OKLAHOMA ENGLISH ACADEMIC LANGUAGE ARTS **STANDARDS**

Instructional Design Considerations

EIGHT CONSISTENT STANDARDS

The standards were developed with consideration to teachers and curriculum designers. Rich units of study can be designed by incorporating each of the eight overarching standards. Further grade-specific guidance is provided in the Reading and Writing strands.

READING and WRITING STRANDS

The standards were designed to develop the total literacy of students by intentionally taking into consideration what they do when reading and writing. **Every standard includes a** reading and writing strand with standard objectives delineated by grade-level.

Reading instruction supports the development and refinement of writing skills. Writing instruction supports the development and refinement of reading skills.



RECURSIVE TEACHING and LEARNING

Teaching and learning language arts is a recursive endeavor: students will revisit concepts again and again as they use language at increasingly sophisticated levels. Skills are repeated with an implied expectation that they are attributed to increasingly more complex texts.

Because of this recursive learning process, language arts learning does not progress for students in a strictly linear way.

Oklahoma ELA standards are not taught in isolation. Standards can be bundled for educators to develop gradeappropriate lessons, tasks, and assessments.

Standard 1: Speaking and Listening

Students will speak and listen effectively in a variety of situations including, but not limited to, responses to reading and writing.

Reading Students will develop and apply effective communication skills through speaking and active listening.		Writing Students will develop and apply effective communication skills through speaking and active listening to create individual and group projects and presentations.	
K.1.R.1	Students will actively listen and speak using agreed-upon rules for discussion with guidance and support.	K.1.W.1	Students will orally describe personal interests or tell stories, facing the audience and speaking clearly in complete sentences and following implicit rules for conversation, including taking turns and staying on topic.
K.1.R.2	Students will ask and answer questions to seek help, get information, or clarify about information presented orally or through text or other media with guidance and support.	K.1.W.2	Students will work respectfully with others with guidance and support.
K.1.R.3	Students will engage in collaborative discussions about appropriate topics and texts with peers and adults in small and large groups with guidance and support.		
K.1.R.4	Students will follow one and two step directions.		

Standard 2: Reading Foundations

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

Phonological Awareness

Phonological awareness is the ability to recognize, think about, and manipulate sounds in spoken language without using text.

K.2.PA.1	Students will distinguish spoken words in a sentence.
K.2.PA.2	Students will recognize and produce pairs of rhyming words, and distinguish them from non-rhyming pairs.
K.2.PA.3	Students will isolate and pronounce the same initial sounds in a set of spoken words (i.e., alliteration) (e.g., "the puppy pounces").
K.2.PA.4	Students will recognize the short or long vowel sound in one syllable words.
K.2.PA.5	Students will count, pronounce, blend, segment, and delete syllables in spoken words.
K.2.PA.6	Students will blend and segment onset and rime in one syllable spoken words (e.g., Blending: $/ch/ + at = chat$; segmenting: $cat = /c/+ at$).
K.2.PA.7	Students will blend phonemes to form one syllable spoken words with 3 to 5 phonemes (e.g., $ f /a /s /t=$ fast).
K.2.PA.8	Students will segment phonemes in one syllable spoken words with 3 to 5 phonemes (e.g., "fast" = $ f / a / s / t $).
K.2.PA.9	Students will add, delete, and substitute phonemes in one syllable spoken words. (e.g., "add /c/ to the beginning of "at" to say "cat;" "remove the /p/ from "pin," to say "in;" "change the /d/ in "dog" to /f/ /r/ to say "frog").

Print Concepts

Students will demonstrate their understanding of the organization and basic features of print, including book handling skills and the understanding that printed materials provide information and tell stories.

- K.2.PC.1 Students will correctly form letters to write their first and last name and most uppercase and lowercase letters correctly.
- K.2.PC.2 Students will demonstrate their understanding that print carries a message by recognizing labels, signs, and other print in the environment.
- K.2.PC.3 Students will demonstrate correct book orientation and identify the title, title page, and the front and back covers of a book.
- K.2.PC.4 Students will recognize that written words are made up of letters and are separated by spaces.
- K.2.PC.5 Students will recognize that print moves from top to bottom, left to right, and front to back (does not have to be matched to voice).
- K.2.PC.6 Students will recognize the distinguishing features of a sentence. (e.g., capitalization of the first word, ending punctuation: period, exclamation mark, question mark) with guidance and support.

Phonics and Word Study

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

- K.2.PWS.1 Students will identify all uppercase and lowercase letters.
- K.2.PWS.2 Students will sequence the letters of the alphabet.
- K.2.PWS.3 Students will produce the primary or most common sound for each consonant, short and long vowel sound (e.g., c = |k|, c = |s|, s = |s|, s = |z|, x = |ks|, x = |z|).
- K.2.PWS.4 Students will blend letter sounds to decode simple Vowel / Consonant (VC) and Consonant / Vowel / Consonant (CVC) words (e.g., VC words= at, in, up; CVC words= pat, hen, lot).

Fluency

Students will recognize high- frequency words and read grade-level text smoothly and accurately, with expression that connotes comprehension.

- K.2.F.1 Students will read first and last name in print.
- K.2.F.2 Students will read common high frequency grade-level words by sight (e.g., not, was, to, have, you, he, is, with, are).

