



Oklahoma Academic Standards
ENGLISH
LANGUAGE ARTS



OKLAHOMA
Education



8 Overarching Standards

The following eight standards encompass the content and competencies of English language arts:

1. **Listening and Speaking**
2. **Reading and Writing Foundations/Process**
3. **Critical Reading and Writing**
4. **Vocabulary**
5. **Language**
6. **Research**
7. **Multimodal Literacies**
8. **Independent Reading and Writing**

The eight overarching standards reinforce language arts' recursive nature, a non-linear process that involves the continuous and thoughtful refinement of concepts and skills. Each standard statement is accompanied by two strand statements—listening and speaking for Standard 1 and reading and writing for Standards 2-8. Each pair of strands contains grade-level objectives.

Standard 2 Reading and Writing Foundations includes the five strands of Phonological Awareness, Print Concepts, Phonics and Word Study, Spelling/Encoding, and Fluency. The linear order of the strands suggests a learning progression that begins with basic foundational skills and culminates in fluent readers and writers.

Concepts and skills are expressed in terms of both reading and writing to support integrated, rather than isolated, reading/writing instruction. Research supports this integrated model of English



language arts, where students read to understand the meaning and composition of a text and write with readers' expectations and assumptions in mind.

The order of the standards is meant to suggest that students learn to read and write by listening and speaking (Standard 1) on their way to the ultimate goal of becoming independent, critical readers and writers (Standards 3 and 8). At the same time, speaking and listening skills will continue to be developed as students progress through the grade levels, and concepts of independent reading and writing will be introduced even in the earliest grades.

Independent reading and writing is a natural outgrowth of strong standards implementation through a rigorous curriculum. Standard 8 acknowledges students' need to grow increasingly independent for college and career readiness. Being able to work independently and seek out opportunities to read and write is a significant part of life-long learning. These skills easily transfer to test-taking, civic engagement, and citizenship.

Academic standards establish objective performance criteria. They are used as guides to develop curriculum and instruction that is engaging, challenging, and sequenced for students. Acquiring English language arts knowledge and skills is a recursive learning endeavor. Students need to revisit concepts as they develop language arts acumen at increasingly higher levels of complexity.



The eight overarching standard statements are accompanied by two strand statements—listening and speaking for Standard 1 and reading and writing for Standards 2-8. Standard 2 Reading and Writing Foundations includes five unique strands and statements related to foundational literacy skills. Every strand contains grade-level objectives.

Standard 1: Listening and Speaking | Students will listen and speak effectively in a variety of situations.

- **Listening:** Students will develop and apply effective communication skills through active listening.
- **Speaking:** Students will develop and apply effective communication skills to share ideas through speaking.

Standard 2: Reading and Writing Foundations | Students will develop foundational skills for reading and writing proficiency by working with sounds, letters, and text.

- **Phonological Awareness:** Students will recognize, count, and manipulate the parts of spoken words, including syllables, onset/rimes, and phonemes without using text.
- **Print Concepts:** Students will demonstrate their understanding of the organization and basic features of print.
- **Phonics and Word Study:** Students will decode words by applying phonics and word analysis skills in context and isolation.
- **Spelling/Encoding:** Students will encode and write words in context and isolation by applying phonics, spelling patterns, and structural analysis skills.
- **Fluency:** Students will read grade-level text smoothly and accurately, with appropriate expression.

Standard 2: Reading and Writing Process | Students will use a variety of recursive reading and writing processes.

- **Reading:** Students will read and comprehend inclusive, diverse, and increasingly complex literary and informational texts.
- **Writing:** Students will engage in a recursive process that may include prewriting, drafting, revising, editing, and publishing.

Standard 3: Critical Reading and Writing | Students will apply critical thinking skills to reading and writing.

- **Reading:** Students will analyze, interpret, and evaluate increasingly complex literary and informational texts that include a wide range of historical, cultural, ethnic, and global perspectives from a variety of genres.
- **Writing:** Students will thoughtfully and intentionally write, addressing a range of modes, purposes, and audiences.

Standard 4: Vocabulary | Students will expand and apply their spoken and reading vocabularies to speak, read, and write effectively.

- **Reading:** Students will expand their grade-level vocabularies through reading, word study, and class discussion.
- **Writing:** Students will apply knowledge of vocabulary to speak and write effectively.



Standard 5: Language | Students will expand and apply knowledge of grammar, usage, mechanics, and style to comprehend texts and communicate effectively.

- **Reading:** Students will expand and apply knowledge of grammar, usage, mechanics, and style to comprehend, analyze, and/or evaluate a variety of texts.
- **Writing:** Students will expand and apply knowledge of grammar, usage, mechanics, and style to speak and write effectively, demonstrating standard usage when appropriate.

Standard 6: Research | Students will engage in inquiry to acquire, refine, and communicate accurate information.

- **Reading:** Students will gather, comprehend, evaluate, and synthesize researched information to acquire and refine knowledge.
- **Writing:** Students will synthesize information ethically through speaking and writing.

Standard 7: Multimodal Literacies | Students will comprehend and communicate knowledge through alphabetic, aural, visual, spatial, and/or gestural content.

- **Reading:** Students will comprehend and evaluate multimodal content.
- **Writing:** Students will create multimodal content to communicate effectively.

Standard 8: Independent Reading and Writing | Students will read and write independently for a variety of purposes and periods of time.

- **Reading:** Students will read self-selected texts independently, choosing genres to suit and expand their personal preferences and purposes.
- **Writing:** Students will write independently, intentionally selecting modes, purposes, and audiences.

Disciplinary Literacy in Oklahoma Academic Standards

As literacy expert Dr. Timothy Shanahan explains, “Disciplinary literacy is based upon the idea that literacy and text are specialized, and even unique, across the disciplines. Historians engage in very different approaches to reading than mathematicians do, for instance. Similarly, even those who know little about math or literature can easily distinguish a science text from a literary one.” Teachers of English language arts can partner with math, social studies, science, fine arts, computer science, and world languages teachers who are also teaching their students to read, write, listen, and speak within their particular subjects through subject-specific processes and standards. In self-contained elementary classrooms, teachers can incorporate various disciplinary literacies in their lessons.



Navigating the Standards



Standard 2: Reading and Writing Process

Students will use a variety of recursive reading and writing processes.



Overarching Standard and Standard Statement

Reading

Students will read and comprehend inclusive, diverse, and increasingly complex literary and informational texts.



Strands and Strand Statements

Writing

Students will use a recursive process that may include prewriting, drafting, revising, editing, and publishing.

6.2.R.1 Students will summarize alphabetic and/or multimodal texts, including main idea, to demonstrate comprehension.

6.2.R.2 Students will analyze details in fiction, poetry, and nonfiction to distinguish genres.

6.2.R.3 Students will paraphrase a paragraph in their own words to demonstrate comprehension.



Objective Code

Grade.Standard.Strand.Objective

6.2.W.1 Students will routinely and recursively prewrite (e.g., develop ideas and plan).

6.2.W.2 Students will routinely and recursively organize and develop ideas to compose a first draft.

6.2.W.3 Students will routinely and recursively revise drafts for intended purpose and organization (e.g., logical order and content).

6.2.W.4 Students will routinely and recursively edit for correct grammar, usage, and mechanics, using various resources.

6.2.W.5 Students will routinely and recursively publish final drafts for an authentic audience (e.g., publishing digitally, performing, entering contests).



Objectives



Grade 2

Students in grade 2 strengthen their foundational and critical reading skills to proficiently read increasingly complex literary and informational texts with fluency and understanding. They ask and answer relevant questions by using text evidence, summarizing, and engaging in collaborative conversations. Students identify literary elements such as character, setting, author’s purpose, and structure. Students in grade 2 continue to practice the writing process by writing narrative, informative, and opinion pieces. They expand their grade-level vocabularies, including synonyms, antonyms, and words with Anglo-Saxon roots, and apply their knowledge of those words as they communicate through speaking and writing. Students write both simple and compound declarative, interrogative, imperative, and exclamatory sentences, and they use the correct end marks for each. Students use apostrophes when writing contractions, commas when writing dates, and colons when writing time. Students in grade 2 understand texts more clearly with the aid of graphic and text features, and use that understanding to find and share relevant information independently or in a group. Students express themselves through different combinations of multimodal content and develop stamina for longer periods of reading and writing.

