8.4
Non-Foster	52,124	8,476	16.3	13,057	25.1	21,699	41.6	8,892	17.1

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 3 Committee Results

		N	lumber	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limite Knowle		Profici	ient	Advan	ced
Mathematics - Grade 04	N	N	%	N	%	N	%	N	%
Total									
All	50,677	10,455	20.6	18,251	36.0	14,863	29.3	7,108	14.0
Form									
Form 1	16,913	3,573	21.1	5,856	34.6	5,273	31.2	2,211	13.1
Form 2	16,920	3,392	20.1	5,899	34.9	5,079	30.0	2,550	15.1
Form 3	16,844	3,490	20.7	6,496	38.6	4,511	26.8	2,347	13.9
Ethnicity									
Hispanic or Latino	9,251	2,683	29.0	3,657	39.5	2,193	23.7	718	7.8
Race									
American Indian/:Alaskan Native	6,646	1,318	19.8	2,639	39.7	1,939	29.2	750	11.3
Asian	988	90	9.1	207	21.0	342	34.6	349	35.3
Black/:African American	4,355	1,768	40.6	1,630	37.4	733	16.8	224	5.1
Pacific Islander	166	48	28.9	66	39.8	37	22.3	15	9.0
White/:Caucasian	24,235	3,598	14.9	8,134	33.6	8,098	33.4	4,405	18.2
Two or More Races	5,036	950	18.9	1,918	38.1	1,521	30.2	647	12.9
Gender									
Female	24,869	5,353	21.5	9,359	37.6	7,094	28.5	3,063	12.3
Male	25,770	5,086	19.7	8,878	34.5	7,764	30.1	4,042	15.7
Not Indicated	38	16	42.1	14	36.8	5	13.2	3	7.9
Other									
ELL 1st Yr: Proficient	1,798	311	17.3	766	42.6	545	30.3	176	9.8
ELL 2nd Yr: Proficient	584	40	6.9	215	36.8	215	36.8	114	19.5
Econ. Disadv.	31,870	8,179	25.7	12,731	40.0	8,240	25.9	2,720	8.5
Non-Econ. Disadv.	18,807	2,276	12.1	5,520	29.4	6,623	35.2	4,388	23.3
Migrant	30	7	23.3	14	46.7	7	23.3	2	6.7
Non-Migrant	50,647	10,448	20.6	18,237	36.0	14,856	29.3	7,106	14.0
Individualized Education Plan (IEP)									
IEP	8,789	3,725	42.4	3,199	36.4	1,450	16.5	415	4.7
IEP w/ Accomm.	5,293	2,632	49.7	1,954	36.9	608	11.5	99	1.9
IEP w/o Accomm.	3,496	1,093	31.3	1,245	35.6	842	24.1	316	9.0
Plan 504	964	202	21.0	388	40.3	266	27.6	108	11.2
Plan 504 w/ Accomm.	469	113	24.1	190	40.5	132	28.1	34	7.3
Plan 504 w/o Accomm.	495	89	18.0	198	40.0	134	27.1	74	15.0
English Language Learners (ELL)									
ELL	4,144	1,817	43.9	1,632	39.4	580	14.0	115	2.8
ELL w/ Accomm.	1,354	668	49.3	507	37.4	154	11.4	25	1.9
ELL w/o Accomm.	2,790	1,149	41.2	1,125	40.3	426	15.3	90	3.2
Non-English Language Learners (Non-ELL)									
Non-ELL	46,533	8,638	18.6	16,619	35.7	14,283	30.7	6,993	15.0

		N	lumber	and Percen	t in Eacl	n Performar	nce Leve	els	
	Total	Unsatisfa	Unsatisfactory		ed edge	Proficient		Advanced	
Mathematics - Grade 04	N	N	%	N	%	N	%	N	%
Military									
Military	254	16	6.3	86	33.9	80	31.5	72	28.4
Non-Military	50,423	10,439	20.7	18,165	36.0	14,783	29.3	7,036	14.0
Foster									
Foster	360	117	32.5	135	37.5	79	21.9	29	8.1
Non-Foster	50,317	10,338	20.6	18,116	36.0	14,784	29.4	7,079	14.1

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 3 Committee Results

		N	lumber a	and Percen	t in Each	n Performai	nce Leve	els	
	Total	Unsatisfa	actory	Limite Knowle		Profici	ient	Advan	ced
Mathematics - Grade 05	N	N	%	N	%	N	%	N	%
Total									
All	48,460	8,146	16.8	19,953	41.2	14,459	29.8	5,902	12.2
Form									
Form 1	16,146	3,141	19.5	6,682	41.4	4,573	28.3	1,750	10.8
Form 2	16,160	2,535	15.7	6,852	42.4	4,555	28.2	2,218	13.7
Form 3	16,154	2,470	15.3	6,419	39.7	5,331	33.0	1,934	12.0
Ethnicity									
Hispanic or Latino	8,760	1,921	21.9	4,016	45.8	2,186	25.0	637	7.3
Race									
American Indian/:Alaskan Native	6,644	1,114	16.8	2,993	45.1	1,919	28.9	618	9.3
Asian	951	70	7.4	245	25.8	318	33.4	318	33.4
Black/:African American	4,250	1,403	33.0	1,836	43.2	829	19.5	182	4.3
Pacific Islander	164	37	22.6	68	41.5	44	26.8	15	9.2
White/:Caucasian	23,245	2,897	12.5	8,920	38.4	7,810	33.6	3,618	15.6
Two or More Races	4,446	704	15.8	1,875	42.2	1,353	30.4	514	11.6
Gender									
Female	23,927	3,905	16.3	10,193	42.6	7,177	30.0	2,652	11.1
Male	24,490	4,229	17.3	9,738	39.8	7,273	29.7	3,250	13.3
Not Indicated	43	12	27.9	22	51.2	9	20.9	0	0.0
Other									
ELL 1st Yr: Proficient	1,420	210	14.8	731	51.5	396	27.9	83	5.9
ELL 2nd Yr: Proficient	1,711	261	15.3	809	47.3	490	28.6	151	8.8
Econ. Disadv.	30,007	6,327	21.1	13,725	45.7	7,771	25.9	2,184	7.3
Non-Econ. Disadv.	18,453	1,819	9.9	6,228	33.8	6,688	36.2	3,718	20.2
Migrant	31	4	12.9	14	45.2	11	35.5	2	6.5
Non-Migrant	48,429	8,142	16.8	19,939	41.2	14,448	29.8	5,900	12.2
Individualized Education Plan (IEP)									
IEP	8,228	3,285	39.9	3,567	43.4	1,111	13.5	265	3.2
IEP w/ Accomm.	5,220	2,345	44.9	2,258	43.3	542	10.4	75	1.4
IEP w/o Accomm.	3,008	940	31.3	1,309	43.5	569	18.9	190	6.3
Plan 504	1,048	178	17.0	462	44.1	313	29.9	95	9.1
Plan 504 w/ Accomm.	514	107	20.8	243	47.3	133	25.9	31	6.0
Plan 504 w/o Accomm.	534	71	13.3	219	41.0	180	33.7	64	12.0
English Language Learners (ELL)									
ELL	2,600	1,064	40.9	1,165	44.8	313	12.0	58	2.2
ELL w/ Accomm.	863	387	44.8	367	42.5	97	11.2	12	1.4
ELL w/o Accomm.	1,737	677	39.0	798	45.9	216	12.4	46	2.7
Non-English Language Learners (Non-ELL)									
Non-ELL	45,860	7,082	15.4	18,788	41.0	14,146	30.9	5,844	12.7

		1	Number	and Percen	t in Each	n Performai	nce Leve	els	
	Total		Unsatisfactory		Limited Knowledge		Proficient		ced
Mathematics - Grade 05	N	N	%	N	%	N	%	N	%
Military									
Military	246	17	6.9	87	35.4	98	39.8	44	17.9
Non-Military	48,214	8,129	16.9	19,866	41.2	14,361	29.8	5,858	12.2
Foster									
Foster	299	83	27.8	147	49.2	57	19.1	12	4.0
Non-Foster	48,161	8,063	16.7	19,806	41.1	14,402	29.9	5,890	12.2

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 3 Committee Results

		N	lumber a	and Percen	t in Each	n Performai	nce Leve	els	
	Total	Unsatisfa	actory	Limite Knowle		Profici	ent	Advan	ced
Mathematics - Grade 06	N	N	%	N	%	N	%	N	%
Total									
All	45,876	8,634	18.8	20,852	45.5	13,556	29.6	2,834	6.2
Form									
Form 1	18,114	4,313	23.8	8,513	47.0	4,392	24.3	896	5.0
Form 2	13,898	2,297	16.5	6,038	43.5	4,589	33.0	974	7.0
Form 3	13,864	2,024	14.6	6,301	45.5	4,575	33.0	964	7.0
Ethnicity									
Hispanic or Latino	7,529	1,883	25.0	3,689	49.0	1,721	22.9	236	3.1
Race									
American Indian/:Alaskan Native	6,604	1,284	19.4	3,205	48.5	1,856	28.1	259	3.9
Asian	884	83	9.4	249	28.2	359	40.6	193	21.8
Black/:African American	3,774	1,420	37.6	1,763	46.7	532	14.1	59	1.6
Pacific Islander	143	60	42.0	56	39.2	19	13.3	8	5.6
White/:Caucasian	23,074	3,234	14.0	10,111	43.8	7,879	34.2	1,850	8.0
Two or More Races	3,868	670	17.3	1,779	46.0	1,190	30.8	229	5.9
Gender									
Female	22,439	4,339	19.3	10,684	47.6	6,189	27.6	1,227	5.5
Male	23,363	4,274	18.3	10,138	43.4	7,347	31.5	1,604	6.9
Not Indicated	74	21	28.4	30	40.5	20	27.0	3	4.1
Other									
ELL 1st Yr: Proficient	634	148	23.3	348	54.9	129	20.4	9	1.4
ELL 2nd Yr: Proficient	903	183	20.3	514	56.9	189	20.9	17	1.9
Econ. Disadv.	27,891	6,812	24.4	13,618	48.8	6,550	23.5	911	3.3
Non-Econ. Disadv.	17,985	1,822	10.1	7,234	40.2	7,006	39.0	1,923	10.7
Migrant	30	8	26.7	15	50.0	7	23.3	0	0.0
Non-Migrant	45,846	8,626	18.8	20,837	45.5	13,549	29.6	2,834	6.2
Individualized Education Plan (IEP)									
IEP	6,891	3,536	51.3	2,594	37.6	662	9.6	99	1.4
IEP w/ Accomm.	3,600	2,042	56.7	1,305	36.3	227	6.3	26	0.7
IEP w/o Accomm.	3,291	1,494	45.4	1,289	39.2	435	13.2	73	2.2
Plan 504	1,072	195	18.2	523	48.8	299	27.9	55	5.1
Plan 504 w/ Accomm.	319	68	21.3	165	51.7	76	23.8	10	3.1
Plan 504 w/o Accomm.	753	127	16.9	358	47.5	223	29.6	45	6.0
English Language Learners (ELL)									
ELL	1,667	894	53.6	664	39.8	94	5.6	15	0.9
ELL w/ Accomm.	297	169	56.9	117	39.4	9	3.0	2	0.7
ELL w/o Accomm.	1,370	725	52.9	547	39.9	85	6.2	13	1.0
Non-English Language Learners (Non-ELL)									
Non-ELL	44,209	7,740	17.5	20,188	45.7	13,462	30.5	2,819	6.4

		1	Number	and Percen	t in Each	n Performai	nce Leve	els	
	Total Unsatisfactory		Limit Knowle		Proficient		Advanced		
Mathematics - Grade 06	N	N	%	N	%	N	%	N	%
Military									
Military	258	33	12.8	98	38.0	98	38.0	29	11.2
Non-Military	45,618	8,601	18.9	20,754	45.5	13,458	29.5	2,805	6.2
Foster									
Foster	266	75	28.2	137	51.5	47	17.7	7	2.6
Non-Foster	45,610	8,559	18.8	20,715	45.4	13,509	29.6	2,827	6.2

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 3 Committee Results

	Number and Percent in Each Performance Levels								
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced
Mathematics - Grade 07	N	N	%	N	%	N	%	N	%
Total									
All	47,554	22,240	46.8	9,087	19.1	12,853	27.0	3,374	7.1
Form									
Form 1	19,110	10,005	52.4	3,274	17.1	4,759	24.9	1,072	5.6
Form 2	14,221	5,910	41.6	3,132	22.0	4,006	28.2	1,173	8.3
Form 3	14,223	6,325	44.5	2,681	18.9	4,088	28.7	1,129	7.9
Ethnicity									
Hispanic or Latino	8,024	4,605	57.4	1,501	18.7	1,630	20.3	288	3.6
Race									
American Indian/:Alaskan Native	6,910	3,430	49.6	1,369	19.8	1,751	25.3	360	5.2
Asian	1,021	225	22.0	167	16.4	386	37.8	243	23.8
Black/:African American	4,170	2,904	69.6	641	15.4	547	13.1	78	1.9
Pacific Islander	151	94	62.3	33	21.9	20	13.3	4	2.7
White/:Caucasian	23,411	9,203	39.3	4,630	19.8	7,448	31.8	2,130	9.1
Two or More Races	3,867	1,779	46.0	746	19.3	1,071	27.7	271	7.0
Gender									
Female	23,187	10,794	46.6	4,600	19.8	6,332	27.3	1,461	6.3
Male	24,312	11,418	47.0	4,473	18.4	6,510	26.8	1,911	7.9
Not Indicated	55	28	50.9	14	25.5	11	20.0	2	3.6
Other									
ELL 1st Yr: Proficient	199	89	44.7	56	28.1	43	21.6	11	5.5
ELL 2nd Yr: Proficient	432	244	56.5	94	21.8	81	18.8	13	3.0
Econ. Disadv.	29,240	16,707	57.1	5,521	18.9	6,027	20.6	985	3.4
Non-Econ. Disadv.	18,314	5,533	30.2	3,566	19.5	6,826	37.3	2,389	13.0
Migrant	30	18	60.0	5	16.7	5	16.7	2	6.7
Non-Migrant	47,524	22,222	46.8	9,082	19.1	12,848	27.0	3,372	7.1
Individualized Education Plan (IEP)									
IEP	7,705	6,211	80.6	791	10.3	598	7.8	105	1.4
IEP w/ Accomm.	3,877	3,281	84.6	364	9.4	203	5.2	29	0.8
IEP w/o Accomm.	3,828	2,930	76.5	427	11.2	395	10.3	76	2.0
Plan 504	995	486	48.8	200	20.1	239	24.0	70	7.0
Plan 504 w/ Accomm.	229	129	56.3	49	21.4	42	18.3	9	3.9
Plan 504 w/o Accomm.	766	357	46.6	151	19.7	197	25.7	61	8.0
English Language Learners (ELL)									
ELL	2,185	1,768	80.9	257	11.8	141	6.5	19	0.9
ELL w/ Accomm.	294	243	82.7	33	11.2	16	5.4	2	0.7
ELL w/o Accomm.	1,891	1,525	80.7	224	11.9	125	6.6	17	0.9
Non-English Language Learners (Non-ELL)									
Non-ELL	45,369	20,472	45.1	8,830	19.5	12,712	28.0	3,355	7.4

		1	Number	and Percen	t in Eacl	n Performai	nce Leve	els	
	Total				Limited Knowledge		Proficient		ced
Mathematics - Grade 07	N	N	%	N	%	N	%	N	%
Military									
Military	228	90	39.5	40	17.5	80	35.1	18	7.9
Non-Military	47,326	22,150	46.8	9,047	19.1	12,773	27.0	3,356	7.1
Foster									
Foster	245	160	65.3	34	13.9	38	15.5	13	5.3
Non-Foster	47,309	22,080	46.7	9,053	19.1	12,815	27.1	3,361	7.1

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 3 Committee Results

		١	Number a	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced
Mathematics - Grade 08	N	N	%	N	%	N	%	N	%
Total									
All	47,141	23,065	48.9	13,106	27.8	5,356	11.4	5,614	11.9
Form									
Form 1	18,715	10,242	54.7	4,656	24.9	1,784	9.5	2,033	10.9
Form 2	14,218	6,601	46.4	4,081	28.7	1,702	12.0	1,834	12.9
Form 3	14,208	6,222	43.8	4,369	30.8	1,870	13.2	1,747	12.3
Ethnicity									
Hispanic or Latino	7,722	4,615	59.8	1,956	25.3	634	8.2	517	6.7
Race									
American Indian/:Alaskan Native	6,814	3,664	53.8	1,887	27.7	681	10.0	582	8.5
Asian	960	215	22.4	230	24.0	169	17.6	346	36.0
Black/:African American	4,098	2,739	66.8	936	22.8	242	5.9	181	4.4
Pacific Islander	164	101	61.6	41	25.0	14	8.5	8	4.9
White/:Caucasian	23,721	9,970	42.0	7,018	29.6	3,171	13.4	3,562	15.0
Two or More Races	3,662	1,761	48.1	1,038	28.4	445	12.2	418	11.4
Gender									
Female	23,200	10,754	46.4	6,938	29.9	2,747	11.8	2,761	11.9
Male	23,870	12,260	51.4	6,156	25.8	2,605	10.9	2,849	11.9
Not Indicated	71	51	71.8	12	16.9	4	5.6	4	5.6
Other									
ELL 1st Yr: Proficient	183	84	45.9	69	37.7	20	10.9	10	5.5
ELL 2nd Yr: Proficient	241	106	44.0	74	30.7	33	13.7	28	11.6
Econ. Disadv.	28,521	16,868	59.1	7,365	25.8	2,460	8.6	1,828	6.4
Non-Econ. Disadv.	18,620	6,197	33.3	5,741	30.8	2,896	15.6	3,786	20.3
Migrant	35	19	54.3	10	28.6	4	11.4	2	5.7
Non-Migrant	47,106	23,046	48.9	13,096	27.8	5,352	11.4	5,612	11.9
Individualized Education Plan (IEP)									
IEP	7,240	6,143	84.9	795	11.0	183	2.5	119	1.6
IEP w/ Accomm.	3,905	3,439	88.1	351	9.0	72	1.8	43	1.1
IEP w/o Accomm.	3,335	2,704	81.1	444	13.3	111	3.3	76	2.3
Plan 504	964	479	49.7	269	27.9	120	12.5	96	10.0
Plan 504 w/ Accomm.	197	110	55.8	51	25.9	22	11.2	14	7.1
Plan 504 w/o Accomm.	767	369	48.1	218	28.4	98	12.8	82	10.7
English Language Learners (ELL)									
ELL	2,105	1,741	82.7	290	13.8	45	2.1	29	1.4
ELL w/ Accomm.	375	321	85.6	44	11.7	8	2.1	2	0.5
ELL w/o Accomm.	1,730	1,420	82.1	246	14.2	37	2.1	27	1.6
Non-English Language Learners (Non-ELL)									
Non-ELL	45,036	21,324	47.4	12,816	28.5	5,311	11.8	5,585	12.4

		1	Number	and Percen	t in Each	n Performai	nce Leve	els	
	Total	,			Limited Knowledge P		Proficient		ced
Mathematics - Grade 08	N	N	%	N	%	N	%	N	%
Military									
Military	227	84	37.0	80	35.2	27	11.9	36	15.9
Non-Military	46,914	22,981	49.0	13,026	27.8	5,329	11.4	5,578	11.9
Foster									
Foster	237	150	63.3	60	25.3	20	8.4	7	3.0
Non-Foster	46,904	22,915	48.9	13,046	27.8	5,336	11.4	5,607	12.0

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 3 Committee Results

	Number and Percent in Each Performance Levels									
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced	
Mathematics - Grade 10	N	N	%	N	%	N	%	N	%	
Total										
All	45,352	24,439	53.9	9,658	21.3	6,985	15.4	4,270	9.4	
Form										
Form 1	16,973	9,421	55.5	3,619	21.3	2,421	14.3	1,512	8.9	
Form 2	14,163	7,832	55.3	2,779	19.6	2,200	15.5	1,352	9.6	
Form 3	14,216	7,186	50.6	3,260	22.9	2,364	16.6	1,406	9.9	
Ethnicity										
Hispanic or Latino	6,933	4,418	63.7	1,391	20.1	776	11.2	348	5.0	
Race										
American Indian/:Alaskan Native	6,690	3,902	58.3	1,479	22.1	920	13.8	389	5.8	
Asian	1,096	333	30.4	182	16.6	244	22.3	337	30.8	
Black/:African American	3,934	2,883	73.3	638	16.2	295	7.5	118	3.0	
Pacific Islander	155	92	59.4	33	21.3	20	12.9	10	6.5	
White/:Caucasian	23,341	11,059	47.4	5,290	22.7	4,235	18.1	2,757	11.8	
Two or More Races	3,203	1,752	54.7	645	20.1	495	15.5	311	9.7	
Gender										
Female	22,336	11,576	51.8	5,157	23.1	3,583	16.0	2,020	9.0	
Male	22,991	12,846	55.9	4,496	19.6	3,399	14.8	2,250	9.8	
Not Indicated	25	17	68.0	5	20.0	3	12.0	0	0.0	
Other										
ELL 1st Yr: Proficient	584	411	70.4	110	18.8	48	8.2	15	2.6	
ELL 2nd Yr: Proficient	218	136	62.4	45	20.6	23	10.6	14	6.4	
Econ. Disadv.	24,793	16,075	64.8	4,815	19.4	2,722	11.0	1,181	4.8	
Non-Econ. Disadv.	20,559	8,364	40.7	4,843	23.6	4,263	20.7	3,089	15.0	
Migrant	32	17	53.1	4	12.5	7	21.9	4	12.5	
Non-Migrant	45,320	24,422	53.9	9,654	21.3	6,978	15.4	4,266	9.4	
Individualized Education Plan (IEP)										
IEP	6,532	5,834	89.3	494	7.6	147	2.3	57	0.9	
IEP w/ Accomm.	2,173	1,979	91.1	144	6.6	38	1.8	12	0.6	
IEP w/o Accomm.	4,359	3,855	88.4	350	8.0	109	2.5	45	1.0	
Plan 504	882	503	57.0	192	21.8	116	13.2	71	8.1	
Plan 504 w/ Accomm.	77	46	59.7	17	22.1	9	11.7	5	6.5	
Plan 504 w/o Accomm.	805	457	56.8	175	21.7	107	13.3	66	8.2	
English Language Learners (ELL)										
ELL	1,625	1,438	88.5	115	7.1	48	3.0	24	1.5	
ELL w/ Accomm.	278	255	91.7	14	5.0	4	1.4	5	1.8	
ELL w/o Accomm.	1,347	1,183	87.8	101	7.5	44	3.3	19	1.4	
Non-English Language Learners (Non-ELL)										
Non-ELL	43,727	23,001	52.6	9,543	21.8	6,937	15.9	4,246	9.7	

		ı	Number	and Percer	nt in Each	n Performa	nce Leve	els	
	Total	Unsatisf	Unsatisfactory		Limited Knowledge		Proficient		ced
Mathematics - Grade 10	N	N	%	N	%	N	%	N	%
Military									
Military	130	62	47.7	24	18.5	27	20.8	17	13.1
Non-Military	45,222	24,377	53.9	9,634	21.3	6,958	15.4	4,253	9.4
Foster									
Foster	196	134	68.4	41	20.9	16	8.2	5	2.6
Non-Foster	45,156	24,305	53.8	9,617	21.3	6,969	15.4	4,265	9.5

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 4 Committee Results

	Number and Percent in Each Performance Levels									
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced	
Mathematics - Grade 03	N	N	%	N	%	N	%	N	%	
Total										
All	52,518	10,364	19.7	16,665	31.7	16,564	31.5	8,925	17.0	
Form										
Form 1	17,526	3,739	21.3	5,115	29.2	5,657	32.3	3,015	17.2	
Form 2	17,553	3,309	18.9	5,768	32.9	5,407	30.8	3,069	17.5	
Form 3	17,439	3,316	19.0	5,782	33.2	5,500	31.5	2,841	16.3	
Ethnicity										
Hispanic or Latino	9,684	2,885	29.8	3,451	35.6	2,507	25.9	841	8.7	
Race										
American Indian/:Alaskan Native	6,764	1,243	18.4	2,332	34.5	2,215	32.8	974	14.4	
Asian	972	96	9.9	225	23.2	337	34.7	314	32.3	
Black/:African American	4,567	1,844	40.4	1,539	33.7	900	19.7	284	6.2	
Pacific Islander	178	57	32.0	73	41.0	37	20.8	11	6.2	
White/:Caucasian	24,881	3,193	12.8	7,263	29.2	8,812	35.4	5,613	22.6	
Two or More Races	5,472	1,046	19.1	1,782	32.6	1,756	32.1	888	16.2	
Gender										
Female	25,718	5,346	20.8	8,336	32.4	7,986	31.1	4,050	15.8	
Male	26,758	5,003	18.7	8,314	31.1	8,568	32.0	4,873	18.2	
Not Indicated	42	15	35.7	15	35.7	10	23.8	2	4.8	
Other										
ELL 1st Yr: Proficient	574	32	5.6	160	27.9	261	45.5	121	21.1	
ELL 2nd Yr: Proficient	268	12	4.5	62	23.1	112	41.8	82	30.6	
Econ. Disadv.	33,722	8,290	24.6	11,923	35.4	9,714	28.8	3,795	11.3	
Non-Econ. Disadv.	18,796	2,074	11.0	4,742	25.2	6,850	36.4	5,130	27.3	
Migrant	33	7	21.2	10	30.3	11	33.3	5	15.2	
Non-Migrant	52,485	10,357	19.7	16,655	31.7	16,553	31.5	8,920	17.0	
Individualized Education Plan (IEP)										
IEP	9,382	3,786	40.4	3,042	32.4	1,843	19.6	711	7.6	
IEP w/ Accomm.	5,073	2,546	50.2	1,691	33.3	674	13.3	162	3.2	
IEP w/o Accomm.	4,309	1,240	28.8	1,351	31.4	1,169	27.1	549	12.7	
Plan 504	974	173	17.8	395	40.6	287	29.5	119	12.2	
Plan 504 w/ Accomm.	485	109	22.5	216	44.5	114	23.5	46	9.5	
Plan 504 w/o Accomm.	489	64	13.1	179	36.6	173	35.4	73	14.9	
English Language Learners (ELL)										
ELL	6,236	2,324	37.3	2,348	37.7	1,260	20.2	304	4.9	
ELL w/ Accomm.	1,894	810	42.8	717	37.9	311	16.4	56	3.0	
ELL w/o Accomm.	4,342	1,514	34.9	1,631	37.6	949	21.9	248	5.7	
Non-English Language Learners (Non-ELL)										
Non-ELL	46,282	8,040	17.4	14,317	30.9	15,304	33.1	8,621	18.6	
Military										

		N	lumber	and Percen	t in Each	n Performa	nce Leve	els		
	Total	Unsatisfa	ctory	Limit Knowle		Proficient		Advanced		
Mathematics - Grade 03	N	N % N % N								
Military	234	25	10.7	62	26.5	94	40.2	53	22.7	
Non-Military	52,284	10,339	19.8	16,603	31.8	16,470	31.5	8,872	17.0	
Foster										
Foster	394	115	29.2	141	35.8	105	26.7	33	8.4	
Non-Foster	52,124	10,249	19.7	16,524	31.7	16,459	31.6	8,892	17.1	

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 4 Committee Results

		N	lumber a	and Percen	t in Eacl	n Performai	nce Leve	els	
	Total	Unsatisfa	actory	Limite Knowle		Profici	ient	Advan	ced
Mathematics - Grade 04	N	N	%	N	%	N	%	N	%
Total									
All	50,677	10,455	20.6	18,251	36.0	14,863	29.3	7,108	14.0
Form									
Form 1	16,913	3,573	21.1	5,856	34.6	5,273	31.2	2,211	13.1
Form 2	16,920	3,392	20.1	5,899	34.9	5,079	30.0	2,550	15.1
Form 3	16,844	3,490	20.7	6,496	38.6	4,511	26.8	2,347	13.9
Ethnicity									
Hispanic or Latino	9,251	2,683	29.0	3,657	39.5	2,193	23.7	718	7.8
Race									
American Indian/:Alaskan Native	6,646	1,318	19.8	2,639	39.7	1,939	29.2	750	11.3
Asian	988	90	9.1	207	21.0	342	34.6	349	35.3
Black/:African American	4,355	1,768	40.6	1,630	37.4	733	16.8	224	5.1
Pacific Islander	166	48	28.9	66	39.8	37	22.3	15	9.0
White/:Caucasian	24,235	3,598	14.9	8,134	33.6	8,098	33.4	4,405	18.2
Two or More Races	5,036	950	18.9	1,918	38.1	1,521	30.2	647	12.9
Gender									
Female	24,869	5,353	21.5	9,359	37.6	7,094	28.5	3,063	12.3
Male	25,770	5,086	19.7	8,878	34.5	7,764	30.1	4,042	15.7
Not Indicated	38	16	42.1	14	36.8	5	13.2	3	7.9
Other									
ELL 1st Yr: Proficient	1,798	311	17.3	766	42.6	545	30.3	176	9.8
ELL 2nd Yr: Proficient	584	40	6.9	215	36.8	215	36.8	114	19.5
Econ. Disadv.	31,870	8,179	25.7	12,731	40.0	8,240	25.9	2,720	8.5
Non-Econ. Disadv.	18,807	2,276	12.1	5,520	29.4	6,623	35.2	4,388	23.3
Migrant	30	7	23.3	14	46.7	7	23.3	2	6.7
Non-Migrant	50,647	10,448	20.6	18,237	36.0	14,856	29.3	7,106	14.0
Individualized Education Plan (IEP)									
IEP	8,789	3,725	42.4	3,199	36.4	1,450	16.5	415	4.7
IEP w/ Accomm.	5,293	2,632	49.7	1,954	36.9	608	11.5	99	1.9
IEP w/o Accomm.	3,496	1,093	31.3	1,245	35.6	842	24.1	316	9.0
Plan 504	964	202	21.0	388	40.3	266	27.6	108	11.2
Plan 504 w/ Accomm.	469	113	24.1	190	40.5	132	28.1	34	7.3
Plan 504 w/o Accomm.	495	89	18.0	198	40.0	134	27.1	74	15.0
English Language Learners (ELL)									
ELL	4,144	1,817	43.9	1,632	39.4	580	14.0	115	2.8
ELL w/ Accomm.	1,354	668	49.3	507	37.4	154	11.4	25	1.9
ELL w/o Accomm.	2,790	1,149	41.2	1,125	40.3	426	15.3	90	3.2
Non-English Language Learners (Non-ELL)									
Non-ELL	46,533	8,638	18.6	16,619	35.7	14,283	30.7	6,993	15.0

		N	lumber	and Percen	t in Eacl	n Performar	nce Leve	els	
	Total	Unsatisfa	Unsatisfactory		ed edge	Proficient		Advanced	
Mathematics - Grade 04	N	N	%	N	%	N	%	N	%
Military									
Military	254	16	6.3	86	33.9	80	31.5	72	28.4
Non-Military	50,423	10,439	20.7	18,165	36.0	14,783	29.3	7,036	14.0
Foster									
Foster	360	117	32.5	135	37.5	79	21.9	29	8.1
Non-Foster	50,317	10,338	20.6	18,116	36.0	14,784	29.4	7,079	14.1

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 4 Committee Results

	Number and Percent in Each Performance Levels									
	Total	Unsatisfa	actory	Limite Knowle		Profic	ient	Advan	ced	
Mathematics - Grade 05	N	N	%	N	%	N	%	N	%	
Total										
All	48,460	8,146	16.8	19,953	41.2	14,459	29.8	5,902	12.2	
Form										
Form 1	16,146	3,141	19.5	6,682	41.4	4,573	28.3	1,750	10.8	
Form 2	16,160	2,535	15.7	6,852	42.4	4,555	28.2	2,218	13.7	
Form 3	16,154	2,470	15.3	6,419	39.7	5,331	33.0	1,934	12.0	
Ethnicity										
Hispanic or Latino	8,760	1,921	21.9	4,016	45.8	2,186	25.0	637	7.3	
Race										
American Indian/:Alaskan Native	6,644	1,114	16.8	2,993	45.1	1,919	28.9	618	9.3	
Asian	951	70	7.4	245	25.8	318	33.4	318	33.4	
Black/:African American	4,250	1,403	33.0	1,836	43.2	829	19.5	182	4.3	
Pacific Islander	164	37	22.6	68	41.5	44	26.8	15	9.2	
White/:Caucasian	23,245	2,897	12.5	8,920	38.4	7,810	33.6	3,618	15.6	
Two or More Races	4,446	704	15.8	1,875	42.2	1,353	30.4	514	11.6	
Gender										
Female	23,927	3,905	16.3	10,193	42.6	7,177	30.0	2,652	11.1	
Male	24,490	4,229	17.3	9,738	39.8	7,273	29.7	3,250	13.3	
Not Indicated	43	12	27.9	22	51.2	9	20.9	0	0.0	
Other										
ELL 1st Yr: Proficient	1,420	210	14.8	731	51.5	396	27.9	83	5.9	
ELL 2nd Yr: Proficient	1,711	261	15.3	809	47.3	490	28.6	151	8.8	
Econ. Disadv.	30,007	6,327	21.1	13,725	45.7	7,771	25.9	2,184	7.3	
Non-Econ. Disadv.	18,453	1,819	9.9	6,228	33.8	6,688	36.2	3,718	20.2	
Migrant	31	4	12.9	14	45.2	11	35.5	2	6.5	
Non-Migrant	48,429	8,142	16.8	19,939	41.2	14,448	29.8	5,900	12.2	
Individualized Education Plan (IEP)										
IEP	8,228	3,285	39.9	3,567	43.4	1,111	13.5	265	3.2	
IEP w/ Accomm.	5,220	2,345	44.9	2,258	43.3	542	10.4	75	1.4	
IEP w/o Accomm.	3,008	940	31.3	1,309	43.5	569	18.9	190	6.3	
Plan 504	1,048	178	17.0	462	44.1	313	29.9	95	9.1	
Plan 504 w/ Accomm.	514	107	20.8	243	47.3	133	25.9	31	6.0	
Plan 504 w/o Accomm.	534	71	13.3	219	41.0	180	33.7	64	12.0	
English Language Learners (ELL)										
ELL	2,600	1,064	40.9	1,165	44.8	313	12.0	58	2.2	
ELL w/ Accomm.	863	387	44.8	367	42.5	97	11.2	12	1.4	
ELL w/o Accomm.	1,737	677	39.0	798	45.9	216	12.4	46	2.7	
Non-English Language Learners (Non-ELL)										
Non-ELL	45,860	7,082	15.4	18,788	41.0	14,146	30.9	5,844	12.7	

		1	Number	and Percen	t in Each	n Performai	nce Leve	els	
	Total	Unsatisfa	Unsatisfactory		Limited Knowledge		Proficient		ced
Mathematics - Grade 05	N	N	%	N	%	N	%	N	%
Military									
Military	246	17	6.9	87	35.4	98	39.8	44	17.9
Non-Military	48,214	8,129	16.9	19,866	41.2	14,361	29.8	5,858	12.2
Foster									
Foster	299	83	27.8	147	49.2	57	19.1	12	4.0
Non-Foster	48,161	8,063	16.7	19,806	41.1	14,402	29.9	5,890	12.2

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 4 Committee Results

	Number and Percent in Each Performance Levels									
	Total	Unsatisfa	actory	Limite Knowle		Profici	ient	Advan	ced	
Mathematics - Grade 06	N	N	%	N	%	N	%	N	%	
Total										
All	45,876	8,634	18.8	20,852	45.5	13,556	29.6	2,834	6.2	
Form										
Form 1	18,114	4,313	23.8	8,513	47.0	4,392	24.3	896	5.0	
Form 2	13,898	2,297	16.5	6,038	43.5	4,589	33.0	974	7.0	
Form 3	13,864	2,024	14.6	6,301	45.5	4,575	33.0	964	7.0	
Ethnicity										
Hispanic or Latino	7,529	1,883	25.0	3,689	49.0	1,721	22.9	236	3.1	
Race										
American Indian/:Alaskan Native	6,604	1,284	19.4	3,205	48.5	1,856	28.1	259	3.9	
Asian	884	83	9.4	249	28.2	359	40.6	193	21.8	
Black/:African American	3,774	1,420	37.6	1,763	46.7	532	14.1	59	1.6	
Pacific Islander	143	60	42.0	56	39.2	19	13.3	8	5.6	
White/:Caucasian	23,074	3,234	14.0	10,111	43.8	7,879	34.2	1,850	8.0	
Two or More Races	3,868	670	17.3	1,779	46.0	1,190	30.8	229	5.9	
Gender										
Female	22,439	4,339	19.3	10,684	47.6	6,189	27.6	1,227	5.5	
Male	23,363	4,274	18.3	10,138	43.4	7,347	31.5	1,604	6.9	
Not Indicated	74	21	28.4	30	40.5	20	27.0	3	4.1	
Other										
ELL 1st Yr: Proficient	634	148	23.3	348	54.9	129	20.4	9	1.4	
ELL 2nd Yr: Proficient	903	183	20.3	514	56.9	189	20.9	17	1.9	
Econ. Disadv.	27,891	6,812	24.4	13,618	48.8	6,550	23.5	911	3.3	
Non-Econ. Disadv.	17,985	1,822	10.1	7,234	40.2	7,006	39.0	1,923	10.7	
Migrant	30	8	26.7	15	50.0	7	23.3	0	0.0	
Non-Migrant	45,846	8,626	18.8	20,837	45.5	13,549	29.6	2,834	6.2	
Individualized Education Plan (IEP)										
IEP	6,891	3,536	51.3	2,594	37.6	662	9.6	99	1.4	
IEP w/ Accomm.	3,600	2,042	56.7	1,305	36.3	227	6.3	26	0.7	
IEP w/o Accomm.	3,291	1,494	45.4	1,289	39.2	435	13.2	73	2.2	
Plan 504	1,072	195	18.2	523	48.8	299	27.9	55	5.1	
Plan 504 w/ Accomm.	319	68	21.3	165	51.7	76	23.8	10	3.1	
Plan 504 w/o Accomm.	753	127	16.9	358	47.5	223	29.6	45	6.0	
English Language Learners (ELL)										
ELL	1,667	894	53.6	664	39.8	94	5.6	15	0.9	
ELL w/ Accomm.	297	169	56.9	117	39.4	9	3.0	2	0.7	
ELL w/o Accomm.	1,370	725	52.9	547	39.9	85	6.2	13	1.0	
Non-English Language Learners (Non-ELL)										
Non-ELL	44,209	7,740	17.5	20,188	45.7	13,462	30.5	2,819	6.4	

		1	Number	and Percen	t in Each	n Performai	nce Leve	els	
	Total	Unsatisfa	actory	Limit Knowle		Profici	ent	Advan	ced
Mathematics - Grade 06	N	N	%	N	%	N	%	N	%
Military									
Military	258	33	12.8	98	38.0	98	38.0	29	11.2
Non-Military	45,618	8,601	18.9	20,754	45.5	13,458	29.5	2,805	6.2
Foster									
Foster	266	75	28.2	137	51.5	47	17.7	7	2.6
Non-Foster	45,610	8,559	18.8	20,715	45.4	13,509	29.6	2,827	6.2

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 4 Committee Results

		N	lumber a	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limite Knowle		Profici	ient	Advan	ced
Mathematics - Grade 07	N	N	%	N	%	N	%	N	%
Total									
All	47,554	22,240	46.8	9,087	19.1	12,853	27.0	3,374	7.1
Form									
Form 1	19,110	10,005	52.4	3,274	17.1	4,759	24.9	1,072	5.6
Form 2	14,221	5,910	41.6	3,132	22.0	4,006	28.2	1,173	8.3
Form 3	14,223	6,325	44.5	2,681	18.9	4,088	28.7	1,129	7.9
Ethnicity									
Hispanic or Latino	8,024	4,605	57.4	1,501	18.7	1,630	20.3	288	3.6
Race									
American Indian/:Alaskan Native	6,910	3,430	49.6	1,369	19.8	1,751	25.3	360	5.2
Asian	1,021	225	22.0	167	16.4	386	37.8	243	23.8
Black/:African American	4,170	2,904	69.6	641	15.4	547	13.1	78	1.9
Pacific Islander	151	94	62.3	33	21.9	20	13.3	4	2.7
White/:Caucasian	23,411	9,203	39.3	4,630	19.8	7,448	31.8	2,130	9.1
Two or More Races	3,867	1,779	46.0	746	19.3	1,071	27.7	271	7.0
Gender									
Female	23,187	10,794	46.6	4,600	19.8	6,332	27.3	1,461	6.3
Male	24,312	11,418	47.0	4,473	18.4	6,510	26.8	1,911	7.9
Not Indicated	55	28	50.9	14	25.5	11	20.0	2	3.6
Other									
ELL 1st Yr: Proficient	199	89	44.7	56	28.1	43	21.6	11	5.5
ELL 2nd Yr: Proficient	432	244	56.5	94	21.8	81	18.8	13	3.0
Econ. Disadv.	29,240	16,707	57.1	5,521	18.9	6,027	20.6	985	3.4
Non-Econ. Disadv.	18,314	5,533	30.2	3,566	19.5	6,826	37.3	2,389	13.0
Migrant	30	18	60.0	5	16.7	5	16.7	2	6.7
Non-Migrant	47,524	22,222	46.8	9,082	19.1	12,848	27.0	3,372	7.1
Individualized Education Plan (IEP)									
IEP	7,705	6,211	80.6	791	10.3	598	7.8	105	1.4
IEP w/ Accomm.	3,877	3,281	84.6	364	9.4	203	5.2	29	0.8
IEP w/o Accomm.	3,828	2,930	76.5	427	11.2	395	10.3	76	2.0
Plan 504	995	486	48.8	200	20.1	239	24.0	70	7.0
Plan 504 w/ Accomm.	229	129	56.3	49	21.4	42	18.3	9	3.9
Plan 504 w/o Accomm.	766	357	46.6	151	19.7	197	25.7	61	8.0
English Language Learners (ELL)									
ELL	2,185	1,768	80.9	257	11.8	141	6.5	19	0.9
ELL w/ Accomm.	294	243	82.7	33	11.2	16	5.4	2	0.7
ELL w/o Accomm.	1,891	1,525	80.7	224	11.9	125	6.6	17	0.9
Non-English Language Learners (Non-ELL)									
Non-ELL	45,369	20,472	45.1	8,830	19.5	12,712	28.0	3,355	7.4

		1	Number	and Percen	t in Eacl	n Performai	nce Leve	els	
	Total	Unsatisfa	actory	Limit Knowle		Profici	ent	Advanced	
Mathematics - Grade 07	N	N	%	N	%	N	%	N	%
Military									
Military	228	90	39.5	40	17.5	80	35.1	18	7.9
Non-Military	47,326	22,150	46.8	9,047	19.1	12,773	27.0	3,356	7.1
Foster									
Foster	245	160	65.3	34	13.9	38	15.5	13	5.3
Non-Foster	47,309	22,080	46.7	9,053	19.1	12,815	27.1	3,361	7.1

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 4 Committee Results

	Number and Percent in Each Performance Levels										
	Total	Unsatisfa	actory	Limite Knowle		Profic	ient	Advan	ced		
Mathematics - Grade 08	N	N	%	N	%	N	%	N	%		
Total											
All	47,141	23,065	48.9	13,106	27.8	5,356	11.4	5,614	11.9		
Form											
Form 1	18,715	10,242	54.7	4,656	24.9	1,784	9.5	2,033	10.9		
Form 2	14,218	6,601	46.4	4,081	28.7	1,702	12.0	1,834	12.9		
Form 3	14,208	6,222	43.8	4,369	30.8	1,870	13.2	1,747	12.3		
Ethnicity											
Hispanic or Latino	7,722	4,615	59.8	1,956	25.3	634	8.2	517	6.7		
Race											
American Indian/:Alaskan Native	6,814	3,664	53.8	1,887	27.7	681	10.0	582	8.5		
Asian	960	215	22.4	230	24.0	169	17.6	346	36.0		
Black/:African American	4,098	2,739	66.8	936	22.8	242	5.9	181	4.4		
Pacific Islander	164	101	61.6	41	25.0	14	8.5	8	4.9		
White/:Caucasian	23,721	9,970	42.0	7,018	29.6	3,171	13.4	3,562	15.0		
Two or More Races	3,662	1,761	48.1	1,038	28.4	445	12.2	418	11.4		
Gender											
Female	23,200	10,754	46.4	6,938	29.9	2,747	11.8	2,761	11.9		
Male	23,870	12,260	51.4	6,156	25.8	2,605	10.9	2,849	11.9		
Not Indicated	71	51	71.8	12	16.9	4	5.6	4	5.6		
Other											
ELL 1st Yr: Proficient	183	84	45.9	69	37.7	20	10.9	10	5.5		
ELL 2nd Yr: Proficient	241	106	44.0	74	30.7	33	13.7	28	11.6		
Econ. Disadv.	28,521	16,868	59.1	7,365	25.8	2,460	8.6	1,828	6.4		
Non-Econ. Disadv.	18,620	6,197	33.3	5,741	30.8	2,896	15.6	3,786	20.3		
Migrant	35	19	54.3	10	28.6	4	11.4	2	5.7		
Non-Migrant	47,106	23,046	48.9	13,096	27.8	5,352	11.4	5,612	11.9		
Individualized Education Plan (IEP)											
IEP	7,240	6,143	84.9	795	11.0	183	2.5	119	1.6		
IEP w/ Accomm.	3,905	3,439	88.1	351	9.0	72	1.8	43	1.1		
IEP w/o Accomm.	3,335	2,704	81.1	444	13.3	111	3.3	76	2.3		
Plan 504	964	479	49.7	269	27.9	120	12.5	96	10.0		
Plan 504 w/ Accomm.	197	110	55.8	51	25.9	22	11.2	14	7.1		
Plan 504 w/o Accomm.	767	369	48.1	218	28.4	98	12.8	82	10.7		
English Language Learners (ELL)											
ELL	2,105	1,741	82.7	290	13.8	45	2.1	29	1.4		
ELL w/ Accomm.	375	321	85.6	44	11.7	8	2.1	2	0.5		
ELL w/o Accomm.	1,730	1,420	82.1	246	14.2	37	2.1	27	1.6		
Non-English Language Learners (Non-ELL)											
Non-ELL	45,036	21,324	47.4	12,816	28.5	5,311	11.8	5,585	12.4		

		1	Number	and Percen	t in Each	n Performai	nce Leve	els	
	Total	Unsatisfa	Unsatisfactory		ed edge	Proficient		Advanced	
Mathematics - Grade 08	N	N	%	N	%	N	%	N	%
Military									
Military	227	84	37.0	80	35.2	27	11.9	36	15.9
Non-Military	46,914	22,981	49.0	13,026	27.8	5,329	11.4	5,578	11.9
Foster									
Foster	237	150	63.3	60	25.3	20	8.4	7	3.0
Non-Foster	46,904	22,915	48.9	13,046	27.8	5,336	11.4	5,607	12.0

Oklahoma School Testing Program (OSTP) Mathematics - Standard Setting - Round 4 Committee Results

	Number and Percent in Each Performance Levels									
	Total	Unsatisfa	actory	Limite Knowle		Profic	ient	Advan	ced	
Mathematics - Grade 10	N	N	%	N	%	N	%	N	%	
Total										
All	45,352	24,439	53.9	9,658	21.3	6,985	15.4	4,270	9.4	
Form										
Form 1	16,973	9,421	55.5	3,619	21.3	2,421	14.3	1,512	8.9	
Form 2	14,163	7,832	55.3	2,779	19.6	2,200	15.5	1,352	9.6	
Form 3	14,216	7,186	50.6	3,260	22.9	2,364	16.6	1,406	9.9	
Ethnicity										
Hispanic or Latino	6,933	4,418	63.7	1,391	20.1	776	11.2	348	5.0	
Race										
American Indian/:Alaskan Native	6,690	3,902	58.3	1,479	22.1	920	13.8	389	5.8	
Asian	1,096	333	30.4	182	16.6	244	22.3	337	30.8	
Black/:African American	3,934	2,883	73.3	638	16.2	295	7.5	118	3.0	
Pacific Islander	155	92	59.4	33	21.3	20	12.9	10	6.5	
White/:Caucasian	23,341	11,059	47.4	5,290	22.7	4,235	18.1	2,757	11.8	
Two or More Races	3,203	1,752	54.7	645	20.1	495	15.5	311	9.7	
Gender										
Female	22,336	11,576	51.8	5,157	23.1	3,583	16.0	2,020	9.0	
Male	22,991	12,846	55.9	4,496	19.6	3,399	14.8	2,250	9.8	
Not Indicated	25	17	68.0	5	20.0	3	12.0	0	0.0	
Other										
ELL 1st Yr: Proficient	584	411	70.4	110	18.8	48	8.2	15	2.6	
ELL 2nd Yr: Proficient	218	136	62.4	45	20.6	23	10.6	14	6.4	
Econ. Disadv.	24,793	16,075	64.8	4,815	19.4	2,722	11.0	1,181	4.8	
Non-Econ. Disadv.	20,559	8,364	40.7	4,843	23.6	4,263	20.7	3,089	15.0	
Migrant	32	17	53.1	4	12.5	7	21.9	4	12.5	
Non-Migrant	45,320	24,422	53.9	9,654	21.3	6,978	15.4	4,266	9.4	
Individualized Education Plan (IEP)										
IEP	6,532	5,834	89.3	494	7.6	147	2.3	57	0.9	
IEP w/ Accomm.	2,173	1,979	91.1	144	6.6	38	1.8	12	0.6	
IEP w/o Accomm.	4,359	3,855	88.4	350	8.0	109	2.5	45	1.0	
Plan 504	882	503	57.0	192	21.8	116	13.2	71	8.1	
Plan 504 w/ Accomm.	77	46	59.7	17	22.1	9	11.7	5	6.5	
Plan 504 w/o Accomm.	805	457	56.8	175	21.7	107	13.3	66	8.2	
English Language Learners (ELL)										
ELL	1,625	1,438	88.5	115	7.1	48	3.0	24	1.5	
ELL w/ Accomm.	278	255	91.7	14	5.0	4	1.4	5	1.8	
ELL w/o Accomm.	1,347	1,183	87.8	101	7.5	44	3.3	19	1.4	
Non-English Language Learners (Non-ELL)										
Non-ELL	43,727	23,001	52.6	9,543	21.8	6,937	15.9	4,246	9.7	

		Number and Percent in Each Performance Levels										
	Total			Limit Knowle		Profic	Proficient		ced			
Mathematics - Grade 10	N	N	%	N	%	N	%	N	%			
Military												
Military	130	62	47.7	24	18.5	27	20.8	17	13.1			
Non-Military	45,222	24,377	53.9	9,634	21.3	6,958	15.4	4,253	9.4			
Foster												
Foster	196	134	68.4	41	20.9	16	8.2	5	2.6			
Non-Foster	45,156	24,305	53.8	9,617	21.3	6,969	15.4	4,265	9.5			

Oklahoma School Testing Program (OSTP) Science - Standard Setting - Round 1 Committee Results

	Number and Percent in Each Performance Levels									
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced	
Science - Grade 05	N	N	%	N	%	N	%	N	%	
Total										
All	48,450	10,429	21.5	13,023	26.9	17,568	36.3	7,430	15.3	
Form										
Form 1	48,450	10,429	21.5	13,023	26.9	17,568	36.3	7,430	15.3	
Ethnicity										
Hispanic or Latino	8,739	2,683	30.7	2,729	31.2	2,670	30.6	657	7.5	
Race										
American Indian/:Alaskan Native	6,656	1,462	22.0	1,906	28.6	2,432	36.5	856	12.9	
Asian	944	123	13.0	196	20.8	344	36.4	281	29.8	
Black/:African American	4,247	1,737	40.9	1,311	30.9	994	23.4	205	4.8	
Pacific Islander	165	64	38.8	44	26.7	50	30.3	7	4.2	
White/:Caucasian	23,264	3,502	15.1	5,643	24.3	9,388	40.4	4,731	20.3	
Two or More Races	4,435	858	19.4	1,194	26.9	1,690	38.1	693	15.6	
Gender										
Female	23,925	5,071	21.2	6,585	27.5	8,853	37.0	3,416	14.3	
Male	24,481	5,341	21.8	6,423	26.2	8,705	35.6	4,012	16.4	
Not Indicated	44	17	38.6	15	34.1	10	22.7	2	4.6	
Other										
ELL 1st Yr: Proficient	1,415	359	25.4	539	38.1	446	31.5	71	5.0	
ELL 2nd Yr: Proficient	1,700	387	22.8	599	35.2	586	34.5	128	7.5	
Econ. Disadv.	30,012	8,079	26.9	8,942	29.8	10,017	33.4	2,974	9.9	
Non-Econ. Disadv.	18,438	2,350	12.8	4,081	22.1	7,551	41.0	4,456	24.2	
Migrant	32	6	18.8	8	25.0	12	37.5	6	18.8	
Non-Migrant	48,418	10,423	21.5	13,015	26.9	17,556	36.3	7,424	15.3	
Individualized Education Plan (IEP)										
IEP	8,247	3,845	46.6	2,349	28.5	1,640	19.9	413	5.0	
IEP w/ Accomm.	5,216	2,785	53.4	1,473	28.2	818	15.7	140	2.7	
IEP w/o Accomm.	3,031	1,060	35.0	876	28.9	822	27.1	273	9.0	
Plan 504	1,048	236	22.5	294	28.1	355	33.9	163	15.6	
Plan 504 w/ Accomm.	513	145	28.3	156	30.4	156	30.4	56	10.9	
Plan 504 w/o Accomm.	535	91	17.0	138	25.8	199	37.2	107	20.0	
English Language Learners (ELL)										
ELL	2,599	1,438	55.3	764	29.4	349	13.4	48	1.9	
ELL w/ Accomm.	861	522	60.6	241	28.0	89	10.3	9	1.1	
ELL w/o Accomm.	1,738	916	52.7	523	30.1	260	15.0	39	2.2	
Non-English Language Learners (Non-ELL)										
Non-ELL	45,851	8,991	19.6	12,259	26.7	17,219	37.6	7,382	16.1	
Military										
Military	250	24	9.6	52	20.8	97	38.8	77	30.8	
Non-Military	48,200	10,405	21.6	12,971	26.9	17,471	36.3	7,353	15.3	

		Number and Percent in Each Performance Levels										
	Total	Unsatisfa	ctory	Limite Knowle		Profici	ent	Advan	ced			
Science - Grade 05	N	N	%	N	%	N	%	N	%			
Foster												
Foster	295	106	35.9	82	27.8	94	31.9	13	4.4			
Non-Foster	48,155	5 10,323 21.4 12,941 26.9 17,474 36.3 7,417 15.4										

Oklahoma School Testing Program (OSTP) Science - Standard Setting - Round 1 Committee Results

	Number and Percent in Each Performance Levels										
	Total	Unsatisfa	actory	Limite Knowle		Profic	ient	Advan	ced		
Science - Grade 08	N	N	%	N	%	N	%	N	%		
Total											
All	47,342	17,847	37.7	10,117	21.4	14,256	30.1	5,122	10.8		
Form											
Form 1	47,342	17,847	37.7	10,117	21.4	14,256	30.1	5,122	10.8		
Ethnicity											
Hispanic or Latino	7,731	3,774	48.8	1,751	22.7	1,797	23.2	409	5.3		
Race											
American Indian/:Alaskan Native	6,860	2,735	39.9	1,580	23.0	1,991	29.0	554	8.1		
Asian	963	193	20.0	179	18.6	344	35.7	247	25.7		
Black/:African American	4,156	2,494	60.0	848	20.4	674	16.2	140	3.4		
Pacific Islander	166	92	55.4	26	15.7	39	23.5	9	5.4		
White/:Caucasian	23,783	7,151	30.1	4,917	20.7	8,355	35.1	3,360	14.1		
Two or More Races	3,683	1,408	38.2	816	22.2	1,056	28.7	403	10.9		
Gender											
Female	23,293	8,517	36.6	5,334	22.9	7,187	30.9	2,255	9.7		
Male	23,979	9,275	38.7	4,774	19.9	7,066	29.5	2,864	11.9		
Not Indicated	70	55	78.6	9	12.9	3	4.3	3	4.3		
Other											
ELL 1st Yr: Proficient	182	62	34.1	53	29.1	57	31.3	10	5.5		
ELL 2nd Yr: Proficient	241	79	32.8	72	29.9	77	32.0	13	5.4		
Econ. Disadv.	28,653	13,476	47.0	6,362	22.2	7,066	24.7	1,749	6.1		
Non-Econ. Disadv.	18,689	4,371	23.4	3,755	20.1	7,190	38.5	3,373	18.1		
Migrant	35	15	42.9	8	22.9	9	25.7	3	8.6		
Non-Migrant	47,307	17,832	37.7	10,109	21.4	14,247	30.1	5,119	10.8		
Individualized Education Plan (IEP)											
IEP	7,285	5,404	74.2	1,020	14.0	713	9.8	148	2.0		
IEP w/ Accomm.	3,929	3,113	79.2	496	12.6	278	7.1	42	1.1		
IEP w/o Accomm.	3,356	2,291	68.3	524	15.6	435	13.0	106	3.2		
Plan 504	968	332	34.3	215	22.2	309	31.9	112	11.6		
Plan 504 w/ Accomm.	197	88	44.7	38	19.3	55	27.9	16	8.1		
Plan 504 w/o Accomm.	771	244	31.7	177	23.0	254	32.9	96	12.5		
English Language Learners (ELL)											
ELL	2,113	1,684	79.7	271	12.8	145	6.9	13	0.6		
ELL w/ Accomm.	372	328	88.2	31	8.3	13	3.5	0	0.0		
ELL w/o Accomm.	1,741	1,356	77.9	240	13.8	132	7.6	13	0.8		
Non-English Language Learners (Non-ELL)											
Non-ELL	45,229	16,163	35.7	9,846	21.8	14,111	31.2	5,109	11.3		
Military											
Military	226	58	25.7	53	23.5	73	32.3	42	18.6		

		Number and Percent in Each Performance Levels									
	Total	Unsatisfa	actory	Limited Knowledge		Proficient		Advanced			
Science - Grade 08	N	N	%	N	%	N	%	N	%		
Non-Military	47,116	17,789	37.8	10,064	21.4	14,183	30.1	5,080	10.8		
Foster											
Foster	241	135	56.0	50	20.8	50	20.8	6	2.5		
Non-Foster	47,101	17,712	37.6	10,067	21.4	14,206	30.2	5,116	10.9		

Oklahoma School Testing Program (OSTP) Science - Standard Setting - Round 1 Committee Results

		N	Number	and Percen	t in Eacl	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limite Knowle		Profic	ient	Advan	ced
Science - Grade 10	N	N	%	N	%	N	%	N	%
Total									
All	29,367	16,385	55.8	8,195	27.9	3,863	13.2	924	3.2
Form									
Form 1	29,367	16,385	55.8	8,195	27.9	3,863	13.2	924	3.2
Ethnicity									
Hispanic or Latino	4,477	2,958	66.1	1,072	23.9	383	8.6	64	1.4
Race									
American Indian/:Alaskan Native	5,249	2,916	55.6	1,528	29.1	648	12.4	157	3.0
Asian	439	256	58.3	107	24.4	61	13.9	15	3.4
Black/:African American	2,414	1,874	77.6	420	17.4	102	4.2	18	0.8
Pacific Islander	113	81	71.7	21	18.6	10	8.9	1	0.9
White/:Caucasian	14,587	7,179	49.2	4,446	30.5	2,365	16.2	597	4.1
Two or More Races	2,088	1,121	53.7	601	28.8	294	14.1	72	3.5
Gender									
Female	14,181	7,788	54.9	4,201	29.6	1,795	12.7	397	2.8
Male	15,165	8,584	56.6	3,990	26.3	2,064	13.6	527	3.5
Not Indicated	21	13	61.9	4	19.1	4	19.1	0	0.0
Other									
ELL 1st Yr: Proficient	377	257	68.2	101	26.8	19	5.0	0	0.0
ELL 2nd Yr: Proficient	82	41	50.0	28	34.2	11	13.4	2	2.4
Econ. Disadv.	18,043	11,221	62.2	4,598	25.5	1,834	10.2	390	2.2
Non-Econ. Disadv.	11,324	5,164	45.6	3,597	31.8	2,029	17.9	534	4.7
Migrant	27	13	48.2	6	22.2	3	11.1	5	18.5
Non-Migrant	29,340	16,372	55.8	8,189	27.9	3,860	13.2	919	3.1
Individualized Education Plan (IEP)									
IEP	5,290	4,402	83.2	698	13.2	164	3.1	26	0.5
IEP w/ Accomm.	1,911	1,599	83.7	252	13.2	51	2.7	9	0.5
IEP w/o Accomm.	3,379	2,803	83.0	446	13.2	113	3.3	17	0.5
Plan 504	542	308	56.8	146	26.9	75	13.8	13	2.4
Plan 504 w/ Accomm.	63	35	55.6	16	25.4	12	19.1	0	0.0
Plan 504 w/o Accomm.	479	273	57.0	130	27.1	63	13.2	13	2.7
English Language Learners (ELL)									
ELL	1,341	1,194	89.0	117	8.7	25	1.9	5	0.4
ELL w/ Accomm.	246	228	92.7	15	6.1	3	1.2	0	0.0
ELL w/o Accomm.	1,095	966	88.2	102	9.3	22	2.0	5	0.5
Non-English Language Learners (Non-ELL)									
Non-ELL	28,026	15,191	54.2	8,078	28.8	3,838	13.7	919	3.3
Military									
Military	85	44	51.8	21	24.7	14	16.5	6	7.1

		Number and Percent in Each Performance Levels										
	Total	Unsatisfa	ctory	Limited Knowledge		Proficient		Advanced				
Science - Grade 10	N	N	%	N	%	N	%	N	%			
Non-Military	29,282	16,341	55.8	8,174	27.9	3,849	13.1	918	3.1			
Foster												
Foster	155	105	67.7	36	23.2	13	8.4	1	0.7			
Non-Foster	29,212	16,280	55.7	8,159	27.9	3,850	13.2	923	3.2			

Oklahoma School Testing Program (OSTP) Science - Standard Setting - Round 2 Committee Results

	Number and Percent in Each Performance Levels									
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced	
Science - Grade 05	N	N	%	N	%	N	%	N	%	
Total										
All	48,450	10,429	21.5	13,023	26.9	17,568	36.3	7,430	15.3	
Form										
Form 1	48,450	10,429	21.5	13,023	26.9	17,568	36.3	7,430	15.3	
Ethnicity										
Hispanic or Latino	8,739	2,683	30.7	2,729	31.2	2,670	30.6	657	7.5	
Race										
American Indian/:Alaskan Native	6,656	1,462	22.0	1,906	28.6	2,432	36.5	856	12.9	
Asian	944	123	13.0	196	20.8	344	36.4	281	29.8	
Black/:African American	4,247	1,737	40.9	1,311	30.9	994	23.4	205	4.8	
Pacific Islander	165	64	38.8	44	26.7	50	30.3	7	4.2	
White/:Caucasian	23,264	3,502	15.1	5,643	24.3	9,388	40.4	4,731	20.3	
Two or More Races	4,435	858	19.4	1,194	26.9	1,690	38.1	693	15.6	
Gender										
Female	23,925	5,071	21.2	6,585	27.5	8,853	37.0	3,416	14.3	
Male	24,481	5,341	21.8	6,423	26.2	8,705	35.6	4,012	16.4	
Not Indicated	44	17	38.6	15	34.1	10	22.7	2	4.6	
Other										
ELL 1st Yr: Proficient	1,415	359	25.4	539	38.1	446	31.5	71	5.0	
ELL 2nd Yr: Proficient	1,700	387	22.8	599	35.2	586	34.5	128	7.5	
Econ. Disadv.	30,012	8,079	26.9	8,942	29.8	10,017	33.4	2,974	9.9	
Non-Econ. Disadv.	18,438	2,350	12.8	4,081	22.1	7,551	41.0	4,456	24.2	
Migrant	32	6	18.8	8	25.0	12	37.5	6	18.8	
Non-Migrant	48,418	10,423	21.5	13,015	26.9	17,556	36.3	7,424	15.3	
Individualized Education Plan (IEP)										
IEP	8,247	3,845	46.6	2,349	28.5	1,640	19.9	413	5.0	
IEP w/ Accomm.	5,216	2,785	53.4	1,473	28.2	818	15.7	140	2.7	
IEP w/o Accomm.	3,031	1,060	35.0	876	28.9	822	27.1	273	9.0	
Plan 504	1,048	236	22.5	294	28.1	355	33.9	163	15.6	
Plan 504 w/ Accomm.	513	145	28.3	156	30.4	156	30.4	56	10.9	
Plan 504 w/o Accomm.	535	91	17.0	138	25.8	199	37.2	107	20.0	
English Language Learners (ELL)										
ELL	2,599	1,438	55.3	764	29.4	349	13.4	48	1.9	
ELL w/ Accomm.	861	522	60.6	241	28.0	89	10.3	9	1.1	
ELL w/o Accomm.	1,738	916	52.7	523	30.1	260	15.0	39	2.2	
Non-English Language Learners (Non-ELL)										
Non-ELL	45,851	8,991	19.6	12,259	26.7	17,219	37.6	7,382	16.1	
Military										
Military	250	24	9.6	52	20.8	97	38.8	77	30.8	
Non-Military	48,200	10,405	21.6	12,971	26.9	17,471	36.3	7,353	15.3	

		Number and Percent in Each Performance Levels										
	Total	Unsatisfa	ctory	Limite Knowle		Profici	ent	Advan	ced			
Science - Grade 05	N	N	%	N	%	N	%	N	%			
Foster												
Foster	295	106	35.9	82	27.8	94	31.9	13	4.4			
Non-Foster	48,155	5 10,323 21.4 12,941 26.9 17,474 36.3 7,417 15.4										

Oklahoma School Testing Program (OSTP) Science - Standard Setting - Round 2 Committee Results

		ı	Number a	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced
Science - Grade 08	N	N	%	N	%	N	%	N	%
Total									
All	47,342	19,525	41.2	10,170	21.5	12,525	26.5	5,122	10.8
Form									
Form 1	47,342	19,525	41.2	10,170	21.5	12,525	26.5	5,122	10.8
Ethnicity									
Hispanic or Latino	7,731	4,092	52.9	1,691	21.9	1,539	19.9	409	5.3
Race									
American Indian/:Alaskan Native	6,860	2,994	43.6	1,574	22.9	1,738	25.3	554	8.1
Asian	963	228	23.7	168	17.5	320	33.2	247	25.7
Black/:African American	4,156	2,659	64.0	796	19.2	561	13.5	140	3.4
Pacific Islander	166	93	56.0	29	17.5	35	21.1	9	5.4
White/:Caucasian	23,783	7,929	33.3	5,101	21.5	7,393	31.1	3,360	14.1
Two or More Races	3,683	1,530	41.5	811	22.0	939	25.5	403	10.9
Gender									
Female	23,293	9,410	40.4	5,351	23.0	6,277	27.0	2,255	9.7
Male	23,979	10,057	41.9	4,812	20.1	6,246	26.1	2,864	11.9
Not Indicated	70	58	82.9	7	10.0	2	2.9	3	4.3
Other									
ELL 1st Yr: Proficient	182	70	38.5	54	29.7	48	26.4	10	5.5
ELL 2nd Yr: Proficient	241	92	38.2	66	27.4	70	29.1	13	5.4
Econ. Disadv.	28,653	14,617	51.0	6,190	21.6	6,097	21.3	1,749	6.1
Non-Econ. Disadv.	18,689	4,908	26.3	3,980	21.3	6,428	34.4	3,373	18.1
Migrant	35	17	48.6	7	20.0	8	22.9	3	8.6
Non-Migrant	47,307	19,508	41.2	10,163	21.5	12,517	26.5	5,119	10.8
Individualized Education Plan (IEP)									
IEP	7,285	5,630	77.3	916	12.6	591	8.1	148	2.0
IEP w/ Accomm.	3,929	3,221	82.0	438	11.2	228	5.8	42	1.1
IEP w/o Accomm.	3,356	2,409	71.8	478	14.2	363	10.8	106	3.2
Plan 504	968	373	38.5	219	22.6	264	27.3	112	11.6
Plan 504 w/ Accomm.	197	95	48.2	42	21.3	44	22.3	16	8.1
Plan 504 w/o Accomm.	771	278	36.1	177	23.0	220	28.5	96	12.5
English Language Learners (ELL)									
ELL	2,113	1,757	83.2	229	10.8	114	5.4	13	0.6
ELL w/ Accomm.	372	338	90.9	28	7.5	6	1.6	0	0.0
ELL w/o Accomm.	1,741	1,419	81.5	201	11.6	108	6.2	13	0.8
Non-English Language Learners (Non-ELL)									
Non-ELL	45,229	17,768	39.3	9,941	22.0	12,411	27.4	5,109	11.3
Military									
Military	226	65	28.8	57	25.2	62	27.4	42	18.6

		Number and Percent in Each Performance Levels										
	Total	Unsatisfa	ctory	Limited Knowledge		Proficient		Advanced				
Science - Grade 08	N	N	%	N	%	N	%	N	%			
Non-Military	47,116	19,460	41.3	10,113	21.5	12,463	26.5	5,080	10.8			
Foster												
Foster	241	142	58.9	53	22.0	40	16.6	6	2.5			
Non-Foster	47,101	19,383	41.2	10,117	21.5	12,485	26.5	5,116	10.9			

Oklahoma School Testing Program (OSTP) Science - Standard Setting - Round 2 Committee Results

		ı	Number	and Percen	t in Each	n Performai	nce Leve	els	
	Total	Unsatisfa		Limit Knowle	ed	Profici		Advan	ced
Science - Grade 10	N	N	%	N	%	N	%	N	%
Total									
All	29,367	16,385	55.8	8,195	27.9	3,505	11.9	1,282	4.4
Form									
Form 1	29,367	16,385	55.8	8,195	27.9	3,505	11.9	1,282	4.4
Ethnicity									
Hispanic or Latino	4,477	2,958	66.1	1,072	23.9	361	8.1	86	1.9
Race									
American Indian/:Alaskan Native	5,249	2,916	55.6	1,528	29.1	588	11.2	217	4.1
Asian	439	256	58.3	107	24.4	56	12.8	20	4.6
Black/:African American	2,414	1,874	77.6	420	17.4	98	4.1	22	0.9
Pacific Islander	113	81	71.7	21	18.6	9	8.0	2	1.8
White/:Caucasian	14,587	7,179	49.2	4,446	30.5	2,127	14.6	835	5.7
Two or More Races	2,088	1,121	53.7	601	28.8	266	12.7	100	4.8
Gender									
Female	14,181	7,788	54.9	4,201	29.6	1,637	11.5	555	3.9
Male	15,165	8,584	56.6	3,990	26.3	1,864	12.3	727	4.8
Not Indicated	21	13	61.9	4	19.1	4	19.1	0	0.0
Other									
ELL 1st Yr: Proficient	377	257	68.2	101	26.8	18	4.8	1	0.3
ELL 2nd Yr: Proficient	82	41	50.0	28	34.2	11	13.4	2	2.4
Econ. Disadv.	18,043	11,221	62.2	4,598	25.5	1,680	9.3	544	3.0
Non-Econ. Disadv.	11,324	5,164	45.6	3,597	31.8	1,825	16.1	738	6.5
Migrant	27	13	48.2	6	22.2	2	7.4	6	22.2
Non-Migrant	29,340	16,372	55.8	8,189	27.9	3,503	11.9	1,276	4.4
Individualized Education Plan (IEP)									
IEP	5,290	4,402	83.2	698	13.2	151	2.9	39	0.7
IEP w/ Accomm.	1,911	1,599	83.7	252	13.2	46	2.4	14	0.7
IEP w/o Accomm.	3,379	2,803	83.0	446	13.2	105	3.1	25	0.7
Plan 504	542	308	56.8	146	26.9	69	12.7	19	3.5
Plan 504 w/ Accomm.	63	35	55.6	16	25.4	10	15.9	2	3.2
Plan 504 w/o Accomm.	479	273	57.0	130	27.1	59	12.3	17	3.6
English Language Learners (ELL)									
ELL	1,341	1,194	89.0	117	8.7	24	1.8	6	0.5
ELL w/ Accomm.	246	228	92.7	15	6.1	3	1.2	0	0.0
ELL w/o Accomm.	1,095	966	88.2	102	9.3	21	1.9	6	0.6
Non-English Language Learners (Non-ELL)									
Non-ELL	28,026	15,191	54.2	8,078	28.8	3,481	12.4	1,276	4.6
Military									
Military	85	44	51.8	21	24.7	12	14.1	8	9.4

		Number and Percent in Each Performance Levels										
	Total	Unsatisfa	ctory	Limited Knowledge		Proficient		Advanced				
Science - Grade 10	N	N	%	N	%	N	%	N	%			
Non-Military	29,282	16,341	55.8	8,174	27.9	3,493	11.9	1,274	4.4			
Foster												
Foster	155	105	67.7	36	23.2	12	7.7	2	1.3			
Non-Foster	29,212	16,280	55.7	8,159	27.9	3,493	12.0	1,280	4.4			

Oklahoma School Testing Program (OSTP) Science - Standard Setting - Round 3 Committee Results

	Number and Percent in Each Performance Levels									
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced	
Science - Grade 05	N	N	%	N	%	N	%	N	%	
Total										
All	48,450	10,429	21.5	13,023	26.9	17,568	36.3	7,430	15.3	
Form										
Form 1	48,450	10,429	21.5	13,023	26.9	17,568	36.3	7,430	15.3	
Ethnicity										
Hispanic or Latino	8,739	2,683	30.7	2,729	31.2	2,670	30.6	657	7.5	
Race										
American Indian/:Alaskan Native	6,656	1,462	22.0	1,906	28.6	2,432	36.5	856	12.9	
Asian	944	123	13.0	196	20.8	344	36.4	281	29.8	
Black/:African American	4,247	1,737	40.9	1,311	30.9	994	23.4	205	4.8	
Pacific Islander	165	64	38.8	44	26.7	50	30.3	7	4.2	
White/:Caucasian	23,264	3,502	15.1	5,643	24.3	9,388	40.4	4,731	20.3	
Two or More Races	4,435	858	19.4	1,194	26.9	1,690	38.1	693	15.6	
Gender										
Female	23,925	5,071	21.2	6,585	27.5	8,853	37.0	3,416	14.3	
Male	24,481	5,341	21.8	6,423	26.2	8,705	35.6	4,012	16.4	
Not Indicated	44	17	38.6	15	34.1	10	22.7	2	4.6	
Other										
ELL 1st Yr: Proficient	1,415	359	25.4	539	38.1	446	31.5	71	5.0	
ELL 2nd Yr: Proficient	1,700	387	22.8	599	35.2	586	34.5	128	7.5	
Econ. Disadv.	30,012	8,079	26.9	8,942	29.8	10,017	33.4	2,974	9.9	
Non-Econ. Disadv.	18,438	2,350	12.8	4,081	22.1	7,551	41.0	4,456	24.2	
Migrant	32	6	18.8	8	25.0	12	37.5	6	18.8	
Non-Migrant	48,418	10,423	21.5	13,015	26.9	17,556	36.3	7,424	15.3	
Individualized Education Plan (IEP)										
IEP	8,247	3,845	46.6	2,349	28.5	1,640	19.9	413	5.0	
IEP w/ Accomm.	5,216	2,785	53.4	1,473	28.2	818	15.7	140	2.7	
IEP w/o Accomm.	3,031	1,060	35.0	876	28.9	822	27.1	273	9.0	
Plan 504	1,048	236	22.5	294	28.1	355	33.9	163	15.6	
Plan 504 w/ Accomm.	513	145	28.3	156	30.4	156	30.4	56	10.9	
Plan 504 w/o Accomm.	535	91	17.0	138	25.8	199	37.2	107	20.0	
English Language Learners (ELL)										
ELL	2,599	1,438	55.3	764	29.4	349	13.4	48	1.9	
ELL w/ Accomm.	861	522	60.6	241	28.0	89	10.3	9	1.1	
ELL w/o Accomm.	1,738	916	52.7	523	30.1	260	15.0	39	2.2	
Non-English Language Learners (Non-ELL)										
Non-ELL	45,851	8,991	19.6	12,259	26.7	17,219	37.6	7,382	16.1	
Military										
Military	250	24	9.6	52	20.8	97	38.8	77	30.8	
Non-Military	48,200	10,405	21.6	12,971	26.9	17,471	36.3	7,353	15.3	

		Number and Percent in Each Performance Levels										
	Total	Unsatisfa	ctory		Limited Knowledge Proficie			Advan	ced			
Science - Grade 05	N	N	%	N	%	N	%	N	%			
Foster												
Foster	295	106	35.9	82	27.8	94	31.9	13	4.4			
Non-Foster	48,155	55 10,323 21.4 12,941 26.9 17,474 36.3 7,417 15.4										

Oklahoma School Testing Program (OSTP) Science - Standard Setting - Round 3 Committee Results

		1	Number a	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limite Knowle		Profic	ient	Advan	ced
Science - Grade 08	N	N	%	N	%	N	%	N	%
Total									
All	47,342	17,847	37.7	10,117	21.4	14,256	30.1	5,122	10.8
Form									
Form 1	47,342	17,847	37.7	10,117	21.4	14,256	30.1	5,122	10.8
Ethnicity									
Hispanic or Latino	7,731	3,774	48.8	1,751	22.7	1,797	23.2	409	5.3
Race									
American Indian/:Alaskan Native	6,860	2,735	39.9	1,580	23.0	1,991	29.0	554	8.1
Asian	963	193	20.0	179	18.6	344	35.7	247	25.7
Black/:African American	4,156	2,494	60.0	848	20.4	674	16.2	140	3.4
Pacific Islander	166	92	55.4	26	15.7	39	23.5	9	5.4
White/:Caucasian	23,783	7,151	30.1	4,917	20.7	8,355	35.1	3,360	14.1
Two or More Races	3,683	1,408	38.2	816	22.2	1,056	28.7	403	10.9
Gender									
Female	23,293	8,517	36.6	5,334	22.9	7,187	30.9	2,255	9.7
Male	23,979	9,275	38.7	4,774	19.9	7,066	29.5	2,864	11.9
Not Indicated	70	55	78.6	9	12.9	3	4.3	3	4.3
Other									
ELL 1st Yr: Proficient	182	62	34.1	53	29.1	57	31.3	10	5.5
ELL 2nd Yr: Proficient	241	79	32.8	72	29.9	77	32.0	13	5.4
Econ. Disadv.	28,653	13,476	47.0	6,362	22.2	7,066	24.7	1,749	6.1
Non-Econ. Disadv.	18,689	4,371	23.4	3,755	20.1	7,190	38.5	3,373	18.1
Migrant	35	15	42.9	8	22.9	9	25.7	3	8.6
Non-Migrant	47,307	17,832	37.7	10,109	21.4	14,247	30.1	5,119	10.8
Individualized Education Plan (IEP)									
IEP	7,285	5,404	74.2	1,020	14.0	713	9.8	148	2.0
IEP w/ Accomm.	3,929	3,113	79.2	496	12.6	278	7.1	42	1.1
IEP w/o Accomm.	3,356	2,291	68.3	524	15.6	435	13.0	106	3.2
Plan 504	968	332	34.3	215	22.2	309	31.9	112	11.6
Plan 504 w/ Accomm.	197	88	44.7	38	19.3	55	27.9	16	8.1
Plan 504 w/o Accomm.	771	244	31.7	177	23.0	254	32.9	96	12.5
English Language Learners (ELL)									
ELL	2,113	1,684	79.7	271	12.8	145	6.9	13	0.6
ELL w/ Accomm.	372	328	88.2	31	8.3	13	3.5	0	0.0
ELL w/o Accomm.	1,741	1,356	77.9	240	13.8	132	7.6	13	0.8
Non-English Language Learners (Non-ELL)									
Non-ELL	45,229	16,163	35.7	9,846	21.8	14,111	31.2	5,109	11.3
Military									
Military	226	58	25.7	53	23.5	73	32.3	42	18.6

