



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 structure).

**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 1

Students in grade 1 learn the foundational reading skills to proficiently decode text with fluency and understanding. Students share personal interests, listen to others, and engage in collaborative conversations. Students in grade 1 ask and answer basic yet relevant questions about fiction and nonfiction texts, retelling facts and details. They begin practicing the writing process by writing narrative, informative, and opinion pieces that focus on appropriate spacing. Students expand their grade-level vocabularies, including Anglo-Saxon roots, and apply their knowledge of those words as they communicate through speaking and writing. They write pieces with simple sentences that include independent clauses with singular or plural nouns, action verbs, correct capitalization, and end marks. Students understand texts more clearly with the aid of graphic and text features and use that understanding to find and share relevant information. 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.

<b>Listening</b> Students will develop and apply effective communication skills through active listening.	<b>Speaking</b> Students will develop and apply effective communication skills to share ideas through speaking.
<b>1.1.L.1</b> Students will actively listen using agreed-upon discussion rules.	<b>1.1.S.1</b> Students will work respectfully with peers.
<b>1.1.L.2</b> Students will follow simple two- and three-step oral directions.	<b>1.1.S.2</b> Students will engage in collaborative discussions about various topics and texts, including their own writing, with peers in small and large groups.
	<b>1.1.S.3</b> Students will ask and answer relevant questions to seek help or get information to confirm understanding.
	<b>1.1.S.4</b> Students will orally describe people, places, things, and events with relevant details expressing their ideas.



## 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.

- 1.2.PA.1** Students will count, segment, blend, and delete syllables in spoken words.
- 1.2.PA.2** Students will blend and segment onset and rime in spoken words (e.g., /ch/+ at = *chat*).
- 1.2.PA.3** Students will isolate and pronounce medial sounds in spoken words.
- 1.2.PA.4** Students will blend phonemes to form spoken words with 4-6 phonemes, including consonant blends (e.g., /s/ /t/ /r/ /i/ /ng/ = *string*).
- 1.2.PA.5** Students will segment phonemes in spoken words with 4-6 phonemes into individual phonemes (e.g., *string* = /s/ /t/ /r/ /i/ /ng/).
- 1.2.PA.6** Students will add\*, delete\*, and substitute\* phonemes in one-syllable spoken words with 3-5 phonemes (e.g., add /c/ to the beginning of *at* to say *cat*; delete the /p/ from *pin*, to say *in*; substitute the /o/ in *stop* with /e/ to say *step*).

\*Manipulation does not involve consonant blends.

### Print Concepts

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

- 1.2.PC.1** Students will recognize the distinguishing features of a sentence (e.g., capitalization of the first word, ending punctuation: period, exclamation point, question mark).
- 1.2.PC.2** Students will correctly form letters and use appropriate spacing for letters, words, and sentences using left-to-right and top-to-bottom progression.



Standard 2 Continued

### Phonics and Word Study

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

- 1.2.PWS.1\*** Students will decode one-syllable phonetically-regular words by using their knowledge of the following phonics skills:
- single consonants (e.g., b = /b/, f = /f/, t = /t/)
  - short vowel sounds (i.e., ā, ě, ĭ, ō, ŭ)
  - consonant blends (e.g., bl, br, cr)
  - 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)

**\*sequential skills**

- 1.2.PWS.2\*** Students will decode words by applying knowledge of syllable types in one-syllable words:
- closed
  - open

**\*sequential skills**

- 1.2.PWS.3\*** Students will decode words by applying knowledge of structural analysis:
- compound words
  - inflectional endings (e.g., -s, -ed, -ing)

**\*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.

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

- a. consonants
- b. short vowels
- c. digraphs
- d. consonant blends
- e. vowel-consonant-silent e

**\*sequential skills**

**1.2.SE.2** Students will correctly spell high-frequency and irregularly-spelled words by using common letter/sound correspondences and recalling the irregular parts of words (e.g., *the*: th- is a common letter/sound correspondence, -e is irregular).

### Fluency

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

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

**1.2.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.

<b>Reading</b> Students will read and comprehend inclusive, diverse, and increasingly complex literary and informational texts.	<b>Writing</b> Students will engage in a recursive process that may include prewriting, drafting, revising, editing, and publishing.
<b>1.2.R.1</b> Students will identify the topic or main idea with some supporting details of a text.	<b>1.2.W.1</b> Students will develop and edit drafts using appropriate spacing between letters, words, and sentences using left-to-right and top-to-bottom progression.
<b>1.2.R.2</b> Students will discriminate between fiction and nonfiction genres.	<b>1.2.W.2</b> Students will develop drafts by sequencing the action in a story or details about a topic through writing sentences.
<b>1.2.R.3</b> Students will sequence the plot (i.e., beginning, middle, and end) of a story.	<b>1.2.W.3</b> Students will revise drafts by adding and/or deleting text.
<b>1.2.R.4</b> Students will retell facts and details from an informational text.	<b>1.2.W.4</b> Students will correctly spell grade-level, highly decodable words (e.g., <i>cup</i> , <i>like</i> , <i>cart</i> ) and common, irregularly spelled sight words (e.g., <i>the</i> ) while editing using resources as needed.  <b>1.2.W.5</b> 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.