Standard 2: Reading and Writing Process

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

Reading Students will read and comprehend increasingly complex literary and informational texts.		Writing Students will develop and strengthen writing by engaging in a recursive process that includes prewriting, drafting, revising, editing, and publishing.		
K.2.R.1	Students will retell or reenact major events from a read-aloud with guidance and support to recognize the main idea.	K.2.W.1	Students will begin to develop first drafts by expressing themselves through drawing and emergent writing.	
K.2.R.2	Students will discriminate between fiction and nonfiction/informational text with guidance and support.	K.2.W.2	Students will begin to develop first drafts by sequencing the action or details of stories/texts.	
K.2.R.3	Students will sequence the events/plot (i.e., beginning, middle, and end) of a story or text with guidance and support.	K.2.W.3	Students will begin to edit first drafts using appropriate spacing between letters and words.	

Standard 3: Critical Reading and Writing

Students will apply critical thinking skills to reading and writing.

Keading	
Students	wil

Il comprehend, interpret, evaluate, and respond to a variety of complex texts of all literary and informational genres from a variety of historical, cultural, ethnic, and global perspectives.

- K.3.R.1 Students will name the author and illustrator, and explain the roles of each in a particular story.
- K.3.R.2 Students will describe characters and setting in a story with guidance and support.
- K.3.R.3 Students will tell what is happening in a picture or illustration.
- Students will ask and answer basic questions K.3.R.4 (e.g., who, what, where, and when) about texts during shared reading or other text experiences with guidance and support.

Writing

Students will write for varied purposes and audiences in all modes, using fully developed ideas, strong organization, well-chosen words, fluent sentences, and appropriate voice.

K.3.W Students will use drawing, labeling, dictating, and writing to tell a story, share information, or express an opinion with guidance and support.

Standard 4: Vocabulary

Students will expand their working vocabularies to effectively communicate and understand texts.

Reading Students will expand academic, domain-appropriate, grade-level vocabularies through reading, word study, and class discussion.		Writing Students will apply knowledge of vocabularies to communicate by using descriptive, academic, and domain-appropriate abstract and concrete words in their writing.	
K.4.R.1	Students will acquire new academic, content-specific, grade-level vocabulary and relate new words to prior knowledge with guidance and support.	K.4.W.1	Students will use new vocabulary to produce and expand complete sentences in shared language activities with guidance and support.
K.4.R.2 K.4.R.3	Students will begin to develop an awareness of context clues through read-alouds and other text experiences. Students will name and sort pictures of objects into categories based on common attributes	K.4.W.2	Students will select appropriate language according to purpose with guidance and support.
	with guidance and support.		

Standard 5: Language

Students will apply knowledge of grammar and rhetorical style to reading and writing.

Reading Students will apply knowledge of grammar and rhetorical style to analyze and evaluate a variety of texts.		Writing Students will demonstrate command of Standard English grammar, mechanics, and usage through writing and other modes of communication.	
K.5.R.1	Students will begin to understand the function of grammar through exposure to conversations, read-alouds, and interactive reading.	K.5.W.1	Students will capitalize, with guidance and support: • their first name • the pronoun "I."
K.5.R.2	Students will recognize concrete objects as persons, places or things (i.e., nouns).	K.5.W.2	Students will begin to compose simple sentences that begin with a capital letter and end with a period or question mark.
K.5.R.3	Students will recognize words as actions (i.e., verbs).		
K.5.R.4	Students will group pictures and/or use movement to determine spatial and time relationships such as up, down, before, and after.		

Standard 6: Research

Students will engage in inquiry to acquire, refine, and share knowledge.

Reading Students will comprehend, evaluate, and synthesize resources to acquire and refine knowledge.		Writing Students will summarize and paraphrase, integrate evidence, and cite sources to create reports, projects, papers, texts, and presentations for multiple purposes.	
K.6.R.1	Students will identify relevant pictures, charts, grade-appropriate texts, or people as sources of information on a topic of interest.	K.6.W.1	Students will generate topics of interest and decide if a friend, teacher, or expert can answer their questions with guidance and support.
K.6.R.2	Students will identify graphic features to understand a text including photos, illustrations, and titles to understand a text.	K.6.W.2	Students will find information from provided sources during group research with guidance and support.

Standard 7: Multimodal Literacies

Students will acquire, refine, and share knowledge through a variety of written, oral, visual, digital, non-verbal, and interactive texts.

Reading Students will evaluate written, oral, visual, and digital texts in order to draw conclusions and analyze arguments.		Writing Students will create multimodal texts to communicate knowledge and develop arguments.	
K.7.R.1	Students will recognize formats of print and digital text with guidance and support.	K.7.W.1	Students will use appropriate technology or media to communicate with others with guidance and support.
K.7.R.2	Students will explore how ideas and topics are depicted in a variety of media and formats.	K.7.W.2	Students will use appropriate props, images, or illustrations to support verbal communication.

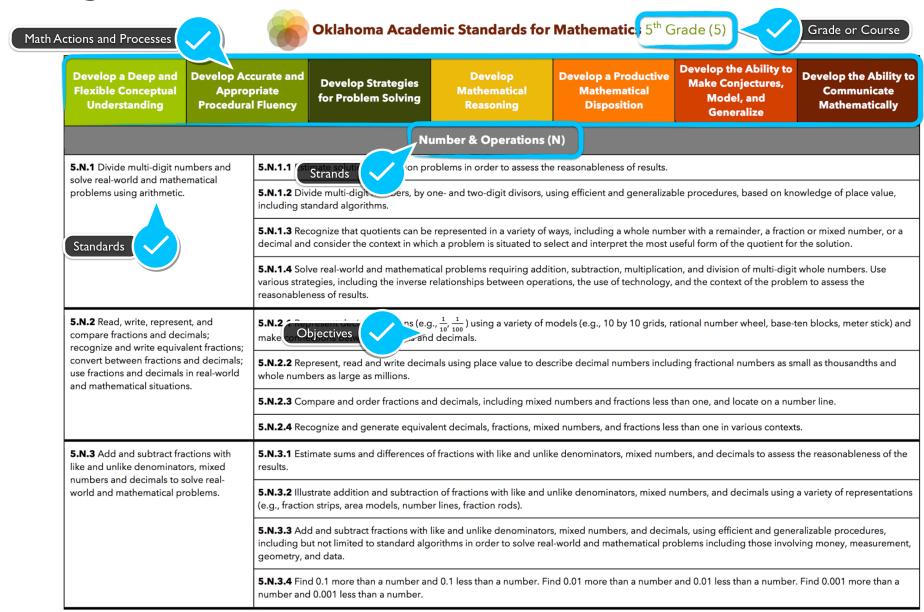
Standard 8: Independent Reading and Writing

Students will read and write for a variety of purposes including, but not limited to, academic and personal.