Standard 1: Listening and Speaking

Students will listen and speak effectively in a variety of situations.

Listening Students will develop and apply effective communication skills through active listening.	Speaking Students will develop and apply effective communication skills to share ideas through speaking.
1. Students will actively listen using agreed-upon discussion rules.	1. Students will work respectfully in groups by sharing responsibility for collaborative work and recognizing individual contributions made by each group member.
2. Students will follow multi-step oral directions.	2. Students will engage in collaborative discussions about various topics and texts, including their own writing, with peers in small and large groups.



Standard 1 Continued

- 2.1.S.3** Students will ask and answer relevant questions to seek help, get information, or clarify information to confirm understanding.
- 2.1.S.4** Students will report on a topic or text, tell a story, or recount an experience with relevant facts descriptive details, speaking audibly in coherent sentences.

Standard 2: Reading and Writing Foundations

Students will develop foundational skills for reading and writing proficiency by working with sounds, letters, and text.

Phonological Awareness

Students will recognize, count, and manipulate the parts of spoken words, including syllables, onset/rimes, and phonemes without using text.

- 2.2.PA** Students will add, delete, and substitute phonemes in spoken words with 5-6 phonemes (e.g., add /th/ to the beginning of *rowing* to say *throwing*; delete the /r/ in *trips* to say *tips*; substitute the /l/ in *clank* with /r/ to say *crank*).

Print Concepts

Students will demonstrate their understanding of the organization and basic features of print.

- 2.2.PC** Students will correctly form letters in print and use appropriate spacing for letters, words, and sentences.



Standard 2 Continued

Phonics and Word Study

Students will decode words by applying phonics and word analysis skills in context and isolation.

- 2.2.PWS.1*** Students will decode one- and two-syllable words by using their knowledge of the following phonics skills:
- single consonants, including those with two different sounds (e.g., soft and hard c [*cent*, *cat*] and g [*gem*, *goat*])
 - consonant blends (e.g., bl, br, cr, spr, spl)
 - consonant digraphs and trigraphs (e.g., sh, tch)
 - vowel-consonant-silent e (e.g., *lake*)
 - r-controlled vowels (i.e., ar, er, ir or, ur)
 - vowel digraphs (e.g., ea, oa, ee)
 - vowel diphthongs (i.e., vowel combinations having two vowel sounds [e.g., oi as in *boil*, oy as in *boy*])
 - schwa (e.g., *banana*)
 - silent letter combinations (*knew*, *could*, *ghost*)

***sequential skills**

- 2.2.PWS.2*** Students will decode words by applying knowledge of all major syllable types:
- closed
 - open
 - vowel digraphs
 - vowel-consonant-silent e
 - r-controlled
 - consonant +le

***sequential skills**

- 2.2.PWS.3*** Students will decode words by applying knowledge of structural analysis:
- compound words
 - inflectional endings (e.g., -s, -ed, -ing)
 - contractions
 - abbreviations
 - common roots and related prefixes and suffixes

***sequential skills**



Standard 2 Continued

Spelling/Encoding

Students will encode and write words in context and isolation by applying phonics, spelling patterns, and structural analysis skills.

2.2.SE.1* Students will use correct spelling when writing the following sounds in words:

- a. digraphs
- b. trigraphs
- c. vowel digraphs
- d. r-controlled

***sequential skills**

2.2.SE.2* Students will use correct spelling when writing the following syllable types in single-syllable and multisyllabic words:

- a. closed
- b. open
- c. vowel-consonant-silent e
- d. r-controlled

***sequential skills**

2.2.SE.3* Students will use structural analysis to correctly spell the following parts of words:

- a. common prefixes
- b. common suffixes
- c. common spelling rules related to adding prefixes and suffixes (e.g., dropping the final -e, doubling a consonant)

***sequential skills**

Fluency

Students will read grade-level text smoothly and accurately, with appropriate expression.

2.2.F.1 Students will expand their sight word vocabulary by reading regularly- and irregularly-spelled words in isolation and context with increasing automaticity.

2.2.F.2 Students will orally and accurately read grade-level text at a smooth rate with expression that connotes comprehension.



Standard 2: Reading and Writing Process

Students will use a variety of recursive reading and writing processes.

Reading Students will read and comprehend inclusive, diverse, and increasingly complex literary and informational texts.	Writing Students will engage in a recursive process that may include prewriting, drafting, revising, editing, and publishing.
1. Students will identify the main idea and supporting details of a text. 2. Students will identify elements of various genres in fiction and nonfiction texts. 3. Students will begin to summarize the plot of a story to include the beginning, middle, and end. 4. Students will begin to summarize facts and details from an informational text.	1. Students will prewrite and develop drafts by sequencing the action in a story or details about a topic through writing sentences. 2. Students will edit drafts using appropriate spacing between letters, words, and sentences. 3. Students will revise drafts by adding, deleting, and/or moving text. 4. Students will correctly spell grade-level words while editing using resources as needed. 5. Students will routinely use a recursive process to publish final drafts for an authentic audience (e.g., reading aloud, author's chair).



Standard 3: Critical Reading and Writing

Students will apply critical thinking skills to reading and writing.

Reading

Students will analyze, interpret, and evaluate increasingly complex literary and informational texts that include a wide range of historical, cultural, ethnic, and global perspectives from a variety of genres.

1. Students will determine the author's purpose (i.e., tell a story, provide information).
2. Students will determine whether a grade-level literary text is narrated in first- or third-person point of view with prompting.
3. Students will find examples of literary elements:
 - setting (i.e., time and place)
 - plot (i.e., beginning, middle, end)
 - characters and their traits
4. Students will find examples of literary devices:
 - simile
 - alliteration
 - onomatopoeia
5. Students will use details from the literary or informational text to draw conclusions and make predictions.
6. Students will locate facts that are clearly stated in an informational text.
7. Students will describe the structure of an informational text with prompting:
 - description
 - sequential

Writing

Students will thoughtfully and intentionally write, addressing a range of modes, purposes, and audiences.

1. Students will write narratives incorporating characters, plot (i.e., beginning, middle, end), and a basic setting (i.e., time, place).
2. Students will write facts about a topic and include a main idea with supporting details in a paragraph.
3. Students will write an opinion about a topic and provide reasons as support in a paragraph.



Standard 4: Vocabulary

Students will expand and apply their spoken and reading vocabularies to speak, read, and write effectively.

Reading Students will expand their grade-level vocabularies through reading, word study, and class discussion.	Writing Students will apply knowledge of vocabulary to speak and write effectively.
1. Students will determine relationships among words, including synonyms, antonyms, and simple multiple-meaning words. 2. Students will use context clues to determine the meaning of words. 3. Students will use word parts (e.g., affixes, Anglo-Saxon roots, stems) to define and determine the meaning of new words. 4. Students will use grade-level resource materials (e.g., simple dictionary, glossary) to clarify the meaning of words. 5. Students will acquire new grade-level vocabulary, relate new words to prior knowledge, and apply vocabulary in new situations.	1. Students will use grade-level vocabulary to communicate ideas through speaking and writing. 2. Students will use language in speaking and writing according to purpose and audience.



Standard 5: Language

Students will expand and apply knowledge of grammar, usage, mechanics, and style to comprehend texts and communicate effectively.

Reading

Students will expand and apply knowledge of grammar, usage, mechanics, and style to comprehend, analyze, and/or evaluate a variety of texts.

1. Students will recognize simple and compound sentences.
2. Students will recognize parts of speech in sentences:
 - common, proper, and irregular plural nouns
 - tenses of verbs (i.e., past, present, future)
 - the simple subject and simple predicate of a sentence
 - descriptive adjectives and articles (i.e., *a*, *an*, *the*) as adjectives
 - prepositions
 - singular and plural personal pronouns and the nouns they replace
 - the conjunctions *and*, *or*, and *but*
 - -ly adverbs

Writing

Students will expand and apply knowledge of grammar, usage, mechanics, and style to speak and write effectively, demonstrating standard usage when appropriate.