<b>Reading</b> 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.	<b>Writing</b> Students will thoughtfully and intentionally write, addressing a range of modes, purposes, and audiences.
<b>1.3.R.1</b> Students will identify the author’s purpose (i.e., tell a story, provide information) with prompting.	<b>1.3.W.1</b> Students will write narratives incorporating characters, plot (i.e., beginning, middle, end), and a basic setting (i.e., time, place) with prompting.
<b>1.3.R.2</b> Students will describe who is telling a story with prompting.	
<b>1.3.R.3</b> Students will find textual evidence when provided with examples of literary elements: <ul style="list-style-type: none"><li>● setting ( i.e., time and place)</li><li>● main characters and their traits</li></ul>	<b>1.3.W.2</b> Students will begin to write facts about a topic in response to a text read aloud to demonstrate understanding with prompting.
<b>1.3.R.4</b> Students will ask and answer basic questions (e.g., who, what, where, why, and when) about texts.	<b>1.3.W.3</b> Students will write an opinion about a topic and provide a reason to support the opinion with prompting.
<b>1.3.R.5</b> Students will begin to use details from a text to draw conclusions and make predictions.	
<b>1.3.R.6</b> Students will begin to locate facts that are clearly stated in a text.	



## Standard 4: Vocabulary

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

<b>Reading</b> Students will expand their grade-level vocabularies through reading, word study, and class discussion.	<b>Writing</b> Students will apply knowledge of vocabulary to speak and write effectively.
<b>1.4.R.1</b> Students will begin to determine relationships among words, including synonyms and antonyms.	<b>1.4.W.1</b> Students will use grade-level vocabulary to communicate ideas through speaking and writing.
<b>1.4.R.2</b> Students will use context clues to determine the meaning of words with prompting.	<b>1.4.W.2</b> Students will use language in speaking and writing according to purpose with prompting.
<b>1.4.R.3</b> Students will use word parts (e.g., affixes, Anglo-Saxon roots, stems) to define unfamiliar words with prompting.	
<b>1.4.R.4</b> Students will begin to use grade-level resource materials (e.g., simple dictionary, glossary) to clarify the meaning of words.	
<b>1.4.R.5</b> Students will acquire new grade-level vocabulary, relate new words to prior knowledge, and apply vocabulary in new situations.	



## 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.

- 1.5.R.1** Students will recognize simple sentences.
- 1.5.R.2** Students will recognize parts of speech in sentences:
- nouns as concrete objects (i.e., people, places, and things)
  - regular plural nouns
  - present-tense verbs as actions
  - color, size, and number adjectives
  - prepositions
  - the pronouns *I*, *me*, *you*, and *we*
  - the conjunctions *and*, *or*, and *but*
  - the adverbs *too* and *very*

### Writing

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

- 1.5.W.1** Students will compose simple sentences that conclude with an end mark.
- 1.5.W.2** Students will use nouns, verbs, and adjectives to add clarity and variety to their writing.
- 1.5.W.3** Students will capitalize the first letter of a sentence, proper names, and months and days of the week.
- 1.5.W.4** Students will use periods, question marks, and exclamation points.



## Standard 6: Research

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

<b>Reading</b> Students will gather, comprehend, evaluate, and synthesize researched information to acquire and refine knowledge.	<b>Writing</b> Students will synthesize information ethically through speaking and writing.
<b>1.6.R.1</b> Students will identify who can answer questions about their topic or what resources they will need to find the information.	<b>1.6.W.1</b> Students will generate questions about topics of interest for research.
<b>1.6.R.2</b> Students will identify and use graphic and text features to understand texts: <ul style="list-style-type: none"><li>● photos</li><li>● illustrations</li><li>● titles</li><li>● labels</li><li>● headings</li><li>● charts</li><li>● graphs</li></ul>	<b>1.6.W.2</b> Students will organize information found during group or individual research, using graphic organizers or other aids with prompting.
<b>1.6.R.3</b> Students will identify the location and purpose of the table of contents and glossary.	<b>1.6.W.3</b> Students will 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.

**1.7.R** Students will explain how ideas and topics are depicted in multimodal content.

#### Writing

Students will create multimodal content to communicate effectively.