Reading Students will read independently for a variety of purposes and for extended periods of time. Students will select appropriate texts for specific purposes.		Writing Students will write independently for extended periods of time. Students will vary their modes of expression to suit audience and task.	
K.8.R	Students will demonstrate interest in books during read-alouds and shared reading, and interact independently with books.	K.8.W	Students will express their ideas through a combination of drawing and emergent writing with guidance and support.

OKLAHOMA ACADEMIC MATHEMATICS STANDARDS

Reading the Oklahoma Academic Standards for Mathematics



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Oklahoma Academic Standards for Mathematics Kindergarten (K)

Develop a Deep and Flexible Conceptual Understanding

Develop Accurate and Appropriate **Procedural Fluency**

Develop Strategies for Problem Solving

Develop a Productive Mathematical Disposition

Develop the Ability to Make Conjectures, Model, and Generalize

Develop the Ability to Communicate Mathematically

	Number & Operations (N)			
K.N.1 Understand the relationship	K.N.1.1 Count aloud forward in sequence to 100 by 1's and 10's.			
between quantities and whole numbers.	K.N.1.2 Recognize that a number can be used to represent how many objects are in a set up to 10.			
	K.N.1.3 Use ordinal numbers to represent the position of an object in a sequence up to 10.			
	K.N.1.4 Recognize without counting (subitize) the quantity of a small group of objects in organized and random arrangements up to 10. Clarification statement: 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.			
	K.N.1.5 Count forward, with and without objects, from any given number up to 10.			
	K.N.1.6 Read, write, discuss, and represent whole numbers from 0 to at least 10. Representations may include numerals, pictures, real objects and picture graphs, spoken words, and manipulatives.			
	K.N.1.7 Find a number that is 1 more or 1 less than a given number up to 10.			
	K.N.1.8 Using the words more than, less than or equal to compare and order whole numbers, with and without objects, from 0 to 10.			
K.N.2 Develop conceptual fluency with addition and subtraction (up to 10) using objects and pictures.	K.N.2.1 Compose and decompose numbers up to 10 with objects and pictures.			
K.N.3 Understand the relationship between whole numbers and fractions through fair share.	K.N.3.1 Distribute equally a set of objects into at least two smaller equal sets.			
K.N.4 Identify coins by name.	K.N.4.1 Identify pennies, nickels, dimes, and quarters by name.			

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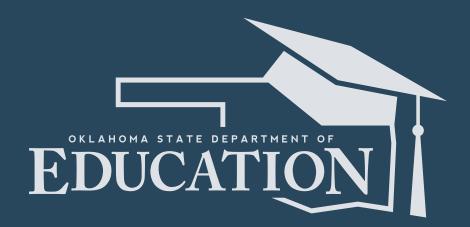
Oklahoma Academic Standards for Mathematics Kindergarten (K)

	Algebraic Reasoning & Algebra (A)			
K.A.1 Duplicate patterns in a variety of contexts.	K.A.1.1 Sort and group up to 10 objects into a set based upon characteristics such as color, size, and shape. Explain verbally what the objects have in common.			
	K.A.1.2 Recognize, duplicate, complete, and extend repeating, shrinking and growing patterns involving shape, color, size, objects, sounds, movement, and other contexts.			
	Geometry & Measurement (GM)			
K.GM.1 Recognize and sort basic two-	K.GM.1.1 Recognize squares, circles, triangles, and rectangles.			
dimensional shapes and use them to represent real-world objects.	K.GM.1.2 Sort two-dimensional objects using characteristics such as shape, size, color, and thickness.			
	K.GM.1.3 Identify attributes of two-dimensional shapes using informal and formal geometric language interchangeably.			
	K.GM.1.4 Use smaller shapes to form a larger shape when there is an outline to follow.			
	K.GM.1.5 Compose free-form shapes with blocks.			
	K.GM.1.6 Use basic shapes and spatial reasoning to represent objects in the real world.			
K.GM.2 Compare and order objects	K.GM.2.1 Use words to compare objects according to length, size, weight, position, and location.			
according to location and measurable attributes.	K.GM.2.2 Order up to 6 objects using measurable attributes, such as length and weight.			
	K.GM.2.3 Sort objects into sets by more than one attribute.			
	K.GM.2.4 Compare the number of objects needed to fill two different containers.			
K.GM.3 Tell time as it relates to daily life. K.GM.3.1 Develop an awareness of simple time concepts using words such as yesterday, today, tomorrow, morning, afternoon, and night wind daily life.				
	Data & Probability (D)			
K.D.1 Collect, organize, and interpret	K.D.1.1 Collect and sort information about objects and events in the environment.			
categorical data.	K.D.1.2 Use categorical data to create real-object and picture graphs.			
	K.D.1.3 Draw conclusions from real-object and picture graphs.			

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SCIENCE



OKLAHOMA ACADEMIC STANDARDS

Components of a Standard Document

1 Performance Expectation

Performance Expectations represent the things students should know, understand, and be able to do to be proficient in science. Performance Expectations are the standards.