1. Students will compose simple and compound declarative, interrogative, imperative, and exclamatory sentences that begin with a capital letter and conclude with an end mark.
2. Students will use nouns, verbs, and adjectives to add clarity and variety to their writing.
3. Students will punctuate initials and capitalize holidays, product names, initials, and months and days of the week.
4. Students will use periods with declarative and imperative sentences, question marks with interrogative sentences, and exclamation points with exclamatory sentences.
5. Students will use apostrophes to form simple contractions (e.g., *isn't*, *aren't*, *can't*).
6. Students will use commas in dates (e.g., September 6, 2020).
7. Students will use a colon to indicate time (e.g., The bell rings at 3:15.).



Standard 6: Research

Students will engage in inquiry to acquire, refine, and communicate accurate information.

Reading Students will gather, comprehend, evaluate, and synthesize researched information to acquire and refine knowledge.	Writing Students will synthesize information ethically through speaking and writing.
1. Students will create their own questions to find information on their topic. 2. Students will identify and use graphic and text features to understand texts: <ul style="list-style-type: none">● photos● illustrations● titles● labels● headings● charts● graphs● captions● subheadings 3. Students will consult various text reference sources to gather information (i.e., title page, table of contents, glossary, index).	1. Students will generate a list of topics and questions about an area of interest for research. 2. Students will organize information found during group or individual research, using graphic organizers or other aids. 3. Students will organize and share relevant information for various purposes.



Standard 7: Multimodal Literacies

Students will comprehend and communicate knowledge through alphabetic, aural, visual, spatial, and/or gestural content.

Reading

Students will comprehend and evaluate multimodal content.

2.7.R Students will explore and compare ideas and topics in multimodal content.

Writing

Students will create multimodal content to communicate effectively.

2.7.W Students will use a combination of writing, sound, visual content, and/or movement to communicate ideas, thoughts, and feelings.

Standard 8: Independent Reading and Writing

Students will read and write independently for a variety of purposes and periods of time.

Reading

Students will read self-selected texts independently, choosing genres to suit and expand their personal preferences and purposes.

2.8.R Students will select texts for academic and personal purposes and read independently for extended periods of time.

Writing

Students will write independently, intentionally selecting modes, purposes, and audiences.

2.8.W Students will write independently using print and/or typing over various lengths of time for a variety of purposes.



Oklahoma Academic Standards **MATHEMATICS**



**OKLAHOMA
Education**

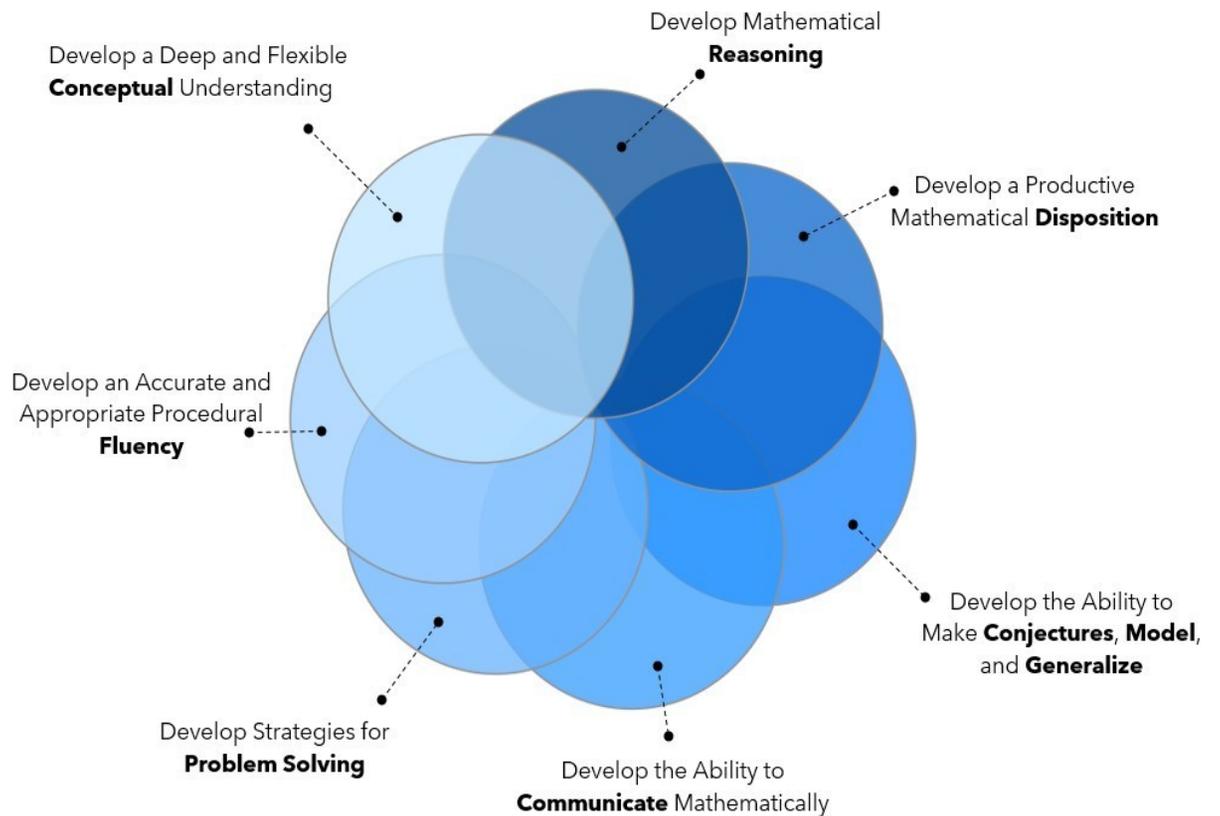


Standards vs. Objectives

The Oklahoma Academic Standards for Mathematics (OAS-M) consist of a set of standards and objectives (see page 9). The objectives serve as “stepping stones” for students to gain proficiency in the corresponding overarching standard. Each objective is the equivalent of at least one mathematical competency that students should know and be able to do if they can demonstrate proficiency in the standard. Objectives can and should be bundled to provide multiple opportunities and methods for students to learn and connect the standards and Mathematical Actions and Processes.

Mathematical Actions and Processes

The Mathematical Actions and Processes (MAPs) simultaneously reflect the holistic nature of mathematics as a discipline in which patterns and relationships among quantities, numbers, and space are studied and as a form of literacy such that all students are supported in accessing and understanding mathematics for life, for the workplace, for the scientific and technical community, and as a part of cultural heritage. The seven MAPS leverage both the NCTM Process Standards and the Five Mathematical Proficiencies to capture the mathematical experience of Oklahoma students as they pursue mathematical literacy. The gradient blocks at the top of each set of standards reminds educators to engage students in the Mathematical Actions and Processes together with content standards.





Mathematical Actions and Processes

Throughout their PK-12 education experience, mathematically literate students will:

Develop a Deep and Flexible Conceptual Understanding

Demonstrate a deep and flexible conceptual understanding of mathematical concepts, operations, and relations while making mathematical and real-world connections. Students will develop an understanding of how and when to apply and use the mathematics they know to solve problems.

Develop Accurate and Appropriate Procedural Fluency

Focus on the efficiency, flexibility, and accuracy in which students approach and solve problems. Students will learn and develop efficient procedures and algorithms for computations and repeated processes which includes developing fluency in operations with numbers and expressions. Students will have opportunities to justify both informal and commonly used strategies to support their choices of appropriate procedures. As they progress, students will strengthen their understanding and skill through application and practice.