		Number and Percent in Each Performance Levels										
	Total	Unsatisfa	actory	Limited Knowledge		Proficient		Advanced				
Science - Grade 08	N	N	%	N	%	N	%	N	%			
Non-Military	47,116	17,789	37.8	10,064	21.4	14,183	30.1	5,080	10.8			
Foster												
Foster	241	135	56.0	50	20.8	50	20.8	6	2.5			
Non-Foster	47,101	17,712	37.6	10,067	21.4	14,206	30.2	5,116	10.9			

Oklahoma School Testing Program (OSTP) Science - Standard Setting - Round 3 Committee Results

	Number and Percent in Each Performance Levels										
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced		
Science - Grade 10	N	N	%	N	%	N	%	N	%		
Total											
All	29,367	17,618	60.0	6,157	21.0	4,310	14.7	1,282	4.4		
Form											
Form 1	29,367	17,618	60.0	6,157	21.0	4,310	14.7	1,282	4.4		
Ethnicity											
Hispanic or Latino	4,477	3,136	70.1	810	18.1	445	9.9	86	1.9		
Race											
American Indian/:Alaskan Native	5,249	3,155	60.1	1,136	21.6	741	14.1	217	4.1		
Asian	439	273	62.2	84	19.1	62	14.1	20	4.6		
Black/:African American	2,414	1,954	80.9	322	13.3	116	4.8	22	0.9		
Pacific Islander	113	83	73.5	16	14.2	12	10.6	2	1.8		
White/:Caucasian	14,587	7,810	53.5	3,339	22.9	2,603	17.8	835	5.7		
Two or More Races	2,088	1,207	57.8	450	21.6	331	15.9	100	4.8		
Gender											
Female	14,181	8,448	59.6	3,140	22.1	2,038	14.4	555	3.9		
Male	15,165	9,157	60.4	3,013	19.9	2,268	15.0	727	4.8		
Not Indicated	21	13	61.9	4	19.1	4	19.1	0	0.0		
Other											
ELL 1st Yr: Proficient	377	280	74.3	68	18.0	28	7.4	1	0.3		
ELL 2nd Yr: Proficient	82	44	53.7	21	25.6	15	18.3	2	2.4		
Econ. Disadv.	18,043	11,986	66.4	3,408	18.9	2,105	11.7	544	3.0		
Non-Econ. Disadv.	11,324	5,632	49.7	2,749	24.3	2,205	19.5	738	6.5		
Migrant	27	13	48.2	6	22.2	2	7.4	6	22.2		
Non-Migrant	29,340	17,605	60.0	6,151	21.0	4,308	14.7	1,276	4.4		
Individualized Education Plan (IEP)											
IEP	5,290	4,547	86.0	508	9.6	196	3.7	39	0.7		
IEP w/ Accomm.	1,911	1,647	86.2	194	10.2	56	2.9	14	0.7		
IEP w/o Accomm.	3,379	2,900	85.8	314	9.3	140	4.1	25	0.7		
Plan 504	542	322	59.4	123	22.7	78	14.4	19	3.5		
Plan 504 w/ Accomm.	63	37	58.7	13	20.6	11	17.5	2	3.2		
Plan 504 w/o Accomm.	479	285	59.5	110	23.0	67	14.0	17	3.6		
English Language Learners (ELL)											
ELL	1,341	1,216	90.7	90	6.7	29	2.2	6	0.5		
ELL w/ Accomm.	246	232	94.3	11	4.5	3	1.2	0	0.0		
ELL w/o Accomm.	1,095	984	89.9	79	7.2	26	2.4	6	0.6		
Non-English Language Learners (Non-ELL)											
Non-ELL	28,026	16,402	58.5	6,067	21.7	4,281	15.3	1,276	4.6		
Military											
Military	85	49	57.7	15	17.7	13	15.3	8	9.4		

		Number and Percent in Each Performance Levels										
	Total	Unsatisfa	ctory	Limited Knowledge		Proficient		Advanced				
Science - Grade 10	N	N	%	N	%	N	%	N	%			
Non-Military	29,282	17,569	60.0	6,142	21.0	4,297	14.7	1,274	4.4			
Foster												
Foster	155	109	70.3	29	18.7	15	9.7	2	1.3			
Non-Foster	29,212	17,509	59.9	6,128	21.0	4,295	14.7	1,280	4.4			

Oklahoma School Testing Program (OSTP) Science - Standard Setting - Round 4 Committee Results

	Number and Percent in Each Performance Levels									
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced	
Science - Grade 05	N	N	%	N	%	N	%	N	%	
Total										
All	48,450	10,429	21.5	17,171	35.4	16,311	33.7	4,539	9.4	
Form										
Form 1	48,450	10,429	21.5	17,171	35.4	16,311	33.7	4,539	9.4	
Ethnicity										
Hispanic or Latino	8,739	2,683	30.7	3,457	39.6	2,228	25.5	371	4.3	
Race										
American Indian/:Alaskan Native	6,656	1,462	22.0	2,501	37.6	2,200	33.1	493	7.4	
Asian	944	123	13.0	266	28.2	365	38.7	190	20.1	
Black/:African American	4,247	1,737	40.9	1,609	37.9	783	18.4	118	2.8	
Pacific Islander	165	64	38.8	51	30.9	46	27.9	4	2.4	
White/:Caucasian	23,264	3,502	15.1	7,672	33.0	9,120	39.2	2,970	12.8	
Two or More Races	4,435	858	19.4	1,615	36.4	1,569	35.4	393	8.9	
Gender										
Female	23,925	5,071	21.2	8,722	36.5	8,087	33.8	2,045	8.6	
Male	24,481	5,341	21.8	8,427	34.4	8,219	33.6	2,494	10.2	
Not Indicated	44	17	38.6	22	50.0	5	11.4	0	0.0	
Other										
ELL 1st Yr: Proficient	1,415	359	25.4	679	48.0	338	23.9	39	2.8	
ELL 2nd Yr: Proficient	1,700	387	22.8	762	44.8	491	28.9	60	3.5	
Econ. Disadv.	30,012	8,079	26.9	11,599	38.7	8,633	28.8	1,701	5.7	
Non-Econ. Disadv.	18,438	2,350	12.8	5,572	30.2	7,678	41.6	2,838	15.4	
Migrant	32	6	18.8	11	34.4	10	31.3	5	15.6	
Non-Migrant	48,418	10,423	21.5	17,160	35.4	16,301	33.7	4,534	9.4	
Individualized Education Plan (IEP)										
IEP	8,247	3,845	46.6	2,871	34.8	1,286	15.6	245	3.0	
IEP w/ Accomm.	5,216	2,785	53.4	1,766	33.9	594	11.4	71	1.4	
IEP w/o Accomm.	3,031	1,060	35.0	1,105	36.5	692	22.8	174	5.7	
Plan 504	1,048	236	22.5	368	35.1	347	33.1	97	9.3	
Plan 504 w/ Accomm.	513	145	28.3	194	37.8	140	27.3	34	6.6	
Plan 504 w/o Accomm.	535	91	17.0	174	32.5	207	38.7	63	11.8	
English Language Learners (ELL)										
ELL	2,599	1,438	55.3	892	34.3	242	9.3	27	1.0	
ELL w/ Accomm.	861	522	60.6	269	31.2	66	7.7	4	0.5	
ELL w/o Accomm.	1,738	916	52.7	623	35.9	176	10.1	23	1.3	
Non-English Language Learners (Non-ELL)										
Non-ELL	45,851	8,991	19.6	16,279	35.5	16,069	35.1	4,512	9.8	
Military										
Military	250	24	9.6	77	30.8	95	38.0	54	21.6	
Non-Military	48,200	10,405	21.6	17,094	35.5	16,216	33.6	4,485	9.3	

		Number and Percent in Each Performance Levels										
	Total	Unsatisfa	ctory		Limited Knowledge Profic		ent	Advanced				
Science - Grade 05	N	N	%	N	%	N	%	N	%			
Foster												
Foster	295	106	35.9	112	38.0	71	24.1	6	2.0			
Non-Foster	48,155	5 10,323 21.4 17,059 35.4 16,240 33.7 4,533 9.4										

Oklahoma School Testing Program (OSTP) Science - Standard Setting - Round 4 Committee Results

	Number and Percent in Each Performance Levels									
	Total	Unsatisfa	actory	Limite Knowle		Profic	ient	Advan	ced	
Science - Grade 08	N	N	%	N	%	N	%	N	%	
Total										
All	47,342	17,847	37.7	10,117	21.4	14,256	30.1	5,122	10.8	
Form										
Form 1	47,342	17,847	37.7	10,117	21.4	14,256	30.1	5,122	10.8	
Ethnicity										
Hispanic or Latino	7,731	3,774	48.8	1,751	22.7	1,797	23.2	409	5.3	
Race										
American Indian/:Alaskan Native	6,860	2,735	39.9	1,580	23.0	1,991	29.0	554	8.1	
Asian	963	193	20.0	179	18.6	344	35.7	247	25.7	
Black/:African American	4,156	2,494	60.0	848	20.4	674	16.2	140	3.4	
Pacific Islander	166	92	55.4	26	15.7	39	23.5	9	5.4	
White/:Caucasian	23,783	7,151	30.1	4,917	20.7	8,355	35.1	3,360	14.1	
Two or More Races	3,683	1,408	38.2	816	22.2	1,056	28.7	403	10.9	
Gender										
Female	23,293	8,517	36.6	5,334	22.9	7,187	30.9	2,255	9.7	
Male	23,979	9,275	38.7	4,774	19.9	7,066	29.5	2,864	11.9	
Not Indicated	70	55	78.6	9	12.9	3	4.3	3	4.3	
Other										
ELL 1st Yr: Proficient	182	62	34.1	53	29.1	57	31.3	10	5.5	
ELL 2nd Yr: Proficient	241	79	32.8	72	29.9	77	32.0	13	5.4	
Econ. Disadv.	28,653	13,476	47.0	6,362	22.2	7,066	24.7	1,749	6.1	
Non-Econ. Disadv.	18,689	4,371	23.4	3,755	20.1	7,190	38.5	3,373	18.1	
Migrant	35	15	42.9	8	22.9	9	25.7	3	8.6	
Non-Migrant	47,307	17,832	37.7	10,109	21.4	14,247	30.1	5,119	10.8	
Individualized Education Plan (IEP)										
IEP	7,285	5,404	74.2	1,020	14.0	713	9.8	148	2.0	
IEP w/ Accomm.	3,929	3,113	79.2	496	12.6	278	7.1	42	1.1	
IEP w/o Accomm.	3,356	2,291	68.3	524	15.6	435	13.0	106	3.2	
Plan 504	968	332	34.3	215	22.2	309	31.9	112	11.6	
Plan 504 w/ Accomm.	197	88	44.7	38	19.3	55	27.9	16	8.1	
Plan 504 w/o Accomm.	771	244	31.7	177	23.0	254	32.9	96	12.5	
English Language Learners (ELL)										
ELL	2,113	1,684	79.7	271	12.8	145	6.9	13	0.6	
ELL w/ Accomm.	372	328	88.2	31	8.3	13	3.5	0	0.0	
ELL w/o Accomm.	1,741	1,356	77.9	240	13.8	132	7.6	13	0.8	
Non-English Language Learners (Non-ELL)										
Non-ELL	45,229	16,163	35.7	9,846	21.8	14,111	31.2	5,109	11.3	
Military										
Military	226	58	25.7	53	23.5	73	32.3	42	18.6	

		Number and Percent in Each Performance Levels								
	Total	Limited otal Unsatisfactory Knowledge Proficient						Advan	ced	
Science - Grade 08	N	N	%	N	%	N	%	N	%	
Non-Military	47,116	17,789	37.8	10,064	21.4	14,183	30.1	5,080	10.8	
Foster										
Foster	241	135	56.0	50	20.8	50	20.8	6	2.5	
Non-Foster	47,101	17,712	37.6	10,067	21.4	14,206	30.2	5,116	10.9	

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Oklahoma School Testing Program (OSTP) Science - Standard Setting - Round 4 Committee Results

		N	Number	and Percen	t in Each	n Performa	nce Leve	els	
	Total	Unsatisfa	actory	Limit Knowle		Profic	ient	Advan	ced
Science - Grade 10	N	N	%	N	%	N	%	N	%
Total									
All	29,367	17,618	60.0	6,157	21.0	4,310	14.7	1,282	4.4
Form									
Form 1	29,367	17,618	60.0	6,157	21.0	4,310	14.7	1,282	4.4
Ethnicity									
Hispanic or Latino	4,477	3,136	70.1	810	18.1	445	9.9	86	1.9
Race									
American Indian/:Alaskan Native	5,249	3,155	60.1	1,136	21.6	741	14.1	217	4.1
Asian	439	273	62.2	84	19.1	62	14.1	20	4.6
Black/:African American	2,414	1,954	80.9	322	13.3	116	4.8	22	0.9
Pacific Islander	113	83	73.5	16	14.2	12	10.6	2	1.8
White/:Caucasian	14,587	7,810	53.5	3,339	22.9	2,603	17.8	835	5.7
Two or More Races	2,088	1,207	57.8	450	21.6	331	15.9	100	4.8
Gender									
Female	14,181	8,448	59.6	3,140	22.1	2,038	14.4	555	3.9
Male	15,165	9,157	60.4	3,013	19.9	2,268	15.0	727	4.8
Not Indicated	21	13	61.9	4	19.1	4	19.1	0	0.0
Other									
ELL 1st Yr: Proficient	377	280	74.3	68	18.0	28	7.4	1	0.3
ELL 2nd Yr: Proficient	82	44	53.7	21	25.6	15	18.3	2	2.4
Econ. Disadv.	18,043	11,986	66.4	3,408	18.9	2,105	11.7	544	3.0
Non-Econ. Disadv.	11,324	5,632	49.7	2,749	24.3	2,205	19.5	738	6.5
Migrant	27	13	48.2	6	22.2	2	7.4	6	22.2
Non-Migrant	29,340	17,605	60.0	6,151	21.0	4,308	14.7	1,276	4.4
Individualized Education Plan (IEP)									
IEP	5,290	4,547	86.0	508	9.6	196	3.7	39	0.7
IEP w/ Accomm.	1,911	1,647	86.2	194	10.2	56	2.9	14	0.7
IEP w/o Accomm.	3,379	2,900	85.8	314	9.3	140	4.1	25	0.7
Plan 504	542	322	59.4	123	22.7	78	14.4	19	3.5
Plan 504 w/ Accomm.	63	37	58.7	13	20.6	11	17.5	2	3.2
Plan 504 w/o Accomm.	479	285	59.5	110	23.0	67	14.0	17	3.6
English Language Learners (ELL)									
ELL	1,341	1,216	90.7	90	6.7	29	2.2	6	0.5
ELL w/ Accomm.	246	232	94.3	11	4.5	3	1.2	0	0.0
ELL w/o Accomm.	1,095	984	89.9	79	7.2	26	2.4	6	0.6
Non-English Language Learners (Non-ELL)									
Non-ELL	28,026	16,402	58.5	6,067	21.7	4,281	15.3	1,276	4.6
Military									
Military	85	49	57.7	15	17.7	13	15.3	8	9.4

		Number and Percent in Each Performance Levels								
	Total	Limited al Unsatisfactory Knowledge Proficient						Advan	ced	
Science - Grade 10	N	N	%	N	%	N	%	N	%	
Non-Military	29,282	17,569	60.0	6,142	21.0	4,297	14.7	1,274	4.4	
Foster										
Foster	155	109	70.3	29	18.7	15	9.7	2	1.3	
Non-Foster	29,212	17,509	59.9	6,128	21.0	4,295	14.7	1,280	4.4	

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APPENDIX L—Standard Setting Results

Table L-1. 2017 OK Standard Setting Report: ELA Round 1

		J17 OK Stand	iai u Settilig	Neport. LLA	Nouna 1	
Grade	Performance	Theta	SE	MAD	At %	At or Above
	Level	Cut				%
	Limited					
3	Knowledge	-0.64765	0.26270	0.11630	15.2	73.3
	Proficient	-0.13874	0.26610	0.14068	43.9	58.1
	Advanced	1.05701	0.31280	0.20766	14.2	14.2
	Limited					
4	Knowledge	-0.62585	0.27530	0.10794	28.6	73.3
4	Proficient	0.22107	0.26960	0.23869	38.1	44.7
	Advanced	1.49870	0.40580	0.00000	6.7	6.7
	Limited					
5	Knowledge	-0.88324	0.25990	0.10002	28.7	80.9
)	Proficient	0.01724	0.27960	0.04911	40.0	52.2
	Advanced	1.17231	0.37400	0.20371	12.2	12.2
	Limited					
	Knowledge	-0.91616	0.27630	0.02491	40.0	81.8
6	Proficient	0.23755	0.29840	0.09798	28.7	41.8
	Advanced	1.10725	0.37280	0.12135	13.1	13.1
	Limited					
_	Knowledge	-0.54707	0.28370	0.27647	24.7	71.7
7	Proficient	0.16319	0.30400	0.00000	32.6	47.1
	Advanced	1.08454	0.37720	0.10642	14.5	14.5
	Limited					
	Knowledge	-0.69508	0.30310	0.13326	34.1	79.2
8	Proficient	0.31452	0.29180	0.15152	33.5	45.1
	Advanced	1.46111	0.42420	0.00000	11.6	11.6
	Limited					
	Knowledge	-1.09572	0.32570	0.12543	31.5	87.0
10	Proficient	0.10061	0.24300	0.02055	33.1	55.5
	Advanced	0.95003	0.25560	0.18552	22.4	22.4
		3.5555				

Table L-2. 2017 OK Standard Setting Report: Math Round 1

	Table E-2. 20.	17 Oktobalia	ar a octting	report: ma	iii itoana 1	
Grade	Performance Level	Theta Cut	SE	MAD	At %	At or Above %
	Limited					
2	Knowledge	-2.13131	0.37400	0.00000	14.4	96.7
3	Proficient	-0.95609	0.24790	0.11562	35.2	82.3
	Advanced	0.14369	0.25020	0.12622	47.1	47.1
	Limited					
4	Knowledge	-0.85598	0.28500	0.06719	36.0	79.4
•	_		•		•	continued

Grade	Performance Level	Theta Cut	SE	MAD	At %	At or Above %
4	Proficient	0.21582	0.23060	0.03156	29.3	43.4
4	Advanced	1.07636	0.31480	0.02931	14.0	14.0
	Limited					
5	Knowledge	-0.92288	0.31960	0.09119	29.9	81.4
5	Proficient	-0.00351	0.25380	0.00000	39.3	51.5
	Advanced	1.16994	0.25880	0.15748	12.2	12.2
	Limited					
6	Knowledge	-0.69754	0.27450	0.11264	38.6	75.9
0	Proficient	0.37560	0.26900	0.06487	31.1	37.3
	Advanced	1.57909	0.31490	0.23581	6.2	6.2
	Limited					
7	Knowledge	0.02240	0.25410	0.06151	17.6	50.6
/	Proficient	0.49130	0.23010	0.17953	25.9	33.0
	Advanced	1.48547	0.22170	0.02713	7.1	7.1
	Limited					
8	Knowledge	0.05488	0.24840	0.06636	27.2	48.8
0	Proficient	0.80638	0.22250	0.09280	9.7	21.6
	Advanced	1.21172	0.24950	0.03131	11.9	11.9
	Limited					
10	Knowledge	-0.03088	0.24340	0.19325	27.6	52.4
10	Proficient	0.70757	0.19320	0.05858	15.4	24.8
	Advanced	1.31796	0.17800	0.20980	9.4	9.4

Table L-3. 2017 OK Standard Setting Report: Science Round 1

Grade	Performance Level	Theta Cut	SE	MAD	At %	At or Above %
	Limited					
_	Knowledge	-0.91364	0.33480	0.06659	26.9	78.5
5	Proficient	0.01333	0.30500	0.17095	36.3	51.6
	Advanced	1.14632	0.32040	0.26336	15.3	15.3
	Limited					
8	Knowledge	-0.34011	0.29830	0.12405	21.4	62.3
0	Proficient	0.27999	0.28320	0.08315	30.1	40.9
	Advanced	1.32579	0.33330	0.24435	10.8	10.8
	Limited					
10	Knowledge	0.23461	0.30420	0.06169	27.9	44.2
10	Proficient	1.04237	0.26860	0.03976	13.2	16.3
	Advanced	1.87180	0.33700	0.19295	3.1	3.1

Table L-4. 2017 OK Standard Setting Report: ELA Round 2

Grade	Performance Level	Theta Cut	SE	MAD	At %	At or Above %
	Limited					
2	Knowledge	-0.64765	0.26270	0.08145	15.2	73.3
3	Proficient	-0.13874	0.26610	0.00000	46.1	58.1
	Advanced	1.18279	0.32270	0.11129	11.9	11.9
	Limited					
4	Knowledge	-0.52719	0.27240	0.09866	26.4	71.2
4	Proficient	0.22107	0.26960	0.02076	38.1	44.7
	Advanced	1.49870	0.40580	0.00000	6.7	6.7
	Limited					
5	Knowledge	-0.99935	0.26110	0.09897	31.4	83.6
5	Proficient	-0.03187	0.27550	0.02818	40.0	52.2
	Advanced	1.17231	0.37400	0.20371	12.2	12.2
	Limited					
6	Knowledge	-0.91616	0.27630	0.00204	41.5	81.8
O	Proficient	0.28516	0.29840	0.05038	27.2	40.3
	Advanced	1.19106	0.40020	0.20063	13.1	13.1
	Limited					
7	Knowledge	-0.65400	0.28340	0.15629	27.6	74.6
,	Proficient	0.16319	0.30400	0.00000	35.1	47.1
	Advanced	1.19095	0.37720	0.06795	12.0	12.0
	Limited					
8	Knowledge	-0.69508	0.30310	0.07289	42.4	79.2
0	Proficient	0.53881	0.29710	0.17617	25.2	36.8
	Advanced	1.46111	0.42420	0.00000	11.6	11.6
	Limited					
10	Knowledge	-1.09572	0.32570	0.00000	31.5	87.0
10	Proficient	0.10061	0.24300	0.00000	36.7	55.5
	Advanced	1.09912	0.25970	0.00000	18.8	18.8

Table L-5. 2017 OK Standard Setting Report: Math Round 2

	10010 2 51 20	z/ On Otalidai	u octime in	cporti iliati		
Grade	Performance Level	Theta Cut	SE	MAD	At %	At or Above %
3	Limited Knowledge	-1.03105	0.25190	0.00000	25.1	83.7
	Proficient	-0.17669	0.24040	0.03597	32.6	58.6
						continued

Grade	Performance Level	Theta Cut	SE	MAD	At %	At or Above %
3	Advanced	0.67238	0.29910	0.05491	25.9	25.9
	Limited					
4	Knowledge	-0.85598	0.28500	0.00000	38.7	79.4
	Proficient	0.25249	0.23060	0.03473	26.6	40.6
	Advanced	1.07636	0.31480	0.02931	14.0	14.0
	Limited					
5	Knowledge	-0.92288	0.31960	0.09119	29.9	81.4
5	Proficient	-0.00351	0.25380	0.00000	34.8	51.5
	Advanced	1.01246	0.25420	0.06194	16.7	16.7
	Limited					
6	Knowledge	-0.89687	0.28670	0.06497	48.3	81.2
0	Proficient	0.51727	0.27030	0.07680	26.7	32.9
	Advanced	1.51120	0.31490	0.00000	6.2	6.2
	Limited					
7	Knowledge	0.02240	0.25410	0.03457	17.6	50.6
,	Proficient	0.49130	0.23010	0.09735	25.9	33.0
	Advanced	1.50462	0.22830	0.01092	7.1	7.1
	Limited					
8	Knowledge	-0.00143	0.25620	0.05630	27.8	51.1
0	Proficient	0.75594	0.22180	0.06830	11.4	23.3
	Advanced	1.21172	0.24950	0.03131	11.9	11.9
	Limited					
10	Knowledge	0.14320	0.23170	0.10222	21.3	46.1
10	Proficient	0.70757	0.19320	0.04647	15.4	24.8
	Advanced	1.34848	0.17820	0.01425	9.4	9.4

Table L-6. 2017 OK Standard Setting Report: Science Round 2

Grade	Performance Level	Theta Cut	SE	MAD	At %	At or Above %
	Limited					
_	Knowledge	-0.91364	0.33480	0.00000	26.9	78.5
5	Proficient	0.01333	0.30500	0.17095	36.3	51.6
	Advanced	1.02686	0.31430	0.03361	15.3	15.3
	Limited					
	Knowledge	-0.21606	0.29300	0.00000	21.5	58.8
8	Proficient	0.35797	0.28430	0.05276	26.5	37.3
	Advanced	1.32579	0.33330	0.00000	10.8	10.8
	Limited					
10	Knowledge	0.24130	0.30420	0.05500	27.9	44.2
10	Proficient	1.03243	0.26860	0.00994	11.9	16.3
	Advanced	1.77837	0.31740	0.03393	4.4	4.4

Table L-7. 2017 OK Standard Setting Report: ELA Round 3

Grade	Performance Level	Theta Cut	SE	MAD	At %	At or Above %
	Limited					
2	Knowledge	-0.53135	0.26350	0.08202	27.6	70.5
3	Proficient	0.26234	0.27550	0.04597	35.3	42.9
	Advanced	1.39558	0.33530	0.05766	7.6	7.6
	Limited					
4	Knowledge	-0.52719	0.27240	0.09866	28.0	71.2
4	Proficient	0.24183	0.27350	0.02076	36.5	43.1
	Advanced	1.49870	0.40580	0.00000	6.7	6.7
	Limited					
5	Knowledge	-0.99935	0.26110	0.09897	30.2	83.6
5	Proficient	-0.05950	0.27550	0.05581	41.1	53.3
	Advanced	1.17231	0.37400	0.20371	12.2	12.2
	Limited					
6	Knowledge	-0.91412	0.27630	0.00204	40.0	81.8
O	Proficient	0.23755	0.29840	0.00000	32.4	41.8
	Advanced	1.39169	0.43700	0.00000	9.4	9.4
	Limited					
7	Knowledge	-0.49771	0.28460	0.10266	25.2	70.8
,	Proficient	0.19463	0.30960	0.03144	33.6	45.6
	Advanced	1.19095	0.37720	0.18213	12.0	12.0
	Limited					
8	Knowledge	-0.69508	0.30310	0.07289	42.4	79.2
0	Proficient	0.53881	0.29710	0.14447	25.2	36.8
	Advanced	1.46111	0.42420	0.00000	11.6	11.6
	Limited					
10	Knowledge	-1.09572	0.32570	0.00000	31.5	87.0
10	Proficient	0.10061	0.24300	0.00000	45.0	55.5
	Advanced	1.40466	0.29110	0.00000	10.5	10.5

Table L-8. 2017 OK Standard Setting Report: Math Round 3

Grade	Performance Level	Theta Cut	SE	MAD	At %	At or Above %
	Limited					
2	Knowledge	-1.03105	0.25190	0.00000	25.1	83.7
3	Proficient	-0.17669	0.24040	0.03904	41.6	58.6
	Advanced	0.98750	0.33110	0.07881	17.0	17.0
4	Limited					
4	Knowledge	-0.85598	0.28500	0.02886	36.0	79.4
						continued

Grade	Performance Level	Theta Cut	SE	MAD	At %	At or Above %
4	Proficient	0.21582	0.23060	0.00000	29.3	43.4
4	Advanced	1.06199	0.31480	0.02664	14.0	14.0
	Limited					
5	Knowledge	-1.01408	0.33040	0.00000	41.2	83.2
3	Proficient	0.25552	0.24550	0.17136	29.8	42.0
	Advanced	1.16994	0.25880	0.00000	12.2	12.2
	Limited	0.00607	0.29670	0.06407	<i>1</i>	01.2
6	Knowledge	-0.89687	0.28670	0.06497	45.5	81.2
	Proficient	0.44047	0.27030	0.07680	29.5	35.7
	Advanced	1.51120	0.31490	0.00000	6.2	6.2
	Limited	0.00000	0.0000	0.05505	40.4	50.0
7	Knowledge	-0.00998	0.26000	0.06696	19.1	53.2
	Proficient	0.44732	0.23320	0.04397	27.0	34.1
	Advanced	1.47147	0.22170	0.03315	7.1	7.1
	Limited					
8	Knowledge	-0.00143	0.25620	0.05630	27.8	51.1
0	Proficient	0.75594	0.22180	0.05044	11.4	23.3
	Advanced	1.21172	0.24950	0.03131	11.9	11.9
	Limited					
10	Knowledge	0.14320	0.23170	0.10222	21.3	46.1
10	Proficient	0.70757	0.19320	0.04647	15.4	24.8
	Advanced	1.34848	0.17820	0.01425	9.4	9.4

Table L-9. 2017 OK Standard Setting Report: Science Round 3

Grade	Performance Level	Theta Cut	SE	MAD	At %	At or Above %
	Limited					715000 70
_	Knowledge	-0.91364	0.33480	0.00000	26.9	78.5
5	Proficient	0.01333	0.30500	0.16236	36.3	51.6
	Advanced	1.02686	0.31430	0.03361	15.3	15.3
	Limited					
	Knowledge	-0.34011	0.29830	0.00000	21.4	62.3
8	Proficient	0.27999	0.28320	0.00000	30.1	40.9
	Advanced	1.32579	0.33330	0.00000	10.8	10.8
	Limited					
10	Knowledge	0.28292	0.29740	0.01338	21.0	40.0
10	Proficient	1.02248	0.26860	0.00000	14.7	19.0
	Advanced	1.77837	0.31740	0.00000	4.4	4.4

APPENDIX M—MEMORANDUM STANDARD SETTING IMPACT DATA



Memorandum: Oklahoma School Testing Program 2016-2017 – Standard Setting Impact Data

The purpose of this memo is to summarize an issue that was discovered with the calculation of the impact data for the recent Oklahoma standard settings. This issue affected only two tests: English Language Arts (ELA) Grade 8 and 10 (hereafter ELA08 and ELA10). This issue was limited to grades 8 and 10 because the issue had to do with missing score points related to the writing prompts, which did not occur with grade 5.

Oklahoma writing prompts are scored on five traits, with each trait earning a score of 1 to 4. A holistic score is obtained by taking a weighted average of the five trait scores and then multiplying by a constant: 5/4 for grade 5, 7/4 for grade 8, and 11/4 for grade 10. These multipliers have the effect of stretching the score scale for the writing prompt from 1 to 4 to: 1 to 5 for grade 5; 2 to 7 for grade 8; and 3 to 11 for grade 10. It is also possible to get a score of zero on a writing prompt, which occurs when a student's response is off topic. In that case, all the trait scores are assigned a zero. Thus, the possible scores on the writing prompts were: 0 to 5 for grade 5; 0 and 2 to 7 for grade 8; and 0 and 3 to 11 for grade 10. This scoring mechanism clearly results in certain scores not being possible for grades 8 and 10. The score of 1 cannot occur for grade 8, and the scores of 1 and 2 cannot occur for grade 10. As a result of these score points being missing by design, extra care needs to be taken to ensure that the Test Characteristic Curve (TCC) is properly built to reflect this design. Usually, if a writing prompt has a maximum score of N, the number of score categories in N+1, reflecting the integer scores from 0 to N. This is not the case for grades 8 and 10. The grade 8 writing prompt has 7 categories, but the highest score is 7, not a high of 6 the N+1 model would normally expect. And the grade 10 writing prompt has 10 categories, but the highest score is 11, not a high of 9 the N+1 model would normally expect.

When the writing prompts were calibrated using the commercially available software PARSCALE, it only knew the number of categories (this is the way PARSCALE works): ELA08 with 6 and ELA10 with 10. When the calibrated item parameters were used to get the TCC, the number of categories was not equal to the maximum score minus one, which was inadvertently overlooked. Thus, the TCC for ELA08 had a maximum score that was one point less than it should have been, and the TCC for ELA10 had a maximum score that was two points less than it should have been.

Additionally, during the review of the writing prompts, it was noticed that in ELA08 there were some students who received a score of 8 on the writing prompt, even though the maximum possible score was supposed to be a 7. Through our investigation, it was discovered that the problem was due to a rounding procedure. The correct rounding procedure has now been implemented, a new data file produced, and the ELA08 writing prompt has been recalibrated using the new data. This problem did not affect the calibration of any other ELA08 items, and it did not occur with the grade 10 writing prompt. This did have an effect on the OIB for ELA08, but the shifts were small and generally far away from the cuts, except for one instance. The Advanced cut was placed next to a WP OIB page, and the new WP page moved away from that location. This means the advanced cut needed to be recalculated. The change for the ability estimate associated with that page number was only 0.01.

As a consequence of the updates to the ELA08 and ELA10 writing prompts to account for the appropriate number of score categories, the impact data changed because the changes in the TCC required the



calculation of a new theta estimate for each student using the inverse TCC method (as was done previously for standard setting). The TCC program developed to provide student theta estimates was updated and used to recalculate the theta estimate (using the inverse TCC method) for every student in ELA08 and ELA10. These results were then used to update the impact data for the standard setting.

In the information provided below, there are three pieces of information "After Standard Setting", "No Adjustment", and "After Adjustment". "After Standard Setting" identifies the impact data and cut scores produced from the standard setting recommendations following vertical articulation, "No Adjustment" identifies the impact data and cut scores after changing the student theta estimates with no adjustment to the original cut scores and "After Adjustment" is the impact data and cut scores after changing the student theta estimates and also adjusting the theta cut bookmarks in the ordered item booklets so as to give impact data results similar to those approved after the standard setting.

In ELA08, the adjustments required to generate impact data resembling the outcomes from standard setting, would be to move the Bookmarks down two OIB pages for both Proficient and Advanced. In ELA10, the adjustments required to generate impact data resembling the outcomes from standard setting, would be to move the Bookmark down 5 OIB pages for Proficient, while also moving the Bookmark down 3 OIB pages for Advanced.

Scope and Impact

English Language Arts - Grade 8

The Percent-Proficient-and-Above (PPAA)

After Standard Setting: 33.65% (22.07% Proficient, 11.58% Advanced)

No Adjustment: 29.48% (22.44% Proficient, 7.04% Advanced)

After Adjustment: 34.63% (23.35% Proficient, 11.28% Advanced)

The benchmark NAEP percentage was 29

Raw scores (associated with cut scores) with point change¹

 Cut 2 After Standard Setting:
 40, 42, 40

 Cut 2 No Adjustment:
 40, 42, 40

 Cut 2 After Adjustment:
 39, 41, 40

 Cut 3 After Standard Setting:
 45, 47, 45

 Cut 3 No Adjustment:
 45, 47, 45

 Cut 3 After Adjustment:
 44, 46, 45

English Language Arts - Grade 10

The Percent-Proficient-and-Above (PPAA)

After Standard Setting:39.00% (28.52% Proficient, 10.48% Advanced)No Adjustment:32.89% (26.01% Proficient, 6.88% Advanced)After Adjustment:35.78% (26.00% Proficient, 9.78% Advanced)

The ACT College Readiness benchmark percentage was 37

¹ The three values represent the three operational forms. Although the standard setting used a single synthetic form, impact data was calculated using the actual three forms that were administered.



Raw score point change

 Cut 2 After Standard Setting:
 47, 45, 45

 Cut 2 No Adjustment:
 49, 47, 47

 Cut 2 After Adjustment:
 48, 46, 46

 Cut 3 After Standard Setting:
 58, 56, 55

 Cut 3 No Adjustment:
 60, 58, 57

 Cut 3 After Adjustment:
 58, 56, 56

Options and Recommendation

One purpose of the standard setting was to recommend cut scores that aligned to expectations of College and Career Readiness goals and to ACT and NAEP Benchmarks. A key component informing these cut scores was impact data. Given the changes resulting from re-computing the student ability estimates there are two options to consider.

Option One: Make no adjustments to the cut scores and have different impact data

Option Two: Make adjustments to the cut sores recapture impact data closely resembling the results from standard setting

As a consequence of updates to the TCC to more accurately reflect the total score points available, which caused changes to the student theta estimates and impact data, and since impact data was key to the final cut scores, we recommend *Option Two*. *Option Two* makes an adjustment to the cut scores (in the OIB) in order to more closely align with the impact data produced from the standard setting.

APPENDIX N—FINAL CUTPOINTS

Table N-1. 2017 OK Standard Setting Report: Final Cutpoints—ELA

Content	Grade	Performance Level	Theta Cut	At %	At or Above %
		Unsatisfactory		29.5	100.0
	3	Limited Knowledge	-0.53135	31.8	70.5
	3	Proficient	0.34092	31.1	38.7
		Advanced	1.39558	7.6	7.6
		Unsatisfactory		28.8	100.0
	4	Limited Knowledge	-0.52719	34.0	71.2
	4	Proficient	0.38608	30.5	37.1
		Advanced	1.49870	6.7	6.7
		Unsatisfactory		21.1	100.0
	_	Limited Knowledge	-0.78321	39.0	78.9
	5	Proficient	0.32533	27.7	39.9
		Advanced	1.17231	12.2	12.2
	6	Unsatisfactory		18.2	100.0
English Language		Limited Knowledge	-0.90856	41.5	81.8
Arts		Proficient	0.28516	31.0	40.3
		Advanced	1.39169	9.4	9.4
	7	Unsatisfactory		29.2	100.0
		Limited Knowledge	-0.49771	38.0	70.8
	,	Proficient	0.46660	22.3	32.8
		Advanced	1.25890	10.6	10.6
		Unsatisfactory		20.8	100.0
	8	Limited Knowledge	-0.69508	45.5	79.2
	0	Proficient	0.45070	23.4	34.6
		Advanced	1.20801	11.3	11.3
		Unsatisfactory		16.4	100.0
	10	Limited Knowledge	-0.88010	44.6	83.6
	10	Proficient	0.45602	26.0	35.8
		Advanced	1.25613	9.8	9.8

Table N-2. 2017 OK Standard Setting Report: Final Cutpoints—Mathematics

Content	Grade	Performance Level	Theta Cut	At %	At or Above %
		Unsatisfactory		20.6	100.0
	3	Limited Knowledge	-0.84047	35.2	79.4
	3	Proficient	0.18660	27.2	44.2
		Advanced	0.98750	17.0	17.0
Mathematics		Unsatisfactory		23.5	100.0
	4	Limited Knowledge	-0.77087	35.9	76.5
	4	Proficient	0.26986	26.6	40.6
		Advanced	1.06199	14.0	14.0
	5	Unsatisfactory		21.6	100.0
					continued

Content	Grade	Performance Level	Theta Cut	At %	At or Above %
		Limited Knowledge	-0.82901	43.2	78.4
	5	Proficient	0.42687	23.1	35.3
		Advanced	1.16994	12.2	12.2
		Unsatisfactory		21.8	100.0
	6	Limited Knowledge	-0.75897	42.5	78.2
	U	Proficient	0.44047	29.5	35.7
		Advanced	1.51120	6.2	6.2
	7	Unsatisfactory		34.9	100.0
		Limited Knowledge	-0.33556	31.0	65.1
Mathematics		Proficient	0.44732	27.0	34.1
		Advanced	1.47147	7.1	7.1
		Unsatisfactory		48.9	100.0
	8	Limited Knowledge	-0.02698	27.8	51.1
	O	Proficient	0.75594	12.6	23.3
		Advanced	1.26746	10.6	10.6
	·	Unsatisfactory		53.9	100.0
	10	Limited Knowledge	0.13593	20.0	46.1
		Proficient	0.68404	16.7	26.2
		Advanced	1.33423	9.4	9.4

Table N-3. 2017 OK Standard Setting Report: Final Cutpoints—Science

Content	Grade	Performance Level	Theta Cut	At %	At or Above %
		Unsatisfactory		21.5	100.0
	5	Limited Knowledge	-0.91364	35.4	78.5
	3	Proficient	0.17570	33.7	43.0
		Advanced	1.32213	9.4	9.4
	8	Unsatisfactory		37.7	100.0
Science		Limited Knowledge	-0.34011	21.4	62.3
Science		Proficient	0.27999	30.1	40.9
		Advanced	1.32579	10.8	10.8
		Unsatisfactory		60.0	100.0
	10	Limited Knowledge	0.28292	21.0	40.0
		Proficient	1.02248	14.7	19.0
		Advanced	1.77837	4.4	4.4

APPENDIX N 2019 CCRA STANDARD SETTING REPORT



Oklahoma College and Career Readiness

Standard-Setting Report

June 5-6, 2019 Oklahoma City, OK

TABLE OF CONTENTS

Chapte	r 1. Overview of Standard-Setting Procedures	4
Chapte	r 2. Tasks Completed Prior To Standard-Setting	4
2.1	Creation of Performance Level Descriptors	
2.2	Preparation of Materials for Panelists	
2.3	Preparation of Presentation Materials	
2.4	Preparation of Instructions for Facilitators	
2.5	Preparation of Systems and Materials for Analysis During the Meeting	
2.6	Selection of Panelists	
Chapte	r 3. Tasks Completed During the Standard-Setting Meeting	7
3.1	Overview of the Bookmark Method	
3.2	General Orientation and Panelist Training	7
3.3	Lead Facilitator Training	
3.4	Review of Assessment Materials	7
3.5	Completion of the Item Map Form	8
3.6	Review of Performance Level Descriptors	8
3.7	Review of Performance Level Descriptors and Definition of Borderline Students	9
3.8	Rating Rounds and Feedback	10
•	.8.1 Practice Round	
	8.2 Round 1 Judgments and Results	
	.8.3 Round 2 Judgments and Results	
	8.5 Round 4 Judgments and Results	
Chapte	r 4. Tasks Completed After the Standard-Setting Meeting	14
4.1	Analysis and Review of Panelists' Feedback	
4.2	Policy Adjustments	14
4.3	Preparation of Standard-Setting Report	
REFER	ENCES	15
ΔΡΡΕΝ	DICES	16

Chapter 1. Overview of Standard-Setting Procedures

The purpose of this report is to summarize the activities involved in the standard-setting process for the Oklahoma College and Career Readiness Assessment (CCRA) in high school science (SCI) on behalf of the Oklahoma State Department of Education (SDE). The need for standard setting arises from the fact that this is a new assessment that was administered for the first time in 2019. For such new assessments, performance standards must be set. The primary goal of the standard setting was to determine the knowledge, skills, and abilities (KSAs) that students must demonstrate to be classified into each of the student status levels (performance levels).

The standard-setting process used was the bookmark procedure (see, e.g., Lewis et al., 1996; Mitzel et al., 2000; Cizek & Bunch, 2007). There were two main reasons this method was chosen. First, the assessment consists primarily of multiple-choice items but also includes some constructed-response items, and the bookmark procedure is appropriate for use with assessments that contain primarily or exclusively multiple-choice items, scaled using item response theory (IRT; Cizek & Bunch, 2007). Second, the modified bookmark method has been used successfully to establish performance standards for Oklahoma in the past (CTB/McGraw-Hill, 2013, 2014; Measured Progress, 2015).

The standard-setting meeting was held from June 5th through June 6th of 2019. In all, 12 panelists participated in the process and were organized into 2 groups of 6 panelists each plus a facilitator provided by Measured Progress. In initial rounds, panelists were organized according to the domain (Life Sciences or Physical Sciences) in which each panelist had the most professional experience. In later rounds, panelists were organized into a single panel.

This report is organized into three major sections, describing tasks completed prior to, during, and after the standard-setting meeting.

Chapter 2. Tasks Completed Prior To Standard-Setting

2.1 Creation of Performance Level Descriptors

Oklahoma State Statute: Title 70. Schools, Chapter 22 – Testing and Assessment, Section 1210.541 – Student Performance Levels and Cut Scores – Accountability System mandates the adoption of "a series of student performance levels and the corresponding cut scores pursuant to the Oklahoma School Testing Program Act." The law states that performance levels must be labeled and defined as follows:

- 1. Advanced, which shall indicate that students demonstrate superior performance on challenging subject matter;
- Proficient, which shall indicate that students demonstrate mastery over appropriate grade-level subject matter and that students are ready for the next grade, course, or level of education, as applicable;
- 3. Basic, which shall indicate that students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level or course; and
- Below Basic, which shall indicate that students have not performed at least at the limited knowledge level.

In 2016, the 29 Oklahoma educators who formed the science PLD committees, members of the Oklahoma SDE, and three Measured Progress staff members met for a three-day PLD writing meeting in Oklahoma City. The purpose of the meetings was to write PLDs for grades 5, 8 and high school that describe what students know and are able to display on a statewide assessment of the Oklahoma academic standards. The descriptors are used to provide a common understanding of each performance level for recommending cut scores during standard setting and to inform stakeholders on how to interpret student test scores.

After introductions of those in attendance at the PLD writing meetings, a brief overview of the purpose of PLDs, and an explanation of the PLD writing process, the Oklahoma PLD committees used the standards and the SDE test and item specifications document to begin development of the PLDs. To ensure that the committee members focused on the state-adopted standards and objectives, the committee members were not shown any items that appeared on the assessment.

Independently, PLD committee members filled in the PLD tables by writing down the skills and knowledge students would demonstrate in the Advanced, Proficient, and Limited Knowledge levels for each standard and objective. After the individual work was completed, the group discussed and arrived at a consensus on the wording for the performance levels. As a final step, the PLD committee members reviewed and revised the suggested wording for each level to ensure appropriateness and consistency, and that each level indicated a trajectory of students' knowledge of the content.

At this 2016 meeting the committee members dedicated to high school completed the PLDs for the Life Science domain of the assessment. In February of 2019 a second group was convened to define the PLDs for Physical Science. This meeting was conducted virtually, with some participants in the state department office in OK and the rest on a web conference with the facilitator from Measured Progress. Prior

to the meeting the participants were provided with materials to review, including the Life Science PLDs for reference. The same process was followed as described above to create the Physical Science PLD descriptions.

2.2 Preparation of Materials for Panelists

The following materials were assembled for presentation to the panelists at the standard-setting meeting in paper or digital form (as indicated):

- PLDs (paper)
- Meeting agendas (paper)
- Nondisclosure forms (paper)
- Test booklets (paper)
- Answer keys/scoring rubrics (paper)
- Ordered item booklets (paper)
- Item map forms (digital)
- Rating forms (digital)
- Evaluation forms (digital)

Copies of the PLDs, meeting agenda, nondisclosure form, sample item map form, sample rating form, and evaluation form are included in Appendices A through F.

2.3 Preparation of Presentation Materials

The PowerPoint presentation used in the opening session was prepared and approved by the SDE and TAC prior to the meeting. A copy of the presentation is included in Appendix A.

2.4 Preparation of Instructions for Facilitators

Scripts were created for the group facilitators to refer to while working through each step of the standard-setting process. This document is included in Appendix B. The facilitators also attended a training session, led by a Measured Progress psychometrician, approximately four weeks before the standard setting. The purpose of the training was to prepare the facilitators for the panel activities and to ensure consistency in the implemented procedures.

2.5 Preparation of Systems and Materials for Analysis During the Meeting

The computational programming used to calculate cutpoints and impact data during the standard-setting meeting was completed and thoroughly tested prior to the standard-setting meeting. See *Section* 3.7.2, *Round 1 Judgments and Results*, for a description of the analyses performed during standard setting.

2.6 Selection of Panelists

As emphasized in Cizek and Bunch (2007), regardless of the method used, the selection of panelists is an important factor in determining standard-setting outcomes and maximizing the validity of the standard-setting process. The guidance provided by *Standards for Educational and Psychological Testing* (AERA et al., 1999) states that "a sufficiently large and representative group of judges should be involved to provide reasonable assurance that results would not vary greatly if the process were repeated." Consistent with the above guidance and respecting practical considerations regarding the maximum size of a group that can be successfully managed, the goal was to recruit a standard-setting panel of 10–12 members representing different stakeholder groups to set standards for the CCRA science. Additionally, in consideration of the distinct content of each domain, an attempt was made to ensure the panel equally represented experts in both the LS and PS domains. Targets for the size and composition of the panel were also consistent with federal guidelines as described in *Standards and Assessment Peer Review Guidance: Information and examples for meeting requirements of the No Child Left Behind Act of 2001* (U.S. Department of Education, 2009).

The SDE selected panelists prior to the standard-setting meeting. The goal for panel selection was to include participants who are primarily teachers, but also to include school administrators, higher education personnel, and stakeholders from other interest groups. Moreover, to the extent possible, panelists were selected to reflect a balance of gender, race/ethnicity, and geographic location. Finally, panelists were selected who were familiar not only with the subject matter, but also with the grade for which they would be setting standards. A list of the panelists is included in Appendix C.

Chapter 3. Tasks Completed During the Standard-Setting Meeting

3.1 Overview of the Bookmark Method

The bookmark method (Lewis et al., 1996; Mitzel et al., 2000; Cizek & Bunch, 2007) involves rank ordering the items by difficulty and asking the panelists to identify the point in the ordered set of items at which the students at the borderline of two adjacent performance levels no longer have at least a two-thirds chance of answering the item correctly.

3.2 General Orientation and Panelist Training

Concerning panelist training, *Standards for Educational and Psychological Testing* (AERA et al., 2014) states the following:

Care must be taken to assure these persons understand what they are to do and that their judgments are as thoughtful and objective as possible. The process must be such that well-qualified participants can apply their knowledge and experience to reach meaningful and relevant judgments that accurately reflect their understandings and intentions. (p. 101)

The training of the panelists began with a general orientation session at the start of the standard-setting meeting. The purpose of the orientation was to ensure that all panelists received the same information about the need for and the goals of standard setting, and about their part in the process. The orientation consisted of three parts. First, Oklahoma Executive Director of State Assessments Craig Walker provided an overview of education policy in the state of Oklahoma, including additional context specific to the CCRA science assessment. Next, a Measured Progress psychometrician, Dr. Matthew Gushta, presented a brief overview of the bookmark procedure and the activities that would occur during the standard-setting meeting. Finally, Measured Progress Lead Program Manager Julie DiBona provided panelists with logistical information (e.g., materials review, content security, attendance).

Once the general orientation was complete, panelists broke out into domain specific groups, where they received more detailed training and completed the first two rounds of the standard-setting activities.

3.3 Lead Facilitator Training

Prior to Day 1, the two facilitators attended a brief training session led by Measured Progress psychometricians Dr. Matthew Gushta and Dr. Frank Padellaro. During this training, expectations for facilitators were set to include leading panelist review of the ordered item booklet, leading panelist development of borderline descriptors, facilitation of panel discussion, collection and review of standard-setting materials, and control of secure materials. Facilitators were separately expected to act as table leaders during the preliminary rounds, ensuring that discussion and logistics within each domain group were conducted fairly and efficiently.

3.4 Review of Assessment Materials

The first step after the opening session was for the panelists to take the test. The purpose of this step was to familiarize the panelists with the assessment and the test taking activities expected of students during

administration. Once panelists completed the test, the answer key was distributed. At this point, panelists were encouraged to discuss any issues regarding items or scoring.

3.5 Completion of the Item Map Form

Panelists were then split into two groups based on domain expertise and each panelist reviewed a domain-specific ordered item booklet item by item, considering the knowledge, skills, and abilities (KSAs) students needed to answer each one. The ordered item booklet contained one item per page, ordered from the easiest item to the most difficult item. The ordered item booklet was created by sorting the items according to their item response theory (IRT)-based difficulty values ($RP_{0.67}$ was used). A three-parameter logistic IRT model was used to calculate the $RP_{0.67}$ values for dichotomous items.

Panelists then completed the item map form using the provided laptop computers. The item map form listed the items in the same order as they were presented in the ordered item booklet. The form included space for the panelists to type in the KSAs required to answer each item correctly and to indicate why they believed each item was more difficult than the previous one. To ensure each panelist was comfortable using the provided laptop computers and understood the mechanics of data entry, Measured Progress Psychometrician Dr. Frank Padellaro reviewed the technology the panelists would use to complete their item maps.

Additionally, the item map form was shaded to show a projected range of expected proficiency, based on historic averages of student performance on state assessments from multiple grades and subjects. Item map entries that would produce percentages of students at or above Proficient comparable to those external assessments were identified as benchmarking locations. The shaded region on the item map form was then calculated as +/-2 standard errors around the IRT-based difficulty of the CCRA benchmarking locations. Table 3-1 identifies the benchmarking region for each booklet.

Table 3-1: CCR Standard-Setting Benchmarking Regions

			<u> </u>	<u> </u>	
Subject	Grade	Percentage*	PS OIB Shaded Region	LS OIB Shaded Region	Complete OIB Shaded Region
Science	11	18% – 50%	3-9	4-12	6-21

^{*}OSTP historic % proficient and above grades 3–8 (ELA and mathematics) and grades 5 and 8 SCI were used to generate a predicted range of SCI 11 % proficient or above performance.

After working individually, panelists had the opportunity to discuss the item map with members of their domain-specific group and make necessary additions or adjustments. The purpose of this step was to ensure that panelists became familiar with the ordered item booklet and understood the relationships among the ordered items.

3.6 Review of Performance Level Descriptors

Oklahoma State Statute: Title 70. Schools, Chapter 22 – Testing and Assessment, Section 1210.541 – Student Performance Levels and Cut Scores – Accountability System mandates the adoption of "a series of student performance levels and the corresponding cut scores pursuant to the Oklahoma School Testing Program Act." The law states that performance levels must be labeled and defined as follows:

- 1. Advanced, which shall indicate that students demonstrate superior performance on challenging subject matter;
- Proficient, which shall indicate that students demonstrate mastery over appropriate grade-level subject matter and that students are ready for the next grade, course, or level of education, as applicable;
- 3. Basic, which shall indicate that students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level or course; and
- 4. Below Basic, which shall indicate that students have not performed at least at the basic level.

In June of 2019, 12 Oklahoma educators, members of the SDE, and five Measured Progress staff members met for a two-day standard-setting meeting in Oklahoma City. Panelists discussed performance level descriptors (PLD), which describe what students know and are able to display on a statewide assessment of the Oklahoma academic standards. The descriptors are used to provide a common understanding of each performance level for recommending cut scores during standard setting and to inform stakeholders of how to interpret student test scores. Panelists then worked to define descriptors of a borderline level student. A borderline student is one who is minimally able to meet the requirements set by the descriptors for each performance level.

After introductions of those in attendance, a brief overview of the meeting's purpose, and an explanation of the standard-setting process, the panelists were organized into groups to begin setting standards for the Oklahoma CCR Science assessment. According to their professional experience, the panelists were organized into Life Science (LS) and Physical Science (PS) groups. Independently, standard-setting committee members filled in the item mapping tables by writing down the knowledge, skills, and abilities necessary for a student to be successful on each item within the subset of items relevant to the domain to which the group was assigned. After the individual work was completed, each group carefully reviewed and discussed the PLDs for Proficient, Advanced, Basic, and Below Basic as they applied to their domain. This understanding was used within the LS and PS groups to separately discuss and arrive at consensus on the definition of a borderline student for each of the Basic, Proficient, and Advanced performance levels. After developing a working understanding of the PLDs and defining borderline students at each cut, the panelists engaged in the standard-setting process in order to recommend the cuts between performance levels.

3.7 Review of Performance Level Descriptors and Definition of Borderline Students

Next, panelists reviewed the Performance Level Descriptors (PLDs). This important step was designed to ensure that panelists thoroughly understood the KSAs needed for students to be classified into performance levels (Below Basic, Basic, Proficient, and Advanced). Panelists first reviewed the PLDs on their own and then participated in group discussion of the PLDs, clarifying each level. Afterward, panelists developed consensus definitions of borderline students—that is, students who have only barely qualified for a

particular performance level. Bulleted lists of characteristics for each level were generated based on the whole-group discussion and posted in the room for reference throughout the bookmark process. Note that the purpose of this step was to clarify and add specificity to the PLDs based on the KSAs, paying particular attention to the definitions of the borderline students.

The bulleted lists were developed as working documents to be used by the panelists for the purposes of standard setting. They supplemented the PLDs, which provide the official definitions of each performance level, by specifically addressing the KSAs that define the borderline of each level.

The PLDs are provided in Appendix D.

3.8 Rating Rounds and Feedback

3.8.1 Practice Round

Next, the panelists completed a practice round of ratings. The purpose of the practice round was to familiarize the panelists with all the materials they would be using for the standard-setting process and to walk them through the process of placing bookmarks. In addition to the PLDs and borderline descriptions, panelists were given a practice ordered item booklet, which consisted of 10 items representing the range of difficulty on the test, and a practice rating form.

Within each domain-specific group, the facilitator explained what each of the materials was and how panelists would use it to make their ratings. Additionally, Measured Progress Psychometrician Dr. Frank Padellaro reviewed the technology panelists would use to complete their ratings, to ensure each panelist understood how to use the tools provided. Then, beginning with the first ordered item and considering the skills and abilities needed to complete it, panelists were instructed to ask themselves, "Would at least two out of three students performing at the borderline of Proficient answer this question correctly?" Panelists considered each ordered item in turn, asking themselves the same question until their answer changed from "yes" (or predominantly "yes") to "no" (or predominantly "no"). Each panelist practiced placing the Proficient bookmark in the ordered item booklet. The facilitator then led the panelists in a readiness discussion, asking panelists to share the reasoning behind their bookmark placements with the group and assessing each panelist's understanding of the rating task, borderline students, and the two-thirds rule. At the end of the practice round, panelists completed the practice evaluation form. The evaluation form was designed to ascertain whether the panelists were comfortable moving ahead to the rating task or whether they had lingering questions or issues that needed to be addressed before proceeding to the Round 1 ratings. Facilitators were instructed to glance over each panelist's evaluation as he or she completed it, to make sure panelists were ready to move on. The results of the training evaluation can be found in Appendix E.

3.8.2 Round 1 Judgments and Results

In the first round, panelists worked individually with the borderline definitions, the item map form, and the ordered item booklet. Beginning with the first ordered item in the shaded region of the domain-specific OIB, described previously, and considering the skills and abilities needed to complete it, panelists asked themselves, "Would at least two out of three students performing at the borderline of Proficient answer this

question correctly?" Panelists considered each ordered item in turn, asking themselves the same question. They placed the bookmark between the two items where their answer changed from "yes" (or predominantly "yes") to "no" (or predominantly "no"). For the identification of this Proficient cut point, panelists were instructed that placing a bookmark outside the shaded region required explicit written justification by the panelist. Panelists then repeated the process for the other two cut points and used the rating form to record their ratings for each cut point.

After the completion of each round, Measured Progress staff members calculated a variety of statistics which served various functions: feedback to panelists as part of the standard-setting method, reporting to Measured Progress and the SDE as intermediate evidence for the impact of panelists' judgements, and as quality control metrics. While these statistics were available, only specific results were revealed to panelists as appropriate for the goals of the specific round.

Results for panelist ratings across all rounds are displayed in Appendix F. For each round, Measured Progress staff members calculated the median cut points for the group based on bookmark placements, theta scale cuts, the Median Absolute Deviation (MAD) of the panelists' cut points, the conditional standard error of measurement (SEM) for each of the scale cuts, and impact data.

Each panelist's theta scale cut points were found by averaging the $RP_{0.67}$ values of the items on either side of the bookmark placed by that panelist for each cut point. The /Round 1 overall cut points were then determined by calculating the median of the individual cut points obtained from each panelist. The MAD of the panelists' cut points indicates the extent to which judgments were consistent across panelists and reflects the level of agreement among the ratings with each successive round of ratings. Conditional SEM characterizes the measurement precision for each of the scale cuts. Finally, impact data reflect the percentage of students across the state who would fall into each performance level category according to the total group median cut points.

3.8.3 Round 2 Judgments and Results

The purpose of Round 2 was for panelists to discuss their Round 1 placements and, if necessary, to revise their ratings. Prior to beginning their discussions, the panelists at each table were presented with the median cut points based on their Round 1 ratings for each cut point in that subject and grade. A Measured Progress psychometrician presented this information to the group using a projector and laptop and explained how to use it as they completed their Round 2 discussions. The distribution of panelists' cut points was presented in terms of location in the ordered item booklet, both as numerical summaries of cut points ranges and graphically, as histograms.

Within both domain-specific groups, panelists were then given the opportunity to share their individual rationales for their bookmark placements in terms of the necessary knowledge and skills for each classification. Panelists were asked to pay particular attention to how their individual ratings compared to those of other panelists in their room to assess whether they were unusually stringent or lenient within the group. Once the discussions were complete, panelists were given the opportunity to revise their Round 1 ratings on the rating form. Panelists were told to set bookmarks according to their *individual* best judgments;

consensus among the panelists was not necessary. They were encouraged to listen to the points made by their colleagues but not to feel compelled to change their bookmark placements.

When Round 2 ratings were complete, Measured Progress staff members calculated the statistics described above and discussed the results with SDE staff. During this discussion, a lack of agreement was noted among some panelists, especially regarding the bookmark associated with the placement of the Advanced cut. This provided an opportunity for Measured Progress and SDE staff to return to the panels for the purpose of clarifying and confirming the judgmental task—answering for each item, "Would at least two out of three students performing at the borderline of the current PLD answer this item correctly?"

3.8.4 Round 3 Judgments and Results

The purpose of Round 3 was for panelists to gather in a single group, regardless of domain-specific expertise, to discuss their Round 2 placements and, if necessary, to revise their ratings. Prior to the discussions, the panelists were separated into domain-specific groups and presented with the median cuts based on Round 2 results. A Measured Progress psychometrician presented the information and explained how to use it, as described in Round 2. Additionally, SDE staff members presented condensed versions of the educational context information originally provided during the opening session.

Following the domain-specific presentations, the panelists were gathered into a single group. During this discussion, domain-specific information was combined and presented according to the entire CCRA Science assessment and content. The lead facilitator, David Harrison, led an extended discussion of the Round 2 results as they applied to the entire CCRA Science form: walking the panelists through the complete ordered item booklet (i.e., LS and PS items), focusing on the KSAs needed for each item and how they related to the overall PLDs, and facilitated synthesis of the borderline definitions into overall concepts of borderline students. In addition, the discussion explored the differences in cut point placement among panelists and across domains. After the discussions, panelists were given another opportunity to revise their bookmark placements, this time considering the entirety of CCRA Science. Once again, the facilitator reminded the panelists to place the bookmarks according to their individual best judgment, and that it was not necessary for them to reach a consensus. When Round 3 ratings were complete, Measured Progress staff members once again calculated the statistics described previously and reviewed these results with SDE staff.

When Round 3 ratings were complete, Measured Progress staff members calculated the usual statistics though in the context of CCRA Science and not separated by domain. The results were discussed with SDE staff, noting a lack of agreement among some panelists – though less so than round 2 – especially regarding the bookmark associated with the placement of the Advanced cut. This provided an opportunity for Measured Progress and SDE staff to return to the panels for the purpose of clarifying and confirming the judgmental task—answering for each item, "Would at least two out of three students performing at the borderline of the current PLD answer this item correctly?"

3.8.5 Round 4 Judgments and Results

Due to the separation of panelists into domain-specific groups in the first two rounds, a fourth round of judgments was planned as part of the standard-setting process, in order to review the results of Round 3

and introduce impact data (the percentage of students in each performance level using the Round 3 cuts). Following the introduction of impact data, the panelists met as a single group to discuss their Round 3 placements and, if necessary, revise their individual ratings

Prior to the discussions, a Measured Progress psychometrician presented the panelists with the median cuts based on Round 3 results, as well as the associated impact data. The lead facilitator then led an extended discussion of the Round 3 results. After discussion, panelists were given a final opportunity to revise their bookmark placements. When Round 4 ratings were complete, Measured Progress staff members once again calculated the various associated statistics.

A summary of the results is provided in Table 3-2, reporting final median cut points on the theta scale and impact data (percentage of students in performance level; percentage of students at-or-above performance level), respectively. Note that disaggregated impact data broken down by demographics are provided in Appendix G.

Table 3-2: CCRA Science Standard Setting: Round 4 Results

Statistic	Below Basic	Basic	Proficient	Advanced
Theta Scale Cuts	-1.52	0.17	0.80	1.53
Percentage of Students at/in Performance Level	53.30%	20.70%	18.10%	7.90%
Percentage of Students at/above Performance Level	100.00%	46.70%	26.00%	7.90%

Chapter 4. Tasks Completed After the Standard-Setting Meeting

Upon conclusion of the standard-setting meeting, several important tasks were completed. These tasks centered on the following: reviewing the standard-setting process and addressing issues presented by the outcomes; presenting the results to the SDE; and making any final revisions or adjustments based on policy considerations, under direction of the SDE.

4.1 Analysis and Review of Panelists' Feedback

The measurement literature sometimes considers the evaluation process to be another product of the standard-setting process (e.g., Reckase, 2001), as it provides important validity evidence supporting the cut points that are obtained. To provide evidence of the participants' views of the standard-setting process, panelists were asked to complete questionnaires after the practice round, after the completion of Round 1, and at the end of the meeting.

After the evaluation forms were completed, panelists' responses were reviewed. This review did not reveal any anomalies in the standard-setting process or indicate any reason that a particular panelist's data should not be included when the final cut points were calculated. In general, participants felt that the recommended cut points were appropriate and that their judgments were based on appropriate information and decision making. The results of the evaluations are presented in Appendix E.

4.2 Policy Adjustments

After all standard-setting activities had been completed and all materials reviewed, the SDE recommended no adjustments to the Round 4 cuts as recommended by panelists at the standard-setting meeting. The full set of cuts as shown in Table 3-2 were presented to the CEQA and approved for use assigning students to performance levels in the 2018–2019 CCRA science assessment.

4.3 Preparation of Standard-Setting Report

Following the final compilation of standard-setting results, Measured Progress prepared this report, which documents the procedures and results of the 2019 standard-setting meeting that was held to establish performance standards for the assessment.

REFERENCES

- American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (1999). Standards for educational and psychological testing. Washington, DC: American Educational Research Association.
- American Educational Research Association, American Psychological Association, National Council on Measurement in Education. (2014). Standards for Educational and Psychological Testing. Washington, DC: American Educational Research Association.
- Cizek, G. J., & Bunch, M. B. (2007). Standard setting: Establishing and evaluating performance standards on tests. Thousand Oaks, CA: Sage Publications.
- Lewis, D.M., Mitzel, H.C., & Green, D.R. (1996). Standard setting: A bookmark approach. In D.R. Green (Chair), *IRT-based standard setting procedures utilizing behavioral anchoring*. Symposium conducted at the Council of Chief State School Officers National Conference on Large-Scale Assessment, Phoenix, AZ.
- Measured Progress (2015). Oklahoma Core Curriculum Tests Geography: Standard Setting Report. Dover, NH: Measured Progress.
- CTB/McGraw-Hill. (2013). Oklahoma School Testing Program: Standard Setting Technical Report for OCCT Grades 5 and 8 Science and Writing. Monterey, CA: Author.
- CTB/McGraw-Hill. (2014). Oklahoma State Testing Program: Standard setting technical report for OSTP Grade 5 Social Studies, Grade 8 U.S. History, and End-of-Instruction U.S. History. Monterey, CA: Author.
- Mitzel, H.C., Lewis, D.M., Patz, R.J., & Green, D.R. (2000). The Bookmark Procedure: Cognitive Perspectives on Standard Setting. In G.J. Cizek (Ed.), *Setting Performance Standards: Concepts, Methods, and Perspectives*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Reckase, M.D. (2001). Innovative methods for helping standard-setting participants to perform their task: The role of feedback regarding consistency, accuracy, and impact. In G. J. Cizek (Ed.), *Setting performance standards: concepts, methods, and perspectives* (pp. 159–173). Mahwah, NJ: Lawrence Erlbaum Associates.
- U.S. Department of Education. (2009). Standards and assessments peer review guidance: Information and examples for meeting requirements of the No Child Left Behind Act of 2001. Washington, DC: U.S. Department of Education Office of Elementary and Secondary Education. Retrieved June 10, 2010, from the World Wide Web: www2.ed.gov/policy/elsec/guid/saaprguidance.pdf.

APPENDICES

APPENDIX A—POWERPOINT PRESENTATION

Welcome!



Oklahoma Career and College Readiness Assessment (CCRA)

Standard Setting Science June 5-6, 2019

Today's Agenda

- 1. Context and Policy Introduction
- 2. Standard Setting Process



Oklahoma State Department of Education Staff

Craig Walker
Executive Director of State Assessments



Assessment Report 2017

Oklahoma Legislature directed the State Board of Education to:

 Evaluate Oklahoma's current state assessment system, and make recommendations for its future.

As a result, Oklahoma State Department of Education:

- Held regional meetings across the state to determine stakeholder concerns
- Convened the Oklahoma Assessment & Accountability Task Force to develop recommendations
- Followed the federal requirements and rules as described in ESSA



Recommendations from the Task Force for CCR Assessments

- Score Interpretation
 - Support criterion-referenced interpretations (i.e., performance against the OAS) and report individual claims appropriate for high school students;
 - Provide a measure of performance indicative of being on track to <u>College and Career Readiness</u> (CCR).
 - (1) supported using theoretically related data in standardsetting activities (e.g., measures of college readiness and other nationally available data) and
 - (2) validated empirically using available postsecondary data linking to performance on the college-readiness assessment;



Goals for Oklahoma Schools

- Focus on college- and career- readiness:
 College and career ready means that students graduate from high school prepared to enter and succeed in postsecondary opportunities whether college or career.
- **Students** should graduate high school ready for postsecondary success and need to demonstrate they are on-track toward that goal.



Individual Career Academic Plan

Student-driven, multi-measures approach representing indications of college- and career-readiness

- Students' coursework, learning and assessment results
- Students' postsecondary plans, aligned with their career, academic and personal/social goals and financial reality
- Students' records of college- and career-readiness activities



Oklahoma Statute on Performance Levels

The Commission for Educational Quality and Accountability shall determine and adopt a series of student **performance** levels and the corresponding cut scores pursuant to the Oklahoma School Testing Program Act.

 The Commission for Educational Quality and Accountability shall have the authority to set cut scores using any method which the State Board of Education was authorized to use in setting cut scores prior to July 1, 2013.



Oklahoma Statute on Performance Levels

- The **performance levels** shall be set by a method that indicates students are ready for the next grade, course, or level of education, as applicable.
- The Commission for Educational Quality and Accountability shall establish
 panels to review and revise the performance level descriptors (PLDs) for
 each subject and grade level.
- The Commission shall ensure that the criterion-referenced tests developed and administered by the State Board of Education pursuant to the Oklahoma School Testing Program Act in grades three through eight and the tests administered at the high school level are vertically aligned by content across grade levels to ensure consistency, continuity, alignment and clarity.



Content Standards and PLDs

Academic Content Standards (OAS-S)

define what the State expects all students to know and be able to do.*

Academic Achievement Standards (PLDs)

define levels of student achievement on the assessments.*

*U.S. Department of Education Peer Review of State Assessment Systems Non-Regulatory Guidance for States, September 25, 2015



More about PLDs

PLDs provide a narrative account of the knowledge, skills, and abilities **demonstrated by** students in each level of achievement.

PLDs describe what students know and are able to do based on the OAS.

PLDs inform
stakeholders of
how to interpret
student test scores
in relation to the
OAS

PLDs are typically used for standard setting and score reporting.



Purpose and Use of PLDs

PLDs define the intended interpretations of test scores

Purposes of PLDs

- Inform standard setting
- Inform score interpretation

OK SDE uses for PLDs

- Item and test development
- Standard setting
- Score interpretation



Structure of PLDs for Science

Include the language from the SEP, DCI, and CCC

Science PLDs

Arranged by the Science and Engineering Practices

Incorporates the knowledge, skills, and abilities in each PE



Anatomy of a Science PLD

PS1-1 Proficient: PS3-2 Performance Level Standard/s SEP: Students demonstrate mastery with subject Develop and Use Models matter and exhibit readiness for college and career. Students scoring at the Proficient level DCI typically use patterns and models to predict how PS1.A Structure and components between or within systems are Properties of Matter related to the energy of motion and the structure PS3.A Definitions of and properties of matter, and the relationships Energy CCC between energy and matter. Patterns PLD Knowledge, Skills, and **Energy and Matter** Abilities (KSAs)



OK CCRA Science

Standard Setting

Measured Progress Staff

- Julie DiBona Lead Program Manager, Client Services
- Matthew Gushta Director, Research & Analytics
- Frank Padellaro Psychometrician
- David Harrison Content Manager, Content Development – State
- Katie Schmidt Content Specialist II, Content Development - State

Housekeeping

- Folder review
 - Content material
 - Administrative forms
- Secure materials
 - Signing out
 - No electronics
- Use of laptops
 - Only use sites you are directed to
 - Do not log out

The Standard Setting Process

Content Standards vs. Performance Standards

- Content standards = "What"
 - Describe the knowledge and skills students are expected to demonstrate by content area and grade
- Performance standards = "How well"
 - Describe attributes of student performance based on Performance Level descriptors

What is Your Job?

- To recommend cut scores for each of the performance levels that will be used to report results:
 - Below Basic
 - Basic
 - Proficient
 - Advanced

Cut Score

——— Cut Score

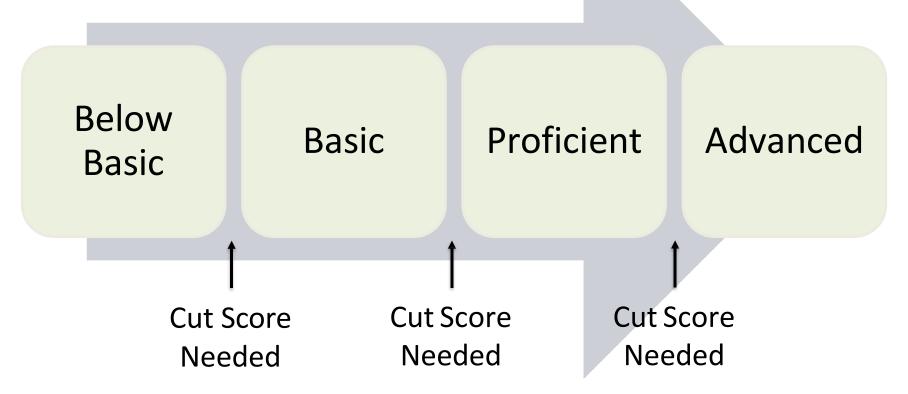
Cut Score

What are we Trying to Determine?

- What knowledge, skills, and abilities (KSAs) need to be demonstrated to be classified in each Performance Level?
- How much is enough?
- What test performance corresponds to:
 - Below Basic
 - Basic
 - Proficient
 - Advanced

Performance Continuum

Based on Proficiency Level
Descriptions, you will recommend a
series of cut scores...



General Phases of Standard Setting

Data Collection

 Your recommendations will be reviewed and presented to the policy makers responsible for final adoption of the cut scores.

Policy/Decision Making

 The recommendations may be accepted, rejected, or modified by the Commission for Educational Quality and Accountability (CEQA).

Overview of Standard Setting Method

- We will cover implementation of the Bookmark standard setting procedure
- This session is intended to be an overview
- Your facilitator will give you more details and guide you through the process step by step.

Factors that Influence Selection of Standard Setting Method

- Prior usage and history
- Recommendation or requirement by policy making authority
- Type of assessment(s)

-

-

Bookmark method chosen

What is the Bookmark Method and How Does It Work?

- A collection of test items is arranged in an Ordered Item Booklet (OIB)
 - Based on statistical analysis.
 - From easiest to most difficult.
- Panelists place one or more "bookmarks" in that OIB to recommend cut scores.

Important Terms to Know

- Performance Levels
- Test items
- "Borderline" students
- Knowledge, skills, and abilities (KSAs)
 needed to answer each test question
- Cut scores

Performance Levels

- Individual review of Performance Level Descriptors (PLDs)
- Group discussion of what student performance in each Performance Level looks like.
- Focus on the "borderline" students, i.e., students who just barely make it into Performance Level.

Develop Borderline Descriptions

- Create bulleted lists of
 - Knowledge, skills, and abilities (KSAs) a student must demonstrate to be classified in each Performance Level, and
 - Knowledge, skills, and abilities that <u>distinguish</u> one Performance Level from another.
- You must reach consensus as a group about the KSAs that define borderline student performance.

How to Place a Bookmark

- Start at the beginning of the OIB.
- Evaluate whether at least two thirds of the students who demonstrate knowledge and skills at the borderline of Proficient would correctly answer the item
- If Yes, move on to the next item.
- Place the bookmark where you think at least two thirds of the Proficient "borderline" students would no longer correctly answer the item.

How to Place a Bookmark

Item Number	Would at least two-thirds of borderline Proficient students correctly answer this item?		
1	Yes		
2	Yes		
3	Yes		
4	Yes		
5	Yes		
6	No		
7	Yes		
8	Yes		
9	No		
10	No		
11	No		
12	No		
13	No		
14	No		
15	No		
	No		

How to Place a Bookmark

- You will have opportunities to discuss your bookmark placements and change them, if desired.
- Place one bookmark for each cut score (between the Performance Levels).

Before You Place the Bookmarks

- Take the test to familiarize yourself with the test taking experience.
- Review the OIB.
- Use the item map form to identify KSAs specific to each item.

Item Order	What knowledge and skills does this item measure?	Why is this item more difficult than the preceding item?
1		
2		
3		
4		
5		
6		
7		
8		

- Review and discuss Performance Levels.
- Develop definition of "borderline" for Below Basic, Proficient, and Advanced.

The Practice Round

- Before placing actual bookmarks, you will have an opportunity to practice the method with a set of practice items.
- You will be given an OIB with approximately 10 items to practice the bookmark placement for the cut point between Basic and Proficient.

Check for Understanding

- Your facilitator will check with you for understanding and answer any questions you may have during and after the practice round.
- You will then complete a training evaluation form which serves as readiness check before proceeding.

Domain-Specific Bookmark Placement

- Round 1 (Without Discussion)
 - Work through the ordered item booklet.
 - Place bookmarks between the items as appropriate.
- Round 2 (With Group Discussion)
 - Discuss the first-round bookmark placements (focus on the KSAs).
 - Examine your cut points in relation to the group results.
 - Review and revise placement of bookmarks as appropriate.

Overall Science Bookmark Placement

- Round 3 (With Group Discussion)
 - Discuss the second-round bookmark placements (focus on the KSAs).
 - Examine your cut points in relation to the group results and impact data.
 - Review and revise placement of bookmarks as appropriate.
- Round 4 (With Group Discussion)
 - Discuss the third bookmark placements (focus on the impact data).
 - Examine your cut points in relation to the group results and impact data.
 - Review and revise placement of bookmarks as appropriate.

External Assessment Data

- Information from prior OSTP assessments in grades 3-8 included as a validity check
- A region of the item map is shaded that corresponds to projected proficiency percentages, with a range of +/- 2SEMs around that point.
- Within this region is where the Proficient bookmark should be placed.
- Your facilitator will give additional training and guidance on the usage of this data.

External Assessment Data

Example Item Map with Shading

Item Order	What knowledge and skills does this item measure?	Why is this item more difficult than the preceding item?
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		

Role of the Facilitator

- Lead and keep the group on track.
- Ensure that all panelists clearly understand the procedures.
- Ensure that the evaluation forms are completed.
- Your honest feedback is important!

A Few Reminders

- It is not necessary for panelists to reach consensus as to how the items should be assigned to Performance Levels.
- You may or may not change your mind as a result of the discussions.
- Process is focused solely on recommending cut scores.
- The Performance Levels and their definitions are not open for debate.
- Items are operational and fixed.
- Panelists' recommendations are vital, but final cut score decisions will be made by the Commission of Educational Quality and Accountability (CEQA).