Each Performance Expectation is built around A Framework for K-12 Science Education recommendation that science education in grades K-12 be built around three major dimensions:

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

The 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.

3 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. While all teachers can utilize the Assessment Boundary as a tool for developing curriculum and local assessments, the Assessment Boundaries for 5th grade, 8th grade, and Biology will be utilized as a guide in the development of the Oklahoma Core Curriculum Tests.

4 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. The term "practice" is used instead of the term "process" to emphasize that scientists and engineers use skill and knowledge simultaneously, not in isolation. The eight science and engineering practices are:

- 1. Ask questions and define problems
- 2. Develop and use models
- 3. Plan and conduct investigations
- 4. Analyze and interpret data
- 5. Use mathematical and computational thinking
- 6. Construct explanations and design solutions
- 7. Engage in scientific argument from evidence
- 8. Obtain, evaluate, and communicate information

Each Performance Expectation integrates one of the above Science and Engineering Practices with a Disciplinary Core Idea in science. The integration of Science and Engineering Practices with science content represents a shift from previous science standards in Oklahoma, giving the learning context and allowing students to utilize scientific reasoning and critical thinking to develop their understanding of science.

6 Disciplinary Core Ideas

The 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; be teachable and learnable over multiple grades at increasing levels of sophistication. (NRC, 2012, p. 31)

Disciplinary Core Ideas are grouped into three domains:

- 1. Physical Science (PS)
- 2. Life Science (LS)
- 3. Earth and Space Science (ESS)

Each Performance Expectation integrates at least one Disciplinary Core Idea with a Science and Engineering Practice.

6 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:

- 1. Patterns
- 2. Cause and Effect: Mechanisms and explanations
- 3. Scale, Proportion, and Quantity
- 4. Systems and System Models
- 5. Energy and Matter: Flows, cycles, and conservation
- 6. Structure and Function
- 7. Stability and Change

Where applicable each of the Performance Expectations includes one of the above Crosscutting Concepts, thereby ensuring that the concepts are not taught in isolation but reinforced in the context of instruction within the science content.

7 Oklahoma Academic Standards Connections

Where applicable the Performance Expectations provide optional connections to the Oklahoma Academic Standards for English Language Arts/Literacy and Mathematics. The connections represent mathematics and literacy standards that could work in tandem with a Performance Expectation for science. The connections are not mandatory. Integration of a connecting English language arts or mathematics standards is determined by the instructor and carried out in the instruction.

K-ESS3-1 Earth and Human Activity

Science & Engineering Practices	Disciplinary Core Ideas	Performance Expectations
Asking questions (for science) and defining problems (for engineering) Developing and using models Modeling in K-2 builds on prior experiences and progresses to include using and developing (i.e., diagram, drawing, I replica, diorama, ization, storyboard) that esent concrete events or design solutions. Use a model to represent relationships in the natural world. Planning and carrying out investigations Analyzing and interpreting data Using mathematics and computational thinking Constructing explanations (for science) and designing solutions (for engineering) Engaging in argument from evidence Obtaining, evaluating, and communicating information	Natural Resources: Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they decreased the second secon	K-ESS3-1 Students who demonstrate understanding can: Use a model to reprote the relationship bet needs of different planimals (including human and the places they live. Clarification Statement: Examples of relationships include that deer eat buds therefore, they usually live hareas; and, grasses need sunlight so they often grow in meadows. Plants, animals, and their surroundings make up a system. Assessment Boundary: N/A

atting Concepts: Systems and System Models werns in the natural and designed world have parts that work together.

ELA/Literacy	Mathematics
Visual Literacy - 1.1 Interpret Meaning - The student will interpret and evaluate various ways visual image-makers including graphic artists, illustrators, and news photographers represent meaning.	Data Analysis - 5.1. Data Analysis b. Develops abilities to collect, describe, and record informatio through a variety of means including discussion, drawings, map charts, and graphs. c. Describes similarities and differences between objects. Collects and analyze information about objects and events in environment.

K-5 Overview

The Kindergarten through 5th Grade Oklahoma Academic Standards for Science include the following Domains:

• Physical Science (PS)

2 Life Science (LS)

© Earth & Space Science (ESS)

Each Domain has a set of Topics in science that fit within that Domain:

• Physical Science (PS)

- Matter and Its Interactions (PS1)
- Motion and Stability: Forces and Interactions (PS2)
- Energy (PS3)
- Waves and Their Application in Technologies for Information Transfer (PS4)

2 Life Science (LS)

- From Molecules to Organisms: Structure and Processes (LS1)
- Ecosystems: Interactions, Energy, and Dynamics (LS2)
- Heredity: Inheritance and Variation of Traits (LS3)
- Biological Unity and Diversity (LS4)

SEarth & Space Science (ESS)

- Earth's Place in the Universe (ESS1)
- Earth's Systems (ESS2)
- Earth and Human Activity (ESS3)

The abbreviations for the Domains and Topics are utilized in the naming system of each Performance Expectation found in the Oklahoma Academic Standards for Science.

For example, the Performance Expectation 4-PS3-1 represents the following:

GRADE: 4

DOMAIN: Physical Science

TOPIC: Energy STANDARD: 1

Each grade level contains Performance Expectations from each Domain. However, to ensure students have a meaningful and focused experience with science in preparation of more advanced topics in Middle and High School, topics are not necessarily covered in each grade level. An example of the progression of topics in grade span 3-5 can be found in the table below. Physical Science Topic 2, "Motion and Stability: Forces and Interactions" (PS2) appears in grade 3 and 5 but not grade 4, is highlighted in green. In contrast, Life Science Topic 1, "From Molecule to Organisms: Structure and Function" (LS1), is highlighted in blue and occurs in each grade level.