Develop Strategies for Problem Solving

Analyze the parts of complex mathematical tasks and identify entry points to begin the search for a solution. Students will select from a variety of problem-solving strategies and use corresponding multiple representations (verbal, physical, symbolic, pictorial, graphical, tabular) when appropriate. They will pursue solutions to various tasks from real-world situations and applications that are often interdisciplinary in nature. They will find methods to verify their answers in context and will always question the reasonableness of solutions.

Develop Mathematical Reasoning

Explore and communicate a variety of reasoning strategies to think through problems. Students will apply their logic to critique the thinking and strategies of others to develop and evaluate mathematical arguments, including making arguments and counterarguments and making connections to other contexts.

Develop a Productive Mathematical Disposition

Hold the belief that mathematics is sensible, useful, and worthwhile. Students will develop the habit of looking for and making use of patterns and mathematical structures. They will persevere and become resilient, effective problem solvers.

Develop the Ability to Make Conjectures, Model, and Generalize

Make predictions and conjectures and draw conclusions throughout the problem-solving process based on patterns and the repeated structures in mathematics. Students will create, identify, and extend patterns as a strategy for solving and making sense of problems.

Develop the Ability to Communicate Mathematically

Students will discuss, write, read, interpret, and translate ideas and concepts mathematically. As they progress, students' ability to communicate mathematically will include their increased use of mathematical language and terms and analysis of mathematical definitions.



Reading the Oklahoma Academic Standards for Mathematics

Standards Overview

The Oklahoma Academic Standards for Mathematics are developed around four main content strands: Numbers and Operations, Algebraic Reasoning and Algebra, Geometry and Measurement, and Data and Probability. These four strands organize the content standards throughout PK-7 and Pre-Algebra. The standards for Algebra I, Algebra II, Geometry, Precalculus, and Statistics & Probability are also fundamentally organized around these strands. The Oklahoma Mathematical Actions and Processes (MAPs) are the skills and abilities students should develop and be engaged in throughout their PK-12 mathematics education. Among these are the ability to problem solve, communicate, and reason about mathematics, which will help students be ready for the mathematics expectations of college and the skills desired by many employers. While the MAPs and content standards work together to create clear, concise, and rigorous mathematics standards and expectations for Oklahoma students with the aim of helping them be college and career ready, it is not intended that each Mathematical Action and Process will be utilized or developed with each content standard. For example, content standards that involve explaining a particular concept may be best accomplished by also engaging students in communicating mathematically, whereas standards that focus in the early grades on fluency with operations may align well with the Mathematical Action and Process focused on procedural fluency.

The Four Content Strands of the Oklahoma Academic Standards for Mathematics

Numbers and Operations Strand: A focus on numbers and operations is the cornerstone of a strong mathematics program. Developing students' fluency with numbers and operations throughout their PK-12 mathematics experience requires a balance and connection between conceptual understanding and computational proficiency and efficiency. This strand focuses on the importance of students' understanding of numbers, ways of representing numbers, relationships among numbers, relationships among number systems, and meanings of operations and how they relate to one another. An emphasis is placed on the development of estimation, so students can determine the reasonableness of solutions and answers. Further, it requires that students should be able to compute with proficiency and efficiency.



The Four Content Strands of the Oklahoma Academic Standards for Mathematics: continued

Algebraic Reasoning and Algebra Strand: All students should be able to reason algebraically and learn algebra. This strand provides focus for the PK-7 and Pre-Algebra standards around the notion that algebra is more than moving symbols around. It is about understanding patterns, relations, and functions, representing and analyzing mathematical situations and structures using algebraic symbols, using mathematical models to represent and understand quantitative relationships, and analyzing change in various contexts. These understandings are critical for success in college-level mathematics and fundamental for many real-world problems and situations students will face in their future careers. High school algebra, precalculus, and trigonometry standards use, apply, and extend these concepts.

Geometry and Measurement Strand: A focus on geometry should enable students to analyze characteristics of two- and three-dimensional objects, develop arguments based on geometric relationships, describe spatial relationships using coordinate geometry and other representational systems, apply transformations and symmetry to analyze mathematical situations, and utilize visualization, spatial reasoning, and geometric modeling to solve problems. A focus on measurement should enable students to understand measurable attributes of objects and the units, systems, and processes of measurement, and apply appropriate techniques, tools, and formulas to determine measurements. This strand provides focus around the notion that geometry and measurement help students understand and represent ideas and solve problems they will encounter in their daily lives. The high school geometry standards use, apply, and extend these concepts.

Data and Probability Strand: An increased emphasis on understanding data should span all grade levels. Making sense of data and probability has become a part of our daily lives, supporting the importance of this strand throughout a student's PK-12 mathematics experience. A focus on data and probability should enable all students to formulate questions that can be addressed with data, and to collect, organize, and display relevant data to answer them. Students should select and use appropriate statistical methods to analyze data, develop and evaluate inferences and predictions that are based on data, and understand and apply basic concepts of probability. High school statistics and probability standards use, apply, and extend these concepts.



Reading the Oklahoma Academic Standards for Mathematics

GRADE OR COURSE

5th Grade (5)

MATH ACTIONS AND PROCESSES

Develop a Deep and Flexible Conceptual Understanding	Develop Accurate and Appropriate Procedural Fluency	Develop Strategies for Problem Solving	Develop Mathematical Reasoning	Develop a Productive Mathematical Disposition	Develop the Ability to Make Conjectures, Model, and Generalize	Develop the Ability to Communicate
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STANDARDS

Number & Operations (N)

STRANDS

5.N.1 Read, write, represent, and compare fractions and decimals; recognize and write equivalent fractions; convert between fractions and decimals; use fractions and decimals in real-world and mathematical situations.

5.N.1.1 Represent decimal fractions (e.g., 1/10, 1/100) using 10 by 10 grids, base-ten blocks, meter stick) and showing the rational number relationship among fractions, decimals and whole numbers.

5.N.1.2 Read, write, and represent decimals using place value to describe decimal numbers including fractional numbers as small as thousandths and whole numbers up to seven digits.

5.N.1.3 Compare and order fractions and decimals, including mixed numbers and fractions less than one, and locate on a number line.

5.N.1.4 Recognize and generate equivalent decimals, fractions, mixed numbers, and fractions in various mathematical models.

OBJECTIVES

5.N.2 Divide multi-digit numbers and solve real-world and mathematical problems using arithmetic.

5.N.2.1 Divide multi-digit numbers using various mathematical models.

5.N.2.2 Divide multi-digit numbers, by one- and two-digit divisors, based on knowledge of place value, including but not limited to standard algorithms.

5.N.2.3 Recognize that remainders can be represented in a variety of ways, including a whole number, fraction, or decimal. Determine the most meaningful form of a remainder based on the context of the problem.

5.N.2.4 Construct mathematical models to solve multi-digit whole numbers problems requiring addition, subtraction, multiplication, and division using various strategies, including the inverse relationships between operations, the use of technology, and the context of the problem to assess the reasonableness of results.

5.N.3 Add and subtract fractions with like and unlike denominators, mixed numbers and decimals to solve real-world and mathematical problems.

5.N.3.1 Estimate sums and differences of fractions with like and unlike denominators, mixed numbers, and decimals to assess the reasonableness of the results.

5.N.3.2 Illustrate addition and subtraction of fractions with like and unlike denominators, mixed numbers, and decimals using a variety of mathematical models (e.g., fraction strips, area models, number lines, fraction rods).

5.N.3.3 Add and subtract fractions with like and unlike denominators, mixed numbers, and decimals, involving money, measurement, geometry, and data using various mathematical models including but not limited to standard algorithms.

5.N.3.4 Applying mental math and knowledge of place value (no computations), find 0.1 more than a number and 0.1 less than a number; find 0.01 more than a number and 0.01 less than a number; find 0.001 more than a number and 0.001 less than a number -- through the thousandths place.