Each Panelist Must

- Use his or her own best judgment in each round of rating.
- Be open-minded when listening to your colleagues' rationales for their ratings.
- Complete an evaluation form at the end of the process.
- Participate in the entire process or his/her judgments will be discounted.
- Use cell phones only during breaks.
- Arrive on time after breaks and each day.

What's Next?

- Take the Test
- Domain-Specific Work
 - Complete Item Map Form
 - Discuss the Performance Levels
 - Practice, Rounds 1 & 2
- Overall Science Work
 - Rounds 3 & 4
- Final Evaluation

Any Questions?

Thank you.

APPENDIX B—INSTRUCTIONS FOR FACILITATORS

GENERAL INSTRUCTIONS FOR STANDARD SETTING GROUP FACILITATORS

CCRA Science June 5-6, 2019

Single-Group Activity

General Orientation

The Standard Setting activities begin with all panelists in one large group, facilitated by the lead facilitator.

Take the Test

Overview: In order to establish an understanding of the test items and for panelists to gain an understanding of the experience of the students who take the test, each participant will take the test. Panelists may wish to discuss or take issue with the items in the test. Tell them we will gladly take their feedback to the SDE. However, this is the actual assessment that students took, and it is the set of items on which we must set standards.

- 1) Introduce the assessment and convey/do each of the following:
 - a. Tell panelists that they are about to take an actual OSTP assessment.
 - b. The purpose of the exercise is to help them establish a good understanding of the test items and to gain an understanding of the experience of the students who take the assessment.
- 2) Distribute a computer to each panelist
- 3) Ensure each panelist is able to login to the eMetric Portal and begin the assessment
- 4) Tell panelists to try to take on the perspective of a student as they complete the test. The expectation is that they will spend no more than 30 minutes on this task.
- 5) When the majority of the panelists have finished, pass out the answer key/scoring rubrics.

Domain-Specific Panels: Preparation

Split into Smaller Panels

Overview: After the general orientation, panelists will convene into two smaller standard setting panels according to domain (Life Sciences or Physical Sciences) for which they will be setting standards. Domain-specific standard setting activities will first occur, allowing for close consideration of the distinct content within CCRA Science. These panels will reconvene at a later point in the meeting in order to set a single set of cut-points.

Preliminaries

- 1. Welcome group, introduce yourself (name, affiliation, a little selected background information).
- 2. Have each participant introduce him/herself.
- 3. Ask each participant to sign a nondisclosure form. Do not proceed until a signed nondisclosure form has been collected from each participant.
- 4. Note that while panelists are making their recommendation for the cut scores, the Commission for Education Quality and Accountability make the final cut decision. The decision is almost always within a range around the recommended cut.

Fill Out Item Map Form

Overview: The primary purpose of this activity is for panelists to think about what knowledge, skills and abilities (KSAs) are measured by each item as well as what makes one question harder or easier than another. The notes panelists take here will be useful in helping them place their bookmarks and in discussions during the rounds of ratings.

On the item map form there is a shaded region based on projections derived from previous assessment. This is the region panelists should consider for the placement of the Proficient bookmark. The shaded region corresponds to a projection based on expected proficiency with a range of +/- 2 SEMs around that point.

- 1. Prepare the materials
 - a. Ensure each panelist can open and view item map form (computer)
 - b. Distribute the domain-specific ordered item book
- 2. Review the domain-specific ordered item book and item map form (computer) with the panelists. Explain what each is, and point out the correspondence of the ordered items between the two. Explain that the items are statistically ordered from easiest to hardest, based on student performance from the most recent administration of the assessment.
- 3. Tell panelists that the shaded region represents a projection or expectation based on other assessment information, including prior-grade assessment results. During the actual standard setting activity, the Proficient bookmark placement should be set within this range. This information is not critical for the current activity.

- 4. Tell panelists they will work individually at first. After they have completed the item map form, they will then discuss it as a group.
- 5. Starting with the first item, they will record for each item:
 - a. The knowledge, skills and abilities (KSAs) the item measures, and
 - b. their thoughts about what makes that question harder than the previous question.
- 6. Panelists should not agonize over these decisions. It may be that the second item is only slightly harder than the first. Panelists should keep in mind that the purpose of the task is to record notes that will be useful to them in completing their ratings and not necessarily to fill in every space on the form.
- 7. Once panelists have completed the item map form, they should discuss them as a group.
- 8. Based on the group discussion, the panelists may modify their own item map form (make additional notes, cross things out, etc.)

Discuss Performance Level Definitions and Describe Characteristics of the "Borderline" Student

Overview: In order to establish an understanding of the expected performance of borderline students on the test, panelists must have a clear understanding of:

- 1) Specific interpretation of the performance levels within their current domain (Life Sciences or Physical Sciences), and
- 2) Characteristics of students who are "just able enough" to be classified into each level above Below Basic within a specific domain. These students will be referred to as borderline students, since they are right on the border between levels.

The purpose of this activity is for the panelists to obtain an understanding of the domain-specific Performance Level Definitions with an emphasis on characteristics that describe students at the borderline within a specific domain -- both what these students can and cannot do.

This activity is critical since the ratings panelists will be making will be based on these understandings.

Preparation:

1. Use 3 sheets of chart paper and label the top of each one: Borderline Basic, Borderline Proficient and Borderline Advanced.

- 1) Introduce the task. In this activity they will:
 - a. individually review the domain-specific Performance Level Descriptors again as needed:

b. generate group descriptions of borderline Basic, Proficient and Advanced students.

The facilitator should compile the descriptions as bulleted lists on chart paper; the chart paper will then be posted so the panelists can refer to the lists as they go through the bookmark process.

- 2) Check to see if panelists want to discuss the performance levels again. Once they have a solid understanding of the PLDs, have them focus their discussion on the knowledge, skills, and abilities of students who are in the Proficient category, but just barely. The focus should be on those characteristics and KSAs that best describe the lowest level of performance necessary to warrant Proficient classification.
- 3) After discussing Proficient, have the panelists discuss characteristics of the borderline Basic student and then characteristics of the borderline Advanced student. Panelists should be made aware of the importance of the Proficient cut. This is the cut from non-proficient to just barely proficient.
- 4) Using chart paper, generate a bulleted list of characteristics for each of the levels. Post these on the wall of the room. Make sure that panelists agree on the bulleted characteristics and have a common understanding.

Practice Round

Overview of Practice Round: The primary purpose of the Practice Round is for panelists to become familiar with the task of placing the bookmarks. The facilitator will walk the panelists through the Proficient bookmark placement on the practice set, engage the panelists in a readiness discussion and check for understanding. If any of the panelists indicate an incomplete understanding of the practice rating task, then the facilitator will continue to work with the panelists to clarify any misconceptions before proceeding to Round 1.

- 1. Make sure panelists have the following materials:
 - a. Domain-specific practice ordered item set
 - b. Domain-specific Performance Level Definitions
 - c. Access to the domain-specific practice rating form (computer)
- 2. Orient panelists to the domain-specific practice ordered item set. Point out the following:
 - a. Only items from the current domain are included in the item set;
 - b. Items are organized by difficulty from easiest to hardest.
 - c. The items represent the full range of difficulty included on the test.
 - d. Identify the items on the item map form that correspond to the practice ordered item set. Panelists can see their item map form entries on the practice rating form
 - e. Show panelists how to indicate their bookmark placement on the practice rating form (computer).

- 3. Give the panelists a few minutes to read through the items.
- 4. The facilitator leads the group through a discussion of the Proficient bookmark placement in the domain-specific practice OIB.
 - a. Referring to the ten ordered items in the practice set, the domain-specific Performance Level Definitions, and the bulleted lists of domain-specific borderline characteristics posted on chart paper, the facilitator will lead a discussion about the placement of the Proficient bookmark.
 - **b.** Panelists should consider the question: would at least two-thirds of the students performing at the borderline of Proficient answer the item correctly?
 - c. Where the answer changes from yes to no is where the bookmark should be placed.
 - d. Panelists should answer the above question for all items to check for anomalies.
 - e. Panelists should enter their bookmark placement on the practice rating form (computer)
 - f. Use the practice rating master sheet to show where each panelist placed their bookmark. Have a discussion of their ratings in the context of the ratings made by other members of their group. Ask the panelists to discuss the rationale for placement of the highest and lowest ratings. The group should get a sense of how much variation there is in the ratings.

Readiness Discussion

After the panelists have placed bookmarks in the domain-specific practice ordered item set, lead a readiness discussion by posing the following seven questions.

The purpose of this discussion is to determine how well each panelist understands the bookmark task, to correct any misunderstandings, and if necessary, to identify panelists whose ratings should be excluded from the standard setting if their understanding doesn't improve.

The "correct" answer for each of the question is listed directly under each question. Some common misunderstandings are also listed for questions one and two. Please watch for these typical misunderstandings and if they arise, redirect the panelists to the correct responses.

Make sure any questions or concerns are resolved prior to moving on.

- 1. What questions should you ask for each item?
 - Would at least two-thirds of the borderline students get this item correct?
 - Would at least two-thirds of the students who just barely fall in the criteria level of interest get this item correct?

Please watch for and correct the following misconceptions.

- Omission of two-thirds (stating all students is also incorrect)
- Omission of borderline (stating all students, or all students in the criteria level of interest is also incorrect)

- 2. What is meant by the "at least two-thirds" rule?
 - At least two-thirds of the borderline students would get items like this correct Please watch for and correct the following misconceptions.
 - All students falling in the performance level of interest have a one out of two chance of getting this item correct.
- 3. What population of students should you consider for each item?
 - Borderline students
 - Students who just barely fall in the performance level of interest
 - a. Does the target population of borderline students change as I progress through the items for the first bookmark? (NO)
 - b. Does the target population change as I progress to the next bookmark? (YES)
- 4. As you approach a bookmark, how do answers change?
 - The answer to "Would at least two-thirds of the borderline students get this item correct" should change from a "yes" to a "no"
- 5. How should your confidence in the answers affect your bookmark placement?
 - As you become less confident in a "yes" answer, the bookmark placement should be approaching.
 - Where you are least confident in your "yes" answer, suggesting a "no", is typically where the bookmark will be placed.
- 6. Does placing a bookmark after a certain page mean the student needs to get that many items correct on the assessment?
 - NO. The OIB page number is only an ordered index, and does not correspond to the number correct.
- 7. Should the population you are thinking about be the students in your classroom or school?
 - NO. You should be thinking about all of the students in the state.

NOTE: Make sure you collect all of the 'training' OIBs!

Standard Setting Practice Evaluation

After the panelists have placed bookmarks in the domain-specific practice ordered item set and you've completed the readiness discussion and answered any questions, have panelists fill out the training evaluation form. Before you start the Round 1 activities, scan the completed evaluations to see if there are any problems or concerns that need to be addressed before proceeding. **Make sure any questions or concerns are resolved prior to moving on.** Return the completed evaluations to the data analysis work room at the next convenient opportunity.

Domain-Specific Panels: Standard Setting

Round 1

Overview of Round 1: The primary purpose of Round 1 is to ask the panelists to make their initial judgments as to where the bookmark should be placed for each cut within their domain-specific OIB. For this round, panelists will work individually, without consulting with their colleagues. Beginning with the first ordered item in the domain-specific OIB, panelists will evaluate each item in turn. The panelists will gauge the level of difficulty of each of the items for those students who barely meet the definition of Proficient. The task that panelists are asked to do is to estimate whether a student performing at the borderline of Proficient, would answer each question correctly. More specifically, panelists should answer:

• Would *at least* two-thirds of the students performing at the borderline of Proficient answer the question correctly?

On the item map form there is a shaded region based on projections derived from previous assessments. This is the region panelists should consider for the placement of the Proficient bookmark. The shaded region corresponds to a projection based on expected proficiency with a range of +/- 2 SEMs around that point.

The Proficient bookmark placement must be between two shaded items. Should a panelist desire to set the bookmark outside the shaded region they will be asked to provide written justification.

The same process is then repeated for the [Below Basic/Basic] and [Proficient/Advanced] cuts.

- 1. Panelists should have their domain-specific ordered item booklets, and Performance Level Definitions. Instruct the panelists to open the procedural rating form (computer) and show how details from their individual item map descriptions have been carried forward to the rating form. Ensure each panelist is able to open their rating form before proceeding.
- 2. Have panelists confirm their ID number matches the ID number on their procedural rating form and item map form. The ID number is on the back of their table tent.
- 3. Provide an overview of Round 1, covering each of the following:
 - a. Orient panelists to the domain-specific ordered-item book. Remind them that the items are presented in order of difficulty, from easiest to hardest, for their current domain only.
- 4. Remind panelists the shaded region is derived from growth projections, and that the Proficient bookmark placement should be set in this range. Placing the bookmark outside the shaded region will require that the panelist provide brief written justification.

- b. The primary purpose of this activity is for the panelists to make their initial determination as to whether students whose performance is barely Proficient would correctly answer each item, and to place their bookmark where they believe the answer of 'yes' turns to 'no'. Remind panelists that they should be thinking about at least two-thirds of the borderline students. Once they have completed the process for the [Basic/Proficient] cut, they will proceed to the remaining two cut points starting with [Below Basic/Basic] and then the [Proficient/Advanced] cut.
- c. Each panelist needs to base his/her judgments on his/her experience with the content, understanding of students, and the definitions of the borderline students generated previously.
- d. One bookmark will be placed for each cut point. For CCRA there are 3 cut points and, therefore, three bookmarks will be placed ["Basic","Proficient","Advanced"]. Place the cut point number on the procedural rating form in the RND 1 column.
- e. If panelists are struggling with placing a particular bookmark, they should use their best judgment and move on. They will have an opportunity to discuss their ratings and make revisions in Rounds 2 and 3.
- 5. Tell panelists that they will be placing the bookmarks individually; they will have the option to discuss each cut point with the other panelists during Round 2. **It is not necessary for the panelists to come to consensus about where the bookmarks should be placed.**
- 6. Go over the rating form with panelists.
 - a. Lead panelists through a step-by-step demonstration of how to fill in the rating form.
 - b. Answer questions the panelists may have about the work in Round 1.
 - c. Once everyone understands what they are to do in Round 1, tell them to begin.
- 7. Starting with the first ordered item in the OIB and proceeding up to their bookmark placement for the [Basic/Proficient] cut point, the panelists will work through the OIB item by item and make their initial bookmark placements. Have panelists continue to examine five items past their placement to check for anomalies.
- 8. As panelists complete the task, ask them to carefully inspect their rating forms to ensure they are filled out properly.
 - a. The ID number must be filled in.
 - b. Exactly three cuts must be entered and identified "Basic", "Proficient" and "Advanced" on the procedural rating form in the RND 1 column.

- a. The cut points must be entered sequentially on the rating form (e.g., the bookmark for "Proficient" cannot be placed on an easier item in the OIB than the bookmark for "Basic" on the rating sheet).
- b. The "Proficient" bookmark placement should be between two shaded items on the item map form, or a written justification must be provided.
- c. Check each panelist's rating form before you allow them to leave for a short break.
- d. When all the rating forms have been validated, the group will take a break. Rating information for round 1 will be locked, so it cannot be changed.

Complete Procedural Evaluation Form

Make sure panelists fill out the procedural evaluation for the grade. Emphasize that their honest feedback is important. Return the completed evaluations to the data analysis work room at the next convenient opportunity. Collect the materials from the grade and mark them off on the Materials Tracking sheet.

Tabulation of Round 1 Results

Tabulation of Round 1 results will be completed by the data analysis team as quickly as possible after processing the rating forms.

Round 2

Overview of Round 2: In Round 2, the panelists will discuss their Round 1 placements as a group and then revise their ratings on the basis of that discussion. They will discuss their ratings in the context of the ratings made by other members of their group. Panelists should discuss the rationale for placement of the highest and lowest ratings. The group should get a sense of how much variation there is in the ratings. Panelists should also consider the question, "How tough or easy a rater are you?" The purpose here is to allow panelists to examine their individual expectations (in terms of their experiences) and to share these expectations and experiences in order to attain a better understanding of how their experiences impact their decision-making.

To aid with the discussion, the panelists will be provided with the median Round 1 bookmark placements for their group.

Once panelists have reviewed and discussed their bookmark placements, they will be given the opportunity to change or revise their Round 1 ratings.

- 1. Make sure the panelists have their domain-specific ordered item booklets, item map forms (computer), and Performance Level Definitions. Ensure each panelist is able to open their rating form.
- 2. A psychometrician will present and explain the following information to the panelists:
 - a. the median bookmark placements for the group based on the Round 2 ratings. This information is provided so panelists can get a sense of where they fall.

relative to the group median –if they are more stringent or more lenient than other panelists.

- 3. Provide an overview of Round 2. Remind panelists of the following:
 - a. As in Round 1, the primary purpose is to place bookmarks where you feel the criteria levels are best distinguished, considering the additional information and discussion.
 - b. Each panelist needs to base his/her judgments on his/her experience with the content area and specific domain, understanding of students, the definitions of the borderline students generated previously, discussions with other panelists and the knowledge, skills, and abilities (KSAs) required to answer each item.
- 4. The panelists will discuss their Round 1 ratings as a group, beginning with the Proficient cut point and followed by the Basic and Advanced cuts.
 - a. The discussion should focus on differences in where individual panelists in the group placed their bookmarks.
 - b. Panelists should be encouraged to listen to their colleagues as well as express their own points of view.
 - c. If the panelists hear a logic/rationale/argument that they did not consider and that they feel is compelling, then they may adjust their ratings to incorporate that information.
 - d. On the basis of the discussions, panelists should make a second round of ratings.
 - e. Remind panelists the shaded region is derived from growth projections and that the Proficient bookmark placement will be set in this range. The Proficient bookmark should be between two shaded items.
 - f. When placing their Round 2 bookmarks, panelists should not feel compelled to change their ratings.
 - g. The group does not have to achieve consensus. If panelists honestly disagree, that is fine. We are trying to get the best judgment of each panelist. Panelists should not feel compelled or coerced into making a rating they disagree with.

Encourage the panelists to use the discussion and feedback to assess how stringent or lenient a judge they are. If a panelist is consistently higher or lower than the group, they may have a different understanding of the borderline student than the rest of the group, or a different understanding of the Performance Level Definitions, or both. It is O.K. for panelists to disagree, but that disagreement should be based on a common understanding of the Performance Level Definitions.

- 5. As the group is conducting their discussions, circulate around the room to ensure that the discussions are staying on topic, the panelists understand the task, and that all panelists are participating appropriately in the discussion.
- 6. When all panelists in each group have completed their second ratings, **carefully inspect the rating forms** to ensure they are filled out properly.
 - a. The ID number must be filled in correctly.
 - **b.** Exactly three cuts must be entered and identified "Basic", "Proficient" and "Advanced" on the procedural rating form.
 - c. The cut points must be entered sequentially on the rating form (e.g., the bookmark for "Proficient" can't come before the bookmark for "Basic" on the rating sheet).
 - d. The "Proficient" bookmark placement should be between two shaded items on the item map form. If it is outside the shaded region, a written justification must be provided.
 - e. Check each panelist's rating form before you allow them to leave for a short
 - f. break.
 - g. When all the rating forms have been validated, the group will take a break. Rating information for round 2 will be locked, so it cannot be changed.

Single-Group Activity: Standard Setting

Round 3

Overview of Round 3: At the conclusion of Round 2 discussions, the complete Science panel will be reassembled from the domain-specific Life Sciences and Physical Sciences panels. Subsequent standard setting activities will be conducted with the entire panel. The primary purpose of Round 3 is to ask the complete Science panel to discuss their Round 2 placements as a group. However, unlike in Round 2, in Round 3 the panelists will have the opportunity to discuss the impact of their domain-specific bookmark placements against overall Science performance and to revise the cut-points based on that discussion. The goal of these discussions is for panelists to resolve the cut-points determined separately by domain, considering whether the percentage of students in each achievement level category seems reasonable.

To aid with the discussion, a psychometrician will present the following information to the panelists:

- 1. The group median Round 2 bookmark placements for each domain;
- 2. Impact data, showing the approximate percentage of students statewide that would be classified into each performance level category based on the room median bookmark placements from Round 2 for each domain; and
- 3. Standard error information, this will demonstrate to the panelists the amount of variability present in the cut scores expressed in real-world terms. Both Median Absolute Deviation (How much disagreement among panelists) and Conditional Standard Error (Measure of error in assessment) data will be provided. A range of impact data for each cut will be determined for +/-1 SE around the cut score for each of these.

Once panelists have reviewed and discussed their bookmark placements and the impact data, they will be given the opportunity to change or revise their Round 2 ratings.

- 1. Make sure the panelists have their complete Science ordered item booklets, item map forms (computer), and Performance Level Definitions. Ensure each panelist is able to open and access their Round 3 and 4 procedural rating form.
 - a. The rating form for Rounds 3 and 4 (computer) is a different worksheet than for Rounds 1 and 2.
 - b. The rating form continues to include the shaded region for guiding placement of the Proficient bookmark and includes colored regions for the range of domain-specific bookmark placements. Yellow indicates the range of Basic bookmarks, green indicates the range of Proficient bookmarks, and blue indicates the range of Advanced bookmarks. For example, a yellow region indicates the Life Sciences bookmark placement, the Physical Sciences bookmark placement, and any pages or items that are between the two.

- 2. A psychometrician will present and explain the following information to the panelists:
 - a. the median bookmark placements for the group based on the Round 2 ratings. Based on their Round 2 rating form, panelists will know where they fall relative to the group median. This information is provided so panelists can get a sense if they are more stringent or more lenient than other panelists.
 - b. Impact data, showing the approximate percentage of students statewide that would be classified into each performance level category based on the room median bookmark placements for each domain. Panelists will use this information as a "reasonableness check." In other words, they will discuss whether the percentages in each level seem reasonable, based on their knowledge of the test and the current status of students across the state relative to the Performance Level Definitions. If the answer is no, panelists may choose to make adjustments to one or more of their bookmark placements. Panelists may decide to select bookmarks resulting from either domain or select an entirely new bookmark between the domain-specific bookmarks. To facilitate these discussions and decisions, the panelists will be provided with an overall Science OIB which will include both Life and Physical Science items as administered on the core operational form. To facilitate the identification of an appropriate bookmark, panelists will be instructed to consider only those items in the OIB that appear between the domain-specific bookmarks.
 - c. Standard error information, this will demonstrate to the panelists the amount of variability present in the cut scores expressed in real-world terms. Both Median Absolute Deviation (How much disagreement among panelists) and Conditional Standard Error (Measure of error in assessment) data will be provided. A range of impact data for each cut will be determined for +/-1 SE around the cut score for each of these.
- 3. Provide an overview of Round 3. Remind panelists of the following:
 - a. As in Round 2, the primary purpose is to place bookmarks where you feel the performance levels are best distinguished, considering the additional information and further discussion.
 - b. Each panelist needs to base his/her judgments on his/her experience with the content area, understanding of students, the definitions of the borderline students generated previously, discussions with other panelists, the knowledge, skills, and abilities required to answer each item, and the consensus and impact data.
 - c. The panelists will discuss their domain-specific ratings, beginning with the Proficient cut point and followed by the Basic and Advanced cuts.
 - d. The discussion should focus on differences in where individual panelists placed their bookmarks.

- e. Panelists should be encouraged to listen to their colleagues as well as express their own points of view.
- f. If the panelists hear a logic/rationale/argument that they did not consider and that they feel is compelling, then they may adjust their ratings to incorporate that information.
- g. On the basis of the discussions, panelists should make a third round of ratings.
- h. Remind panelists the shaded region is derived from growth projections and that the Proficient bookmark placement will be set in this range. The Proficient bookmark must be between two shaded items or a written justification must be provided by the panelist.
- i. Remind panelists additionally that the yellow, green, and blue shaded regions indicate the domain-specific bookmark placements. The complete Science bookmarks for Basic, Proficient, and Advanced should be placed within those ranges, or a written justification must be provided.
- j. Because of the combination of domain-specific OIBs and the need to make a judgement about overall Science performance, it is likely that panelists will change their bookmark placement from the previous round.
- k. The group does not have to achieve consensus. If panelists honestly disagree, that is fine. We are trying to get the best judgment of each panelist. Panelists should not feel compelled or coerced into making a rating they disagree with.
- Write brief notes on any notable discussions of the process, any particular sticking points or issues, or key rationales had in their judgments. These do not need to formal but will be useful if the client has questions regarding the process.
- 4. When all panelists have completed their second ratings, **carefully inspect the rating forms (computer)** to ensure they are filled out properly.
 - a. The ID number must be filled in correctly.
 - b. Exactly three cuts must be entered and identified "Basic", "Proficient" and "Advanced" on the procedural rating form.
 - c. The cut points must be entered sequentially on the rating form (e.g., the
 - d. bookmark for "Proficient" can't come before the bookmark for "Basic" on the
 - e. rating sheet).
 - f. The "Proficient" bookmark placement should be between two shaded items on the item map form. If it is outside the shaded region, a written justification must be provided.

- g. Check each panelist's rating form before you allow them to leave for a short
- h. break.
- i. When all the rating forms have been validated, the group will take a break. Rating information for round 3 will be locked, so it cannot be changed.

Round 4

Overview of Round 4: The primary purpose of Round 4 is to ask the panelists to discuss their Round 3 placements as a group and to give them one last opportunity to revise their ratings on the basis of that discussion. As in Round 3, they will discuss their ratings in the context of the ratings made by other members of the group.

To aid with the discussion, a psychometrician will present the following information to the panelists:

- 1. The group median Round 3 bookmark placements for Science overall, and
- 2. Impact data, showing the approximate percentage of students statewide that would be classified into each performance level category based on the room median bookmark placements from Round 3 for Science overall.
- 3. Standard error information, as before.

Once panelists have reviewed and discussed their bookmark placements and the impact data, they will be given the opportunity to change or revise their Round 3 ratings.

- 1. Make sure the panelists have their ordered item booklets, item map forms (computer), and Performance Level Definitions. Ensure each panelist can open their procedural rating form.
- 2. A psychometrician will present and explain the following information to the panelists:
 - a. the median bookmark placements for the group based on the Round 3 ratings. Based on their Round 3 rating form, panelists will know where they fall relative to the group median. This information is provided so panelists can get a sense if they are more stringent or more lenient than other panelists.
 - b. Impact data, showing the approximate percentage of students statewide that would be classified into each performance level category based on the room median bookmark placements. Panelists will use this information as a "reasonableness check." In other words, they will discuss whether the percentages in each level seem reasonable, based on their knowledge of the test and the current status of students across the state relative to the Performance Level Definitions. If the answer is no, panelists may choose to make adjustments to one or more of their bookmark placements.

Standard error information, this will demonstrate to the panelists the amount of variability present in the cut scores expressed in real-world terms. Both Median Absolute Deviation (How much disagreement among panelists) and Conditional Standard Error (Measure of error in assessment) data will be provided. A range of impact data for each cut will be determined for +/-1 SE around the cut score for each of these.

- 3. Provide an overview of Round 4. Remind panelists of the following:
 - a. As in Round 3, the primary purpose is to place bookmarks where you feel the performance levels are best distinguished, considering the additional information and further discussion.
 - b. Each panelist needs to base his/her judgments on his/her experience with the content area, understanding of students, the definitions of the borderline students generated previously, discussions with other panelists and the knowledge, skills, and abilities required to answer each item.
 - c. The panelists will discuss their Round 3 ratings, beginning with the Proficient cut point and followed by the Basic and Advanced cuts.
 - d. The discussion should focus on differences in where individual panelists placed their bookmarks.
 - e. Panelists should be encouraged to listen to their colleagues as well as express their own points of view.
 - f. If the panelists hear a logic/rationale/argument that they did not consider and that they feel is compelling, then they may adjust their ratings to incorporate that information.
 - g. On the basis of the discussions, panelists should make a fourth round of ratings.
 - h. Remind panelists that the shaded regions for Proficient, Basic, and Advanced should guide placement of their bookmarks. Placement outside these ranges will require brief written justification.
 - i. When placing their Round 4 bookmarks, panelists should not feel compelled to change their ratings.
 - j. The group does not have to achieve consensus. If panelists honestly disagree, that is fine. We are trying to get the best judgment of each panelist. Panelists should not feel compelled or coerced into making a rating they disagree with.
 - k. Write brief notes on any notable discussions of the process, any particular sticking points or issues, or key rationales had in their judgments. These do not

need to formal but will be useful if the client has questions regarding the process.

- 4. When all panelists have completed their fourth ratings, carefully inspect the rating forms (computer) to ensure they are filled out properly.
 - **a.** The ID number must be filled in.
 - **b.** Exactly three cuts must be entered and identified "Basic", "Proficient" and "Advanced" on the procedural rating form.
 - c. The cut points must be entered sequentially on the rating form (e.g., the
 - d. bookmark for "Proficient" can't come before the bookmark for "Basic" on the
 - e. rating sheet).
 - f. The "Proficient" bookmark placement should be between two shaded items on the item map form. If it is outside the shaded region, a written justification must be provided.
 - g. The standard setting team will now lock the round 4 ratings.

Complete Final Evaluation Forms

Make sure panelists fill out the final evaluations before they leave. Emphasize that their honest feedback is important.

APPENDIX C—PANELISTS

Panelists

Table C-1. 2019 OK Standard Setting Report: Science Panelists

Full Name	Email Address	Company	Invitation List	Status
Peters, Chanda	cpeters@woodwardps.net	Woodward	Physical Science	Accepted
Wright, Gayla	docgayla@cox.net	OERB	Physical Science	Accepted
Jones, Vanessa (cancelled)	jonesv@bethel.k12.ok.us	Bethel High School	Life Science	Accepted
Chaisson, Leiha	lchaisson1@cox.net	Mustang	Life Science	Accepted
Will, Tammy	tammywill@morrisonps.com	Morrison Public School	Physical Science	Accepted
Tamez, Jeramey	Jeramey.Tamez@yukonps.com	Yukon	Life Science	Accepted
Zumwalt, Ruth	ruth.zumwalt@edmondschools.net	Edmond Public Schools	Physical Science	Accepted
Richardson, Traci	trichardson@stillwaterschools.com	Currently Stillwater, but that will change	Life Science	Accepted
Schweitzer, Dawna	schweitzer.dawna@gmail.com	Retired	Life Science	Accepted
Shrauner, Jennifer	jshrauner@putnamcityschools.org	Putnam City	Life Science	Accepted
Gilmore, Paul	pgilmore@putnamcityschools.org	Putnam City	Physical Science	Accepted
Maier, Steve	sjmaier@nwosu.edu	Alva	Physical Science	Accepted

APPENDIX D—PERFORMANCE LEVEL DESCRIPTORS

Oklahoma School Testing Program Performance-Level Descriptors Grade 7 Geography: Eastern Hemisphere

ADVANCED: Students demonstrate superior understanding of challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the Advanced level will

- infer and apply information using a variety of geographic sources
- analyze the importance of Celebrate Freedom Week
- compare and contrast cultural, physical, and political regions; urban areas and countries
- analyze how human and physical characteristics affect regions over time
- evaluate the role of international organizations in conflict and cooperation
- identify and describe major landforms and bodies of water
- identify the causes of natural disasters and analyze their effects on human populations and the environment
- summarize and evaluate how countries/regions are categorized based on cultures, population locations, economic development, social and political structures, and standard of living measures
- analyze and predict the distribution of natural resources and the three sectors of the economy
- analyze how humans adapt to and change the natural environment
- evaluate governmental policies that address regional resource issues

PROFICIENT: Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade. Students scoring at the Proficient level will

- interpret information using a variety of geographic sources
- explain the importance of Celebrate Freedom Week
- identify and describe cultural, physical, and political regions; urban areas and countries
- explain how human and physical characteristics affect regions over time

- describe the role of international organizations in conflict and cooperation
- identify and describe major landforms and bodies of water
- identify the causes of natural disasters and explain their effects on human populations and the environment
- compare and contrast how countries/regions are categorized based on cultures, population locations, economic development, social and political structures, and standard of living measures
- identify and describe the distribution of natural resources and the three sectors of the economy
- explain how humans adapt to and change the natural environment
- describe governmental policies that address regional resource issues

LIMITED KNOWLEDGE: Students demonstrate partial mastery of the essential grade-level knowledge and skills. Students at the Limited Knowledge level will

- identify some information using a variety of geographic sources
- identify the importance of Celebrate Freedom Week
- identify or describe some of the cultural, physical, and political regions; urban areas and countries
- identify how some human and physical characteristics affect regions over time
- identify the involvement of some international organizations in conflict and cooperation
- identify and locate some major landforms and bodies of water
- identify some of the causes of natural disasters and explain some of their effects on human populations and the environment
- compare or contrast how some countries/regions are categorized based on cultures, population locations, economic development, social and political structures, and standard of living measures
- identify or describe the distribution of some natural resources and some sectors of the economy
- identify some ways humans adapt to and change the natural environment
- identify or describe some governmental policies that address regional resource issues

UNSATISFACTORY: Students have not performed at least at the Limited Knowledge level. Students at the Unsatisfactory level have not demonstrated gradelevel knowledge and skills.

Grade 3 Mathematics Performance Level Descriptors

Advanced: Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the **Advanced** level typically complete complex addition, subtraction, and multiplication problems and model division facts. Students order fractions using models and compose and decompose fractions related to the same whole. Students extend patterns and generate real-world situations to represent number sentences. Students determine volume and elapsed time. Students summarize complex data sets and analyze the data to solve problems. Students solve complex and nonroutine real-world problems, draw logical conclusions, and justify solutions.

Proficient: Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the **Proficient** level typically compare and order whole numbers. Students complete addition, subtraction, and multiplication problems and recognize the relationship between multiplication and division. Students construct and compare fractions using models. Students select the fewest number of coins for a given amount of money. Students determine rules to describe basic patterns. Students determine unknowns in equations and apply number properties. Students classify angles. Students sort three-dimensional figures and determine the perimeter of polygons. Students determine the area of two-dimensional figures. Students read and analyze length, temperature, and time. Students summarize a data set and analyze the data to solve problems. Students solve real-world problems and employ problem-solving strategies of identifying and using appropriate information.

Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the **Basic** level represent whole numbers. Students complete simple addition, subtraction, and multiplication problems. Students read and write fractions. Students determine the value of a set of coins or bills. Students determine rules to describe simple patterns. Students determine unknowns in simple equations. Students identify right angles. Students choose an appropriate instrument to measure an object. Students read and write time from a digital clock.

Below Basic: Students have not performed at least at the Basic level. Students scoring at the **Below Basic** level should be given comprehensive mathematical instruction.

Grade 3 English Language Arts Performance Level Descriptors

Advanced: Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the Advanced level consistently choose the best summary of the text and identify the main idea and key details. Students compare and contrast details in literary and nonfiction/informational texts to describe genres. Students frequently identify literary elements,

literary devices, and author's purpose and frequently distinguish fact from opinion. Students consistently infer whether a text is written in first or third person point of view.

Students consistently engage in a recursive writing process to create organized written works with a purpose that is clearly communicated for an appropriate audience. Students skillfully use details that support the writing task.

Students skillfully use vocabulary knowledge and resources to analyze complex text through word parts, word relationships, and context clues. Students consistently use appropriate and meaningful vocabulary to enhance clarity and effectiveness in their writing.

Students consistently identify and apply appropriate use of grammar and mechanics to provide clarity and enhance communication.

Students generate a question on a specific topic and consistently locate and use information, including graphic features, to understand the text. Students determine the relevance and reliability of information. Students clearly summarize and present information in an organized and cohesive way.

Proficient: Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the Proficient level typically choose the best summary of the text and identify the main idea and key details. Students compare and contrast details to classify genres. Students identify literary elements, literary devices, and author's purpose and distinguish fact from opinion. Students infer whether a text is written in first or third person point of view.

Students engage in a recursive writing process to create organized written works. Students create written works for specific purposes and audiences using details that support the writing task.

Students use vocabulary knowledge and resources to interpret text through word parts, word relationships, and context clues. Students use appropriate vocabulary to write clearly and effectively.

Students frequently identify and apply appropriate use of grammar and mechanics to provide clarity and enhance communication.

Students generate a question on a specific topic and locate and use information, including graphic features, to understand the text. Students summarize and present information in an organized way.

Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the **Basic** level inconsistently choose the best summary of the text and have difficulty identifying main ideas and key details. Students compare and contrast but inconsistently classify genres. Students inconsistently identify literary elements, literary

devices, author's purpose, or points of view or inconsistently distinguish fact from opinion.

Students inconsistently engage in a recursive writing process to create written works that lack organization. Students write for a specific purpose but seldom consider the audience. Students inconsistently support their ideas with details.

Students inconsistently use vocabulary knowledge and resources to interpret text through word parts, word relationships, or context clues. Students inconsistently use appropriate vocabulary in written works.

Students inconsistently identify and apply appropriate use of grammar and mechanics.

Students generate a question on a topic but ineffectively locate and use information, or imprecisely use graphic features, to understand the text. Students provide an incomplete summary and present information with lack of clarity.

Below Basic: Students have not performed at least at the Basic level. Students scoring at the **Below Basic** level should be given comprehensive reading instruction.

Grade 4 Mathematics Performance Level Descriptors

Advanced: Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the **Advanced** level typically estimate and solve complex mathematical problems and determine the unknown in non-equivalent expressions. Students compare decimals and fractions. Students solve complex money problems. Students determine a rule and extend a complex pattern. Students determine and represent unknown values in complex problems. Students determine volume. Students solve complex measurement problems. Students represent complex data sets and solve problems involving the data. Students solve complex and non-routine real-world problems, draw logical conclusions, and justify solutions.

Proficient: Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the **Proficient** level typically estimate and solve mathematical problems. Students use models to determine equivalent fractions, compare and order fractions, and add and subtract fractions. Students read and write decimals and make connections between decimals and fractions. Students determine change using coins. Students determine rules and extend patterns. Students determine unknown values in mathematical problems. Students describe parts of geometrical figures and identify similarities in three-dimensional figures. Students decompose and determine the area of polygons. Students solve measurement problems. Students represent data sets and solve problems involving the data. Students solve real-world problems and employ problem-solving strategies of identifying and using appropriate information.

Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the **Basic** level demonstrate the ability to estimate and solve simple mathematical problems. Students use models to determine simple equivalent fractions, compare and order whole numbers and simple fractions, and decompose fractions. Students read and write simple decimals and compare and order whole numbers and decimals. Students determine change using whole dollars. Students determine a rule and extend a simple pattern. Students determine unknown values in simple mathematical problems. Students identify quadrilaterals and determine the area of simple polygons. Students identify appropriate units and tools to measure. Students solve simple problems given a data set.

Below Basic: Students have not performed at least at the Basic level. Students scoring at the **Below Basic** level should be given comprehensive mathematical instruction.

Grade 4 English Language Arts Performance Level Descriptors

Advanced: Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the **Advanced** level consistently choose the best summary of the text and explain how the details support the main idea. Students compare and contrast details in literary and nonfiction/informational texts to describe and analyze genres. Students consistently recognize the paraphrase of original text. Students consistently identify and describe literary elements, literary devices, author's purpose, accuracy of facts, and text structure in various texts. Students consistently infer meaning from increasingly complex text including author's purpose and points of view.

Students consistently engage in a recursive writing process to create purposeful and organized written works. Students create fully developed and engaging written works for specific purposes and audiences using details that support the writing task.

Students efficiently use vocabulary knowledge and resources to analyze complex text through word parts, word relationships, and context clues. Students consistently use appropriate and meaningful vocabulary to enhance clarity and effectiveness in their writing.

Students consistently identify and apply appropriate use of grammar and mechanics to provide clarity and enhance communication.

Students generate a viable research question on a specific topic and consistently locate and use information, including graphic features, to interpret the text. Students organize and synthesize relevant and reliable information in order to present findings.

Proficient: Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the **Proficient** level typically choose the best summary of the text and identify the details that support the main idea. Students compare and contrast details in literary and nonfiction/informational texts to classify genres. Students recognize the paraphrase of original text most of the time. Students identify and describe literary elements, literary devices, author's purpose, accuracy of facts, and text structure in various texts. Students infer meaning from a text including author's purpose and points of view.

Students engage in a recursive writing process to create purposeful written works. Students select and apply the organizational structure that best fits the mode, purpose, and audience.

Students use vocabulary knowledge and resources to interpret text through word parts, word relationships, and context clues. Students use appropriate vocabulary to write clearly and effectively.

Students frequently identify and apply appropriate use of grammar and mechanics to provide clarity and enhance communication.

Students generate a viable research question on a specific topic and adequately locate and use information, including graphic features, to interpret the text. Students organize relevant and reliable information in order to present findings.

Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the **Basic** level inconsistently choose the best summary of the text and have difficulty differentiating main ideas from details. Students compare and contrast details in literary and nonfiction/informational texts but inconsistently classify genres.

Students seldom identify the paraphrase of original text. Students inconsistently identify and describe literary elements, literary devices, author's purpose, points of view, or accuracy of fact.

Students inconsistently engage in a recursive writing process to create written works. Students' writing lacks organizational structure. Students create underdeveloped written works for specific purposes and audiences with inconsistent use of details.

Students inconsistently use vocabulary knowledge and resources to interpret text through word parts, word relationships, or context clues. Students inconsistently use appropriate vocabulary in written works.

Students inconsistently identify and apply appropriate use of grammar and mechanics.

Students generate a research question on a topic but ineffectively locate and use information, or imprecisely use graphic features, to interpret the text.

Below Basic: Students have not performed at least at the Basic level. Students scoring at the **Below Basic** level should be given comprehensive reading instruction.

Grade 5 Mathematics Performance Level Descriptors

Advanced: Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the **Advanced** level typically interpret the remainder of division problems within the context of the problem. Students order decimals, fractions, and whole numbers. Students evaluate complex expressions, equations, and inequalities. Students construct geometric figures and identify them in various contexts. Students compare the volume, perimeter, or surface area of geometric figures. Students analyze complex graphs. Students solve complex and non-routine real-world problems, draw logical conclusions, and justify solutions.

Proficient: Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the **Proficient** level typically estimate and solve division problems with the remainder represented as a fraction or decimal. Students generate equivalent decimals and fractions, represent whole numbers or decimals, and compare fractions and decimals, including mixed numbers. Students estimate, add, and subtract decimals and fractions. Students describe patterns of change and graph these patterns as ordered pairs on a coordinate plane. Students evaluate expressions, equations, and inequalities. Students solve volume and perimeter problems and simple surface area problems. Students determine reasonable values for the perimeter of shapes with curves. Students compare angles. Students recognize relationships within a measurement system. Students determine the mean, median, mode, and range of a data set and analyze simple graphs. Students solve real-world problems and employ problem-solving strategies of identifying and using appropriate information.

Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the **Basic** level estimate and solve division problems with remainders and solve addition and subtraction real-world problems. Students recognize basic equivalent decimals and fractions, represent whole numbers, and compare and order fractions or decimals. Students add and subtract decimals and fractions with like denominators. Students describe simple patterns of change and identify ordered pairs on a coordinate plane. Students evaluate simple equivalent numerical expressions or equations. Students describe and classify geometric figures. Students solve simple volume and perimeter problems. Students choose an appropriate instrument to measure objects and read and analyze the length of objects. Students read and analyze the measure of angles. Students read simple graphs.

Below Basic: Students have not performed at least at the Basic level. Students scoring at the **Below Basic** level should be given comprehensive mathematical instruction.

Grade 5 Science Performance Level Descriptors

Advanced: Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the Advanced level typically analyze scale, proportion, quantity and patterns when performing computational thinking to complex data as it pertains to distribution of water on Earth, conservation of matter, and Earth's relationship with the sun, moon and stars. Students predict, modify, and extend complex models at various scales to analyze the movement of matter and energy between organisms, ecosystems, and Earth's systems, and analyze the outcomes of these interactions. Students analyze and compare evidence, data, and models to engage in argument to explain the cause and effect relationships between an object and Earth's gravity, how scale and proportion affect the apparent brightness of the sun and other stars/ and/or how plants use matter (chiefly air and water) to grow. Students observe and measure phenomenon to interpret and evaluate patterns that classify materials based on properties. Students can describe complex cause and effect relationships when mixing substances within an investigation framework.

Proficient: Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the **Proficient** level typically describe, use and/or develop basic models at various scales to explain the movement of matter and energy between organisms, ecosystems, and Earth's systems and explain the outcomes of these interactions. Students apply scale, proportion, quantity, and/or patterns when performing computational thinking to data as it pertains to distribution of water on Earth, conservation of matter, and Earth's relationship with the sun, moon, and stars. Students use evidence, data, and/or models to engage in argument to explain the cause and effect relationships between an object and Earth's gravity, how scale and proportion affect the apparent brightness of the sun and other stars, or how plants use matter (chiefly air and water) to grow. Students observe and measure phenomenon to identify patterns that classify materials based on properties.

Students can describe cause and effect relationships when mixing substances within an investigation framework.

Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the **Basic** level identify basic models to represent common features of matter and/or energy, ecosystems, and/or Earth's systems. Students recognize scale, proportion, quantity, or patterns when performing basic computations with data as it pertains to distribution of water on Earth, conservation of matter, and/or Earth's relationship with the sun, moon, and stars. Students identify evidence, data, or models to distinguish relationships between an object and Earth's gravity, how basic scale and proportion affect the brightness of the sun and other stars, or how plants use air and water. Students will observe or measure phenomenon to recognize patterns of materials. Students can identify basic relationships when mixing substances within an investigation framework.

Below Basic: Students have not performed at least at the Basic level. Students scoring at the **Below Basic** level should be given comprehensive science instruction.

Grade 5 English Language Arts Performance Level Descriptors

Advanced: Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the **Advanced** level analyze how summaries reflect a meaningful, text- based sequence of the main idea and supporting details. Students compare and contrast details in literary and nonfiction/informational texts to describe and analyze genres. Students consistently recognize the paraphrase of original text. Students evaluate and analyze literary devices, author's purpose, point of view, and accuracy of fact to interpret the meaning of the text as a whole. Students consistently compare and contrast texts, and ideas within and between texts, to support inferences.

Students consistently engage in a recursive writing process to create purposeful and organized written works. Students create thoroughly organized and engaging written works by selecting and applying the organizational structure that best fits the mode, purpose, and audience.

Students skillfully use vocabulary knowledge and resources to analyze complex text through word parts, word relationships, and context clues. Students consistently use appropriate and meaningful vocabulary to enhance clarity and effectiveness in their writing.

Students consistently identify and apply appropriate use of grammar and mechanics to provide clarity and enhance communication.

Students consistently locate, record, and organize relevant and reliable information on a topic in order to synthesize and clearly present findings.

Proficient: Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the **Proficient** level typically identify objective text-based summaries that include main idea, supporting details, and a logical sequence of events. Students compare and contrast details in literary and nonfiction/informational texts to classify genres. Students recognize the paraphrase of original text most of the time. Students explain how literary elements, literary devices, author's purpose, point of view, accuracy of facts, and text structure contribute to the meaning of the text. Students compare and contrast texts and ideas within and between texts.

Students engage in a recursive writing process to create purposeful written works. Students select and apply the organizational structure that best fits the mode, purpose, and audience.

Students use vocabulary knowledge and resources to interpret text through word parts, word relationships, and context clues. Students use appropriate vocabulary to write clearly and effectively.

Students frequently identify and apply appropriate use of grammar and mechanics to provide clarity and enhance communication.

Students adequately locate, record, and organize relevant and reliable information on a topic in order to present findings.

Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the **Basic** level inconsistently choose the best summary of the text and have difficulty differentiating main ideas from details. Students compare and contrast details in literary and nonfiction/informational texts but inconsistently classify genres. Students seldom identify the paraphrase of original text. Students identify literary elements, literary devices, author's purpose, point of view, or accuracy of fact. Students inconsistently compare and contrast texts and ideas within or between texts.

Students inconsistently engage in a recursive writing process to create written works. Students create written works for various purposes and audiences but inconsistently select and apply an organizational structure that fits the writing task.

Students inconsistently use vocabulary knowledge and resources to interpret text through word parts, word relationships, or context clues. Students inconsistently use appropriate vocabulary in written works.

Students inconsistently identify and apply appropriate use of grammar and mechanics.

Students ineffectively locate, record, and organize information on a topic in order to present findings.

Below Basic: Students have not performed at least at the Basic level. Students scoring at the **Below Basic** level should be given comprehensive reading instruction.

Grade 6 Mathematics Performance Level Descriptors

Advanced: Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the **Advanced** level typically estimate and solve complex problems requiring unit conversions. Students use the distance between points and transformations to solve complex problems involving congruent figures. Students analyze the differences between two outcomes of simple experiments. Students solve complex and non-routine real-world problems, draw logical conclusions, and justify solutions.

Proficient: Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the **Proficient** level estimate, illustrate, and simplify the addition and subtraction of integers and assess the reasonableness of an answer. Students solve ratio and unit rate problems. Students estimate and illustrate the multiplication and division of non-negative rational numbers. Students evaluate the validity of the value of a variable. Students generate expressions, equations, and inequalities. Students interpret the solution of an equation and assess the reasonableness of the solution. Students determine the area of polygons and composite figures. Students use relationships between angles and the triangle sum theorem to solve problems. Students estimate and solve problems requiring unit conversion. Students predict transformations, analyze lines of symmetry, and use the distance between points and transformations to solve problems involving congruent figures. Students explain and justify which measure of central tendency provides the most descriptive information for a data set. Students create and analyze box-and-whisker plots and explain and compare possible outcomes of simple experiments. Students solve real-world problems and employ problem-solving strategies of identifying and using appropriate information.

Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the **Basic** level read, order, represent, and explain rational numbers expressed as fractions, decimals, percents, and ratios. Students write positive integers as products of factors. Students illustrate or simplify the addition and subtraction of integers. Students identify and compare quantities, determine unit rates, and find equivalent fractions and percents. Students multiply and divide non-negative rational numbers. Students graph ordered pairs in all quadrants. Students represent reflective relationships between varying quantities. Students evaluate the value of a variable in expressions, equations, and inequalities. Students use number sense and properties of operations to solve equations and graph the solution. Students determine the area of parallelograms and triangles. Students identify angle relationships by name. Students identify and display the effect of transformations. Students identify lines of symmetry. Students calculate measures of central tendency, determine the sample space of simple experiments, and identify possible outcomes.

Below Basic: Students have not performed at least at the Basic level. Students scoring at the **Below Basic** level should be given comprehensive mathematical instruction.

Grade 6 English Language Arts Performance Level Descriptors

Advanced: Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the **Advanced** level will thoroughly comprehend, interpret, evaluate, and respond to a variety of increasingly complex texts of all literary and informational genres. Students skillfully create an objective summary including main idea and supporting details. Students effectively paraphrase main ideas with supporting details in a text. Students thoroughly compare and contrast stated or implied purposes of authors' writing. Students thoroughly evaluate literary devices, points of view, and perspectives, and they explicitly analyze how authors use key literary elements to contribute to the meaning of the text. Students consistently categorize facts included in an argument. Students analyze and evaluate complex textual evidence to support inferences and understanding within and between varied texts.

Students effectively engage in a recursive writing process to compose narrative, informative, and argumentative responses for varied purposes and audiences. In opinion writing, students strategically state an opinion supported with facts and details. Students use fully developed, complex ideas, thorough organization, purposeful word choice, a variety of fluent sentences, and appropriate voice.

Students skillfully use context clues, word parts, and reference tools to determine or clarify the meaning of words. Students infer complex relationships among words with multiple meanings. Students select precise vocabulary to communicate ideas in writing and to create a specific effect according to a purpose.

Students intentionally apply knowledge of grammar and rhetorical style to analyze and evaluate a variety of texts in reading and writing. Students demonstrate a strong command of Standard English grammar, mechanics, and usage.

Students recognize viable research questions and well-developed thesis statements to find information on a specific topic. Students thoroughly comprehend, evaluate, and synthesize resources. Students skillfully summarize and paraphrase, integrate evidence, and cite sources to create written works for multiple purposes.

Proficient: Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the **Proficient** level typically comprehend, interpret, evaluate, and respond to a variety of complex texts of all literary and informational genres. Students create an objective summary including main idea and supporting details.

Students paraphrase main ideas with supporting details in a text. Students compare and contrast stated or implied purposes of authors' writing. Students evaluate literary devices, points of view, and perspectives, and they analyze how authors use key literary elements to contribute to the meaning of the text. Students categorize facts included in an argument. Students analyze textual evidence to support inferences and understanding within and between texts.

Students engage in a recursive writing process to compose narrative, informative, and argumentative responses for varied purposes and audiences. In argumentative writing, students introduce a claim and organize reasons and evidence. Students use fully developed ideas, strong organization, well-chosen words, fluent sentences, and appropriate voice.

Students use context clues, word parts, and reference tools to determine or clarify the meaning of words. Students infer the relationships among words with multiple meanings. Students select vocabulary to communicate ideas in writing and to create a specific effect according to a purpose.

Students apply knowledge of grammar and rhetorical style to analyze and evaluate a variety of texts in reading and writing. Students demonstrate a command of Standard English grammar, mechanics, and usage.

Students recognize viable research questions to find information on a topic. Students record and organize information from various sources. Students comprehend, evaluate, and synthesize resources. Students summarize and integrate information following a citation style with guidance and support. Students summarize and present information in a report.

Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the **Basic** level partially comprehend, interpret, evaluate, and respond to literary and informational texts, applying limited critical thinking skills. Students create a summary including main idea and limited supporting details. Students inconsistently paraphrase main ideas with limited supporting details in a text. Students inconsistently compare and contrast stated or implied purposes of authors' writing. Students inconsistently identify literary devices, points of view, and perspectives, and they describe how authors use key literary elements. Students inconsistently categorize facts included in an argument. Students inconsistently identify limited textual evidence to support inferences between texts.

Students inconsistently engage in a writing process to compose narrative, informative, and argumentative responses for varied purposes and audiences. In opinion writing, students inconsistently state an opinion supported with limited facts and details. Students use partially developed ideas, weak organization, and ineffective word choice, sentences, and voice.

Students ineffectively use context clues, word parts, and reference tools to determine the meaning of words. Students may or may not infer the relationships among words with multiple meanings. Students use a limited vocabulary to communicate ideas in writing and to create an effect according to a purpose.

Students inconsistently apply knowledge of grammar and rhetorical style to analyze and evaluate a variety of texts in reading and writing. Students demonstrate a limited command of Standard English grammar, mechanics, and usage.

Students may not recognize viable research questions and well-developed thesis statements to find information on a specific topic. Students partially comprehend, evaluate, and synthesize resources. Students ineffectively summarize and paraphrase, integrate evidence, and cite sources to create written works for multiple purposes.

Below Basic: Students have not performed at least at the Basic level. Students scoring at the **Below Basic** level should be given comprehensive reading instruction.

Grade 7 Mathematics Performance Level Descriptors

Advanced: Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the **Advanced** level typically interpret equations and inequalities involving variables and rational numbers. Students make connections between circumference and area to solve problems involving circles. Students analyze, apply, and display the effect of dilations and multiple transformations. Students use central tendencies and range, predict data and select an appropriate data display, and predict theoretical probability. Students solve complex and non-routine real-world problems, draw logical conclusions, and justify solutions.

Proficient: Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the **Proficient** level typically estimate solutions of problems involving rational numbers and assess the reasonableness of the solutions. Students differentiate between proportional and inversely proportional relationships and identify the constant of proportionality. Students represent proportional relationships in a variety of ways. Students use representations to identify and compare unit rates. Students solve problems involving proportional relationships and assess the reasonableness of solutions. Students represent, solve, and write equations. Students solve simple inequalities. Students generate and evaluate equivalent expressions with justification of steps. Students interpret theoretical probability and draw conclusions. Students apply the effect of dilations and transformations. Students solve real-world problems and employ problem-solving strategies of identifying and using appropriate information.

Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the **Basic** level recognize, compare, and order rational numbers. Students create equivalent representations of rational numbers. Students calculate and model mathematical problems involving rational numbers and exponents. Students calculate the absolute value of a rational number. Students describe and identify a proportional relationship.

Students identify and solve problems involving ratios and unit rates. Students represent, solve, and write simple equations. Students represent, write, and graph simple inequalities. Students evaluate expressions using the order of operations. Students determine the surface area and volume of rectangular prisms and calculate the area and perimeter of trapezoids. Students calculate the circumference and area of circles. Students describe the effect of dilations and transformations.

Students calculate the measures of central tendencies and range and determine appropriate data displays. Students calculate theoretical probability.

Below Basic: Students have not performed at least at the Basic level. Students scoring at the **Below Basic** level should be given comprehensive mathematical instruction.

Grade 7 English Language Arts Performance Level Descriptors

Advanced: Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the **Advanced** level thoroughly comprehend, interpret, evaluate, and respond to a variety of increasingly complex texts of all literary and informational genres. Students skillfully create an objective summary including main idea and supporting details. Students effectively paraphrase main ideas with supporting details in a text. Students thoroughly compare and contrast stated or implied purposes of authors' writing. Students thoroughly evaluate literary devices, points of view, and perspectives, and they explicitly analyze how authors use key literary elements to contribute to the meaning of the text. Students consistently distinguish factual claims from opinions. Students analyze and evaluate complex textual evidence to support inferences and draw logical conclusions between and across multiple and varied texts.

Students effectively engage in a recursive writing process to compose narrative, informative, and argumentative responses for varied purposes and audiences. In argumentative writing, students strategically introduce a claim and organize well-developed reasons and evidence. Students use fully developed, complex ideas, thorough organization, purposeful word choice, a variety of fluent sentences, and appropriate voice.

Students skillfully use context clues, word parts, and reference tools to determine or clarify the meaning of words. Students infer complex relationships among words with multiple meanings. Students select precise vocabulary to communicate ideas in writing and to create a specific effect according to a purpose.

Students intentionally apply knowledge of grammar and rhetorical style to analyze and evaluate a variety of texts in reading and writing. Students demonstrate a strong command of Standard English grammar, mechanics, and usage.

Students recognize viable research questions and well-developed thesis statements to find information on a specific topic. Students thoroughly comprehend, evaluate, and synthesize resources. Students skillfully summarize and paraphrase, integrate evidence, and cite sources to create written works for multiple purposes.

Proficient: Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the **Proficient** level typically read and comprehend increasingly complex literary and informational texts. Students create an objective summary including main idea and supporting details. Students paraphrase main ideas with supporting details in a text. Students compare and contrast stated or implied purposes of authors' writing. Students evaluate literary devices, points of view, and perspectives, and they analyze how authors use key literary elements to contribute to the meaning of the text. Students distinguish factual claims from opinions. Students analyze and evaluate textual evidence to support inferences and draw simple, logical conclusions between and across multiple texts.

Students engage in a recursive writing process to compose narrative, informative, and argumentative responses for varied purposes and audiences. In argumentative writing, students introduce a claim and organize reasons and evidence. Students use fully developed ideas, strong organization, well-chosen words, fluent sentences, and appropriate voice.

Students use context clues, word parts, and reference tools to determine or clarify the meaning of words. Students infer the relationships among words with multiple meanings. Students select vocabulary to communicate ideas in writing and to create a specific effect according to a purpose.

Students apply knowledge of grammar and rhetorical style to analyze and evaluate a variety of texts in reading and writing. Students demonstrate a command of Standard English grammar, mechanics, and usage.

Students recognize viable research questions and well-developed thesis statements to find information on a specific topic. Students comprehend, evaluate, and synthesize resources. Students summarize and paraphrase, integrate evidence, and cite sources to create written works for multiple purposes.

Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the **Basic** level partially comprehend, interpret, evaluate, and respond to literary and informational texts, applying limited critical thinking skills. Students create a summary including main idea and limited supporting details. Students inconsistently paraphrase main ideas with limited supporting details in a text. Students inconsistently compare and contrast stated or implied purposes of authors' writing. Students inconsistently identify literary devices, points of view, and perspectives, and they describe how authors use key literary elements. Students inconsistently distinguish factual claims from opinions. Students inconsistently identify limited textual evidence to support inferences and draw weak conclusions between texts.

Students inconsistently engage in a writing process to compose narrative, informative, and argumentative responses for varied purposes and audiences. In argumentative writing, students introduce a claim, reasons, and evidence. Students use partially developed ideas, weak organization, and ineffective word choice, sentences, and voice.

Students ineffectively use context clues, word parts, and reference tools to determine the meaning of words. Students may or may not infer the relationships among words with multiple meanings. Students use a limited vocabulary to communicate ideas in writing and to create an effect according to a purpose.

Students inconsistently apply knowledge of grammar and rhetorical style to analyze and evaluate a variety of texts in reading and writing. Students demonstrate a limited command of Standard English grammar, mechanics, and usage.

Students may not recognize viable research questions and well-developed thesis statements to find information on a specific topic. Students partially comprehend, evaluate, and synthesize resources. Students ineffectively summarize and paraphrase, integrate evidence, and cite sources to create written works for multiple purposes.

Below Basic: Students have not performed at least at the Basic level. Students scoring at the **Below Basic** level should be given comprehensive reading instruction.

Grade 8 Mathematics Performance Level Descriptors

Advanced: Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the **Advanced** level typically generate, simplify, and evaluate complex equivalent expressions. Students make connections between volume and surface area to solve problems involving solids and compare the volume and surface area of different solids. Students describe the impact on central tendencies of a data set with multiple outliers and when inserting or deleting multiple data points. Students solve complex and non-routine real-world problems, draw logical conclusions and justify solutions.

Proficient: Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the **Proficient** level typically generate, simplify, and evaluate equivalent expressions. Students classify and explain operational closure of rational and irrational numbers. Students distinguish between a linear and nonlinear function. Students identify independent and dependent variables. Students describe, analyze, and represent linear functions with two variables and translate between representations. Students use and apply the Pythagorean Theorem. Students describe the impact on central tendencies of a data set with an outlier and when inserting or deleting a data point. Students interpret a scatterplot, determine the rate of change, and use a line of best fit to make predictions. Students calculate, interpret, and predict experimental probability and generalize samples to populations. Students solve real-world problems and employ problem-solving strategies of identifying and using appropriate information.

Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the **Basic** level simplify and generate simple equivalent expressions, including expressions in scientific notation. Students translate between standard form and scientific notation. Students identify and compare real numbers. Students recognize if a graph represents a linear function. Students identify intercepts and slope from the graph of a line. Students identify the effect on the graph of a linear function when characteristics are changed. Students solve and graph equations and inequalities. Students use the Pythagorean Theorem to identify right triangles and to find the length of the hypotenuse. Students calculate the surface area and volume of solids. Students identify the outliers of a data set. Students identify the line of best fit from a given scatterplot and determine if the rate of change is positive or negative. Students calculate the experimental probability of single events, identify sample spaces, and classify events as independent or dependent.

Below Basic: Students have not performed at least at the Basic level. Students scoring at the **Below Basic** level should be given comprehensive mathematical instruction.

Grade 8 Science Performance Level Descriptors

Advanced: Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the **Advanced** level typically evaluate, revise, or develop a model from evidence, or apply models to complex concepts involving conservation of matter in chemical reactions, patterns in the structure and function of waves, or stability and change at varying scales in Earth's systems. Students design, evaluate, or modify investigations about stability and change of forces and motion, or analyze and draw conclusions from patterns in data about common ancestry and diversity of organisms, the geologic history of Earth, or natural hazards. Students modify, synthesize, or apply a design solution, or evaluate evidence of relationships within a design solution in various systems involving energy transfer in chemical reactions or forces in collisions. Students analyze, infer, relate, or identify complex relationships within a system to construct or evaluate explanations for evidence of anatomy and common ancestry of organisms, or aspects of Earth systems including geologic history, materials and processes, natural resources, or human impacts on those systems using the concept of patterns in cause and effect relationships or the concept of scale and proportion.

Proficient: Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the **Proficient** level typically make predictions about, describe, develop, or use a given model involving conservation of matter in chemical reactions, patterns in the structure and function of waves, or stability and change at

varying scales in Earth's systems. Students identify, describe, or explain how to plan or perform investigations about stability and change of forces and motion, or identify and apply patterns in data about common ancestry and diversity of organisms, the geologic history of Earth, or natural hazards. Students use, describe, or explain a design solution, or identify evidence of relationships within a design solution in various systems involving energy transfer in chemical reactions or forces in collisions. Students construct explanations by identifying, describing, or comparing evidence of anatomy and common ancestry of organisms, or aspects of Earth systems including geologic history, materials and processes, natural resources, or human impacts on those systems using the concept of patterns in cause and effect relationships or the concept of scale and proportion.

Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the **Basic** level identify or describe basic components or concept(s) of a model involving conservation of matter in chemical reactions, patterns in the structure and function of waves, or stability and change at varying scales in Earth's systems.

Students identify or describe basic steps or processes within investigations about stability and change of forces and motion, or identify and define patterns in data about common ancestry and diversity of organisms, the geologic history of Earth, or natural hazards. Students identify components of a design solution or describe simple relationships within a design solution in various systems involving energy transfer in chemical reactions or forces in collisions. Students identify or describe basic relationships shown in

evidence of anatomy and common ancestry of organisms, or aspects of Earth systems, including geologic history, materials and processes, natural resources, or human impacts on those systems using the concept of patterns in cause and effect relationships or the concept of scale and proportion.

Below Basic: Students have not performed at least at the Basic level. Students scoring at the **Below Basic** level should be given comprehensive science instruction.

Grade 8 English Language Arts Performance Level Descriptors

Advanced: Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the **Advanced** level typically thoroughly comprehend, interpret, evaluate, and respond to literary and informational texts, applying critical thinking skills. Students skillfully evaluate literary devices, points of view, and perspectives, and they skillfully analyze how authors use key literary elements to contribute to the meaning of the text. Students explicitly analyze and evaluate textual evidence to support inferences and conclusions between and across multiple texts.

Students effectively engage in a recursive writing process to compose narrative, informative, and argumentative responses for varied purposes and audiences. In argumentative writing, students introduce a claim, counterclaim, and support with logical reasons and evidence. Students synthesize fully developed ideas, strong organization, well-chosen words, fluent sentences, and appropriate voice.

Students skillfully use context clues, word parts, and reference tools to determine or clarify the meaning of words. Students infer complex relationships among words with multiple meanings. Students select precise vocabulary to communicate ideas in writing and to create a specific effect according to a purpose.

Students intentionally apply knowledge of grammar and rhetorical style to analyze and evaluate a variety of texts in reading and writing. Students demonstrate a strong command of Standard English grammar, mechanics, and usage.

Students recognize viable research questions and well-developed thesis statements to find information on a specific topic. Students thoroughly comprehend, evaluate, and synthesize resources. Students skillfully summarize and paraphrase, integrate evidence, and cite sources to create written works for multiple purposes.

Proficient: Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the **Proficient** level typically read, comprehend, interpret, evaluate, and respond to literary and informational texts, applying critical thinking skills. Students evaluate literary devices, points of view, and perspectives, and they analyze how authors use key literary elements to contribute to the meaning of the text. Students analyze and evaluate textual evidence to support inferences and conclusions between and across multiple texts.

Students engage in a recursive writing process to compose narrative, informative, and argumentative responses for varied purposes and audiences. In argumentative writing, students introduce a claim, recognize a claim from an opposing viewpoint, and organize reasons and evidence. Students use fully developed ideas, strong organization, well-chosen words, fluent sentences, and appropriate voice.

Students use context clues, word parts, and reference tools to determine or clarify the meaning of words. Students infer the relationships among words with multiple meanings. Students select vocabulary to communicate ideas in writing and to create a specific effect according to a purpose.

Students apply knowledge of grammar and rhetorical style to analyze and evaluate a variety of texts in reading and writing. Students demonstrate a command of Standard English grammar, mechanics, and usage.

Students recognize viable research questions and well-developed thesis statements to find information on a specific topic. Students comprehend, evaluate, and synthesize resources. Students summarize and paraphrase, integrate evidence, and cite sources to create written works for multiple purposes.

Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the **Basic** level partially comprehend, interpret, evaluate, and respond to literary and informational texts, applying limited critical thinking skills. Students inconsistently evaluate literary devices, points of view, and perspectives, and they inconsistently analyze how authors use key literary elements to contribute to the meaning of the text. Students inconsistently analyze and evaluate textual evidence to support inferences and conclusions between or across multiple texts.

Students inconsistently engage in a writing process to compose narrative, informative, and argumentative responses for varied purposes and audiences. In argumentative writing, students introduce a claim and provide reasons and evidence. Students use partially developed ideas, weak organization, ineffective word choice, basic sentences, or inconsistent voice.

Students ineffectively use context clues, word parts, and reference tools to determine the meaning of words. Students may or may not infer the relationships among words with multiple meanings. Students use a limited vocabulary to communicate ideas in writing and to create an effect according to a purpose.

Students inconsistently apply knowledge of grammar and rhetorical style to analyze and evaluate a variety of texts in reading and writing. Students demonstrate a limited command of Standard English grammar, mechanics, and usage.

Students may not recognize viable research questions and well-developed thesis statements to find information on a specific topic. Students partially comprehend, evaluate, and synthesize resources. Students ineffectively summarize and paraphrase, integrate evidence, and cite sources to create written works for multiple purposes.

Below Basic: Students have not performed at least at the Basic level. Students scoring at the **Below Basic** level should be given comprehensive reading instruction.





Oklahoma Grade 11 Life Science Performance Level Descriptor Tables

Advanced

Students demonstrate superior performance on challenging subject matter and clearly exhibit readiness for college and career. Students scoring at the Advanced level:

- develop and use models to interpret and evaluate components and relationships among components within and between complex systems and system
 models related to structure, function, growth and/or development of organisms, organization of matter and energy flow in organisms, cycles of matter
 and energy transfer in ecosystems and/or energy in chemistry processes.
- plan and conduct investigations to produce reliable data considering the types, amounts, and accuracy of data needed; analyze and interpret complex data sets to support explanations or claims about the stability related to structure and function of organisms, interdependent relationships in ecosystems at different scales, the cycling of matter and flow of energy among organisms in an ecosystem, the effect variation of traits has in a population, patterns that show evidence of common ancestry and diversity, natural selection, or adaptation.
- ask questions to analyze relationships about the effect of structure and function on inheritance of traits; or support and/or evaluate the merits of arguments to synthesize and communicate understanding and defend them based on empirical evidence about stability and change in ecosystem dynamics, function and resilience, the cause and effect relationships of social interactions, group behaviors, adaptation, and variation of traits.
- construct, evaluate, make inferences and revise an explanation based on valid and reliable evidence from a variety of sources regarding the cause and effect
 relationships in natural selection, adaptation, and how the structure of DNA determines protein structure and impacts the function of the cell; or evaluate or
 refine explanations derived from evidence from a variety of sources for how matter and energy is organized, cycled, and transferred within an organism or
 ecosystem.

Proficient

Students demonstrate mastery with subject matter and exhibit readiness for college and career. Students scoring at the Proficient Level:

- develop and use models to describe components and relationships among the components of a system, related to structure and function, growth and
 development of organisms, organization of matter and energy flow in organisms, cycles of matter and energy transfer In ecosystems, and energy in
 chemistry processes, including hierarchical structures and inputs and outputs of a system. Use the models to represent basic aspects of phenomena that
 result from changes in energy and matter.
- plan and conduct investigations to produce reliable data; analyze and interpret provided data to support explanations or claims about the stability related to structure and function of organisms, interdependent relationships in ecosystems at different scales, the cycling of matter and flow of energy among organisms in an ecosystem, the effect variation of traits has in a population, patterns that show evidence of common ancestry and diversity, natural selection, or adaptation.
- ask questions to clarify relationships about the effect of structure and function on inheritance of traits; or evaluate arguments based on evidence as

- students synthesize and communicate understanding of stability and change in ecosystem dynamics, function and resilience, the cause and effect relationships of social interactions, group behaviors, adaptation, and variation of traits.
- construct an explanation based on valid and reliable evidence from sources of the cause and effect relationships in natural selection, adaptation, and how the structure of DNA determines protein structure and impacts the function of the cell; or construct and revise explanations derived from evidence from a variety of sources for how matter and energy is organized, cycled, and transferred within an organism or ecosystem.

Basic:

Students demonstrate partial mastery with subject matter and may not exhibit readiness for college and career. Students scoring at the Basic level typically:

- identify or describe basic components or relationships among components within systems and system models related to structure, function, growth and/or development of organisms, organization of matter and energy flow in organisms, cycles of matter and energy transfer in ecosystems, or energy in chemistry processes.
- conduct investigations to produce data; use provided data to support explanations or claims about the stability related to structure and function of organisms, interdependent relationships in ecosystems at different scales, the cycling of matter and flow of energy among organisms in an ecosystem, the effect variation of traits has in a population, patterns that show evidence of common ancestry and diversity, natural selection, or adaptation.
- ask questions to identify relationships about the effect of structure and function on inheritance of traits; or describe arguments based on evidence as students communicate understanding of stability and change in ecosystem dynamics, function and resilience, the cause and effect relationships of social interactions, group behaviors, adaptation, and variation of traits.
- identify and describe basic relationships based on evidence of the cause and effect relationships in natural selection, adaptation, and how the structure of DNA determines protein structure and impacts the function of the cell; or identify and describe explanations from evidence for how matter and energy is organized, cycled, and transferred within an organism or ecosystem.

Below Basic

Students scoring Below Basic have not demonstrated they can perform at the Basic level. Students scoring at the Basic Level:

- identify or describe basic components or relationships among components within systems and system models related to structure, function, growth and/or development of organisms, organization of matter and energy flow in organisms, cycles of matter and energy transfer in ecosystems, or energy in chemistry processes.
- conduct investigations to produce data; use provided data to support explanations or claims about the stability related to structure and function of organisms, interdependent relationships in ecosystems at different scales, the cycling of matter and flow of energy among organisms in an ecosystem, the effect variation of traits has in a population, patterns that show evidence of common ancestry and diversity, natural selection, or adaptation.
- ask questions to identify relationships about the effect of structure and function on inheritance of traits; or describe arguments based on evidence

- as students communicate understanding of stability and change in ecosystem dynamics, function and resilience, the cause and effect relationships of social interactions, group behaviors, adaptation, and variation of traits.
- identify and describe basic relationships based on evidence of the cause and effect relationships in natural selection, adaptation, and how the structure of DNA determines protein structure and impacts the function of the cell; or identify and describe explanations from evidence for how matter and energy is organized, cycled, and transferred within an organism or ecosystem.

LS1-2 LS1-4 LS1-5 LS1-7 LS2-5	Below Basic Students have not performed at least at the Basic level.	Basic Students demonstrate partial mastery of the essential knowledge and skills that are foundational for proficient work at their grade level or course and that students are not on track to be career and college ready (CCR)	Proficient: Students demonstrate mastery over challenging grade-level subject matter, can analyze and apply such knowledge to realworld situations, are ready for the next grade, course, or level, and are on-track to be career and college ready (CCR)	Advanced: Students demonstrate superior performance on challenging subject matter.
Develop and Use Models DCI LS1.A Structure and function LS1.B Growth and Development of Organisms LS1.C Organization for Matter and Energy Flow in Organisms LS2.B Cycles of matter and Energy Transfer In Ecosystems PS3.D Energy in Chemistry Processes CCC Systems and System Models Energy and matter		Students scoring at the Basic level typically identify or describe basic components or relationships among components within systems and system models related to structure, function, growth and/or development of organisms, organization of matter and energy flow in organisms, cycles of matter and energy transfer in ecosystems, or energy in chemistry processes.	Students scoring at the Proficient level typically develop and use models describing components and relationships among components of a system, related to structure and function, growth and development of organisms, organization of matter and energy flow in organisms, cycles of matter and energy transfer In ecosystems, and energy in chemistry processes, including hierarchical structures and inputs and outputs of a system. Use the models to represent basic aspects of phenomena that result from changes in energy and matter.	Students scoring at the Advanced level typically develop and use models to interpret and evaluate components and relationships among components within and between complex systems and system models related to structure, function, growth and/or development of organisms, organization of matter and energy flow in organisms, cycles of matter and energy transfer in ecosystems, and/or energy in chemistry processes.

LS1-3 LS2-1 LS2-2 LS2-4 LS3-3 LS4-1 LS4-3 Below Basic: Students have not performed at least at the Limited Knowledge level.		Basic Students demonstrate partial mastery of the essential knowledge and skills that are foundational for proficient work at their grade level or course and that students are not on track to be career and college ready (CCR)	Proficient: Students demonstrate mastery over challenging grade-level subject matter, can analyze and apply such knowledge to realworld situations, are ready for the next grade, course, or level, and are on-track to be career and college ready (CCR)	Advanced: Students demonstrate superior performance on challenging subject matter.
Planning and Carrying Out Investigations, Using Mathematics and Computational Thinking, Analyzing and Interpreting Data DCI LS1.A Structure and Function LS2.A Interdependent Relationships in Ecosystems LS2.B Cycles of Matter and Energy Transfer in Ecosystems LS2.C Ecosystem Dynamics, Functioning and Resilience LS3.B Variation of Traits LS4.A Evidence of Common Ancestry and Diversity LS4.B Natural Selection LS4.C Adaptation CCC Patterns Scale, Proportion, Quantity Energy and matter Stability and Change		Students scoring at the Limited Knowledge level typically conduct investigations to produce data; use provided data to support explanations or claims about the stability related to structure and function of organisms, interdependent relationships in ecosystems at different scales, the cycling of matter and flow of energy among organisms in an ecosystem, the effect variation of traits has in a population, patterns that show evidence of common ancestry and diversity, natural selection, or adaptation.	Students scoring at the Proficient level typically plan and conduct investigations to produce reliable data; analyze and interpret provided data to support explanations or claims about the stability related to structure and function of organisms, interdependent relationships in ecosystems at different scales, the cycling of matter and flow of energy among organisms in an ecosystem, the effect variation of traits has in a population, patterns that show evidence of common ancestry and diversity, natural selection, or adaptation.	Students scoring at the Advanced level typically plan and conduct investigations; produce reliable data considering the types, amounts, and accuracy of data needed; analyze and interpret complex data sets to support explanations or claims about the stability related to structure and function of organisms, interdependent relationships in ecosystems at different scales, the cycling of matter and flow of energy among organisms in an ecosystem, the effect variation of traits has in a population, patterns that show evidence of common ancestry and diversity, natural selection, or adaptation.

LS2-6 LS2-8 LS3-1 LS3-2 LS4-5	Limited Knowledge: Students have not performed at least at the Limited Knowledge level.	Basic: Students demonstrate partial mastery of the essential knowledge and skills that are foundational for proficient work at their grade level or course and that students are not on track to be career and college ready (CCR)	Proficient: Students demonstrate mastery over challenging grade-level subject matter, can analyze and apply such knowledge to real-world situations, are ready for the next grade, course, or level, and are on- track to be career and college ready (CCR)	Advanced: Students demonstrate superior performance on challenging subject matter.
Asking Questions, Engaging in Argument from Evidence (make and defend a claim, evaluate a claim) DCI LS2.C Ecosystem dynamics, functioning and resilience LS2.D Social interactions and group behavior LS3.A Inheritance of traits LS1.A Structure and function LS3.B Variation of traits LS4.C Adaptation CCC Stability and change Cause and effect		Students scoring at the Basic level typically ask questions to identify relationships demonstrating how cause of structure and function affect inheritance of traits; or describe arguments based on evidence to communicate understanding of stability and change in ecosystem dynamics, function and resilience, the cause and effect relationships of social interactions, group behaviors, adaptation, and variation of traits.	Students scoring at the Proficient level typically ask questions to clarify relationships demonstrating how cause of structure and function affect inheritance of traits; or evaluate arguments based on evidence as students synthesize and communicate understanding of stability and change in ecosystem dynamics, function and resilience, the cause and effect relationships of social interactions, group behaviors, adaptation, and variation of traits.	Students scoring at the Advanced level typically ask questions to analyze relationships demonstrating how cause of structure and function affect inheritance of traits; or support, evaluate, and defend arguments based on evidence as students synthesize and communicate understanding of stability and change in ecosystem dynamics, function and resilience, the cause and effect relationships of social interactions, group behaviors, adaptation, and variation of traits.