**1.7.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.

**1.8.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.

**1.8.W** Students will write independently using a combination of emergent and conventional writing with prompting.

# OKLAHOMA ACADEMIC STANDARDS

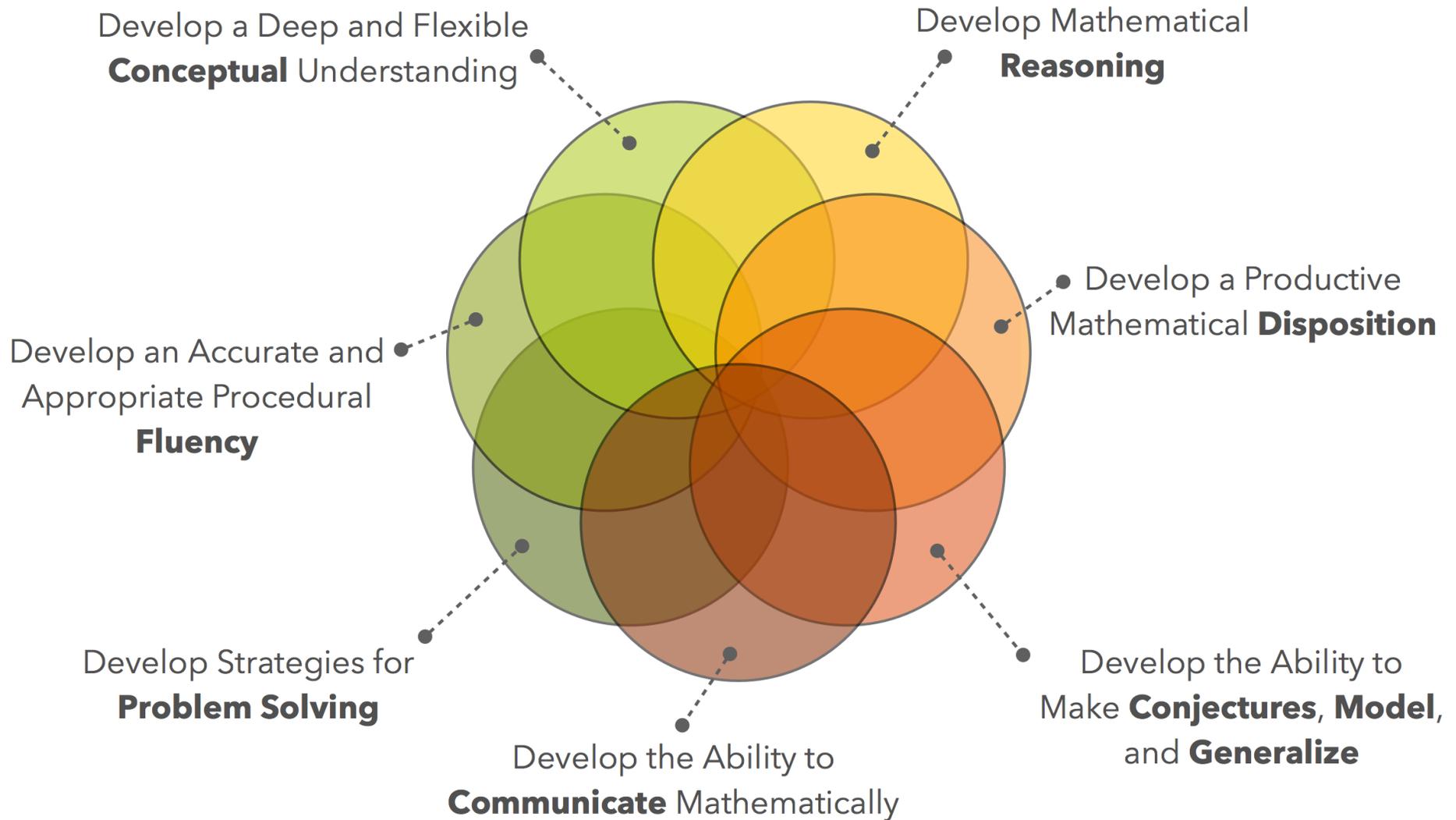
# MATHEMATICS



OKLAHOMA STATE DEPARTMENT OF  
**EDUCATION**  
— CHAMPION EXCELLENCE —



# Mathematical Actions and Processes





# Mathematical Actions and Processes

The Mathematical Actions and Processes simultaneously reflect the holistic nature of mathematics as a discipline in which patterns and relationships among quantities, numbers, and space are studied (National Academies of Sciences, 2014) 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 (NCTM, 2000). The seven Mathematical Actions and Processes leverage both the NCTM Process Standards and the Five Mathematical Proficiencies (NRC, 2001) to capture the mathematical experience of Oklahoma students as they pursue mathematical literacy.