Grade 3	Grade 4	Grade 5
3-PS2-1	4-PS3-1	5-PS1-1
3-PS2-2	4-PS3-2	5-PS1-2
3-PS2-3	4-PS3-3	5-PS1-3
3-PS2-4	4-PS3-4	5-PS1-4
3-LS1-1	4-PS4-1	5-PS2-1
3-LS2-1	4-PS4-2	5-PS3-1
3-LS3-1	4-PS4-3	5-LS1-1
3-LS3-2	4-LS1-1	5-LS2-1
3-LS4-1	4-LS1-2	5-LS2-2
3-LS4-2	4-ESS1-1	5-ESS1-1
3-LS4-3	4-ESS2-1	5-ESS1-2
3-LS4-4	4-ESS2-2	5-ESS2-1
3-ESS2-2	4-ESS3-1	5-ESS2-2
3-ESS3-1	4-ESS3-2	5-ESS3-1

K-PS2-1 Motion and Stability: Forces and Interactions

Science & Engineering Practices Disciplinary Core Ideas Performance Expectations Forces and Motion: 1 Asking questions (for science) and K-PS2-1 • Pushes and pulls can have different defining problems (for engineering) Students who demonstrate strengths and directions. 2 Developing and using models understanding can: • Pushing or pulling on an object can Planning and carrying out investigations to answer change the speed or direction of its Plan and conduct an questions or test solutions to motion and can start or stop it. investigation to compare the problems in K-2 builds on prior effects of different strengths experiences and progresses to Types of Interactions: or different directions of • When objects touch or collide, they simple investigations, based on fair push on one another and can change pushes and pulls on the tests, which provide data to support motion. explanations or design solutions. motion of an object. • With guidance, plan and conduct Relationship Between an investigation in collaboration Clarification Statement: **Energy and Forces:** with peers. Examples of pushes or pulls could • A bigger push or pull makes things 4 Analyzing and interpreting data include a string attached to an object **5** Using mathematics and speed up or slow down more quickly. being pulled, a person pushing an computational thinking object, a person stopping a rolling ball, 6 Constructing explanations (for science) and two objects colliding and pushing and designing solutions (for on each other (e.g. ramps such as engineering) blocks or wooden moldings with cars 7 Engaging in argument from evidence and balls; paper towel threaded on 8 Obtaining, evaluating, and rope or string across the classroom). communicating information

Crosscutting Concepts: Cause and Effect

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

Oklahoma Academic Standards Connections

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.

Okianoma Academic Standards Connections		
ELA/Literacy	Mathematics	
Vocabulary – 4.2. Use new vocabulary and language in own speech and writing. Writing –1.3. Presents his or her own writing which may include pictures, attempts at letters, initial consonants, words, or phrases to the group, teacher and/or parent. Modes/Forms of Writing – 2.2. Construct journal entries using illustrations and beginning writing skills. Listening – 1.3. Follow one- and two-step directions. Speaking – 2.1. Share information and ideas speaking in clear, complete, coherent sentences.	Number Sense – 2.1. Compare a group or set to another group, set, or numerical quantity and verbally explain which has more, less, or equivalent quantities. Measurement – 4.1. Linear Measurement a. Measure objects using nonstandard units of measurement (e.g., pencil, paper clip block). b. Compare objects according to observable attributes (e.g., long, longer, longest; short, shorter, shortest; big, bigger, biggest; small, smaller, smallest; small, medium, large). c. Compare and order objects in graduated order (e.g., shortest to tallest, thinnest to thickest). d. Identify the appropriate instrument used to measure length (ruler), weight (scale), time (clock: digital and analog; calendar: day, month, year, season), and temperature (thermometer). Data Analysis – 5.1. Data Analysis b. Develops abilities to collect, describe, and record information through a variety of means including discussion, drawings, maps, charts, and graphs. c. Describes similarities and differences between objects. d. Collects and analyze information about objects and events in the environment. Data Analysis – 5.2. Create and verbally explain a data display or graph (e.g., real object graph, pictorial graphs).	

^{*}The performance expectations marked with an asterisk integrate traditional science content with engineering through a Practice or Disciplinary Core Idea.

K-PS2-2 Motion and Stability: Forces and Interactions

Science & Engineering Practices	Disciplinary Core Ideas	Performance Expectations
 Asking questions (for science) and defining problems (for engineering) Developing and using models Planning and carrying out investigations Analyzing and interpreting data Analyzing data in K-2 builds on prior experiences and progresses to collecting, recording, and sharing observations. Analyze data from tests of an object or tool to determine if it works as intended. Using mathematics and computational thinking Constructing explanations (for science) and designing solutions (for engineering) Engaging in argument from evidence Obtaining, evaluating, and communicating information 	Forces and Motion: Pushes and pulls can have different strengths and directions. Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. Defining Engineering Problems: (secondary to K-PS2-2) A situation that people want to change or create can be approached as a problem to be solved through engineering. Such problems may have many acceptable solutions.	K-PS2-2 Students who demonstrate understanding can: Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.* Clarification Statement: Examples of problems requiring a solution could include having a marble or other object move a certain distance, follow a particular path, and knock down other objects. Examples of solutions could include tools such as a ramp to increase the speed of the object and a structure that would cause an object such as a marble or ball to turn and using a rope or string to pull an object. Assessment Boundary: Assessment does not include friction as a mechanism for change in speed.

