

## Reading Standards for Literature

The following standards offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

### Key Ideas and Details

1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
2. Recount stories, including fables, folktales, and myths from diverse cultures; determine the central message, lesson, or moral and explain how it is conveyed through key details in the text.
3. Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.

### Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, distinguishing literal from non-literal language.
5. Refer to parts of stories, dramas, and poems when writing or speaking about a text, using terms such as chapter, scene, and stanza; describe how each successive part builds on earlier sections.
6. Distinguish the student's point of view from that of the narrator or those of the characters.

### Integration of Knowledge and Ideas

7. Explain how specific aspects of a text's illustrations contribute to what is conveyed by the words in a story (e.g., create mood, emphasize aspects of a character or setting).
8. (Not applicable to literature)
9. Compare and contrast the themes, settings, and plots of stories written by the same author about the same or similar characters (e.g., in books from a series).

### Range of Reading and Level of Text Complexity

10. By the end of the year, read and comprehend literature, including stories, dramas, and poetry, at the high end of the grades 2–3 text complexity band independently and proficiently.

## Reading Standards for Informational Text

### Key Ideas and Details

1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
2. Determine the main idea of a text; recount the key details and explain how they support the main idea.
3. Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.

### Craft and Structure

4. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.
5. Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.
6. Distinguish the student's point of view from that of the author of a text.

**Integration of Knowledge and Ideas**

7. Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).
8. Describe the logical connection between particular sentences and paragraphs in a text (e.g., comparison, cause/effect, first/second/third in a sequence).
9. Compare and contrast the most important points and key details presented in two texts on the same topic.

**Range of Reading and Level of Text Complexity**

10. By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 2–3 text complexity band independently and proficiently.

**Reading Standards for Foundational Skills**

These standards are directed toward fostering students’ understanding and working knowledge of concepts of print, the alphabetic principle, and other basic conventions of the English writing system. These foundational skills are not an end in and of themselves; rather, they are necessary and important components of an effective, comprehensive reading program designed to develop proficient readers with the capacity to comprehend texts across a range of types and disciplines. Instruction should be differentiated: good readers will need much less practice with these concepts than struggling readers will. The point is to teach students what they need to learn and not what they already know— to discern when particular children or activities warrant more or less attention.

**Print Concepts**

1. Mastered in grade 1.

**Phonological Awareness**

2. Mastered in grade 1.

**Phonics and Word Recognition**

3. Know and apply grade-level phonics and word analysis skills in decoding words.
  - a. Identify and know the meaning of the most common prefixes and derivational suffixes.
  - b. Decode words with common Latin suffixes.
  - c. Decode multi-syllable words.
  - d. Read grade-appropriate irregularly spelled words.

**Fluency**

4. Read with sufficient accuracy and fluency to support comprehension.
  - a. Read on-level text<sup>5</sup> with purpose and understanding.
  - b. Read on-level prose<sup>6</sup> and poetry orally with accuracy, appropriate rate, and expression on successive readings.
  - c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

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<sup>5</sup> “On-level text” means grade level text.

<sup>6</sup> “On-level prose” means grade level prose.

## Writing Standards

The following standards offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Each year in their writing, students should demonstrate increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas, and they should address increasingly demanding content and sources. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

### Text Types and Purposes

1. Write opinion pieces on topics or texts, supporting a point of view with reasons.
  - a. Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists reasons.
  - b. Provide reasons that support the opinion.
  - c. Use linking words and phrases (e.g., because, therefore, since, for example) to connect opinion and reasons.
  - d. Provide a concluding statement or section.
2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
  - a. Introduce a topic and group related information together; include illustrations when useful to aiding comprehension.
  - b. Develop the topic with facts, definitions, and details.
  - c. Use linking words and phrases (e.g., also, another, and, more, but) to connect ideas within categories of information.
  - d. Provide a concluding statement or section.
3. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
  - a. Establish a situation and introduce a narrator and/or characters; organize an event sequence that unfolds naturally.
  - b. Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences and events or show the response of characters to situations.
  - c. Use temporal words and phrases to signal event order.
  - d. Provide a sense of closure.

### Production and Distribution of Writing

4. With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose.
5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.
6. With guidance and support from adults, produce and publish grade-appropriate writing, using technology, either independently or in collaboration with others.