*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**  
Learn efficient procedures and algorithms for computations and repeated processes based on a strong sense of numbers. Develop fluency in addition, subtraction, multiplication, and division of numbers and expressions. Students will generate a sophisticated understanding of the development and application of algorithms and procedures.
- 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

Math Actions and Processes Oklahoma Academic Standards for Mathematics **5<sup>th</sup> Grade (5)** Grade or Course

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 Mathematically	
<b>Number &amp; Operations (N)</b>							
<b>5.N.1</b> Divide multi-digit numbers and solve real-world and mathematical problems using arithmetic.	<b>Strands</b>						
	<b>5.N.1.1</b> Estimate quotients of division problems in order to assess the reasonableness of results.						
	<b>5.N.1.2</b> Divide multi-digit numbers, by one- and two-digit divisors, using efficient and generalizable procedures, based on knowledge of place value, including standard algorithms.						
	<b>5.N.1.3</b> Recognize that quotients can be represented in a variety of ways, including a whole number with a remainder, a fraction or mixed number, or a decimal and consider the context in which a problem is situated to select and interpret the most useful form of the quotient for the solution.						
<b>Standards</b>	<b>5.N.1.4</b> Solve real-world and mathematical problems requiring addition, subtraction, multiplication, and division of multi-digit whole numbers. Use various strategies, including the inverse relationships between operations, the use of technology, and the context of the problem to assess the reasonableness of results.						
	<b>5.N.2</b> 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.	<b>Objectives</b>					
		<b>5.N.2.1</b> Represent and compare decimals (e.g., $\frac{1}{10}$ , $\frac{1}{100}$ ) using a variety of models (e.g., 10 by 10 grids, rational number wheel, base-ten blocks, meter stick) and make comparisons of fractions and decimals.					
		<b>5.N.2.2</b> Represent, read and write decimals using place value to describe decimal numbers including fractional numbers as small as thousandths and whole numbers as large as millions.					
<b>5.N.2.3</b> Compare and order fractions and decimals, including mixed numbers and fractions less than one, and locate on a number line.							
<b>5.N.2.4</b> Recognize and generate equivalent decimals, fractions, mixed numbers, and fractions less than one in various contexts.							
<b>5.N.3</b> Add and subtract fractions with like and unlike denominators, mixed numbers and decimals to solve real-world and mathematical problems.	<b>5.N.3.1</b> Estimate sums and differences of fractions with like and unlike denominators, mixed numbers, and decimals to assess the reasonableness of the results.						
	<b>5.N.3.2</b> Illustrate addition and subtraction of fractions with like and unlike denominators, mixed numbers, and decimals using a variety of representations (e.g., fraction strips, area models, number lines, fraction rods).						
	<b>5.N.3.3</b> Add and subtract fractions with like and unlike denominators, mixed numbers, and decimals, using efficient and generalizable procedures, including but not limited to standard algorithms in order to solve real-world and mathematical problems including those involving money, measurement, geometry, and data.						
	<b>5.N.3.4</b> 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.						



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 Mathematically
<b>Number &amp; Operations (N)</b>						
<p><b>1.N.1</b> Count, compare, and represent whole numbers up to 100, with an emphasis on groups of tens and ones.</p>	<p><b>1.N.1.1</b> Recognize numbers to 20 without counting (subitize) the quantity of structured arrangements.  <b>Clarification statement:</b> Subitizing is defined as instantly recognizing the quantity of a set without having to count. “Subitizing” is not a vocabulary word and is not meant for student discussion at this age.</p>					
	<p><b>1.N.1.2</b> Use concrete representations to describe whole numbers between 10 and 100 in terms of tens and ones.</p>					
	<p><b>1.N.1.3</b> Read, write, discuss, and represent whole numbers up to 100. Representations may include numerals, addition and subtraction, pictures, tally marks, number lines and manipulatives, such as bundles of sticks and base 10 blocks.</p>					
	<p><b>1.N.1.4</b> Count forward, with and without objects, from any given number up to 100 by 1s, 2s, 5s and 10s.</p>					
	<p><b>1.N.1.5</b> Find a number that is 10 more or 10 less than a given number up to 100.</p>					
	<p><b>1.N.1.6</b> Compare and order whole numbers from 0 to 100.</p>					
	<p><b>1.N.1.7</b> Use knowledge of number relationships to locate the position of a given whole number on an open number line up to 20.</p>					
	<p><b>1.N.1.8</b> Use objects to represent and use words to describe the relative size of numbers, such as more than, less than, and equal to.</p>					
<p><b>1.N.2</b> Solve addition and subtraction problems up to 10 in real-world and mathematical contexts.</p>	<p><b>1.N.2.1</b> Represent and solve real-world and mathematical problems using addition and subtraction up to ten.</p>					
	<p><b>1.N.2.2</b> Determine if equations involving addition and subtraction are true.</p>					
	<p><b>1.N.2.3</b> Demonstrate fluency with basic addition facts and related subtraction facts up to 10.</p>					
<p><b>1.N.3</b> Develop foundational ideas for fractions.</p>	<p><b>1.N.3.1</b> Partition a regular polygon using physical models and recognize when those parts are equal.</p>					
	<p><b>1.N.3.2</b> Partition (fair share) sets of objects into equal groupings.</p>					