Crosscutting Concepts: Cause and Effect

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

ELA/Literacy	Mathematics		
Vocabulary – 4.2. Use new vocabulary and language in own speech and writing. Speaking – 2.1. Share information and ideas speaking in clear, complete, coherent sentences.	Number Sense – 2.1. Compare a group or set to another group, set, or numerical quantity and verbally explain which has more, less, or equivalent quantities. Measurement – 4.1. Linear Measurement a. Measure objects using nonstandard units of measurement (e.g., pencil, paper clip, block). b. Compare objects according to observable attributes (e.g., long, longer, longest; short, shorter, shortest; big, bigger, biggest; small, smaller, smallest; small, medium, large). c. Compare and order objects in graduated order (e.g., shortest to tallest, thinnest to thickest). d. Identify the appropriate instrument used to measure length (ruler), weight (scale), time (clock: digital and analog; calendar: day, month, year, season), and temperature (thermometer). Data Analysis – 5.1. Data Analysis b. Develops abilities to collect, describe, and record information through a variety of means including discussion, drawings, maps, charts, and graphs. c. Describes similarities and differences between objects. d. Collects and analyze information about objects and events in the environment. Data Analysis – 5.2. Create and verbally explain a data display or graph (e.g., real object graph, pictorial graphs).		

^{*}The performance expectations marked with an asterisk integrate traditional science content with engineering through a Practice or Disciplinary Core Idea.

K-PS3-1 Energy			
 Asking questions (for science) and defining problems (for engineering) Developing and using models Planning and carrying out investigations to answer questions or test solutions to problems in K-2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions. Make observations (firsthand or from media) to collect data that an be used to make comparisons. Analyzing and interpreting data Using mathematics and computational thinking Constructing explanations (for science) and designing solutions (for engineering) Engaging in argument from evidence Obtaining, evaluating, and communicating information 	Conservation of Energy and Energy Transfer: • Sunlight warms Earth's surface.	K-PS3-1 Students who demonstrate understanding can: Make observations to determine the effect of sunlight on Earth's surface. Clarification Statement: Examples of Earth's surface could include sand, soil, rocks, and water. Examples can extend beyond natural objects on Earth's surface to include man-made objects such as plastics, asphalt, or concrete. Assessment Boundary: Assessment of temperature is limited to relative measures such as warmer/ cooler.	

Crosscutting Concepts: Cause and Effect

• Events have causes that generate observable patterns.

ELA/Literacy	Mathematics
Vocabulary – 4.2. Use new vocabulary and language in own speech and writing. Comprehension – 6.3. Make predictions and confirm after reading or listening to text. Speaking – 2.1. Share information and ideas speaking in clear, complete, coherent sentences.	Number Sense – 2.1. Compare a group or set to another group, set, or numerical quantity and verbally explain which has more, less, or equivalent quantities. Data Analysis – 5.1. Data Analysis b. Develops abilities to collect, describe, and record information through a variety of means including discussion, drawings, maps, charts, and graphs.

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K-PS3-2 Energy Science & Engineering Practices Disciplinary Core Ideas Performance Expectation			
 Asking questions (for science) and defining problems (for engineering) Developing and using models Planning and carrying out investigations Analyzing and interpreting data Using mathematics and computational thinking Constructing explanations (for science) and designing solutions (for engineering) Constructing explanations and designing solutions in K-2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions. Use tools and materials provided to design and build a device that solves a specific problem or a solution to a specific problem. Engaging in argument from evidence Obtaining, evaluating, and communicating information 	Conservation of Energy and Energy Transfer: • Sunlight warms Earth's surface.	K-PS3-2 Students who demonstrate understanding can: Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.* Clarification Statement: Examples of structures could include umbrellas, canopies, and tents that minimize the warming effect of the sun. Assessment Boundary: N/A	

Crosscutting Concepts: Cause and Effect

• Events have causes that generate observable patterns.

Okianoma Academic Standards Connections			
ELA/Literacy	Mathematics		
Vocabulary – 4.2. Use new vocabulary and language in own speech and writing. Speaking – 2.1. Share information and ideas speaking in clear, complete, coherent sentences.	Number Sense – 2.1. Compare a group or set to another group, set, or numerical quantity and verbally explain which has more, less, or equivalent quantities. Data Analysis – 5.1. Data Analysis d. Collects and analyze information about objects and events in the environment. Data Analysis – 5.2. Create and verbally explain a data display or graph (e.g., real object graph, pictorial graphs).		

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K-LS1-1 From Molecules to Organisms: Structure and Processes

Science & Engineering Practices	Disciplinary Core Ideas	Performance Expectations
 Asking questions (for science) and defining problems (for engineering) Developing and using models Planning and carrying out investigations Analyzing and interpreting data Analyzing data in K-2 builds on prior experiences and progresses to collecting, recording, and sharing observations. Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. Using mathematics and computational thinking Constructing explanations (for science) and designing solutions (for engineering) Engaging in argument from evidence Obtaining, evaluating, and communicating information 	Organization for Matter and Energy Flow in Organisms: • All animals need food in order to live and grow. • Animals obtain their food from plants or from other animals. • Plants need water and light to live and grow.	K-LS1-1 Students who demonstrate understanding can: Use observations to describe patterns of what plants and animals (including humans) need to survive. Clarification Statement: Examples of patterns could include that plants make their own food while animals do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and, that all living things need water. Assessment Boundary: Students are not expected to understand the mechanisms of photosynthesis.

Crosscutting Concepts: Patterns

• Patterns in the natural and human designed world can be observed and used as evidence.