### Research to Build and Present Knowledge

7. Conduct short research projects that build knowledge about a topic.
8. Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.
9. Begins in grade 4.

### **Range of Writing**

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

## **Speaking and Listening Standards**

The following standards offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

### **Comprehension and Collaboration**

1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
  - a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
  - b. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
  - c. Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others.
  - d. Explain their own ideas and understanding in light of the discussion.
2. Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
3. Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.

### **Presentation of Knowledge and Ideas**

4. Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.
5. Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details.
6. Speak in complete sentences when appropriate to task, audience, and situation in order to provide requested detail or clarification.

## **Language Standards**

The following standards for grades offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

### **Conventions of Standard English**

1. Demonstrate command of the conventions of Standard English grammar and usage when writing or speaking.
  - a. Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences.
  - b. Form and use regular and irregular plural nouns.
  - c. Use abstract nouns (e.g., childhood).
  - d. Form and use regular and irregular verbs.
  - e. Form and use the simple (e.g., I walked; I walk; I will walk) verb tenses.
  - f. Ensure subject-verb and pronoun-antecedent agreement.

- g. Form and use comparative and superlative adjectives and adverbs, and choose between them depending on what is to be modified.
  - h. Use coordinating and subordinating conjunctions.
  - i. Produce simple, compound, and complex sentences.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
- a. Capitalize appropriate words in titles.
  - b. Use commas in addresses.
  - c. Use commas and quotation marks in dialogue.
  - d. Form and use possessives.
  - e. Use conventional spelling for high-frequency and other studied words and for adding suffixes to base words (e.g., *sitting, smiled, cries, happiness*).
  - f. Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing words.
  - g. Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.

#### **Knowledge of Language**

3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- a. Choose words and phrases for effect.
  - b. Recognize and observe differences between the conventions of spoken and written Standard English.

#### **Vocabulary Acquisition and Use**

4. Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on grade 3 reading and content, choosing flexibly from a range of strategies.
- a. Use sentence-level context as a clue to the meaning of a word or phrase.
  - b. Determine the meaning of the new word formed when a known affix is added to a known word (e.g., *agreeable/disagreeable, comfortable/uncomfortable, care/careless, heat/preheat*).
  - c. Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., *company, companion*).
  - d. Use glossaries or beginning dictionaries, both print and digital, to determine or clarify the precise meaning of key words and phrases.
5. Demonstrate understanding of word relationships and nuances in word meanings.
- a. Distinguish the literal and non-literal meanings of words and phrases in context (e.g., *take steps*).
  - b. Identify real-life connections between words and their use (e.g., describe people who are friendly or helpful).
  - c. Distinguish shades of meaning among related words that describe states of mind or degrees of certainty (e.g., *knew, believed, suspected, heard, wondered*).
6. Acquire and use accurately grade-appropriate conversational, general academic and domain-specific words and phrases, including those that signal spatial and temporal relationships (e.g., *After dinner that night we went looking for them*).

## Mathematics | Grade 3

[Teachers Companion Documents.zip](#)

### Grade Level Overview

(1) Students develop an understanding of the meanings of multiplication and division of whole numbers through activities and problems involving equal-sized groups, arrays, and area models; multiplication is finding an unknown product, and division is finding an unknown factor in these situations. For equal-sized group situations, division can require finding the unknown number of groups or the unknown group size. Students use properties of operations to calculate products of whole numbers, using increasingly sophisticated strategies based on these properties to solve multiplication and division problems involving single-digit factors. By comparing a variety of solution strategies, students learn the relationship between multiplication and division.

(2) Students develop an understanding of fractions, beginning with unit fractions. Students view fractions in general as being built out of unit fractions, and they use fractions along with visual fraction models to represent parts of a whole. Students understand that the size of a fractional part is relative to the size of the whole. For example,  $\frac{1}{2}$  of the paint in a small bucket could be less paint than  $\frac{1}{3}$  of the paint in a larger bucket, but  $\frac{1}{3}$  of a ribbon is longer than  $\frac{1}{5}$  of the same ribbon because when the ribbon is divided into 3 equal parts, the parts are longer than when the ribbon is divided into 5 equal parts. Students are able to use fractions to represent numbers equal to, less than, and greater than one. They solve problems that involve comparing fractions by using visual fraction models and strategies based on noticing equal numerators or denominators.