<b>1.N.4</b> Identify coins and their values.	<b>1.N.4.1</b> Identifying pennies, nickels, dimes, and quarters by name and value.
	<b>1.N.4.2</b> Write a number with the cent symbol to describe the value of a coin.
	<b>1.N.4.3</b> Determine the value of a collection of pennies, nickels, or dimes up to one dollar counting by ones, fives, or tens.
<b>Algebraic Reasoning &amp; Algebra (A)</b>	
<b>1.A.1</b> Identify patterns found in real-world and mathematical situations.	<b>1.A.1.1</b> Identify, create, complete, and extend repeating, growing, and shrinking patterns with quantity, numbers, or shapes in a variety of real-world and mathematical contexts-
<b>Geometry &amp; Measurement (GM)</b>	
<b>1.GM.1</b> Recognize, compose, and decompose two- and three-dimensional shapes.	<b>1.GM.1.1</b> Identify trapezoids and hexagons by pointing to the shape when given the name.
	<b>1.GM.1.2</b> Compose and decompose larger shapes using smaller two-dimensional shapes.
	<b>1.GM.1.3</b> Compose structures with three-dimensional shapes.
	<b>1.GM.1.4</b> Recognize three-dimensional shapes such as cubes, cones, cylinders, and spheres.
<b>1.GM.2</b> Select and use nonstandard and standard units to describe length and volume/capacity.	<b>1.GM.2.1</b> Use nonstandard and standard measuring tools to measure the length of objects to reinforce the continuous nature of linear measurement.
	<b>1.GM.2.2</b> Illustrate that the length of an object is the number of same-size units of length that, when laid end-to-end with no gaps or overlaps, reach from one end of the object to the other.
	<b>1.GM.2.3</b> Measure the same object/distance with units of two different lengths and describe how and why the measurements differ.
	<b>1.GM.2.4</b> Describe a length to the nearest whole unit using a number and a unit.
	<b>1.GM.2.5</b> Use standard and nonstandard tools to identify volume/capacity. Compare and sort containers that hold more, less, or the same amount.
<b>1.GM.3</b> Tell time to the half and full hour.	<b>1.GM.3.1</b> Tell time to the hour and half-hour (analog and digital).
<b>Data &amp; Probability (D)</b>	
<b>1.D.1</b> Collect, organize, and interpret categorical and numerical data.	<b>1.D.1.1</b> Collect, sort, and organize data in up to three categories using representations (e.g., tally marks, tables, Venn diagrams).
	<b>1.D.1.2</b> Use data to create picture and bar-type graphs to demonstrate one-to-one correspondence.
	<b>1.D.1.3</b> Draw conclusions from picture and bar-type graphs.

# 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



## 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

##### Planning and Carrying Out Investigations:

• Science and Engineering Practice and Collaboration with peers.



#### Disciplinary Core Ideas

- 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.



#### Disciplinary Core Ideas

#### Crosscutting Concepts

##### Cause and Effect:

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



#### Crosscutting Concept



1<sup>st</sup> Grade (1)

Waves and Their Applications in Technologies for Information Transfer (PS4)

1.PS4.1 Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.

**Clarification Statement:** Examples of vibrating materials that make sound could include tuning forks, kazoos, plucking a stretched string or rubber band, and stringed instruments. Examples of how sound can make matter vibrate could include holding a piece of paper near a speaker making sound, placing hand on personal larynx or mouth while humming, and holding an object near a vibrating tuning fork.

**Assessment Boundary:** N/A

Science and Engineering Practice	Disciplinary Core Ideas	Crosscutting Concepts
<b>Planning and Carrying Out Investigations:</b> <ul style="list-style-type: none"> <li>Plan and conduct investigations collaboratively to produce data to serve as the basis for evidence to answer a question.</li> </ul>	<ul style="list-style-type: none"> <li>Sound can make matter vibrate, and vibrating matter can make sound.</li> </ul>	<b>Cause and Effect:</b> <ul style="list-style-type: none"> <li>Simple tests can be designed to gather evidence to support or refute student ideas about causes.</li> </ul>

1.PS4.2 Make observations to construct an evidence-based account that objects can be seen only when illuminated.