Develop a Deep and Flexible Conceptual Understanding	Develop Accurate and Appropriate Procedural Fluency	Develop Strategies for Problem Solving	Develop Mathematical Reasoning	Develop a Productive Mathematical Disposition	Develop the Ability to Make Conjectures, Model, and Generalize	Develop the Ability to Communicate
Numbers & Operations (N)						
<p>2.N.1 Compare and represent whole numbers up to 1,000 with an emphasis on place value and equality.</p>	<p>2.N.1.1 Read, write, discuss, and represent whole numbers up to 1,000. Representations should include, but are not limited to, numerals, words, pictures, tally marks, number lines, and manipulatives.</p>					
	<p>2.N.1.2 Use knowledge of number relationships to locate the position of a given whole number, up to 100, on an open number line.</p>					
	<p>2.N.1.3 Use place value to describe whole numbers between 10 and 1,000 in terms of hundreds, tens, and ones, including written, standard, and expanded forms. Know that 10 is equivalent to 10 ones and 100 is equivalent to 10 tens.</p>					
	<p>2.N.1.4 Find 10 more or 10 less than a given three-digit number. Find 100 more or 100 less than a given three-digit number.</p>					
	<p>2.N.1.5 Use objects to determine whether a number is even or odd.</p>					
	<p>2.N.1.6 Use place value understanding to round numbers to the nearest ten and nearest hundred (up to 1,000). Recognize when to round in real-world situations.</p>					
	<p>2.N.1.7 Use place value to compare and order whole numbers up to 1,000 using comparative language, numbers, and symbols (e.g., $425 > 276$, $73 < 107$, page 351 comes after page 350, 753 is between 700 and 800).</p>					
<p>2.N.2 Add and subtract one- and two-digit numbers in real-world and mathematical problems.</p>	<p>2.N.2.1 Use the relationship between addition and subtraction to generate basic facts with sums and minuends of up to 20.</p>					
	<p>2.N.2.2 Demonstrate fluency with basic facts of addition and subtraction with sums and minuends of up to 20.</p>					
	<p>2.N.2.3 Estimate sums and differences up to 100.</p>					
	<p>2.N.2.4 Use strategies and algorithms based on knowledge of place value and equality to add and subtract two-digit numbers.</p>					
	<p>2.N.2.5 Solve addition and subtraction problems involving whole numbers up to two digits.</p>					
	<p>2.N.2.6 Use concrete models and structured arrangements, such as repeated addition, arrays, and ten frames to develop an understanding of multiplication.</p>					
<p>2.N.3 Explore the foundational ideas of fractions.</p>	<p>2.N.3.1 Identify the parts of a set and area that represent fractions for halves, thirds, and fourths.</p>					
	<p>2.N.3.2 Construct equal-sized portions through fair sharing (length, set, and area models for halves, thirds, and fourths).</p>					
<p>2.N.4 Determine the value of a set of coins.</p>	<p>2.N.4.1 Determine the value of a collection of coins up to one dollar using the cent symbol.</p>					
	<p>2.N.4.2 Use a combination of coins to represent a given amount of money up to one dollar.</p>					



Algebraic Reasoning & Algebra (A)	
2.A.1 Describe the relationship found in patterns to solve real-world and mathematical problems.	2.A.1.1 Represent, create, describe, complete, and extend increasing and decreasing patterns with quantity and numbers in a variety of contexts.
	2.A.1.2 Represent and describe repeating patterns involving shapes in a variety of contexts.
2.A.2 Use number sentences involving unknowns to represent and solve real-world and mathematical problems.	2.A.2.1 Use objects and number lines to represent number sentences.
	2.A.2.2 Generate models and situations to represent number sentences and vice versa.
	2.A.2.3 Apply the commutative property, identity property, and number sense to find values for unknowns that make addition and subtraction number sentences true or false.
Geometry & Measurement (GM)	
2.GM.1 Analyze attributes of two- and three-dimensional figures and develop generalizations about their properties.	2.GM.1.1 Recognize regular and irregular trapezoids and hexagons.
	2.GM.1.2 Describe, compare, and classify two-dimensional figures according to their geometric attributes.
	2.GM.1.3 Compose and decompose two-dimensional shapes using triangles, squares, hexagons, trapezoids, and rhombi.
	2.GM.1.4 Sort three-dimensional shapes based on attributes such as number of faces, vertices, and edges.
	2.GM.1.5 Recognize right angles and classify angles as smaller or larger than a right angle.
2.GM.2 Understand length as a measurable attribute and explore capacity.	2.GM.2.1 Explain the relationship between the size of the unit of measurement and the number of units needed to measure the length of an object.
	2.GM.2.2 Explain the relationship between length and the numbers on a ruler by using a ruler to measure lengths to the nearest whole unit.
	2.GM.2.3 Explore how varying shapes and styles of containers can have the same capacity.
2.GM.3 Tell time to the quarter hour.	2.GM.3.1 Distinguish between a.m. and p.m.
	2.GM.3.2 Read and write time to the quarter hour on an analog and digital clock.
Data & Probability (D)	
2.D.1 Collect, organize, and interpret data.	2.D.1.1 Explain that the length of a bar in a bar graph and the number of objects in a pictograph represents the number of data points for a given category.
	2.D.1.2 Organize a collection of data with up to four categories using pictographs and bar graphs in intervals of 1s, 2s, 5s or 10s.
	2.D.1.3 Write and solve one-step word problems involving addition or subtraction using data represented within pictographs and bar graphs with intervals of one.
	2.D.1.4 Draw conclusions and make predictions from information in a pictograph and bar graph.

OKLAHOMA ACADEMIC STANDARDS

SCIENCE



OKLAHOMA STATE DEPARTMENT OF
EDUCATION
— CHAMPION EXCELLENCE —



Science Strands Overview

The Draft Oklahoma Academic Standards for Science, K-12 are three-dimensional performance expectations representing the things students should know, understand, and be able to do to be proficient in science and engineering. Performance expectations are considered standards and include a science and engineering practice (everyday skills of scientists and engineers), disciplinary core ideas (science ideas used by scientists and engineers), and crosscutting concepts (ways of thinking like scientists and engineers). The PreK standards emphasize one dimension; the science and engineering practices. This provides early learners with ample time for exploratory play and background experiences that will inform learning experiences K-12.

Performance Expectation:

Each Performance Expectation is built upon recommendations in *A Framework for K-12 Science Education* and the three dimensions of science.

1. Science and Engineering Practices
2. Disciplinary Core Ideas
3. Crosscutting Concepts (NRC, 2012, p. 2)

The following additional components in the standard documents serve as support for instructors in providing clarity and further guidance for each Performance Expectation.

Clarification Statement:

Where needed, a Clarification Statement accompanies a Performance Expectation. The aim of a Clarification Statement is to provide further explanation or examples to better support educators in understanding the aim of the Performance Expectation.

Assessment Boundary:

Where applicable, an Assessment Boundary accompanies a Performance Expectation in order to provide additional support for educators in understanding the intent of the Performance Expectation and its relation to other Performance Expectations in the learning progression. Teachers should utilize the Assessment Boundaries as tools for developing curriculum and local assessments. For 5th grade, 8th grade, Biology, and Physical Science(s) the Assessment Boundaries will be utilized to inform the development of the state summative academic achievement assessments.



Dimension 1: Science and Engineering Practices

The Science and Engineering Practices describe the major practices that scientists employ as they investigate and build models and theories about the world, and a key set of engineering practices that engineers use as they design and build systems. Performance Expectations that emphasize engineering are designated with an asterik *. The eight science and engineering practices are:

Asking Questions and Defining Problems
A practice of science is to ask and refine questions that lead to descriptions and explanations of how the natural and designed world(s) works. Engineering questions clarify problems to determine criteria for successful solutions.

Developing and Using Models
A practice of both science and engineering is to use and construct models as helpful tools for representing ideas and explanations. These tools include diagrams, drawings, physical replicas, mathematical representations, analogies, and computer simulations.

Planning and Carrying Out Investigations
Scientists and engineers plan and carry out investigations in the field or laboratory, working collaboratively as well as individually. Their investigations are systematic and require clarifying what counts as data and identifying variables or parameters.

Analyzing and Interpreting Data
Scientific investigations produce data that must be analyzed in order to derive meaning, and engineering investigations include analysis of data collected in the tests of designs.