(3) Students recognize area as an attribute of two-dimensional regions. They measure the area of a shape by finding the total number of same-size units of area required to cover the shape without gaps or overlaps, a square with sides of unit length being the standard unit for measuring area. Students understand that rectangular arrays can be decomposed into identical rows or into identical columns. By decomposing rectangles into rectangular arrays of squares, students connect area to multiplication, and justify using multiplication to determine the area of a rectangle.

(4) Students describe, analyze, and compare properties of two-dimensional shapes. They compare and classify shapes by their sides and angles, and connect these with definitions of shapes. Students also relate their fraction work to geometry by expressing the area of part of a shape as a unit fraction of the whole.

## Operations and Algebraic Thinking

## 3.OA

### A. Represent and solve problems involving multiplication and division.

1. Interpret products of whole numbers, e.g., interpret  $5 \times 7$  as the total number of objects in 5 groups of 7 objects each. *For example, describe a context in which a total number of objects can be expressed as  $5 \times 7$ .*
2. Interpret whole-number quotients of whole numbers, e.g., interpret  $56 \div 8$  as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. *For example, describe a context in which a number of shares or a number of groups can be expressed as  $56 \div 8$ .*
3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.<sup>1</sup>
4. Determine the unknown whole number in a multiplication or division equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations  $8 \times ? = 48$ ,  $5 = \square \div 3$ ,  $6 \times 6 = ?$ .*

<sup>1</sup> See Glossary, Table 2.



**B. Understand properties of multiplication and the relationship between multiplication and division.**

5. Apply properties of operations as strategies to multiply and divide.<sup>2</sup> *Examples: If  $6 \times 4 = 24$  is known, then  $4 \times 6 = 24$  is also known. (Commutative property of multiplication.)  $3 \times 5 \times 2$  can be found by  $3 \times 5 = 15$ , then  $15 \times 2 = 30$ , or by  $5 \times 2 = 10$ , then  $3 \times 10 = 30$ . (Associative property of multiplication.) Knowing that  $8 \times 5 = 40$  and  $8 \times 2 = 16$ , one can find  $8 \times 7$  as  $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$ . (Distributive property.)*
6. Understand division as an unknown-factor problem. *For example, find  $32 \div 8$  by finding the number that makes 32 when multiplied by 8.*

**C. Multiply and divide within 100.**

7. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that  $8 \times 5 = 40$ , one knows  $40 \div 5 = 8$ ) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

**D. Solve problems involving the four operations, and identify and explain patterns in arithmetic.**

8. Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.<sup>3</sup>
9. Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*

**Number and Operations in Base Ten**

**3.NBT**

**A. Use place value understanding and properties of operations to perform multi-digit arithmetic.<sup>4</sup>**

1. Use place value understanding to round whole numbers to the nearest 10 or 100.
2. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
3. Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g.,  $9 \times 80$ ,  $5 \times 60$ ) using strategies based on place value and properties of operations.

**Number and Operations - Fractions**

**3.NF**

**A. Develop understanding of fractions as numbers.**

1. Understand a fraction  $1/b$ , with denominators 2, 3, 4, 6, and 8, as the quantity formed by 1 part when a whole is partitioned into  $b$  equal parts; understand a fraction  $a/b$  as the quantity formed by  $a$  parts of size  $1/b$ .
2. Understand a fraction with denominators 2, 3, 4, 6, and 8 as a number on a number line diagram.
  - a. Represent a fraction  $1/b$  on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into  $b$  equal parts. Recognize that each part has size  $1/b$  and that the endpoint of the part based at 0 locates the number  $1/b$  on the number line.
  - b. Represent a fraction  $a/b$  on a number line diagram by marking off  $a$  lengths  $1/b$  from 0. Recognize that the resulting interval has size  $a/b$  and that its endpoint locates the number  $a/b$  on the number line.

<sup>2</sup> Students need not use formal terms for these properties.

<sup>3</sup> This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).

<sup>4</sup> A range of algorithms may be used.