**Clarification Statement:** Examples of observations could include those made in a completely dark room or those made in a dark room with the door opened slightly. Illumination could be from an external light source or an object giving off its own light. This can be explored with string lights, mirrors, projectors, and flashlights. **Assessment Boundary:** N/A

Science and Engineering Practice	Disciplinary Core Ideas	Crosscutting Concepts
<b>Planning and Carrying Out Investigations:</b> <ul style="list-style-type: none"> <li>Plan and conduct investigations collaboratively to produce data to serve as the basis for evidence to answer a question.</li> </ul>	<ul style="list-style-type: none"> <li>Objects can be seen if light is available to illuminate them or if they give off their own light.</li> </ul>	<b>Cause and Effect:</b> <ul style="list-style-type: none"> <li>Simple tests can be designed to gather evidence to support or refute student ideas about causes.</li> </ul>



Waves and Their Applications in Technologies for Information Transfer (PS4)

**1.PS4.3 Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light.**

**Clarification Statement:** Examples of materials could include those that are transparent (such as clear plastic), translucent (such as wax paper), opaque (such as cardboard), and reflective (such as a mirror). **Assessment Boundary:** Assessment does not include the speed of light or assessment of descriptive words like transparent, translucent, opaque, or reflective.

Science and Engineering Practice	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Planning and Carrying Out Investigations:</b></p> <ul style="list-style-type: none"> <li>Plan and conduct investigations collaboratively to produce data to serve as the basis for evidence to answer a question.</li> </ul>	<ul style="list-style-type: none"> <li>Some materials allow light to pass through them, others allow only some light through, and others block all the light and create a dark shadow on any surface beyond them, where the light cannot reach.</li> <li>Mirrors can be used to redirect a light beam. (Boundary: The idea that light travels from place to place is developed through experiences with light sources, mirrors, and shadows, but no attempt is made to discuss the speed of light.)</li> </ul>	<p><b>Cause and Effect:</b></p> <ul style="list-style-type: none"> <li>Simple tests can be designed to gather evidence to support or refute student ideas about causes.</li> </ul>

**1.PS4.4 Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.\***

**Clarification Statement:** Examples of devices could include a light source to send signals, paper cup and string “telephones,” and a pattern of drum beats. **Assessment Boundary:** Assessment does not include technological details for how communication devices work.

Science and Engineering Practice	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Designing Solutions:</b></p> <ul style="list-style-type: none"> <li>Use tools and materials provided to design a device that solves a specific problem.</li> </ul>	<ul style="list-style-type: none"> <li>People also use a variety of devices to communicate (send and receive information) over long distances.</li> <li>People depend on various technologies in their lives; human life would be very different without technology.</li> </ul>	<p><b>Structure and Function:</b></p> <ul style="list-style-type: none"> <li>The shape and stability of structures of natural and designed objects are related to their functions.</li> </ul>



From Molecules to Organisms: Structure and Function (LS1)

1.LS1.1 Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.\*

**Clarification Statement:** Examples of human problems that can be solved by mimicking plant or animal solutions could include designing clothing or equipment to protect bicyclists by mimicking turtle shells, acorn shells, and animal scales; stabilizing structures by mimicking animal tails and roots on plants; keeping out intruders by mimicking thorns on branches and animal quills; and detecting intruders by mimicking eyes and ears. **Assessment Boundary:** N/A

Science and Engineering Practice	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Planning and Carrying Out Investigations:</b></p> <ul style="list-style-type: none"> <li>Plan and conduct investigations collaboratively to produce data to serve as the basis for evidence to answer a question.</li> </ul>	<ul style="list-style-type: none"> <li>All organisms have external parts.</li> <li>Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water, and air.</li> <li>Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow.</li> <li>Animals have body parts that capture and convey different kinds of information needed for growth and survival.</li> <li>Plants also respond to some external inputs.</li> <li>Every human-made product is designed by applying some knowledge of the natural world and is built using materials derived from the natural world.</li> </ul>	<p><b>Structure and Function:</b></p> <ul style="list-style-type: none"> <li>The shape and stability of structures of natural and designed objects are related to their functions.</li> </ul>



From Molecules to Organisms: Structure and Function (LS1)

**1.LS1.2 Obtain information from media and/or text to determine patterns in the behavior of parents and offspring that help offspring survive.**

**Clarification Statement:** Examples of patterns of behaviors could include the signals that offspring make (such as crying, cheeping, and other vocalizations) and the responses of the parents (such as feeding, comforting, and protecting the offspring). Information may be obtained through observations, media, and/or text.