LS1-1 LS1-6 LS2-3 LS4-2 LS4-4	Below Basic: Students have not performed at least at the Basic level.	Basic: Students demonstrate partial mastery of the essential knowledge and skills that are foundational for proficient work at their grade level or course and that students are not on track to be career and college ready (CCR)	Proficient: Students demonstrate mastery over challenging grade-level subject matter, can analyze and apply such knowledge to real-world situations, are ready for the next grade, course, or level, and are on-track to be career and college ready (CCR)	Advanced: Students demonstrate superior performance on challenging subject matter.
Constructing Explanations DCI LS1.A Structure and function LS1.C Organization for matter and energy flow in organisms LS2.B Cycles of matter and energy transfer in ecosystems LS4.B Natural selection LS4.C Adaptation CCC Structure and function Energy and matter Cause and effect		Students scoring at the Basic level typically identify and describe basic relationships based on evidence of the cause and effect relationships in natural selection, adaptation, and how the structure of DNA determines protein structure and impacts the function of the cell; or identify and describe explanations from evidence for how matter and energy is organized, cycled, and transferred within an organism or ecosystem.	Students scoring at the Proficient level typically construct an explanation based on valid and reliable evidence from sources of the cause and effect relationships in natural selection, adaptation, and how the structure of DNA determines protein structure and impacts the function of the cell; or construct and revise explanations from evidence from sources for how matter and energy is organized, cycled, and transferred within an organism or ecosystem.	Students scoring at the Advanced level typically construct, evaluate, or draw inferences from an explanation based on valid and reliable evidence from a variety of sources of the cause and effect relationships in natural selection, adaptation, and how the structure of DNA determines protein structure and impacts the function of the cell; or evaluate or refine explanations from evidence from a variety of sources for how matter and energy is organized, cycled, and transferred within an organism or ecosystem.

NAEP grade 12 Performance Level Descriptors with content extracted. NAEP only assesses science at grade 12 in high school.							
Limited Knowledge	Proficient	Advanced					
Students performing at the Limited	Students performing at the Proficient level	Students performing at the Advanced level					
Knowledge level should be able to describe, measure, classify, explain, and predict	should be able to demonstrate relationships and compare alternative models, predictions,	should be able to use alternative models to generate predictions and explanations. They					
phenomena at multiple scales, from atomic/molecular to interstellar. They should	and extrapolations. They should be able to design and critique observational and	should be able to explain differences, use evidence, and be able to design and critique					
be able to design and critique observational and experimental studies, and they should be	experimental studies, controlling multiple variables; use scientific models to explain	investigations that relate data to alternative models of phenomena. They should be able					
able to propose and critique solutions to problems at local or regional scales.	results; and choose among alternative conclusions based on the arguments from	to compare costs or risks and benefits of alternative solutions to problems at local,					
	evidence. They should be able to compare scientific costs or risks and benefits of	regional, and global scales.					
	alternative solutions to problems at local or						
	regional scales.						





Oklahoma Grade 11 Physical Science Performance Level Descriptor Tables

Name:

Advanced

Students demonstrate superior performance on challenging subject matter and clearly exhibit readiness for college and career. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the Advanced level typically:

- evaluate multiple patterns to develop and use models to predict how components between or within systems are related to the energy of motion and the structure and properties of matter, and the relationships between energy and matter.
- use complex mathematical models and plan and conduct investigations to produce and refine reliable data considering the types, amounts, accuracy, and limitations of data needed; analyze and interpret complex data sets to support explanations or claims about the conservation of energy and matter during chemical reactions, the effects of different type of interactions, definitions of energy, conservation of energy and energy transfer within a system and/or system model, and how matter affects wave properties.
- evaluate the validity and reliability of complex claims about the effects of electromagnetic radiation on matter from a variety of published sources, including complex texts.
- construct, evaluate, make inferences, and revise an explanation based on scientific principles using valid and reliable evidence
 obtained from a variety of sources to identify patterns relating to the structure and properties of matter and chemical reactions; and
 define energy and matter in order to design, refine, and evaluate solutions, taking into account unanticipated effects around defining
 and delimiting engineering problems and interdependence of science, engineering, and technology.

Proficient

Students demonstrate mastery with subject matter and exhibit readiness for college and career. In addition to demonstrating understanding and application of all skills in the Basic Level, students scoring at the Proficient Level typically:

- use patterns and models to predict how components between or within systems are related to the energy of motion and the structure and properties of matter, and the relationships between energy and matter.
- use mathematical models and plan and conduct investigations to produce and use reliable data to serve as a basis for evidence to support explanations or claims about the conservation of energy and matter during chemical reactions, the effects of different type of interactions, definitions of energy, conservation of energy and energy transfer within a system and/or system model, and how matter affects wave properties.
- evaluate the validity and reliability of claims about the effects of electromagnetic radiation on matter from a variety of published sources.
- construct and revise an explanation based on scientific principles using valid and reliable evidence obtained from a variety of sources to identify patterns relating to the structure and properties of matter and chemical reactions; and define energy and matter in order to design and refine solutions around defining and delimiting engineering problems and interdependence of science, engineering, and

technology.

Basic

Students demonstrate partial mastery with subject matter and may not exhibit readiness for college and career. Students scoring at the Basic level typically:

- use basic patterns and models to identify and describe components between or within systems related to the energy of motion and the structure and properties of matter, and the relationships between energy and matter.
- use simple mathematical models and conduct investigations to produce data or use provided data to support explanations or claims about the conservation of energy and matter during chemical reactions, the effects of different type of interactions, definitions of energy, conservation of energy and energy transfer within a system and/or system model, and how matter affects wave properties.
- evaluate the validity and/or reliability of a simple claim about the effects of electromagnetic radiation on matter from a published source.
- identify and describe basic relationships and construct explanations based on evidence from a variety of sources about patterns relating to the structure and properties of matter and chemical reactions; and define energy and matter in order to design solutions around defining and delimiting engineering problems and interdependence of science, engineering, and technology.

Below Basic

Students scoring **Below Basic** have not demonstrated they can perform at the Basic level. Students scoring at the Basic Level:

- use basic patterns and models to identify and describe components between or within systems related to the energy of motion and the structure and properties of matter, and the relationships between energy and matter.
- use simple mathematical models and conduct investigations to produce data or use provided data to support explanations or claims about the conservation of energy and matter during chemical reactions, the effects of different type of interactions, definitions of energy, conservation of energy and energy transfer within a system and/or system model, and how matter affects wave properties.
- evaluate the validity and/or reliability of a simple claim about the effects of electromagnetic radiation on matter from a published source.
- identify and describe basic relationships and construct explanations based on evidence from a variety of sources about patterns relating to the structure and properties of matter and chemical reactions; and define energy and matter in order to design solutions around defining and delimiting engineering problems and interdependence of science, engineering, and technology.

PS1-1 PS3-2	Below Basic: Students have not performed at least at the Basic level.	Basic: Students demonstrate partial mastery of the essential knowledge and skills that are foundational for proficient work at their grade level or course and that students are not on track to be career and college ready (CCR).	Proficient: Students demonstrate mastery over challenging grade-level subject matter, can analyze and apply such knowledge to real-world situations, are ready for the next grade, course, or level, and are on-track to be career and college ready (CCR).	Advanced: Students demonstrate superior performance on challenging subject matter.
Develop and Use Models DCI PS1.A Structure and Properties of Matter PS3.A Definitions of Energy CCC Patterns Energy and Matter		Students scoring at the Basic level typically use basic patterns and models to identify and describe components between or within systems related to the energy of motion and the structure and properties of matter, and the relationships between energy and matter.	Students scoring at the Proficient level typically use patterns and models to predict how components between or within systems are related to the energy of motion and the structure and properties of matter, and the relationships between energy and matter.	Students scoring at the Advanced level typically evaluate multiple patterns to develop and use models to predict how components between or within systems are related to the energy of motion and the structure and properties of matter, and the relationships between energy and matter.

PS1-7 PS2-5 PS3-1 PS3-4 PS4-1	Below Basic: Students have not performed at least at the Basic level.	Basic: Students demonstrate partial mastery of the essential knowledge and skills that are foundational for proficient work at their grade level or course and that students are not on track to be career and college ready (CCR).	Proficient: Students demonstrate mastery over challenging grade-level subject matter, can analyze and apply such knowledge to real-world situations, are ready for the next grade, course, or level, and are on-track to be career and college ready (CCR).	Advanced: Students demonstrate superior performance on challenging subject matter.
Planning and Carrying Out Investigations, Using Mathematics and Computational Thinking DCI PS1.B Chemical Reactions PS2.B Types of Interactions PS3.A Definitions of Energy PS3.B Conservation of Energy and Energy Transfer PS4.A Wave Properties CCC Energy and Matter Cause and Effect Systems and System Models		Students scoring at the Basic level typically use simple mathematical models and conduct investigations to produce data or use provided data to support explanations or claims about the conservation of energy and matter during chemical reactions, the effects of different type of interactions, definitions of energy, conservation of energy and energy transfer within a system and/or system model, and how matter affects wave properties.	Students scoring at the Proficient level typically use mathematical models and plan and conduct investigations to produce and use reliable data to serve as a basis for evidence to support explanations or claims about the conservation of energy and matter during chemical reactions, the effects of different type of interactions, definitions of energy, conservation of energy and energy transfer within a system and/or system model, and how matter affects wave properties.	Students scoring at the Advanced level typically use complex mathematical models and plan and conduct investigations to produce and refine reliable data considering the types, amounts, accuracy and limitations of data needed; analyze and interpret complex data sets to support explanations or claims about the conservation of energy and matter during chemical reactions, the effects of different type of interactions, definitions of energy, conservation of energy and energy transfer within a system and/or system model, and how matter affects wave properties.

PS4-4 Below Basic: Students have not performed at least at the Basic level.		Basic: Students demonstrate partial mastery of the essential knowledge and skills that are foundational for proficient work at their grade level or course and that students are not on track to be career and college ready (CCR). Proficient: Students demonstrate mastery ove challenging grade-level subject matter, can analyze and apply such knowledge to real-world situations, are ready for the next grade, course, or level, and are on-track to be career and college ready (CCR).		Advanced: Students demonstrate superior performance on challenging subject matter.
Obtaining, Evaluating, and Communicating Information DCI PS4.B Electromagnetic Radiation CCC Cause and Effect		Students demonstrate partial mastery of the essential knowledge and skills appropriate to college and career readiness. Students scoring at the Basic level typically evaluate the validity and/or reliability of a simple claim about the effects of electromagnetic radiation on matter from a published source.	Students demonstrate mastery with subject matter and exhibit readiness for college and career. Students scoring at the Proficient level typically evaluate the validity and reliability of claims about the effects of electromagnetic radiation on matter from a variety of published sources.	Students demonstrate superior performance on challenging subject matter and clearly exhibit readiness for college and career. In addition to demonstrating a broad and indepth understanding and application of all skills at the Proficient level, students scoring at the Advanced level typically evaluate the validity and reliability of complex claims about the effects of electromagnetic radiation on matter from a variety of published sources, including complex texts.

PS1-2 PS1-5 PS3-3	Below Basic: Students have not performed at least at the Basic level.	Basic: Students demonstrate partial mastery of the essential knowledge and skills that are foundational for proficient work at their grade level or course and that students are not on	Proficient: Students demonstrate mastery over challenging grade-level subject matter, can analyze and apply such knowledge to real-world situations, are ready for the next grade, course, or level, and are on-track to	Advanced: Students demonstrate superior performance on challenging subject matter.
		track to be career and college ready (CCR).	be career and college ready (CCR).	
Constructing Explanations and Designing Solutions DCI PS1.A Structure and Properties of Matter PS1.B: Chemical Reactions PS3.A Definitions of Energy ETS1.A Defining and Delimiting Engineering Problems ETS2.B Interdependence of Science, Engineering, and Technology CCC Patterns Energy and Matter		Students scoring at the Basic level typically identify and describe basic relationships and construct explanations based on evidence from a variety of sources about patterns relating to the structure and properties of matter and chemical reactions; and define energy and matter in order to design solutions around defining and delimiting engineering problems and interdependence of science, engineering, and technology.	Students scoring at the Proficient level typically construct and revise an explanation based on scientific principles using valid and reliable evidence obtained from a variety of sources to identify patterns relating to the structure and properties of matter and chemical reactions; and define energy and matter in order to design and refine solutions around defining and delimiting engineering problems and interdependence of science, engineering, and technology.	Students scoring at the Advanced level typically construct, evaluate, make inferences, and revise an explanation based on scientific principles using valid and reliable evidence obtained from a variety of sources to identify patterns relating to the structure and properties of matter and chemical reactions; and define energy and matter in order to design, refine, and evaluate solutions taking into account unanticipated effects around defining and delimiting engineering problems and interdependence of science, engineering, and technology.

APPENDIX E—EVALUATION RESULTS

Training Evaluation Results

I understand the goals of the standard setting meeting
I understand the procedures we are using to set standards
I understand how to use the standard setting materials
I understand the differences between the performance levels
I understand how to make the bookmark placements
I know what tasks to expect for the remainder of the meeting
I am confident in my understanding of the standard setting task
I am ready to proceed with the standard setting process

N	Average	%SD	%D	%N	%A	%SA
12	4.92	0%	0%	0%	8%	92%
12	4.67	0%	0%	0%	33%	67%
12	4.67	0%	0%	0%	33%	67%
12	4.58	0%	0%	0%	42%	58%
12	4.83	0%	0%	0%	17%	83%
12	4.42	0%	0%	8%	42%	50%
12	4.67	0%	0%	0%	33%	67%
12				100%		

Procedural Evaluation Results

I understood how to make the bookmark placements
I understood how to use the materials provided
I understood how to record my judgments
I thought the procedures made sense
I was sufficiently familiar with the assessment
I understood the differences between the performance levels

N	Average	%SD	%D	%N	%A	%SA
12	4.92	0%	0%	0%	8%	92%
12	4.92	0%	0%	0%	8%	92%
12	4.75	0%	0%	0%	25%	75%
12	4.67	0%	0%	8%	17%	75%
12	4.5	0%	0%	8%	33%	58%
12	4.67	0%	0%	0%	33%	67%

Final Evaluation Results

Please rate the usefulness of each of the following

The opening session

Completing the practice test

Completing the item map

Discussions with other participants

Impact data

	N	ot Useful at All				Extremely Useful
N	Average	1	2	3	4	5
12	4.92	0%	0%	0%	8%	92%
12	4.92	0%	0%	0%	8%	92%
12	4.92	0%	0%	0%	8%	92%
12	4.92	0%	0%	0%	8%	92%
12	4.92	0%	0%	0%	8%	92%

Please rate the usefulness of each of the following

The Performance Level Definitions
My expectations of students
The difficulty of the test materials
My experience in the field
Discussions with other participants
Decisions of other participants
Impact data

		influential				Influential
N	Average	1	2	3	4	5
12	4.92	0%	0%	0%	8%	92%
12	4.33	0%	0%	17%	33%	50%
12	4.17	8%	0%	8%	33%	50%
12	4.58	0%	0%	8%	25%	67%
12	4.67	0%	0%	8%	17%	75%
12	4	0%	8%	8%	58%	25%
12	3.92	8%	0%	25%	25%	42%

Not at all

I understood the goals of the standard setting meeting
The facilitator helped me understand the process
The materials contained the information needed to set standards
I understood how to use the impact data
I understood how the cut scores were calculated
The facilitator was able to provide answers to my questions
Sufficient time was allotted for training on the standard setting
tasks
Sufficient time was allotted to complete the standard setting tasks

The facilitator helped the standard setting process run smoothly Overall, the standard setting process produced credible results

N	Average	%SD	%D	%N	%A	%SA
12	4.75	0%	0%	0%	25%	75%
12	4.92	0%	0%	0%	8%	92%
12	4.83	0%	0%	8%	0%	92%
12	4.58	0%	0%	8%	25%	67%
12	4.42	0%	8%	0%	33%	58%
12	5	0%	0%	0%	0%	100%
		-01	-01			/
12	4	0%	8%	17%	42%	33%
12	4.25	0%	8%	8%	33%	50%
12	5	0%	0%	0%	0%	100%
12	4.92	0%	0%	0%	8%	92%

Do you believe the final recommended cut score for each performance level was Too Low, Somewhat Low, About Right, Somewhat High, or Too High?

Advanced / Proficient Proficient / Basic Basic / Below Basic

N	Average	%TL	%SL	%AR	%SH	%ТН
12	3	0%	0%	100%	0%	0%
12	2.92	0%	8%	92%	0%	0%
12	2.92	0%	8%	92%	0%	0%

Extremely

<u>Demographics and Professional</u> <u>Experience</u>

Panelist Demographics	Count (N=12)	<u>%</u>
Gender:		
Male	3	25.00%
Female	9	75.00%
Race/Ethnicity:		
White	11	91.67%
Black		0.00%
Hispanic		0.00%
Asian		0.00%
Pacific Islander		0.00%
American Indian	1	8.33%
Professional Experience:		
Students with Disabilities	1	8.33%
Students with Limited English Proficiency	1	8.33%
Economically Disadvantaged Students	3	25.00%
Gifted and Talented Students	7	58.33%
General Education	12	100.00%

APPENDIX F—STANDARD SETTING RESULTS

Table F-1. 2017 OK Standard Setting Report: Round 1 CCRA Physical Science

Performance Level	Theta Cut	SE	MAD	At %	At or Above %
Limited Knowledge	0.3442	0.1432	0.0964	16.55%	40.49%
Proficient	0.8227	0.0838	0.4785	13.83%	23.94%
Advanced	1.3836	0.1416	0.2322	10.11%	10.11%

Table F-2. 2017 OK Standard Setting Report: Round 1 CCRA Life Science

Performance Level	Theta Cut	SE	MAD	At %	At or Above %
Limited Knowledge	-0.2795	0.2642	0.4274	31.00%	66.03%
Proficient	0.5126	0.0472	1.0483	26.00%	35.03%
Advanced	1.4509	0.1408	0.1886	9.03%	9.03%

Table F-3. 2017 OK Standard Setting Report: Round 2 CCRA Physical Science

Performance Level	Theta Cut	SE	MAD	At %	At or Above %
Limited Knowledge	0.3442	0.0604	0.1351	16.55%	40.49%
Proficient	0.8577	0.0567	0.4960	16.03%	23.94%
Advanced	1.5050	0.0319	0.0183	7.91%	7.91%

Table F-4. 2017 OK Standard Setting Report: Round 2 CCRA Life Science

Performance Level	Theta Cut	SE	MAD	At %	At or Above %
Limited Knowledge	0.1684	0.1064	0.0825	16.33%	46.69%
Proficient	0.6290	0.0576	0.6404	20.25%	30.36%
Advanced	1.4265	0.0246	0.0527	10.11%	10.11%

Table F-5. 2017 OK Standard Setting Report: Round 3 CCRA Science

Performance Level	Theta Cut	SE	MAD	At %	At or Above %
Limited Knowledge	0.3056	0.0258	0.1017	17.48%	43.47%
Proficient	0.8021	0.0211	0.4965	18.08%	25.99%
Advanced	1.5289	0.0053	0.0000	7.91%	7.91%

Table F-6. 2017 OK Standard Setting Report: Round 4 CCRA Science

Performance Level	Theta Cut	SE	MAD	At %	At or Above %
Limited Knowledge	0.1684	0.0114	0.0000	20.70%	46.69%
Proficient	0.8021	0.0131	0.6337	18.08%	25.99%
Advanced	1.5289	0.0047	0.0000	7.91%	7.91%

APPENDIX G—DISAGGREGATED IMPACT DATA

Table G-1. 2019 OK Standard Setting Report: Round 1—Physical Science

	Total N	Below Basic N	Below Basic %	Basic N	Basic %	Prof N	Prof %	Adv N	Adv %
Total	43,638	25,968	0.5951	7,222	0.1655	6,036	0.1383	4,412	0.1011
ELL	2,027	1,874	0.9245	116	0.0572	33	0.0163	4	0.0020
ELL w Acc	461	438	0.9501	17	0.0369	5	0.0108	1	0.0022
ELL wo Acc	1,566	1,436	0.9170	99	0.0632	28	0.0179	3	0.0019
Black African American	3,751	2,945	0.7851	409	0.1090	279	0.0744	118	0.0315
American Indian Alaskan Native	6,154	4,008	0.6513	995	0.1617	754	0.1225	397	0.0645
Hispanic or Latino	7,097	4,969	0.7002	1,044	0.1471	720	0.1015	364	0.0513
Asian	1,000	442	0.4420	156	0.1560	173	0.1730	229	0.2290
Native Hawaiian or Other Pacific Islander	136	104	0.7647	18	0.1324	9	0.0662	5	0.0368
White Caucasian	22,053	11,477	0.5204	4,006	0.1817	3,609	0.1637	2,961	0.1343
Multi Racial	3,404	1,994	0.5858	588	0.1727	487	0.1431	335	0.0984
No Response	43	29	0.6744	6	0.1395	5	0.1163	3	0.0698
Foster	166	123	0.7410	16	0.0964	19	0.1145	8	0.0482
Non Foster	43,472	25,845	0.5945	7,206	0.1658	6,017	0.1384	4,404	0.1013
Female	21,813	12,994	0.5957	3,898	0.1787	3,086	0.1415	1,835	0.0841
Male	21,788	12,948	0.5943	3,319	0.1523	2,947	0.1353	2,574	0.1181
Not Indicated	37	26	0.7027	5	0.1351	3	0.0811	3	0.0811
IEP	5,971	5,169	0.8657	447	0.0749	214	0.0358	141	0.0236
IEP w Accomm	2,689	2,361	0.8780	189	0.0703	85	0.0316	54	0.0201
IEP w o Accomm	3,282	2,808	0.8556	258	0.0786	129	0.0393	87	0.0265
Military	291	133	0.4570	61	0.2096	55	0.1890	42	0.1443
Non Military	43,347	25,835	0.5960	7,161	0.1652	5,981	0.1380	4,370	0.1008
ELL 1st Yr Proficient	159	88	0.5535	37	0.2327	24	0.1509	10	0.0629
ELL 2nd Yr Proficient	87	49	0.5632	20	0.2299	10	0.1149	8	0.0920
Econ Disadv	22,230	15,306	0.6885	3,328	0.1497	2,315	0.1041	1,281	0.0576
Non Econ Disadv	21,408	10,662	0.4980	3,894	0.1819	3,721	0.1738	3,131	0.1463
Migrant	13	8	0.6154	2	0.1538	2	0.1538	1	0.0769
Non Migrant	43,625	25,960	0.5951	7,220	0.1655	6,034	0.1383	4,411	0.1011
Plan 504	1,201	674	0.5612	207	0.1724	174	0.1449	146	0.1216
Plan 504 w Accomm	167	82	0.4910	28	0.1677	30	0.1796	27	0.1617
Plan 504 w o Accomm	1,034	592	0.5725	179	0.1731	144	0.1393	119	0.1151

Table G-2. 2019 OK Standard Setting Report: Round 1—Life Science

	Total N	Below Basic N	Below Basic %	Basic N	Basic %	Prof N	Prof %	Adv N	Adv %
Total	43,638	14,822	0.3397	13,529	0.3100	11,348	0.2600	3,939	0.0903
ELL	2,027	1,434	0.7074	490	0.2417	99	0.0488	4	0.0020
ELL w Acc	461	341	0.7397	99	0.2148	20	0.0434	1	0.0022
ELL wo Acc	1,566	1,093	0.6980	391	0.2497	79	0.0504	3	0.0019
Black African American	3,751	1,966	0.5241	1,127	0.3005	552	0.1472	106	0.0283
American Indian Alaskan Native	6,154	2,265	0.3681	2,051	0.3333	1,497	0.2433	341	0.0554
Hispanic or Latino	7,097	3,075	0.4333	2,272	0.3201	1,444	0.2035	306	0.0431
Asian	1,000	237	0.2370	240	0.2400	311	0.3110	212	0.2120
Native Hawaiian or Other Pacific Islander	136	70	0.5147	40	0.2941	21	0.1544	5	0.0368
White Caucasian	22,053	6,061	0.2748	6,728	0.3051	6,598	0.2992	2,666	0.1209
Multi Racial	3,404	1,131	0.3323	1,057	0.3105	916	0.2691	300	0.0881
No Response	43	17	0.3953	14	0.3256	9	0.2093	3	0.0698
Foster	166	73	0.4398	53	0.3193	32	0.1928	8	0.0482
Non Foster	43,472	14,749	0.3393	13,476	0.3100	11,316	0.2603	3,931	0.0904
Female	21,813	6,953	0.3188	7,329	0.3360	5,915	0.2712	1,616	0.0741
Male	21,788	7,853	0.3604	6,188	0.2840	5,427	0.2491	2,320	0.1065
Not Indicated	37	16	0.4324	12	0.3243	6	0.1622	3	0.0811
IEP	5,971	3,776	0.6324	1,566	0.2623	500	0.0837	129	0.0216
IEP w Accomm	2,689	1,747	0.6497	681	0.2533	210	0.0781	51	0.0190
IEP w o Accomm	3,282	2,029	0.6182	885	0.2697	290	0.0884	78	0.0238
Military	291	67	0.2302	82	0.2818	107	0.3677	35	0.1203
Non Military	43,347	14,755	0.3404	13,447	0.3102	11,241	0.2593	3,904	0.0901
ELL 1st Yr Proficient	159	35	0.2201	63	0.3962	51	0.3208	10	0.0629
ELL 2nd Yr Proficient	87	27	0.3103	28	0.3218	26	0.2989	6	0.0690
Econ Disadv	22,230	9,367	0.4214	7,099	0.3193	4,657	0.2095	1,107	0.0498
Non Econ Disadv	21,408	5,455	0.2548	6,430	0.3004	6,691	0.3125	2,832	0.1323
Migrant	13	6	0.4615	3	0.2308	3	0.2308	1	0.0769
Non Migrant	43,625	14,816	0.3396	13,526	0.3101	11,345	0.2601	3,938	0.0903
Plan 504	1,201	340	0.2831	409	0.3405	318	0.2648	134	0.1116
Plan 504 w Accomm	167	36	0.2156	55	0.3293	51	0.3054	25	0.1497
Plan 504 w o Accomm	1,034	304	0.2940	354	0.3424	267	0.2582	109	0.1054

Table G-3. 2019 OK Standard Setting Report: Round 2—Physical Science

		Below	Below						
	Total N	Basic N	Basic %	Basic N	Basic %	Prof N	Prof %	Adv N	Adv %
Total	43,638	25,968	0.5951	7,222	0.1655	6,997	0.1603	3,451	0.0791
ELL	2,027	1,874	0.9245	116	0.0572	33	0.0163	4	0.0020
ELL w Acc	461	438	0.9501	17	0.0369	5	0.0108	1	0.0022
ELL wo Acc	1,566	1,436	0.9170	99	0.0632	28	0.0179	3	0.0019
Black African									
American	3,751	2,945	0.7851	409	0.1090	304	0.0810	93	0.0248
American Indian									
Alaskan Native	6,154	4,008	0.6513	995	0.1617	850	0.1381	301	0.0489
Hispanic or Latino	7,097	4,969	0.7002	1,044	0.1471	832	0.1172	252	0.0355
Asian	1,000	442	0.4420	156	0.1560	205	0.2050	197	0.1970
Native Hawaiian or									
Other Pacific Islander	136	104	0.7647	18	0.1324	13	0.0956	1	0.0074
White Caucasian	22,053	11,477	0.5204	4,006	0.1817	4,227	0.1917	2,343	0.1062
Multi Racial	3,404	1,994	0.5858	588	0.1727	560	0.1645	262	0.0770
No Response	43	29	0.6744	6	0.1395	6	0.1395	2	0.0465
Foster	166	123	0.7410	16	0.0964	20	0.1205	7	0.0422
Non Foster	43,472	25,845	0.5945	7,206	0.1658	6,977	0.1605	3,444	0.0792
Female	21,813	12,994	0.5957	3,898	0.1787	3,533	0.1620	1,388	0.0636
Male	21,788	12,948	0.5943	3,319	0.1523	3,460	0.1588	2,061	0.0946
Not Indicated	37	26	0.7027	[^] 5	0.1351	4	0.1081	2	0.0541
IEP	5,971	5,169	0.8657	447	0.0749	243	0.0407	112	0.0188
IEP w Accomm	2,689	2,361	0.8780	189	0.0703	94	0.0350	45	0.0167
IEP w o Accomm	3,282	2,808	0.8556	258	0.0786	149	0.0454	67	0.0204
Military	291	133	0.4570	61	0.2096	63	0.2165	34	0.1168
Non Military	43,347	25,835	0.5960	7,161	0.1652	6,934	0.1600	3,417	0.0788
ELL 1st Yr Proficient	159	88	0.5535	37	0.2327	26	0.1635	8	0.0503
ELL 2nd Yr Proficient	87	49	0.5632	20	0.2299	14	0.1609	4	0.0460
Econ Disadv	22,230	15,306	0.6885	3,328	0.1497	2,649	0.1192	947	0.0426
Non Econ Disadv	21,408	10,662	0.4980	3,894	0.1819	4,348	0.2031	2,504	0.1170
Migrant	13	8	0.6154	2	0.1538	2	0.1538	1	0.0769
Non Migrant	43,625	25,960	0.5951	7,220	0.1655	6,995	0.1603	3,450	0.0791
Plan 504	1,201	674	0.5612	207	0.1724	207	0.1724	113	0.0941
Plan 504 w Accomm	167	82	0.4910	28	0.1677	36	0.2156	21	0.1257
Plan 504 w o Accomm	1,034	592	0.5725	179	0.1731	171	0.1654	92	0.0890

Table G-4. 2019 OK Standard Setting Report: Round 2—Life Science

	Total N	Below Basic N	Below Basic %	Basic N	Basic %	Prof N	Prof %	Adv N	Adv %
Total	43,638	23,265	0.5331	7,124	0.1633	8,837	0.2025	4,412	0.1011
ELL	2,027	1,809	0.8925	144	0.0710	70	0.0345	4	0.0020
ELL w Acc	461	431	0.9349	16	0.0347	13	0.0282	1	0.0022
ELL wo Acc	1,566	1,378	0.8799	128	0.0817	57	0.0364	3	0.0019
Black African American	3,751	2,747	0.7323	460	0.1226	426	0.1136	118	0.0315
American Indian Alaskan Native	6,154	3,591	0.5835	1,012	0.1644	1,154	0.1875	397	0.0645
Hispanic or Latino	7,097	4,550	0.6411	1,066	0.1502	1,117	0.1574	364	0.0513
Asian	1,000	375	0.3750	156	0.1560	240	0.2400	229	0.2290
Native Hawaiian or Other Pacific Islander	136	96	0.7059	17	0.1250	18	0.1324	5	0.0368
White Caucasian	22,053	10,120	0.4589	3,808	0.1727	5,164	0.2342	2,961	0.1343
Multi Racial	3,404	1,760	0.5170	597	0.1754	712	0.2092	335	0.0984
No Response	43	26	0.6047	8	0.1860	6	0.1395	3	0.0698
Foster	166	107	0.6446	24	0.1446	27	0.1627	8	0.0482
Non Foster	43,472	23,158	0.5327	7,100	0.1633	8,810	0.2027	4,404	0.1013
Female	21,813	11,502	0.5273	3,903	0.1789	4,573	0.2096	1,835	0.0841
Male	21,788	11,739	0.5388	3,214	0.1475	4,261	0.1956	2,574	0.1181
Not Indicated	37	24	0.6486	7	0.1892	3	0.0811	3	0.0811
IEP	5,971	4,924	0.8247	540	0.0904	366	0.0613	141	0.0236
IEP w Accomm	2,689	2,263	0.8416	211	0.0785	161	0.0599	54	0.0201
IEP w o Accomm	3,282	2,661	0.8108	329	0.1002	205	0.0625	87	0.0265
Military	291	115	0.3952	63	0.2165	71	0.2440	42	0.1443
Non Military	43,347	23,150	0.5341	7,061	0.1629	8,766	0.2022	4,370	0.1008
ELL 1st Yr Proficient	159	74	0.4654	34	0.2138	41	0.2579	10	0.0629
ELL 2nd Yr Proficient	87	44	0.5057	17	0.1954	18	0.2069	8	0.0920
Econ Disadv	22,230	13,947	0.6274	3,419	0.1538	3,583	0.1612	1,281	0.0576
Non Econ Disadv	21,408	9,318	0.4353	3,705	0.1731	5,254	0.2454	3,131	0.1463
Migrant	13	8	0.6154	1	0.0769	3	0.2308	1	0.0769
Non Migrant	43,625	23,257	0.5331	7,123	0.1633	8,834	0.2025	4,411	0.1011
Plan 504	1,201	591	0.4921	219	0.1823	245	0.2040	146	0.1216
Plan 504 w Accomm	167	73	0.4371	28	0.1677	39	0.2335	27	0.1617
Plan 504 w o Accomm	1,034	518	0.5010	191	0.1847	206	0.1992	119	0.1151

Table G-5. 2019 OK Standard Setting Report: Round 3—Combined

	Total N	Below Basic N	Below Basic %	Basic N	Basic %	Prof N	Prof %	Adv N	Adv %
Total	43,638	24,671	0.5654	7,626	0.1748	7,890	0.1808	3,451	0.0791
ELL	2,027	1,849	0.9122	131	0.0646	43	0.0212	4	0.0020
ELL w Acc	461	433	0.9393	18	0.0390	9	0.0195	1	0.0022
ELL wo Acc	1,566	1,416	0.9042	113	0.0722	34	0.0217	3	0.0019
Black African American	3,751	2,851	0.7601	456	0.1216	351	0.0936	93	0.0248
American Indian Alaskan Native	6,154	3,797	0.6170	1,066	0.1732	990	0.1609	301	0.0489
Hispanic or Latino	7,097	4,781	0.6737	1,108	0.1561	956	0.1347	252	0.0355
Asian	1,000	402	0.4020	178	0.1780	223	0.2230	197	0.1970
Native Hawaiian or Other Pacific Islander	136	100	0.7353	20	0.1471	15	0.1103	1	0.0074
White Caucasian	22,053	10,818	0.4905	4,180	0.1895	4,712	0.2137	2,343	0.1062
Multi Racial	3,404	1,895	0.5567	611	0.1795	636	0.1868	262	0.0770
No Response	43	27	0.6279	7	0.1628	7	0.1628	2	0.0465
Foster	166	114	0.6867	21	0.1265	24	0.1446	7	0.0422
Non Foster	43,472	24,557	0.5649	7,605	0.1749	7,866	0.1809	3,444	0.0792
Female	21,813	12,263	0.5622	4,164	0.1909	3,998	0.1833	1,388	0.0636
Male	21,788	12,383	0.5683	3,456	0.1586	3,888	0.1784	2,061	0.0946
Not Indicated	37	25	0.6757	6	0.1622	4	0.1081	2	0.0541
IEP	5,971	5,058	0.8471	512	0.0857	289	0.0484	112	0.0188
IEP w Accomm	2,689	2,324	0.8643	199	0.0740	121	0.0450	45	0.0167
IEP w o Accomm	3,282	2,734	0.8330	313	0.0954	168	0.0512	67	0.0204
Military	291	123	0.4227	65	0.2234	69	0.2371	34	0.1168
Non Military	43,347	24,548	0.5663	7,561	0.1744	7,821	0.1804	3,417	0.0788
ELL 1st Yr Proficient	159	84	0.5283	34	0.2138	33	0.2075	8	0.0503
ELL 2nd Yr Proficient	87	47	0.5402	19	0.2184	17	0.1954	4	0.0460
Econ Disadv	22,230	14,670	0.6599	3,581	0.1611	3,032	0.1364	947	0.0426
Non Econ Disadv	21,408	10,001	0.4672	4,045	0.1889	4,858	0.2269	2,504	0.1170
Migrant	13	8	0.6154	2	0.1538	2	0.1538	1	0.0769
Non Migrant	43,625	24,663	0.5653	7,624	0.1748	7,888	0.1808	3,450	0.0791
Plan 504	1,201	636	0.5296	223	0.1857	229	0.1907	113	0.0941
Plan 504 w Accomm	167	80	0.4790	24	0.1437	42	0.2515	21	0.1257
Plan 504 w o Accomm	1,034	556	0.5377	199	0.1925	187	0.1809	92	0.0890

Table G-6. 2019 OK Standard Setting Report: Round 4—Combined

	Total N	Below Basic N	Below Basic %	Basic N	Basic %	Prof N	Prof %	Adv N	Adv %
Total	43,638	23,265	0.5331	9,032	0.2070	7,890	0.1808	3,451	0.0791
ELL	2,027	1,809	0.8925	171	0.0844	43	0.0212	4	0.0020
ELL w Acc	461	431	0.9349	20	0.0434	9	0.0195	1	0.0022
ELL wo Acc	1,566	1,378	0.8799	151	0.0964	34	0.0217	3	0.0019
Black African American	3,751	2,747	0.7323	560	0.1493	351	0.0936	93	0.0248
American Indian Alaskan Native	6,154	3,591	0.5835	1,272	0.2067	990	0.1609	301	0.0489
Hispanic or Latino	7,097	4,550	0.6411	1,339	0.1887	956	0.1347	252	0.0355
Asian	1,000	375	0.3750	205	0.2050	223	0.2230	197	0.1970
Native Hawaiian or Other Pacific Islander	136	96	0.7059	24	0.1765	15	0.1103	1	0.0074
White Caucasian	22,053	10,120	0.4589	4,878	0.2212	4,712	0.2137	2,343	0.1062
Multi Racial	3,404	1,760	0.5170	746	0.2192	636	0.1868	262	0.0770
No Response	43	26	0.6047	8	0.1860	7	0.1628	2	0.0465
Foster	166	107	0.6446	28	0.1687	24	0.1446	7	0.0422
Non Foster	43,472	23,158	0.5327	9,004	0.2071	7,866	0.1809	3,444	0.0792
Female	21,813	11,502	0.5273	4,925	0.2258	3,998	0.1833	1,388	0.0636
Male	21,788	11,739	0.5388	4,100	0.1882	3,888	0.1784	2,061	0.0946
Not Indicated	37	24	0.6486	7	0.1892	4	0.1081	2	0.0541
IEP	5,971	4,924	0.8247	646	0.1082	289	0.0484	112	0.0188
IEP w Accomm	2,689	2,263	0.8416	260	0.0967	121	0.0450	45	0.0167
IEP w o Accomm	3,282	2,661	0.8108	386	0.1176	168	0.0512	67	0.0204
Military	291	115	0.3952	73	0.2509	69	0.2371	34	0.1168
Non Military	43,347	23,150	0.5341	8,959	0.2067	7,821	0.1804	3,417	0.0788
ELL 1st Yr Proficient	159	74	0.4654	44	0.2767	33	0.2075	8	0.0503
ELL 2nd Yr Proficient	87	44	0.5057	22	0.2529	17	0.1954	4	0.0460
Econ Disadv	22,230	13,947	0.6274	4,304	0.1936	3,032	0.1364	947	0.0426
Non Econ Disadv	21,408	9,318	0.4353	4,728	0.2209	4,858	0.2269	2,504	0.1170
Migrant	13	8	0.6154	2	0.1538	2	0.1538	1	0.0769
Non Migrant	43,625	23,257	0.5331	9,030	0.2070	7,888	0.1808	3,450	0.0791
Plan 504	1,201	591	0.4921	268	0.2231	229	0.1907	113	0.0941
Plan 504 w Accomm	167	73	0.4371	31	0.1856	42	0.2515	21	0.1257
Plan 504 w o Accomm	1,034	518	0.5010	237	0.2292	187	0.1809	92	0.0890

APPENDIX H—SAMPLE RATING FORM

ID	EXAMPLE_01	Example Doma	ain 1 Panelist					
Procedural Rou	nd 3&4	1						
Directions:		In the column n	narked "Bookr	nark", indicate Y	OUR BOOKMA	ARK PLACEMENT PAGE in the ordered item book. YELLOW AREA=B.	ASIC, GREEN AREA=PROFICIENT, BLUE AREA=ADVANCED	
Warning:								
Item order	Item ID	RND 3 Bookmark	RND 3 Level	RND 4 Bookmark	RND 4 Level	What knowledge and skills does this item measure?	Why is this item more difficult than the preceding item?	Rationale for placements outside shaded areas
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APPENDIX I—EVALUATION FORM

Procedural Evaluation Form

OK CCRA SCI 11

The purpose of this evaluation form is to obtain your feedback about the Standard Setting process. Please complete the information below. Do not put your name on the form. We want your feedback to be confidential.

* Required

1. Please mark the appropriate circle for each statement. *

Mark only one oval per row.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I understood how to make the bookmark placements.	0	0	0	0	0
I understood how to use the materials provided.	0	0	0	0	0
I understood how to record my judgements.	0	0	0	0	0
I thought the procedures made sense.	0	0	0	0	0
I was sufficiently familiar with the assessment.	0	0	0	0	0
I understood the differences between the performance levels.	0	0	0	0	0

2.	of the cut scores? Why? *
 3.	Please provide any additional comments about the cut score placements.

Final Evaluation Form

OK CCRA SCI 11

The purpose of this evaluation form is to obtain your feedback about the Standard Setting process. Please complete the information below. Do not put your name on the form. We want your feedback to be confidential.

* Required

1. Mark only one oval per row*.

	Male	Female
Gender	0	0

2. Mark only one oval per row.

	White	Black	Hispanic	Asian	Pacific Islander	American Indian
Race Ethnicity	0	0	0	0	0	0

- 3. Area of expertise (check all that apply)
 - ☐ Students with Disabilities
 - ☐ Students with Limited English Proficiency
 - ☐ Economically Disadvantaged Students
 - ☐ Gifted and Talented Students
 - □ General Education
- 4. Please rate the usefulness of each of the following*

Mark only one oval per row.

·	Not at all Useful	Somewhat not Useful	Neutral	Somewhat Useful	Extremely Useful
The opening session	0	0	0	0	0
Completing the practice test	0	0	0	0	0
Completing the item map	0	0	0	0	0
Discussions with other participants	0	0	0	0	0
Impact data	0	0	0	0	0

5. Please rate the influence of the following when setting standards: * Mark only one oval per row.

	Not at all influential	Somewhat not influential	Neutral	Somewhat influential	Extremely influential
The Performance Level Definitions	0	0	0	0	0
My expectations of students	0	0	0	0	0
The difficulty of the test materials	0	0	0	0	0
My experience in the field	0	0	0	0	0
Discussions with other participants	0	0	0	0	0
Decisions of other participants	0	0	0	0	0
Impact data	0	0	0	0	0

6. Please select the appropriate circle for each statement. *

Mark only one oval per row.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I understood the goals of the standard setting meeting	0	0	0	0	0
The facilitator helped me understand the process.	0	0	0	0	0
The materials contained the information needed to set standards.	0	0	0	0	0
I understood how to use the impact data.	0	0	0	0	0
I understood how the cut scores were calculated.	0	0	0	0	0
The facilitator was able to provide answers to my questions.	0	0	0	0	0
Sufficient time was allotted for training on the standard setting tasks.	0	0	0	0	0
Sufficient time was allotted to complete the standard setting tasks.	0	0	0	0	0
The facilitator helped the standard setting process run smoothly.	0	0	0	0	0
Overall, the standard setting process produced credible results.	0	0	0	0	0

7. Do you believe the final recommended cut scores for each performance level was Too Low, Somewhat Low, About Right, Somewhat High, or Too High? *

	Too Low	Somewhat Low	About Right	Somewhat High	Too High
Advanced / Proficient	0	0	0	0	0
Proficient / Basic	0	0	0	0	0
Basic / Below Basic	0	0	0	0	0

8.	Please provide any additional comments about the standard setting process or
	suggestions as to how the training and process could be improved.

Powered by Google Forms

APPENDIX J—SAMPLE ITEM LIST FORM

ID	EXAMPLE_01		
DOMAIN	1		
Directions:	Enter your notes	for knowledge / skills and rationale for increased difficulty in the colur	nns below
Item order	Item ID	What knowledge and skills does this item measure?	Why is this item more difficult than the preceding item?
1	586659-1		
2	592071		
3	592069		
4	586636		
5	586031		
6	586218		
7	593426		
8	586106		
9	586029		
10	594357		
11	586649		
12	586701		
13	586709		
14	586693		
15	586659-2		
16	594361		
17	586108		
	594375		
	594354		
	591949		
	593424		
	586655		
	586691		
	586711		
	586027		
	594373		
	592073		
	586631		
	586110		
	594379		
31	586640		

APPENDIX K—NONDISCLOSURE FORM







Nondisclosure Agreement

CCRA – Science Standard Setting June 5–6, 2019

The undersigned is an employee, contractor, assessment committee member, or person otherwise authorized to view secure state assessment materials. The undersigned hereby agrees to be bound to the terms of this agreement restricting the disclosure of said materials.

It is essential to the integrity of this item development project and testing program that all test items remain secure. To maintain this security, only authorized persons are permitted to view the test questions. With the exception of materials released by the Oklahoma State Department of Education for informational purposes, all test questions (draft or final) in hardcopy or electronic format and associated materials must be regarded as secure documents. As a result, such materials may not be reproduced, electronically transmitted, discussed, used in classroom instruction, or in any way released or distributed to unauthorized persons. All materials including items and item drafts must be returned at the end of the meeting.

I understand that I am responsible for test materials security. By breaching test materials security as described here, I am breaching professional testing ethics and may be subject to additional penalties under law.

Name:	 		
Signature:	 		
Date:			

APPENDIX L—MEETING AGENDA







CCRA Science Content Standard Setting Meeting June 5-6, 2019

Agenda - Day 1: Wednesday, June 5, 2019

J	V· V
8:15 am	Registration/Breakfast
9:00 am	Welcome and Introductions
	Review of Agenda and Materials
	Overview of the Standard Setting Process
9:45 am	Take the Test
10.15	
10:15 am	Break
10:30 am	Split into Domain-Specific Groups
	Fill Out Item Map
11:15 am	Discuss PLDs and Describe Characteristics of "Borderline" Students
12:00 pm	Lunch in Hotel Restaurant
1:00 pm	Practice Round
1:30 pm	Readiness Discussion
2:15 pm	Training Evaluation
2:30 pm	Break
2:45 pm	Round 1
4:15 pm	Round 1 questions and discussions
5:00 pm	Adjourn

All times are approximate Breaks will take place as needed







CCRA Science Content Standard Setting Meeting June 5-6, 2019

Agenda – Day 2: Thursday, June 6, 2019

,	y,y-,
8:00 am	Breakfast and sign in
9:00 am	Introduction to Day 2
9:15 am	Round 2
10:15 am	Break
10:30 am	Reconvene as Single Group Review of PLDs and borderline definitions Round 3
12:00 pm	Lunch in Hotel Restaurant
1:00 pm	Round 4
2:15 pm	Break
3:00 pm	Round 4 questions and discussions
4:15 pm	Final Evaluation
4:30 pm	Adjourn

All times are approximate Breaks will take place as needed

APPENDIX M—FINAL CUTPOINTS

Table M-1. 2019 OK Standard Setting Report: Final Cutpoints—CCRA Science

Performance Level	Theta Cut	At %	At or Above %
Below Basic	0.1684	53.31%	100.00%
Basic	0.8021	20.70%	46.69%
Proficient	1.5289	18.08%	25.99%
Advanced	0.1684	7.91%	7.91%

APPENDIX O 2022 CCRA STANDARD SETTING REPORT



US History

June 23-24, 2022—Oklahoma City, Oklahoma

Prepared by Cognia for the Oklahoma Department of Education



TABLE OF CONTENTS

CHAPTER 1. OVERVIEW OF STANDARD-SETTING PROCEDURES	3
CHAPTER 2. TASKS COMPLETED PRIOR TO STANDARD SETTING	4
2.1 CREATION OF PERFORMANCE LEVEL DESCRIPTORS 2.2 PREPARATION OF MATERIALS 2.3 PREPARATION OF THE STANDARD-SETTING TOOLKIT FOR USE DURING THE MEETING 2.4 SELECTION OF PANELISTS	
CHAPTER 3. TASKS COMPLETED DURING THE STANDARD-SETTING MEETING	7
3.1 OVERVIEW OF THE ID MATCHING METHOD 3.2 GENERAL ORIENTATION AND PANELIST TRAINING 3.3 BECOMING FAMILIAR WITH THE TEST ITEMS AND CONTENT 3.4 USE OF THE STANDARD-SETTING TOOLKIT 3.5 REVIEW OF BORDERLINE PERFORMANCE LEVEL DESCRIPTORS 3.6 JUDGMENT ROUNDS AND FEEDBACK 3.6.1 Modeling and Practice 3.6.2 Round 1 Judgments and Results 3.6.3 Round 2 Judgments and Results 3.6.4 Round 3 Judgments and Results 3.6.5 Workshop Evaluation	
CHAPTER 4. TASKS COMPLETED AFTER THE STANDARD-SETTING MEETING	12
4.1 ANALYSIS AND REVIEW OF PANELISTS' FEEDBACK	12
REFERENCES	13
APPENDICES	_
APPENDIX A—POWERPOINT PRESENTATION APPENDIX B—MEETING AGENDAS APPENDIX C—NONDISCLOSURE FORM APPENDIX D—PERFORMANCE LEVEL DESCRIPTORS APPENDIX E—COGNIA STANDARD-SETTING TOOLKIT APPENDIX F—READINESS SURVEYS APPENDIX G—WORKSHOP EVALUATION SURVEY APPENDIX H—PANELISTS APPENDIX I—STANDARD-SETTING ROUND RESULTS APPENDIX J—WORKSHOP EVALUATION RESULTS APPENDIX K—STANDARD-SETTING MEMO APPENDIX L—FINAL CUT POINTS	

Chapter 1. Overview of Standard-Setting Procedures

The purpose of this report is to summarize the activities involved in the standard-setting process for the Oklahoma College and Career Readiness Assessment (CCRA) in US History on behalf of the Oklahoma State Department of Education (SDE). The need for standard setting arises from the fact that this is a new assessment that was administered operationally for the first time in 2022. For such new assessments, performance standards must be set. The primary goal of the standard setting was to determine the knowledge, skills, and abilities (KSAs) that students must demonstrate to be classified into one of the performance levels (i.e., Advanced, Proficient, Basic, and Below Basic).

The standard-setting process used was the Item-Descriptor (ID) Matching method (Ferrara & Lewis, 2012; Cizek & Bunch, 2007). The ID Matching method was selected because it reduces cognitive burden on panelists as compared to other standard-setting methods that require probability judgments about hypothetical high- and low-performing students, and it most clearly translates content standards into performance categories as compared to other methods of standard setting (Cizek, Bunch, & Koons, 2004).

The standard-setting meeting was held from June 23rd through June 24th of 2022. In all, 11 panelists participated in the process and were organized into 3 tables of 3–4 panelists each plus a facilitator provided by Cognia.

This report is organized into three major sections, describing tasks completed prior to, during, and after the standard-setting meeting.

Chapter 2. Tasks Completed Prior to Standard Setting

2.1 Creation of Performance Level Descriptors

Oklahoma State Statute: Title 70. Schools, Chapter 22 – Testing and Assessment, Section 1210.541 – Student Performance Levels and Cut Scores – Accountability System mandates the adoption of "a series of student performance levels and the corresponding cut scores pursuant to the Oklahoma School Testing Program Act." The law states that performance levels must be labeled and defined as follows:

- 1. Advanced, which shall indicate that students demonstrate superior performance on challenging subject matter;
- Proficient, which shall indicate that students demonstrate mastery over appropriate grade-level subject matter and that students are ready for the next grade, course, or level of education, as applicable;
- 3. Basic, which shall indicate that students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level or course; and
- 4. Below Basic, which shall indicate that students have not performed at least at the limited knowledge level.

The PLDs were drafted by Cognia and approved by SDE in early 2020. SDE reviewed the PLDs electronically. The Borderline PLDs, used in the standard-setting process, were created jointly between Cognia team members and SDE team members through a virtual meeting in June 2022. Dr. Steve Ferrara gave a presentation at the start of the meeting on the importance of Borderline PLDs and how to draft them. During the meeting, the PLDs drafted in 2020 were used as a reference document in the creation of the Borderline PLDs.

2.2 Preparation of Materials

The following materials were assembled for presentation to the panelists at the standard-setting meeting in paper or digital form (as indicated):

- · Opening session and workshop facilitator PowerPoint slides
- PLDs (paper)
- Meeting agendas (paper)
- Nondisclosure forms (paper)
- Test booklets (paper)
- Cognia Standard-Setting Toolkit (digital) which included the following: Practice item booklet, integrated item map and ordered item booklet, readiness surveys, and judgment forms.
- Evaluation forms (paper)

The PowerPoint presentation used in the opening session was prepared and approved by the SDE and TAC prior to the meeting. The same PowerPoint presentation slide deck also included the workshop facilitator slides used during the main portion of the standard-setting meeting. A copy of the presentation is included in Appendix A. Copies of the meeting agenda, nondisclosure forms, PLDs, the Cognia Standard-Setting Toolkit, the readiness surveys, and the workshop evaluation form are included in Appendices B through G.

2.3 Preparation of the Standard-Setting Toolkit for use during the Meeting

This section provides details about the Cognia Standard-Setting Toolkit that panelists used to complete standard-setting activities during the meeting. In addition, the setup of the digital ordered item booklet with integrated item map is discussed.

The Cognia Standard-Setting Toolkit was developed, tested, and set up by Cognia prior to the meeting and included a digital ordered item booklet with integrated item map, judgement forms, and readiness surveys. During traditional paper-based standard setting meetings, panelists would be provided with an ordered item book where each page in the book represented a different item, and the items were sorted by difficulty. In addition, panelists would also use an item map which consisted of a list of items that correspond to the pages in the ordered item booklet. Finally, panelists would have paper-based judgement forms which included space for panelists to write notes and make their judgments.

The Cognia Standard-Setting Toolkit consisted of a digital interface that first presented the ordered item map view (i.e., a list of items separated by rows with the easiest item at the bottom and the most difficult at the top). From the initial screen panelists could easily toggle to the corresponding ordered item booklet view (i.e., viewing each item as a single page with the option to use navigation arrows to move 'up' or 'down' in the booklet to a more difficult or easier item). The ordered item booklet was created by sorting the items according to their item response theory (IRT)-based difficulty values (RP = .67 was used). A three-parameter logistic IRT model was used to calculate the RP67 values for dichotomous items.

Integrated judgement forms were available within both the item map and booklet view. The judgment forms provided space for users to note (1) the relevant knowledge, skills, and abilities (KSAs) needed to answer the item, (2) why the item is more difficult than the previous item, (3) item descriptor matches, and (4) cut placements. Any notes entered by the user in the item map view screen would remain in place when the user switched to the booklet view screen and vice versa. In addition to the above, the toolkit included the round-specific readiness surveys that panelists completed before undertaking each judgment round.

Additional details and screenshots of the Cognia Standard-Setting Toolkit are available in Appendix E.

2.4 Selection of Panelists

As emphasized in Cizek and Bunch (2007), regardless of the method used, the selection of panelists is an important factor in determining standard-setting outcomes and maximizing the validity of the standard-setting process. The guidance provided by *Standards for Educational and Psychological Testing* (AERA et al., 1999) states that "a sufficiently large and representative group of judges should be involved to provide reasonable assurance that results would not vary greatly if the process were repeated."

Consistent with the above guidance and respecting practical considerations regarding the maximum size of a group that can be successfully managed, the goal was to recruit a standard-setting panel of 10–12 members representing different stakeholder groups to set standards for US History. Targets for the size and composition of the panel were also consistent with federal guidelines as described in *Standards and Assessment Peer Review Guidance: Information and examples for meeting requirements of the No Child Left Behind Act of 2001* (U.S. Department of Education, 2009).

The SDE selected panelists prior to the standard-setting meeting. The goal for panel selection was to include participants who are primarily teachers, but also to include school administrators, higher education personnel, and stakeholders from other interest groups. Moreover, to the extent possible, panelists were selected to reflect a balance of gender, race/ethnicity, and geographic location. Finally, panelists were selected who were familiar with the high school US History subject matter. A list of the panelists is included in Appendix H.

Chapter 3. Tasks Completed During the Standard-Setting Meeting

3.1 Overview of the ID Matching Method

The Item-Descriptor (ID) Matching method is appropriate for setting standards for standards-aligned assessments like the CCRA U.S. History assessment. Assessment programs around the world have used ID Matching (e.g., Delaware, Massachusetts, Maryland, Mississippi, New Mexico, New York, South Carolina, and West Virginia; the Chicago and Philadelphia Public Schools; and programs in Brazil, Germany, and Finland).

ID Matching has advantages over Bookmark, Angoff, and other standard-setting methods. Specifically, its cognitive-judgmental task requires that standard-setting panelists, who are typically classroom educators, undertake a judgmental task that they are well suited for—matching item knowledge and skill response demands with knowledge and skill expectations in performance level descriptors (PLDs). The Bookmark and other methods require panelists to make probability judgments—something that people in general do not do well (e.g., Murphy, 2002). In addition, panelists do not need to hold a hypothetical borderline student in mind when they match items to descriptors and recommend cut scores, so the cognitive load and complexity of ID Matching is more manageable.

During standard setting using ID Matching, panelists use borderline PLDs as their guide to match items to performance level descriptors. The structure of the PLDs provides a general characterization of expected student knowledge and skill at each level and examples of the knowledge and skills that students at each achievement level can be expected to demonstrate. The ordering of items by their empirical difficulty facilitates the matching process. By matching test items to specific claims from the borderline Proficient PLD, for example, panelists identify the evidence in test items that supports the claims in that descriptor. Supporting the claims represented in the borderline Proficient PLD contributes to the validity of interpretations of student achievement, based on the PLDs, and to the overall validity argument that a student who achieves that level on the assessment has demonstrated adequate understanding of essential concepts with respect to the standards being measured. This logic applies to all cut scores and performance levels.

3.2 General Orientation and Panelist Training

Concerning panelist training, the *Standards for Educational and Psychological Testing* (AERA et al., 2014) states the following:

Care must be taken to assure these persons understand what they are to do and that their judgments are as thoughtful and objective as possible. The process must be such that well-qualified participants can apply their knowledge and experience to reach meaningful and relevant judgments that accurately reflect their understandings and intentions. (p. 101)

The training of the panelists began with a general orientation session at the start of the standard-setting meeting. The purpose of the orientation was to ensure that all panelists received the same information about the need for and the goals of standard setting, and about their part in the process.

3.3 Becoming Familiar with the Test Items and Content

The first step after the opening session was for the panelists to take the US History test. The purpose of this step was to familiarize the panelists with the assessment and the test taking activities expected of students during administration. Once panelists completed the test, the answer key was distributed. At this point, panelists were encouraged to discuss any issues regarding items or scoring.

3.4 Use of the Standard-Setting Toolkit

Panelists were organized into tables such that each table included 3–4 panelists. Panelists used the provided laptop computers to securely access the Cognia Standard-Setting Toolkit. Within the digital tool, each panelist reviewed the domain-specific ordered item booklet item by item, considering the KSAs students needed to answer each one.

Panelists used the integrated ordered item booklet and judgment forms available within the Cognia Standard-Setting Toolkit to complete their judgments. The judgment form included space for the panelists to type in the KSAs required to answer each item correctly and to indicate why they believed each item was more difficult than the previous one. To ensure each panelist was comfortable using the provided laptop computers and understood the mechanics of data entry, Cognia Psychometricians Dr. Frank Padellaro, Dr. Robert Cook, and Dr. Robert Keller reviewed the technology the panelists would use to complete their judgment forms.

3.5 Review of Borderline Performance Level Descriptors

Before engaging in the judgment tasks, panelists reviewed the borderline PLDs. This important step was designed to ensure that panelists thoroughly understood the KSAs needed for students to be classified into performance levels (Below Basic, Basic, Proficient, and Advanced). The borderline PLDs are provided in Appendix D.

3.6 Judgment Rounds and Feedback

During the main portion of the standard-setting workshop, panelists completed a practice round followed by three consecutive rounds of judgments. After the completion of each judgment round, Cognia psychometricians calculated a variety of statistics which served various functions: feedback to panelists as part of the standard-setting process, reporting to Cognia and the SDE as intermediate evidence for the impact of panelists' judgments, and as quality control metrics. For each round, Cognia psychometricians calculated the median cut scores for the group based on their cut score recommendations, theta scale cut scores, the conditional standard error of measurement (SEM) for each of the cut scores, and impact data (i.e., the percentage of students in each performance level).

For each round, the overall cut points were determined by first calculating the median of the individual cut points obtained from each panelist, and then calculating the average of the RP67 thetas associated with the median OIB page number and the item just below it in the ordered item booklet. This calculation was repeated for each performance level cut point. The Mean Absolute Difference of the panelists' cut points indicates the extent to which judgments were consistent across panelists and reflects the level of

agreement among the ratings with each successive round of ratings. Conditional SEM characterizes the measurement precision for each of the scale cuts. Finally, impact data reflect the percentage of students across the state who would fall into each performance level category according to the total group median cut points. While these statistics were available, the only results revealed to panelists were those that were appropriate for the goals of the specific round. Results for panelist ratings across all rounds are displayed in Appendix I.

3.6.1 Modeling and Practice

To begin, the panelists completed a practice round of judgments. The purpose of the practice round was to familiarize the panelists with all the materials they would be using for the standard-setting process and become facile with the ID Matching judgments. Panelists used the provided laptop computers to access digital copies of the borderline PLDs and standards. In addition, panelists were provided with credentials to access the Cognia Standard-Setting Toolkit. Within the digital tool, panelists were presented with a practice ordered item book, which consisted of 6 items representing the range of difficulty on the test, as well as the integrated digital judgment forms.

The facilitator demonstrated how to navigate within the standard-setting tool and how to use the tool to make their judgments. Additionally, Cognia Psychometrician Dr. Frank Padellaro reviewed the technology panelists would use to complete their judgments, to ensure each panelist understood how to use the Cognia Standard-Setting tool. Then, beginning with the first ordered item and considering the skills and abilities needed to complete it, panelists were instructed to ask themselves two questions: (1) "What are the knowledge, skills, and abilities a student needs to respond to this item?" and (2) "Why is this item more difficult than the previous item?" Panelists considered each ordered item in turn, asking themselves the same two questions and assigning item descriptor matches (i.e., below basic, basic, proficient, advanced, or the threshold between two levels) to each item. The facilitator then led the panelists in a readiness discussion, asking panelists to share the reasoning behind their item descriptor matches with the group and assessing each panelist's understanding of the judgment task and borderline PLDs.

At the end of the practice round, panelists completed the round one readiness survey (Appendix F). The readiness survey was designed to ascertain whether the panelists were comfortable moving ahead to the judgment task. Once all panelists completed the Round 1 Readiness Survey, Cognia psychometricians reviewed the responses to make sure panelists were ready to undertake the first round of judgments. In the event of any uncertainty (based on the survey responses), the specific information was relayed to the facilitator so that any questions or issues could be addressed before proceeding to the Round 1 judgments.

3.6.2 Round 1 Judgments and Results

In the first round, panelists worked individually with the borderline PLDs, the standard-setting tool, and the ordered item booklet (OIB). Beginning with the first ordered item and considering the skills and abilities needed to complete it, Panelists considered each ordered item in turn, asking themselves the same two questions and assigning item descriptor matches (i.e., below basic, basic, proficient, advanced, or threshold) to each item. They continued in this manner until they located a threshold region (a region in the item descriptor matches alternated between two performance levels), then placed their cut at the item

that marked the beginning of the region based on their judgments. Panelists then repeated the process for the other two cut points and used the integrated judgment forms to record their notes and judgments.

After the completion of round one, Cognia psychometricians calculated a variety of statistics as described previously. As a reminder, the Round 1 overall cut points were determined by first calculating the median of the individual cut points obtained from each panelist, and then calculating the average of the RP67 thetas associated with the median OIB page number and the item just below it in the ordered item booklet.

3.6.3 Round 2 Judgments and Results

The purpose of Round 2 was for panelists to discuss their Round 1 cut score recommendations and, if they determined it necessary, to revise their judgments. Prior to beginning their discussions, panelists were presented with the median cut scores based on their Round 1 judgments for each performance level cut score. The facilitator presented this information to the group using a projector and laptop and explained how to use it as they completed their discussions. The distribution of panelists' cut points was presented graphically, as histograms, in terms of location in the item map.

Panelists were then given the opportunity to share their individual rationales for their cut placements in terms of the necessary knowledge and skills for each classification. Panelists were asked to pay particular attention to how their individual judgments compared to those of other panelists in their room to assess whether they were unusually stringent or lenient within the group. They also were reminded to make their own independent judgments and that they did not have to agree with other panelist recommendations. Once the discussions were complete, panelists completed the round two readiness survey (Appendix F). The readiness survey was designed to ascertain whether the panelists were comfortable moving ahead to the second round of the judgment task. Once all panelists completed the Round 2 Readiness Survey, Cognia psychometricians reviewed the responses to make sure panelists were ready to undertake their second round of judgments. In the event of any uncertainty (based on the survey responses), the specific information was relayed to the facilitator so that any questions or issues could be addressed before proceeding to the Round 2 judgments.

Once all panelists indicated that they were ready to undertake the next round, they were given the opportunity to revise or retain their Round 1 judgments on the judgment forms within the digital tool. Panelists were told to place cut scores according to their individual best judgments; consensus among the panelists was not necessary. They were encouraged to listen to the points made by their colleagues but not to feel compelled to change their cut placements. When Round 2 judgments were complete, Cognia psychometricians calculated the statistics described previously and discussed the results with SDE staff. In addition, the results and associated impact data were presented to panelists at the conclusion of round 2.

3.6.4 Round 3 Judgments and Results

The purpose of Round 3 was for panelists to discuss their Round 2 cut score recommendations and, if necessary, to revise their judgments. Prior to beginning their discussions, panelists were presented with the median cut scores based on their Round 2 judgments as well as impact data for each performance level cut. The facilitator presented this information to the group using a projector and laptop and explained

how to use it as they completed their discussions. The distribution of panelists' cut points was presented graphically, as histograms, in terms of location in the ordered item booklet. The impact data was presented graphically in the form of a stacked bar chart.

Panelists were then given the opportunity to share their individual rationales for their cut score placements in terms of the necessary knowledge and skills for each classification. Panelists were asked to pay particular attention to how their individual judgments compared to those of other panelists in their room to assess whether they were unusually stringent or lenient within the group. Once the discussions were complete, panelists completed the round three readiness survey. The readiness survey was designed to ascertain whether the panelists were comfortable moving ahead to the second round of the judgment task. Once all panelists completed the Round 3 Readiness Survey, Cognia psychometricians reviewed the responses to make sure panelists were ready to undertake their second round of judgments. In the event of any uncertainty (based on the survey responses), the specific information was relayed to the facilitator so that any questions or issues could be addressed before proceeding to the Round 3 judgments.

Once all panelists indicated that they were ready to undertake the next round, they were given the opportunity to revise or retain their Round 2 judgments on the judgment forms within the digital tool. Panelists were told to place cuts according to their individual best judgments; consensus among the panelists was not necessary. They were encouraged to listen to the points made by their colleagues but not to feel compelled to change their cut placements. When Round 3 judgments were complete, Cognia psychometricians calculated the statistics described previously and discussed the results with SDE staff.

3.6.5 Workshop Evaluation

At the conclusion of the standard-setting meeting, panelists completed a final workshop evaluation form and gave their feedback on various aspects of the standard-setting meeting. Panelists indicated that they felt positive about how Cognia conducted the workshop and their final recommendations. Specifically, panelists expressed generally positive support for the workshop overall; workshop facilitation; training, practice, and the workshop process; the Cognia Standard-Setting tool; and other details in the standard-setting workshop process. When asked about panelists perceptions in final cut scores, as shown in Table 1 of Appendix J, all panelists indicated that they were satisfied with final group cut scores. A copy of the evaluation survey is available in Appendix G; the workshop evaluation results are available in Appendix J.

Chapter 4. Tasks Completed After the Standard-Setting Meeting

Upon conclusion of the standard-setting meeting, several important tasks were completed. These tasks centered on the following: reviewing the standard-setting process and addressing issues presented by the outcomes; presenting the results to the SDE; and making any final revisions or adjustments based on policy considerations, under direction of the SDE. Shortly after the standard-setting meeting, Cognia provided SDE with a standard-setting memo that included an overview of the standard-setting process, as well as the final recommended cut scores. A copy of the memo is available in Appendix K.

4.1 Analysis and Review of Panelists' Feedback

The standard-setting literature considers evaluation of the workshop and its results to be another product of the standard-setting process (e.g., Reckase and Chen, 2012), as it provides important validity evidence supporting the cut scores that are obtained. To provide evidence of the participants' views of the standard-setting process, panelists were asked to complete a questionnaire at the end of the meeting.

After the evaluation forms were completed, panelists' responses were reviewed. This review did not reveal any anomalies in the standard-setting process or indicate any reason that a particular panelist's data should not be included when the final cut points were calculated. In general, participants felt that the recommended cut points were appropriate and that their judgments were based on appropriate information and decision making. The results of the evaluations are presented in Appendix J.

4.2 Policy Adjustments

After all standard-setting activities had been completed and all materials reviewed, the SDE recommended no adjustments to the Round 3 cuts as recommended by panelists at the standard-setting meeting. The full set of cuts are shown in Appendix L were presented to the CEQA and approved for use assigning students to performance levels in the 2022–2023 Oklahoma US History assessments.

4.3 Preparation of Standard-Setting Report

Following the final compilation of standard-setting results, Cognia prepared this report, which documents the procedures and results of the 2022 standard-setting meeting that was held to establish performance standards for the assessment.

References

- American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (1999). Standards for educational and psychological testing. Washington, DC: American Educational Research Association.
- American Educational Research Association, American Psychological Association, National Council on Measurement in Education. (2014). Standards for Educational and Psychological Testing. Washington, DC: American Educational Research Association.
- Cizek, G. J., & Bunch, M. B. (2007). Standard setting: Establishing and evaluating performance standards on tests. Thousand Oaks, CA: Sage Publications.
- Murphy, G. L. (2002). The big book of concepts. Cambridge, MA: The MIT Press
- Reckase, M.D. (2001). Innovative methods for helping standard-setting participants to perform their task: The role of feedback regarding consistency, accuracy, and impact. In G. J. Cizek (Ed.), Setting performance standards: concepts, methods, and perspectives (pp. 159–173). Mahwah, NJ: Lawrence Erlbaum Associates.
- U.S. Department of Education. (2009). Standards and assessments peer review guidance: Information and examples for meeting requirements of the No Child Left Behind Act of 2001. Washington, DC: U.S. Department of Education Office of Elementary and Secondary Education. Retrieved June 10, 2010, from the World Wide Web: www2.ed.gov/policy/elsec/guid/saaprguidance.pdf.

Appendices

APPENDIX—A POWERPOINT PRESENTATIONS

Item-Descriptor (ID) Matching StandardSetting Workshop

Oklahoma CCRA US History Assessment

June 23-24, 2022



Welcome!

- Introductions
- One minute each panelist
 - Your name, school district, what you teach
 - Experience in other standard-setting workshops
- Ask for show of hands
 - Who's been involved in SS before?
 - Which method(s)?

Review the agenda

Overview

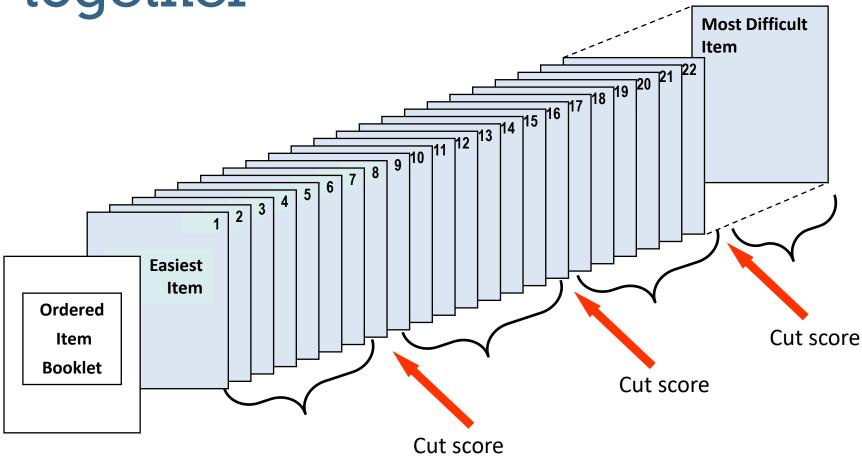
Rhythm

- 1. Become familiar with borderline PLDs, test items, training, and practice and using the standard-setting tool
- 2. Prepare for round 1
- 3. Complete round 1
- 4. Review feedback from round 1, prepare for round 2
- 5. Complete round 2
- 6. Etc.

Overview (cont.)

- Our shared goals
 - Get your recommendations for performance standards for CCRA US History assessment that provide meaningful and actionable information
- Your goals as panelists
 - Learn the concepts and procedures to recommend cut scores following Item-Descriptor (ID) matching
 - Follow the procedures we train you on
 - Recommend cut scores for Advanced, Proficient, Below Basic, and Basic
 - Rely on your expertise about the content standards, student learning, and students throughout the process

The outcome we're pursuing together



Note: Width of brackets irrelevant

At each table

- Introductions
- Pick a table leader
 - Facilitate discussion
 - Engage all panelists
 - Ask for help from facilitator, psychometricians for tool,
 Cognia and OSDE content experts
 - No need to act as spokesperson for your table; individuals can speak up for themselves

Key concepts and procedures

- Borderline PLDs
- ID Matching judgmental task
- Item map, OIB, online tool
- Threshold regions
- Become familiar with test items
- Preparation for the round 1
- Preparation for the round 2
 - Feedback interpretations and uses
- Preparation for the round 3

Performance level descriptors (PLDs)

- PLDs define knowledge and skills we can expect of students at each performance level
 - Advanced, Proficient, Basic, Below Basic
- Range PLDs: solid performance in a level
- Borderline PLDs: performance that is just barely in a level
- Review the borderline PLDs in the tool

Understanding the Borderline PLDs

Advanced:

Students at the borderline of the **Advanced** level can demonstrate superior performance on the challenging subject matter through the process of making connections more than 50% of the time on the assessment. While these students sometimes may only demonstrate the understanding and application of knowledge and skills at the Proficient level rather than the Advanced level, students scoring at the Advanced level can do the following more than 50% of the time:

Understanding the Borderline PLDs continued

Proficient:

Students at the borderline of the Proficient level can demonstrate mastery over appropriate subject matter more than 50% of the time on the assessment. . . .

Basic:

Students at the borderline of the Basic level can demonstrate partial mastery of the essential knowledge and skills of the appropriate subject matter more than 50% of the time on the assessment. . . .

Understanding the Borderline PLDs continued

Advanced:

- Analyze the causes and effects of the United States developing in a world power in the late Nineteenth and early Twentieth centuries.
- Evaluate how both the outbreak and events of World War II transformed the United States.

Proficient:

- Examine the causes and effects of the United States developing in a world power in the late Nineteenth and early Twentieth centuries.
- Summarize how both the outbreak and events of World War II transformed the United States.

Basic:

- Ineffectively describe the causes and effects of the United States developing in a world power in the late Nineteenth and early Twentieth centuries.
- Partially examine how both the outbreak and events of World War II transformed the United States.

Connection between OK PLDs Verbiage and Marzano's Taxonomy

	Marzano Cognitive System Category	OK USH Standards Verbiage	OK USH PLD Verbiage
	ComprehensionSynthesisRepresentation	Examine	Examine
	ComprehensionSynthesisRepresentation	Summarize	Summarize
	Analysis	Analyze	Analyze
	Analysis	Evaluate	Evaluate

Modeling: The ID matching process

- Now I'll model the ID Matching process for item
- Your answers
 identify the item's
 knowledge and
 skill demands

- (a) Answer the two questions
 - What does a student need to know/be able to do to respond to this item/at this score level?
 - What makes this item more difficult than all previous items?
- (b) Match the items to a PLD
 - Explain how the item response demands align with PLD expectations
- I'll think out loud
- You'll see me do this again—then you'll practice doing it

Standard-setting tools

Online Tool

- Item map
- Ordered item book
- Borderline PLDs
- Space for you to make notes to yourself ("item review")
 - E.g., notes on your answers to the two questions
- Spaces for you to enter your item-PLD matches and to indicate your cut score recommendations ("judgment round")

Standard-setting tool

- Demonstrate all other information and functionality
- Taking notes
 - Answering the two questions
 - Matches to PLDs
- Indicating your cut score recommendations

Item map and OIB

Item Map

- Each line contains one test item
- Items are ordered by difficulty: easiest to most difficult

OIB

- Each page contains one test item
- Items are ordered by difficulty: easiest to most difficult
- Passage(s) and other stimuli

The ID matching judgmental task

Practice and guided feedback

ID matching judgmental task

- Step (a) Answer the two questions
- Step (b) Match items to PLDs
- Step (c) comes later
 - (Select your cut score in the threshold region)
- Work independently
- Take notes in the Tool

- (1) What does a student need to know and be able to do in order to respond to this item?
- (2) What makes this item more difficult than the preceding items?

Which PLD most closely matches the knowledge and skill demands for each item?

Hint: Items are ordered by difficulty.

Panelist practice

- Facilitator models for one more item
 - Answer the two questions, match items to PLDs
 - Think out loud
 - Explain your thinking as a contentbased rationale
- Panelists practice independently; enter answers to two Qs in the tool
- Table discussion: Share insights, look for shared understandings, no persuasion
- Room discussion: guided feedback

- (1) What does a student need to know and be able to do in order to respond to this item?
- (2) What makes this item more difficult than the preceding items?

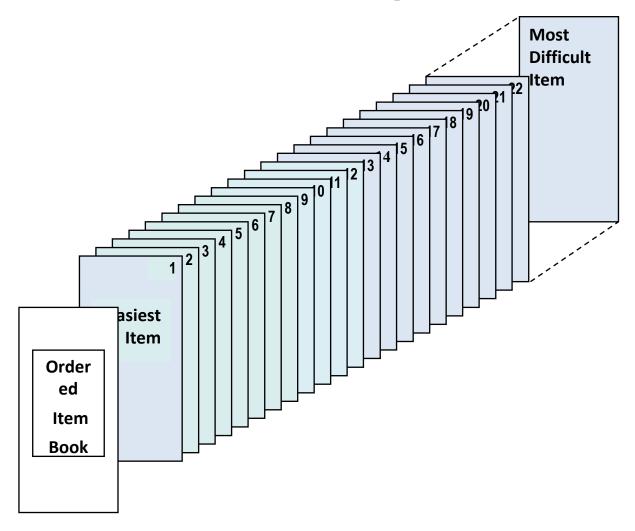
Which PLD most closely matches the knowledge and skill demands for each item?

Hint: Items are ordered by difficulty.