3. Explain equivalence of fractions with denominators 2, 3, 4, 6, and 8 in special cases, and compare fractions by reasoning about their size.
  - a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.
  - b. Recognize and generate simple equivalent fractions, e.g.,  $1/2 = 2/4$ ,  $4/6 = 2/3$ . Explain why the fractions are equivalent, e.g., by using a visual fraction model.
  - c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers.  
*Examples: Express 3 in the form  $3 = 3/1$ ; recognize that  $6/1 = 6$ ; locate  $4/4$  and 1 at the same point of a number line diagram.*
  - d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions, e.g., by using a visual fraction model.

## Measurement and Data

## 3.MD

### A. Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.

1. Understand time to the nearest minute.
  - a. Tell and write time to the nearest minute and measure time intervals in minutes, within 60 minutes, on an analog and digital clock.
  - b. Calculate elapsed time greater than 60 minutes to the nearest quarter and half hour on a number line diagram.
  - c. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.
2. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).<sup>5</sup> Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.<sup>6</sup>

### B. Represent and interpret data.

3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*
4. Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.

### C. Geometric measurement: understand concepts of area and relate area to multiplication and to addition.

5. Recognize area as an attribute of plane figures and understand concepts of area measurement.
  - a. A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area.
  - b. A plane figure that can be covered without gaps or overlaps by  $n$  unit squares is said to have an area of  $n$  square units.
6. Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).
7. Relate area to the operations of multiplication and addition.

<sup>5</sup> Excludes compound units such as  $\text{cm}^3$  and finding the geometric volume of a container.

<sup>6</sup> Excludes multiplicative comparison problems (problems involving notions of “times as much”; see Glossary, Table 2).



- a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.
- b. Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real-world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.
- c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths  $a$  and  $b + c$  is the sum of  $a \times b$  and  $a \times c$ . Use area models to represent the distributive property in mathematical reasoning.

**D. Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.**

8. Solve real-world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

**E. Work with money**

9. Solve word problems involving pennies, nickels, dimes, quarters, and bills greater than one dollar, using the dollar and cent symbols appropriately.

**Geometry**

**3.G**

**A. Reason with shapes and their attributes.**

1. Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
2. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. *For example, partition a shape into 4 parts with equal area, and describe the area of each part as  $\frac{1}{4}$  of the area of the shape.*

<b>3-5</b>
<p><b>3-5.SP1.</b> Examine sources in order to:</p> <ul style="list-style-type: none"> <li>A. Distinguish between primary, secondary, and tertiary sources.</li> <li>B. Determine the origin, author's point of view, and intended audience.</li> <li>C. Understand and use content-specific vocabulary and phrases.</li> </ul>
<p><b>3-5.SP2.</b> Select and use appropriate evidence from primary and secondary sources to support claims:</p> <ul style="list-style-type: none"> <li>A. Analyze social studies content.</li> <li>B. Explain claims and evidence.</li> <li>C. Compare and contrast multiple sources distinguish between primary, secondary, and tertiary sources.</li> </ul>
<p><b>3-5.SP3.</b> Construct and express claims that are supported with relevant evidence from primary and/or secondary sources, content knowledge, and clear reasoning in order to:</p> <ul style="list-style-type: none"> <li>A. Demonstrate an understanding of social studies content.</li> <li>B. Compare and contrast content and viewpoints.</li> <li>C. Explain causes and effects.</li> <li>D. Describe counterclaims.</li> </ul>

**GRADE 3    The American Story: People, Places, and Papers**

Building on what students learned in grade 2 about our founding documents and system of government, this course continues to introduce students to major historical events, figures, symbols, and places related to the development and history of the United States of America. In grade 3, students examine the people, places, and papers in United States history that exemplify American ideals and fundamental values such as equality under the law, liberty, justice, and responsibility for the common good. Students will also focus on building their geographic knowledge of North America and the wider world, while further developing an understanding of how the environment affects its inhabitants.

**HISTORY**

- 3.1 Create and use a chronological sequence of related events to compare developments and describe instances of change and continuity.
- 3.2 Explain connections between ideas, events, and developments in U.S. history.
- 3.3 Use a variety of primary and secondary sources to:
  - a. Analyze social studies content.
  - b. Explain claims and evidence.
  - c. Compare and contrast multiple sources.