**Assessment Boundary:** N/A

Science and Engineering Practice	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Obtaining, Evaluating, and Communicating Information:</b></p> <ul style="list-style-type: none"> <li>Read grade-appropriate texts and use media to obtain scientific information to determine patterns in the natural world.</li> </ul>	<ul style="list-style-type: none"> <li>Adult plants and animals can have young.</li> <li>In many kinds of animals, parents and the offspring themselves engage in behaviors that help the offspring to survive.</li> </ul>	<p><b>Patterns:</b></p> <ul style="list-style-type: none"> <li>Patterns in the natural world can be observed, used to describe phenomena, and used as evidence.</li> </ul>

Heredity: Inheritance and Variation of Traits (LS3)

**1.LS3.1 Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.**

**Clarification Statement:** Examples of patterns could include features plants or animals share. Examples of observations could include that leaves from the same kind of plant are the same shape but can differ in size; and that particular breed of dog looks like its parents but is not exactly the same. **Assessment Boundary:** Assessment does not include inheritance, animals that undergo metamorphosis or hybrids.

Science and Engineering Practice	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Constructing Explanations:</b></p> <ul style="list-style-type: none"> <li>Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena.</li> </ul>	<ul style="list-style-type: none"> <li>Young animals are very much, but not exactly like, their parents.</li> <li>Plants also are very much, but not exactly, like their parents.</li> <li>Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways.</li> </ul>	<p><b>Patterns:</b></p> <ul style="list-style-type: none"> <li>Patterns in the natural world can be observed, used to describe phenomena, and used as evidence.</li> </ul>



Earth's Place in the Universe (ESS1)

**1.ESS1.1 Use observations of the sun, moon, and stars to describe patterns that can be predicted.**

**Clarification Statement:** Examples of patterns could include that the sun and moon appear to rise in one part of the sky, move across the sky, and set; and stars other than our sun are visible at night but not during the day. **Assessment Boundary:** Assessment of star patterns is limited to stars being seen at night and not during the day.

Science and Engineering Practice	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Analyzing and Interpreting Data:</b></p> <ul style="list-style-type: none"> <li>Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions.</li> </ul>	<ul style="list-style-type: none"> <li>Patterns of the motion of the sun, moon, and stars in the sky can be observed, described, and predicted.</li> </ul>	<p><b>Patterns:</b></p> <ul style="list-style-type: none"> <li>Patterns in the natural world can be observed, used to describe phenomena, and used as evidence.</li> </ul>

**1.ESS1.2 Make observations at different times of year to relate the amount of daylight and relative temperature to the time of year.**

**Clarification Statement:** Emphasis is on relative comparisons of the amount of daylight and temperature in the winter to the amount in the spring, fall, or summer. **Assessment Boundary:** Assessment is limited to relative amounts of daylight, not quantifying the hours or time of daylight.

Science and Engineering Practice	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Planning and Carrying Out Investigations:</b></p> <ul style="list-style-type: none"> <li>Make observations (firsthand or from media) to collect data that can be used to make comparisons.</li> </ul>	<ul style="list-style-type: none"> <li>Seasonal patterns of sunrise and sunset can be observed, described, and predicted.</li> </ul>	<p><b>Patterns:</b></p> <ul style="list-style-type: none"> <li>Patterns in the natural world can be observed, used to describe phenomena, and used as evidence.</li> </ul>



Earth and Human Activity (ESS3)

1.ESS3.1 Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.\*

**Clarification Statement:** Examples of human impact on the land could include cutting trees to produce paper and using resources to produce bottles. Examples of solutions could include reusing paper and recycling cans and bottles. **Assessment Boundary:** N/A

Science and Engineering Practice	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Obtaining, Evaluating and Communicating Information:</b></p> <ul style="list-style-type: none"> <li>Communicate solutions with others in oral and/or written forms using models and/or drawings that provide detail about scientific ideas.</li> </ul>	<ul style="list-style-type: none"> <li>Things that people do to live comfortably can affect the world around them. But, they can make choices that reduce their impacts on the land, water, air, and other living things.</li> <li>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.</li> </ul>	<p><b>Cause and Effect:</b></p> <ul style="list-style-type: none"> <li>Events have causes that generate observable patterns.</li> </ul>

# OKLAHOMA ACADEMIC STANDARDS

# SOCIAL STUDIES



OKLAHOMA STATE DEPARTMENT OF  
**EDUCATION**  
— CHAMPION EXCELLENCE —



## Introduction

The Oklahoma Academic Standards for Social Studies is the result of the contributions of hundreds of social studies educators, representatives of higher education, tribal representatives, and community members. This document reflects a balanced synthesis of the work of all members of the Oklahoma Academic Standards for Social Studies Writing and Draft Committees.