ELA/Literacy	Mathematics
Vocabulary – 4.2. Use new vocabulary and language in own speech and writing. Speaking – 2.1. Share information and ideas speaking in clear, complete, coherent sentences.	Number Sense – 2.1. Compare a group or set to another group, set, or numerical quantity and verbally explain which has more, less, or equivalent quantities. Measurement – 4.1. Linear Measurement b. Compare objects according to observable attributes (e.g., long, longer, longest; short, shorter, shortest; big, bigger, biggest; small, smaller, smallest; small, medium, large c. Compare and order objects in graduated order (e.g., shortest to tallest, thinnest to thickest). Data Analysis – 5.1. Data Analysis b. Develops abilities to collect, describe, and record information through a variety of means including discussion, drawings, maps, charts, and graphs. c. Describes similarities and differences between objects. d. Collects and analyze information about objects and events in the enviror ment. Data Analysis – 5.2. Create and verbally explain a data display or graph (e.g., real object graph, pictorial graphs).

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K-ESS2-1 Earth's Systems

Science & Engineering Practices	Disciplinary Core Ideas	Performance Expectations	
 Asking questions (for science) and defining problems (for engineering) Developing and using models Planning and carrying out investigations Analyzing and interpreting data Analyzing data in K-2 builds on prior experiences and progresses to collecting, recording, and sharing observations. Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. Using mathematics and computational thinking Constructing explanations (for science) and designing solutions (for engineering) Engaging in argument from evidence Obtaining, evaluating, and communicating information 	Weather and Climate: Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. People measure these conditions to describe and record the weather and to notice patterns over time.	K-ESS2-1 Students who demonstrate understanding can: Use and share observations of local weather conditions to describe patterns over time. Clarification Statement: Examples of qualitative observations could include descriptions of the weather (such as sunny, cloudy, rainy, and warm); examples of quantitative observations could include numbers of sunny, windy, and rainy days in a month. Examples of patterns could include that it is usually cooler in the morning than in the afternoon and the number of sunny days versus cloudy days in different months. Assessment Boundary: Assessment of quantitative observations limited to whole numbers and relative measures such as warmer/cooler.	

Crosscutting Concepts: Patterns

• Patterns in the natural and human designed world can be observed and used as evidence.

Oklahoma Academic Standards Connections		
ELA/Literacy	Mathematics	
Vocabulary – 4.2. Use new vocabulary and language in own speech and writing. Speaking – 2.1. Share information and ideas speaking in clear, complete, coherent sentences.	Number Sense – 2.1. Compare a group or set to another group, set, or numerical quantity and verbally explain which has more, less, or equivalent quantities. 2.3. Count forward to twenty and backward from ten. 2.4. Count objects in a set one-by-one from one through twenty. 2.5. Identify and create sets of objects zero through twenty. Measurement – 4.1. Linear Measurement b. Compare objects according to observable attributes (e.g., long, longer, longest; short, shorter, shortest; big, bigger, biggest; small, smaller, smallest; small, medium, large). c. Compare and order objects in graduated order (e.g., shortest to tallest, thinnest to thickest). Data Analysis – 5.1. Data Analysis b. Develops abilities to collect, describe, and record information through a variety of means including discussion, drawings, maps, charts, and graphs. c. Describes similarities and differences between objects. d. Collects and analyze information about objects and events in the environment. Data Analysis – 5.2. Create and verbally explain a data display or graph (e.g., real object graph, pictorial graphs).	

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K-ESS2-2 Earth's Systems

Science & Engineering Practices	Disciplinary Core Ideas	Performance Expectations
 Asking questions (for science) and defining problems (for engineering) Developing and using models Planning and carrying out 	Biogeology: • Plants and animals can change their environment.	K-ESS2-2 Students who demonstrate understanding can:
 investigations 4 Analyzing and interpreting data 5 Using mathematics and computational thinking 6 Constructing explanations (for science) and designing solutions (for engineering) 7 Engaging in argument from 	Human Impacts on Earth Systems: Things that people do to live comfortably can affect the world around them.	Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.
evidence in K-2 builds on prior experiences and progresses to comparing ideas and representations about the natural and designed world(s). • Construct an argument with evidence to support a claim.		Clarification Statement: Examples of plants and animals changing their environment could include a squirrel digs in the ground to hide its food and tree roots can break concrete, or a dandelion spreading seeds to generate more dandelions.
Obtaining, evaluating, and communicating information		Assessment Boundary: Arguments should be based on qualitative not quantitative evidence.

Crosscutting Concepts: Systems and System Models

• Systems in the natural and designed world have parts that work together.

ELA/Literacy	Mathematics	
Vocabulary – 4.2. Use new vocabulary and language in own speech and writing. Speaking – 2.1. Share information and ideas speaking in clear, complete, coherent sentences. Group Interaction – 3.0. The student will use effective communication strategies in pair and small group context. 1. Show respect and consideration for others in verbal communications. 2. Show respect and consideration for others in physical communications. Research and Information – 8.1. Accessing Information - The student will select the best source for a given purpose.	N/A	

^{*}The performance expectations marked with an asterisk integrate traditional science content with engineering through a Practice or Disciplinary Core Idea.

K-ESS3-1 Earth and Human Activity

Science & Engineering Practices	Disciplinary Core Ideas	Performance Expectations
Science & Engineering Practices ① Asking questions (for science) and defining problems (for engineering) ② Developing and using models Modeling in K-2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, storyboard) that represent concrete events or design solutions. • Use a model to represent relationships in the natural world. ③ Planning and carrying out investigations ④ Analyzing and interpreting data ⑤ Using mathematics and computational thinking ⑤ Constructing explanations (for science) and designing solutions (for engineering) ⑦ Engaging in argument from evidence ③ Obtaining, evaluating, and communicating information	Natural Resources: • Living things need water, air, and resources from the land, and they live in places that have the things they need. • Humans use natural resources for everything they do.	K-ESS3-1 Students who demonstrate understanding can: Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live. Clarification Statement: Examples of relationships could include that deer eat buds and leaves, therefore, they usually live in forested areas; and, grasses need sunlight so they often grow in meadows. Plants, animals, and their surroundings make up a system. Assessment Boundary: N/A

Crosscutting Concepts: Systems and System Models

• Systems in the natural and designed world have parts that work together.