Considerations

- You may judge that an item seems out of order
- There are no right or wrong answers—only your best professional judgments

Threshold regions



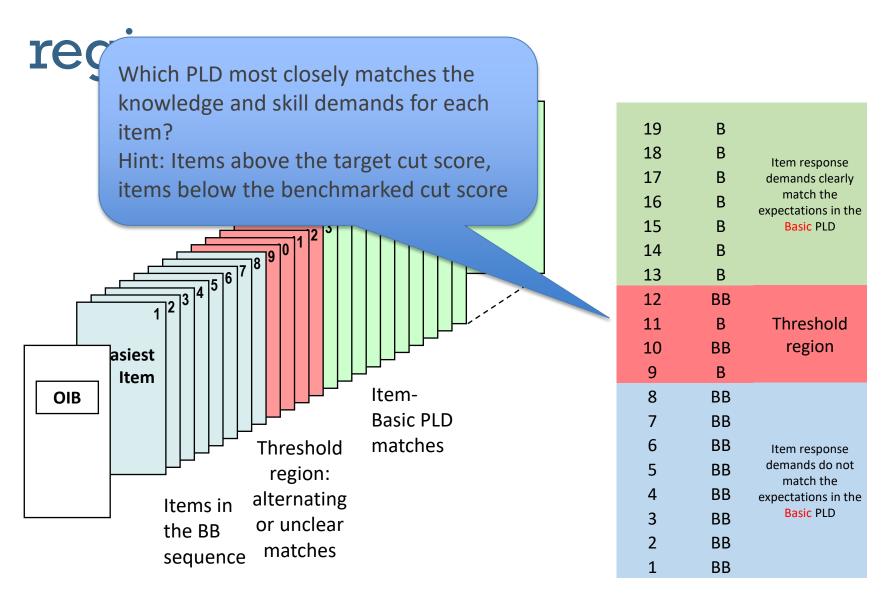
OIB Page	PLD		
Number	Match	Explanation	
40	Α	Item response	
39	Α	demands clearly	
38	Α	match the	
37	Α	expectations in the	
36	Α	Advanced PLD	
35	Р		
34	Α		
33	Р	Threshold region	
32	Р	Tillesiloid region	
31	Α		
30	Α		
29	Р	Item response	
28	Р	demands clearly	
27	Р	match the	
26	Р	expectations in the	
25	Р	Proficient PLD	
24	В		
23	В		
22	Р	Threshold region	
21	BB		
20	Р		
19	В	Item response	
18	В	demands clearly	
17	В	match the	
16	В	expectations in the	
15	В	Basic PLD	
14	BB		
13	В		
12	BB	Threshold region	
11	В	Titlestroid region	
10	BB		
9	В		
8	BB		
7	BB	Item response	
6	BB	demands do not	
5	BB	match the	
4	BB		
3	BB	expectations in the Basic PLD	
2	ВВ		
1	ВВ		

What is the threshold region?

- A sequence of items that match two adjacent PLDs in alternating and inconsistent sequence
- Note: If your threshold region is lengthy, go through the items at the top and bottom one more time—see if you can match some items to reduce the length
 - Don't force it; match item RDs to PLD expectations

OIB Page Number	PLD Match	Explanation	
40	А	Item response	
39	А	demands clearly	
38	А	match the	
37	Α	expectations in the	
36	Α	Advanced PLD	
35	Р		
34	Α		
33	Р	Threshold region	
32	Р	Threshold region	
31	Α		
30	Α		
29	P	Item response	
28	P	demands clearly	
27	P	match the	
26	P	expectations in the	
25	P	Proficient PLD	
24	В		
23	В		
22	Р	Threshold region	
21	BB		
20	P		
19	В	Item response	
18	В	demands clearly	
17	В	match the	
16	В	expectations in the	
15	В	Basic PLD	
14	BB		
13	В		
12	BB	Threshold region	
11	В		
10	BB		
9	В		
8	BB	1	
7	BB	Item response	
6	BB	demands do not	
5	BB	match the expectations in the	
4	BB		
3	BB	Basic PLD	
2	BB	- Busic res	
1 1	DD		

ID matches and threshold



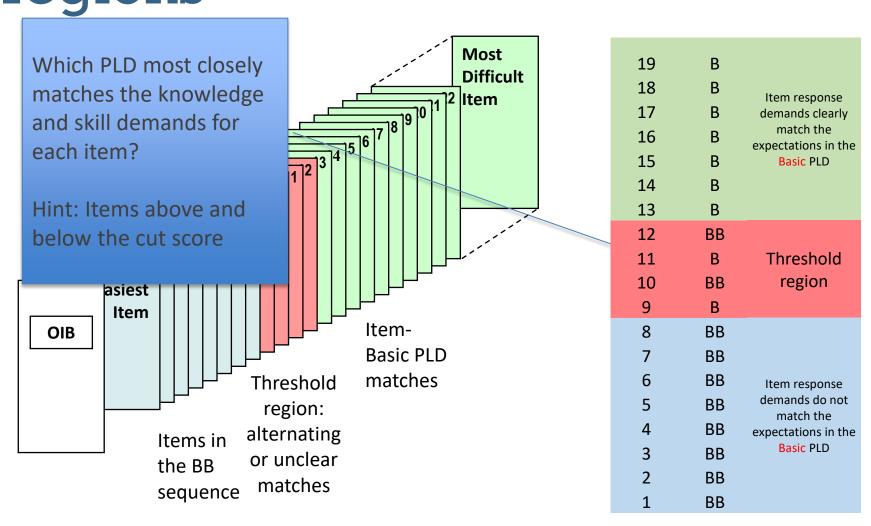
Why do you end up with threshold regions?

- Reasons why panelists put some items in threshold regions
 - The response demands of these items reflect some expectations in the Proficient PLD (for example), and some expectations in the Basic PLD
 - I can't make up my mind yet which PLD this item most closely matches
- Note: If your threshold region is lengthy, go through the items at the top and bottom one more time—see if you can match some items to reduce the length
 - Don't force it; match item RDs to PLD expectations

Placing cut scores in threshold regions

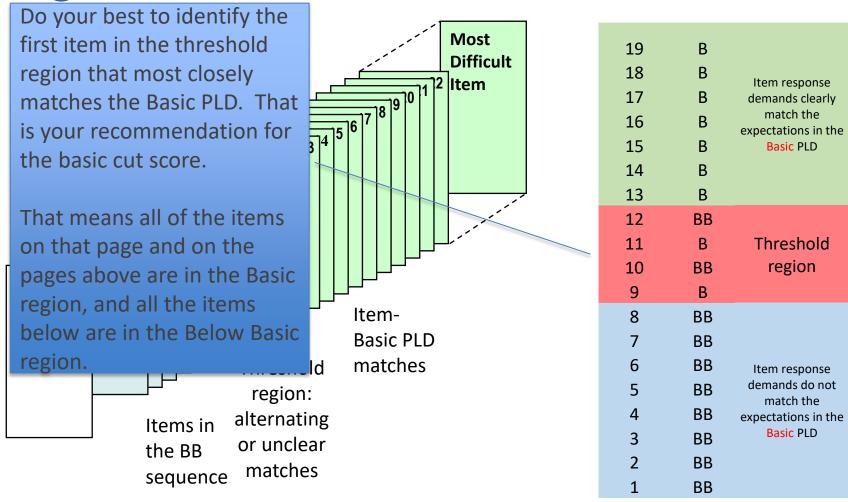
In Round 1, not using the practice items

ID matches and threshold regions



ID matches and threshold

regions



End of training and practice

- Do you feel ready to prepare for round 1?
- What questions, concerns, etc. remain?
- Table and room discussion

Prepare for round 1: review

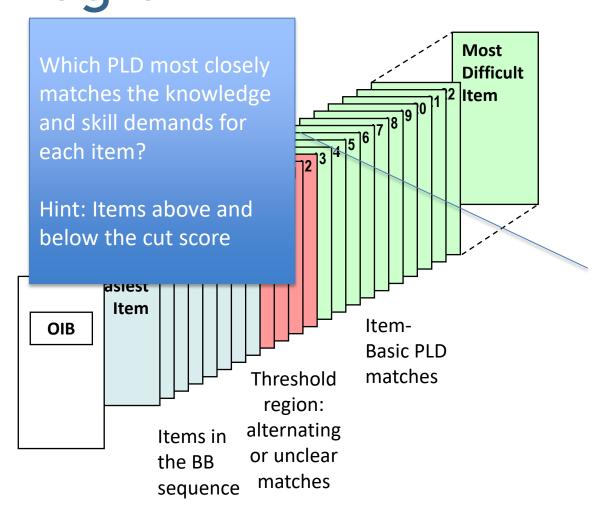
- The ID matching judgmental task
- Place cut scores in threshold regions

ID matching judgmental task

- Step (a) Answer the two questions
- Step (b) Match items to PLDs
- (1) What does a student need to know and be able to do in order to respond to this item?
- (2) What makes this item more difficult than the preceding items?

- Work independently
- Trust your expertise
- Take notes in the tool

ID matches and threshold regions



19	В					
18	В	Item response				
17	В	demands clearly				
16	В	match the expectations in the				
15	В	Basic PLD				
14	В					
13	В					
12	ВВ					
11	В	Threshold				
10	BB	region				
9	В					
8	ВВ					
7	BB					
6	BB	Item response				
5	BB	demands do not				
4	BB	match the expectations in the				
3	ВВ	Basic PLD				
2	ВВ					
1	BB					

Are you ready to undertake round 1?

- Any final questions
- You can ask for more explanation, demonstration of steps, whatever you want
- Discuss with colleagues at your table or pose to the facilitator

Round 1 steps (cont.)

For Each Cut Score

- a) Answer the two questions
 - Start at page 1, finish when you have a clear sequence of items matched to the Advanced PLD
 - Notes on your item map in the tool
- b) Record item-PLD matches
 - Note clear matches and threshold region
 - Notes on your item map in the tool
- c) Place your cut score in the threshold regions
 - Proficient, Advanced, Basic
 - Record in tool

Are you ready to undertake round 1?

- Ask final questions
- Ask for more explanation, demonstration of steps

- Complete the Readiness Survey
 - Open the survey in the tool
- Work independently
- You have up to 120 minutes to complete Round 1

Display while panelists are working

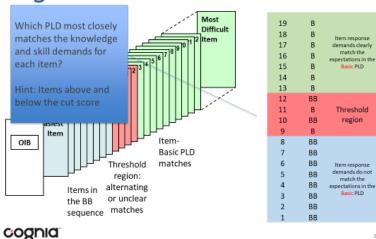
ID matching judgmental task

- Step (a) Answer the two questions
- Step (b) Match items to PLDs
- Work independently
- Trust your expertise
- Take notes in the tool

- (1) What does a student need to know and be able to do in order to respond to this item?
- (2) What makes this item more difficult than the preceding items?

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ID matches and threshold regions



Preparation for round 2

Let's prepare for round 2

Review Together

- Cut score feedback from round 1
 - How to think about it as you make cut score decisions in round 2
 - For all cut scores
 - Bar charts in slides

Round 1 feedback

- For your table, for the room
 - Median for the room
 - Each anonymous panelist: highest and lowest OIB page
- Using the feedback
 - Demonstrate reasoning for OIB pages around the recommended cut score
 - Share insights
 - No right or wrong, no persuasion to change
 - Sharing the reasoning for each page is what matters
- Table and room discussion

Concepts to be clear on

- Items are ordered by difficulty
 - We know that panelists in other standard settings think they're ordered by cognitive complexity
- The group recommended cut score is the average of all of your combined recommended cut scores
 - Specifically, it's the median, which you can think of as something like the average we use in sports, etc.

Other concepts to be clear on

- Cut score feedback after round 1
 - These numbers are based your and your colleagues' recommended cut scores, from round 1
 - There is nothing about students or item difficulty in this feedback
 - Use this information to see where your recommendation is, compared to your colleagues
 - You do not have to change your recommendation to be closer to your colleagues—use content-based rationales to retain or adjust your own round 1 cut score recommendation when you get to rounds 2 and 3

Table and room discussions

- In all discussions with your colleagues
- Your goals
 - Share your insights
 - Listen to your colleagues' insights
 - Develop sharing understandings amap
 - Support independent decision making
 - Courtesy and respect
- Not your goals
 - Agree with your colleagues
 - Persuade your colleagues to agree with you
 - Reach consensus

Are you ready to undertake round 2?

- Ask final questions
- Ask for more explanation, demonstration of steps

- Complete the Readiness Survey
- Work independently
- 90 minutes

Display while panelists are working

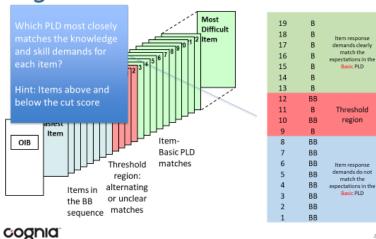
ID matching judgmental task

- Step (a) Answer the two questions
- Step (b) Match items to PLDs
- Work independently
- Trust your expertise
- Take notes in the tool

- (1) What does a student need to know and be able to do in order to respond to this item?
- (2) What makes this item more difficult than the preceding items?

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ID matches and threshold regions



Preparation for round 3

Let's prepare for round 3

Two Types of Feedback Review Together

- Cut scores feedback from round 2
 - How to think about it as you make cut score decisions in round 3
 - For all cut scores
- Impact data based on round 2 cut scores

Round 2 cut score feedback

- For your table, for the room
 - Median for the room
 - Each anonymous panelist: highest and lowest OIB page
- Using the feedback
 - Demonstrate reasoning for OIB pages around the recommended cut score
 - Share insights
 - No right or wrong, no persuasion to change
 - Sharing the reasoning for each page is what matters
- Table and room discussion

Table and room discussions

- In all discussions with your colleagues
- Your goals
 - Share your insights
 - Listen to your colleagues' insights
 - Develop sharing understandings as possible
 - Support independent decision making
 - Courtesy and respect
- Not your goals
 - Agree with your colleagues
 - Persuade your colleagues to agree with you
 - Reach consensus

Round 2 impact data

- Based on room median recommended cut score
- Using the impact d
- Room discussion

Are you ready to undertake round 3?

- Ask final questions
- Ask for more explanation, demonstration of steps
- Complete the Readiness Survey
- Work independently
- 90 minutes

Display while panelists are working

ID matching judgmental task

- Step (a) Answer the two questions
- Step (b) Match items to PLDs
- Work independently
- Trust your expertise
- Take notes in the tool

- (2) What makes this item more difficult than the preceding items?

14 13 Hint: Items above and 12 11 OIB Basic PLD

regions

19 Which PLD most closely Difficult 18 matches the knowledge Item response 17 demands clearly and skill demands for match the 16 expectations in the each item? 15 Basic PLD Threshold region BB Threshold demands do not region: match the alternating expectations in the or unclear sequence matches

ID matches and threshold

cognia

cognia

Closing session

- Review final results; discussion
- Complete workshop evaluation
- Dismissal

APPENDIX—B MEETING AGENDA

Oklahoma State Testing Program CCRA US History Assessment Standard-Setting Workshop Agenda

Day 1 June 23 Thursday					
8:00-8:30	Check-in and continental breakfast	All papaliata			
8:30-10:00	Introductions and overview: welcome (OK SDE),	All panelists All panelists			
	workshop goals (TBD), USH exam (OK SDE); standard setting and score reporting, the ID Matching method (Cognia)	, panienese			
10:00-10:15	Break	All panelists			
10:15-11:30	Training and practice on the ID Matching method: Facilitator models the cognitive-judgmental task, panelists practice, table and workshop discussion Select Table Leaders	All panelists			
11:30-12:30 1:15-2:00	Familiarization with the US History assessment: Review range and borderline PLDs, content standards (brief); take the 50-item test; discuss the experience from the student pov	All panelists			
12:30-1:15	Lunch	All panelists			
2:00-3:00	Prepare for round 1: review IDM judgmental task and borderline PLDs; complete readiness survey	All panelists			
2:00-4:00	Complete round 1	All panelists			
4:00-4:30	Break and data analysis	All panelists			
4:30-4:30	Prepare for round 2: Review round 1 cut score feedback: discuss agreements, disagreements, hypothetical rationales Complete readiness survey Begin round 2 (if time allows)	All panelists			

Day 2
June 24 Friday

8:00-8:30	Continental breakfast	All panelists
8:30-9:00	Debrief day 1	All panelists
9:00-10:30	Complete round 2	All panelists
10:30-11:00	Break and data analysis	All panelists
11:00-12:00	Prepare for round 3: Review round 1 cut score feedback: discuss agreements, disagreements, hypothetical rationales; review impact data Complete readiness survey	All panelists
12:00-1:00	Lunch	All panelists
1:00-3:00	Complete round 3	All panelists
3:00-3:30	Break and data analysis	All panelists
3:30-4:30	Review final results; complete workshop evaluation; dismissal	All panelists

APPENDIX—C NONDISCLOSURE FORM





Nondisclosure Agreement

Oklahoma State Test Program
College and Career Readiness Assessment
US History Standard Setting
June 23-24, 2022

The undersigned is an employee, contractor, assessment committee member, or person otherwise authorized to view secure state assessment materials. The undersigned hereby agrees to be bound to the terms of this agreement restricting the disclosure of said materials.

It is essential to the integrity of this item development project and testing program that all test items remain secure. To maintain this security, only authorized persons are permitted to view the test questions. With the exception of materials released by the Oklahoma State Department of Education for informational purposes, all test questions (draft or final) in hardcopy or electronic format and associated materials must be regarded as secure documents. As a result, such materials may not be reproduced, electronically transmitted, discussed, used in classroom instruction, or in any way released or distributed to unauthorized persons. All materials including items and item drafts must be returned at the end of the meeting.

I understand that I am responsible for test materials security. By breaching test materials security as described here, I am breaching professional testing ethics and may be subject to additional penalties under law.

Name:	 		
Signature:			
Date:			

APPENDIX—D PERFORMANCE LEVEL DESCRIPTORS

Oklahoma Performance Level Descriptors (PLDs) U.S. History

Policy PLDs

Policy PLDs define the knowledge and skill level expectations for the Oklahoma Academic Standards U.S. History (USH).

Advanced

Students demonstrate superior performance on challenging subject matter.

Proficient

Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level.

Basic

Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level.

Below Basic

Students have not performed at least at the Basic level. Students in this range should be given comprehensive U.S. History instruction in order to achieve at the proficient level.

Borderline PLDs

Borderline PLDs describe the knowledge and skills that students within each proficiency level are just barely expected to be able to demonstrate. In line with Oklahoma Academic Standards, the statements combine the subject matter for U.S. History that students are expected to demonstrate.

Advanced

Students at the borderline of the **Advanced** level can demonstrate superior performance on the challenging subject matter through the process of making connections more than 50% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of knowledge and skills at the Proficient level rather than the Advanced level, students scoring at the **Advanced** level can do the following more than 50% of the time:

- Apply social studies content knowledge in order to make connections and thoroughly understand how the United States developed and changed over time.
- Apply social studies content knowledge in order to make connections and thoroughly understand how eras and events throughout United States history have influenced subsequent eras.
- Analyze how the "Civil War Amendments," westward expansion, immigration, and industrialization impacted the development of the United States from 1865 to the 1920s.
- Evaluate how the American Industrial Revolution, the growth of populism, and the Progressive Movement transformed the United States from the 1870s to the 1920s.
- Analyze the causes and effects of the United States developing into a world power in the late Nineteenth and early Twentieth centuries.
- Analyze the social, political, and economic factors that impacted the United States during the 1920s and 1930s.

- Evaluate how both the outbreak and events of World War II transformed the United States.
- Evaluate the social, political, and economic effects the expansion of communism and the Cold War had on the United States from 1945 to 1975.
- Analyze how the events and effects of the Civil Rights Movement socially and politically transformed the United States from 1945 to 1975.
- Evaluate the major events and presidential policies that affected the United States from 1977 to 2001.
- Thoroughly comprehend, interpret, evaluate, and respond to primary sources, political cartoons, maps, photographs, and informational texts, applying critical thinking skills.

Proficient

Students at the borderline of the **Proficient** level can demonstrate mastery over appropriate subject matter more than 50% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of skills at the Basic level rather than the Proficient level, students scoring at the **Proficient** level can do the following more than 50% of the time:

- Apply social studies content knowledge in order to make connections and sufficiently understand how the United States developed and changed over time.
- Apply social studies content knowledge in order to make connections and sufficiently understand how eras and events throughout United States history have influenced subsequent eras.
- Examine how the "Civil War Amendments," westward expansion, immigration, and industrialization impacted the development of the United States from 1865 to the 1920s.
- Examine how the American Industrial Revolution, the growth of populism, and the Progressive Movement transformed the United States from the 1870s to the 1920s.
- Summarize the causes and effects of the United States developing into a world power in the late Nineteenth and early Twentieth centuries.
- Examine the social, political, and economic factors that impacted the United States during the 1920s and 1930s.

- Summarize how both the outbreak and events of World War II transformed the United States.
- Examine the social, political, and economic effects the expansion of communism and the Cold War had on the United States from 1945 to 1975.
- Examine how the events and effects of the Civil Rights Movement socially and politically transformed the United States from 1945 to 1975.
- Summarize the major events and presidential policies that affected the United States from 1977 to 2001.
- Sufficiently comprehend, interpret, evaluate, and respond to primary sources, political cartoons, maps, photographs, and informational texts, applying critical thinking skills.

Basic

Students at the borderline of the **Basic** level can demonstrate partial mastery of the essential knowledge and skills of the appropriate subject matter more than 50% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of skills at the Below Basic level rather than the Basic level, students scoring at the **Basic** level can do the following more than 50% of the time:

- Inconsistently apply social studies content knowledge in order to make connections and partially understand how the United States developed and changed over time.
- Inconsistently apply social studies content knowledge in order to make connections and partially understand how eras and events throughout United States history have influenced subsequent eras.
- Partially examine how the "Civil War Amendments," westward expansion, immigration, and industrialization impacted the development of the United States from 1865 to the 1920s.
 Partially examine how the American Industrial Revolution, the growth of populism, and the Progressive Movement transformed the United States from the 1870s to the 1920s.
- Ineffectively describe the causes and effects of the United States developing into a world power in the late Nineteenth and early Twentieth centuries.
- Inconsistently identify the social, political, and economic factors that impacted the United States during the 1920s and 1930s.

- Partially examine how both the outbreak and events of World War II transformed the United States.
- Inconsistently identify the social, political, and economic effects the expansion of communism and the Cold War had on the United States from 1945 to 1975.
- Partially examine how the events and effects of the Civil Rights Movement socially and politically transformed the United States from 1945 to 1975.
- Inconsistently identify the major events and presidential policies that affected the United States from 1977 to 2001.
- Partially comprehend, interpret, evaluate, and respond to primary sources, political cartoons, maps, photographs, and informational texts, applying critical thinking skills.

Below Basic

Students have not performed at least at the Basic level.

APPENDIX E COGNIA STANDARD-SETTING TOOLKIT

Cognia Standard-Setting Toolkit

This appendix contains sample screenshots of the Cognia Standard-Setting Toolkit that panelists used for all standard-setting activities during the meeting. Images provided correspond to sample (1) login screen, (2) practice item booklet, (3) readiness survey screen, (4) ordered item booklet view, (5) item view, and (6) completion survey. A brief description accompanies each image.

Figure 1. Sample Login Screen

Panelists are provided with usernames and password to enable secure access to the toolkit

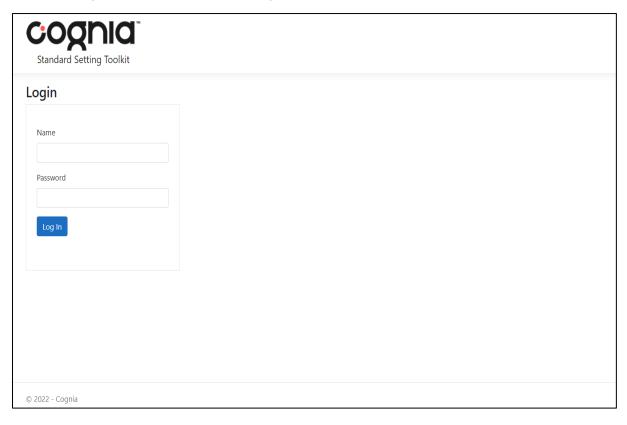


Figure 2. Sample Practice Item Booklet

This image shows a list of sample practice items as a truncated item map view. Panelists use the practice item booklet during the practice round to become familiar with use of the tool and to practice the ID matching process.

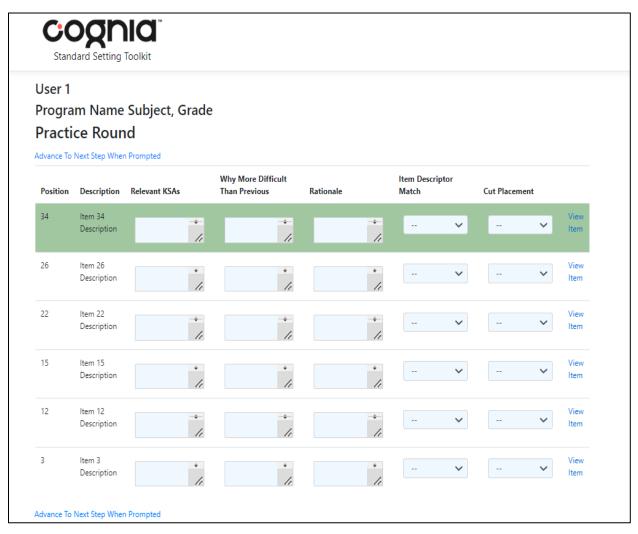


Figure 3. Sample Readiness Survey

Before each round of judgements, panelists complete a readiness survey to indicate whether they are ready to undertake the associated judgement round.

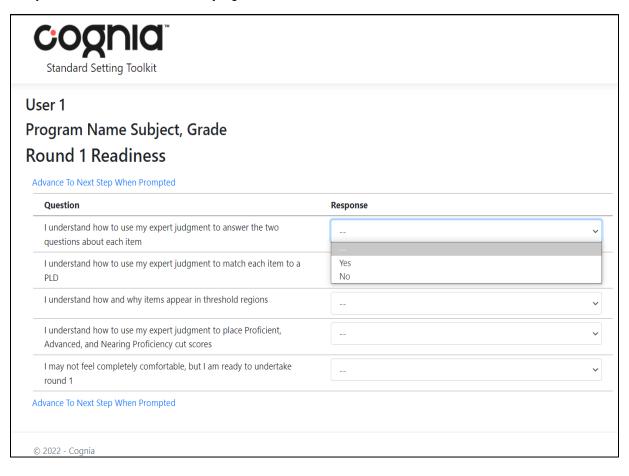


Figure 4. Sample Ordered Item Map View (truncated)

This image shows a sample view of the item map as displayed on panelists' screens. As a reminder, the item list is ordered from easiest (at the bottom) to most difficult (at the top).

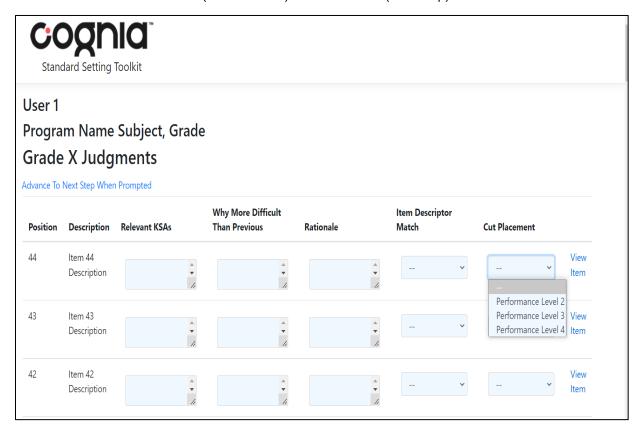


Figure 5. Sample Ordered Item Booklet Page View

The ordered item booklet view displays each item as a digital page in the booklet along with links to any associated stimuli and/or rubrics. In addition, notes below the item provide the item description, the associated standard, and (when relevant) notes about possible score points for the item. Panelists used the navigational arrows to move 'up' and 'down' pages in the booklet.

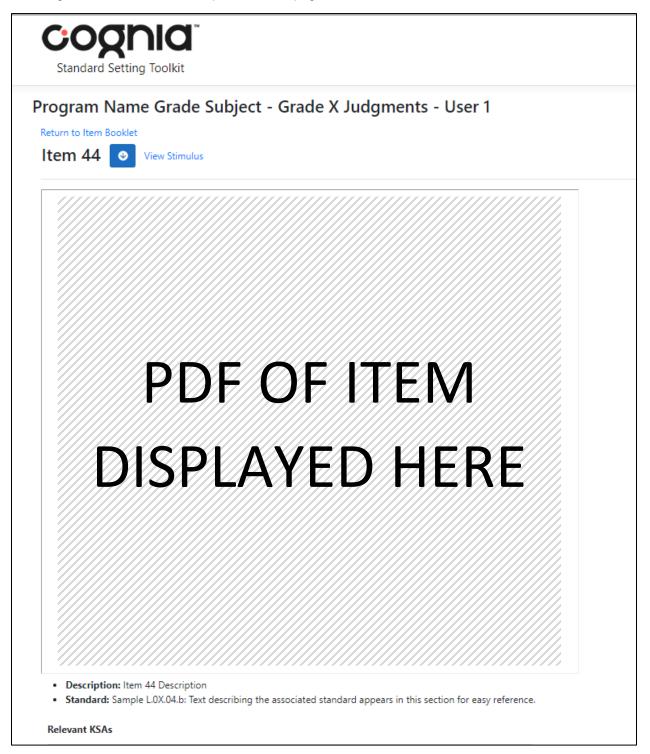


Figure 6. Sample Judgement Form

The judgement form provides space for panelists to write notes about (1) the relevant knowledge, skills, and abilities (KSAs) needed to respond to the item, (2) why the item is more difficult than the previous item, and (3) content-based rationales. In addition, dropdown menus are provided for the item descriptor matches and the cut placements. Note that the judgement form can be accessed through both the booklet view and the item map view.

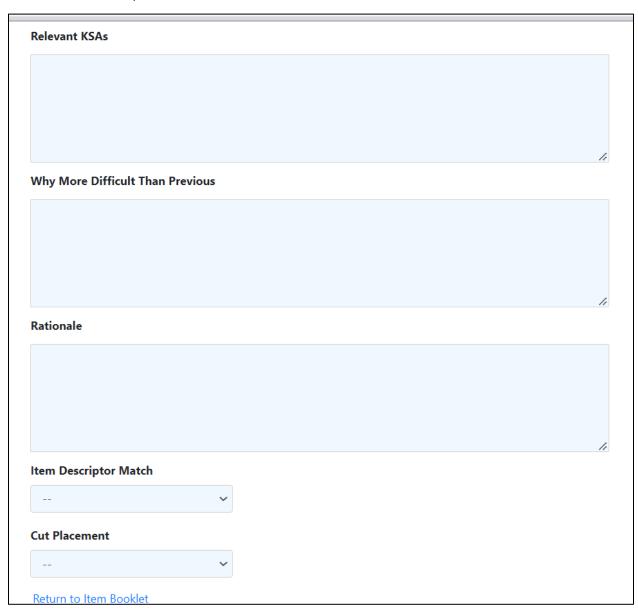
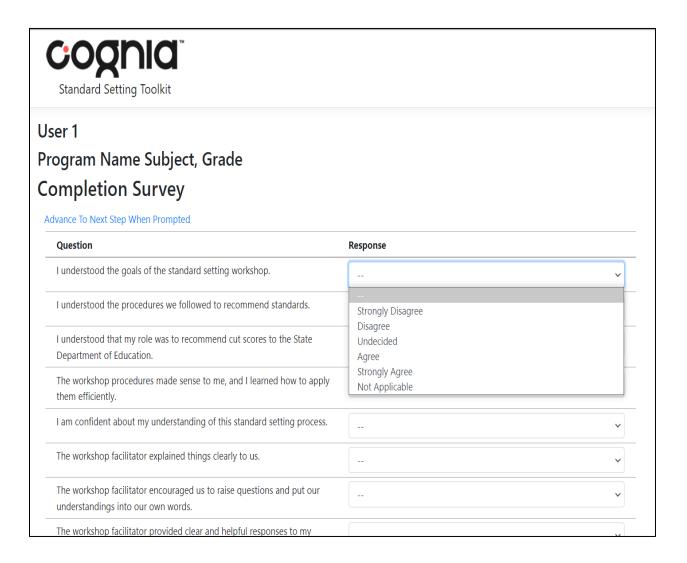


Figure 7. Sample Completion Survey (truncated)

This image provides a truncated view of the completion survey provided to panelists at the end of the standard-setting meeting to collect their final evaluations and feedback on various aspects of the meeting.



APPENDIX—F READINESS SURVEYS

Readiness Surveys

Round 1 Readiness Survey

Survey Questions	Respons Yes	e Options No
I understand how to use my expert judgment to answer the two questions about each item I understand how to use my expert judgment to match each item to a PLD I understand how and why items appear in threshold regions		
I understand how to use my expert judgment to place Basic, Proficient, and Advanced cut scores I may not feel completely comfortable, but I am ready to undertake round 1		

Round 2 Readiness Survey

Survey Questions	Response Yes	Options No
I know that feedback and discussion in preparation for round 2 will help me feel even more comfortable I understand the round 1 feedback about (a) our group cut scores for Basic, Proficient, and Advanced, and (b) the highest and lowest panelist cut scores for each level I understand the ground rules for discussing feedback in preparation for round 2: sharing information, avoiding persuasion I understand that I should use the round 1 feedback as information, not persuasion, for me to consider as I place my cut scores in round 2	.00	0
I'm ready to undertake round 2		

Round 3 Readiness Survey

Survey Questions	Response Yes	Options No
I know that feedback and discussion in preparation for round 3 will help me feel even more comfortable		
I understand the round 2 feedback about (a) our group cut scores for		
Basic, Proficient, and Advanced, and (b) the highest and lowest panelist cut scores for each level		
I understand the ground rules for discussing feedback in preparation for round 3: sharing information, avoiding persuasion		
I understand that I should use the round 2 feedback as information, not		
persuasion, for me to consider as I place my cut scores in round 3		
I'm ready to undertake round 3		

APPENDIX—G WORKSHOP EVALUATION SURVEY

OK CCRA US History Standard Setting

Final Workshop Evaluation

Please respond to the items below to provide your feedback on the training we provided so that you could recommend cut scores following the ID Matching process.

Your feedback is anonymous. We will summarize feedback for all panelists and use the summary for the standard-setting final technical report.

The Workshop Overall

- 1. I understood the goals of the standard-setting workshop.
- 2. I understood the procedures we followed to recommend standards.
- I understood that my role was to recommend cut scores to the Oklahoma State Department of Education.
- 4. The workshop procedures made sense to me, and I learned how to apply them efficiently.
- 5. I am confident about my understanding of this standard-setting process.

Workshop Facilitation

- 6. The workshop facilitator explained things clearly to us.
- 7. The workshop facilitator encouraged us to raise questions and put our understandings into our own words.
- 8. The workshop facilitator provided clear and helpful responses to my questions and other requests for clarification.
- 9. The workshop facilitator took steps to help the standard setting process run smoothly.

Training, Practice, and the Standard Setting Workshop Process

- 10. Sufficient time was allotted for training and practice on the standard-setting concepts, tasks, and procedures.
- 11. I understood the progressions in expectations across the Basic, Proficient, and Advanced levels as defined by the borderline Performance Level Descriptors.
- 12. I became sufficiently familiar with the CCRA US History assessment to recommend cut scores, based on responding to items on the test and answering the two questions about items.
- 13. I understood the ID Matching task, including answering the two questions about each item, matching those item response demands to PLDs, and how to place cut scores in threshold regions.

The Standard Setting Tool

I understood how to use the standard-setting tool to

- 14. Record my responses to the two questions about each item I reviewed
- 15. Record my recommended cut scores.
- 16. Record other notes

Threshold Regions

17. I understood why I had threshold regions and how to place a cut score in those regions in round 1 of the workshop

Feedback After Round 1, Preparation for Round 2

18. I understood that the group recommended cut score was the average (i.e., the median) of all 13 recommended cut scores. I understood how to use the feedback after round 1 on the group

recommended cut score and the individual panelist highest and lowest cut scores, in preparation for round 2.

Final Cut Scores

- 19. I am satisfied with the final group cut scores. I would not recommend changing any of the group cut scores.
- 20. If yes, would you recommend moving a cut score up or down in the OIB, and by how many pages?

Optional Open-ended Comments

- 21. Please indicate any parts of the standard-setting training and process that we should improve.
- 22. Please indicate any concerns you may have about the workshop process and the final recommended cut scores.

Main Sections of the Standard-Setting Workshop

Please rate the usefulness of each section:

	1 Not at all useful	2	3	4	5 Extremely useful
The opening session					
Working together at my table					
Parsing the ALDs					
Answering the two questions about each item					
Table-level discussions					
Cross-table discussions					

Please rate the influence of the following when setting standards:

	1 Not at all useful	2	3	4	5 Extremely useful
ALDs: Overall descriptors					
ALDs: overall bulleted descriptors					
My answers to the two questions about each item					
My judgements about match of items to ALDs					
My experience working with students					

What materials, information, or procedures were most influential in your placement of the cut scores? In what ways?

Finally

Please provide any additional comments you would like us to consider.

Please provide any other recommendations that could help us improve future standard setting workshops.

Thanks for participating in this workshop and completing the evaluation.

Safe and easy travels!

APPENDIX—H PANELISTS

2022 Oklahoma U.S. History Standard-Setting Participant List

Last Name	First Name	Current Position/Title	School/Site Name	District
Butler Dormiani Doudican	Jennifer Angela Kevin "Mike"	Teacher High School History Teacher Teacher	Edmond North High School ASTEC Charter School Glenpool High school	Edmond Public Schools ASTEC Charter Schools Glenpool
Frazier	Stephen	District Social Studies Department Chair, HS History Teacher	Dove Science Academy Tulsa HS	Dove Schools of Tulsa
Lamkin	Jennifer	U.S. History Teacher	Tulsa School of Arts and Sciences	TPS-Public Charter
Purcell	Jane	Social Studies Coordinator	Curriculum Center	Norman Public Schools
Walden	Stephen	AP/Standard US History Teacher	Tahlequah High School	Tahlequah Public Schools
Mosqueda	Stephanie	US History, APUSH Teacher	Elk City HS	Elk City
Tillotson	Heather	Teacher	Wagoner HS	Wagoner Public Schools
Thom Stewart	David Arletta	Teacher	Memorial HS	Tulsa Public Schools Cache Public Schools

APPENDIX—I STANDARD-SETTING ROUND RESULTS

OK CCRA USH Standard-Setting Round Results

Table 1. OK CCRA USH Standard-Setting Round 1 Results

Performance Level	OIB Page #	Raw Score	Theta (Median)	Median Abs. Diff.	Percent Students
Below Basic				39.9	
Basic	6	22	-0.26	0.18	20.0
Proficient	17	28	0.33	0.59	30.2
Advanced	41	42	1.30	0.11	9.9
Proficient + Advanced					40.1

Table 2. OK CCRA USH Standard-Setting Round 2 Results

Performance Level	OIB Page #	Raw Score	Theta (Median)	Median Abs. Diff.	Percent Students
Below Basic				39.9	
Basic	6	22	-0.26	0.18	23.0
Proficient	18	28	28 0.37 0.62		27.2
Advanced	41 42 1.30 0.00		9.9		
Proficient + Advanced					37.1

Table 3. OK CCRA USH Standard-Setting Round 3 Results

Performance Level	OIB Page #	Raw Score	Theta (Median)	Median Abs. Diff.	Percent Students
Below Basic				39.9	
Basic	6	22	-0.26	0.16	13.9
Proficient	14	25	0.14	0.40	36.3
Advanced	41	42	1.30	0.00	9.9
Proficient + Advanced					46.2

APPENDIX—J WORKSHOP EVALUATION RESULTS

OK CCRA USH Standard-Setting Workshop Evaluation Results

Table 1. Frequency of Evaluation Responses (N = 11)

	Yes	No	No Response
I understood the goals of the standard-setting workshop.	11		
I understood the procedures we followed to recommend standards.	11		
I understood that my role was to recommend cut scores to the State Department of Education.	11		
The workshop procedures made sense to me, and I learned how to apply them efficiently.	10		1
I am confident about my understanding of this standard-setting process.	11		
The workshop facilitator explained things clearly to us.	11		
The workshop facilitator encouraged us to raise questions and put our understandings into our own words.	11		
The workshop facilitator provided clear and helpful responses to my questions and other requests for clarification.	11		
The workshop facilitator took steps to help the standard-setting process run smoothly.	11		
Sufficient time was allotted for training and practice on the standard-setting concepts, tasks, and procedures.	10	1	
I understood the progressions in expectations across the Basic, Proficient, and Advanced levels as defined by the borderline Performance Level Descriptors.	10	1	
I became sufficiently familiar with the assessment to recommend cut scores, based on responding to items on the test and answering the two questions about items.	11		
I understood the ID Matching task, including answering the two questions about each item, matching those item response demands to PLDs, and how to place cut scores.	11		
I understood how to use the standard-setting tool to record my responses regarding skills and item difficulties as instructed.	11		
I understood how to use the standard-setting tool to record my recommended cut scores.	11		
I understood how to use the standard-setting tool to record other notes.	11		
I understood why I had threshold regions and how to place a cut score in those regions in round 1 of the workshop	11		
I understood that the group recommended cut score was the average (i.e., the median) of all 13 recommended cut scores. I understood how to use the feedback after round 1 on the group recommended cut score and the individual panelist highest and lowest cut scores, in preparation for round 2.	11		
I am satisfied with the final group cut scores. I would not recommend changing any of the group cut scores.	11		

Table 2. Open-ended responses

Questions	Responses
Please indicate any parts of the standard-setting training and	"3 days instead of 2. More static schedule"
process that we should improve.	"Half days over more time. The work was heavy big brain thinking. Otherwise, it was fine."
	"A little more time for practice would've been nice. More practice on sample items for notetaking on KSAs"
Please indicate any concerns you may have about the workshop process and the final recommended cut scores.	"Scaffolding was great, but it took forever to get started. Too much seeking confirmation of understanding. Everyone was kind and patient! The hotel was nice. Still not sure the operating assumptions on which questions are automatically "basic" region v. "advanced" region (bottom/top list) are correct or helpful "I think there was too much opportunities for questions rather than giving us some time to practice with sample questions, then being able to ask
	questions. Its hard to ask questions when you haven't interacted with material prior to round1. thank you. you were super nice and pleasant to work with"
	"Excellent team facilitating this workshop!"
What materials, information, or procedures were most influential in your placement of the cut scores? In what ways?	"The discussion helped tremendously. When others explain their reasoning, it helps me see what I missed" "PLDs gave guidance"
	"Listing all of my answers and getting an overview"
	"PLDs, seeing data following each round"
	"All of it was very helpful in keeping with the process of placement of the cut scores. It help knowing what was expected for each level"
	"The PLDs were moderately influential; however, discussion with colleagues was most"
	"2 questions. Discussion"
	"the graph slides. Visualizing the data helped me narrow it down"
	"Q&A based on the shared experiences of teachers in the room helped me contextualize my decisions"
	"The questions and ALDs"
	"PLDs & bulleted descriptors helped me to define what student performance should look lik. Discussions with table + whole group helped clarify transition points between levels"

Table 3. Frequency of Responses to Rating Scale Questions

	1 Not at all useful	2	3	4	5 Extremely useful
Please rate the usefulness of each section:					
The opening session				3	8
Working together at my table			2	1	8
Parsing the ALDs				3	8
Answering the two questions about each item				2	9
Table-level discussions			1	2	8
Cross-table discussions				1	10
Please rate the influence of the following when setting	g standards:				
ALDs: Overall descriptors			1	4	6
ALDs: overall bulleted descriptors			1	4	6
My answers to the two questions about each item				3	8
My judgements about match of items to ALDs			1	3	7
My experience working with students				2	9

Table 4. Frequency of Evaluation Responses for MSSA ELA Grade 6–8 (N = 1--)

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Not Applicable
I understood the goals of the standard-setting workshop.				2	8	
I understood the procedures we followed to recommend standards.				4	6	
I understood that my role was to recommend cut scores to the State Department of Education.				2	8	
The workshop procedures made sense to me, and I learned how to apply them efficiently.			1	4	5	
I am confident about my understanding of this standard- setting process.				3	7	
The workshop facilitator explained things clearly to us.				3	7	
The workshop facilitator encouraged us to raise questions and put our understandings into our own words.				1	9	
The workshop facilitator provided clear and helpful responses to my questions and other requests for clarification.				1	9	
The workshop facilitator took steps to help the standard- setting process run smoothly.				3	7	
Sufficient time was allotted for training and practice on the standard-setting concepts, tasks, and procedures.		1	4	3	2	
I understood the progressions in expectations across the Nearing Proficiency, Proficient, and Advanced levels as defined by the borderline Performance Level Descriptors.				5	5	
I became sufficiently familiar with the assessment to recommend cut scores, based on responding to items on the test and answering the two questions about items.				5	5	
I understood the ID Matching task, including answering the two questions about each item, matching those item response demands to PLDs, and how to place cut scores.				3	7	
I understood how to use the standard-setting tool to record my responses regarding skills and item difficulties as instructed.				2	8	
I understood how to use the standard-setting tool to record my recommended cut scores.				2	8	
I understood that I could recommend retaining or adjusting the target cut scores.				2	8	
I understood how to write content-based rationales for my cut score recommendations.				7	3	
I understood that the group recommended cut score was the average (i.e., the median) of all 13 recommended cut scores.				5	4	1
I understood how to use the feedback after round 1 on the group recommended cut score and the individual panelist highest and lowest cut scores, in preparation for round 2.				4	6	
I am satisfied with the final group cut scores. I would not recommend changing any of the group cut scores.				3	2	2
	Up 2 Pages	Up 1 Page	Do Not Move	Down 1 Page	Down 2 Pages	Not Applicable
If no, would you recommend moving a cut score up or down in the OIB, and by how many pages?			1	1		4

Table 5. Open-ended responses for MSSA Grade 6-8 ELA

Questions	Responses
Please indicate any parts of the standard-setting	I feel that there should have been one more day.
training and process that we should improve.	"It might have been beneficial to have one more day to work on the panel. Completing Round
	1 is going to take more time because it takes a little bit to get into the swing of things.
	I feel honored to be on the panel and enjoy the process; I just felt a little rushed."
	Introduce the PLD's in more detail. Reduce or eliminate the repetitive discussion about
	processes. Increase work time by reducing breakfast and lunch. Add half a day.
	Overall the process was exciting and interesting. I feel like we needed more time to read the
	content prior to making cut scoresan hour for 44 questions just isn't enough. I feel like the
	presentation during breakfast the first day wasn't necessarythat information was given in
	content meetings.
	technology!
Please indicate any concerns you may have about	More time needed to complete this panel discussion
the workshop process and the final recommended	Taking the 8th grade test was extremely beneficial because it gave us time to read the
cut scores.	passages. We ran out of time and the decision was made to not take the 7th and 6th grade
	tests. I did not feel as familiar with the 7th and 6th grade tests and passages as I did with 8th
	grade.
	I have no concerns at this point. It was a fantastic experience and I appreciate the
	opportunity to participate.

Table 6. Frequency of Evaluation Responses for MSSA Mathematics Grade 3–5 (N = 9)

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Not Applicable
I understood the goals of the standard-setting workshop.				3	6	
I understood the procedures we followed to recommend				2	7	
standards.				2	1	
I understood that my role was to recommend cut scores to the State Department of Education.				2	7	
The workshop procedures made sense to me, and I learned ho to apply them efficiently.	_			3	6	
I am confident about my understanding of this standard-setting process.				2	7	
The workshop facilitator explained things clearly to us.				2	7	
The workshop facilitator encouraged us to raise questions and put our understandings into our own words.				2	7	
The workshop facilitator provided clear and helpful responses to my questions and other requests for clarification.				3	5	1
The workshop facilitator took steps to help the standard-setting process run smoothly.				3	6	
Sufficient time was allotted for training and practice on the standard-setting concepts, tasks, and procedures.				3	6	
I understood the progressions in expectations across the Nearing Proficiency, Proficient, and Advanced levels as defined by the borderline Performance Level Descriptors.				3	6	
I became sufficiently familiar with the assessment to recommend cut scores, based on responding to items on the test and answering the two questions about items.				3	6	
I understood the ID Matching task, including answering the two questions about each item, matching those item response demands to PLDs, and how to place cut scores.				3	6	
I understood how to use the standard-setting tool to record my responses regarding skills and item difficulties as instructed.				3	6	
I understood how to use the standard-setting tool to record my recommended cut scores.				3	6	
						continued

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Not Applicable
I understood that I could recommend retaining or adjusting the target cut scores.				1	8	
I understood how to write content-based rationales for my cut score recommendations.			1	4	5	
I understood that the group recommended cut score was the average (i.e., the median) of all 13 recommended cut scores.	1	1	1	2	7	
I understood how to use the feedback after round 1 on the group recommended cut score and the individual panelist highest and lowest cut scores, in preparation for round 2.				2	7	
I am satisfied with the final group cut scores. I would not recommend changing any of the group cut scores.				5	4	
	Up 2 Pages	Up 1 Page	Do Not Move	Down 1 Page	Down 2 Pages	Not Applicable
If no, would you recommend moving a cut score up or down in the OIB, and by how many pages?						7

Table 7. Open-ended responses for MSSA Mathematics Grade 3–5

Questions	Responses
Please indicate any parts of the standard-setting training and	Better ventilated and cooler room. It was bit hot to work in.
process that we should improve.	The process would be more practical as a 3-day meeting, rather than 2.5
	days.
	I felt well trained.
	None, the process was smooth and clearly understandable
	The training process was ideal.
	none difficult process but became easier as I went along
Please indicate any concerns you may have about the workshop	
process and the final recommended cut scores.	

Table 8. Frequency of Evaluation Responses for MSSA Mathematics Grade 6–8 (N = 1--)

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Not Applicable
I understood the goals of the standard-setting workshop.	1			2	6	
I understood the procedures we followed to recommend standards.	1			3	5	
I understood that my role was to recommend cut scores to the State Department of Education.				1	8	
The workshop procedures made sense to me, and I learned how to apply them efficiently.	1		1	2	4	1
I am confident about my understanding of this standard-setting process.				4	5	
The workshop facilitator explained things clearly to us.	1			2	6	
The workshop facilitator encouraged us to raise questions and put our understandings into our own words.				1	8	
The workshop facilitator provided clear and helpful responses to my questions and other requests for clarification.		1		1	7	
The workshop facilitator took steps to help the standard-setting process run smoothly.		1		2	6	
Sufficient time was allotted for training and practice on the standard-setting concepts, tasks, and procedures.		-	2	3	4	
I understood the progressions in expectations across the Nearing Proficiency, Proficient, and Advanced levels as defined by the borderline Performance Level Descriptors.				2	7	
I became sufficiently familiar with the assessment to recommend cut scores, based on responding to items on the test and answering the two questions about items.		1		2	6	
I understood the ID Matching task, including answering the two questions about each item, matching those item response demands to PLDs, and how to place cut scores.	1			3	5	
I understood how to use the standard-setting tool to record my responses regarding skills and item difficulties as instructed.				3	6	
I understood how to use the standard-setting tool to record my recommended cut scores.				2	7	
I understood that I could recommend retaining or adjusting the target cut scores.	1			3	5	
I understood how to write content-based rationales for my cut score recommendations.			1	4	4	
I understood that the group recommended cut score was the average (i.e., the median) of all 13 recommended cut scores.				5	3	1
I understood how to use the feedback after round 1 on the group recommended cut score and the individual panelist highest and lowest cut scores, in preparation for round 2.			1	3	5	
I am satisfied with the final group cut scores. I would not recommend changing any of the group cut scores.	1			4	3	
	Up 2 Pages	Up 1 Page	Do Not Move	Down 1 Page	Down 2 Pages	Not Applicable
If no, would you recommend moving a cut score up or down in the OIB, and by how many pages?			1			5

Table 9. Open-ended responses for MSSA Mathematics Grade 6-8

Questions	Responses
Please indicate any parts of the standard-setting training and	It's good
process that we should improve.	"We never once talked about allowing us as participants to recommend retaining or adjusting the target cut scores. (See 6th understand question above this one). With regard to the question just above this there were some cut
	scores that should have been moved up at least 2 pages and others that should have been moved down at least 2 pages the answer is dependent on the grade level AND on the PDL cut."
	let get started with work sooner
	I would recommend more collaboration between the panelist during the round 1 process. The working independently was a good process but being able to collaborate would allow for a good experience between educators and allow for more experiences to allow better understanding of content that may not be understood fully.
	It started off a little bit slow and then I felt rushed at the end. Maybe time management or hands on practice with individual help as needed rather than just explaining the process.
	Providing the Answers and a calculator to move through the process
	"Provide calculator sheets and calculators (or asks educators to bring)
	More time to complete tasks-felt rushed sometimes
	Every task should be completed for accuracy with cut scores
	Allow for 5 -1 minute breaks every two ours- mentally draining
	Copy of math practices
Diagon indicate any concerns you may have about the workshap	Very hot in rooms made it very difficult to stay focused" "Concerned because (1) at least 2 participants complained in the
Please indicate any concerns you may have about the workshop process and the final recommended cut scores.	hallway numerous times that ""i don't care what the pdl's say as my
process and the inial recommended cut scores.	students can't do this"", (2) at least 1 person has never taught math
	and has no background in math, (3) several people believed the
	proficient HAD to be in the green area and move not move from there, (4) at least one person at my table never understood the threshold
	portion of rating. An additional tech person is highly needed as there was quite a bit of wasted time waiting for tech issues.
	People constantly coming in and out was very distracting, and actually seems like a breech in security (especially when ""outside"" people came into the room)."
	let us get started with work sooner
	I do not have any concerns. I thought that the workshop was conducted well and that the gentlemen and ladies who were in charge
	of the workshop did a great job of handling the workshop.
	Need to shorten the initial training to 1/2 day, so committee can start working on day one not day two

Table 10. Frequency of Evaluation Responses for ASR Science Grade 5 (N = 1--)

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Not Applicable
I understood the goals of the standard-setting workshop.					1	
I understood the procedures we followed to recommend standards.				1	9	
I understood that my role was to recommend cut scores to the State Department of Education.					1	
The workshop procedures made sense to me, and I learned how to apply them efficiently.				3	7	
I am confident about my understanding of this standard-setting process.			1	2	7	
The workshop facilitator explained things clearly to us.				1	9	
The workshop facilitator encouraged us to raise questions and put our understandings into our own words.					1	
The workshop facilitator provided clear and helpful responses to my questions and other requests for clarification.				1	9	
The workshop facilitator took steps to help the standard setting process run smoothly.					1	
Sufficient time was allotted for training and practice on the standard setting concepts, tasks, and procedures.	1				9	
I understood the progressions in expectations across the Nearing Proficiency, Proficient, and Advanced levels as defined by the borderline Performance Level Descriptors.				2	8	
I became sufficiently familiar with the assessment to recommend cut scores, based on responding to items on the test and answering the two questions about items.				2	8	
I understood the ID Matching task, including answering the two questions about each item, matching those item response demands to PLDs, and how to place cut scores.				3	7	
I understood how to use the standard-setting tool to record my responses regarding skills and item difficulties as instructed.				2	8	
I understood how to use the standard-setting tool to record my recommended cut scores.				2	8	
I understood that I could recommend retaining or adjusting the target cut scores.				1	9	
I understood how to write content-based rationales for my cut score recommendations.			1	3	6	
I understood that the group recommended cut score was the average (i.e., the median) of all 13 recommended cut scores.				2	8	
I understood how to use the feedback after round 1 on the group recommended cut score and the individual panelist highest and lowest cut scores, in preparation for round 2.				3	7	
I am satisfied with the final group cut scores. I would not recommend changing any of the group cut scores.			1	1	8	
	Up 2 Pages	Up 1 Page	Do Not Move	Down 1 Page	Down 2 Pages	Not Applicable
If no, would you recommend moving a cut score up or down in the OIB, and by how many pages?			4		1	4

Table 11. Open-ended responses for ASR Science Grade 5

Questions	Responses
Please indicate any parts of the standard-setting training and	"Facilitator was clear and thorough.
process that we should improve.	More in-depth screening/application process for the panelists - I feel some people were here just for a vacation at the Sheraton rather than being
	passionate about the assessment process and success of our children."
	I felt that the training and process would have been solid with 2 days instead of 3
	I feel it was well organized and presented. No improvements are
	recommended.
	I think you all were clear and careful about your procedures.
	I thought that everything was explained well, and plenty of time to ask
	questions, and re explained.
	Everything was, hands on training is more understandable for me, but by asking questions I was able to accomplish
	A hands-on example or two about the process would be helpful.
Please indicate any concerns you may have about the workshop process and the final recommended cut scores.	The workshop was very well organized and structured - this is my second event and pleased overall with the professionalism of Cognia and the presence of the PED in this process.
	No concerns.
	You did a great job with some challenging material.

Table 12. Frequency of Evaluation Responses for ASR Science Grade 8 (N = 11)

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Not Applicable
I understood the goals of the standard-setting workshop.				2	9	
I understood the procedures we followed to recommend				3	8	
standards.				J	0	
I understood that my role was to recommend cut scores to the				3	8	
State Department of Education.	-			J	0	
The workshop procedures made sense to me, and I learned				4	7	
how to apply them efficiently.				7	,	
I am confident about my understanding of this standard-setting				3	8	
process.				J	0	
The workshop facilitator explained things clearly to us.				2	9	1
The workshop facilitator encouraged us to raise questions and					11	
put our understandings into our own words.					11	
The workshop facilitator provided clear and helpful responses				1	1	
to my questions and other requests for clarification.				1	1	
The workshop facilitator took steps to help the standard-setting					11	
process run smoothly.					11	
Sufficient time was allotted for training and practice on the			1	2	8	
standard-setting concepts, tasks, and procedures.			'		0	
I understood the progressions in expectations across the						
Nearing Proficiency, Proficient, and Advanced levels as			1	4	6	
defined by the borderline Performance Level Descriptors.						
I became sufficiently familiar with the assessment to						
recommend cut scores, based on responding to items on the				5	6	
test and answering the two questions about items.						
I understood the ID Matching task, including answering the two						
questions about each item, matching those item response				6	5	
demands to PLDs, and how to place cut scores.						
I understood how to use the standard setting tool to record my				4	7	
responses regarding skills and item difficulties as instructed.				4	/	
I understood how to use the standard-setting tool to record my				4	7	
recommended cut scores.				4	/	
	•	•			•	continue

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Not Applicable
I understood that I could recommend retaining or adjusting the target cut scores.		1	1	3	8	1
I understood how to write content-based rationales for my cut score recommendations.		1	1	6	5	1
I understood that the group recommended cut score was the average (i.e., the median) of all 13 recommended cut scores.		ı	1	4	7	1
I understood how to use the feedback after round 1 on the group recommended cut score and the individual panelist highest and lowest cut scores, in preparation for round 2.		1	1	5	5	ł
I am satisfied with the final group cut scores. I would not recommend changing any of the group cut scores.				5	5	-
	Up 2	Up 1	Do Not	Down	Down 2	Not
	Pages	Page	Move	1 Page	Pages	Applicable
If no, would you recommend moving a cut score up or down in the OIB, and by how many pages?			1			3

Table 13. Open-ended responses for ASR Science Grade 8

Questions	Responses
Please indicate any parts of the standard-setting training and	"Better organized PLD sheet we use as a guide ex. Life Science LS4 have
process that we should improve.	Advanced, Proficient and Nearing Proficiency standards on one page.
	When returning to the Booklet have the page that you return to be where you
	left off and not back to the top of the booklet page. This will decrease the
	amount of scrolling needed. "
	Everything worked!!!!
	I would like to see the standards that move from NP to P to A be separated
	(maybe bulleted) by the topics covered.
	The room temperature. perhaps practicing too with novice questions
	The PLD's should be organized by standard.
	"More user-friendly standards pbls
	more examples to familiarize with the tool
	sample rationales"
	having PLDs separated by standard (PS, LS, ESS, etc)
	all of it was really good
	air conditioning
Please indicate any concerns you may have about the	
workshop process and the final recommended cut scores.	

Table 14. Frequency of Evaluation Responses for ASR Science Grade 11 (N = 9)

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Not Applicable
I understood the goals of the standard-setting workshop.				2	7	
I understood the procedures we followed to recommend standards.				2	7	
I understood that my role was to recommend cut scores to the State Department of Education.				1	8	
The workshop procedures made sense to me, and I learned how to apply them efficiently.				4	5	
I am confident about my understanding of this standard-setting process.				4	5	
The workshop facilitator explained things clearly to us.				2	7	
The workshop facilitator encouraged us to raise questions and put our understandings into our own words.				2	7	
The workshop facilitator provided clear and helpful responses to my questions and other requests for clarification.				2	7	
The workshop facilitator took steps to help the standard-setting process run smoothly.				1	8	
Sufficient time was allotted for training and practice on the standard-setting concepts, tasks, and procedures.				2	7	
I understood the progressions in expectations across the Nearing Proficiency, Proficient, and Advanced levels as defined by the borderline Performance Level Descriptors.				5	4	
I became sufficiently familiar with the assessment to recommend cut scores, based on responding to items on the test and answering the two questions about items.				3	6	
I understood the ID Matching task, including answering the two questions about each item, matching those item response demands to PLDs, and how to place cut scores.			1	2	6	
I understood how to use the standard setting tool to record my responses regarding skills and item difficulties as instructed.				2	7	
I understood how to use the standard setting tool to record my recommended cut scores.				2	7	
I understood that I could recommend retaining or adjusting the target cut scores.				1	8	
I understood how to write content-based rationales for my cut score recommendations.				4	5	
I understood that the group recommended cut score was the average (i.e., the median) of all 13 recommended cut scores.				2	7	
I understood how to use the feedback after round 1 on the group recommended cut score and the individual panelist highest and lowest cut scores, in preparation for round 2.				2	7	
I am satisfied with the final group cut scores. I would not recommend changing any of the group cut scores.				1	8	
	Up 2 Pages	Up 1 Page	Do Not Move	Down 1 Page	Down 2 Pages	Not Applicable
If no, would you recommend moving a cut score up or down in the OIB, and by how many pages?			1			2

Table 15. Open-ended responses for ASR Science Grade 11

Questions	Responses
Please indicate any parts of the standard-setting training and	There were three or four questions for which, after the discussion, for
process that we should improve.	which I would have liked to have confirmed the answers. It may have
	been a case of knowing too much complexity about the subject.
	Randi was an excellent facilitator.
	It was all very helpful and the steps to learn the process well conveyed
	and reinforced. Maybe provide so general tools, prior reading for general
	understanding But the process was challenging but very very great
	learning experience.
	It would be helpful to have an actual mouse to use with the computers.
	Maybe a broad preview on the first day to show how this process fits in to
	the development of the ASR test.
	"The process is difficult, but well worth it. I am not sure if there would be
	a way to improve it. ** AC would be great ;)"
Please indicate any concerns you may have about the	None, everything was explained as we worked through the material. I was
workshop process and the final recommended cut scores.	a little slow on the uptake, but the facilitators were very responsive and
	patient with me. Their demeanor made the process more successful for
	me.
	I hope that we have set scores that allow for growth across the years.

APPENDIX—K STANDARD-SETTING MEMO

Oklahoma Standard Setting

CCRA US History Assessment June 23-24, 2022

Cognia and the Oklahoma Department of Education convened a panel of high school US History teachers during June 23-24, 2022 to recommend Basic, Proficient, and Advanced cut scores to enable reporting of student performance on the CCRA US History assessment. Eleven educators from around the state participated in two days of training and decision-making with Cognia standard-setting specialists. The standard-setting panelists reviewed test content and performance level descriptors and followed the Item-Descriptor (ID) Matching standard setting method to recommend these cut scores.

In the ID Matching method, the high school US History teachers reviewed the knowledge and skill response demands of CCRA US History assessment items placed in ordered item books (i.e., ordered from the easiest to the most difficult item). They matched those item response demands to knowledge and skill expectations in borderline performance level descriptors for the Basic, Proficient, and Advanced levels. (Borderline performance level descriptors define knowledge and skills that students who are just barely in a performance level are expected to know and be able to demonstrate.) Working independently, the standard-setting panelists conducted the ID matching process in three rounds and recommended cut scores for each of the three levels in each of the three rounds. After rounds 1 and 2, the Cognia workshop facilitator led panelists through a discussion of agreements and disagreements among the panelists and rationales for the various cut scores they recommended. The ensuing discussion enabled panelists to consider their colleagues' insights about item response demands and rationales for matching items to descriptors, and to consider adjusting their cut score recommendations in rounds 2 and 3. After the round 2 recommendations, and in preparation for making final cut score recommendations in round 3, panelists also reviewed impact data. (Impact data are the percentages of students who would be sorted into the Below Basic, Basic, Proficient, and Advanced performance levels, using their scores from the 2022 administration of the US History assessment, and based on the cut scores recommended in round 2.) The impact data gave the panelists one final opportunity to consider whether to adjust their cut scores in round 3.

In the final workshop evaluation, panelists expressed generally positive support for the workshop overall; workshop facilitation; training, practice, and the workshop process; the online standard setting tool; and other details in the standard setting workshop process. They responded this way to a final evaluation statement:

I'm satisfied with the final group cut scores. I would not recommend changing any of the group cut scores.

Table 1. Frequency of Responses for Final Evaluation Statement

N	Yes	No
11	10	1

If no, would you recommend moving a cut score up or down in the OIB, and by how many pages?

"Proficient – 4 pages higher" (panelist response).

Oklahoma Standard Setting CCRA US History June 2022

Final recommended cut scores are calculated as the average recommended cut score (specifically the median cut score) across the 11 panelists. The final recommended cut scores and corresponding impact data appear in the table below.

The Oklahoma State Department of Education can accept these recommended cut scores and adopt them as is. Or the department may choose to make "policy adjustments" to the cut scores, using standard errors of the cut scores, for example, to account for the newness of the US History assessment and curriculum, overall test difficulty, resource limitations to support students who need more instruction in US History before retesting, and other considerations. Cognia can advise the department on psychometrically defensible ways to make policy adjustments.

Table 2. Final Recommended Cut Scores

Performance Level	Ordered Item Book Page	Percentage of Students
Advanced	41	9.9
Proficient	14	36.3
Basic	6	13.9
Below Basic	-	39.9
Proficient + Advanced		46.2

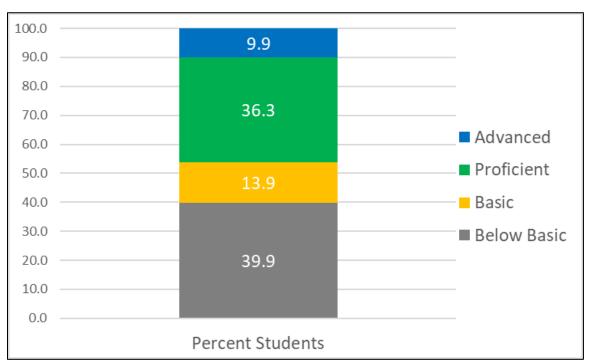
APPENDIX—L FINAL CUT POINTS

OK CCRA USH Standard-Setting Final Cut Points

Table 1. OK CCRA USH Grade 11 Standard-Setting Final Cut Points

Performance Level	OIB Page #	Raw Score	Theta (Median)	Percent Students
Below Basic		-		39.9
Basic	6	22	-0.26	13.9
Proficient	14	25	0.14	36.3
Advanced	41	42	1.30	9.9
Proficient + Advanced				46.2

Figure 1. OK CCRA USH Grade 11 Impact Data based on Final Cut Points



APPENDIX P 2023 OSTP STANDARD SETTING REPORT



OSTP Science—Grade 8

June 22-23, 2023—Oklahoma City, Oklahoma

Prepared by Cognia for the Oklahoma Department of Education



TABLE OF CONTENTS

CHAPTER 1. OVERVIEW OF STANDARD SETTING PROCEDURES	4
CHAPTER 2. TASKS COMPLETED PRIOR TO STANDARD SETTING	5
2.1 Creation of Performance Level Descriptors	5
2.2 PREPARATION OF MATERIALS	
2.2.1 Ordered Item Booklet (OIB)	6
2.2.2 Content-Based Benchmarks	
2.2.3 Cognia Standard Setting Toolkit	
2.2.4 Panelist Materials	
2.2.5 Presentation Materials	
2.2.6 Data, Information and Analysis Materials	
2.3 SELECTION OF PANELISTS	
CHAPTER 3. DURING THE STANDARD SETTING MEETING	11
3.1 Overview of the ID Matching Method	11
3.2 MEETING LOGISTICS	
3.2.1 Standard Setting Panelists and Workshop Staff	
3.2.2 Standard Setting Meeting Schedule	
3.2.3 Standard Setting Meeting Security	
3.2.4 ID Matching Standard Setting Procedure	
3.3 CUT SCORE CALCULATION	
3.4 GENERAL ORIENTATION AND PANELIST TRAINING	
3.5 BECOMING FAMILIAR WITH THE TEST ITEMS AND CONTENT	
3.6 USE OF THE COGNIA STANDARD SETTING TOOLKIT	
3.7 REVIEW OF THE STANDARDS AND PERFORMANCE LEVEL DESCRIPTORS	17
3.8 Training on the ID-Matching Judgmental Task	17
3.8.1 Modeling and Practice	18
3.9 JUDGMENT ROUNDS AND FEEDBACK	18
3.9.1 Round 1 Judgments	20
3.9.2 Round 2 Judgments	
3.9.3 Round 3 Judgments and Results	
3.9.4 Validation Step	
3.9.5 Workshop Evaluation	21
CHAPTER 4. TASKS COMPLETED AFTER THE STANDARD SETTING MEETING	22
4.1 FINAL ANALYSIS AND REVIEW	22
4.1.1 Review and Analysis of Standard Setting Results	
4.1.2 Analysis and Review of Panelists' Feedback	
4.2 POLICY ADJUSTMENTS	23
4.3 Preparation of Standard Setting Report	23
REFERENCES	24
APPENDICES	25
	-
APPENDIX A—LOGISTIC REGRESSION CALCULATION	
APPENDIX B—COGNIA STANDARD SETTING TOOLKIT	
APPENDIX C—POWERPOINT PRESENTATIONS	
APPENDIX D—MEETING AGENDA	
APPENDIX E—Non-DISCLOSURE AGREEMENT	
APPENDIX F—PERFORMANCE LEVEL DESCRIPTORS	
APPENDIX G—READINESS SURVEYS	

APPENDIX H—ROUND RESULTS APPENDIX I—WORKSHOP EVALUATION SURVEY APPENDIX J—WORKSHOP EVALUATION RESULTS APPENDIX K—STANDARD SETTING MEMO APPENDIX L—FINAL CUT POINTS

Chapter 1. Overview of Standard Setting Procedures

The purpose of this report is to summarize the activities involved in the Standard Setting process for the Oklahoma School Testing Program (OSTP) in grade 8 science on behalf of the Oklahoma State Department of Education (SDE). Changes in the Oklahoma Academic Standards for Science grade 8 were implemented in Fall 2022, necessitating the need to reset standards. The primary goal of the standard setting was to determine the knowledge, skills, and abilities (KSAs) that students must demonstrate to be classified into one of the performance levels (i.e., Advanced, Proficient, Basic, and Below Basic).

The Standard Setting process used was a modified version of the Item-Descriptor (ID) Matching method (Ferrara & Lewis, 2012; Cizek & Bunch, 2007). The ID Matching method was selected because it reduces cognitive burden on panelists as compared to other Standard Setting methods that require probability judgments about hypothetical high- and low-performing students, and it most clearly translates content standards into performance categories as compared to other methods of standard setting (Cizek, Bunch, & Koons, 2004).

The Standard Setting meeting was held from June 22nd through June 23rd of 2023. In all, 11 panelists participated in the process and were organized into three tables of 3–4 panelists each plus a facilitator provided by Cognia.

This report is organized into three major sections, describing tasks completed prior to, during, and after the Standard Setting meeting.

Chapter 2. Tasks Completed Prior to Standard Setting

2.1 Creation of Performance Level Descriptors

Oklahoma State Statute: Title 70. Schools, Chapter 22 – Testing and Assessment, Section 1210.541 – Student Performance Levels and Cut Scores – Accountability System mandates the adoption of "a series of student performance levels and the corresponding cut scores pursuant to the Oklahoma School Testing Program Act." The law states that performance levels must be labeled and defined as follows:

- 1. Advanced, which shall indicate that students demonstrate superior performance on challenging subject matter;
- 2. Proficient, which shall indicate that students demonstrate mastery over appropriate grade-level subject matter and that students are ready for the next grade, course, or level of education, as applicable;
- 3. Basic, which shall indicate that students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level or course; and
- 4. Below Basic, which shall indicate that students have not performed at least at the limited knowledge level.

Cognia collaborated with the Oklahoma State Department of Education (OSDE) to develop Range performance level descriptors (PLDs) for OSTP Science Grade 8. Prior to this collaboration, Policy PLDs were established by the OSDE to define the knowledge and skill level expectations for the Oklahoma Academic Standards for Science (OAS-S).

In developing the draft Range PLDs, Cognia worked collaboratively with OSDE and took into consideration the content standards and the achievement construct the PLDs represent, and used statements developed for the OSTP Science Grade 8 assessment to organize Range PLDs for each assessable OSTP Science Grade 8 performance expectation (PE) by Science and Engineering Practice (SEP). Cognia reviewed the content standards to select (a) verbs that define science skills and thinking processes, (b) nouns to identify knowledge and understanding of science facts and concepts, and (c) modifiers (i.e., adverbs, adjectives) that indicate levels of frequency, consistency, or quality of student performance. Following the framework described in Egan et al. (2012), Cognia collaborated with the OSDE and other stakeholders to review the draft Range PLDs (i.e., knowledge and skill expectations for all students who have achieved the range of scores in a performance level). Lastly, Cognia and OSDE worked together to approve final Range PLDs in 2023. The final Range PLDs were approved by SDE in April of 2023.

Following approval of the final Range PLDs, Cognia developed the Borderline PLDs. The Borderline PLDs were developed with specific nouns, verbs, adjectives, and adverbs to describe the knowledge and skills that students within each proficiency level are just barely expected to be able to demonstrate. In line with the OAS-S, the statements combine the subject matter for science that students are expected to demonstrate at the borderline of each proficiency level.

2.2 Preparation of Materials

Preparing for the Standard Setting meeting involved analyzing operational test data and organizing key materials. The materials that were prepared prior to the Standard Setting meeting included the following:

- Ordered Item Booklet (OIB)
- Content-based benchmarks
- The Cognia Standard Setting Toolkit
- Panelist materials
- Presentation materials
- Data, information, and analysis materials

Details related to the materials preparation for each of the above categories are provided below.

2.2.1 Ordered Item Booklet (OIB)

The standard setting was conducted using test items from the Spring 2023 administration. The initial OIB comprised the test items, which were ordered in terms of difficulty. Item difficulty, as defined by its scale location given a response probability (RP) value, was calculated based on data from OSTP Science Grade 8 students during the Spring 2023 administration. Items ascended in terms of difficulty throughout the OIB. Easier items appeared earlier in the OIB, and more difficult items appeared later.

Response probability (RP) criterion. The RP 67 criterion, defined by the Item Response Theory (IRT) scale value associated with a 67% chance of answering the item correctly, was used to order items in the OIB for the OSTP Science 8 standard setting meeting.

Collection of items for the OIB. To ensure that the items included in the OIB spanned the difficulty continuum—from easy to difficult—and that items were found around the points on the test scale where cut scores were likely to appear, the following procedure was used for building the OIB.

- Start with an operational test form: Cognia ordered the items from the Spring 2023 operational
 test form. Operational items that fell below the statistical thresholds for psychometric adequacy
 were replaced with Spring 2023 field test (FT) items from the same domain that did meet the
 thresholds.
- Augment the OIB with additional field test items: As needed, Cognia chose additional items for
 the OIB from previously field-tested items. For example, if the OIB did not have many items near
 the point in the test scale where the Proficient benchmark was expected, then items were added
 to the OIB that had locations around this point based on availability of such items in the pool.
- Review the balance of content against the blueprint: Since additional items were substituted in or added to the OIB, Cognia confirmed that the items had a balance of content consistent with the test blueprint to ensure that individual content strands were less likely to be overrepresented in the OIB through the augmentation process.

2.2.2 Content-Based Benchmarks

In standard setting, benchmarks refer to any content- or policy-based information that comes from an external source and is presented to panelists. The exact way that the benchmarks are used in the standard setting depends upon the methodology used. However, the general use is the same: Standard Setting panelists see and consider information from these external measures as they engage in the Standard Setting meeting activities.

Content-based benchmarks were used for the OSTP Science Grade 8 standard setting. The procedure for determining the content-based benchmarks was as follows:

- Prior to the Standard Setting meeting, Cognia content teams reviewed each item in the OIB and
 matched the items to one of three PLD levels (Basic, Proficient, or Advanced). Note that the
 Cognia content specialists did not assign any items to the Below Basic PLD. This is because all
 OSTP Science items are written according to level Basic and above, and the Below Basic
 performance level is described simply as the inability to perform at the Basic level.
- Cognia psychometricians then compiled the content specialists' item-PLD alignments and
 calculated threshold regions through logistic regression. Specifically, the regions were calculated
 by combining the item-PLD judgments to derive a set of cut scores with two standard errors
 added below and above each cut score. See Appendix A for calculation details.
- The above process resulted in content-based benchmark regions for the Proficient and Advanced levels.

Special Considerations for the Basic Benchmark Region. As mentioned previously, the Below Basic performance level is described as the inability to perform at the Basic level; therefore, items were not written to the Below Basic level and, by extension, it was not feasible to align items to the Below Basic level. Since there were no Below Basic item-PLD alignments, the above logistic regression method could not be employed to calculate a cut and corresponding region for the Basic level.

Thus, to facilitate the Basic level cut score identification, Cognia psychometricians empirically derived the cut score by constructing a mini–Test Characteristic Curve (TCC) based on items that were aligned to the Basic PLD. Cognia interpreted the borderline PLD of 50% to mean that a student placed in the Basic performance level should be answering items aligned to the Basic PLD correctly 50% of the time when chance is considered. Thus, Cognia calculated a theta value that was associated with 50% beyond chance of the expected score of the mini TCC. The '50% beyond chance' criterion is reflected in the performance level descriptor and takes guessing into account. Two OIB pages were added below and above the empirical cut score to create an empirical threshold region for the Basic level.

2.2.3 Cognia Standard Setting Toolkit

This section provides details about the Cognia Standard Setting Toolkit that panelists used to complete the main Standard Setting activities during the meeting. The Cognia Standard Setting Toolkit was



developed, tested, and set up by Cognia prior to the meeting and included a digital ordered item booklet with integrated item list, judgment forms, readiness surveys, and the final workshop evaluation survey.

The Cognia Standard Setting Toolkit consisted of a digital interface that first presented the ordered item list view (i.e., a list of items separated by rows with the easiest item at the top and the most difficult at the bottom). From the initial screen, panelists could toggle to the corresponding item detail view and use navigation arrows to move 'up' or 'down' in the booklet. The item detail view showed a PDF of the full item with the response options, as well as any stimuli or rubrics associated with the item. The ordered item booklet was created as discussed in a previous section of this document. Integrated judgment forms were available within both the item list and detail views. The judgment forms provided space for users to note (1) the relevant knowledge, skills, and abilities (KSAs) needed to answer the item, (2) any additional information that came to mind as panelists undertook the judgment task for each item, and (3) item descriptor matches. Any notes entered by the user in the item list view screen persisted when the user switched to the detail view screen and vice versa. In addition to the above, the Cognia Toolkit included the round-specific readiness surveys that panelists completed before undertaking each judgment round. Finally, the toolkit included the final workshop evaluation survey that panelists completed at the conclusion of the Standard Setting meeting.

Additional details and screenshots of the Cognia Standard Setting Toolkit are available in Appendix B.

2.2.4 Panelist Materials

Cognia developed specific and relevant materials that were used by panelists during the meeting. Because panelists utilized the Cognia Standard Setting Toolkit for most of the Standard Setting activities, some of the materials were presented digitally within the Toolkit. Table 1 includes a list of the materials developed for the panelists and their mode of presentation.

Table 1. Panelist Materials Prepared Prior to the Standard Setting Meeting

Panelist Material	Paper	Digital Online	Digital Within the Toolkit
Meeting Agenda	\checkmark	✓	
Non-disclosure Agreement	\checkmark		
OSTP Science 8 Test		✓	
Performance Level Descriptors (PLDs)	\checkmark		✓
Science Standards			\checkmark
Practice Items and Judgment Forms			\checkmark
Round Readiness Surveys			✓
Ordered Item Booklet (OIB)			✓
Integrated Item Map and Judgment Forms			\checkmark
Workshop Evaluation Survey			✓

2.2.5 Presentation Materials

PowerPoint presentations guided the facilitator through the distribution of information and materials during the Standard Setting meeting. Cognia developed the initial presentations and OSDE reviewed the presentations prior to the standard setting meeting.