Using Mathematics and Computational Thinking

In both science and engineering, mathematics and computation are fundamental tools for representing physical variables and their relationships. They are used for constructing simulations, solving

equations exactly or approximately, and recognizing, expressing, and applying quantitative relationships.

Constructing Explanations and Designing Solutions

End products of science are explanations, and end products of engineering are solutions. The construction of theories provides explanatory accounts of the world, and scientific knowledge is utilized in the development of solution to problems.

Engaging Scientific Argument from Evidence

Argumentation is the process by which evidence-based conclusions and solutions are reached. In science and engineering, reasoning and argument based on evidence are essential to identifying the best explanation for a natural phenomenon or the best solution to a design problem.

Obtaining, Evaluating, and Communicating Information

Scientists and engineers must be able to communicate clearly and persuasively the ideas and methods they generate. Critiquing and communicating ideas individually and in groups is a critical professional activity.



Dimension 2: Disciplinary Core Ideas

Disciplinary Core Ideas represent a set of science and engineering ideas for K-12 science education that have broad importance across multiple sciences or engineering disciplines; provide a key tool for understanding or investigating more complex ideas and solving problems; relate to the interests and life experiences of students; and are teachable and learnable over multiple grades at increasing levels of sophistication. (NRC, 2012, p. 31) Disciplinary Core Ideas are grouped into four domains:

Domain 1: Physical Science (PS)

Most systems or processes depend at some level on physical and chemical subprocesses, whether the system is a star, Earth's atmosphere, a river, a bicycle, or a living cell. To understand the physical and chemical basis of a system, students must understand the structure of matter, the forces between objects, the related energy transfers, and their consequences. In this way, the underlying principles of physical science, chemistry, and physics allow students to understand all natural and human-created phenomena.

Domain 2: Life Science (LS)

The life sciences focus on patterns, processes, and relationships of living organisms. The study of life ranges over scales from single molecules, organisms and ecosystems, to the entire biosphere. A core principle of the life sciences is that organisms are related through common ancestry and that processes of natural selection have led to the tremendous diversity of the biosphere. Through courses like Biology and Environmental Science, students explore all aspects of living things and the environments they live in.

Domain 3: Earth and Space Science (ESS)

Through Earth and Space Sciences (ESS), students investigate processes that operate on Earth and also address Earth's place in the solar system and the galaxy. ESS involve phenomena that range in scale from unimaginably large

to invisibly small and provide students opportunities to understand how the atmosphere, geosphere, and biosphere are connected.

Domain 4: Engineering, Technology, and Applications of Science (ETS)

The applications of science knowledge and practices to engineering have contributed to the technologies and the systems that serve people today. Insights gained from scientific discovery have altered the ways in which buildings, bridges, and cities are constructed; changed the operations of factories; led to new methods of generating and distributing energy; and created new modes of travel and communication. An overarching goal of ETS is for students to explore links among engineering, technology, science, and society throughout the physical, life, and Earth and space sciences.



Dimension 3: Crosscutting Concepts

The Crosscutting Concepts represent common threads or themes that span across science disciplines (biology, chemistry, physics, environmental science, Earth/space science) and have value to both scientists and engineers because they identify universal properties and processes found in all disciplines. These Crosscutting Concepts are:

Patterns

Observed patterns of forms and events guide organization and classification. Patterns prompt questions about the factors that influence cause and effect relationships. Patterns are useful as evidence to support explanations and arguments.

Cause and Effect

Events have causes, sometimes simple, sometimes multifaceted and complex. A major activity of science is investigating and explaining causal relationships and the mechanisms by which they are mediated. Such mechanisms can then be tested across given contexts and used to predict and explain events in new contexts.

Scale, Proportion, Quantity

In considering phenomena, it is critical to recognize what is relevant at different measures of size, time, and energy and to recognize how changes in scale, proportion, or quantity affect a system's structure or performance.

Tracking fluxes of energy and matter into, out of, and within systems helps one understand the system's possibilities and limitations.

Structure and Function

An object's structure and shape determine many of its properties and functions. The structures, shapes, and substructures of living organisms determine how the organism functions to meet its needs within an environment.

Stability and Change

For natural and built systems alike, conditions of stability and rates of change provide the focus for understanding how the system operates and causes for changes in system.

Systems and System Models

Defining the system under study—specifying its boundaries and making explicit a model of that system—provides tools for understanding and testing ideas that are applicable throughout science and engineering.

Energy and Matter



Reading the Oklahoma Academic Standards for Science



Oklahoma Academic Standards for Science

Kindergarten



Grade or Course

KINDERGARTEN (K)



Disciplinary Core Idea Category

Motion and Stability of Forces (PS2)

K.PS2.1 Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object. Performance Expectation



Clarification Statement: Example investigations include observing the movement of different objects being pulled by a string, observing different objects pushed on a surface and used to roll down a ramp, or observing how two objects (e.g., toy cars, balls) interact when they collide. Observations should be collected directly. **Clarification Statement & Assessment Boundary** share ideas for investigations and observations. **Assessment Boundary:** Assessment is limited to different relative strengths or different directions, but not both at the same time. Assessment does not include non-contact pushes or pulls such as those produced by magnets.



Science and Engineering Practice

Disciplinary Core Ideas

Crosscutting Concepts

Planning and Carrying Out Investigations:

- Pushes and pulls can have different strengths and directions.
- Pushing or pulling on an object can change the speed or direction of motion.
- A bigger push or pull makes things speed up or slow down more quickly.
- When objects touch or collide, they push on one another and can change motion.

Cause and Effect:
Simple tests can be designed to provide evidence to support or refute student ideas about causes.



Science and Engineering Practice



Disciplinary Core Ideas



Crosscutting Concept



2 nd GRADE (2)		
Matter and Its Interactions (PS1)		
2.PS1.1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.		
Clarification Statement: Observations could include color, texture, hardness, and flexibility. Patterns could include the similar properties that different materials share. Investigations could include ice and snow melting or frozen objects thawing. Assessment Boundary: N/A		
Science and Engineering Practice	Disciplinary Core Ideas	Crosscutting Concepts
Planning and Carrying Out Investigations: <ul style="list-style-type: none"> Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence to answer a question. 	<ul style="list-style-type: none"> Different kinds of matter exist and many of them can be either solid or liquid, depending on temperature. Matter can be described and classified by its observable properties. Different properties are suited to different purposes. 	Patterns: <ul style="list-style-type: none"> Patterns in the natural and human-designed world can be observed.
2.PS1.2 Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for the intended purpose.*		
Clarification Statement: Examples of properties could include strength, flexibility, hardness, texture, and absorbency (e.g. paper towels could be utilized to measure absorbency and strength). Assessment Boundary: Assessment of quantitative measurements is limited to length.		
Science and Engineering Practice	Disciplinary Core Ideas	Crosscutting Concepts
Analyzing and Interpreting Data: <ul style="list-style-type: none"> Analyze data from tests of an object or tool to determine if it works as intended. 	<ul style="list-style-type: none"> Different properties are suited to different purposes. Every human-made product is designed by applying some knowledge of the natural world and is built using materials derived from the natural world. 	Cause and Effect: <ul style="list-style-type: none"> Simple tests can be designed to gather evidence to support or refute student ideas about causes.