The standards specify what students should know and be able to do as learners of social studies at the end of each grade level or social studies course. The order of the standards at any grade level is not meant to imply a sequence of topics and should be considered flexible for the organization of any course.

The Oklahoma Academic Standards for Social Studies were informed by the National Council of the Social Studies (NCSS) Skills Framework, the Center for Civic Education Civics Standards, the National Council for Geographic Education (NCGE) Geography for Life Standards, the Council for Economic Education Voluntary National Content Standards in Economics, the National Council for History Education (NCHE) Habits of Mind, the National Center for History in the Schools Standards for Historical Thinking, the Oklahoma Academic Standards for English Language Arts and Social Studies, and other states' standards documents.

## Standards Overview

Having a literate citizenry rests on a commitment to democratic values and the practice of them. It requires the ability to use knowledge about one's community, nation and world, apply inquiry processes, and employ skills of data collection and analysis, collaboration, decision-making; and problem-solving. Young people who are knowledgeable, skillful, and committed to democracy are necessary to sustaining and improving the democratic way of life. This will also enable our students to become participating members of a global community. A well-rounded, vigorous social studies education encourages and enables each student to acquire a core of basic knowledge, an arsenal of useful skills, and a way of thinking drawn from many academic disciplines. Thus equipped, students are prepared to become informed, contributing, and participating citizens in this democratic republic – the United States of America.

The standards are comprised of two primary components, content standards and social studies practices. The content standards designate specific learning targets at each grade level or course. These content standards are derived from the major disciplines of the social sciences: history, geography, civics and economics. The social studies practices define basic skills and disciplinary tools to prepare students for college, career, and civic life. These practices are meant to be integrated with the instruction of content standards.



# 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 2<sup>nd</sup> Grade (2)



Grade or Course

<b>Engage in Democratic Processes</b>	<b>Analyze and Address Authentic Civic Issues</b>	<b>Acquire, Apply, and Evaluate Evidence</b>	<b>Read Critically and Interpret Informational Sources</b>	<b>Engage in Evidence-Based Writing</b>
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## 2<sup>nd</sup> 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
<b>1<sup>st</sup> Grade Content Standards</b>				
<p><b>1.1</b> The student will analyze their role as a citizen in a community.</p>	<p><b>1.1.1</b> Describe the need for written laws and the main purpose of government, including the concept of consequences for one’s actions when a law or rule is violated.</p>			
	<p><b>1.1.2</b> Describe how citizens within communities work together to accomplish common tasks and fulfill roles of authority.</p>			
	<p><b>1.1.3</b> Explain patriotic traditions including <i>The Pledge of Allegiance</i>, describe appropriate flag etiquette and proper behavior during the playing of <i>The Star-Spangled Banner</i>.</p>			
	<p><b>1.1.4</b> Identify important symbols of the United States including the Bald Eagle and the Liberty Bell, and explain their meanings.</p>			
<p><b>1.2</b> The student will demonstrate knowledge of basic geographic concepts.</p>	<p><b>1.2.1</b> Describe the difference between physical and political maps; construct basic maps of specific places.</p>			
	<p><b>1.2.2</b> Identify cardinal directions and use them to identify specific locations on a map.</p>			
	<p><b>1.2.3</b> Identify the difference between continents and oceans.</p>			
	<p><b>1.2.4</b> Compare the features of urban and rural communities.</p>			
	<p><b>1.2.5</b> Describe community customs and traditions as basic elements of culture.</p>			
<p><b>1.3</b> The student will examine important events and historical figures in the nation’s past.</p>	<p><b>1.3.1</b> Explain why people may see events from different points of view.</p>			
	<p><b>1.3.2</b> Describe the contributions of people and groups who have shaped our history and ways we commemorate important places and events of the past.</p>			
	<p><b>1.3.3</b> Read and construct basic timelines to understand the chronology of events in history.</p>			
	<p><b>1.3.4</b> Identify primary sources and how they help us to learn about the past.</p>			



Oklahoma Academic Standards for Social Studies 1<sup>st</sup> Grade (1)

<b>1.4</b> The student will describe the characteristics of the American economic system.	<b>1.4.1</b> Explain the costs and benefits of spending and saving in order to meet needs and wants.
	<b>1.4.2</b> Describe ways people are paid for their labor and how goods and services are purchased using money and credit.
	<b>1.4.3</b> Identify and explain the roles of consumers and producers in the American economy.
	<b>1.4.4</b> Describe the role of banks in the community.