Notes and scripts that coincided with the PowerPoint slides were added within the presentation to guide facilitators. The notes and scripts for the meeting provided information, including procedural steps, talking points, definitions to explain concepts to panelists, answers to commonly asked questions, and specific materials to distribute to panelists. Copies of the PowerPoint presentations are available in Appendix C.

2.2.6 Data, Information and Analysis Materials

Prior to the Standard Setting meeting, data, information, and other relevant analysis materials were generated for use during the meeting. Table 2 shows a list of materials that were generated, as well as the purpose of each.

Table 2. Data, Information, and Analysis Materials Generated Before the Standard Setting Meeting

Data, Information, and Analysis Materials	Description/Purpose	
Ordered Item Booklet (OIB)	The OIB was a set of items ordered by item difficulty and was generated according to the procedures outlined in section 2.2.1 of this report. Panelists worked within the OIB to review items and follow the ID Matching process.	
Content-based benchmark regions	Benchmark regions were calculated according to the procedures outlined section 2.2.2 of this document. Panelists viewed and considered information from these benchmark regions as they engaged in the Standard Setting meeting activities.	
Cognia Standard Setting Toolkit	A digital platform that was setup and tested prior to the meeting and included all necessary item data and information, as well as information related to the standards and PLDs.	
Student Test Data	Student test data from the Spring 2023 administration of the OSTP Science grade 8 test were prepared to enable the calculation impact data during and after the meeting.	
Programming	Cognia created and tested programming for computing the following: Theta cut scores: Cut scores on the theta scale based on panelists' judgments after each judgement round. Various statistics: Standard errors, percent exact and adjacent (based on differences between judgments from panelists and content specialists). Panelist judgment frequency distributions: Computed for all panelists after each round. The code also produced presentation artifacts for use during the discussion session after each round. Impact data: Code that used the theta cut scores and student test data to calculate the percentage of students in each performance level category.	

2.3 Selection of Panelists

As emphasized in Cizek and Bunch (2007), regardless of the method used, the selection of panelists is an important factor in determining Standard Setting outcomes and maximizing the validity of the standard-setting process. The guidance provided by *Standards for Educational and Psychological Testing* (AERA et al., 2014) states that "a sufficiently large and representative group of judges should be involved to provide reasonable assurance that results would not vary greatly if the process were repeated."

Consistent with the above guidance and respecting practical considerations regarding the maximum size of a group that can be successfully managed, the goal was to recruit a Standard Setting panel of 10–12 members representing different stakeholder groups to set standards for science. Targets for the size and composition of the panel were also consistent with federal guidelines as described in *Standards and Assessment Peer Review Guidance: Information and examples for meeting requirements of the No Child Left Behind Act of 2001* (U.S. Department of Education, 2009).

Two goals were proposed for recruiting Standard Setting panelists: (a) diverse experience and points of view regarding students, student learning, and Oklahoma content standards and (b) diverse representation among panelists in years of teaching, geographic regions in the state, school system sizes, school system urbanicity, and the racial/ethnic make-up of the student and teacher populations.

Chapter 3. During the Standard Setting Meeting

3.1 Overview of the ID Matching Method

The Item-Descriptor (ID) Matching method is appropriate for setting standards for standards-aligned assessments like the OSTP Grade 8 Science assessment. Assessment programs around the world have used ID Matching (e.g., Delaware, Massachusetts, Maryland, Mississippi, New Mexico, New York, South Carolina, and West Virginia; the Chicago and Philadelphia Public Schools; and programs in Brazil, Germany, and Finland).

ID Matching has advantages over Bookmark, Angoff, and other Standard Setting methods. Specifically, its cognitive-judgmental task requires that Standard Setting panelists, who are typically classroom educators, undertake a judgmental task that they are well suited for—matching item knowledge and skill response demands with knowledge and skill expectations in performance level descriptors (PLDs). The Bookmark and other methods require panelists to make probability judgments—something that people in general do not do well (e.g., Murphy, 2002). In addition, panelists do not need to hold a hypothetical borderline student in mind when they match items to descriptors and recommend cut scores, so the cognitive load and complexity of ID Matching is more manageable.

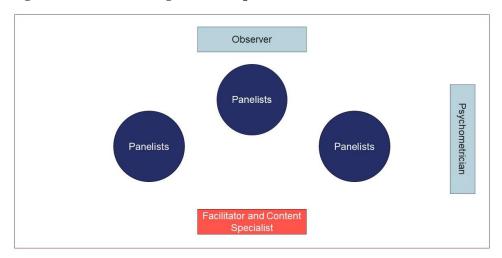
During standard setting using ID Matching, panelists use PLDs as their guide to match items to performance level descriptors. The structure of the PLDs provides a general characterization of expected student knowledge and skill at each level and examples of the knowledge and skills that students at each achievement level can be expected to demonstrate. By matching test items to specific claims from the Proficient PLD, for example, panelists identify the evidence in test items that supports the claims in that descriptor. Supporting the claims represented in the Proficient PLD contributes to the validity of interpretations of student achievement, based on the PLDs, and to the overall validity argument that a student who achieves that level on the assessment has demonstrated adequate understanding of essential concepts with respect to the standards being measured. This logic applies to all cut scores and performance levels.

3.2 Meeting Logistics

3.2.1 Standard Setting Panelists and Workshop Staff

Participants of the OSTP Science Grade 8 Standard Setting meeting included meeting facilitators, panelists, observers, and psychometricians. Figure 1 illustrates the room setup for the Standard Setting meeting.

Figure 1. Standard Setting Room Setup



Facilitators

The Standard Setting meeting was led by a facilitator with support from a science content specialist. The facilitator was a member of Cognia's staff who has experience facilitating Standard Setting meetings and was responsible for leading the panelists through the Standard Setting process. The content specialist was a Cognia science test development specialist and was responsible for leading the panelists through the development of the test, procedures for scoring the items, and the review of PLDs.

The facilitator, with support from a Cognia psychometrician, ensured that appropriate Standard Setting processes were followed throughout all phases of the meeting and verified that panelists had a solid understanding of the tasks they were being asked to complete. The facilitator, along with the content specialist, underwent preparatory training to lead the Standard Setting meeting. Psychometric staff from Cognia conducted the training, which included:

- OSTP Science Grade 8 assessment overview: The facilitators were provided with an overview of the OSTP Science 8 test, including the different item types, scoring rules, and performance levels.
- Cognia Standard Setting Toolkit: Both the facilitator and content specialist became familiar with the Cognia Toolkit to lead the Standard Setting process.
- Standard setting process: Facilitators participated in a walkthrough of the Standard Setting
 meeting, with a focus on specific issues for these meetings, such as time management, the use
 of the Cognia Standard Setting Toolkit, and communicating feedback information.
- Training slides and presentation script/notes: As part of the walkthrough of the standard setting
 process, facilitators reviewed the Standard Setting training slides. Notes in the Standard Setting
 training slides and a presentation script provided the facilitators with guidance, including when
 specific language was to be used.

Panelists

The SDE selected panelists prior to the Standard Setting meeting. The goal for panel selection was to include participants who are primarily teachers, but also to include school administrators, higher education personnel, and stakeholders from other interest groups. Moreover, to the extent possible, panelists were selected to reflect a balance of gender, race/ethnicity, and geographic location. Finally, panelists were selected who were familiar with the eighth-grade science subject matter. Table 3-1 provides information about the panelists that participated in the OSTP science grade 8 standard setting.



Table 3-1. OK OSTP Science Grade 8 Standard Setting Committee Participant List

Panelist #	District	Grade Level Currently Teaching Science	Science Content Experience	Gender	Suburban, Urban, Rural	District Ethnicity Breakdown	Site
1						52% White; 19% Hispanic; 8%	
	Mustang	8th	Life Science	F	Suburb	Asian; 6% AA; 3% AI	Mustang North Middle School
2		211	5	_		67% White; 24% Hispanic; 5% AI;	
	Woodward	8th	Physical Science	F	Rural	1% AA; 1% Asian	Woodward Middle School South
3	Alex	8th	Life Science	F	Rural	74% White; 9% Hispanic; 6% Al	Alex Jr/Sr High
4						54% White; 12% Hispanic; 8% AI;	
4	Owasso	8th	Earth and Space Science	F	Suburb	6% AA; 6% Asian	Owasso 8th Grade Center
5						36% AI; 20% White; 20%	
э	Tahlequah	8th	Life Science	F	Rural	Hispanic; 1% Asian; 1% AA	Tahlequah Middle School
6						70% White; 11% Hispanic; 5% AA;	
	Edmond	8th	Life Science	F	Urban	3% AI; 3% Asian	Edmond - Central Middle School
7						47% White; 29% Hispanic; 12%	
	Enid	8th	Physical Science	F	Rural	Asian; 4% AA; 3% AI	Enid - Emerson Middle School
8						67% White; 24% Hispanic; 5% AI;	
	Woodward	8th	Earth and Space Science	F	Rural	1% AA; 1% Asian	Woodward Middle School
9	Skiatook	8th	Physical Science	F	Suburb	56% White; 19% AI; 7% Hispanic	Newman Middle School
10						39% Hispanic; 23% White; 21%	
10	Putnam City	8th	Earth and Space Science	F	Urban	AA; 4% Asian; 2% AI (Capps)	Capps Middle School/Hefner MS
11						67% White; 24% Hispanic; 5% AI;	
	Woodward	8th	Physical Science	F	Rural	1% AA; 1% Asian	

3.2.2 Standard Setting Meeting Schedule

The Standard Setting meeting consisted of two days of activities. The meeting started with an opening session on the morning of day 1 before continuing with training, practice, and round 1. On day 2, panelists completed rounds 2 and 3, and concluded the meeting with the final workshop evaluation survey. A detailed meeting agenda can be found in Appendix D.

3.2.3 Standard Setting Meeting Security

During the meeting, panelists reviewed operational test items, preliminary cut score recommendations, and associated impact data. Due to the nature of this information, security was a critical component of the meeting. Specific procedures were established to ensure the security of all materials was maintained.

As part of the meeting, the facilitator reviewed the process for maintaining the security of materials, discussions, and preliminary results from the meeting. Panelists were not permitted to share or discuss secure materials and information outside of meeting rooms. To confirm that the panelists understood and agreed to the security conditions, they signed security and non-disclosure agreements (an example is provided in Appendix E).

To preserve the security of the materials and activities within the Cognia Standard Setting Toolkit, each panelist was provided a Chromebook and unique login credentials. The supporting Cognia psychometrician-controlled panelist access to each section of the Toolkit throughout the meeting. Access to the Toolkit was disabled at the conclusion of the Standard Setting meeting and the Chromebooks were wiped clean of all data.

Additional materials were provided to panelists in their meeting folders after signing the non-disclosure agreement. All printed materials were collected at the end of each day to maintain test security.

3.2.4 ID Matching Standard Setting Procedure

Over the course of two days, panelists engaged in Standard Setting activities, starting with an opening session on day one. The opening session was followed by the main Standard Setting session during which panelists received training and engaged in a practice round. Next, panelists engaged in three consecutive judgment rounds, with preparation and discussion between rounds. The Standard Setting meeting will conclude after the third round, at which point a final workshop evaluation will be administered.

3.3 Cut Score Calculation

To calculate the Proficient and Advanced cut scores during the Standard Setting meeting, all item-PLD alignment judgments from each panelist were gathered and used as input in a logistic regression calculation (see Appendix A for details).

To facilitate the Basic level cut score identification, Cognia psychometricians empirically derived the cut score by constructing a miniature Test Characteristic Curve (TCC) based on items that were aligned to the Basic PLD. Cognia interpreted the borderline PLD of 50% to mean a student placed in the Basic

performance level should be answering items aligned to the Basic PLD correctly 50% of the time when chance is considered. Thus, Cognia calculated a theta value that was associated with 50% beyond chance of the expected score of the mini TCC. The '50% beyond chance' criterion reflected in the performance level descriptor also takes guessing into account.

Note that during the first round of standard setting, panelists made item-PLD alignments for each item. During rounds 2 and 3, they had the opportunity to change their item-PLD alignments as they saw fit. Thus, the above process was used to calculate cuts during each round of the standard setting by using the complete set of panelists' judgments for that specific round.

3.4 General Orientation and Panelist Training

Concerning panelist training, the *Standards for Educational and Psychological Testing* (AERA et al., 2014) states the following:

Care must be taken to assure these persons understand what they are to do and that their judgments are as thoughtful and objective as possible. The process must be such that well-qualified participants can apply their knowledge and experience to reach meaningful and relevant judgments that accurately reflect their understandings and intentions. (p. 101)

The training of the panelists began with a general orientation session at the start of the meeting. During the main Standard Setting session, panelists were organized such that three to four panelists were assigned to each table. Chromebooks, supplied by Cognia and set up for the standard setting, were distributed to all panelists. Facilitators guided panelists through the following activities:

- Overview and introductions
- Taking the test
- Use of the Cognia Standard Setting Toolkit
- Review of the standards and PLDs
- Training on the ID Matching process
- Modeling and practice
- Judgment rounds and feedback
- Final workshop evaluation survey

To begin the main Standard Setting session, the individuals in the room introduced themselves. After introductions, the facilitator reviewed the security and non-disclosure information. The facilitator then provided a high-level overview of the process. The panelists were given opportunities to ask questions before proceeding.

3.5 Becoming Familiar with the Test Items and Content

After the overview and introductions, panelists experienced the OSTP Science Grade 8 test. The purpose of this step was to familiarize the panelists with the assessment and the test taking activities expected of students during administration.

Using individual Chromebooks provided by Cognia, panelists were instructed on how to log into their Chromebooks and navigate to the testing platform site. Cognia staff provided panelists with unique login credentials and once they successfully accessed the testing platform, panelists experienced the test the same way students do, to become familiar with the test from the student's perspective.

In the interest of time and efficiency, panelists were presented with session 1 of the OSTP Science Grade 8 test. Session 1 represented half of the full test. Cognia's science content specialist confirmed that the set of items in the first session included all the item types that would be encountered on the full test. In addition, the range of content standards and item difficulties in session 1 were representative of the full test and the test blueprint.

3.6 Use of the Cognia Standard Setting Toolkit

The facilitator (with support from a Cognia psychometrician) guided panelists through the steps needed to log in and access the Cognia Standard Setting Toolkit. Each panelist used their email and an initial assigned password to access the site. After their initial log in, panelists were directed to change their passwords, and then prompted to log back into the system with their new passwords. Their emails and individual passwords were used to access the Toolkit for the duration of the Standard Setting meeting. Once everyone completed the log in procedure, they viewed an initial screen with tabs that linked to the standards and PLDs.

3.7 Review of the Standards and Performance Level Descriptors

Before engaging in the judgment tasks, panelists reviewed the standards and the performance level descriptors (PLDs). This important step was designed to ensure that panelists thoroughly understood the KSAs needed for students to be classified into performance levels (Below Basic, Basic, Proficient, and Advanced).

Panelists studied the standards and range PLDs associated with the OSTP Science Grade 8 assessment. Panelists were asked to consider the knowledge, skills, and abilities (KSAs) detailed in the standards, and how they were reflected in the PLDs. Next, panelists focused on the borderline PLDs that describe the KSAs expected of students who just barely meet each performance level. Panelists then reflected on their conversations about the standards and the PLDs. The PLDs are provided in Appendix F.

3.8 Training on the ID-Matching Judgmental Task

Once panelists reviewed and discussed the standards, range and borderline PLDs, the facilitator guided them through more detailed training on the ID-Matching judgmental task. The facilitator used a customized PowerPoint slide deck to explain the following concepts: the ordered item booklet (OIB), how to review items and what information to consider while doing so, and how to make item-descriptor matches. The facilitator emphasized the importance of considering the knowledge, skills, and abilities (KSAs) required by an item, as well as the information in the PLDs to make their item-descriptor matches.

After explaining the main concepts and the process for making item-descriptor matches, the facilitator provided a high-level description of the round-by-round judgement procedures and what to expect before (i.e., readiness survey), during (i.e., judgmental tasks and, when relevant, consideration of benchmarks), and after (i.e., presentation of results and discussion) each round.

During the training, the facilitator provided clear explanations and directions while ensuring that the panelists had all the information and support needed to undertake the Standard Setting process. To that end, the facilitator used a customized script alongside the PowerPoint slide deck to guide panelists through the training.

The facilitator encouraged panelists to ask questions during the training but also reminded panelists that they would have the opportunity to practice before beginning the first round. In addition, the facilitator reminded panelists that they would review concepts as needed throughout the Standard Setting process.

3.8.1 Modeling and Practice

After training on the ID-Matching process, the facilitator provided a brief demonstration of the Cognia Standard Setting Toolkit. A Cognia psychometrician, with dedicated access to a management screen within the Cognia Toolkit, was responsible for managing aspects related to the system.

After the initial demonstration of the Cognia Toolkit, the facilitator proceeded with the practice round, which consisted of three sample items. The facilitator used the three sample items to model the judgmental task and guide panelists through making their own item-descriptor matches. During this practice round, the facilitator reinforced the training concepts.

The three sample items were chosen such that (1) none of the items were part of the OIB, (2) the first two items were relatively easy to identify in terms of item-PLD alignment, and (3) the last item was more challenging to identify in terms of item-PLD alignment (i.e., the item was expected to fall in a borderline region). Using sample items that were not part of the OIB allowed the facilitator to avoid undue influence over panelists' judgmental tasks. In addition, the mix of items gave panelists the opportunity to experience different levels of cognitive load while making their judgments, as would be the case once they considered the full set of items contained in the OIB. During the modeling and practice session, panelists also had the opportunity for discussion with each other, to ask questions, and become more familiar with the Toolkit.

3.9 Judgment Rounds and Feedback

During the main portion of the Standard Setting workshop, panelists completed three consecutive rounds of judgments. Each judgment round consisted of three distinct sessions: Readiness, Judgment, and Feedback and Discussion. This was an iterative process during which the outcomes of each judgment round were considered during the next judgment round. Table 3 provides a crosswalk of the activities, analyses, and outcomes for each session within each judgment round.

Table 3-2. Crosswalk of Activities, Analyses, and Outcomes by Judgment Round

Round	Session	Panelist Activities	Analyses	Outcomes
	Readiness	Complete Round 1 readiness survey.	Determine if all panelists are ready to proceed.	
1	Judgment	Review all items, identify KSAs, and align each item to a PLD.	Calculate threshold regions for Proficient and Advanced levels (cut score with 2 standard errors) Calculate % exact agreement on OIB items Create presentation artifacts	Initial threshold regions Presentation artifacts
	Feedback & Discussion	Discuss round 1 results: items with the most disagreement		
	Readiness	Introduce content-based benchmark regions. Complete Round 2 readiness survey.	Determine if all panelists are ready to proceed.	
2	Judgment	Review items (with special attention to items discussed in round 1 feedback) and make changes to item-PLD alignments as desired.	Calculate threshold regions for Proficient and Advanced levels (cut score with 1 standard error) Calculate % exact agreement on OIB items Create presentation artifacts	Narrowed threshold regions Presentation artifacts
	Feedback & Discussion	Discuss round 2 results: items with the most disagreement and benchmarks		
	Readiness	Complete Round 3 readiness survey.	Determine if all panelists are ready to proceed.	
3	Judgment	Review items (with special attention to items discussed in round 2 feedback) and make changes to item-PLD alignments as desired.	Calculate cut scores Calculate associated impact data Create presentation artifacts	Cut scores and impact data Presentation artifacts
	Feedback & Discussion	Additional validation step to address any remaining differences between panel results and content-based benchmarks. Present final cut scores and impact data to panelists		Group-level content- based rationale for final cut score recommendations.

Readiness Surveys: Before each judgment round, panelists completed a readiness survey that consisted of questions about whether they felt prepared to undertake the upcoming round of judgements. All questions had yes/no response options, and all "yes" responses indicated that panelists were ready to proceed. See Appendix G for the readiness surveys for all three rounds. If one or more panelists answered "no" to one or more questions, the facilitator reviewed the concepts associated with those questions, and panelists were then asked to complete the readiness survey again. Panelists moved on to the judgement round only when everyone indicated that they were ready to do so.

Feedback and Discussion: After each judgement round, Cognia psychometricians calculated a variety of statistics as described previously. In addition, the psychometricians created a presentation artifact in the form of a frequency chart. During the feedback and discussion portion that followed each judgement round, the facilitator presented the frequency chart to the panelists and used it to facilitate table and room discussions. The discussion focused on items that showed the most disagreement between panelists, and panelists were encouraged to share their thoughts and viewpoints. Panelists were encouraged to refer to training materials (e.g., OIB, item information, PLDs, and standards) as well as their own notes (taken within the Toolkit) throughout this discussion. Panelists were also reminded that the goal of the discussion was not to persuade or influence others. Instead, the discussion centered around sharing their

own reasoning for their PLD matches and listening to other panelists' reasons as additional information to consider.

3.9.1 Round 1 Judgments

During the first round, panelists worked individually with the PLDs, the standards, and the ordered item booklet (OIB). For each item in the OIB, panelists considered the knowledge, skills, and abilities (KSAs) needed to respond to the item (i.e., asking themselves 'what does a student need to know and be able to do to respond to this item?'). After identifying the KSAs required by the item, panelists then assigned an item descriptor match (i.e., basic, proficient, or advanced) to the item. They continued in this manner until they reviewed all items in the OIB.

At the conclusion of round 1 judgments, Cognia psychometricians compiled all judgments from all panelists to calculate cut scores and associated standard errors. The cuts with two standard errors above and below represented the threshold regions for round 1. In addition, Cognia psychometricians calculated an item-level % exact PLD agreement to facilitate round 1 discussion. Finally, the psychometricians created the presentation artifact (i.e., a graphical representation of results) that was handed off to the facilitator.

3.9.2 Round 2 Judgments

Before starting the second round of judgements, the panelists were introduced to the content-based benchmarks. The facilitator, with support from a psychometrician, described how the benchmarks were calculated, demonstrated how they would be presented within the Cognia Toolkit, and explained how panelists should consider the information represented by the benchmarks as they engaged in round 2 of the Standard Setting activities. Panelists were reminded that benchmarks were provided for their consideration, and not to influence their judgments.

Next, panelists completed the round 2 readiness survey and once all panelists indicated that they were ready to proceed, they continued to round 2 of the judgement task.

During the second round, panelists once again worked individually with the PLDs, the standards, and the ordered item booklet (OIB). Taking into consideration the feedback and discussion after round 1, as well as the additional information represented by the content-based benchmarks, panelists reviewed their work from round 1. Panelists could keep their judgment from round 1 or revise it. All panelists made their round 2 judgments individually and without discussion.

At the conclusion of round 2 judgments, Cognia psychometricians again compiled all judgments from all panelists to calculate cut scores and associated standard errors. The cuts with one standard error above and below represented the narrowed threshold regions for round 2. In addition, Cognia psychometricians calculated an item-level % exact PLD agreement to facilitate round 2 discussion. Finally, the psychometricians created the presentation artifact (i.e., a graphical representation of results) that was handed off to the facilitator.

3.9.3 Round 3 Judgments and Results

After round 2 feedback and discussion portion, but before round 3, panelists once again completed a readiness survey. Once all panelists indicated that they were ready to proceed, they continued to round 3 of the judgment task.

During the third round, panelists once again worked individually with the PLDs, the standards, and the ordered item booklet (OIB). Taking into consideration the feedback and discussion after round 2, panelists reviewed their work from round 2. Panelists could keep their judgment from round 2 or revise it. All panelists made their round 3 judgments individually and without discussion.

At the conclusion of the round 3 judgments, Cognia psychometricians again compiled all judgments from all panelists and, using the same procedures already detailed in previous sections, used the panelists' item-PLD judgements to calculate the final cut scores, as well as associated impact data. In addition, the results were reviewed and compared to the content-based benchmarks.

The frequency of panelists item-PLD judgments across the basic, proficient, and advanced levels for each of the three rounds are available in Appendix H. Note that these frequency results are the same graphical displays that were presented to panelists after each round.

The round 3 results were not congruent with the content-based benchmarks. As per the Standard Setting plan and discussion with SDE, the results (including impact data) were shared with panelists and panelists were asked to complete a validation step.

3.9.4 Validation Step

During the validation step, the facilitator guided the panelists to write content-based rationales for their judgments associated with items that were still very much discrepant from the content-based benchmarks. Panelists captured these content-based rationales in the Cognia Toolkit.

3.9.5 Workshop Evaluation

At the conclusion of the Standard Setting meeting, panelists completed a final workshop evaluation form and gave their feedback on various aspects of the Standard Setting meeting. Panelists indicated that they felt positive about how Cognia conducted the workshop and their final recommendations. Specifically, panelists expressed generally positive support for the workshop overall; workshop facilitation; training, practice, and the workshop process; the Cognia Standard Setting Toolkit; and other details in the workshop process. A copy of the evaluation survey is available in Appendix I; the workshop evaluation results are available in Appendix J.

Chapter 4. Tasks Completed After the Standard Setting Meeting

Upon conclusion of the Standard Setting meeting, several important tasks were completed. These tasks centered on the following: reviewing the Standard Setting process and addressing issues presented by the outcomes; presenting the results to the SDE; and making any final revisions or adjustments based on policy considerations, under direction of the SDE. Shortly after the Standard Setting meeting, Cognia provided SDE with a Standard Setting memo that included an overview of the Standard Setting process, as well as the final recommended cut scores. A copy of the memo is available in Appendix K.

4.1 Final Analysis and Review

The Standard Setting literature considers evaluation of the workshop and its results to be another product of the Standard Setting process (e.g., Reckase and Chen, 2012), as it provides important validity evidence supporting the cut scores that are obtained. To that end, a final review and analysis of the Standard Setting results was conducted. In addition, to provide evidence of the participants' views of the Standard Setting process, a review and analysis of panelists' feedback on the workshop evaluation survey was also conducted.

4.1.1 Review and Analysis of Standard Setting Results

First, Cognia conducted statistical analyses of panelists' item-PLD alignment data by calculating the percent exact, adjacent, and discrepant for each panelist on each performance level. Panelists with the least percentage exact were identified as showing statistically aberrant behavior. Next, an independent subject matter expert (SME) reviewed the qualitative data for all panelists identified as statistically aberrant. The SME reviewed panelists' notes on the knowledge, skills, and abilities required by the items, as well as their content-based rationales to determine if the panelists were on task.

After the statistical analyses and qualitative review of panelist data, one panelist was determined to be statistically and qualitatively aberrant. Consequently, their data were removed from the final analyses.

The next phase of the analyses included conducting logistical regression to calculate cut scores. Since the logistical regression method is sensitive to statistical outliers and the presence of such outliers violates the assumptions of the model, an outlier analysis was performed in the form of visual inspection of the initial logistic regression curves for any statistical outliers. A total of 430 data points (10 panelists made judgements on each of 43 items) were included in the logistic regression calculation. Visual inspection of the initial logistic regression curves revealed seven statistical outlier data points.

After the seven data points were removed, the final logistic regression analyses were conducted to calculate the proficient and advanced cut scores. Next, the TCC method was used to calculate the Basic cut score.

Finally, the resulting cut scores were applied to student data from the Spring 2023 administration of the OSTP Science Grade 8 assessment to calculate the impact data (i.e., the percentage of students that would be classified into each performance level based on the Standard Setting cut scores).

4.1.2 Analysis and Review of Panelists' Feedback

After the evaluation forms were completed, panelists' responses were reviewed. This review did not reveal any anomalies in the Standard Setting process. In general, participants felt that the recommended cut points were appropriate and that their judgments were based on appropriate information and decision making. The results of the evaluations are presented in Appendix J.

4.2 Policy Adjustments

After all Standard Setting activities had been completed and all materials reviewed, the SDE recommended an adjustment to the Standard Setting results. Specifically, all three cut scores were adjusted by one standard error. The full set of cuts, shown in Appendix L, were presented to the Commission for Educational Quality and Accountability (CEQA), and approved for use assigning students to performance levels in the 2022–2023 Oklahoma Science Grade 8 assessment.

4.3 Preparation of Standard Setting Report

Following the final compilation of Standard Setting results, Cognia prepared this report, which documents the procedures and results of the 2023 Standard Setting meeting that was held to establish performance standards for the OSTP Science Grade 8 assessment.

References

- American Educational Research Association, American Psychological Association, and National Council on Measurement in Education. (1999). Standards for educational and psychological testing. Washington, DC: American Educational Research Association.
- American Educational Research Association, American Psychological Association, and National Council on Measurement in Education. (2014). *Standards for educational and psychological Testing*. Washington, DC: American Educational Research Association.
- Cizek, G. J., & Bunch, M. B. (2007). Standard setting: Establishing and evaluating performance standards on tests. Thousand Oaks, CA: Sage Publications.
- Murphy, G. L. (2002). The big book of concepts. Cambridge, MA: The MIT Press
- Reckase, M.D. (2001). Innovative methods for helping Standard Setting participants to perform their task: The role of feedback regarding consistency, accuracy, and impact. In G. J. Cizek (Ed.), Setting performance standards: concepts, methods, and perspectives (pp. 159–173). Mahwah, NJ: Lawrence Erlbaum Associates.
- U.S. Department of Education. (2009). Standards and assessments peer review guidance: Information and examples for meeting requirements of the No Child Left Behind Act of 2001. Washington, DC: U.S. Department of Education Office of Elementary and Secondary Education. Retrieved June 10, 2010, from the World Wide Web: www2.ed.gov/policy/elsec/guid/saaprguidance.pdf.

Appendices

APPENDIX A LOGISTIC REGRESSION CALCULATION

Logistic Regression Calculation

The proficient and advanced cut scores were computed using the logistic regression as follows:

$$\log \frac{P}{1-P} = \beta_0 + \beta_1 \theta$$

which is equivalent to:

$$P = \frac{exp (\beta_0 + \beta_1 \theta)}{1 + exp (\beta_0 + \beta_1 \theta)}$$

Where β_0 (intercept) and β_1 (slope) are two regression coefficients that need to be computed, theta (θ) is the RP67 value associated with each OIB page, and P is the probability of observing a performance level (level X or above) given theta. After fitting the model with data, the theta cut score is obtained by finding which score corresponds to a probability of 0.5 for being rated above the cut as follows:

$$\log \frac{0.5}{1 - 0.5} = 0 = \beta_0 + \beta_1 \theta$$

Solving the equation, the following is obtained:

$$\theta = -\frac{\beta_0}{\beta_1}$$

Additionally, the variance of the theta estimate will be computed as:

$$VAR(\theta) = \frac{\mu_{\beta 0}^{2}}{\mu_{\beta 1}^{2}} \left[\frac{\sigma_{\beta 0}^{2}}{\mu_{\beta 0}^{2}} - 2 \frac{Cov(\beta_{0}, \beta_{1})}{\beta_{0}\beta_{1}} + \frac{\sigma_{\beta 1}^{2}}{\mu_{\beta 1}^{2}} \right]$$

Therefore, the standard error of the estimate is given by:

$$SE(\theta) = \sqrt{VAR(\theta)}.$$

APPENDIX B COGNIA STANDARD-SETTING TOOLKIT

Appendix B: Cognia Standard Setting Toolkit

This appendix contains sample screenshots of the Cognia Standard Setting Toolkit that panelists used for all standard setting activities during the meeting. Images provided correspond to samples (1) login screen, (2) readiness survey screen, (3) ordered item booklet view, and (4) item detail view.

Figure 1. Sample Login Screen

Panelists are provided with usernames and passwords to enable secure access to the toolkit.

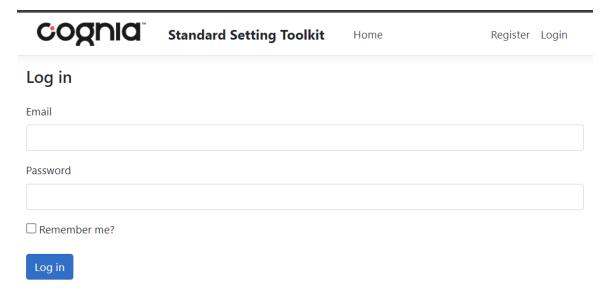


Figure 2. Sample Readiness Survey

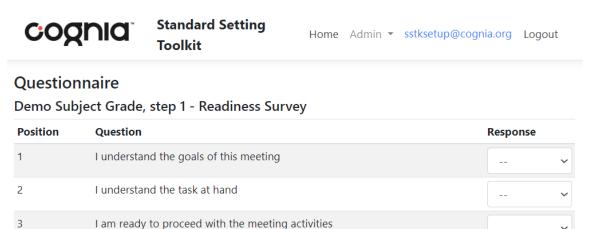


Figure 3. Sample Ordered Item Booklet View

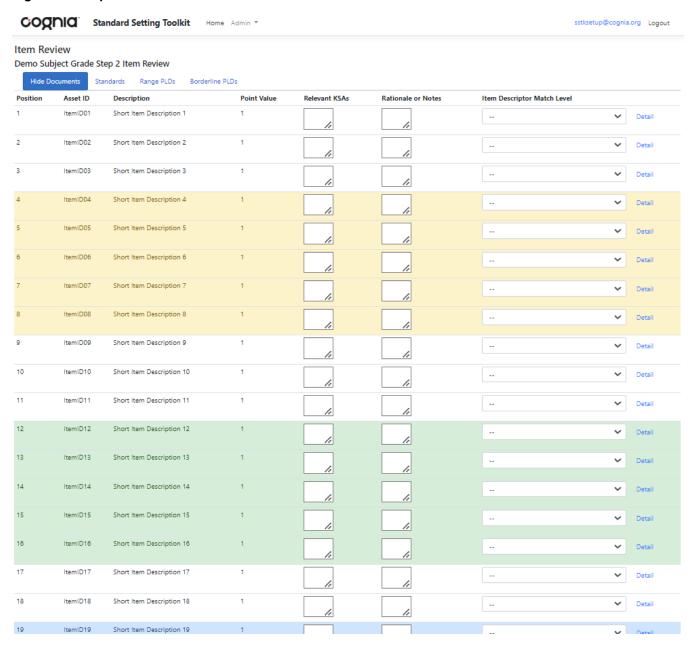
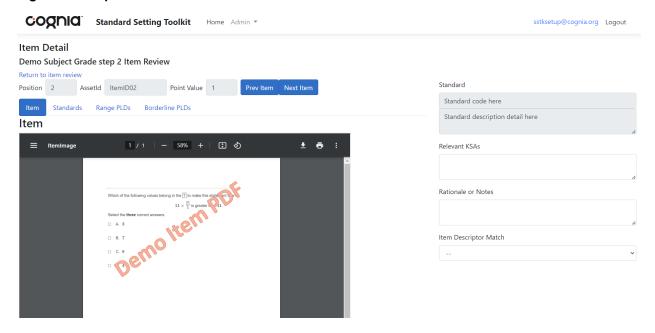


Figure 4. Sample Item Detail View



APPENDIX—C POWERPOINT PRESENTATIONS



OSTP Science Grade 8

Standard Setting Orientation June 22 – 23, 2023

Welcome!

Thank you for taking time out of your summer to help us.



Assessment History

- In 2016, the Oklahoma Legislature directed the State Board of Education to evaluate Oklahoma's current state assessment system and make recommendations for its future.
- As a result, the Oklahoma State Department of Education
 - Held regional meetings across the state to determine stakeholder concerns
 - Convened the Oklahoma Assessment & Accountability Task Force to develop recommendations
 - Followed federal requirements and rules as described in ESSA.



Goals for Oklahoma Schools

- Focus on college- and career-readiness:
 - College and career ready means that students graduate from high school prepared to enter and succeed in postsecondary opportunities whether college or career.
- Students should graduate high school ready for postsecondary success and should be able to demonstrate that they are on track toward that goal.



Commission for Educational Quality

•The Commission for Educational Quality and Accountability shall determine and adopt a series of student performance levels and the corresponding cut scores pursuant to the Oklahoma School Testing Program Act.



Content Standards and PLDs

Academic Content Standards (OAS-S)

define what the State expects all students to know and be able to do.*

Academic Achievement Standards (PLDs)

define levels of student achievement on the assessments.*

*U.S. Department of Education Peer Review of State Assessment Systems Non-Regulatory Guidance for States, September 25, 2015





OSTP Science Grade 8

Standard Setting Orientation June 22 – 23, 2023



Orientation Session - Agenda

- c Introduction of the Standard Setting Team
- **c** Standard Setting Goals and Outcomes
- © Overview of the OSTP Science Grade 8 Assessment
- **c** Overview of Standard Setting
- Overview of Key Concepts and Procedures
- **c** Overview of Performance Level Descriptors



cognia

Welcome!

Thank you for taking time out of your summer to help us.

Standard Setting Team

- Oklahoma SDE Members
 - Catherine Boomer—Program Director of State Assessment
 - Eric Jones—Program Manager of State Assessment
 - Samantha Sheppard—Project Manager of Science Assessment
 - Heather Johnston—Project Manager of Secondary Science and Engineering
 - Caroline Misner—Project Manager of OAAP
- OSTP Technical Advisory Committee Member
 - Juan D'Brot (observer)
- Cognia
 - David Harrison (facilitator)
 - Mary-Alice Corliss (content SME)
 - Liz Garcia (lead program manager)
 - Frank Padellaro (VP Psychometrics and Reporting)





Standard Setting Goals

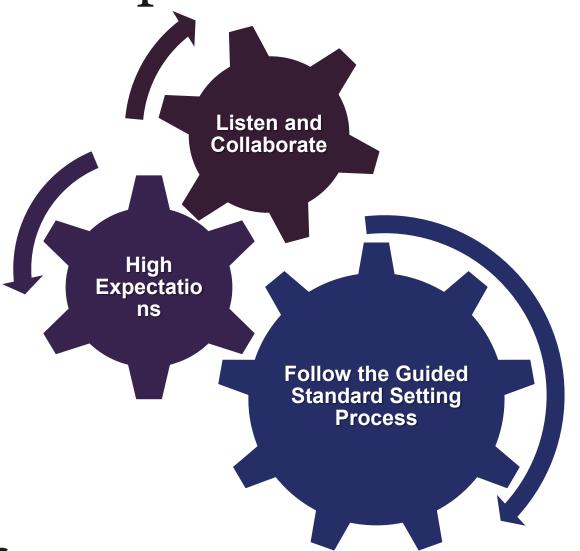
c Our shared goals

 Use your judgments to help provide performance standards recommendations for the OSTP science grade 8 assessment that provide meaningful and actionable information

• Your goals as panelists

- Learn concepts and procedures following the Item-Descriptor (ID)
 Matching method
- Follow the procedures to complete the standard setting activities
- Rely on your expertise about the content standards, student learning, and students throughout the process

Expectations of all Panelists



- Security is of the utmost importance
 - You can discuss the process in general terms
- You may NOT
 - Share details about the items or specific details about the process (e.g., cuts that were recommended)
 - Use your phones or personal devices while in the room
 - Use the Chromebooks for anything other than standard setting activities



cognia

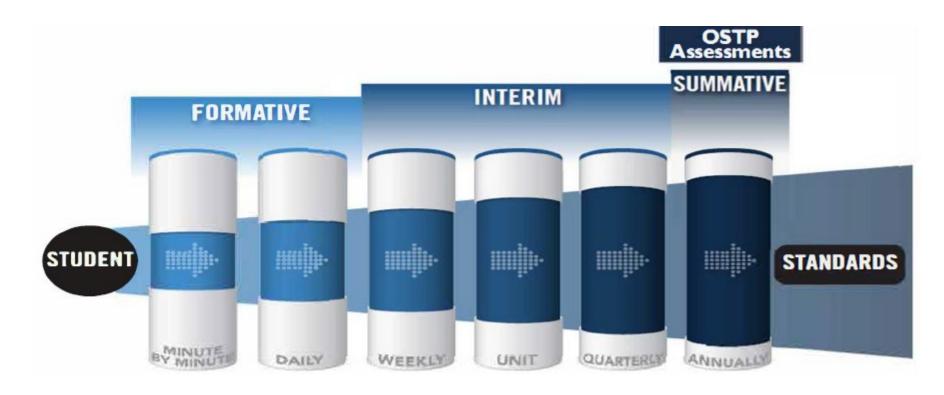
OSTP Science Grade 8 Assessment Overview



Assessment Overview Topics

- **c** OSTP Science Test Purpose
- **c** Development and Administration Process
- The three dimensions of science learning
- **c** OSTP Science Test Design overview

OSTP Science Test Purpose



"A robust assessment system is predicated upon the knowledge that no one assessment is able to provide answers to all questions affecting instructional decisions. An assessment system utilizes different types of assessment to gather multiple pieces of evidence to provide timely, relevant, actionable, and reliable information about what students know and can do relative to a set of standards."

Grade 8 Science Test and Item Specifications

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OSTP Science Development and Administration Process

- The items developed for the OSTP Science Grade 8 Test are aligned to the Oklahoma Academic Standards-Science (OAS-S).
- The OSTP Science Grade 8 test is administered online. Paper/pencil testing is only provided as a testing accommodation
- The OSTP Science Grade 8 test is separated into two sessions. Districts may
 exercise flexibility in determining how to administer the sessions. The Grade
 8 Science test is meant to be administered in two sessions within one day or
 on consecutive instructional days. When testing a session, test
 administrators may give students additional time if they need it, but the
 additional time is to be given as an extension of that specific testing session.



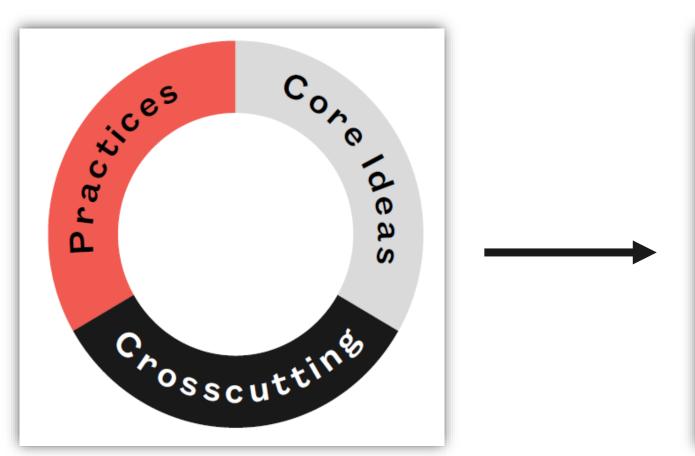
The OAS-S Standards are 3-dimensional

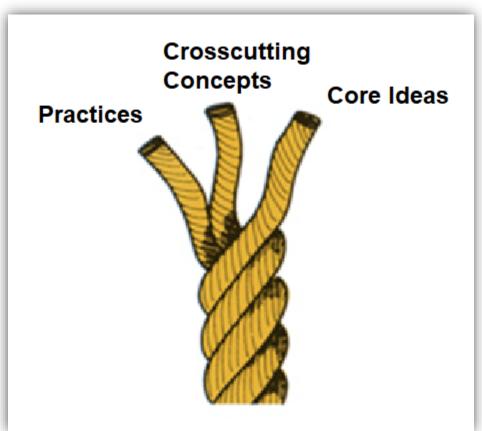
- Science and Engineering Practices (SEPs)
 - What students are expected to do
- Disciplinary Core Ideas (DCIs)
 - What students are expected to know

- Crosscutting Concepts (CCCs)
 - How students think and connect ideas

Integrating dimensions

The standards integrate all three dimensions.







OSTP Science Grade 8 Test Design Overview

Overview – Clusters and Test Design

- Individual items are organized as part of a cluster, which consists of 1 stimulus or passage and the 3 items associated with that stimulus. All items in a cluster are aligned to a single OAS-S standard
- The Grade 8 Science Test consists of 15 OP clusters, or a total of 45 OP items.
- The test blueprint targets a specific % of clusters that cover three domains of science: Physical Science, Earth and Space Science, and Life Science

Grade 8

Reporting Category	Percentage	Number of Items	Number of Points
Physical Sciences			
(8.PS2.1, 8.PS2.2, 8.PS2.3, 8.PS2.4, 8.PS2.5, 8.PS4.1, 8.PS4.3)	33-40%	15-18	16-19
Life Sciences			
(8.LS1.4, 8.LS1.5, 8.LS3.1, 8.LS3.2, 8.LS4.1, 8.LS4.2, 8.LS4.3, 8.LS4.4, 8.LS4.5, 8.LS4.6)	40-46%	18-21	19-22
Earth and Space Sciences			
(8.ESS1.1, 8.ESS1.2, 8.ESS1.3)	21-27%	9-12	10-13
Total Operational Test	100%	45	48

Overview - Item Types

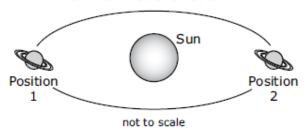
Items developed for the Grade 8 Science test are either multiple choice (MC) items and technology enhanced items (TEIs). A cluster is either a set of three MC items linked to a common stimulus or a set of two MC items and a TEI linked to a common stimulus:

- MC
 - 4 options and 1 key, item is worth 1 point
- TEIs—worth 2 pts, depending on the TEI students may be able to receive 1 pt credit based on scoring notes
 - Drag and Drop (dragging an option into a chart or graphic)
 - Hotspot (clicking on a relevant option in a graphic)
 - Ordering (arranging options in the correct sequence)
 - Inline Choice (select the words to complete a sentence)

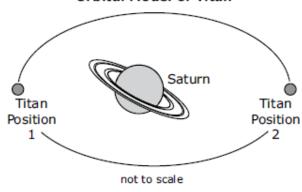
A class visits a planetarium where students watch a presentation that models movements in the solar system. During the presentation, the students see the planet Saturn and one of its moons, Titan.

The students want to learn more about Saturn and Titan. They find models of Saturn's orbit and Titan's orbit. The models are shown.

Orbital Model of Saturn



Orbital Model of Titan



The students also find a table that shows the mass of each object, as shown.

Mass of Three Objects in the Solar System

Object	Mass	Average Distance from the Sun	Average Distance from Saturn	
Saturn	$5.7 \times 10^{26} \text{ kg}$	1.4 × 10 ⁹ km	N/A	
Sun	$2.0 \times 10^{30} \text{ kg}$	N/A	1.4×10^9 km	
Titan	$1.3 \times 10^{23} \text{ kg}$	$1.4 \times 10^{9} \text{ km}$	1.2×10^6 km	

Example G8 Science Stimulus and Item



A student claims that according to the models, Titan only orbits Saturn and Saturn only orbits the Sun.

Which statement **best** evaluates the student's claim?

- A The student is correct because only Saturn is shown orbiting the Sun in the model.
- B The student is correct because all moons orbit planets and Titan is classified as a moon.
- C The student is incorrect because all objects in the solar system orbit the Sun because it has the largest mass.
- D The student is incorrect because Saturn has less mass than the Sun which causes Titan to only orbit the Sun.



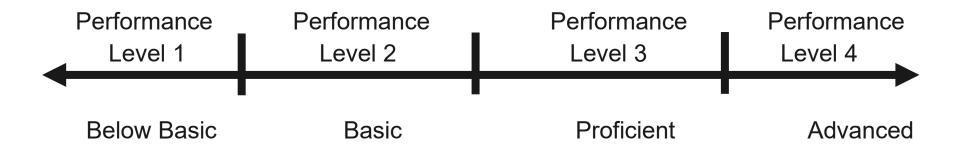


Purpose of standard setting

- Allows Oklahoma State Department of Education (OSDE) to have educator expertise inform performance standards for the OSTP Science Grade 8 assessment:
 - Teachers, administrators, higher-ed and vocational specialists.
- Opportunity for educator input on cut scores used to define performance levels
- To ensure recommendations are consistent with expectations stated in the Performance Level Descriptors

What are performance levels?

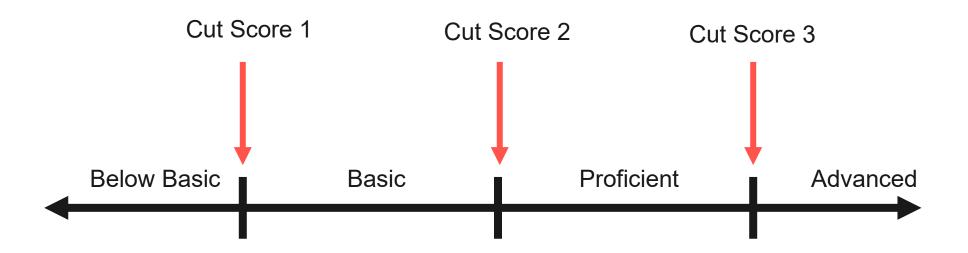
 Performance Levels reflect the specific knowledge and skills that a student should be able to demonstrate based on their performance on the test.





What exactly are we doing here?

- What is a Cut Score?
 - A cut score is the minimum test score a student must earn to be considered at a specific performance level.
 - Three cut scores result in four levels of performance.





What exactly are we doing here?

- How do we consider cut scores?
 - We don't rely on percentages.
 - They are arbitrary and don't consider the content.
 - We use content-based judgment.
 - Content links assessment items, PLDs, and Performance Standards.
 - Content lets you consider OSDE's objective for students.





Performance Level Descriptors (PLDs)

 PLDs describe the specific knowledge and skills that a student at a given performance level should be able to demonstrate.

Policy PLDs

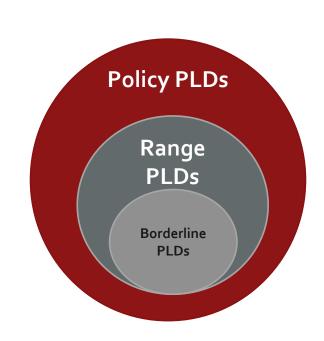
 High-level descriptors that define the knowledge and skill level expectations.

Range PLDs

 Content-specific descriptors that link back to the standards.

Borderline PLDs

 Specifically define what it takes for a student to attain each performance level, just barely.



Language for Science PLDs

Below Basic	Basic	Proficient	Advanced
Students have not demonstrated they can perform at the Basic level.* Students scoring at the Below Basic level should be given comprehensive science instruction.	Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level.* Students scoring at the Basic level typically	Students demonstrate mastery over appropriate grade-level subject matter, and students are ready for the next grade level.* Students scoring at the Proficient level typically	Students demonstrate superior performance on challenging subject matter. * In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the Advanced level typically

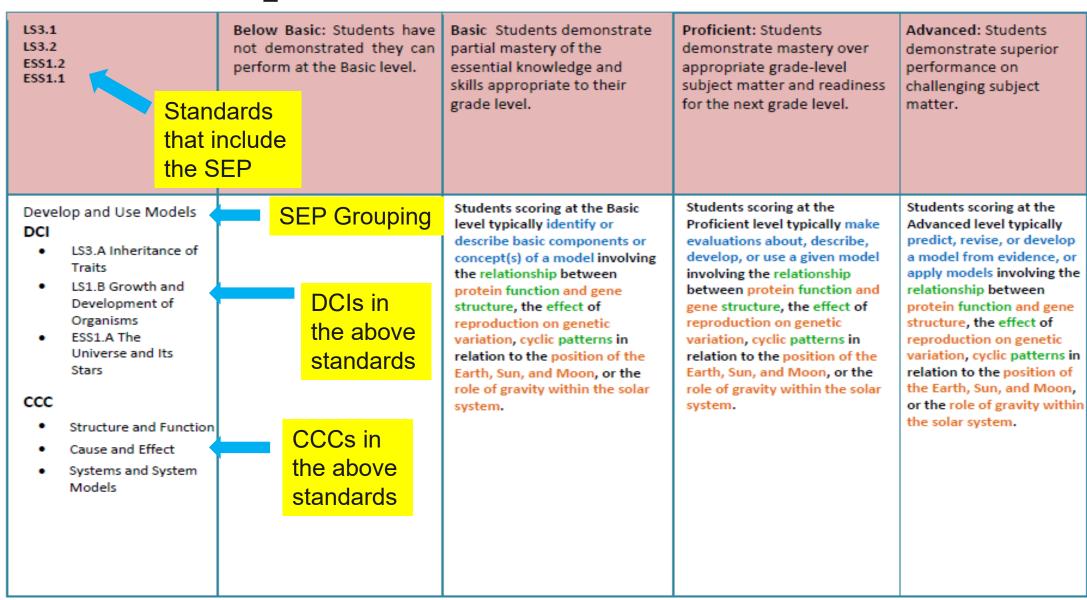
Range PLD Organization

 PLDs are arranged by the Science and Engineering Practices (SEPs).

 Each PLD incorporates the knowledge, skills, and abilities from each PE containing the SEP.

 PLDs are three dimensional and therefore include language from the SEP, DCI (Disciplinary Core Ideas), and CCC (Cross-cutting Concepts).

PLD Example



Borderline PLDs

LS3.1 LS3.2 ESS1.1 ESS1.2	Below Basic: Students have not demonstrated they can perform at the Basic level.	Basic: Students at the borderline of the Basic level can demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level more than 50% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of skills at the Below Basic level rather than the Basic level, students scoring at the Basic level can do the following more than 50% of the time:	Proficient: Students at the borderline of the Proficient level can demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level more than 50% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of skills at the Basic level rather than the Proficient level, students scoring at the Proficient level can do the following more than 50% of the time:	
Develop and Use Models DCI LS3.A Inheritance of Traits LS1.B Growth and Development of Organisms LS3.B Variation of Traits ESS1.A The Universe and Its Stars CCC Structure and Function Cause and Effect Patterns Systems and System Models		identify or describe basic components or concept(s) of a model involving: the relationship between gene structure and protein structure; the effect of reproduction on genetic variation; cyclic patterns in relation to the position of the Earth, Sun, and Moon; the role of gravity within galaxies and the solar system.	develop or use a model to describe: the relationship between gene structure and protein structure; the effect of reproduction on genetic variation; cyclic patterns in relation to the position of the Earth, Sun, and Moon; the role of gravity within galaxies and the solar system.	evaluate, revise, or predict a model involving: the relationship between gene structure and protein structure; the effect of reproduction on genetic variation; cyclic patterns in relation to the position of the Earth, Sun, and Moon; the role of gravity within galaxies and the solar system.



Overview of ID Matching

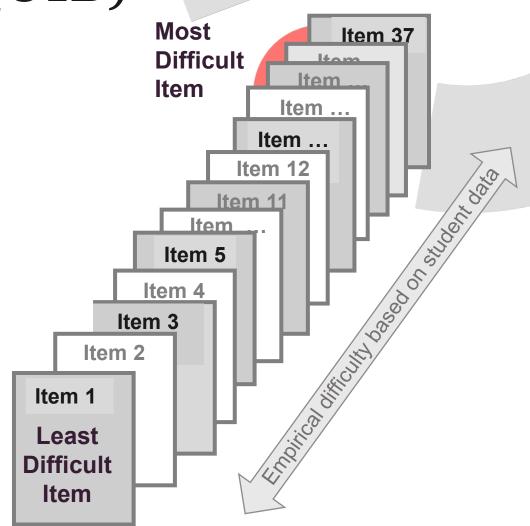
Itemcentered Method Contentbased Judgment

Iterative Process

Ordered Item Booklet* (OIB)

- One item per page
- Easiest item first
- Items ascend by difficulty
- Hardest item last

*The order of the OIB items is based on their empirical difficulties and not the order in which they appear for students during the test.



Overview of ID Matching Method

- c Panelists review each item in the OIB.
 - Identify the knowledge, skills, and abilities (KSAs) required to answer the item correctly.
- **c** For each item, make the following judgment:
 - Match the knowledge, skills, and abilities (KSAs) required by the item with the expectations described in either the Basic, Proficient, or Advanced performance level descriptor (PLD).
- **c** Judgements are made independently

Your Judgmental Task

- For each item: Which PLD most closely matches the knowledge, skills, and abilities (KSAs) required by the item?
 - Use range and borderline PLDs to make a judgment about items in the ordered item booklet (OIB).
 - Consider the Standards described in the PLDs.
 - Consider the knowledge and skills demand of an item.
- You will engage in three rounds of the ID-Matching judgmental task.

Panelists Judgments: 3 rounds

- Panelists will complete three rounds of the ID-Matching judgments.
 - Round 1: Align items to PLDs, discuss items with panelist disagreement
 - Round 2: Introduce benchmark, align items to PLDs, discuss items with panelist disagreement
 - Round 3: Align items to PLDs and write group-level content-based rationales for cut scores if necessary.

Content-based Judgment - Overview



Good

- Based on Content
- Links items to PLDs
- Refers to specific knowledge, skills, and abilities (KSAs)



Bad

- Based on something other than the content
- Too general
- Based on a specific student or class

Content-Based Benchmarks - Overview

- Benchmarks based on Cognia content team judgements
 - Benchmarks will be presented to you at the beginning of Round 2.
 - The benchmark region represents a likely transition between two levels based on those judgments.
- Benchmarks serve as a guide.
 - You may consider the benchmark as you engage in Round 2 judgment.
 - → More detailed information/training to come later today



Break





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OSTP Science Standard Setting – Day 1

Standard Setting – Day 1

Facilitator: David Harrison

Content specialist: Mary-Alice Corliss

Day 1 - Agenda

- **c** Welcome and Introductions Panelists
- **c** Access to the Cognia Standard Setting Toolkit
- **c** Familiarization with PLDs and Content Standards
- **c** Experience the OSTP Science Grade 8 Test
- **c** Lunch
- C Training on the Item-Descriptor (ID) Matching Method
- **c** Modeling and Practice
- **c** Begin Round 1

Welcome & Introductions - Panelists

- Introduce yourself
 - Your name, school district, what you teach
 - A little selected background information
- Show of hands
 - Who's been involved in standard setting before?
 - Which method(s)?

Meeting Norms

- All conversations are confidential
 - What happens here stays here.
 - When you return to your state, please do talk about the process we undertake, but do not disclose the specifics.
 - Do not discuss item specifics outside of the panels or after standard setting.
- Please DO NOT
 - Use personal devices in the room you may step out at any time if needed.
 - Use the Chromebooks for anything other than the standard setting activities

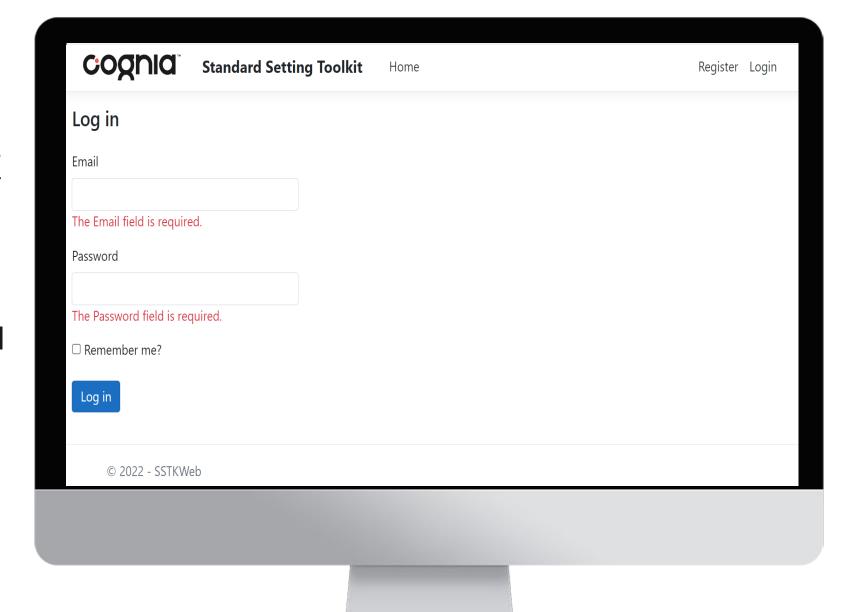




Access to Cognia Standard Setting Toolkit

Cognia Standard Setting Toolkit

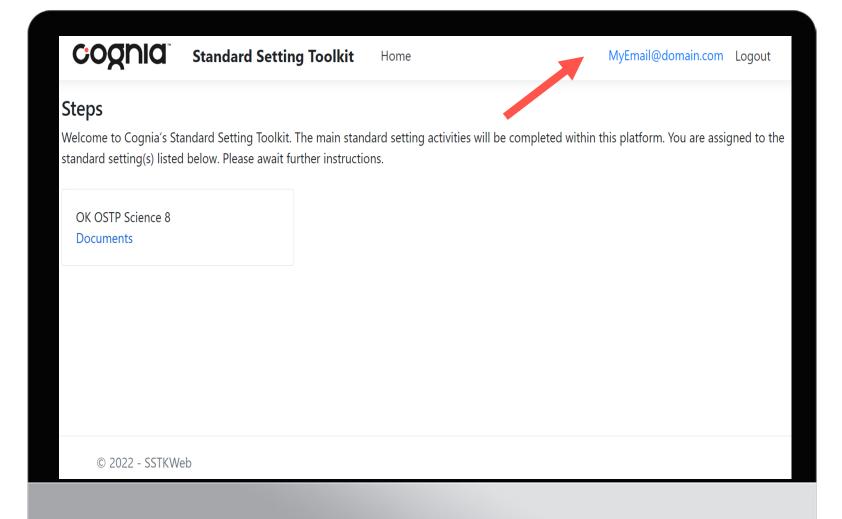
- Use your email and initial password to log on to the platform
- Email: Your own email that was used to register for this meeting
- Password: Everyone has the same initial password





Cognia Toolkit: Change Your Password

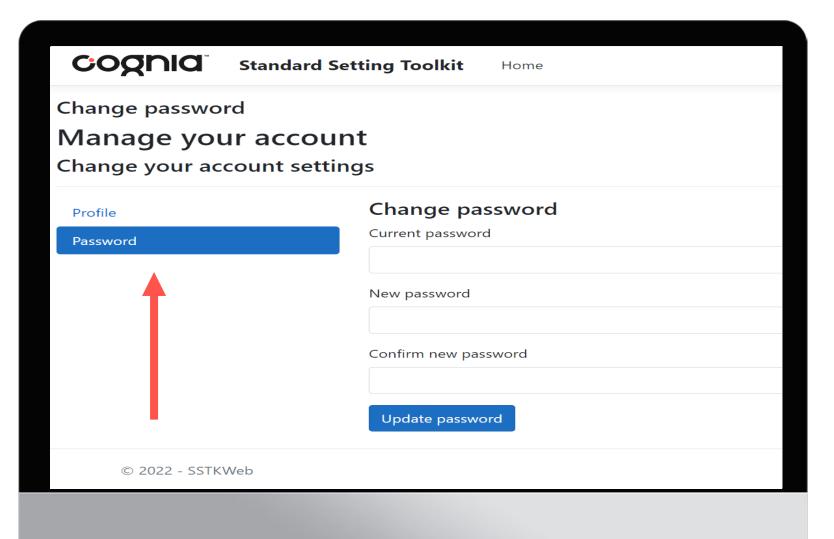
- Click on your email in the top right corner
- This will bring you to a profile page
- Click on the "Password" tab shown to the left





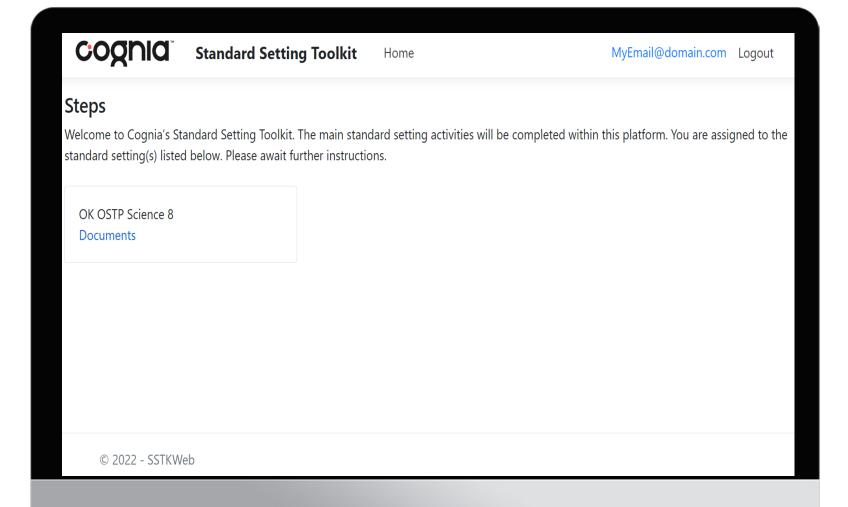
Cognia Toolkit: Change Your Password

- Click on the "Password" tab shown to the left
- Enter the initial password
- Enter New Password:
 - Upper Case Letter
 - Lower Case Letter
 - Number
 - At least 6 Characters
- Click "Update Password"
- Log out and Log back in with your new password.





You Should Now Be Back on the Following Screen:







Familiarization OSTP Science

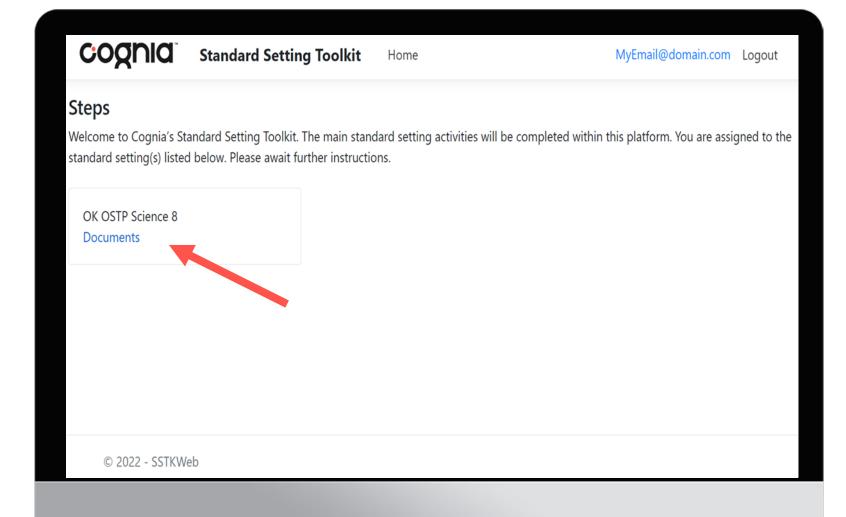
Content Standards and Performance Level Descriptors (PLDs)

Review PLDs

- Brief Background on PLD development
- Obtain an understanding of PLDs in relation to Content Standards.
 - This activity is critical because you will make judgements based on your understanding of PLDs.
 - The PLD documents will be used throughout the workshop to make item-PLD alignment.
- Individually review PLDs within the Cognia Standard Setting Toolkit

Where to find the PLDs and Standards

- In the Toolkit: Blue "documents" link
- Document links for the Standards, Range, and Borderline PLDs appear
- Paper copies of the PLDs also distributed for easy reference





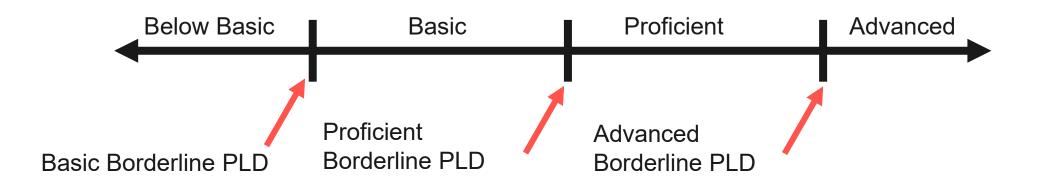
Discuss Range PLDs

- Collegial discussion to clarify questions
- Reach common understanding of what it means to be in each performance level.
 - Start with Basic PLD, then Proficient and Advanced.
 - Focus on how the levels differ in content, cognitive complexity.
 - Discuss Below Basic PLD as an extension of Basic PLD.



Discuss Borderline PLDs

- Borderline PLDs describe the knowledge, skills and abilities (KSAs) expected of students who just barely meet each performance level.
 - Draw similar connection between performance expectations and borderline students who can demonstrate a level of KSAs that is barely pass the entry point for a given performance level



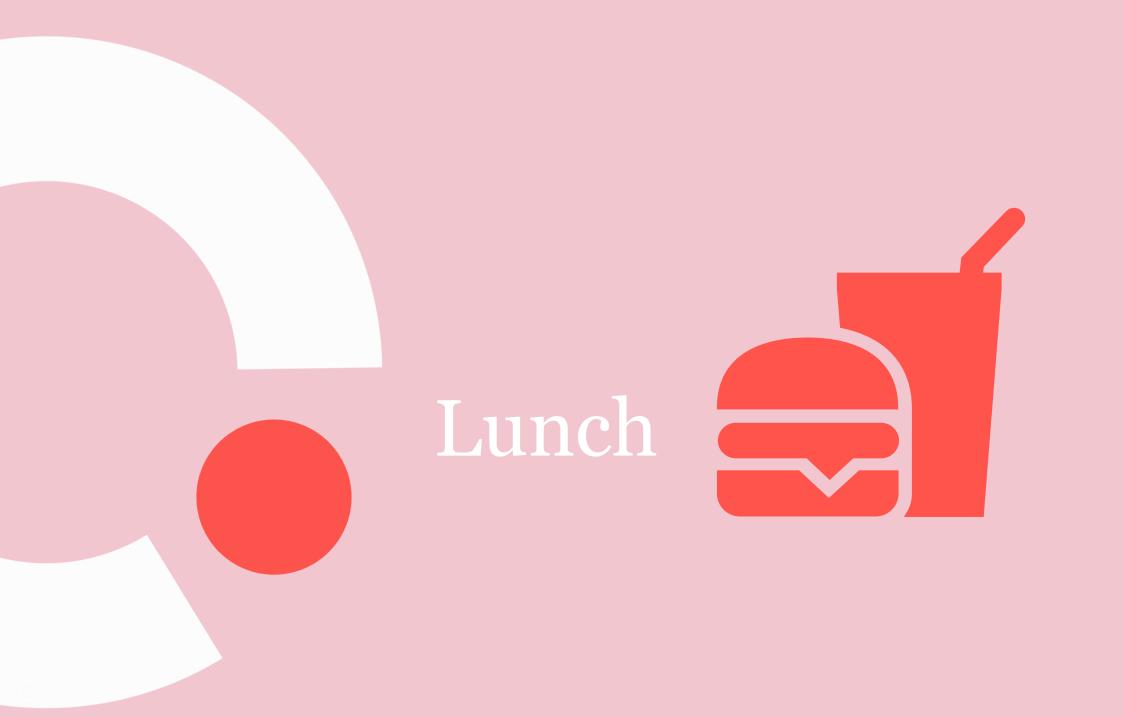




Experience the Test

Experience the Test

- You will experience the OSTP Science Grade 8 test in a format that is similar to student experience.
 - Briefly examine the test items in the testing platform.
 - Try not to linger on any one item; this session is scheduled for a duration of one hour.
- Purpose:
 - Get familiar with the items as they appeared to students.
 - Science items sets appear together in the testing platform but do not appear together in the OIB.
 - You will see most of the items from the testing platform in the OIB.



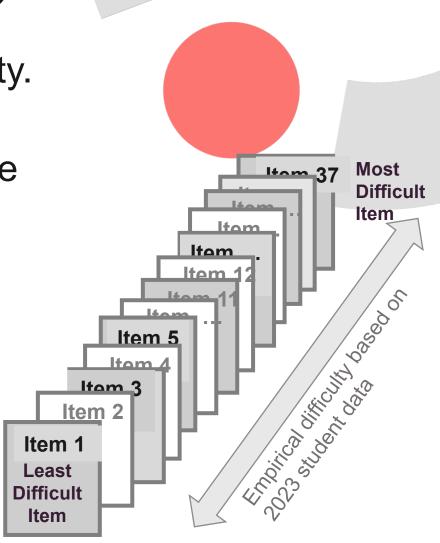


Key Concepts & Process

Ordered Item Booklet (OIB) and Item-Descriptor Matching (ID-Matching)

Ordered Item Booklet (OIB)

- OIB contains test items ordered by difficulty.
- Each OIB page represents an item.
- The difference in difficulty is not exactly the same between each pair of neighboring items.
- Difficulty is based on data from the AY23 OSTP students who took the test
- 2-Point items:
 - Will appear twice in the OIB once for each point



OIB in the Toolkit

Item Review

OV OCTD Calones O Cton 2 Down d 1 Judgements

Hide Documents		Standards Range PLDs Border	rline PLDs	S			
Position	Asset ID	Description	Point Value	Relevant KSAs	Notes	Item Descriptor Match Level	
1	638903	CL03_PS2-1_TEI1	1	6	4		Detail
2	494991	Trilobites and Ammonites	1		4		Detail
3	788060	Sharks and Dolphins_LS4-3_MC2	1		4		Detail
4	300154A	Whale Ancestors	1		<u>a</u>		Detail
5	188317A	Trilobites and Ammonites	1		4		Detail
6	788002	Coconuts_LS1-4_MC1	1			~	Detail

ID Matching: Your Judgmental Task

- Review each item in the OIB
- For each item: Which PLD most closely matches the knowledge, skills, and abilities (KSAs) required by the item?
 - Use range and borderline PLDs to make a judgment about items in the ordered item booklet (OIB).
 - Consider the Standards described in the PLDs.
 - Consider the knowledge and skills demand of an item.
- As you review items, write down brief content-based reasons for your item-PLD matches
- If an item seems to be aligned in the border between two PLDs, select the PLD that most closely matches the KSAs AND write notes about the item to later inform discussions

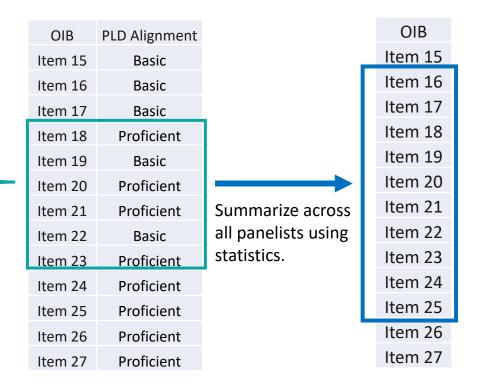
From Judgments to Cut Scores

- 1. You are presented with Items ordered from least to most difficult in the OIB based on student data
- 2. You will proceed through the items in order of difficulty and make the following judgment:

Match knowledge, skills, and abilities required by an item with a Performance Level Descriptor

- 3. As you go, you will
- Write content-based reasons for your judgement
- Note when an item seems to align between two PLDs

4. At the completion of the round, we will feed all the item-PLD matches from every panelist into an analysis to calculate three threshold regions.



Panelist item-PLD
Alignment **Transition Region**

Calculated item-PLD Alignment Threshold Region for the entire group

From Judgments to Cut Scores (Cont.)

1. You are presented with Items ordered from least to most difficult in the OIB based on student data

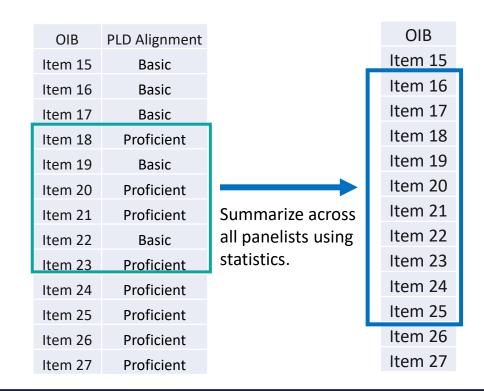
2. You will proceed through the items in order of difficulty and make the following judgment:

Match knowledge, skills, and abilities required by an item with a Performance Level Descriptor

- 3. As you go, you will
- Write content-based reasons for your judgement
- Note when an item seems to align between two PLDs

	7	Z
ha completion	of the	round

4. At the completion of the round, we will feed all the item-PLD matches from every panelist into an analysis to calculate three threshold regions.



- Threshold region: Area where items most likely tip from one PLD level to the next
- We will calculate 3 threshold regions: Basic, Proficient, and Advanced
- After each round the regions will shrink
 - At the conclusion of Round 3, we will pinpoint the specific cut scores (points in the OIB) for the Basic, Proficient, and Advanced cuts.





Modeling and Practice

Preparation for Round 1

Modeling & Practice of the ID-Matching Judgmental Task

- We will look at 3 sample items
- For each item: Answer the following question:
 - What does a student need to know or be able to do to respond to this item?
- Match each item to a PLD
 - Explain how the item response demands align with expectations described in PLDs.

A reminder: Content-based Judgments



Good

- Based on Content
- Links items to PLDs
- Refers to specific knowledge, skills, and abilities (KSAs)



Bad

- Based on something other than the content
- Too general
- Based on a specific student or class

Content-based Judgment - Examples

- A good example:
 - The item require XYZ; XYZ are described in the Proficient PLD and not in the Basic PLD.

- A bad example:
 - The items match the Proficient PLD and do not match the Advanced PLD.

Practice Round Process







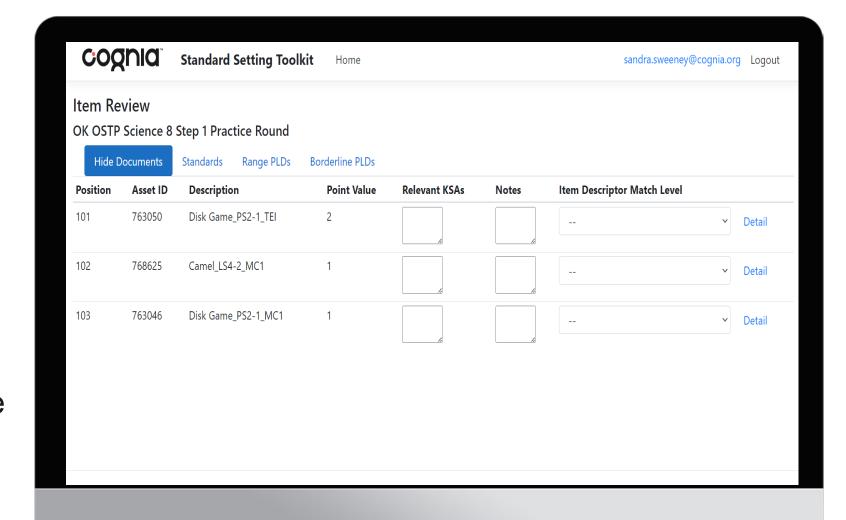
Complete item-PLD alignment task for 3 sample items.

Discuss matches.

Discuss and clarify range and borderline PLDs as needed.

Practice Round

- In the Toolkit you will automatically be redirected to the practice round
- You will see 3 practice items





Practice Round - Review

- Reviewed three sample items and for each one:
 - Reviewed the item
 - Considered the Knowledge, Skills, and Abilities required by the item
 - Matched the item to either the Basic, Proficient, or Advanced PLD
- Borderline considerations
 - Some items seem to be in the border between two adjacent PLDs
 - Select the PLD that most closely matches the item
 - Make notes for yourself next to these items to inform discussions later
- Remaining questions or concerns?

Complete Round 1 Readiness Survey



Round 1 – Readiness Survey

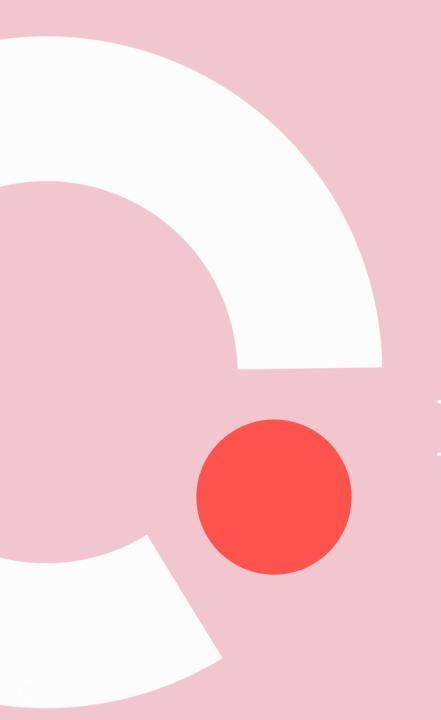
- In a moment, you will be redirected in the Toolkit to a short survey
- Goal: Determine if everyone understands the task at hand and is ready to proceed
- Read each question and answer yes/no
- Once everyone has completed the survey, we will review responses and proceed accordingly.

cogn	Standard Setting Toolkit Home				
Questionnaire OK OSTP Science 8, step 2 - Readiness Round 1					
Position	Question				
1	I understand the goals of the standard setting meeting.				
2	I understand the procedures we are using to set standards.				
3	I understand the differences between the performance levels.				
4	I understand what materials/content I should consider when making judgments.				
5	I understand the item-PLD alignment task and how to make it.				
6	I understand how to use the Cognia Standard Setting Toolkit.				
7	I am ready to proceed with the standard setting process.				
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Round 1 Judgments

- You will now be redirected to Round 1
 - In the toolkit you will see the full list of items
- Reminder: Your task
 - Review each item
 - Consider the KSAs and match the item to one of the PLDs
 - Write content-based reasons in the "KSAs" box as you go
 - Use the "Notes" box for additional notes (for example: when an item seems to be in-between two PLDs)
- Item-PLD alignment is an individual activity please do not discuss your work with your colleagues at this time.