Matter and Its Interactions (PS1)		
2.PS1.3 Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.		
<p>Clarification Statement: Examples of pieces could include building blocks, or other assorted small objects. Provide students with the same number of pieces to create a different object. Assessment Boundary: Do not introduce terminology associated with the Law of Conservation of Matter just concepts. Chemical change is outside of this performance expectation.</p>		
Science and Engineering Practice	Disciplinary Core Ideas	Crosscutting Concepts
<p>Constructing Explanations:</p> <ul style="list-style-type: none"> Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena. 	<ul style="list-style-type: none"> A great variety of objects can be built up from a small set of pieces. Different properties are suited to different purposes. 	<p>Energy and Matter:</p> <ul style="list-style-type: none"> Objects may break into smaller pieces and be put together into larger pieces, or change shapes.
2.PS1.4 Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.		
<p>Clarification Statement: Demonstrations of reversible changes could include materials such as water, butter, or crayons at different temperatures. Demonstrations of irreversible changes could include cooking an egg, freezing a plant leaf, or heating paper. Arguments center on using first-hand observations as evidence to support a claim that a material can change and go back to its original form through heating and cooling. Assessment Boundary: Students should not be expected to identify or explain physical and chemical changes.</p>		
Science and Engineering Practice	Disciplinary Core Ideas	Crosscutting Concepts
<p>Engaging in Argument from Evidence:</p> <ul style="list-style-type: none"> Construct an argument with evidence to support a claim. 	<ul style="list-style-type: none"> Heating or cooling a substance may cause changes that can be observed. Sometimes these changes are reversible, and sometimes they are not. 	<p>Cause and Effect:</p> <ul style="list-style-type: none"> Events have causes that generate observable patterns.



Ecosystems: Interactions, Energy and Dynamics (LS2)

2.LS2.1 Plan and conduct an investigation to determine if plants need sunlight and water to grow.

Clarification Statement: Investigations should be limited to testing one variable at a time. **Assessment Boundary:** Assessment is limited to testing one variable at a time, although students are not expected to understand the term variable at this time.

Science and Engineering Practice	Disciplinary Core Ideas	Crosscutting Concepts
<p>Planning and Carrying Out Investigations:</p> <ul style="list-style-type: none"> Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence to answer a question. 	<ul style="list-style-type: none"> Plants depend on water and light to grow. 	<p>Cause and Effect:</p> <ul style="list-style-type: none"> Events have causes that generate observable patterns.

2.LS2.2 Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.*

Clarification Statement: Examples include: placing socks on the outside of students’ shoes and walking outside allows socks to gather seeds, plant sock(s) to see what grows, use a pipe cleaner to move powder (like flour) from one place to another emulating flowers being pollinated by bees or other insects. **Assessment Boundary:** N/A

Science and Engineering Practice	Disciplinary Core Ideas	Crosscutting Concepts
<p>Developing and Using Models:</p> <ul style="list-style-type: none"> Develop a simple model based on evidence to represent a proposed object or tool. 	<ul style="list-style-type: none"> Plants depend on animals for pollination or to move their seeds around. Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem’s solutions to other people. 	<p>Structure and Function:</p> <ul style="list-style-type: none"> The shape and stability of structures of natural and designed objects are related to their function(s).



Biological Unity and Diversity (LS4)

2.LS4.1 Make observations of plants and animals to compare the diversity of life in different habitats.

Clarification Statement: Emphasis is on the diversity of living things in each of a variety of different habitats. Students could explore different habitats such as a neighborhood park, ponds, and the school playground. **Assessment Boundary:** Assessment does not include specific animal and plant names in specific habitats.

Science and Engineering Practice	Disciplinary Core Ideas	Crosscutting Concepts
<p>Constructing Explanations:</p> <ul style="list-style-type: none"> Make observations from several sources to construct an evidence-based account for natural phenomena. 	<ul style="list-style-type: none"> There are many different kinds of living things in any area, and they exist in different places on land and in water. 	<p>Systems and System Models:</p> <ul style="list-style-type: none"> A system is an organized group of related objects or components.

Earth’s Place in the Universe (ESS1)

2.ESS1.1 Use information from several sources to provide evidence that Earth events can occur quickly or slowly.

Clarification Statement: Examples of events and timescales could include volcanic explosions and earthquakes, which happen quickly, and erosion of rocks, which occurs slowly. **Assessment Boundary:** Assessment does not include quantitative measurements of timescales.

Science and Engineering Practice	Disciplinary Core Ideas	Crosscutting Concepts
<p>Planning and Carrying Out Investigations:</p> <p>Make observations (firsthand or from media) to collect data which can be used to make comparisons.</p>	<ul style="list-style-type: none"> Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe. 	<p>Stability and Change:</p> <ul style="list-style-type: none"> Things may change slowly or rapidly.



Earth's Systems (ESS2)

2.ESS2.1 Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.*

Clarification Statement: Examples of solutions could include different designs of dikes and windbreaks to hold back wind and water, and different designs for using shrubs, grass, and trees to hold back the land. Students could explore these ideas with sand tables or soil and water in large containers. **Assessment Boundary:** N/A.

Science and Engineering Practice	Disciplinary Core Ideas	Crosscutting Concepts
Designing Solutions: <ul style="list-style-type: none"> Compare multiple solutions to a problem. 	<ul style="list-style-type: none"> Wind and water can change the shape of the land. Because there is always more than one possible solution to a problem, it is useful to compare and test designs. Developing and using technology has impacts on the natural world. 	Stability and Change: <ul style="list-style-type: none"> Things may change slowly or rapidly.

2.ESS2.2 Develop a model to represent the shapes and kind of land and bodies of water in an area.

Clarification Statement: Examples could include a diagram, drawing, physical replica, or three-dimensional diorama. Models can be based on photographs, virtual images, or in-person observations. **Assessment Boundary:** Assessment does not include quantitative scaling in models.

Science and Engineering Practice	Disciplinary Core Ideas	Crosscutting Concepts
Developing and Using Models: <ul style="list-style-type: none"> Develop a model to represent patterns in the natural world. 	<ul style="list-style-type: none"> Maps show where things are located. One can map the shapes and kinds of land and water in any area. 	Patterns: <ul style="list-style-type: none"> Patterns in the natural world can be observed.

2.ESS2.3 Obtain information to identify where water is found on Earth and that it can be solid or liquid.

Clarification Statement: Information can be obtained through text, media, or in-person observations. Patterns can be observed through identifying where solid water (ice) is found and where liquid water can be located. **Assessment Boundary:** N/A.

Science and Engineering Practice	Disciplinary Core Ideas	Crosscutting Concepts
Obtaining, Evaluating, and Communicating Information: <ul style="list-style-type: none"> Obtain information using various texts and media. 	<ul style="list-style-type: none"> Water is found in the ocean, rivers, lakes, and ponds. Water exists as solid ice and in liquid form. 	Patterns: <ul style="list-style-type: none"> Patterns in the natural world can be observed.

**OKLAHOMA
ACADEMIC
STANDARDS**

**SOCIAL
STUDIES**



OKLAHOMA STATE DEPARTMENT OF
EDUCATION
— CHAMPION EXCELLENCE —



Social Studies Content Strands Overview

Social Studies is a systematic and coordinated discipline designed to promote civic competence by drawing upon four content strands: history, geography, civics, and economics. These strands draw from all fields of study related to the social sciences to provide a framework used in the development of the content standards for social studies. They are to be threaded through an integrated program, from grades pre-K through 12, as appropriate at each level. While at some grades and for some courses, specific strands will be more dominant than others, all strands are represented and interrelated in the standards for each grade and course.

Strand 1: History

History focuses on the written record of human experience revealing how individuals and societies developed institutions, philosophies, ideals, and cultural values, and resolved their problems. A balanced study of history helps students understand the how and why of the challenges and successes of past societies. By studying the choices and decisions of the past, students can confront today's problems with a deeper awareness of their alternatives and likely consequences.

Strand 2: Geography

Geography has more to do with asking questions and solving problems than with rote memorization of isolated facts. It is the study of the earth's surface and the processes that shape it, the relationships between people and environments, and the connections between people and places. As a discipline, geography provides the skills to help students answer questions about where things are, how they got there, and how they interact with other things - in the past, now, and in the future.

Strand 3: Civics

Civics is defined to mean the study of the rights and duties of Oklahoma and United States citizens and of how their governments work. This strand helps students understand the essential principles and workings of their political system and that of others, as well as the relationship of American politics and government to world affairs. The goal of civics is to develop literate, informed, competent, and responsible citizens who are politically aware, active, and committed to the fundamental values and principles of American constitutional democracy.