- 3.4 Construct and express claims that are supported with relevant evidence from primary and/or secondary sources, content knowledge, and clear reasoning in order to:
  - a. Demonstrate an understanding of social studies content.
  - b. Compare and contrast content and viewpoints.
  - c. Explain causes and effects.
  - d. Describe counterclaims.
- 3.5 Compare life in the United States in the past and present.
- 3.6 Identify and describe national historical figures, celebrations, and symbols.
  - a. Describe the achievements of George Washington, Thomas Jefferson, Lewis and Clark, Sacagawea, Abraham Lincoln, Frederick Douglass, Harriet Tubman, Sojourner Truth, Sitting Bull, George Washington Carver, Susan B. Anthony, Mabel Ping-Hua Lee, Theodore Roosevelt, the Wright Brothers, Thomas Edison, Henry Ford, Alexander Graham Bell, Dr. Martin Luther King Jr., Jackie Robinson, Sally Ride, Katherine Johnson, and Mae Jemison.
  - b. Describe the significance of state and nationally designated holidays, including New Year’s Day, the birthday of Martin Luther King, Jr., Inauguration Day, Washington’s Birthday, Mardi Gras, Memorial Day, Juneteenth, Independence Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day, Christmas Day.
  - c. Describe the history of American symbols, including the Liberty Bell, U.S. flag (etiquette, customs pertaining to the display and use of the flag), bald eagle, national anthem, Uncle Sam, Statue of Liberty, The Pledge of Allegiance, and the national motto “In God We Trust.”
  - d. Identify and describe man-made American monuments and landmarks including the Gateway Arch, the Golden Gate Bridge, Jefferson Memorial, Dr. Martin Luther King Jr. Memorial in Washington D.C, Lincoln Memorial, Mount Rushmore, Pearl Harbor Museum, September 11 Memorial and Museum, Statue of liberty, the Tomb of the Unknown Soldier, U.S. Capitol, Washington Monument, and the White House.
  - e. Identify and describe natural American landmarks, including the Grand Canyon, Mississippi River, Monument Valley, Niagara Falls, Rocky Mountains, Smoky Mountains, and Yellowstone National Park.
- 3.7 Describe the significance of major events in the history of the United States, including the American Revolution, Louisiana Purchase, Lewis and Clark Expedition, the abolition of slavery following the Civil War, women’s suffrage movement, civil rights movement, and the Space Race.
- 3.8 Describe how voluntary and involuntary migration have affected the United States.
- 3.9 Describe how technological advancements such as the steam engine, railroad, airplane, automobile, electricity, telephone, radio, television, microwave, and digital technologies have affected the lives of people in the United States.

## **CIVICS**

- 3.10 Recognize functions of the Declaration of Independence and the Constitution of the United States.
  - a. Describe the process by which a bill becomes law.
  - b. Describe the responsibilities of the three branches of government.
  - c. Explain the relationship between the federal government and state government.

- d. Compare and contrast representative democracy (republic) and monarchy.
- e. Explain how our founding documents protect individuals' rights to life, liberty, and the pursuit of happiness.
- 3.11 Identify and describe basic principles of the Declaration of Independence and the Constitution of the United States.
- 3.12 Explain the significance of the Emancipation Proclamation and the Thirteenth Amendment.
- 3.13 Describe civic virtues: voting, running for office, serving on committees, and volunteering.
- 3.14 Describe how and why people become citizens of the United States.

## **ECONOMICS**

- 3.15 Describe the United States in economic terms: free enterprise, private property, producers and consumers, profit and loss, supply and demand, and imports and exports.
  - a. Explain why free enterprise and private property are important concepts and how they are beneficial to individuals and to the United States.
  - b. Explain how the interaction between producers and consumers in a free market satisfies economic wants and needs.
  - c. Explain how supply and demand can affect the prices of goods and services.
  - d. Differentiate between imports and exports.
  - e. Explain why and how people specialize in the production of goods and services.
- 3.16 Identify how people use natural (renewable and non-renewable), human, and capital resources to provide goods and services.
- 3.17 Describe the relationship between scarcity and opportunity cost in economic decision-making.
- 3.18 Describe the importance of personal financial decision-making such as budgeting and saving.