Dismiss



OSTP Science Standard setting – Day 2

Standard Setting – Day 2

Facilitator: David Harrison

Content specialist: Mary-Alice Corliss



- **c** Debrief Day 1
- **c** Complete Round 1 Judgments
- **c** Feedback and Discussion of Round 1 Results
- **c** Complete Round 2 Judgments
- **c** Feedback and Discussion of Round 2 Results
- **c** Complete Round 3 Judgments
- **c** Final Workshop Evaluation Survey

Round 1 Judgments - Continue

- You will now be redirected to Round 1
 - In the toolkit you will see the full list of items
- Reminder: Your task
 - Review each item
 - Consider the KSAs and match the item to one of the PLDs
 - Write content-based reasons in the "KSAs" box as you go
 - Use the "Notes" box for additional notes (for example: when an item seems to be in-between two PLDs)
- Item-PLD alignment is an individual activity please do not discuss your work with your colleagues at this time.





Feedback/Discussion of Round 1 Results



Preparation for Round 2

Introduce Benchmarks

- Content-based information from Cognia content specialists
- Benchmarks serve as additional information for your consideration.
- Will be presented as shaded rows in the OIB
 - Yellow → Basic Region
 - Green → Proficient Region
 - Blue → Advanced Region

Content-Based Benchmarks: Visual Presentation

SSTKWeb Home Admin * sandra.sweeney@cognia.org Logout

Item Review

1. OK OSTP Science 8 Step 5 Round 2 Judgements

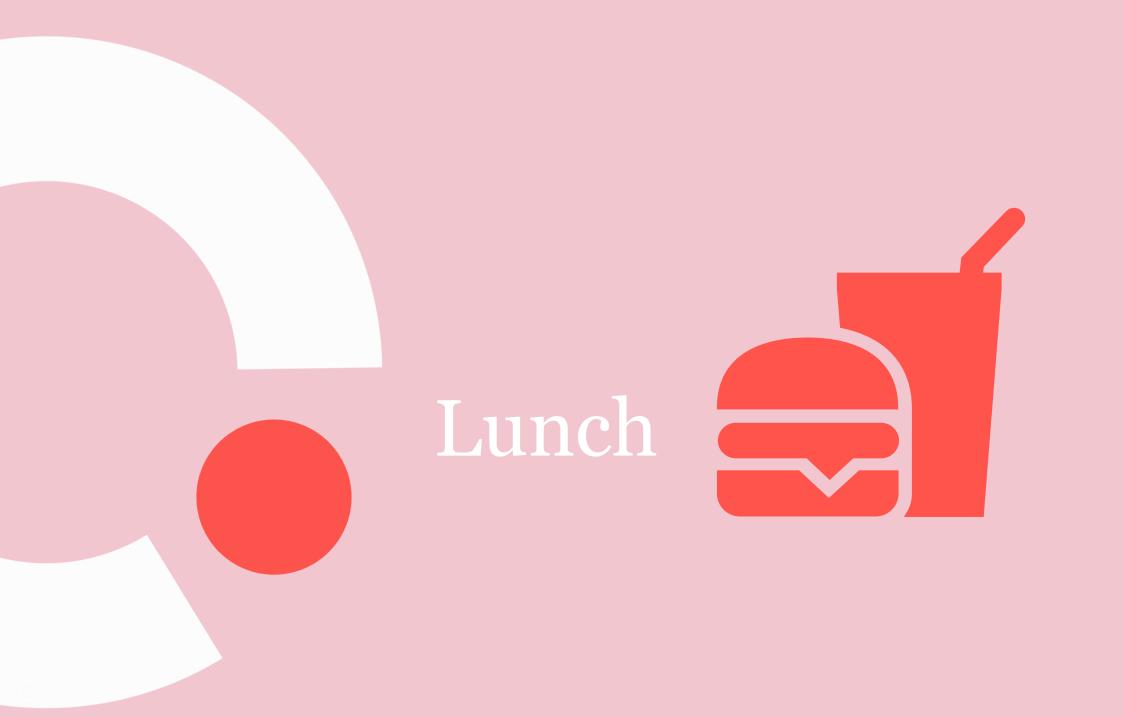
Position	Asset ID	Description	Point Value	Relevant KSAs	Notes	Item Descriptor Match Level
1	638903	CL03_PS2-1_TEI1	1	1	10	V Detail
2	494991	Trilobites and Ammonites	1			V Detail
3	788060	Sharks and Dolphins_LS4-3_MC2	1			V Detail
4	300154A	Whale Ancestors	1	4		V Detail
5	188317A	Trilobites and Ammonites	1			V Detail
6	788002	Coconuts_LS1-4_MC1	1	1		Detail
7	300160A	Whale Ancestors	1	10	10	Detail
8	638901	CL03_PS2-1_MC2	1	10	10	V Detail
9	788146	Eclipse_ESS1-1_B_TEI_2	1	10	[V Detail
10	494991	Trilobites and Ammonites	2			V Detail
11	638899	CL03_PS2-1_MC1	1			V Detail
12	300153A	Whale Ancestors	1			V Detail



Content-Based Benchmarks

- The shaded regions are calculated based on judgments from other content experts like yourselves.
- This region represents a likely transition between where they were aligning content between two adjacent levels.
- The experts making those judgments are Cognia item writers.
- It is vital that we have the input of educators who teach to these standards and population.
- To that end, your results may very well differ from theirs.
- The content-based benchmarks provide additional information for your consideration but is not meant to constrain or persuade your judgements







Complete Round 2 Readiness Survey

Round 2 – Readiness Survey

- In a moment, you will be redirected in the Toolkit to a short survey
- Goal: Determine if everyone understands the task at hand and is ready to proceed
- Read each question and answer yes/no
- Once everyone has completed the survey, we will review responses and proceed accordingly.

cogn	Standard Setting Toolkit Home					
•	Questionnaire OK OSTP Science 8, step 2 - Readiness Round 1					
Position	Question					
1	I understand the goals of the standard setting meeting.					
2	I understand the procedures we are using to set standards.					
3	I understand the differences between the performance levels.					
4	I understand what materials/content I should consider when making judgments.					
5	I understand the item-PLD alignment task and how to make it.					
6	I understand how to use the Cognia Standard Setting Toolkit.					
7	I am ready to proceed with the standard setting process.					
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Round 2 Judgments

- You will now be redirected to Round 2
 - In the toolkit you will see the same full list of items with your work from round 1 (notes and judgments)
 - You will also see the shaded regions for the content-based benchmarks
- Reminder: Your task
 - Review items in the benchmark regions and items you were previously unsure about
 - Consider the KSAs and decide to keep or change your initial PLD Match
- Item-PLD alignment is an individual activity please do not discuss your work with your colleagues at this time.



cognia

Feedback/Discussion of Round 2 Results

Complete Round 3 Readiness Survey



Round 3 – Readiness Survey

- In a moment, you will be redirected in the Toolkit to a short survey
- Goal: Determine if everyone understands the task at hand and is ready to proceed
- Read each question and answer yes/no
- Once everyone has completed the survey, we will review responses and proceed accordingly.

cogn	Standard Setting Toolkit Home					
•	Questionnaire OK OSTP Science 8, step 2 - Readiness Round 1					
Position	Question					
1	I understand the goals of the standard setting meeting.					
2	I understand the procedures we are using to set standards.					
3	I understand the differences between the performance levels.					
4	I understand what materials/content I should consider when making judgments.					
5	I understand the item-PLD alignment task and how to make it.					
6	I understand how to use the Cognia Standard Setting Toolkit.					
7	I am ready to proceed with the standard setting process.					
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Round 3 Judgments

- You will now be redirected to Round 3
 - In the toolkit you will see the same full list of items with your work from round 2 (notes and judgments)
 - You will also see the shaded regions for the content-based benchmarks
- Reminder: Your task
 - Review items in the benchmark regions and items you were previously unsure about
 - Consider the KSAs and decide to keep or change your initial PLD Match
- Item-PLD alignment is an individual activity please do not discuss your work with your colleagues at this time.

Complete workshop Evaluation Survey



Dismiss



APPENDIX—D MEETING AGENDA



Oklahoma School Testing Program **Standard Setting Meeting**

Science Grade 8

Meeting Agenda

Day 1: June 22. Thursday

Time	Activity/Session
08:00 - 09:00	Registration and Breakfast
09:00 - 09:45	Orientation: Introductions and overview: Welcome, workshop goals, OSTP Science exam; standard setting, the ID Matching method
09:45 - 11:15	Review range and borderline PLDs, content standards (brief)
11:15 – 12:00	Experience the Test
12:00 - 01:00	Lunch
01:00 - 02:30	Training on the ID Matching method; Practice: Facilitator models cognitive-judgment task; Panelist practice and discussion; Prepare for round 1: Complete readiness survey
02:30 - 04:00	Begin Round 1
04:00	Adjourn for the day.

Day 2: June 23, Friday

Time	Activity/Session
08:00 - 08:45	Check-in and Continental breakfast
08:45 - 10:00	Complete Round 1 Judgments.
10:00 – 10:15	Break and Analysis of Round 1 data
10:15 – 11:15	Feedback and discussion of round 1 results.
11:15 – 12:00	Prepare for Round 2: Introduce benchmarks and complete readiness survey
12:00 – 1:00	Lunch
01:00 - 02:00	Complete round 2 Judgments
02:00 - 02:45	Feedback and discussion of round 2 results. Prepare for round 3: complete readiness survey
02:45 - 03:00	Break
03:00 - 03:30	Complete round 3
03:30 - 04:00	Review final results; Impact data; Complete workshop evaluation; Dismissal



APPENDIX—E NONDISCLOSURE AGREEMENT





Nondisclosure Agreement

Oklahoma State Testing Program Science Standard Setting June 22-23, 2023

The undersigned is an employee, contractor, assessment committee member, or person otherwise authorized to view secure state assessment materials. The undersigned hereby agrees to be bound to the terms of this agreement restricting the disclosure of said materials.

It is essential to the integrity of this item development project and testing program that all test items remain secure. To maintain this security, only authorized persons are permitted to view the test questions. With the exception of materials released by the Oklahoma State Department of Education for informational purposes, all test questions (draft or final) in hardcopy or electronic format and associated materials must be regarded as secure documents. As a result, such materials may not be reproduced, electronically transmitted, discussed, used in classroom instruction, or in any way released or distributed to unauthorized persons. All materials including items and item drafts must be returned at the end of the meeting.

I understand that I am responsible for test materials security. By breaching test materials security as described here, I am breaching professional testing ethics and may be subject to additional penalties under law.

Name:	_
Signature:	
Date:	

APPENDIX—F PERFORMANCE LEVEL DESCRIPTORS





Oklahoma Grade 8 Science Performance Level Descriptor Tables

Policy PLDs

Policy PLDs define the knowledge and skill level expectations for the Oklahoma Academic Standards for Science.

Advanced

Students demonstrate superior performance on challenging subject matter.

Proficient

Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level.

Basic

Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level.

Below Basic

Students have not performed at least at the Basic level. Students scoring at the Below Basic level should be given comprehensive science instruction.

Borderline PLDs

Borderline PLDs describe the knowledge and skills that students within each proficiency level are just barely expected to be able to demonstrate. In line with the Oklahoma Academic Standards for Science, the statements combine the subject matter for science that students are expected to demonstrate.

Advanced

Students at the borderline of the **Advanced** level can demonstrate superior performance on challenging subject matter more than 67% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of knowledge and skills at the Proficient level rather than the Advanced level, students scoring at the **Advanced** level can do the following more than 67% of the time:

- evaluate, revise, or predict a model involving: the relationship between gene structure and protein structure; the effect of reproduction on genetic variation; cyclic patterns in relation to the position of the Earth, Sun, and Moon; the role of gravity within galaxies and the solar system.
- evaluate or modify investigations about: stability and change of forces and motion; the effect of fields on force interactions.
- analyze, infer, relate, or identify complex relationships within a system to construct or evaluate explanations for: the
 effect of environmental and genetic factors on growth; the common ancestry of organisms based on patterns in
 anatomy or the chronological order of fossils; the effect of trait variation in populations on natural selection.
- modify the solution to a problem with new information involving energy transfer, forces, and motions in systems where objects collide.
- evaluate, develop, or apply reasoning to support or refute new arguments or counterarguments about how: the structures
 of plants and behaviors of animals affect the likelihood of successful reproduction; gravitational interactions depend on
 the masses of interacting objects in a system.
- revise questions about data based on new evidence to determine factors that affect the strength of electric and magnetic forces.
- analyze mathematical representations to: describe patterns in wave models to show the relationship between amplitude and energy; explain how natural selection affects the distribution of traits in populations.
- evaluate data to: compare patterns of embryological similarities between species; identify how patterns in the fossil record indicate the history of life on Earth; determine the scale properties of objects in the solar system.
- compare competing claims or scientific explanations to communicate how: humans affect trait inheritance through
 artificial selection; the structure and function of digital signals contributes to those signals reliably transmitting
 information.

Proficient

Students at the borderline of the **Proficient** level can demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level more than 67% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of skills at the Basic level rather than the Proficient level, students scoring at the **Proficient** level can do the following more than 67% of the time:

- develop or use a model to describe: the relationship between gene structure and protein structure; the effect of
 reproduction on genetic variation; cyclic patterns in relation to the position of the Earth, Sun, and Moon; the role of
 gravity within galaxies and the solar system.
- identify, describe, or explain: a plan to investigate stability and change of forces and motion; how to conduct and evaluate investigations about the effect of fields on force interactions.
- identify, describe, or compare evidence to construct explanations for: the effect of environmental and genetic factors on growth; the common ancestry of organisms based on patterns in anatomy or the chronological order of fossils; the effect of trait variation in populations on natural selection.
- design or revise a solution to a problem involving energy transfer, forces, and motions in systems where objects collide.
- use reasoning to show that evidence supports or refutes arguments about how: the structures of plants and behaviors
 of animals affect the likelihood of successful reproduction; gravitational interactions depend on the masses of
 interacting objects in a system.
- use reasoning to develop questions about data to determine factors that affect the strength of electric and magnetic forces.
- use mathematical representations to: describe patterns in wave models to show the relationship between amplitude and energy; explain how natural selection affects the distribution of traits in populations.
- analyze and interpret data to: compare patterns of embryological similarities between species; identify how patterns
 in the fossil record indicate the history of life on Earth; determine the scale properties of objects in the solar system.
- gather, use, synthesize, or integrate information to communicate and support claims about how: humans affect trait
 inheritance through artificial selection; the structure and function of digital signals contributes to those signals
 reliably transmitting information.

Basic

Students at the borderline of the **Basic** level can demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level more than 50% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of skills at the Below Basic level rather than the Basic level, students scoring at the **Basic** level can do the following more than 50% of the time:

- identify or describe basic components or concept(s) of a model involving: the relationship between gene structure and protein structure; the effect of reproduction on genetic variation; cyclic patterns in relation to the position of the Earth, Sun, and Moon; the role of gravity within galaxies and the solar system.
- identify or describe basic steps or processes within investigations about: stability and change of forces and motion;
 the effect of fields on force interactions.
- identify or describe basic relationships shown in evidence of: the effect of environmental and genetic factors on growth; the common ancestry of organisms based on patterns in anatomy or the chronological order of fossils; the effect of trait variation in populations on natural selection.
- identify or describe basic relationships in a design solution involving energy transfer, forces, and motions in systems where objects collide.
- identify evidence that supports arguments about how: the structures of plants and behaviors of animals affect the likelihood of successful reproduction; gravitational interactions depend on the masses of interacting objects in a system.
- determine factors that affect the strength of electric and magnetic forces.
- identify components of mathematical representations to: describe patterns in wave models to show the relationship between amplitude and energy; explain how natural selection affects the distribution of traits in populations.
- use data to: recognize patterns of embryological similarities between species; identify how patterns in the fossil record indicate the history of life on Earth; determine the scale properties of objects in the solar system.
- describe information to support claims about how: humans affect trait inheritance through artificial selection;
 the structure and function of digital signals contributes to those signals reliably transmitting information.

Below Basic

Students scoring **Below Basic** have not demonstrated they can perform at the Basic level. Students scoring at the Below Basic level should be given comprehensive science instruction. Students scoring at the Basic level typically:

- identify or describe basic components or concept(s) of a model involving: the relationship between gene structure and protein structure; the effect of reproduction on genetic variation; cyclic patterns in relation to the position of the Earth, Sun, and Moon; the role of gravity within galaxies and the solar system.
- identify or describe basic steps or processes within investigations about: stability and change of forces and motion;
 the effect of fields on force interactions.
- identify or describe basic relationships shown in evidence of: the effect of environmental and genetic factors on growth; the common ancestry of organisms based on patterns in anatomy or the chronological order of fossils; the effect of trait variation in populations on natural selection.
- identify or describe basic relationships in a design solution involving energy transfer, forces, and motions in systems where objects collide.
- identify evidence that supports arguments about how: the structures of plants and behaviors of animals affect the likelihood of successful reproduction; gravitational interactions depend on the masses of interacting objects in a system.
- determine factors that affect the strength of electric and magnetic forces.
- identify components of mathematical representations to: describe patterns in wave models to show the relationship between amplitude and energy; explain how natural selection affects the distribution of traits in populations.
- use data to: recognize patterns of embryological similarities between species; identify how patterns in the fossil record indicate the history of life on Earth; determine the scale properties of objects in the solar system.
- describe information to support claims about how: humans affect trait inheritance through artificial selection;
 the structure and function of digital signals contributes to those signals reliably transmitting information.

LS3.1 LS3.2 ESS1.1 ESS1.2	Below Basic : Students have not demonstrated they can perform at the Basic level.	Basic: Students at the borderline of the Basic level can demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level more than 50% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of skills at the Below Basic level rather than the Basic level, students scoring at the Basic level can do the following more than 50% of the time:	Proficient: Students at the borderline of the Proficient level can demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level more than 67% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of skills at the Basic level rather than the Proficient level, students scoring at the Proficient level can do the following more than 67% of the time:	Advanced: Students at the borderline of the Advanced level can demonstrate superior performance on challenging subject matter more than 67% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of knowledge and skills at the Proficient level rather than the Advanced level, students scoring at the Advanced level can do the following more than 67% of the time:
Develop and Use Models DCI LS3.A Inheritance of Traits LS1.B Growth and Development of Organisms LS3.B Variation of Traits ESS1.A The Universe and Its Stars CCC Structure and Function Cause and Effect Patterns Systems and System Models		identify or describe basic components or concept(s) of a model involving: the relationship between gene structure and protein structure; the effect of reproduction on genetic variation; cyclic patterns in relation to the position of the Earth, Sun, and Moon; the role of gravity within galaxies and the solar system.	develop or use a model to describe: the relationship between gene structure and protein structure; the effect of reproduction on genetic variation; cyclic patterns in relation to the position of the Earth, Sun, and Moon; the role of gravity within galaxies and the solar system.	evaluate, revise, or predict a model involving: the relationship between gene structure and protein structure; the effect of reproduction on genetic variation; cyclic patterns in relation to the position of the Earth, Sun, and Moon; the role of gravity within galaxies and the solar system.

PS2.2 PS2.5	Below Basic: Students have not demonstrated they can perform at the Basic level.	Basic: Students at the borderline of the Basic level can demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level more than 50% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of skills at the Below Basic level rather than the Basic level, students scoring at the Basic level can do the following more than 50% of the time:	Proficient: Students at the borderline of the Proficient level can demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level more than 67% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of skills at the Basic level rather than the Proficient level, students scoring at the Proficient level can do the following more than 67% of the time:	Advanced: Students at the borderline of the Advanced level can demonstrate superior performance on challenging subject matter more than 67% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of knowledge and skills at the Proficient level rather than the Advanced level, students scoring at the Advanced level can do the following more than 67% of the time:
Planning and Carrying Out Investigations DCI PS2.A Forces and Motion PS2.B Types of Interactions CCC Cause and Effect Stability and Change		identify or describe basic steps or processes within investigations about: stability and change of forces and motion; the effect of fields on force interactions.	identify, describe, or explain: a plan to investigate stability and change of forces and motion; how to conduct and evaluate investigations about the effect of fields on force interactions.	evaluate or modify investigations about: stability and change of forces and motion; the effect of fields on force interactions.

LS1.5 LS4.2 LS4.4	Below Basic: Students have not demonstrated they can perform at the Basic level.	partial mastery of the essential knowledge and skills appropriate to their grade level more than 50% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of skills at the Below Basic level rather than the Basic level, students scoring at the Basic level can do the following more than 50% of the time:	Proficient: Students at the borderline of the Proficient level can demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level more than 67% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of skills at the Basic level rather than the Proficient level, students scoring at the Proficient level can do the	Advanced: Students at the borderline of the Advanced level can demonstrate superior performance on challenging subject matter more than 67% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of knowledge and skills at the Proficient level rather than the Advanced level, students scoring at the Advanced level can do the following more than 67% of the time:
Constructing Explanations DCI LS1.B Growth and Development of Organisms LS4.A Evidence of Common Ancestry and Diversity LS4.B Natural Selection CCC Cause and Effect Patterns		identify or describe basic relationships shown in evidence of: the effect of environmental and genetic factors on growth; the common ancestry of organisms based on patterns in anatomy or the chronological order of fossils; the effect of trait variation in populations on natural selection.	identify, describe, or compare evidence to construct explanations for: the effect of environmental and genetic factors on growth; the common ancestry of organisms based on patterns in anatomy or the chronological order of fossils; the effect of trait variation in populations on natural selection.	analyze, infer, relate, or identify complex relationships within a system to construct or evaluate explanations for: the effect of environmental and genetic factors on growth; the common ancestry of organisms based on patterns in anatomy or the chronological order of fossils; the effect of trait variation in populations on natural selection.

PS2.1	Below Basic: Students have not demonstrated they can perform at the Basic level.	Basic: Students at the borderline of the Basic level can demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level more than 50% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of skills at the Below Basic level rather than the Basic level, students scoring at the Basic level can do the following more than 50% of the time:	Proficient: Students at the borderline of the Proficient level can demonstrate mastery over appropriate grade-leve subject matter and readiness for the next grade level more than 67% of the time or the assessment. While these students sometimes may only demonstrate understanding and application of skills at the Basic level rather than the Proficient level, students scoring at the Proficient level can do the following more than 67% of the time:	of the Advanced level can demonstrate superior performance on challenging subject matter more than 67% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of knowledge and skills at the Proficient level rather than the Advanced level, students scoring at the
Designing Solutions DCI PS2.A Forces and Motion CCC Systems and System Models		identify or describe basic relationships in a design solution involving energy transfer, forces, and motions in systems where objects collide.	design or revise a solution to a problem involving energy transfer, forces, and motions in systems where objects collide.	modify the solution to a problem with new information involving energy transfer, forces, and motions in systems where objects collide.

LS1.4 PS2.4	Below Basic: Students have not demonstrated they can perform at the Basic level.	Basic: Students at the borderline of the Basic level can demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level more than 50% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of skills at the Below Basic level rather than the Basic level, students scoring at the Basic level can do the following more than 50% of the time:	the Basic level rather than the Proficient level, students scoring at the Proficient	Advanced: Students at the borderline of the Advanced level can demonstrate superior performance on challenging subject matter more than 67% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of knowledge and skills at the Proficient level rather than the Advanced level, students scoring at the Advanced level can do the following more than 67% of the time:
Engaging in Argument from Evidence DCI LS1.B Growth and Development of Organisms PS2.B Types of Interactions CCC Cause of Effect Systems and System Models		identify evidence that supports arguments about how: the structures of plants and behaviors of animals affect the likelihood of successful reproduction; gravitational interactions depend on the masses of interacting objects in a system.	use reasoning to show that evidence supports or refutes arguments about how: the structures of plants and behaviors of animals affect the likelihood of successful reproduction; gravitational interactions depend on the masses of interacting objects in a system.	evaluate, develop, or apply reasoning to support or refute new arguments or counterarguments about how: the structures of plants and behaviors of animals affect the likelihood of successful reproduction; gravitational interactions depend on the masses of interacting objects in a system.

PS2.3	Below Basic: Students have not demonstrated they can perform at the Basic level.	Basic: Students at the borderline of the Basic level can demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level more than 50% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of skills at the Below Basic level rather than the Basic level, students scoring at the Basic level can do the following more than 50% of the time:	Proficient: Students at the borderline of the Proficient level can demonstrate mastery over appropriate grade-leve subject matter and readiness for the next grade level more than 67% of the time or the assessment. While these students sometimes may only demonstrate understanding and application of skills at the Basic level rather than the Proficient level, students scoring at the Proficient level can do the following more than 67% of the time:	of the Advanced level can demonstrate superior performance on challenging subject matter more than 67% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of knowledge and skills at the Proficient level rather than the
Asking Questions DCI PS2.B Types of Interactions CCC Cause and Effect		determine factors that affect the strength of electric and magnetic forces.	use reasoning to develop questions about data to determine factors that affect the strength of electric and magnetic forces.	revise questions about data based on new evidence to determine factors that affect the strength of electric and magnetic forces.

PS4.1 LS4.6	Below Basic: Students have not demonstrated they can perform at the Basic level.	Basic: Students at the borderline of the Basic level can demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level more than 50% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of skills at the Below Basic level rather than the Basic level, students scoring at the Basic level can do the following more than 50% of the time:	Proficient: Students at the borderline of the Proficient level can demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level more than 67% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of skills at the Basic level rather than the Proficient level, students scoring at the Proficient level can do the following more than 67% of the time:	of the Advanced level can demonstrate superior performance on challenging subject matter more than 67% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of knowledge and skills at the Proficient level rather than the
Using Mathematics and Computational Thinking DCI		identify components of mathematical representations to: describe patterns in wave models to show the relationship between amplitude and energy; explain how natural selection affects the distribution of traits in populations.	use mathematical representations to: describe patterns in wave models to show the relationship between amplitude and energy; explain how natural selection affects the distribution of traits in populations.	analyze mathematical representations to: describe patterns in wave models to show the relationship between amplitude and energy; explain how natural selection affects the distribution of traits in populations.

LS4.3 LS4.1 ESS1.3	Below Basic: Students have not demonstrated they can perform at the Basic level.	Basic: Students at the borderline of the Basic level can demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level more than 50% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of skills at the Below Basic level rather than the Basic level, students scoring at the Basic level can do the following more than 50% of the time:	Proficient: Students at the borderline of the Proficient level can demonstrate master, over appropriate grade-level subject matter and readiness for the next grade level more than 67% of the time on the assessment While these students sometimes may only demonstrate understanding and application of skills at the Basic level rather than the Proficient level, students scoring at the Proficient level can do the following more than 67% of the time:	of the Advanced level can demonstrate superior performance on challenging subject matter more than 67% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of knowledge and skills at the Proficient level rather than the
Analyzing and Interpreting Data DCI LS4.A Evidence of Common Ancestry and Diversity ESS1.B Earth and the Solar System ETS1: Interdependence of Science, Engineering, and Technology CCC Patterns Scale, Proportion, and Quantity		use data to: recognize patterns of embryological similarities between species; identify how patterns in the fossil record indicate the history of life on Earth; determine the scale properties of objects in the solar system.	analyze and interpret data to: compare patterns of embryological similarities between species; identify how patterns in the fossil record indicate the history of life on Earth; determine the scale properties of objects in the solar system.	evaluate data to: compare patterns of embryological similarities between species; identify how patterns in the fossil record indicate the history of life on Earth; determine the scale properties of objects in the solar system.

LS4.5 PS4.3	Below Basic: Students have not demonstrated they can perform at the Basic level.	Basic: Students at the borderline of the Basic level can demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level more than 50% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of skills at the Below Basic level rather than the Basic level, students scoring at the Basic level can do the following more than 50% of the time:	Proficient: Students at the borderline of the Proficient level can demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level more than 67% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of skills at the Basic level rather than the Proficient level, students scoring at the Proficient level can do the following more than 67% of the time:	Advanced: Students at the borderline of the Advanced level can demonstrate superior performance on challenging subject matter more than 67% of the time on the assessment. While these students sometimes may only demonstrate understanding and application of knowledge and skills at the Proficient level rather than the Advanced level, students scoring at the Advanced level can do the following more than 67% of the time:
Obtaining, Evaluating, and Communication of Evidence DCI LS4.B Natural Selection ETS2.A Interdependence of Science, Engineering, and Technology PS4.C Information Technologies and Instrumentation CCC Structure and Function Cause and Effect		describe information to support claims about how: humans affect trait inheritance through artificial selection; the structure and function of digital signals contributes to those signals reliably transmitting information.	gather, use, synthesize, or integrate information to communicate and support claims about how: humans affect trait inheritance through artificial selection; the structure and function of digital signals contributes to those signals reliably transmitting information.	compare competing claims or scientific explanations to communicate how: humans affect trait inheritance through artificial selection; the structure and function of digital signals contributes to those signals reliably transmitting information.

APPENDIX G READINESS SURVEYS

Readiness Surveys

Round 1 Readiness Survey

Survey Questions	Response Options	
Survey Questions	Yes	No
I understand the goals of the standard setting meeting.		
I understand the procedures we are using to set standards.		
I understand the differences between the performance levels.		
I understand what materials/content I should consider when making		
judgments.		
I understand the item-PLD alignment task and how to make it.		
I understand how to use the Cognia Standard Setting Toolkit.		•
I am ready to proceed with the standard setting process.		•

Round 2 Readiness Survey

Survey Overtions	Response Options	
Survey Questions		No
I understand the round 1 feedback.		
I understand that I should use the round 1 feedback as information, not		
persuasion, for me to consider as I make my judgements in round 2.		
I understand what the content-based benchmarks represent.		
I understand that I can use the content-based benchmarks as additional		
information, not persuasion, for me to consider as I make my judgements		
in round 2.		
I understand that I should make my own judgments about matching items		
to Performance Level Descriptors (PLDs), with consideration of the		
insights of my colleagues, but independently of the views and opinions of		
my colleagues.		
I am ready to proceed with Round 2 of the standard setting process.		

Round 3 Readiness Survey

Survey Questions	Response Options	
Survey Questions		No
I understand the round 2 feedback.		
I understand that I should use the round 2 feedback as information, not		
persuasion, for me to consider as I make my judgements in round 3.		
I understand that I should make my own judgments about matching items		
to Performance Level Descriptors (PLDs), with consideration of the		
insights of my colleagues, but independently of the views and opinions of		
my colleagues.		
I am ready to proceed with Round 3 of the standard setting process.		

APPENDIX H ROUND RESULTS

OK OSTP Science Grade 8 Standard Setting Round Results

Figure 1. Round 1 - Frequency of Panelist Judgments across Basic, Proficient, and Advanced Levels

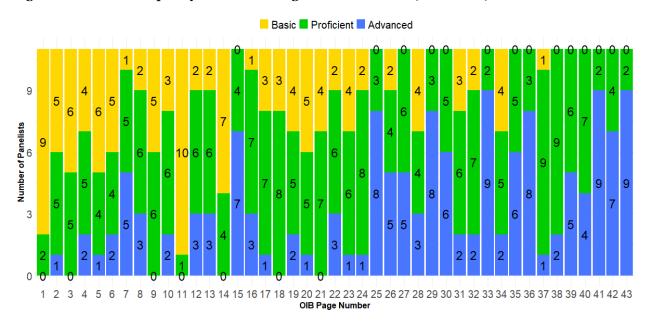
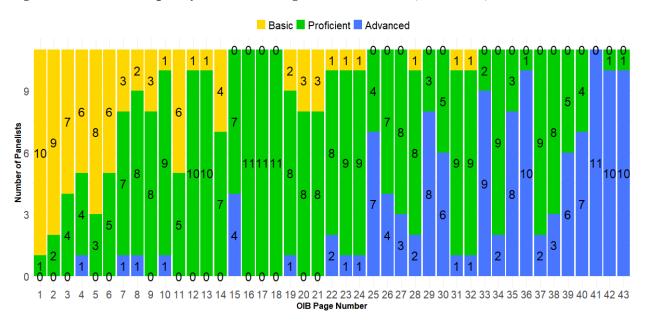
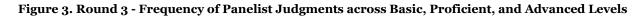
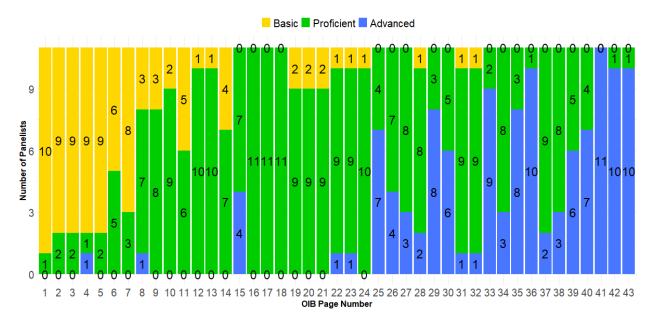


Figure 2. Round 2 - Frequency of Panelist Judgments across Basic, Proficient, and Advanced Levels







APPENDIX—I WORKSHOP EVALUATION SURVEY

OK OSTP Science Grade 8 Standard Setting

Final Workshop Evaluation

Questions 1 – 20 were selected response items on the following Likert-type scale: Strongly Disagree, disagree, undecided, agree, strongly agree, or not applicable.

- 1. I understood the goals of the standard setting workshop.
- 2. I understood the procedures we followed to set standards.
- 3. I understood that my role was to make content-based judgements about the alignment between the items and the performance level descriptors.
- 4. The workshop procedures made sense to me, and I learned how to apply them efficiently.
- 5. I am confident about my understanding of this standard setting process.
- 6. The workshop facilitator explained things clearly to us.
- 7. The workshop facilitator encouraged us to raise questions and put our understandings into our own words.
- 8. The workshop facilitator provided clear and helpful responses to my questions and other requests for clarification.
- 9. The workshop facilitator took steps to help the standard setting process run smoothly.
- 10. Sufficient time was allotted for training and practice on the standard setting concepts, tasks, and procedures.
- 11. I understood the progressions in expectations across the Basic, Proficient, and Advanced performance levels as defined by the Performance Level Descriptors.
- 12. I became sufficiently familiar with the assessment to make item-PLD judgements, based on responding to items on the test and considering the knowledge, skills, and abilities required by the items.
- 13. I understood the ID Matching task, including considering the knowledge, skills, and abilities required by each item, and matching those item response demands to PLDs.
- 14. I understood how to use the standard setting tool to record my responses regarding skills and notes as instructed.
- 15. I understood how to use the standard setting tool to record my item-PLD alignment judgements.
- 16. I understood how to write content-based rationales for my item-PLD alignment judgements.
- 17. I understood that the cut scores were calculated based on all item-PLD alignment judgements from all panelists.
- 18. I understood how to use the feedback after round 1, in preparation for round 2.
- 19. I understood what the content-based benchmarks, introduced in round 2, represented.
- 20. I understood how to consider the content-based benchmarks in rounds 2 and 3, as I made my item-PLD alignment judgements.

Question 21 – 23 were open response questions.

- 21. Please indicate any parts of the standard setting training and process that we should improve.
- 22. Please indicate any parts of the standard setting training and process that you felt worked really well
- 23. Please note any other feedback you would like us to consider.

APPENDIX—J WORKSHOP EVALUATION RESULTS

OK OSTP Science Grade 8 Standard Setting Workshop Evaluation Results

Table 1. Frequency of Evaluation Responses (N = 11)

Question Text	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Not Applicable
I understood the goals of the standard setting workshop.				2	9	
I understood the procedures we followed to set standards.				2	9	
3. I understood that my role was to make content-based judgements about the alignment between the items and the performance level descriptors.				3	8	
The workshop procedures made sense to me, and I learned how to apply them efficiently.			1	4	6	
5. I am confident about my understanding of this standard setting process.				4	7	
6. The workshop facilitator explained things clearly to us.		1	1	2	7	
7. The workshop facilitator encouraged us to raise questions and put our understandings into our own words.				4	7	
The workshop facilitator provided clear and helpful responses to my questions and other requests for clarification.			1	4	6	
9. The workshop facilitator took steps to help the standard setting process run smoothly.			2	3	6	
10. Sufficient time was allotted for training and practice on the standard setting concepts, tasks, and procedures.	1	4		3	3	
11. I understood the progressions in expectations across the Basic, Proficient, and Advanced performance levels as defined by the Performance Level Descriptors.			1	3	7	
12. I became sufficiently familiar with the assessment to make item-PLD judgements, based on responding to items on the test and considering the knowledge, skills, and abilities required by the items.				5	6	
13. I understood the ID Matching task, including considering the knowledge, skills, and abilities required by each item, and matching those item response demands to PLDs.	1			5	6	
14. I understood how to use the standard setting tool to record my responses regarding skills and notes as instructed.				2	9	
15. I understood how to use the standard setting tool to record my item-PLD alignment judgements.				1	10	
16. I understood how to write content-based rationales for my item-PLD alignment judgements.				4	7	
17. I understood that the cut scores were calculated based on all item-PLD alignment judgements from all panelists.				3	8	
18. I understood how to use the feedback after round 1, in preparation for round 2.				4	7	
19. I understood what the content-based benchmarks, introduced in round 2, represented.	-		1	4	6	
20. I understood how to consider the content-based benchmarks in rounds 2 and 3, as I made my item-PLD alignment judgements.			1	4	6	
21. I am satisfied with the final results and cut scores	1		3	5	2	

Table 2. Open-ended responses

Questions	Responses
Please indicate any parts of the standard setting training and process that we should improve.	"We waited too long on data to be returned and subsequently were delayed in ending. I personally spent 10 hours on the process today so this should have been split over 3 days instead of 2."
	"With the reading load that is needed on the science items, I felt like we were not given enough time. This needs to be a 3-day committee workshop, not a 2-day. That way people don't feel rush and we don't have to go over the scheduled time."
	"here should be less time spent on the repetitive explanation of the process on day one. I think there should be more time focused on the action verbs of the PLDs as it relates to KSAs before Round 1. The borderline PLD
	document was unnecessary and could be added to the range PLD document on one page. I think if possible, the down time waiting on the analysis of all panelist data could be sped up"
	"perhaps go into detail about the different levels and how to relate them to KSA more for those that didn't understand it."
	"Was this in the past a 3-day thing? Why do I feel like it was?" "The explanation of the borderline PLD's was a little confusing at first. I didn't really understand it until we got deep into the process"
Please indicate any parts of the standard setting	"Everything else was great."
Please indicate any parts of the standard setting training and process that you felt worked really well.	"I felt that the chunking or breaking up of the process into rounds worked well."
	"review rounds"
	"think it all went very well. The David, Mary-Alice and Frank worked very well together and made the process very easy."
If you would recommend changing any of the final cut scores, please indicate which cut scores (Basic,	"Basic needs to be expanded. More than 48 % of the students in Oklahoma need to pass this exam."
Proficient, and/or Advanced) you would recommend changing. For each recommended cut score change,	"I felt that the chunking or breaking up of the process into rounds worked well."
please also note if you would recommend moving it	"I would change the cut scores specifically Basic and Proficient."
earlier or later in the OIB and by how many pages.	"I feel like the line between Basic and Proficient was/is a little blurry (but I do realize that is why we had to do round 4). I'm OK with where the cut scores were placed because I feel like that was the consensus of the group, but I would also understand if it was moved by 1-2 questions later in the OIB."
	"I do not think I would move them"

APPENDIX K STANDARD SETTING MEMO



Oklahoma Standard Setting Memo

OSTP Science Grade 8

June 22-23, 2023

Overview

Cognia and the Oklahoma Department of Education convened a panel of science teachers during June 23-24, 2023, to establish Basic, Proficient, and Advanced cut scores to enable reporting of student performance on the OSTP Science Grade 8 assessment. Eleven educators from around the state participated in two days of training and decision-making with Cognia standard setting specialists. The standard setting panelists reviewed test content and performance level descriptors and followed the Item-Descriptor (ID) Matching standard setting method.

The purpose of this memo is to present the cut scores and associated impact data that resulted from the standard setting meeting.

Methods

Standard Setting Procedure

During the standard setting meeting, the panelists were trained on and followed the ID-Matching method. Each panelist reviewed each item in the ordered item booklet (OIB) and considered the knowledge, skills, and abilities required by the item. Panelists then matched those item response demands to the knowledge and skill expectations in the performance level descriptors for the Basic, Proficient, and Advanced levels. Working independently, the standard setting panelists conducted the ID matching process in three rounds and made item-PLD alignment judgements for each item. Before each round, panelists completed a round readiness survey. After rounds 1 and 2, the Cognia workshop facilitator led panelists through a discussion of agreements and disagreements among the panelists and rationales for their various item-PLD alignment judgements. The ensuing discussion enabled panelists to consider their colleagues' insights about item response demands and rationales for matching items to descriptors, and to consider adjusting their judgements in rounds 2 and 3.

At the beginning of round 2, content-based benchmarks were introduced to panelists which served as additional information for panelists to consider as they made their item-PLD alignment judgements in rounds 2 and 3. At the completion of round 3, the resulting cut scores and associated impact data were presented to panelists. Impact data are the percentages of students who would be sorted into the Below Basic, Basic, Proficient, and Advanced performance levels, using their scores from the 2023 administration of the OSTP Science grade 8 assessment, and based on the cut scores calculated after round 3. Panelists then completed a round 4 evaluation step during which the facilitator guided the panel through the procedure of writing group level content-based rationales for item-PLD alignments where panelists disagreed with the content-based benchmark alignments. Finally, panelists completed the final evaluation survey about their overall experience and satisfaction with the standard setting workshop.



Analyses Procedure

First, Cognia conducted statistical analyses of panelists' item-PLD alignment data by calculating the percent exact, adjacent, and discrepant for each panelist on each performance level. Panelists with the least percentage exact were identified as showing statistically aberrant behavior.

Next, an independent subject matter expert (SME) reviewed the qualitative data for all panelists identified as statistically aberrant. The SME reviewed panelists' notes on the knowledge, skills, abilities required by the items, as well as their content-based rationales to determine if the panelists were on task.

After analyses and qualitative review, the data of panelists that were determined to be statistically and qualitatively aberrant were removed before proceeding with the rest of the analyses.

The next phase of the analyses included conducting logistical regression to calculate cut scores. Since the logistical regression method is sensitive to statistical outliers and the presence of such outliers violate the assumptions of the model, an outlier analysis was performed in the form of visual inspection of the initial logistic regression curves for any statistical outliers. Statistical outliers were identified, and the associated data points were removed and then the final logistic regression analyses were conducted to calculate the proficient and advanced cut scores. After calculating the proficient and advanced cut scores, the TCC method was used to calculate the Basic cut score.

Finally, the resulting cut scores were applied to student data from the spring 2023 administration of the OSTP science grade 8 assessment to calculate the impact data (i.e., the percentage of students that would be classified into each performance level based on the standard setting cut scores).

Results

After the statistical analyses and qualitative review of panelist data, one panelist was determined to be statistically and qualitatively aberrant. Consequently, their data were removed from the final analyses.

Visual inspection of the initial logistic regression curves for the proficient and advanced cuts scores revealed 7 statistical outlier data points. Figure 1 shows the initial logistic regression curve for the proficient level. The row of dots at the top and bottom of the curve represents 1 or more item-PLD judgements. Data points to the far left and right (i.e., in the tails) that are circled in red represent statistical outliers, and the numbers above or below the circles indicate how many item-PLD judgements are located at that specific location. The 7 data points were removed from the final analyses.

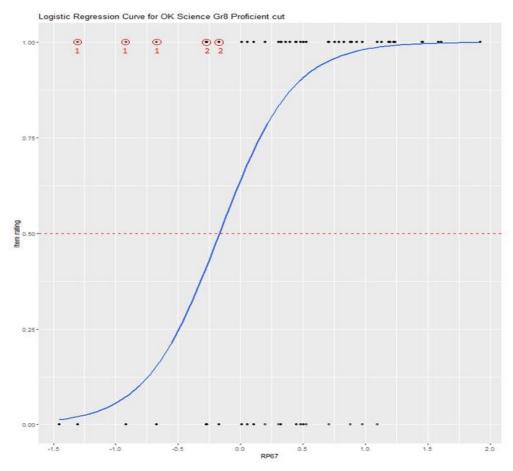


Figure 1. Initial Logistic Regression Curve for the Proficient Cut Score

Table 1 shows the cut scores that resulted from the standard setting meeting and analyses, as well as the associated impact data for OSTP science grade 8. The percentage of Oklahoma students in each grade is shown for each performance level (Below Basic, Basic, Proficient, and Advanced), as well as for the combined proficient and advanced performance levels. Figure 2 gives a visual representation of the impact data.

In addition to the cut scores and impact data, Table 1 also lists standard errors associated with each cut score. Note that these standard errors are based on the round 1 judgement data because it is most reflective of the discrepancy between panelists. After round 1, panelists enter group discussions and thus their judgements begin to violate the assumption of dependency.

Table 1. OSTP Science Grade 8 Standard Setting Cut Scores and Impact Data

Performance Level	OIB#	Theta	*Standard Error	% Students
Below Basic				28.6
Basic	3 – 4	-0.89	0.115	30.6
Proficient	6 – 7	- 0.07	0.155	32.7
Advanced	34 – 35	1.14	0.131	8.1
Proficient + Advanced				40.8

Note. OIB = Ordered Item Booklet

^{*}Standard Error based on round 1 panelist data



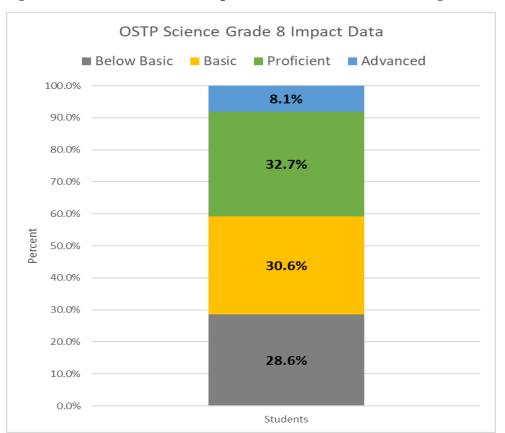


Figure 2. OSTP Science Grade 8 Impact Data based on Standard Setting Cut Scores

In the final workshop evaluation, panelists expressed generally positive support for the workshop overall, workshop facilitation, training, practice, and the workshop process. Table 2 shows the frequency of panelist selected responses to the following final evaluation statement: "I am satisfied with the final results and cut scores." In addition, quotes from panelists associated with the follow up question to the above statement are also presented in Table 2.

As shown in the table, 1 panelist strongly disagreed with the above statement, 3 panelists were undecided, 5 panelists agreed, and 1 panelist strongly agreed. Three panelists specifically mentioned concerns about the Basic and Proficient cut scores and/or the impact data related to the Basic and Proficient range. In addition, one panelist specifically mentioned concerns about the impact data in the advanced performance level.

Table 2. Frequency of Responses (and related panelist quotes) for Survey Question: "I am satisfied with the final results and cut scores."

Question Response Options	N (# Panelists)	Related Panelist Quotes
Strongly Disagree	1	"I would change the cut scores specifically Basic and Proficient"
Disagree		·
		"My initial thoughts are that it seems there should be more students in the basic and proficient range"
Undecided	3	"I am undecided"
		"I recommend taking the data provided by those who are actually in the classroom into
		much more consideration for validity of reasoning"
Agree	5	"Maybe make the Advance range slightly larger"
		I feel like the line between Basic and Proficient was/is a little blurry (but I do realize that is why we had to do round 4). I'm OK with where the cut scores were placed because I feel
Strongly Agree	2	like that was the consensus of the group, but I would also understand if it was moved by 1-2 questions later in the OIB.
		"I do not think I would move them"

Considerations for Articulation and Policy Review

SDE can accept the standard setting cut scores and adopt them as is. Or the department may choose to make "policy adjustments" to the standard setting cut scores, using several criteria.

A common psychometric approach. Adjust the cut scores based on the standard errors of the cut scores. Table 3 shows the cut scores, standard errors, and impact data based on the standard setting results. In addition, the table shows the theta cuts and impact data if the standard setting cuts were to be adjusted by 1 standard error. For additional reference and consideration, the last two columns of Table 3 show the theta cuts and impact data based on cut scores derived from Cognia's content specialists' item-PLD alignment work.

Policy and communication approach: Adjust the cut scores to achieve vertical and/or horizontal articulation. For reference, Table 4 shows the cut scores and impact data across grades 5, 8, and 11. See Figure 3 for a visual representation of the impact data across grades. Note that the impact data for grade 8 is based on the standard setting cut scores.

As SDE conducts their policy review, we also encourage SDE to consider the panelists' thoughts and opinions on the standard setting cut score results as outlined in Table 2 of the results section.

We at Cognia are grateful for the opportunity to contribute to this important conversation and will be pleased to do discuss the contents of this memo and advise SDE on psychometrically defensible ways to make policy adjustments.

Table 3. OSTP Science Grade 8 Cut Scores and Impact Data based on Psychometric Adjustments.

Performance Level	Standard Setting Cut Scores			Cut Score adjusted DOWN by 1 Standard Error		Cut Score adjusted UP by 1 Standard Error		Cut Scores based on Cognia Content Specialists Data	
Level	Theta	*Standard Error	% Students	Theta	% Students	Theta	% Students	Theta	% Students
Below Basic			28.6		24.9		32.7		40.7
Basic	-0.89	0.115	30.6	-1.01	28.6	-0.78	31.8	-0.56	28.1
Proficient	- 0.07	0.155	32.7	-0.22	36.1	0.09	29.3	0.22	27.7
Advanced	1.14	0.131	8.1	1.01	10.5	1.27	6.2	1.51	3.6
Proficient + Advanced			40.8		46.5		35.5		31.2

Note. OIB = Ordered Item Booklet

*Standard Error based on round 1 panelist data

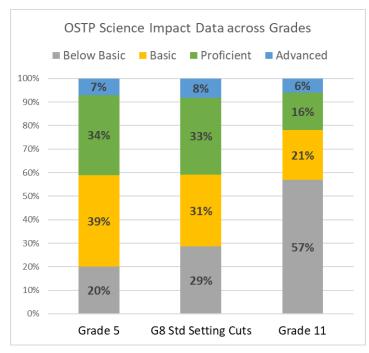
Table 4. OSTP Science Cut Scores and Impact Data across Grades

	Grade 8 (Standard Setting Cut Scores)				ade 5	Grade 11		
Performance Level	Theta	*Standard Error	% Students	Theta	% Students	Theta	% Students	
Below Basic			28.6	_	20.0		57.0	
Basic	-0.89	0.115	30.6	-0.91	39.0	0.17	21.0	
Proficient	- 0.07	0.155	32.7	0.18	34.0	0.80	16.0	
Advanced	1.14	0.131	8.1	1.32	7.0	1.53	6.0	
Proficient + Advanced			40.8		40.0		22.0	

Note. OIB = Ordered Item Booklet

*Standard Error based on round 1 panelist data

Figure 3. OSTP Science Impact Data across Grades



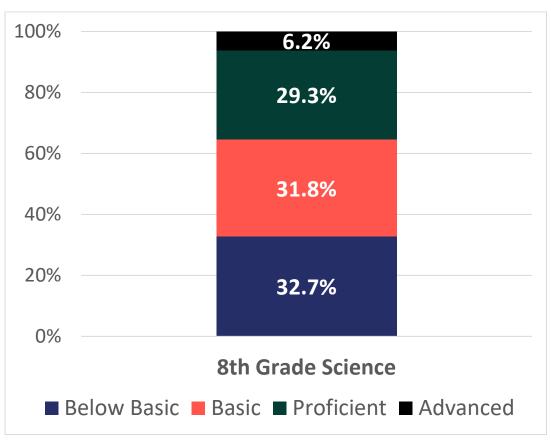
APPENDIX—L FINAL CUT POINTS

OK OSTP Science Grade 8 Standard Setting Final Cut Points

Table 1. OK OSTP Science Grade 8 Standard Setting Final Cut Points

Performance Level	OIB Page #	Theta	Percent Students
Below Basic			32.7
Basic	3 – 4	-0.78	31.8
Proficient	10 – 11	0.09	29.3
Advanced	31 – 32	1.27	6.2
Proficient + Advanced			35.5

Figure 1. OK OSTP Science Grade 8 Impact Data based on Final Cut Points



APPENDIX Q PERFORMANCE LEVEL DISTRIBUTIONS

Table Q-1. Performance Level Distributions by Grade and Year*—ELA

Grade	Performance Level	% in Level 2023	% in Level 2022	% in Level 2021	% in Level 2019	% in Level 2018	% in Level 2017
	1	41	40	44	31	34	30
_	2	31	32	32	30	33	32
3	3	25	23	21	29	27	31
	4	4	6	4	10	6	8
	1	41	43	45	36	30	29
	2	35	33	33	33	34	34
4	3	22	21	20	24	28	30
	4	2	2	2	6	7	7
	1	23	26	31	25	23	21
-	2	46	43	41	40	42	39
5	3	25	23	21	27	22	28
	4	6	8	6	8	13	12
	1	32	31	31	22	22	18
c	2	42	43	44	42	40	41
6	3	23	22	21	28	29	31
	4	3	4	4	8	9	9
	1	44	44	46	35	32	34
7	2	34	34	34	36	41	40
,	3	17	16	15	21	20	20
	4	4	5	4	8	8	6
	1	33	30	33	25	24	23
8	2	46	42	43	43	43	42
U	3	17	22	18	24	24	23
	4	4	6	6	9	9	11

^{*}Tests were not administered in 2019-20 due to COVID-19.

Table Q-2. Performance Level Distributions by Grade and Year*—Mathematics

0 1	Performance	% in Level					
Grade	Level	2023	2022	2021	2019	2018	2017
	1	25	33	35	24	24	21
•	2	37	33	35	33	35	35
3	3	27	22	20	26	26	27
	4	12	11	9	17	15	17
	1	23	35	37	26	27	23
4	2	36	32	35	36	37	36
4	3	26	20	18	26	25	27
	4	14	13	10	12	11	14
	1	23	32	37	24	25	22
5	2	45	41	41	45	46	43
J	3	21	18	15	19	20	23
	4	11	8	8	11	10	12
	1	28	38	37	27	29	22
6	2	45	40	42	43	43	42
U	3	22	18	16	25	23	29
	4	5	5	5	6	5	6
	1	43	48	55	38	34	35
7	2	30	28	25	29	32	31
,	3	23	20	17	26	26	27
	4	5	4	3	7	8	7
	1	57	61	65	50	52	49
8	2	27	23	21	30	28	28
0	3	10	10	9	11	10	12
	4	6	6	5	10	10	11

^{*}Tests were not administered in 2019-20 due to COVID-19.

Table Q-3. Performance Level Distributions by Grade and Year*—Science

Grade	Performance	% in Level					
Grade	Level	2023	2022	2021	2019	2018	2017
	1	20	28	28	22	20	22
5	2	39	34	40	40	39	35
J	3	34	31	27	30	32	34
	4	7	7	5	8	9	9
	1	35	48	45	39	40	38
0	2	31	21	22	21	21	21
8	3	28	24	26	31	29	30
	4	6	6	6	9	10	11
	1	57	54	52	57		
44	2	21	21	24	20		
11	3	16	18	17	17		
	4	6	8	6	7		

^{*}Tests were not administered in 2019-20 due to COVID-19.

Table Q-4. Performance Level Distributions by Grade and Year*—U.S. History

Grade	Performance Level	% in Level 2023	% in Level 2022	% in Level 2021	% in Level 2019	% in Level 2018	% in Level 2017
	1	42	40				
44	2	14	14	-	-		
11	3	35	36	-			
	4	9	10				

^{*}Tests were not administered in 2019-20 due to COVID-19.

APPENDIX R CLASSICAL RELIABILITY

Table R-1. Subgroup Reliabilities Grade 3—ELA

	Number		Raw Score)		Standard
Description	of Students	Maximum	Mean	Standard Deviation	Alpha	Error
Female	24,231	51	28.42	10.15	0.91	3.10
Male	25,362	51	27.23	10.42	0.91	3.11
Hispanic or Latino	9,987	51	24.87	10.04	0.90	3.17
American Indian/Alaskan Native	5,259	51	27.43	9.68	0.89	3.14
Asian	1,198	49	30.07	10.65	0.92	3.04
Black/African American	3,866	49	22.97	9.88	0.90	3.17
Pacific Islander	236	46	21.20	8.39	0.85	3.21
White/Caucasian	22,200	51	29.95	10.05	0.91	3.06
Two or More Races	6,858	50	28.03	10.09	0.90	3.11
Economically Disadvantaged	30,870	51	25.31	9.92	0.90	3.16
Individual Education Program	9,775	50	21.14	9.83	0.90	3.17
Plan 504	1,288	49	28.74	9.30	0.89	3.12
English Language Learners	6,675	48	22.92	9.50	0.89	3.20

Table R-2. Subgroup Reliabilities Grade 4—ELA

	Number		Raw Score	e		Standard
Description	of Students	Maximum	Mean	Standard Deviation	Alpha	Error
Female	23,873	52	31.71	10.03	0.91	3.04
Male	25,146	52	30.10	10.35	0.91	3.07
Hispanic or Latino	9,867	52	27.98	10.21	0.91	3.14
American Indian/Alaskan Native	5,413	51	30.72	9.70	0.90	3.07
Asian	1,245	51	33.49	10.36	0.92	2.94
Black/African American	3,812	50	25.88	10.15	0.90	3.17
Pacific Islander	219	48	26.08	10.21	0.90	3.16
White/Caucasian	21,950	52	32.81	9.82	0.91	2.99
Two or More Races	6,527	51	31.52	9.97	0.91	3.04
Economically Disadvantaged	30,442	52	28.61	10.15	0.91	3.13
Individual Education Program	9,482	51	22.84	9.95	0.90	3.20
Plan 504	1,432	50	31.92	8.98	0.88	3.05
English Language Learners	6,348	49	25.22	9.50	0.89	3.21

Table R-3. Subgroup Reliabilities Grade 5—ELA

	Number	i	Raw Score)		Standard
Description	of Students	Maximum	Mean	Standard Deviation	Alpha	Error
Female	20,955	55	37.21	9.88	0.91	3.04
Male	20,965	55	36.00	10.36	0.91	3.07
Hispanic or Latino	7,461	55	33.76	10.50	0.91	3.17
American Indian/Alaskan Native	4,853	54	35.85	9.81	0.90	3.10
Asian	1,038	55	39.92	9.80	0.91	2.91
Black/African American	3,362	54	30.77	10.60	0.91	3.23
Pacific Islander	187	52	30.61	11.36	0.92	3.21
White/Caucasian	19,452	55	38.67	9.35	0.90	2.98
Two or More Races	5,572	54	36.95	9.87	0.90	3.06
Economically Disadvantaged	24,854	55	34.15	10.27	0.91	3.16
Individual Education Program	3,994	54	29.37	11.68	0.93	3.19
Plan 504	1,406	54	36.41	9.57	0.90	3.09
English Language Learners	3,354	52	28.03	9.44	0.88	3.32

Table R-4. Subgroup Reliabilities Grade 6—ELA

	Number		Raw Score)		Standard
Description	of Students	Maximum	Mean	Standard Deviation	Alpha	Error
Female	23,769	52	30.13	9.99	0.90	3.10
Male	24,946	52	28.35	10.09	0.91	3.10
Hispanic or Latino	9,812	52	26.52	9.84	0.90	3.18
American Indian/Alaskan Native	5,594	51	28.44	9.54	0.89	3.14
Asian	1,113	52	32.29	10.32	0.91	3.02
Black/African American	3,757	50	24.47	9.48	0.89	3.21
Pacific Islander	232	43	23.56	8.87	0.87	3.21
White/Caucasian	21,943	52	31.18	9.90	0.91	3.04
Two or More Races	6,275	51	29.78	9.84	0.90	3.10
Economically Disadvantaged	29,738	52	26.70	9.73	0.89	3.18
Individual Education Program	8,535	51	20.51	8.68	0.86	3.21
Plan 504	1,678	51	30.21	9.03	0.88	3.10
English Language Learners	5,008	52	20.95	7.62	0.82	3.27

Table R-5. Subgroup Reliabilities Grade 7—ELA

	Number		Raw Score)		Standard
Description	of Students	Maximum	Mean	Standard Deviation	Alpha	Error
Female	24,425	52	29.16	9.95	0.90	3.17
Male	25,397	51	27.99	10.33	0.91	3.15
Hispanic or Latino	10,012	50	25.47	9.91	0.89	3.23
American Indian/Alaskan Native	5,653	52	28.27	9.71	0.89	3.20
Asian	1,145	51	32.51	10.36	0.91	3.03
Black/African American	3,904	49	23.86	9.69	0.89	3.24
Pacific Islander	230	47	21.98	9.89	0.89	3.21
White/Caucasian	22,613	51	30.59	9.86	0.90	3.11
Two or More Races	6,276	52	28.87	9.89	0.90	3.16
Economically Disadvantaged	30,232	51	26.02	9.81	0.89	3.22
Individual Education Program	8,329	52	19.99	8.68	0.86	3.22
Plan 504	1,779	50	28.99	9.11	0.88	3.18
English Language Learners	5,092	48	19.94	7.70	0.82	3.28

Table R-6. Subgroup Reliabilities Grade 8—ELA

	Number		Raw Score)		Standard
Description	of Students	Maximum	Mean	Standard Deviation	Alpha	Error
Female	22,983	56	34.52	8.81	0.86	3.24
Male	23,270	57	33.02	9.50	0.88	3.29
Hispanic or Latino	9,134	54	31.17	9.32	0.87	3.34
American Indian/Alaskan Native	5,441	55	33.51	8.76	0.86	3.27
Asian	1,030	54	37.10	9.36	0.89	3.15
Black/African American	3,715	53	29.41	9.20	0.87	3.36
Pacific Islander	147	48	29.97	9.15	0.87	3.36
White/Caucasian	21,132	57	35.61	8.73	0.86	3.22
Two or More Races	5,675	54	33.70	8.95	0.87	3.28
Economically Disadvantaged	26,829	54	31.55	9.06	0.87	3.33
Individual Education Program	3,979	54	25.81	9.28	0.87	3.39
Plan 504	1,623	54	33.48	9.12	0.87	3.30
English Language Learners	3,764	52	25.16	7.96	0.81	3.43

Table R-7. Subgroup Reliabilities Grade 3—Mathematics

	Number		Raw Score)		Standard
Description	of Students	Maximum	Mean	Standard Deviation	Alpha	Error
Female	20,676	50	32.07	9.94	0.92	2.88
Male	20,609	50	34.22	9.94	0.92	2.77
Hispanic or Latino	7,101	50	30.66	10.08	0.92	2.92
American Indian/Alaskan Native	4,525	50	32.57	9.35	0.91	2.88
Asian	852	50	37.59	9.11	0.92	2.58
Black/African American	3,360	50	25.90	10.38	0.92	3.02
Pacific Islander	145	45	26.08	10.23	0.91	3.04
White/Caucasian	19,330	50	35.42	9.19	0.91	2.74
Two or More Races	5,982	50	32.79	9.90	0.92	2.85
Economically Disadvantaged	24,368	50	30.58	10.07	0.92	2.93
Individual Education Program	4,313	50	30.65	10.78	0.93	2.91
Plan 504	1,104	50	33.24	9.52	0.91	2.85
English Language Learners	3,690	50	29.45	10.07	0.91	2.96

Table R-8. Subgroup Reliabilities Grade 4—Mathematics

	Number		Raw Score)		Standard
Description	of Students	Maximum	Mean	Standard Deviation	Alpha	Error
Female	20,139	50	30.56	9.96	0.91	2.94
Male	20,161	50	32.84	10.21	0.92	2.85
Hispanic or Latino	6,844	50	29.55	10.04	0.91	2.97
American Indian/Alaskan Native	4,570	50	31.20	9.70	0.91	2.93
Asian	951	50	36.58	9.75	0.93	2.64
Black/African American	3,205	49	24.30	10.02	0.91	3.08
Pacific Islander	132	50	25.06	10.78	0.92	3.04
White/Caucasian	18,947	50	33.72	9.51	0.91	2.83
Two or More Races	5,664	50	31.47	10.09	0.92	2.91
Economically Disadvantaged	23,654	50	29.24	10.06	0.91	2.99
Individual Education Program	3,489	50	28.63	10.83	0.92	2.98
Plan 504	1,228	50	31.89	9.93	0.91	2.91
English Language Learners	3,364	50	27.27	9.60	0.90	3.04

Table R-9. Subgroup Reliabilities Grade 5—Mathematics

	Number	ı	Raw Score	•		Standard
Description	of Students	Maximum	Mean	Standard Deviation	Alpha	Error
Female	20,328	50	29.79	9.93	0.91	2.94
Male	19,980	50	31.90	10.12	0.92	2.88
Hispanic or Latino	7,114	50	28.58	9.84	0.91	2.98
American Indian/Alaskan Native	4,642	50	30.01	9.58	0.91	2.95
Asian	973	50	37.01	9.31	0.92	2.62
Black/African American	3,252	50	23.50	9.34	0.89	3.06
Pacific Islander	172	50	25.94	10.27	0.91	3.01
White/Caucasian	18,787	50	32.98	9.58	0.91	2.85
Two or More Races	5,372	50	30.55	9.92	0.91	2.92
Economically Disadvantaged	23,671	50	28.25	9.75	0.91	3.00
Individual Education Program	2,716	50	27.39	10.41	0.92	3.01
Plan 504	1,362	50	30.48	9.76	0.91	2.95
English Language Learners	3,014	50	24.45	8.75	0.88	3.09

Table R-10. Subgroup Reliabilities Grade 6—Mathematics

	Number	i	Raw Score	•		Standard
Description	of Students	Maximum	Mean	Standard Deviation	Alpha	Error
Female	20,779	50	26.52	9.13	0.89	3.05
Male	20,489	50	28.52	9.47	0.90	2.98
Hispanic or Latino	7,777	50	25.17	8.98	0.88	3.07
American Indian/Alaskan Native	4,715	50	26.78	8.70	0.88	3.05
Asian	945	50	32.60	9.73	0.92	2.83
Black/African American	3,155	50	21.19	8.12	0.85	3.12
Pacific Islander	190	40	20.94	7.39	0.83	3.08
White/Caucasian	19,062	50	29.56	9.08	0.89	2.98
Two or More Races	5,435	50	27.36	9.23	0.89	3.02
Economically Disadvantaged	24,056	50	25.07	8.82	0.88	3.08
Individual Education Program	2,530	50	23.02	9.54	0.90	3.09
Plan 504	1,466	50	27.33	9.39	0.90	3.03
English Language Learners	3,163	48	20.37	7.11	0.81	3.14

Table R-11. Subgroup Reliabilities Grade 7—Mathematics

	Number		Raw Score)		Standard
Description	of Students	Maximum	Mean	Standard Deviation	Alpha	Error
Female	21,499	50	21.26	9.11	0.89	3.09
Male	21,220	50	22.60	10.04	0.91	3.07
Hispanic or Latino	7,894	50	19.65	8.80	0.88	3.08
American Indian/Alaskan Native	4,886	50	21.00	8.84	0.88	3.09
Asian	1,002	50	28.76	10.93	0.93	2.95
Black/African American	3,293	49	16.54	7.45	0.83	3.04
Pacific Islander	166	45	18.01	8.00	0.85	3.07
White/Caucasian	19,973	50	23.77	9.78	0.90	3.08
Two or More Races	5,515	50	21.40	9.21	0.89	3.09
Economically Disadvantaged	24,777	50	19.49	8.53	0.87	3.09
Individual Education Program	2,791	49	17.22	8.22	0.86	3.05
Plan 504	1,574	50	21.13	9.03	0.88	3.11
English Language Learners	3,115	47	15.63	6.33	0.77	3.05

Table R-12. Subgroup Reliabilities Grade 8—Mathematics

	Number		Raw Score	9		Standard
Description	of Students	Maximum	Mean	Standard Deviation	Alpha	Error
Female	22,189	50	22.24	9.22	0.89	3.12
Male	22,095	50	22.90	9.88	0.90	3.10
Hispanic or Latino	8,547	50	20.50	8.69	0.87	3.13
American Indian/Alaskan Native	5,191	50	21.89	8.88	0.88	3.13
Asian	1,001	50	29.38	10.94	0.93	2.96
Black/African American	3,549	50	18.35	7.91	0.84	3.12
Pacific Islander	148	46	19.50	8.42	0.86	3.13
White/Caucasian	20,383	50	24.19	9.78	0.90	3.10
Two or More Races	5,485	50	21.94	9.44	0.89	3.11
Economically Disadvantaged	25,337	50	20.27	8.60	0.87	3.13
Individual Education Program	2,484	48	17.54	7.77	0.84	3.10
Plan 504	1,576	49	22.18	9.60	0.89	3.11
English Language Learners	3,234	49	16.59	6.40	0.76	3.12

Table R-13. Subgroup Reliabilities Science (OSTP)—Grade 5

	Number		Raw Score	9		Standard
Description	of Students	Maximum	Mean	Standard Deviation	Alpha	Error
Female	20,455	45	24.97	8.01	0.86	2.95
Male	20,179	45	26.10	8.44	0.88	2.91
Hispanic or Latino	7,232	45	23.26	7.93	0.86	2.99
American Indian/Alaskan Native	4,685	45	24.91	7.86	0.86	2.96
Asian	976	45	28.86	8.19	0.88	2.83
Black/African American	3,261	44	20.14	7.39	0.83	3.04
Pacific Islander	183	42	20.48	7.82	0.85	3.03
White/Caucasian	18,895	45	27.37	7.96	0.87	2.89
Two or More Races	5,407	45	25.49	8.09	0.87	2.94
Economically Disadvantaged	23,910	45	23.55	7.95	0.86	2.99
Individual Education Program	2,955	45	22.86	8.49	0.88	2.99
Plan 504	1,370	45	25.25	8.17	0.87	2.94
English Language Learners	3,131	43	19.37	6.54	0.78	3.06

Table R-14. Subgroup Reliabilities Science (OSTP)—Grade 8

	Number		Raw Score	9		Standard
Description	of Students	Maximum	Mean	Standard Deviation	Alpha	Error
Female	22,365	48	24.81	8.29	0.86	3.16
Male	22,278	48	26.08	9.13	0.88	3.10
Hispanic or Latino	8,628	48	23.34	8.23	0.85	3.18
American Indian/Alaskan Native	5,259	48	25.06	8.26	0.85	3.16
Asian	1,001	48	30.24	9.18	0.89	2.98
Black/African American	3,595	48	20.94	7.69	0.83	3.21
Pacific Islander	139	41	21.80	8.60	0.87	3.15
White/Caucasian	20,523	48	27.13	8.70	0.87	3.10
Two or More Races	5,519	48	25.01	8.66	0.87	3.15
Economically Disadvantaged	25,636	48	23.53	8.24	0.85	3.18
Individual Education Program	2,904	48	20.92	8.13	0.85	3.19
Plan 504	1,571	48	25.32	8.83	0.87	3.13
English Language Learners	3,317	46	19.13	6.47	0.75	3.21

Table R-15. Subgroup Reliabilities Science (CCRA)—Grade 11

	Number		Raw Score)		Standard
Description	of Students	Maximum	Mean	Standard Deviation	Alpha	Error
Female	23,445	61	26.27	10.19	0.87	3.61
Male	22,817	62	27.01	11.70	0.91	3.59
Hispanic or Latino	8,766	62	24.04	9.72	0.86	3.60
American Indian/Alaskan Native	5,372	61	25.78	10.18	0.87	3.61
Asian	1,041	61	32.75	12.14	0.91	3.56
Black/African American	3,720	60	21.49	8.51	0.82	3.57
Pacific Islander	204	46	21.93	8.34	0.81	3.60
White/Caucasian	21,911	62	28.58	11.40	0.90	3.60
Two or More Races	5,275	59	26.38	10.75	0.89	3.60
Economically Disadvantaged	24,111	62	24.34	9.83	0.87	3.60
Individual Education Program	4,995	59	20.43	8.26	0.82	3.54
Plan 504	1,872	61	28.07	11.88	0.91	3.58
English Language Learners	2,389	50	19.01	6.26	0.68	3.53

Table R-16. Subgroup Reliabilities U.S. History (CCRA)—Grade 11

	Number	ı	Raw Score	•		Standard
Description	of Students	Maximum	Mean	Standard Deviation	Alpha	Error
Female	23,468	50	24.89	9.17	0.88	3.18
Male	22,845	50	26.24	10.54	0.91	3.12
Hispanic or Latino	8,732	50	23.46	9.28	0.88	3.18
American Indian/Alaskan Native	5,392	50	24.96	9.46	0.89	3.18
Asian	1,036	50	30.42	9.83	0.90	3.04
Black/African American	3,732	49	21.20	8.57	0.86	3.21
Pacific Islander	204	42	20.85	8.88	0.87	3.18
White/Caucasian	21,960	50	27.16	10.03	0.90	3.13
Two or More Races	5,285	50	25.26	9.76	0.89	3.17
Economically Disadvantaged	24,113	50	23.37	9.24	0.88	3.19
Individual Education Program	5,013	50	19.63	8.54	0.86	3.19
Plan 504	1,872	49	27.02	10.43	0.91	3.11
English Language Learners	2,352	45	18.03	6.99	0.79	3.19

Table R-17. Reliabilities by Reporting Category—ELA Grade 3

Poporting	Number of		Raw Score			Standard
Reporting Category	Items	Maximum	Mean	Standard Deviation	Alpha	Error
1	19	20	10.64	4.37	0.82	1.88
2	6	7	3.18	1.70	0.59	1.09
3	12	12	6.73	2.72	0.68	1.54
4	7	7	4.06	1.72	0.55	1.15
5	6	6	3.20	1.59	0.52	1.11

Table R-18. Reliabilities by Reporting Category—ELA Grade 4

Reporting	Number of		Raw Score		Standard	
Category	Items	Maximum	Mean	Standard Deviation	Alpha	Error
1	15	15	9.19	3.49	0.77	1.66
2	11	13	6.33	2.75	0.69	1.53
3	12	12	7.96	2.73	0.73	1.41
4	6	6	4.15	1.48	0.54	1.01
5	6	6	3.25	1.52	0.50	1.07

Table R-19. Reliabilities by Reporting Category—ELA Grade 5

Reporting	Number of		Raw Score			Standard	
Category	Items	Maximum	Mean	Standard Deviation	Alpha	Error	
1	17	17	11.65	3.75	0.79	1.70	
2	11	11	7.21	2.61	0.73	1.36	
3	9	9	6.93	1.83	0.64	1.09	
4	7	7	4.92	1.47	0.54	1.00	
5	6	6	3.67	1.55	0.49	1.10	

Table R-20. Reliabilities by Reporting Category—ELA Grade 6

Reporting	Number of		Raw Score			Standard
Category	Items	Maximum	Mean	Standard Deviation	Alpha	Error
1	17	17	10.07	3.65	0.75	1.81
2	11	13	6.31	2.71	0.69	1.50
3	10	10	6.78	2.49	0.73	1.30
4	6	6	3.01	1.59	0.56	1.05
5	6	6	3.05	1.53	0.48	1.11

Table R-21. Reliabilities by Reporting Category—ELA Grade 7

Reporting	Number of		Raw Score		Standard	
Category	Items	Maximum	Mean	Standard Deviation	Alpha	Error
1	17	19	9.33	3.79	0.75	1.91
2	11	11	6.23	2.77	0.72	1.47
3	9	9	5.35	2.17	0.65	1.28
4	6	6	3.35	1.52	0.47	1.10
5	7	7	4.30	1.76	0.58	1.14

Table R-22. Reliabilities by Reporting Category—ELA Grade 8

Donarting	Number of		Raw Score			Standard
Reporting Category	Items	Maximum	Mean	Standard Deviation	Alpha	Error
1	13	13	6.82	2.61	0.62	1.61
2	15	15	9.60	2.94	0.70	1.62
3	10	10	6.86	2.24	0.69	1.24
4	6	6	3.71	1.35	0.34	1.09
5	6	6	3.04	1.36	0.32	1.12

Table R-23. Reliabilities by Reporting Category—Mathematics Grade 3

Reporting	Number of		Raw Score			Standard
Category	Items	Maximum	Mean	Standard Deviation	Alpha	Error
1	23	23	16.31	4.93	0.86	1.83
2	7	7	5.23	1.50	0.56	0.99
3	14	14	7.71	3.02	0.71	1.62
4	6	6	3.90	1.77	0.69	0.98

Table R-24. Reliabilities by Reporting Category—Mathematics Grade 4

Reporting	Number of		Raw Score			. Standard	
Category	Items	Maximum	Mean	Standard Deviation	Alpha	Error	
1	23	23	14.78	5.13	0.86	1.92	
2	7	7	4.52	1.80	0.67	1.03	
3	14	14	8.15	2.95	0.70	1.62	
4	6	6	4.24	1.53	0.60	0.97	

Table R-25. Reliabilities by Reporting Category—Mathematics Grade 5

Reporting	Number of	Raw Score				Standard
Category	Items	Maximum	Mean	Standard Deviation	Alpha	Error
1	22	22	13.70	5.15	0.87	1.88
2	9	9	6.14	2.04	0.67	1.17
3	13	13	7.48	2.76	0.69	1.53
4	6	6	3.51	1.63	0.60	1.03

Table R-26. Reliabilities by Reporting Category—Mathematics Grade 6

Reporting	Number of		Raw Score		Standard	
Category	Items	Maximum	Mean	Standard Deviation	Alpha	Error
1	21	21	12.47	4.31	0.80	1.92
2	11	11	5.69	2.50	0.68	1.42
3	12	12	6.37	2.43	0.61	1.52
4	6	6	2.99	1.54	0.55	1.04

Table R-27. Reliabilities by Reporting Category—Mathematics Grade 7

Reporting	Number of		Raw Score		Standard		
Category	Items	Maximum	Mean	Standard Deviation	Alpha	Error	
1	10	10	4.81	2.67	0.73	1.37	
2	15	15	6.53	2.99	0.68	1.70	
3	16	16	6.15	3.44	0.75	1.73	
4	9	9	4.43	1.99	0.59	1.27	

Table R-28. Reliabilities by Reporting Category—Mathematics Grade 8

Reporting	Number of		Raw Score		Standard		
Category		Maximum	Mean	Standard Deviation	Alpha	Error	
1	9	9	4.52	2.35	0.70	1.29	
2	22	22	9.24	4.25	0.77	2.03	
3	11	11	4.89	2.80	0.73	1.46	
4	8	8	3.91	1.79	0.49	1.27	

Table R-29. Reliabilities by Reporting Category—Science (OSTP) Grade 5

Reporting	Number of		Raw Score		Standard	
Category	Items	Maximum	Mean	Standard Deviation	Alpha	Error
1	15	15	8.08	3.03	0.67	1.74
2	12	12	6.94	2.53	0.65	1.50
3	18	18	10.51	3.81	0.77	1.81

Table R-30. Reliabilities by Reporting Category—Science (OSTP) Grade 8

Reporting	Number of		Standard			
Category	Items	Maximum	Mean	Standard Deviation	Alpha	Error
1	15	16	7.97	3.63	0.75	1.80
2	21	22	12.32	4.08	0.73	2.12
3	9	10	5.15	2.23	0.59	1.42

Table R-31. Reliabilities by Reporting Category—Science (CCRA) Grade 11

Reporting	Number of		Raw Score		Standard		
Category	Items	Maximum	Mean	Standard Deviation	Alpha	Error	
1	30	31	13.47	6.15	0.83	2.54	
2	30	31	13.17	5.40	0.78	2.55	

Table R-32. Reliabilities by Reporting Category-U.S. History (CCRA) Grade 11

Reporting	Number of	Standard					
Category	Items	Maximum	Mean	Standard Deviation	Alpha	Error	
1	24	24	12.88	5.17	0.82	2.17	
2	26	26	12.67	5.22	0.81	2.29	

APPENDIX S DECISION ACCURACY AND CONSISTENCY RESULTS

Table S-1. Summary of Decision Accuracy and Consistency Results by Content Area and Grade—Conditional on Cutpoint

Content Area		Below Basic / Basic				Basic / Proficient		Proficient / Advanced		
	Grade	Accuracy (consistency)	Fa Positive	alse Negative	Accuracy (consistency)	Fa Positive	alse Negative	Accuracy (consistency)	Fa Positive	alse Negative
	3	0.93 (0.9)	0.03	0.04	0.92 (0.89)	0.04	0.04	0.97 (0.96)	0.02	0.01
	4	0.93 (0.9)	0.03	0.04	0.92 (0.89)	0.04	0.04	0.98 (0.97)	0.01	0.01
	5	0.94 (0.92)	0.03	0.03	0.92 (0.89)	0.04	0.04	0.96 (0.94)	0.02	0.02
ELA	6	0.93 (0.9)	0.03	0.04	0.93 (0.9)	0.04	0.03	0.98 (0.97)	0.02	0.01
	7	0.92 (0.89)	0.04	0.04	0.93 (0.9)	0.04	0.03	0.97 (0.95)	0.02	0.01
	8	0.92 (0.89)	0.04	0.04	0.93 (0.9)	0.04	0.03	0.97 (0.96)	0.02	0.01
	3	0.95 (0.92)	0.03	0.03	0.93 (0.9)	0.04	0.04	0.95 (0.93)	0.03	0.02
	4	0.94 (0.91)	0.03	0.03	0.93 (0.9)	0.03	0.03	0.95 (0.93)	0.03	0.02
	5	0.93 (0.9)	0.04	0.03	0.94 (0.91)	0.03	0.03	0.96 (0.94)	0.02	0.02
Mathematics	6	0.92 (0.89)	0.04	0.04	0.94 (0.91)	0.03	0.03	0.98 (0.97)	0.01	0.01
	7	0.9 (0.86)	0.06	0.04	0.94 (0.92)	0.03	0.02	0.98 (0.98)	0.01	0.01
	8	0.92 (0.89)	0.05	0.03	0.96 (0.94)	0.02	0.02	0.98 (0.97)	0.01	0.01
	5	0.92 (0.89)	0.04	0.04	0.92 (0.88)	0.05	0.04	0.97 (0.95)	0.02	0.01
Science	8	0.9 (0.85)	0.06	0.05	0.92 (0.88)	0.05	0.04	0.97 (0.95)	0.02	0.01
	11	0.92 (0.89)	0.05	0.03	0.95 (0.92)	0.03	0.02	0.98 (0.97)	0.01	0.01
U.S. History	11	0.91 (0.87)	0.05	0.04	0.92 (0.89)	0.04	0.03	0.96 (0.95)	0.02	0.02

APPENDIX T SAMPLE REPORTS



STUDENT/FAMILY REPORT OKLAHOMA SCHOOL TESTING PROGRAM



USING THIS REPORT TO MEET WITH YOUR STUDENT'S TEACHER OR SCHOOL

As your student's first teacher, you are a critical part of their education. It is important to remember that your student's strengths, abilities and potential cannot be measured by a single test score. Each student grows at different rates both physically and academically. State tests help gauge how your student is growing in the knowledge and skills outlined in the Oklahoma Academic Standards. State test results, when combined with other information (i.e., report card grades, teacher feedback, classroom performance and local tests) can help you and the teacher understand where your student is making progress and where they may need extra support. Ask your student's teachers and/or school:

- Where is my student excelling? How can I support this success?
- What do you think is giving my student the most trouble? How can I help my student improve in this area?
- What can I do to help my student with upcoming work?
- What curriculum and learning experiences do you provide to support my student?