Strand 4: Economics

Economics provides students with an understanding of how individuals, communities, states, and nations allocate both scarce and abundant resources. A clear understanding of economics enables students to comprehend the various competing economic philosophies, ideas, and forces that affect them every day, measure the effectiveness of each, and identify and evaluate the consequences of personal decisions and public policies. Students then will understand how a market economy effectively functions preparing them to be producers, consumers, and citizens.



Social Studies Practices Overview

The Social Studies Practices reflect the key skills and disciplinary tools to prepare students for college, career, and civic life. The practices are meant to be integrated with the instruction of content standards. The five practices are defined broadly below and are further delineated on pg. 6. The social studies practices are designed to support student mastery of the content through a progression of skills PK-12.

Engage in Democratic Processes

Understanding civic virtues and the role of civic institutions. Students will gain knowledge of the history, principles, and foundations of American democracy to participate in civic and democratic processes. Students will identify the institutions of American government to analyze their role as responsible citizens.

Analyze and Address Authentic Civic Issues

Understanding the importance of critical questioning to solve real world problems. Students will develop essential questions to frame independent inquiry related to the past and present. Students will identify and address public problems individually and collaboratively to improve communities and society.

Acquire, Apply, and Evaluate Evidence

Understanding and using strategies to analyze evidence in the social studies. Students will evaluate historical, geographic, and economic information. Students will draw conclusions from primary and secondary sources to formulate informed decisions.

Read Critically and Interpret Information Sources

Understanding the purpose of engaging with text. Students will evaluate factual information and points of view as presented in text. Students will read historical and contemporary texts to engage in collaborative discussion.

Engage in Evidence-Based Writing

Understanding the multiple purposes of the writing process. Students will develop written products designed for a variety of social studies related investigations. Students will use and integrate evidence to present knowledge and support opinion.



Social Studies Practices PK-12

The Social Studies Practices describe the experience all students should have as they explore and reason about social studies content PK-12. Additional guidance for what the Social Studies Practices look like across grade levels is provided in **Appendix A: Social Studies Practices PK-12 Progression**.

1. **Engage in Democratic Processes** - Students will understand the principles of government, the benefits of democratic systems, and their responsibilities as citizens.
 - 1.A. Students will demonstrate an understanding of the virtues that citizens should use when interacting with each other and the virtues that guide official government institutions.
 - 1.B. Students will demonstrate an understanding of the important institutions of their society and the principles that these institutions are intended to reflect.
 - 1.C. Students will demonstrate understanding of the processes and rules by which groups of people make decisions, govern themselves, and address public problems.
2. **Analyze and Address Authentic Civic Issues** - Students will determine the kinds of sources that will be helpful in answering essential, compelling, and supporting questions addressing authentic civic issues.
 - 2.A. Students will demonstrate the capability for developing essential, compelling, and supporting questions that address authentic civic issues.
 - 2.B. Students will demonstrate the ability to investigate problems taking into consideration multiple points of view represented in arguments, structure of an explanation, and other sources.
3. **Acquire, Apply, and Evaluate Evidence** - Students will utilize interdisciplinary tools and master the basic concepts of the social studies in order to acquire and apply content understanding in all related fields of study.
 - 3.A. Students will develop skills and practices which demonstrate an understanding that historical inquiry is based on the analysis and evaluation of evidence and its credibility.
 - 3.B. Students will demonstrate an understanding of geographic concepts and develop mastery of geographic tools and ways of thinking in order to become geographically informed.
 - 3.C. Students will analyze the principles of economic systems and develop an understanding of the benefits of a market system in local, national, and global settings.
4. **Read Critically and Interpret Informational Sources** - Students will engage in critical, active reading of grade-level appropriate primary and secondary sources related to key social studies concepts, including frequent analysis and interpretation of informational sources.
 - 4.A. Students will comprehend, evaluate, and synthesize textual sources to acquire and refine knowledge in the social studies.
 - 4.B. Students will apply critical reading and thinking skills to interpret, evaluate, and respond to a variety of complex texts from historical, ethnic, and global perspectives.
5. **Engage in Evidence-Based Writing** - Students will apply effective communication skills by developing a variety of evidence-based written products designed for multiple purposes and tasks, in order to demonstrate their understandings of social studies concepts, ideas, and content.
 - 5.A. Students will summarize and paraphrase, integrate evidence, and cite sources to create written products, research projects, and presentations for multiple purposes related to social studies content.
 - 5.B. Students will engage in authentic inquiry to acquire, refine, and share knowledge through written presentations related to social studies.



Reading the Oklahoma Academic Standards for Social Studies

Practices



Oklahoma Academic Standards for Social Studies 2nd Grade (2)



Grade or Course

Engage in Democratic Processes	Analyze and Address Authentic Civic Issues	Acquire, Apply, and Evaluate Evidence	Read Critically and Interpret Informational Sources	Engage in Evidence-Based Writing
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2nd Grade Content Standards

2.1 The student will explain the importance of the basic principles that provide the foundation of the American system of government.

Standards



2.2 The student will describe the physical and human characteristics of their environment.

2.1.1 Describe the Constitution of the United States as the structure for our national government.

2.1.2 Summarize the five key individual rights and liberties protected by the First Amendment to the Constitution of the United States.

2.1.3 Explain how active citizens participate in the government by voting to elect officials that represent them.

2.1.4 Identify the basic roles of national leaders including the President of the United States, the members of the United States Congress, and the justices of the Supreme Court.

2.1.5 Explain how all people can play an important role in their community.



Objectives

2.2.1 Construct basic maps using cardinal directions and map symbols.

2.2.2 Describe absolute and relative location using latitude, longitude, and hemispheres on basic maps and globes.

2.2.3 Use political maps to locate the state of Oklahoma and the six bordering states.

2.2.4 Identify and locate basic landforms, bodies of water, continents, and oceans on a map.

2.2.5 Describe how communities modify the environment to meet their needs.

2.2.6 Describe customs, traditions, clothing, food, housing, and music as basic elements of various cultures represented within the local community.



Engage in Democratic Processes	Analyze and Address Authentic Civic Issues	Acquire, Apply, and Evaluate Evidence	Read Critically and Interpret Informational Sources	Engage in Evidence-Based Writing
2nd Grade Content Standards				
2.1 The student will explain the importance of the basic principles that provide the foundation of the American system of government.	2.1.1 Describe the Constitution of the United States as the structure for our national government.			
	2.1.2 Summarize the five key individual rights and liberties protected by the First Amendment to the Constitution of the United States.			
	2.1.3 Explain how active citizens participate in the government by voting to elect officials that represent them.			
	2.1.4 Identify the basic roles of national leaders including the President of the United States , the members of the United States Congress, and the justices of the Supreme Court.			
	2.1.5 Explain how all people can play an important role in their community.			
2.2 The student will describe the physical and human characteristics of their environment.	2.2.1 Construct basic maps using cardinal directions and map symbols.			
	2.2.2 Describe absolute and relative location using latitude, longitude, and hemispheres on basic maps and globes.			
	2.2.3 Use political maps to locate the state of Oklahoma and the six bordering states.			
	2.2.4 Identify and locate basic landforms, bodies of water, continents, and oceans on a map.			
	2.2.5 Describe how communities modify the environment to meet their needs.			
	2.2.6 Describe customs, traditions, clothing, food, housing, and music as basic elements of various cultures represented within the local community.			



2.3 The student will examine the lives of notable Americans who expanded peoples' rights and freedoms through our history.	2.3.1 Analyze the contributions of people and groups who have shaped our history and who are honored by holidays and commemorative months.
	2.3.2 Compare perspectives of people in the past to people in the present.
	2.3.3 Compare different accounts of the same historical event using primary and secondary sources.
	2.3.4 Explain possible reasons for events in the past.
2.4 The student will understand basic economic concepts in the American economy.	2.4.1 Explain the importance of supply and demand in the consumer and producer relationship.
	2.4.2 Explain how barter and trade can lead to interdependence among communities.
	2.4.3 Describe the connection between taxes and community services, including schools, sanitation and water, fire and police protection, parks and recreation, libraries, and roads.
	2.4.4 Describe how setting goals and creating a budget helps people pay for things they need and want.