Oklanoma Academic Standards Connections		
ELA/Literacy	Mathematics	
Visual Literacy – 1.1 Interpret Meaning - The student will interpret and evaluate various ways visual image-makers including graphic artists, illustrators, and news photographers represent meaning.	Data Analysis – 5.1. Data Analysis b. Develops abilities to collect, describe, and record information through a variety of means including discussion, drawings, maps, charts, and graphs. c. Describes similarities and differences between objects. d. Collects and analyze information about objects and events in the environment.	

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K-ESS3-2 Earth and Human Activity

Science & Engineering Practices	Disciplinary Core Ideas	Performance Expectations
Asking questions (for science) and defining problems (for engineering) Asking questions and defining problems in grades K–2 builds on	Natural Hazards: • Some kinds of severe weather are more likely than others in a given region. • Weather scientists forecast severe	K-ESS3-2 Students who demonstrate understanding can:
prior experiences and progresses to simple descriptive questions that can be tested. • Ask questions based on	weather so that the communities can prepare for and respond to these events.	Ask questions to obtain information about the purpose of weather fore-
observations to find more	Defining and Delimiting	casting to prepare for, and
information about the designed	an Engineering Problem:	respond to, severe weather.*
world. ② Developing and using models ③ Planning and carrying out investigations ④ Analyzing and interpreting data	Asking questions, making observations, and gathering information are helpful in thinking about problems. *Connections to Engineering,	Clarification Statement: Emphasis is on local forms of severe weather and safety precautions associated with that severe weather.
5 Using mathematics and computational thinking	Technology, and Application of Science	Assessment Boundary:
 Constructing explanations (for science) and designing solutions (for engineering) Engaging in argument from evidence Obtaining, evaluating, and communicating information 	Interdependence of Science, Engineering, and Technology: • People encounter questions about the natural world every day. Influence of Engineering, Technology, and Science on Society and the Natural World: • People depend on various technologies in their lives; human life would be very different without technology.	N/A

Crosscutting Concepts: Cause and Effect

• Events have causes that generate observable patterns.

ELA/Literacy	Mathematics
Comprehension – 6.1. 1. Use prereading skills (e.g., connecting prior knowledge to text, making predictions about text and using picture clues). 6.3. Make predictions and confirm after reading or listening to text.	Number Sense – 2.1. Compare a group or set to another group, set, or numerical quantity and verbally explain which has more, less, or equivalent quantities. 2.3. Count forward to twenty and backward from ten. 2.4. Count objects in a set one-by-one from one through twenty. 2.5. Identify and create sets of objects zero through twenty. Data Analysis – 5.1. Data Analysis b. Develops abilities to collect, describe, and record information through a variety of means including discussion, drawings, maps, charts, and graphs. c. Describes similarities and differences between objects. d. Collects and analyze information about objects and events in the environment.

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Oklahoma Academic Standards for Social Studies Introduction

Reading the Oklahoma Academic Standards for Social Studies





Oklahoma Academic Standards for Social Studies Kindergarten (K)

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	
		Kindergarten Content Stan	dards		
K.1 The student will exhibit of good citizenship.	traits K.1.1 Describe the impo	rtance of rules, personal respo	nsibilities, and natural consequence	es as a member of a family,	
	K.1.2 Identify ways to be	K.1.2 Identify ways to be an active member of the community.			
		K.1.3 Identify the United States Flag as a symbol of the country, explaining the stripes as symbols for the first states and the stars as symbols for the current states in our country.			
	K.1.4 Identify the purpo	K.1.4 Identify the purpose of the Pledge of Allegiance and explain appropriate flag etiquette.			
	K.1.5 Identify other impo	K.1.5 Identify other important United States symbols including the Statue of Liberty located in New York Harbor.			
K.2 The student will demonstrate knowledge of basic physical and human geographic concepts.	· · · · · ·	K.2.1 Explain that a globe is a model of the Earth and that a map is a drawing of a place; construct basic maps.			
	1.6 .1	K.2.2 Identify basic cardinal directions and relative location terms.			
	K.2.3 Identify the shape	K.2.3 Identify the shape of the state of Oklahoma on a map.			
	K.2.4 Explain that the so	K.2.4 Explain that the school is part of a larger community and one's community is within the state of Oklahoma.			
	K.2.5 Describe what mal	K.2.5 Describe what makes one's community alike or different than other communities.			
	K.2.6 Describe family an	K.2.6 Describe family and community customs and traditions as basic elements of culture.			



Oklahoma Academic Standards for Social Studies Kindergarten (K)

K.3 The student will understand that history relates to events and people of other times and places.	K.3.1 Explain how events of the past may have affected our community and the way we live today.
	K.3.2 Explain how we honor people and events of the past.
	K.3.3 Use words and phrases related to chronology and time to explain how things change including before/after and yesterday/today/tomorrow.
	K.3.4 Explain that different types of sources can be used to learn about the past.
K.4 The student will identify basic economic concepts.	K.4.1 Describe the basic needs of all people: food, clothing, and shelter; differentiate between these needs and a want.
	K.4.2 Explain the relationship between work and earning money.
	K.4.3 Identify ways that people use their money, including spending and saving.
	K.4.4 Explain how various community members including police officers, firefighters, soldiers, school personnel, business professionals, and medical personnel impact the student's life.