OKLAHOMA STATE DEPARTMENT OF EDUCATION (OSDE) RESOURCES

The **OSTP Parent Portal** - is an interactive web-based tool you can use to access information about your student's OSTP results. (Note: You will need your student's state ID (STN) number and date of birth to set up an account. Your student's state ID (STN) number is located on the front of this report.). https://okparentportal.emetric.net/login

The **OSDE Family Guides** page provides links to grade-level guides that illustrate what is expected of students at each grade level in different content areas, along with activities families can do at home to further support their student's learning. https://sde.ok.gov/oklahoma-family-guides

The **OSDE Family Engagement** page is home to tools and resources that support partnerships between families and schools. https://sde.ok.gov/families

The **OSDE Assessment Guidance** page provides information and guidance on interpreting and using data from student assessments. https://sde.ok.gov/assessment-guidance

The **Oklahoma School Testing Program (OSTP)** material page provides more information about the state tests your student took such as Parent, Student, Teacher Guides (PSTGs) and testing blueprints. https://sde.ok.gov/assessment-material

GLOSSARY OF TERMS

Performance Level: Reflect overall performance and are determined by where a student's OPI score falls within a defined range for each academic area. Oklahoma reports four performance levels: **Below Basic**, **Basic**, **Proficient**, or **Advanced**.

Performance by Category: Represent groups of similar student skills assessed within each grade and subject. For example, performance categories reported for grades 3-8 mathematics include Numbers and Operations, Algebra and Algebraic Reasoning, Geometry and Measurements, and Data and Probability. Each performance category uses an indicator to show student performance on the subset of items associated with the category. These indicators are **Approaching Expectations**, **Near/At Expectations** and **Achieving Expectations**.

ADDITIONAL RESOURCES AND INFORMATION

Office of Assessment Phone: (405) 521-3341 Office of Special Education Phone: (405) 521-3351 Office of Curriculum and Instruction

Phone: (405) 521-4287

Grade 6

Student: Local ID: State ID: Birth Date: School: District: Code:

Dear Family,

This report showcases your student's performance on the spring 2023 Oklahoma School Testing Program (OSTP) in key academic areas. State test results, when combined with other information - (i.e. homework, classwork, report card grades and local assessments), can help you and the teacher work together to support your student's growth.

Your student's score report helps you know:

- · how your student performed in each academic area
- · where your student is doing well and where they may need additional support
- how your student performed compared to others
- how you can support your student at home and at school

If you have any questions, please contact your local school or the Office of Assessment at Assessments@sde.ok.gov.

Sincerely,

Ry Walter

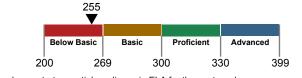
Ryan Walters

State Superintendent of Public Instruction

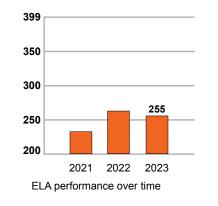
English Language Arts

255

Below Basic



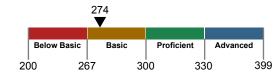
demonstrates partial readiness in ELA for the next grade or course and may need targeted support to bring them to grade level.



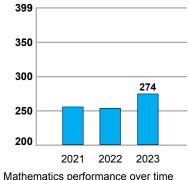
Mathematics

274

Basic



demonstrates partial readiness in Mathematics for the next grade or course and may need additional support.



Mathematics performance over time



English Language Arts (ELA) ▶ BELOW BASIC

Students scoring **Below Basic** do not typically:

- comprehend, interpret, evaluate, and respond to basic literary and informational texts, applying limited critical thinking skills at times.
- create a summary including main ideas and easily identified supporting details.
- paraphrase main ideas with some supporting details in a text.
- compare and contrast stated or implied purposes of authors' writing some of the time.
- identify some literary devices, points of view, and perspectives and describe how authors use key literary elements at times.
- categorize facts included in an argument some of the time.
- engage in a writing process to compose basic narrative, informative, and opinion responses for varied purposes and audiences using some developed ideas, organization, word choice, sentences, voice, and predictable vocabulary.
- introduce a basic opinion supported with simple facts and details in opinion writing.
- use vocabulary knowledge and resources to interpret simple text through word parts, word relationships, or context clues.
- identify and apply some rules of grammar and mechanics.
- locate, record, and organize basic information on a topic in order to present findings.

Students scoring Basic typically:

- read, order, represent, and explain rational numbers expressed as fractions, decimals, percents and ratios.
- write positive integers as products of factors.
- illustrate or simplify the addition and subtraction of integers.
- identify and compare quantities, determine unit rates and find equivalent fractions and percents.
- multiply and divide nonnegative rational numbers.
- graph ordered pairs in all quadrants.
- represent reflective relationships between varying quantities.
- evaluate the value of variables in expressions, equations and inequalities.
- use number sense and properties of operations to solve an equation and graph the solution.
- determine the area of parallelograms and triangles.
- identify angle relationships by name.
- identify and display the effect of transformations.
- identify lines of symmetry.
- calculate measures of central tendency, determine the sample space of simple experiments and identify possible outcomes.

ELA Performance by Reporting Category Points

Earned /

Points Possible Ways to Support

4 / 17

Reading/Writing Process ► Approaching Expectations

- Make time to read aloud to your student. Let them pick which book you read and then talk about what you read.
- Encourage your student to keep a diary or journal and write about something every day.

1 / 13

Critical Reading/Writing ► Approaching Expectations

- Ask your student details (names of characters, how plot or theme shapes the story, facts and opinions, etc.) about the book or article they are reading.
- Discuss current events or local issues with your student. Brainstorm pros and cons and have them write in favor of one side or the other.

8 / 10

Vocabulary ► Near/At Expectations

- As a family, learn one new word per week. Use it in your conversations and display it in a special place. Take turns picking the word of the week.
- Help your student to use references such as the Internet or a dictionary to find the meaning of unfamiliar words.

2/6

Language ▶ Approaching Expectations

■ Help your student think about how language is used to communicate ideas. (For example, find an interesting sentence from a book, news story, or magazine article. Talk with your student about what makes it interesting. Then help your student write an interesting sentence of their own.)

2/6

Research ► Approaching Expectations

■ Encourage your student to create a list of topics they would like to know more about. Talk about which resources provide reliable information and talk about what makes the information trustworthy.

For more information on supporting your student, please visit the OSDE Family Guides found at https://sde.ok.gov/oklahoma-family-guides.

Mathematics Performance by Reporting Category

Points Earned /

Points Possible Ways to Support

11 / 21

Number & Operations ► Approaching Expectations

- Model how you use positive and negative numbers in the real world (such as managing your bank account).
- Make connections between real world and mathematical problems involving ratios (such as sports statistics).

4 / 11

Algebraic Reasoning ► Approaching Expectations

■ Help your student develop problem-solving skills by asking them to share how they find unknown, number-based information and by sharing how you find this information (for example, costs of items, number of items you can buy with a certain amount of money, etc.).

Mathematics ► BASIC

5 / 12

Geometry & Measurement ► Approaching Expectations

■ Ask your student to make connections between real world and mathematical problems involving ratios and area (for example, finding the area of various rooms in multiple measurement units [feet, meters, etc.] and comparing the different room measurements using ratios).

2/6

Data & Probability ► Approaching Expectations

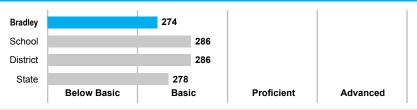
- Help your student make connections between real world and mathematical problems involving the measures of central tendency by asking them to look at different real world graphs and find the average, median, mode and range of the number data.
- Help your student look for probability in real life. (For example, what is the likelihood of a particular event happening? How do you know?)

For more information on supporting your student, please visit the OSDE Family Guides found at https://sde.ok.gov/oklahoma-family-guides.

ELA Performance Compared to School, District, and State



Mathematics Performance Compared to School, District, and State



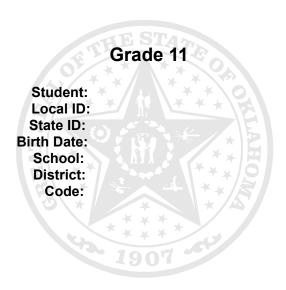
Your student's Lexile score:

745L

The **Lexile measure** provides a score that describes the level at which your student can comfortably read challenging text and also describes the complexity of texts, taking into account such features as vocabulary and sentence complexity. This measure, along with consideration of your student's interests and experiences, is helpful in finding texts for independent reading. For more information on Lexile measures, please visit https://sde.ok.gov/lexiles.

Your student's Quantile score: **800Q**

The **Quantile measure** provides a score that describes your student's level of mathematical ability and the difficulty of a skill or concept as it relates to other mathematical skills and concepts your student is learning. The score shows your student's readiness for instruction regarding a particular mathematical skill or concept. For more information on Quantile measures, please visit https://sde.ok.gov/quantiles.



Dear Family,

This report showcases your student's performance on the spring 2023 College and Career Readiness Assessment (CCRA) in key academic areas. State test results, when combined with other information (i.e., homework, classwork, report card grades and local assessments), can help you and the teacher work together to support your student's growth.

Your student's score report helps you know:

- · how your student performed in each academic area
- where your student is doing well and where they may need additional support
- · how your student performed compared to others
- how you can support your student at home and at school

If you have any questions, please contact your local school or the Office of Assessment at Assessments@sde.ok.gov.

Sincerely,

Ry-Wolter

Ryan Walters

State Superintendent of Public Instruction

English Language Arts

OPI: 251 Below Basic



demonstrates partial readiness in ELA for the next grade or course and may need targeted support to bring them to grade level.

Mathematics

OPI: 231 Below Basic



demonstrates partial readiness in Mathematics for the next grade or course and may need targeted support to bring them to grade level.

Science

OPI: 258 Below Basic



demonstrates partial readiness in Science for the next grade or course and may need targeted support to bring them to grade level.

U.S. History

OPI: 258 Below Basic



demonstrates partial readiness in U.S. History for the next grade or course and may need targeted support to bring them to grade level.

English Language Arts ► BELOW BASIC

Students scoring **Below Basic** may need targeted support in developing skills and abilities to bring them to grade level. Students scoring below basic may:

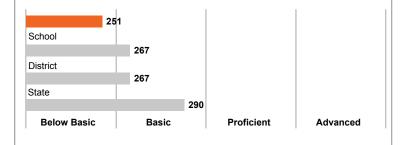
- Comprehend, analyze, and synthesize information from literary and informational texts, applying limited close reading skills across a range of subject levels and complexity levels.
- Inconsistently locate explicitly stated details, make inferences about characters and actions, and identify central ideas when they are clearly stated
- Sometimes use knowledge about the author's craft and the text structure to determine the text's primary purpose and the function of key textual elements.
- Identify knowledge and ideas from across multiple related texts, comparing details that texts have in common.
- Attempt to blend multiple modes of writing to produce argumentative essays on substantive topics.
- Produce writing that responds to multiple perspectives, establishes a thesis claim that shows some clarity in thought, and provides limited analysis of the issue.
- Develop ideas and support claims with some relevant evidence that is often overly general, sometimes using basic reasoning and illustration that may be repetitious.
- Attempt to use a recursive writing process and create a simple organization with some transitions that establish relationships among ideas.
- Use language that is sometimes imprecise to convey meaning.
- Use sentence structures that are usually clear but show little variety.
- Interpret vocabulary, including basic figurative language, sometimes inferring the meaning of key words and phrases by using the context.
- Demonstrate understanding of familiar and some general academic vocabulary.
- Make inconsistent word choices and may use inappropriate tone in their writing.
- Inconsistently apply knowledge of the English language and rhetorical style to make meaning when analyzing, evaluating, producing, and revising texts.
- May recognize obvious disturbances in sentence structure.
- Demonstrate an inconsistent command of the conventions of English grammar, usage, and mechanics.

Mathematics ► BELOW BASIC

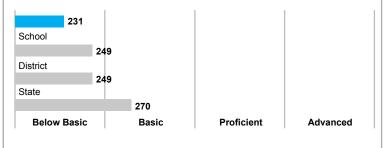
Students scoring **Below Basic** may need targeted support in developing skills and abilities to bring them to grade level. Students scoring below basic may:

- Add complex numbers and add matrices.
- Simplify square roots.
- Rewrite monomials with integer exponents to have positive exponents.
- Create linear expressions, equations or inequalities to model contexts.
- Create systems of two linear equations to model contexts.
- Solve systems of two linear equations with integer coefficients.
- Make connections between different representations of linear relationships between two variables
- Create and use linear relationships to solve a problem.
- Multiply polynomials by monomials.
- Multiply binomials.
- Factor monomials from polynomial expressions.
- Factor trinomials
- Add and subtract polynomials.
- Solve quadratic equations in the form $ax^2 = b$.
- Solve simple radical equations.
- Use function notation to represent functions.
- Evaluate absolute value functions.
- Evaluate simple algebraic expressions
- Identify the shape of graphs from some of their points.
- Identify graphs of nonlinear relationships between two variables based on descriptions of characteristics.
- Read and interpret information presented in graphs, scatterplots, or tables.
- Find the median or mean of data sets.
- Find probabilities of simple events.
- Estimate expected population counts or proportions from sample counts or proportions.
- Find probabilities of simple compound events.
- Calculate simple conditional probabilities.
- Solve simple problems about geometric figures using the vertical angle theorem, the triangle angle sum theorem, or theorems about a transversal crossing parallel lines.
- Solve real-world problems using the Pythagorean Theorem.
- Solve simple problems involving perimeter, area and volume.
- Identify corresponding parts of congruent triangles.
- Translate points horizontally and vertically on a coordinate plane.

Performance Compared to School, District, and State



Performance Compared to School, District, and State



Science ► BELOW BASIC

Students scoring **Below Basic** may need targeted support in developing skills and abilities to bring them to grade level. Students scoring below basic may:

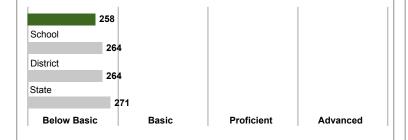
- Use basic patterns and models to identify and describe components between or within systems related to the energy of motion and the structure and properties of matter, and the relationships between energy and matter.
- Use simple mathematical models and conduct investigations to produce data or use provided data to support explanations or claims about the conservation of energy and matter during chemical reactions, the effects of different types of interactions, definitions of energy, conservation of energy and energy transfer within a system and/or system model, and how matter affects wave properties.
- Evaluate the validity and/or reliability of a simple claim about the effects of electromagnetic radiation on matter from a published source.
- Identify and describe basic relationships and construct explanations based on evidence from a variety of sources about patterns relating to the structure and properties of matter; identify how temperature or concentration affects the rate of chemical reactions; and define energy and matter in order to design solutions around defining and delimiting engineering problems and interdependence of science, engineering, and technology.
- Identify or describe basic components or relationships among components within systems and system models related to structure, function, growth and/or development of organisms, organization of matter and energy flow in organisms, cycles of matter and energy transfer in ecosystems, or energy in chemistry processes.
- Conduct investigations to produce data; use provided data to support explanations or claims about the stability related to structure and function of organisms, interdependent relationships in ecosystems at different scales, the cycling of matter and flow of energy among organisms in an ecosystem, the effect variation of traits has in a population, patterns that show evidence of natural selection or adaptation.
- Synthesize scientific information to communicate using a partial understanding of the patterns that show evidence of common ancestry, diversity, or adaptation.
- Ask questions to identify relationships about the effect of structure and function on inheritance of traits; or describe arguments based on evidence to communicate understanding of stability and change in ecosystem dynamics, function and resilience, the cause-and-effect relationships of social interactions, group behaviors, adaptation, and variation of traits.
- Identify and describe basic relationships based on evidence of the cause-and-effect relationships in natural selection, adaptation, and how the structure of DNA determines protein structure and impacts the function of the cell; or identify and describe explanations from evidence for how matter and energy is organized, cycled, and transferred within an organism or ecosystem.

U.S. History ▶ **BELOW BASIC**

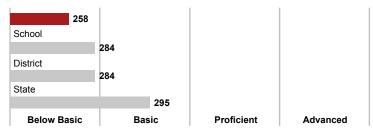
Students scoring **Below Basic** may need targeted support in developing skills and abilities to bring them to grade level. Students scoring below basic may:

- Inconsistently apply social studies content knowledge in order to make connections between, and partially understand, how eras and events throughout United States history have influenced subsequent eras.
- Partially analyze how post-Reconstruction civil rights struggles, westward expansion, immigration, and American Indians were impacted by federal policy from 1865 to the 1920s
- Partially evaluate how the American Industrial Revolution, the Progressive Movement, and the impact of key individuals transformed the United States from the 1870s to the 1920s.
- Partially describé the causes and effects of the United States developing into a world power through foreign and domestic policies from 1890 to 1920.
- Partially identify the factors that transformed the American government, economy, and society during the 1920s and 1930s.
- Summarize some of the major causes, events, and effects of the United States' involvement in World War II, from 1933 to 1946, transformed the nation, including the Nuremberg Trials.
- Partially describes the economic, political, and social effects of containment of Communism and Cold War from 1945 to 1975.
- Partially examine how the domestic events and policies, including various civil rights movements, transformed the United States from 1945 to 1975.
- Identify the impact of United States' foreign and domestic policy both at home and abroad from 1977 to 2001.
- Partially apply critical thinking skills, demonstrating an inconsistent ability to comprehend, interpret, evaluate, and utilize primary and secondary sources.

Performance Compared to School, District, and State



Performance Compared to School, District, and State



USING THIS REPORT TO MEET WITH YOUR STUDENT'S TEACHER OR SCHOOL

As your student's first teacher, you are a critical part of their education. It is important to remember that your student's strengths, abilities and potential cannot be measured by a single test score. Each student grows at different rates both physically and academically. State tests help gauge how your student is growing in the knowledge and skills outlined in the Oklahoma Academic Standards. State test results, when combined with other information (i.e., report card grades, teacher feedback, classroom performance and local tests), can help you and the teacher understand where your student is making progress and where they may need extra support. Ask your student's teachers and/or school:

- Where is my student excelling? How can I support this success?
- What do you think is giving my student the most trouble? How can I help my student improve in this area?
- What can I do to help my student with upcoming work?
- What curriculum and learning experiences do you provide to support my student?

OKLAHOMA STATE DEPARTMENT OF EDUCATION (OSDE) RESOURCES

The **OSTP Parent Portal** - is an interactive web-based tool you can use to access information about your student's OSTP results. (Note: You will need your student's state ID [STN] number and date of birth to set up an account. Your student's state ID [STN] number is located on the front of this report.) https://okparentportal.emetric.net/login

The **OSDE Graduation Resources** page provides links and tools you can use to help answer questions you may have about graduation requirements and career and college readiness. https://sde.ok.gov/achieving-classroom-excellence-resources

The **OSDE Family Engagement** page is home to tools and resources that support partnerships between families and schools. https://sde.ok.gov/families

The **OSDE Assessment Guidance for Families** page provides information and guidance on interpreting and using data from student assessments. https://sde.ok.gov/oklahoma-school-testing-program-ostp-families

GLOSSARY OF TERMS

Performance Level: Reflect overall performance and are determined by where a student's OPI score falls within a defined range for each academic area. Oklahoma reports four performance levels: **Below Basic**, **Basic**, **Proficient**, or **Advanced**.

OPI Score: The Oklahoma Performance Index (OPI) score allows for a numerical comparison between students. For example, we can compare scale scores for students who took the 5th grade mathematics test this year with those who will take this test next year. Scale scores are not comparable across different subjects.

ADDITIONAL RESOURCES AND INFORMATION

Office of Assessment Office of Special Education Phone: (405) 521-3341 Phone: (405) 521-3351

Office of Curriculum and Instruction

Phone: (405) 521-4287



APPENDIX U REPORTING BUSINESS REQUIREMENTS



Reporting Business Requirements

156052 - OSTP 2023 Oklahoma (Grade 3-8: Math, ELA, Science)

159052 - CCRA 2023 Oklahoma (Grade 11: Science, US History)

Spring 2023

Version Number	Date	Updated Content Description	Updated By Name
1.0	1/30/23	Initial Document	Woreen Bogle
	1/31/23	PgM edits incorporated	Woreen Bogle
	2/6/23	Reporting team edits incorporated	Woreen Bogle
	2/14/23	CCRA student report changes added	Woreen Bogle
	2/15/23	Incorporated decisions based on TAC meeting	Woreen Bogle
	3/13/23	Updates regarding ACT/SAT data file from SDE	Woreen Bogle



Table of Contents

I.	Overview	5
A.	Points of Contact	5
В.	Changes from 21-22	5
C.	Contract File Layouts and other documentation	5
D.	Risks	6
II.	General Information	6
A.	Assessments	6
В.	Reporting Phases	6
C.	Receivables	7
D.	Deliverables	8
III.	Pre-Assessment Processing	8
A.	Student Roster and Test Data Preparation	8
IV.	Post Test Assessment Administration	9
A.	Preliminary and Expedited Reporting	9
В.	Clean Up Window	10
C.	Student Data Processing	10
D.	Test Data	10
E.	Scan Paper Delivery and Data Denotation	10
F.	Data Validation	11
G.	Blank Books	11
Н.	Login Discrepancy	11
l.	Spanish Tests	11
J.	Void Bubble	11
K.	Paper Booklet/Test Identity	12
L.	Overlay Data	12
M.	Test and Overlay Variable Reconciliation	13
N.	Demographic Cleanup	13
Ο.	Duplicate Processing	13
Ρ.	Breach Processing	14
Q.	Merge Tests	14
R.	Processing ACT/SAT Score Data File	15
S.	Processing Scoring Data	15
V.	Student Participation and Exclusions	16



A.	Test Attempt Rules	16
B.	Test Design	16
C.	Not Tested Reasons	18
D.	Student Participation Status	18
VI.	Calculations	18
A.	Participation Status Summary	18
B.	Demographic Reporting	19
C.	Scoring Items	19
D.	Performance Levels	21
E.	Aggregate Calculations	21
VII.	Specific Reporting Rules	21
A.	Student Results Label(s)	21
B.	OSTP Student Report	22
C.	CCRA Student Report	23
D.	Datafile Deliverables	23
VIII.	Content Design and Development	25
A.	Assessment Content	25
IX.	Shipping Product Code Summary	30
A.	Reporting Products	30
X. A	Appendix	30
A.	Math Performance Level Descriptors for CCRA student report	30
B.	ELA Performance Level Descriptors for CCRA student report.	31
XI.	Addenda	32



I. Overview

This document describes the Reporting requirements for the Spring 2023 assessments in Oklahoma. Assessments being administered by Cognia in Oklahoma are the Oklahoma School Testing Program (OSTP) and the College and Career Readiness Assessment (CCRA).

A. Points of Contact

Title	Name
Client Services Lead Program Manager	Elizabeth Garcia
Client Services Senior Program Manager	Sarah Melmed
Client Services Program Manager	Robin Petrowicz

B. Changes from 21-22

- 1. There will be a standard setting conducted for grade 8 science in 2023.
- 2. New science standards in 2023 in grades 8 and 11 science.
- 3. Reporting category performance categories are renamed in 2023.
- 4. Class names are the classes created by school administrators in the testing platform. Class/Teacher information is no longer provided in the demographic files.
- Writing prompts will be separated from the rest of the ELA test. This will allow Writing prompts to be invalidated without the whole ELA test needing to be invalidated and retaken.
- 6. New TEI item types in ELA
- 7. No ranking files in 2023. With Standard setting done in 21-22, USH will have full results available.
- 8. OSTP and CCRA on separate reporting timelines. Data files are reported by program.
- 9. Participation files will be needed for preliminary reporting grade 8 science.
- 10. Blank breach forms will be suppressed from the data.
- 11. TEI field test items in US History
- 12. The tests will be pattern scored.
- 13. ACT/SAT equivalent scale scores and PLDs added to the CCRA student report. US History and Science Reporting category reporting is removed from the report.

C. Contract File Layouts and other documentation

- 1) Data File Layouts and Schema Documentation Files
 - a) OKXXXX StudentResultsLayout.xlsx
 - b) OKXXXXeMetricReportingTransfer.xlsx-used for both OSTP and CCRA results.
 - c) OKXXXXeMetricSummaryDataTransfer.xlsx-used for both OSTP and CCRA results.
 - d) OK_MediaRedacted_Layout_22-23.xlsx used for both OSTP and CCRA results. Column indicates which fields are valid for each program.
 - e) OKXXXXRosterOutboundSchemaDocumentation.xlsx
 - f) OSTPXXXXStudentLabelsSchemaDocumentation.xlsx



- g) CCRAXXXXStudentLabelsSchemaDocumentation.xlsx
- h) OSTPXXXXStudentReportSchemaDocumentation.xlsx
- i) CCRAXXXXStudentReportSchemaDocumentation.xlsx
- j) OKStudentDataDefinitions.xlsx
- k) DemographicOverlayLayout.xlsx
- I) eMetricPostAdminTransfer.xlsx
- m) Pre-ID layout
- n) File with the ACT/SAT equivalent scale scores and performance levels.

Where XXXX is the academic year

D. Risks

All stakeholders shall be notified of any risks associated to their responsible area's and be engaged as necessary.

II. General Information

A. Assessments

The CCRA testing window begins on April 3, 2023. The window for paper testers concludes on April 14, 2023. The online testing window concludes on April 27, 2023. The OSTP testing window begins April 17, 2023. The window for paper testers concludes on May 3, 2023. The online testing window concludes on May 17, 2023.

	Overview						
_	OSTP	03 04 06 07	ELA, Math	Online Operational (in English) Online Breach (in English) Online Spanish (Math and Science only)			
	OSIP	05 08	ELA, Math, Science	Paper Operational (in English) Paper Breach (in English)			
one	CCRA		Science	Online Operational (in English)			
atic				Online Breach (in English)			
Operational				Online Spanish			
0				Paper Operational (in English)			
				Paper Breach (in English)			
				Online (in English)			
			LIC History	Paper (in English)			
			US History	Online Spanish Online Breach (in English) Paper Breach in (in English)			

B. Reporting Phases

See the Reporting Schedule for specific dates included in each phase.

1) Pre-ID – This is the period before the test administration window begins.



- a) Using the Pre-ID file from SDE Cognia produces Pre-administration labels.
- b) Pre-administration labels are provided only for those students indicating a Paper based test.
- c) A pre-administration label is produced for each subject a student is expected to take depending on the student's grade.
- d) Cognia provides eMetric with a data file of students that are identified as taking their tests online. The data are provided according to the OKStudentDataDefinitions file layout.
- e) Pre-ID data is used to populate Outbound Rosters which accompany the preadministration labels.
- 2) Expedited Reporting This is the period after the test administration but before the Preliminary Reporting period.

Cognia provides eMetric with the student results data files populated with only the Grade 3 Reading results. The points possible table is also handed off to eMetric. The data files conform to the layouts in the eMetricReportingTransfer document. This is to satisfy the early Reading Sufficiency Act (RSA) reporting requirement.

- 3) Preliminary Reporting
 - a) Cognia provides the SDE with preliminary student results and participation data files.
 - b) Cognia provides eMetric with preliminary student results data.
- 4) Final Reporting The period following state cleanup and receipt of the Demographic Overlay file and final SSC files from SDE.
 - Cognia will provide SDE with the final state student results data files for OSTP and CCRA
 - b) Cognia will provide eMetric with the final data to populate Data Interaction and the Parent Portal
 - c) Cognia reporting team will provide Psychometrics data support for the Technical Report and Data Forensics deliverables.

C. Receivables

Receivable	Received from	Description	Method of Delivery
Pre-ID file (all grades)	SDE	WAVE and Non-WAVE student data	sftp
Post Admin Extract (by administration)	eMetric	Student Post-test data	Database backup
Demographic Overlay (all grades)	SDE	Student Demographic file to be used as the source of student demographic information for students with a verified student ID. The source is the WAVE file.	sftp
Student Status Code (all grades)	SDE	Lists tests to be invalidated (will now include writing as a subject)	sftp
CCRA ELA/Math scores	SDE	Student level data file containing the ACT/SAT equivalent scale scores for High School students	sftp



D. Deliverables

Contract	Deliverable	File Layout	Method of Delivery	Recipient
PRE-TEST	ADMINISTRATION			
OSTP CCRA	Mock PreID Student File	OKStudentDataDefinitions	sftp	eMetric
OSTP CCRA	Outbound Roster	N/A	Printed/shipped	Schools
OSTP CCRA	Reporting Test Deck	eMetricReportingTransfer; eMetricSummaryTransfer	sftp	eMetric
EXPEDITE	ED REPORTING			
OSTP	Student Results Data Grade 3 RSA	eMetricReportingTransfer	Sftp	eMetric
PRELIMIN	ARY REPORTING			
OSTP CCRA	State Student Results (non-Grade 8 science) 1 file for OSTP and 1 file for CCRA	StudentResultsLayout	sftp	SDE
OSTP	Participation data file (Grade 8 science)	StudentResultsLayout	sftp	SDE
OSTP CCRA	Points Possible table	eMetricReportingTransfer	Sftp	eMetric
OSTP CCRA	Student Results Data File (non- Grade 8 science)	eMetricReportingTransfer	sftp	eMetric
OSTP CCRA	Summary Data File (a file per grade) (non-Grade 8 science)	eMetricSummaryTransfer	sftp	eMetric
FINAL RE				
OSTP CCRA	Student Results Data File (1 file for OSTP and 1 file for CCRA)	eMetricReportingTransfer	sftp	eMetric
OSTP CCRA	Summary Data File (one file per grade)	eMetricSummaryTransfer	sftp	eMetric
OSTP CCRA	Points Possible table	eMetricSummaryTransfer	sftp	eMetric
OSTP CCRA	Media Redacted file (one file for OSTP and 1 file for CCRA)	OK_Media_Redacted_Layout	sftp	SDE
OSTP	Individual Student Reports	N/A	printed pdf	Shipped to Districts
CCRA	Individual Student Reports	N/A	printed pdf	Shipped to Districts
OSTP CCRA	Student Results Labels	N/A	printed pdf	Shipped to Districts
OSTP CCRA	Student Results Data File (one file for OSTP and one file for CCRA)	StudentResultsLayout	sftp	SDE

III. Pre-Assessment Processing

Pre-Assessment activities are completed prior to the testing window. Using the pre-ID data, provided by SDE, Cognia produces and ships test administration labels and the Outbound rosters to districts.

A. Student Roster and Test Data Preparation

Pre-ID data is received from the SDE to prepare for the test administration. The Pre-ID data contains student information, including demographics, and program information for students



eligible to take the assessments. The source of the pre-ID from the SDE is the Accountability Reporting Application, the Student Information System in Oklahoma.

The SDE shares Student Information with the State of Texas, in the district of Texhoma, district code 701061, located in Texas for grades three and four. The Oklahoma Student Information System includes the students located in Texas for Public School Funding purposes. The Students in the State of Texas are not included in any reporting or rostering activities.

- Student information is provided by SDE in the WAVE file. Student data not available in the WAVE are provided by the districts in separate data files to Cognia directly. The data from the non-WAVE districts is provided in a different layout from the WAVE data. In 2023, Class/Teacher information was removed from the layouts for the WAVE and non-WAVE files.
- 2) Students in Grades 03 and 04, in the School District of Texhoma (701061) Texhoma Elementary School (105) are removed from data to handed off to iCore and eMetric. These students do not take OK assessments.
- 3) Students in Texhoma district in grades 5-8 are expected to take OK assessments.
- 4) Cognia provides the final Pre-ID data to eMetric prior to the test administration window.
- 5) Cognia provides data for student test booklet labels to the iCore distribution group. These labels are printed and shipped to the district for all students taking paper tests.
- 6) Data from the Pre-ID files are used to produce the Outbound Rosters. These rosters are printed and shipped along with the pre-administration labels districts and schools.

IV. Post Test Assessment Administration

The Testing window is closed prior to processing and reporting. The commencement of the testing window initiates the following activities to report test results.

A. Preliminary and Expedited Reporting

- 1) eMetric provides the post testing data to Cognia in the post admin extract layout.
- 2) Cognia Reporting team provides Psychometrics with data to support Scaling and Equating.
- 3) Cognia Reporting team provides Psychometrics with student level data for Grade 3 ELA. Psychometrics uses Grade 3 Reading items in Standards 2 and 4 to determine if a student achieves the RSA requirement. An indicator is provided back to the reporting team to indicate that the student achieves or does not achieve the requirement. The technical report each year provides additional details about the psychometrics for Grade 3 RSA.
- 4) Due to the timing of RSA reporting, any CR items within these standards will not be included in the RSA calculations.
- 5) During expedited reporting, key verification will be done for all grades and subjects. During this period only machine scores are available. Adjudication is also done for TEIs to ensure correct scoring of these items. Psychometrics and Content Development work together in this effort. This is done prior to reporting.
- 6) For Preliminary Reporting, machine scores and hand scores are available.



B. Clean Up Window

- 1) The SDE will perform post-test clean-up of Student Participation and Demographic record modifications using the preliminary data from Cognia
- 2) The following steps define the process to be followed:
 - a) Specific fields will be identified as editable.
 - b) FAY/NFAY is a snapshot of the status at the time of delivery of the final cleanup file from the SDE
 - c) After cleanup by SDE, the updated GRF is returned to Cognia reporting team.
- 3) The eMetric Reporting Portal will have a note to direct users to SDE's Accountability Systems for a more accurate student status.

C. Student Data Processing

- Student IDs are provided by the SDE whenever possible. In the event the state does not provide a Student ID for a test, Cognia will assign a unique test ID for processing purposes.
 - a) If the Student ID is blank, Cognia creates a unique number using the eMetric ID. It Is stored as the booklet number. The Student ID remains blank.
 - b) All created IDs will be a ten-digit number which may not begin with 0 (zero) or "100".
- 2) Student data from the Overlay datafile are used for reporting student demographic data if the student has a valid verified student ID that links to the Overlay file.

D. Test Data

- 1) Every imported test record must be associated with a student record.
- 2) Test Mode is captured in all test records as 1: Online or 2: Paper.
- 3) Braille tests for subjects except Science are from Spring 21-22 paper tests.
- 4) Duplicate test records are merged/resolved prior to reporting:
 - a) All attempted duplicate records are reviewed and updated accordingly based on SDE feedback as necessary.
 - b) In the event the student has a test record with no items attempted, Cognia does not suppress any records unless specifically directed to do so as part of the duplicate resolution.

E. Scan Paper Delivery and Data Denotation

Each Paper Booklet is scanned and delivered immediately to the Cognia Reporting team. At the time of receipt, the reporting team performs procedures to accurately identify discrepancies in the data. The data is handed off in the agreed upon format specified in the Scan Delivery Layout and Scanning Specifications document.

- 1) Any and all discrepancies with the Scan File are resolved accordingly.
- 2) The reporting team provides a report of all discrepancies back to the Scanning department for research and/or re-scanning.



F. Data Validation

- 1) The Date of Birth field is set to blank if the value does not pass the 6 numeric value validation of (mmddyy).
- 2) All non-Alpha characters are set to blank for First Name, MI and DOB fields where there are non-Alpha characters in the fields.
- 3) SDE may provide information on any unresolved test data records that have no student association.
- 4) Ethnicity is reported as selected.
 - a) If Hispanic/Latino ethnicity is selected, the record is reported as Hispanic/Latino regardless of any additional ethnicity value selected.
 - b) If more than one ethnicity is selected and none of them Hispanic/Latino, the ethnicity is reported as Two or More Races
 - i) Valid Ethnicity Values include:
 - (1) Black/African American
 - (2) American Indian/Alaska Native
 - (3) Hispanic/Latino
 - (4) Asian
 - (5) Pacific Islander
 - (6) White/Caucasian
 - (7) Two or More Races

G. Blank Books

- 1) Records are suppressed from reporting if all the following fields are blank:
 - a) First Name
 - b) Last Name
 - c) Bubbled Student ID
 - d) Student Label
 - e) All item responses

H. Login Discrepancy

- 1) A comparison is made between the location where a label was sent and where the label is returned from. A login discrepancy occurs if these are different locations.
- 2) In the event of a login discrepancy, the Label location is used.
 - a) Schools/Districts can resolve during the clean-up period allowed.

I. Spanish Tests

1) There are no paper Spanish Tests. All Spanish tests are available online only. Spanish tests are available in grades 3-8 and CCRA.

J. Void Bubble

- 1) Preliminary reporting includes Void (that are not invalidated) records.
- 2) For final reporting, all remaining VOID booklets will be suppressed.



K. Paper Booklet/Test Identity

1. If a label exists, label always trumps bubbled information.
If a valid label exists and the barcode matched to label data, assign Student ID that was assigned to the barcode.

Apply demographic data from label data.

- Name, DOB, District Student ID
- 2. If a label does not exist, and Bubbled State Student ID links to Overlay.
 - And the first 3 characters of bubbled Lname and Fname (or the inversion of Names) matches.

(Note: blank data indicates no conflict)

- 3. If a label does not exist, and Bubbled State Student ID links to Overlay.
 - And the first 3 characters of bubbled Lname and Fname (or the inversion of Names) matches.

(note: blank data indicates no conflict)

- 4. Bubbled LocalID link to District Student ID in Overlay
 - And school matches
 - And first name and last name matches.
- 5. Bubbled State Student ID link to District Student ID in Overlay
 - And school matches
 - And first name and last name matches.
- 6. Apply overlay demographic data when assigned **student ID** matched.
- 7. SDE will participate in resolution of any unidentified book or student.

L. Overlay Data

- 1) The Demographic Overlay file is provided by the SDE to Cognia for reporting purposes.
 - a) The demographic overlay file is the most up-to-date demographic information submitted by available in the student information systems.
 - b) If a Student ID is not unique within a school, the Program Manager will be notified for research and resolution.
 - c) A file will be delivered to the Program Manager with all requested resolutions.
 - d) Demographics available in the Demographic Overlay file will be used in reporting a student if the Student ID exists in the Demographic Overlay file and has been verified. Otherwise, the demographics provided in the testing platform will be used.
 - A student record will be created for students without tests but are present in the Demographic Overlay file. Test records will be built out from the Demographic Overlay where the Student ID does not exist in the test data.
 - 3) The updates made in the returned preliminary file will be overwritten by the Demographic Overlay file if the Student ID exists in the Overlay file.



M. Test and Overlay Variable Reconciliation

- 1) Set the IEP value in the test record to 0 if Student IEP from the Overlay file is not set to '1' for students that link to the Overlay file or 'Y' for students whose data is coming from the test record.
 - a. If Student IEP is '1' or 'Y' and test IEP is '1' then test IEP remains set to '1'.
 - b. If Student IEP is '0' or 'N' and test IEP is '1' then test IEP is set to '0'.
 - c. If Student IEP is '1' or 'Y' and test IEP is not '1' then test IEP is set to '2'.
- 2) Set test Plan504 as follows:
 - a. If Student Plan504 is '1' or 'Y' and test Plan504 is '1' then test Plan504 remains set to '1'.
 - b. If Student Plan504 is '0' or 'N' and test Plan504 is '1' then test Plan504 is set to '0'
 - c. If Student Plan504 is '1' or 'Y' and test Plan504 is not '1' then test Plan504 is set to '2'.
- 3) Set Test ELL as follows:
 - a. If Student ELL is '1' or 'Y' and test ELL is '1' then test ELL remains set to '1'.
 - b. If Student ELL is '0' or 'N' and test ELL is '1' then test ELL is set to '0'.
 - c. If Student ELL is '1' or 'Y' and test ELL is not '1' then test ELL is set to '2'.

N. Demographic Cleanup

- 1) NFAY is not available in Preliminary Reporting. SDE will update during the cleanup period and provide back to Cognia.
- 2) Grade
 - a. Student Grade is provided by SDE in the Overlay file
 - b. Where Student Grade is not available, the Student Grade is set to the Tested Grade

O. Duplicate Processing

Multiple Choice duplicate test items are identified when there is more than one record with the same verified Student ID. A record is attempted when five or more MC/PMC/TEI responses to any item(s) has been recorded. All duplicate records with less than five responses will be suppressed from reporting.

- For all online test duplicate records in which there are five or more MC/PMC/TEI
 responses, the test record with the earliest Start Date will be used where there is a valid
 participation status.
 - a) All records with a greater Start Date will be flagged as 'Do Not Report-Duplicate.'
- 2) For all paper test duplicate records in which there are five or more MC/PMC/TEI responses, all paper tests will be reported in Preliminary Reporting and SDE will resolve all paper duplicates for Final Reporting.
- 3) For all test duplicate records where there are five or more MC/PMC/TEI responses on the Online test and five or more MC/PMC/TEI responses on the Paper test, the Online test will be the record of source.
 - a) The duplicated Paper test will be flagged as 'Do Not Report Duplicate.'



- 4) For duplicate online tests with less than five MC/PMC/TEI responses, the test with the lower TestDate will be reported. The other test will be suppressed from reporting.
- 5) For all test duplicate records where there are two or more Paper records with less than five MC/PMC/TEI responses, the Paper record with the earliest Bubbled valid Test Date will be the record of source.
 - a) In the event of all duplicate paper tests that do not have a Bubbled Test Date, the Booklet number with the lowest sequence number will be the source of record.
- 6) For duplicate cases with online and paper records with less than five MC/PMC/TEI responses, the online record is reported. The paper record is suppressed from reporting.
- 7) Any duplicates not resolved are included in the data reported to eMetric. These duplicates are included in aggregations based on the participation status of the test and the schooltype.

P. Breach Processing

- 1) A valid breach test needs to be accompanied by an Invalidated operational test.
- 2) An Invalidated operational test needs to be indicated in the SSC file from SDE.
- 3) A breach test is Invalidated when an Invalidated operational test does not exist in SSC file, matching by STN and Subject.
- 4) All blank breach form tests will be excluded from reporting.
- 5) A student whose complete ELA test includes a valid Breach form (either for the writing prompt or the rest of the ELA test) will be treated as a valid participant. The created form will identify these students in data deliverables.
- 6) If either form (writing prompt or machine scored portion of the test) is an invalidated breach, it will not be merged with the rest of test. Only the operational portion or valid breach portion of the test is reported.

Q. Merge Tests

- 1) If we have more than one Writing booklet and one ELA booklet for the same student,
 - a) If the writing scores are the same, the writing score associated with the lower booklet number is merged with the ELA booklet.
 - b) If the scores are different between the Writing booklets, the ELA test will be reported with the Writing score with the lower test date (or Test ID). Cognia will send a report to SDE with the different scores. SDE will decide which Writing score to merge with the ELA test for Final Reporting.
 - c) If the Writing booklets are from different grades, merge the Writing booklet with the grade that matches the ELA grade.
- 2) If we have multiple ELA booklets and one Writing booklet for the same student, all ELA tests are reported with the same Writing score from the Writing booklet.
- 3) If we have an ELA booklet with no associated Writing booklet, the Writing score is reported as "B" for Blank.
- 4) If we have a Writing booklet with no matching ELA booklet, an ELA booklet is built out with blank ELA item responses.
- 5) If either the writing prompt or rest of the ELA test is on the paper and the other is online, the sections will not be merged.



R. Processing ACT/SAT Score Data File

The SDE will provide a data file containing the ACT/SAT equivalent scale scores and performance levels for High School students. The file will be used to populate the CCRA student report and student results data files.

- 1) Cognia will link to the data file using the Student's STN.
- 2) If performance level column is -1 or 0 this indicates the student did not test in the subject. The test will be reported as No Score Available on the student report.
- 3) If a student does not link to the ACT/SAT file, the ELA and Math will be reported as No Score Available on the student report.
- 4) The following cleanup/checks will be done on the ACT/SAT score data file from SDE:
 - a) Check for duplicate STN.
 - b) Check for valid STN that links to the overlay file.
 - c) Score range check
 - d) -1 values will be blanked.
- 5) If an STN does not link to the overlay file an updated STN will be provided by SDE or an updated overlay file with the added STN will be provided.
- 6) All demographic information is taken from the overlay file.

S. Processing Scoring Data

Scoring division will provide Reporting Services with the scores from all tests.

- 1) Each score record will be associated with a Booklet ID or a Test ID
 - a) If a score record is received without an associated Test or Booklet ID, resolution will be attempted with the Scoring Division
- 2) Every score record will contain a valid score value.
 - a) A validation of score values will be performed.
 - i) Multiple Choice responses must be a valid value to be considered attempted.
 - (1) Valid values will be A, B, C, D, blank and * for items with multiple response when only one should be given.
 - (2) Blank values will not be considered a response attempt.
 - ii) Technology Enhanced Items will be administered online only and scored based on the scoring rubric.
 - iii) Multiple Part Selected Response Items will be combined when each part has a valid response attempt.
 - (1) Valid values will be A, B, C, D or blank.
 - (2) The two parts will be combined for a final response.
 - iv) Writing Composite Score will be based on a single holistic rubric.
 - (1) Responses are 30% double scored, with a score range of 1-4. A 3rd score is required if scores are non-adjacent, or non-scorable codes do not match; the third score will be human scored. A final score is then calculated.
 - v) Constructed response scores will be provided in ELA in grades 3,4,6, and 7.
 - b) Score validation for each individual score is captured as follows:



Raw Data Value	Description	Reported Value	Point Value
1-4 (per scorer)	Score	Final	1-4
		score	
1	Illegible/Incomprehensible	I	0
F	Language Other than English	L	0
B, R	Blank response/ refusal	N	0
0	Off Topic	0	0

- 3) All unresolved scoring records will be included in a report to the Scoring Division, as well as the Program Manager for research and resolution.
- 4) All scoring records will be resolved prior to reporting.

V. Student Participation and Exclusions

A. Test Attempt Rules

- 1) Test Attempted indicates that a student has answered a minimum of five (5) operational MC/PMC/TEIs test item(s) within a content area, regardless number of sessions.
 - a) Each of the five items must not be indicated as flawed or otherwise not scorable.
 - b) Items not able to be converted to Braille must be identified and excluded from attempted rules.
- 2) In grades 5 and 8 English Language Arts (ELA) tests even if the writing composition is present, the student would still need to have attempted at least five operational multiplechoice test items to be considered meeting attemptedness.
- 3) If the student meets attemptedness for ELA, then the student meets attemptedness for RSA in grade 3.
- 4) If the student doesn't meet test attemptedness then the test is reported with a Did Not Attempt status
- 5) If there is no valid attempt, the record will use the Participation Status guidelines.

B. Test Design

Each test will be delivered Online or Paper. Operational items will be included in Raw Score. Raw score items will be a single common block across all forms.

Grade	Subject	Form(s)	Items included in Raw Score	Item Types
03-05	Mathematics	Paper Operational Paper Breach	If countstowardsstude ntscore=Yes in NTS	Selected response items (Single part) only. (Grade 4 and 5 TEIs)
06-08	Mathematics	Online Operational: A1 Online Breach Paper Operational Paper Breach Online Spanish	If countstowardsstude ntscore=Yes in NTS	Selected response items (Single part) and TEIs.



Grade	Subject	Form(s)	Items included in Raw Score	Item Types
03-08	ELA	Paper/Online Operational Paper/Online Breach Online Spanish	If countstowardsstude ntscore=Yes in NTS	A Writing Composition is present at grades 5 and 8. All other items are selected response items (Single or Multiple parts and TEIs).
05	Science	Paper Operational Paper Breach	If countstowardsstude ntscore=Yes in NTS	Selected response items (Single part) and TEIs
08	Science	Online Operational Online Breach Online Spanish Paper Operational Paper Breach	If countstowardsstude ntscore=Yes in NTS	Selected response items (Single or Multiple parts) and TEIs.
11	Science	Online Operational Online Breach Online Spanish Paper Operational Paper Breach	If countstowardsstude ntscore=Yes in NTS	Selected response items (Single or Multiple parts) and TEIs.
11	US History	Online Paper Online English with Spanish TTS	If countstowardsstude ntscore=Yes in NTS	Selected response items (Single or Multiple parts) and TEIs.

1) Item Reporting Categories

- a) Standards will be reported for all content areas.
- b) ELA Tests for grades 5 and 8 will have writing subtest information reported.
- c) Minimum item counts
 - i) Any content area attempt will be considered to have attempted all standards.
 - ii) If less than 6 points are included in a standard, the student score will not be reported within that category.
 - iii) All Item Reporting Categories are defined by Content Design and Development. The reporting categories are mapped and found in the CDD Test Delivery Blueprints
 - iv) The Primary Standard in NTS is the source of the Reporting Category.
 - v) Writing Prompt is its own category. Suppression rule is not applied since the number of points is less than 6.

2) Braille Item Content

- a) Paper Braille tests will be transcribed onto an answer booklet.
 - i) Paper Braille tests will be identified with the IEP Braille accommodation.
- b) Any test items that are not able to be transcribed Braille will be identified.
 - i) School year 2022-2023 tests will not contain any items required to be excluded for Braille.



C. Not Tested Reasons

Not Tested Reasons are supplied by the SDE in the Student Status Code file or is flagged in iTester for online testers or the scannable for paper testers. Throughout the reporting cycles Cognia receives updated versions of the SSC.

- 1) If a student test record is assigned more than one Not Tested reason, the following hierarchy will be applied to assign only one status to a student test record:
 - a) Did Not Attempt
 - b) No Longer Enrolled
 - c) State Alternate Testing (OAAP)
- 2) If a student has participated and has a valid attempt, any Not Tested Reason indicated is ignored.

D. Student Participation Status

Student Participation Status reflects the participation of the test assessment performed by an individual student. Valid Participation Status values are provided by the SDE.

- 1) If a student has more than one of the below statuses, the Participation Status for each subject is set based on the following hierarchy:
 - a) Void, not invalidated (preliminary reporting only)
 - b) Emergency Exemption
 - c) Do Not Report
 - d) Do Not Report Duplicate (May be set by Reporting)
 - e) Invalidated Test
 - f) Invalidated Breach Tests
 (Breach tests without an Operational test that have been Invalidated will be set by reporting)
 - g) Low Grade Invalidation (set by Reporting, not by the SDE)
 - h) State Alternate Testing (OAAP)
 - i) No Longer Enrolled
- 2) If the student does not have any valid test attempt and none of the above apply, the test record is reported with a status of Did Not Attempt.

VI. Calculations

A. Participation Status Summary

- 1) Student Level Calculations will be summarized by Participation Status
- 2) Raw scores are only produced and available in datafiles and do not appear on any Printed reports (Points Possible will be provided for each subcategory)



Description	Part Status	Item Scores (Reports)	OPI Score (Reports)	Performance Level (Reports)	Data File Raw Scores	Data File Item Scores	Data File OPI Score	Data File Performance Level	Data File Student Status Code
Valid Participant	Ζ	ü	ü	ü	ü	ü	ü	ü	
Did Not Attempt	Α								DNA
Emergency Exemption	D								EE
Do Not Report	E*								DNR
Invalidated (Breach)	F								INV
No Longer Enrolled	G*								NLE
State Alternate Testing (OAAP)	I *								OAAP
Do Not Report- Duplicate	L*								DNR-D
Invalidated Breach	М								INV-B
Low Grade Invalidation	V								INV-G
Voided Booklet	X ¹								VOID

^{*} Student records only appear in the State results file. They do not appear in online or paper reports.

B. Demographic Reporting

A student may have differing demographic information associated with each test record. This may occur when the STN is not provided and/or the STN does not link to the overlay file or SDE has not updated the record in the preliminary cleanup file. However, only one student report (OSTP) and one student label are generated for a unique student in a given school and tested grade. One of the tests will be selected, according to the below selection hierarchy, to be the associated demographics for all tests reported for that student in the eMetric data files, Student Report, and Student Labels.

Selection Hierarchy

- 1. Blank Student Status Code (Valid Participant).
- 2. Last Name is NOT null or blank.
- 3. First Name is NOT null or blank.
- 4. Class Name is provided.
- 5. Most recent Test
- 6. Largest Test ID value.

See Specific Reporting Rules section for demographics per report.

C. Scoring Items

- 1) Beginning in 2023 the tests will be pattern scored. An analysis will be done by Psychometrics to confirm the decision to patten score was correct.
- 2) Open response scores are reported for only non-flawed items.
- 3) Reading Sufficiency Act

¹ Voided booklets will be provided in Preliminary Reporting State results datafile only and will not appear in Final Reporting



- a) Reading Sufficiency Act https://sde.ok.gov/sites/ok.gov.sde/files/documents/files/RSA%20Statutes-508C%20to%20508F.pdf
- b) Operational items in Standards 2 (Reading/Writing Process) and Standards 4 (Vocabulary) on the Grade 3 ELA test are used to determine whether a student meets the RSA requirement or not.
- c) The RSA score is applied in Psychometrics and is based on a theta cut. Further information is provided in the Technical Report.
- 4) Lexile/Quantile
 - a) Scores are assigned based on the student's earned OSTP scale score given grade and subject specific values from the MetaMetrics lookup provided by SDE.
 - b) Lexile scores are reported based on the ELA scaled score when applicable



OSTP ELA_Lexile Conversion Table.xlsx

c) Quantile scores are reported based on the Math scaled score when applicable



OSTP Math_Quantile Conversion Table.xlsx

- 5) Writing Scores
 - a) Cut points are psychometrically determined making them consistent with other Reporting Categories and similarly interpretable.
 - b) Performance level is determined based on a psychometric scale method.
 - c) Final Score
 - i) If Scorer 1 score=Scorer 2 score, then the final score is set to either.
 - ii) If Scorer 1 score is adjacent to Scorer 2 score, then the final score is the higher of the 2 scores.
 - iii) If Scorer 1 and Scorer 2 both assign the same non-scorable codes, that value is the final trait score.
 - iv) Otherwise, the final trait score is the third score or non-scorable value.
 - d) Final Composite Score for grades 5 and 8 is calculated as follows:
 - i) Grade 5 is calculated as 5 times the final score, divided by 4
 - (1) The grade 5 score is rounded to the nearest whole value.
 - (2) Possible score values 0, 1, 3, 4 or 5. These values are used for Psychometrics.
 - (3) Reports contain the scores in the range 1-4.
 - ii) Grade 8 is calculated as 7 times the final score, divided by 4
 - (1) The grade 8 score is rounded to the nearest whole value.
 - (2) Possible score values 0, 2, 4, 5 or 7. These values are used for Psychometrics.
 - (3) Reports contain the scores in the range 1-4.
 - e) Raw Score is calculated as a sum of the final calculated writing score and the operational multiple-choice raw score and used to get the final scale score and performance level.
- 6) Reporting Category Scores
 - a) Only calculated from Common, non-flawed items
 - b) Each Percent value is rounded to the nearest whole number.
 - c) The Reporting Category associated with the Writing is reported using the final score.



D. Performance Levels

- 1) Performance Levels are assigned based on the Scale Scores by grade and subject.
- 2) Four Performance Levels
 - a) Performance Level 1: Below Basic
 - b) Performance Level 2: Basic
 - c) Performance Level 3: Proficient
 - d) Performance Level 4: Advanced

E. Aggregate Calculations

- 1) Enrolled number of students (TotalN) includes students with the following participation status:
 - a) Valid Participant (Partstatus=Z)
 - b) Did Not Attempt (Partstatus=A)
 - c) Emergency Exemption (Partstatus=D)
 - d) Invalidated (Breach) (Partstatus=M)
 - e) State Alternate Assessment (OAAP) (Partstatus=I)
- 2) The number tested only includes Valid Participant status.
- 3) Aggregations include Valid Participants. However, school inclusion rules also apply:
 - a) The 3rd character of the district code is used to determine the school inclusion rules for aggregations.
 - b) Schools whose district codes contain B or P are not included in the State Summary.
 - c) Other Placement students are not included in Class, School or District aggregations. Other Placement students are identified in the Student Status Code file from SDE.
- 4) Standards Summary only include Valid Participant who meet school inclusion rules only and do not include Braille tests if there are items that cannot be brailled.
- 5) All Valid Participants are included for Performance Levels and scaled score aggregations at the Class, School, District and State levels based on school inclusion rules.

VII. Specific Reporting Rules

1) School information is taken from the iCore database.

A. Student Results Label(s)

- Student Results Labels are printed, packed and shipped to each District for dissemination to each School separated by tested Grade.
- 2) Student Results Labels is created for each student and include all subjects tested at that particular school.
- 3) If a student has subjects at different schools, results for the subjects are reported back to the school where the test was taken.
- 4) When printed there will be 10 labels per page.
- Student Results Labels are grouped by tested Grade, tested District and School and ordered alphabetically by Student Last Name, FirstName, MiddleName, Student ID (STN)



- 6) If the First and Last Name are both blank, No Name Provided is set as the student's name.
- 7) The sort is done so that No Name Provided are sorted to the top of each pack.
- 8) Labels are printed one per student per school with results from all tests taken at that school.
- 9) Demographics that are not consistent between reported subjects with not tested reasons are reported based on the selection hierarchy presented in the Demographic Reporting above. The following demographic fields are taken from the selected test record after application of the selection hierarchy, if necessary.
 - i) First Name, Last Name MI
 - ii) Gender
 - iii) Date of Birth
 - iv) Student ID
 - v) Student Grade

B. OSTP Student Report

- 1) Student Reports are printed, packed, and shipped to each District for dissemination to each School separated by tested Grade.
- 2) Reports are printed in color on 11 x 17 paper and folded in the middle.
- 3) Student Reports are created for each participating student.
- 4) Student name is formatted as FIRSTNAME MI LASTNAME
- 5) Packs are grouped by tested Grade, tested District and School and cpicode.
- 6) Within packs the reports are ordered alphabetically by Student Last Name, Student First Name, MI, Student ID. No Name Provided are sorted as to appear at the top of the pack.
- 7) Report templates for grades 3, 4, 6 and 7 include ELA and Mathematics results.
- 8) Report templates for grades 5 and 8 include ELA, Mathematics and Science results.
- 9) Students that do not test in a subject related to their Grade tested receive text "No Score Available" instead of the subject results display on the front page.
- 10) Historical Scores:
 - a) Science scores are displayed for current year results only. Due to Science only being tested in grades 5 and 8, prior year results are always unavailable.
 - b) 3 years' worth of scores are reported for ELA and Math where available. The current year and 2 previous years. In the reports for Spring 2023, the years will be 2023, 2022, and 2021.
 - c) Years with no available data are left blank on the graph and an * on the year indicates Score Not Available
- 11) Reading Sufficiency Act
 - a) Grade 3 ELA students that have met the RSA standard will have on the following text on their report: "Sophia HAS MET the Reading Sufficiency Act (RSA) criteria based on Standard 2.0 (Reading and Writing Process) and 4.0 (vocabulary) and is eligible for automatic promotion to 4th grade. For more information about RSA, please visit: https://sde.ok.gov/parents-reading-sufficiency"
 - b) Grade 3 ELA students that have not met the RSA standard will have the following text on their report: "Sophia HAS NOT MET the Reading Sufficiency Act (RSA) criteria based on Standard 2.0 (Reading and Writing Process) and 4.0 (Vocabulary). Please visit with Sophia's school regarding promotion or retention options. For more information about RSA, please visit https://sde.ok.gov/parents-reading-sufficiency"



- 12) In the absence of a Student First Name, the first name is replaced with "Your student" or "your student."
- 13) If a student has tested different subjects in different schools, a student report is sent to each testing school with the results for the subject taken at that school.
- 14) Reporting Category performance is reported for both subjects.
 - a) The points earned by the student in each reporting category is reported along with the total possible points for the reporting category. This is formatted as earned points/total possible points.
 - b) The performance level for each reporting category is reported.
 - c) The Reporting Category Performance levels are: Approaching Expectations, Near/At Expectations and Achieving Expectations

C. CCRA Student Report

- 1) Student Reports are collated by testing school. A school pdf is created containing all Student Report PDFs for students being reported to that school.
- 2) Student Reports are created for students with any participation status.
- 3) Reports are printed in color on 8 ½ x 11 paper.
- 4) If a student has tested different subjects in different schools, a student report is sent to each testing school with the results for the subject taken at that school.
- 5) Within the school pdf the reports are ordered alphabetically by Student Last Name, Student First Name, MI, Student ID. No Name Provided are sorted as to appear at the beginning of the school pdf.
- 6) Student name is formatted as FIRSTNAME MI LASTNAME
- 7) In the absence of a Student First Name, the first name is replaced with "Your student" or "your student" wherever first name alone appears on the report.
- 8) Only current year results are reported on the student report.
- 9) The student's earned scaled score and performance level for Science and US History are reported on the front page.
- 10) Starting in 2023 student's ACT/SAT equivalent scale score for ELA and Mathematics are added to the CCRA student report.
- 11) 2023: The earned performance level descriptor associated with the ACT/SAT equivalent scale score is printed on the report as well. See Appendices A and B for the performance level descriptors.
- 12) On the back page the performance level descriptor associated with the earned performance level is printed for US History and Science.
- 13) Students that do not test in a subject receive text "No Score Available" "(Please contact your student's school for more information.)" instead of the subject results display on the front page. There is no reported performance level. If Science or US History is not tested the corresponding comparison graphs are blank on the back page.

D. Datafile Deliverables

1) Student Results Datafiles are provided to SDE in a comma delimited format (csv) format.



- a) The file contains students with their Student Status Code or results for each subject that they are eligible for based on tested grade.
- b) Demographics reported for students are either from the Demographic Overlay file provided by SDE if the student has a validated student ID or from the test records as described above.
- c) Rows in the data file represent students' test records.
- d) Naming convention for the data files to SDE:
 - OSTPXXXXStudentResultsRelease[i].csv and
 - CCRAXXXXStudentResultsRelease[i].csv
 - Where XXXX=academic year, i=1,2,3 etc.
- e) WR_FinalScore is the final score. Final score is determined after all scores are available and arbitration is complete if necessary.
- f) R1 score is the score given by scorer 1
- g) R2 score is the score given by scorer 2
- h) R3 score is the arbitrated score, if necessary.
- 2) Student Results Datafile is provided to eMetric
 - a) eMetricReportingTransfer layout. The following tables contain the students' results:
 - i) StudentData
 - ii) StudentScores
 - iii) Datafiles provided to eMetric only contain student records where status is Valid, Did Not Attempt, Emergency Exemption, Invalidated (Breach), Invalidated Breach and Low-Grade Invalidation.
 - b) eMetricSummary data file is provided to eMetric for both Preliminary and Final Reporting.
- 3) Student results data files and participation data files will follow the same layout. Participation data files to SDE will not have item and performance data populated. Demographics, form, accommodation information will be populated.
- 4) For Expedited Grade 3 RSA reporting, the RSA flag in the StudentScores table to eMetric is populated for tested students and students with the low-grade invalidation participation statuses only. In final reporting, the RSA flag is only populated for tested students.
- 5) Summary Data is provided to eMetric to aid in their quality assurance process. The following files are posted to the ftp site for eMetric:
 - a) eMetricSummaryDataTransfer
 - i) Summary
 - ii) SummaryLookup
- 6) Media Redacted

Redaction is a general term describing the process of expunging sensitive data from the records prior to disclosure in a way that meets established disclosure requirements applicable to the specific data disclosure occurrence (e.g., removing, or obscuring PII from published reports to meet federal, state, and local privacy laws as well as organizational data disclosure policies). (See disclosure limitation method for more information about specific techniques that can be used for data redaction.)¹

- 1) Cognia provides a Media Redacted Datafile to the SDE
 - a) The file is in comma separated file format (csv)
 - b) All grades are included in one file.
 - c) The naming convention for the file is OKOSTPXXXMediaRedacted.csv and OKCCRAXXXXMediaRedacted.csv where XXXX is the academic year.



- 2) The Media Redacted file provides the number of students in each reporting category performance level and the percent to total.
- 3) To minimize the identification of any individual student, the count and percent of values are redacted and masked with *** if the count is <10.
- 4) Each file is sorted by tested Grade, CountyName, District, School, Subject, Reporting Category and Reporting Subcategory
- 5) Each file contains the tested Grade, County Name, District or School Code (as the OrganizationID), District or School Name and Administration Year, Subject, Reporting Category and Reporting Subcategory
- 6) Each file contains the Total Count, Valid Count and Percent to Valid Count Total of each Performance Level by Reporting Category
- 7) Each Reporting Category contains the Valid Count and Percent to Total for each Performance Level by Reporting Subcategory
 - a) If Total Count value and/or Valid Count value is < 10 then redact all Performance Level Count values and associated Percent values from Report Category Count and Percent, including Total Count and/or Valid Count
- 8) If Total Count and/or Valid Count value is > 10 AND One Performance Level Count value is < 4
 - a) Redact where Performance Level Count value is <4 and associated Percent values from Report Category Count and Percent
 - b) Redact one additional random Performance Level Count value and associated Percent value from Report Category Count and Percent
- 9) If Total Count and/or Valid Count value is > 10 AND more than one Performance Level Count value is < 4
 - a) Redact all Performance Level Count values <4 and associated Percent values from Report Category Count and Percent
- 10) If Performance Level Percent = 100%
 - a) Redact where Performance Level Percent is 100% and associated Count value from Reported Category Count and Percent
 - b) Redact one additional random Performance Level Percent <100% and associated Count value from Reported Category Count and Percent
- 11) If the Sum of two Performance Level Count values = Valid Count value
 - a) Redact one of the Performance Level Count values and associated Percent values from Reported Category Count and Percent
 - b) Redact one additional random Performance Level Count value equal to 0 and associated Percent value from Report Category Count and Percent
 - 1 https://studentprivacy.ed.gov/glossary

VIII. Content Design and Development

A. Assessment Content

- CD provides Reporting with the Test Content delivery blueprint, both External/Public Blueprint and District Aggregate Reporting and Internal Target Blueprint which contains the following:
 - a) Reporting Category
 - b) Assessable Standards
 - c) Target Number of Clusters



- d) Target Points
- e) Percent of Total on Test
- 2) Reference Reporting Categories is mapped as follows:

Grade	Subject	Content Standard	Reporting Category	Student Report Display
3	OSTP Math	N	Number & Operations	Number & Operations
3	OSTP Math	Α	Algebraic Reasoning	Algebraic Reasoning & Algebra
3	OSTP Math	GM	Geometry & Measurement	Geometry & Measurement
3	OSTP Math	D	Data & Probability	Data & Probability
3	OSTP ELA	2	Reading/Writing Process	Reading & Writing Process
3	OSTP ELA	3	Critical Reading/Writing	Critical Reading & Writing
3	OSTP ELA	4	Vocabulary	Vocabulary
3	OSTP ELA	5	Language	Language
3	OSTP ELA	6	Research	Research
4	OSTP Math	N	Number & Operations	Number & Operations
4	OSTP Math	А	Algebraic Reasoning	Algebraic Reasoning & Algebra
4	OSTP Math	GM	Geometry & Measurement	Geometry & Measurement
4	OSTP Math	D	Data & Probability	Data & Probability
4	OSTP ELA	2	Reading/Writing Process	Reading & Writing Process
4	OSTP ELA	3	Critical Reading/Writing	Critical Reading & Writing
4	OSTP ELA	4	Vocabulary	Vocabulary
4	OSTP ELA	5	Language	Language
4	OSTP ELA	6	Research	Research
5	OSTP Math	N	Number & Operations	Number & Operations
5	OSTP Math	А	Algebraic Reasoning	Algebraic Reasoning & Algebra
5	OSTP Math	GM	Geometry & Measurement	Geometry & Measurement
5	OSTP Math	D	Data & Probability	Data & Probability
5	OSTP ELA	2	Reading/Writing Process	Reading & Writing Process
5	OSTP ELA	3	Critical Reading/Writing	Critical Reading & Writing
5	OSTP ELA	4	Vocabulary	Vocabulary
5	OSTP ELA	5	Language	Language
5	OSTP ELA	6	Research	Research



Grade	Subject	Content Standard	Reporting Category	Student Report Display
5	OSTP ELA	Writing Prompt	Writing Composite Score	Writing Composite Score
5	OSTP Science	PS1.1, PS1.2, PS1.3, PS1.4	Physical Science	Physical Science
5	OSTP Science	LS1.1, LS2.1, LS2.2, PS3.1	Life Science	Life Science
5	OSTP Science	ESS1.1, ESS1.2, ESS2.1, ESS2.2, PS2.1	Earth & Space Science	Earth & Space Science
6	OSTP Math	N	Number & Operations	Number & Operations
6	OSTP Math	Α	Algebraic Reasoning	Algebraic Reasoning & Algebra
6	OSTP Math	GM	Geometry & Measurement	Geometry & Measurement
6	OSTP Math	D	Data & Probability	Data & Probability
6	OSTP ELA	2	Reading/Writing Process	Reading & Writing Process
6	OSTP ELA	3	Critical Reading/Writing	Critical Reading & Writing
6	OSTP ELA	4	Vocabulary	Vocabulary
6	OSTP ELA	5	Language	Language
6	OSTP ELA	6	Research	Research
7	OSTP Math	N	Number & Operations	Number & Operations
7	OSTP Math	Α	Algebraic Reasoning	Algebraic Reasoning & Algebra
7	OSTP Math	GM	Geometry & Measurement	Geometry & Measurement
7	OSTP Math	D	Data & Probability	Data & Probability
7	OSTP ELA	2	Reading/Writing Process	Reading & Writing Process
7	OSTP ELA	3	Critical Reading/Writing	Critical Reading & Writing
7	OSTP ELA	4	Vocabulary	Vocabulary
7	OSTP ELA	5	Language	Language
7	OSTP ELA	6	Research	Research
8	OSTP Math	N	Number & Operations	Number & Operations
8	OSTP Math	Α	Algebraic Reasoning	Algebraic Reasoning & Algebra
8	OSTP Math	GM	Geometry & Measurement	Geometry & Measurement
8	OSTP Math	D	Data & Probability	Data & Probability
8	OSTP ELA	2	Reading/Writing Process	Reading & Writing Process



Grade	Subject	Content Standard	Reporting Category	Student Report Display
8	OSTP ELA	3	Critical Reading/Writing	Critical Reading & Writing
8	OSTP ELA	4	Vocabulary	Vocabulary
				•
8	OSTP ELA	5	Language	Language
8	OSTP ELA	6	Research	Research
8	OSTP ELA	Writing Prompt	Writing Composite Score	Writing Composite Score
8	OSTP Science	8.PS1.5, 8.PS1.6, 8.PS2.1, 8.PS2.2, 8.PS4.1, 8.PS4.2	Physical Science	Physical Science
8	OSTP Science	8.LS1.7, 8.LS4.1, 8.LS4.2	Life Science	Life Science
8	OSTP Science	8.ESS1.4, 8.ESS2.1, 8.ESS2.2, 8.ESS2.3, 8.ESS3.1, 8.ESS3.2, 8.ESS3.4	Earth & Space Science	Earth & Space Science
11	CCRA Science	PS.PS1.1, PS.PS1.2, PS.PS1.5, PS.PS1.7, PS.PS2.5, PS.PS3.1, PS.PS3.2, PS.PS3.3, PS.PS3.4, PS.PS4.1, PS.PS4.4	Physical Science	Physical Science
11	CCRA Science	B.LS1.1, B.LS1.2, B.LS1.3, B.LS1.4, B.LS1.5, B.LS1.6, B.LS1.7, B.LS2.1, B.LS2.2, B.LS2.3, B.LS2.4, B.LS2.5, B.LS2.6, B.LS2.8, B.LS2.8, B.LS3.1, B.LS3.2,	Life Science	Life Science



Grade	Subject	Content Standard	Reporting Category	Student Report Display
		B.LS3.3,B.LS4.1, B.LS4.2, B.LS4.3, B.LS4.4, B.LS4.5		
11	CCRA US History	1.2.A, 1.3.A, 1.3.D, 2.1.A, 2.1.B, 2.1.D, 2.1.E, 2.1.G, 2.2.B, 2.3.B, 3.1.A, 3.1.B, 3.1.C, 3.2.A, 3.2.B, 4.1.A, 4.1.D, 4.1.E, 4.2.A, 4.2.B, 4.2.D, 4.3.C, 5.1.B, 5.2, 5.3, 6.1.A, 6.1.B, 6.1.C, 6.1.D, 6.2.A, 6.2.B, 6.2.C, 6.4, 7.2.D, 8.1, 8.2, 8.3, 8.4, 8.5.A	US History	US History
11	CCRA US History	1.1, 1.2.B, 1.2.C, 1.3.B, 1.3.C, 2.1.C, 2.1.F, 2.2.A, 2.2.C, 2.3.A, 2.3.C, 3.1.D, 3.2.C, 3.2.D,	Civics	Civics



Grade	Subject	Content Standard	Reporting Category	Student Report Display
		4.1.B, 4.1.C,		
		4.2.C, 4.3.A,		
		4.3.B, 5.1.A,		
		5.1.C, 6.3,		
		7.1.A, 7.1.B,		
		7.1.C, 7.2.A,		
		7.2.B, 7.2.C,		
		7.2.E, 7.2.F,		
		8.5.B, 8.6		

IX. Shipping Product Code Summary

A. Reporting Products

Reporting Products is provided to iCore to identify the products that will be shipped to the client.

Contract Code	Description	Report For	Grade(s)	Report Subtype	Content Code	Qty
156052	OSTP Student Labels	1	03-08	03	00	1
159052	CCRA Student Labels	1	11	03	00	1
156052	OSTP Student Report	1	03-08	02	00	1
159052	CCRA Student Report	1	11	02	00	1

X. Appendix

A. Math Performance Level Descriptors for CCRA student report

Performance Level	Performance level Name	Performance Level Descriptor
1	Below Basic	Indicates that students have not performed
		at least at the Basic level.
2	Basic	Students at this level have a 50% or higher probability of earning a C or higher in credit-bearing math courses across all levels of higher education. Their average first year college GPA at this level is between a 2.4 to



Performance Level	Performance level Name	Performance Level Descriptor
		2.8 (mid to high C student). Students at this level likely require additional coursework and/or support to be on track for college and/or career success.
3	Proficient	Students at this level have approximately a 75% or higher probability of earning a C or higher in credit-bearing math courses at all levels of higher education. Their average first year college GPA at this level is between a 2.9 and 3.3. Students at this level are likely to be on track to be successful at the next level.
4	Advanced	Students at this level have a 86% probability of earning a C or higher and a 61% probability of earning a B or higher in creditbearing math courses at 4-year institutions. Their average first year college GPA at this level is a 3.3 or above. This score is also the mean score of students who earn a three on the Advanced Placement (AP) exam in A/B Calculus: the minimum necessary to receive college credit. Students at this level are highly likely to be on track to be successful at the next level.

B. ELA Performance Level Descriptors for CCRA student report.

Performance Level	Performance level Name	Performance Level Descriptor
1	Below Basic	Indicates that students have not performed at least at the Basic level.
2	Basic	Students at this level have a 60% or higher probability of earning a C or higher in credit-bearing history, literature, social sciences, or writing classes across all levels of higher education. The average first year college GPA at this level is between a 2.4 to 2.7. Students at this level likely require additional coursework and/or support to be on track for success in college or career.
3	Proficient	Students at this level have approximately an 80% or higher probability of earning a C or higher in credit-bearing history, literature, social sciences, or writing classes at all levels of higher education. The average first year college GPA at this level is between a 2.8 and 3.3. Students at this level are likely to be on track for success in college or career.



Performance Level	Performance level Name	Performance Level Descriptor
4	Advanced	Students at this level have a 92% probability of earning a C or higher and a 71% probability of earning a B or higher in creditbearing history, literature, social sciences, or writing classes at 4-year institutions. The average first year college GPA at this level is a 3.2 or above. This score is also the mean score of students who earn a three on the Advanced Placement (AP) exam in Literature: the minimum necessary to receive college credit. Students at this level are highly likely to be on track for success in college or career.

XI. Addenda

4/18/23

Media Redacted files: When a reporting category is not applicable to a subject/grade, N/A will be used in the cell.