## **GEOGRAPHY**

- 3.19 Create and use maps and models with a key, scale, and compass with intermediate directions.
- 3.20 Describe the geographic features of places in the United States.
- 3.21 Interpret geographic features of the United States using a variety of tools such as different types of maps and photos.
- 3.22 Identify and locate the four hemispheres, equator, and prime meridian.
- 3.23 Locate and describe the seven continents and five oceans.
- 3.24 Describe the relative location of the United States.
- 3.25 Describe why and how people in the United States have modified their environment.
- 3.26 Compare and contrast basic land use and economic activities in urban, suburban, and rural environments.
- 3.27 Describe the importance of conservation and preservation.
- 3.28 Describe how the regions of the United States vary culturally and economically.

## MOTION AND STABILITY: FORCES AND INTERACTIONS

<p><b>Performance Expectation</b></p>	<p>Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.</p>
<p><b>Clarification Statement</b></p>	<p>Examples could include an unbalanced force on one side of an object that can make it start moving, or balanced forces pushing on an object from opposite sides will not produce any motion at all. Investigations include one variable at a time: number, size, or direction of forces.</p>



Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<ol style="list-style-type: none"> <li>1. Asking questions and defining problems</li> <li>2. Developing and using models</li> <li>3. <b>Planning and carrying out investigations:</b> Planning and carrying out investigations to answer questions (science) or test solutions (engineering) to problems in 3–5 builds on K–2 experiences and progresses to include investigations that control variables and provide evidence to support explanations or design solutions. <ul style="list-style-type: none"> <li>• Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence, using fair tests in which variables are controlled and the number of trials considered.</li> </ul> </li> <li>4. Analyzing and interpreting data</li> <li>5. Using mathematics and computational thinking</li> <li>6. Constructing explanations and designing solutions</li> <li>7. Engaging in argument from evidence</li> <li>8. Obtaining, evaluating, and communicating information</li> </ol>	<p><b>FORCES AND MOTION</b> Each force acts on one particular object and has both strength and a direction. An object at rest typically has multiple forces acting on it but they add to give zero net force on the object. (UE.PS2A.a)</p> <p>Forces that do not sum to zero can cause changes in the object’s speed or direction of motion. (Qualitative and conceptual, but not quantitative addition of forces are used at this level.) (UE.PS2A.b)</p> <p><b>TYPES OF INTERACTIONS</b> Objects in contact exert forces on each other. (UE.PS2B.a)</p>	<p><b>CAUSE AND EFFECT</b> Cause and effect relationships are routinely identified, tested, and used to explain change.</p>

## MOTION AND STABILITY: FORCES AND INTERACTIONS

<p><b>Performance Expectation</b></p>	<p>Make observations and/or measurements of an object’s motion to provide evidence that a pattern can be used to predict future motion.</p>
<p><b>Clarification Statement</b></p>	<p>Examples of motion with a predictable pattern could include a child swinging in a swing, a ball rolling back and forth in a bowl, or two children on a see-saw.</p>

Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<ol style="list-style-type: none"> <li>Asking questions and defining problems</li> <li>Developing and using models</li> <li><b>3. Planning and carrying out investigations:</b> Planning and carrying out investigations to answer questions (science) or test solutions (engineering) to problems in 3–5 builds on K–2 experiences and progresses to include investigations that control variables and provide evidence to support explanations or design solutions. <ul style="list-style-type: none"> <li>Make observations and/or measurements to produce data to serve as the basis for evidence for an explanation of a phenomenon or test a design solution.</li> </ul> </li> <li>Analyzing and interpreting data</li> <li>Using mathematics and computational thinking</li> <li>Constructing explanations and designing solutions</li> <li>Engaging in argument from evidence</li> <li>Obtaining, evaluating, and communicating information</li> </ol>	<p><b>FORCES AND MOTION</b></p> <p>The patterns of an object’s motion in various situations can be observed and measured; when that past motion exhibits a regular pattern, future motion can be predicted from it. (Technical terms, such as magnitude, velocity, momentum, and vector quantity, are not introduced at this level, but the concept that some quantities need both size and direction to be described is developed.) (UE.PS2A.c)</p>	<p><b>PATTERNS</b></p> <p>Patterns of change can be used to make predictions.</p>



## MOTION AND STABILITY: FORCES AND INTERACTIONS

<b>Performance Expectation</b>	Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.
<b>Clarification Statement</b>	Examples of an electric force could include the force on hair from an electrically charged balloon or the electrical forces between a charged rod and pieces of paper; examples of a magnetic force could include the force between two permanent magnets, the force between an electromagnet and steel paper clips, or the force exerted by one magnet versus the force exerted by two magnets. Examples of cause and effect relationships could include how the distance between objects affects the strength of the force or how the orientation of magnets affects the direction of the magnetic force. Examples could include forces produced by objects that can be manipulated by students, or electrical interactions could include static electricity.

Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>1. Asking questions and defining problems:</b> Asking questions (science) and defining problems (engineering) in 3–5 builds on K–2 experiences and progresses to specifying qualitative relationships.</p> <ul style="list-style-type: none"> <li>Ask questions that can be investigated and predict reasonable outcomes based on patterns such as cause and effect relationships.</li> </ul> <p>2. Developing and using models</p> <p>3. Planning and carrying out investigations</p> <p>4. Analyzing and interpreting data</p> <p>5. Using mathematics and computational thinking</p> <p>6. Constructing explanations (for science) and designing solutions (for engineering)</p> <p>7. Engaging in argument from evidence</p> <p>8. Obtaining, evaluating, and communicating information</p>	<p><b>TYPES OF INTERACTIONS</b></p> <p>Electric and magnetic forces between a pair of objects do not require that the objects be in contact. The sizes of the forces in each situation depend on the properties of the objects and their distances apart and, for forces between two magnets, on their orientation relative to each other. (UE.PS2B.b)</p>	<p><b>CAUSE AND EFFECT</b></p> <p>Cause and effect relationships are routinely identified, tested, and used to explain change.</p>

## MOTION AND STABILITY: FORCES AND INTERACTIONS

<b>Performance Expectation</b>	Define a simple design problem that can be solved by applying scientific ideas about magnets.
<b>Clarification Statement</b>	Examples of problems could include constructing a latch to keep a door shut or creating a device to keep two moving objects from touching each other.

Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>1. Asking questions and defining problems:</b> Asking questions (science) and defining problems (engineering) in 3-5 builds on K-2 experiences and progresses to specifying qualitative relationships.</p> <ul style="list-style-type: none"> <li>Define a simple design problem that can be solved through the development of an object, tool, process, or system and includes several criteria for success and constraints on materials, time, or cost.</li> </ul> <p>2. Developing and using models</p> <p>3. Planning and carrying out investigations</p> <p>4. Analyzing and interpreting data</p> <p>5. Using mathematics and computational thinking</p> <p>6. Constructing explanations (for science) and designing solutions (for engineering)</p> <p>7. Engaging in argument from evidence</p> <p>8. Obtaining, evaluating, and communicating information</p>	<p><b>TYPES OF INTERACTIONS</b> Electric and magnetic forces between a pair of objects do not require that the objects be in contact. The sizes of the forces in each situation depend on the properties of the objects and their distances apart and, for forces between two magnets, their orientation relative to each other. (UE.PS2B.b)</p> <p><b>DEFINING AND DELIMITING ENGINEERING PROBLEMS</b> Possible solutions to a problem are limited by available materials and resources (constraints). The success of a designed solution is determined by considering the desired features of a solution (criteria). Different proposals for solutions can be compared on the basis of how well each one meets the specified criteria for success or how well each takes the constraints into account. (UE.ETS1A.a)</p>	<p><b>PATTERNS</b> Patterns can be used as evidence to support an explanation.</p>

## FROM MOLECULES TO ORGANISMS: STRUCTURES AND PROCESSES

<p><b>Performance Expectation</b></p>	<p>Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.</p>
<p><b>Clarification Statement</b></p>	<p>Changes that organisms go through during their lives form a pattern. For plant life cycles there is an emphasis on flowering plants.</p>

Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<ol style="list-style-type: none"> <li>1. Asking questions and defining problems</li> <li>2. <b>Developing and using models:</b> Modeling in 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions. <ul style="list-style-type: none"> <li>• Develop and/or use models to describe and/or predict phenomena.</li> </ul> </li> <li>3. Planning and carrying out investigations</li> <li>4. Analyzing and interpreting data</li> <li>5. Using mathematics and computational thinking</li> <li>6. Constructing explanations and designing solutions</li> <li>7. Engaging in argument from evidence</li> <li>8. Obtaining, evaluating, and communicating information</li> </ol>	<p><b>GROWTH AND DEVELOPMENT OF ORGANISMS</b> Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles. (UE.LS1B.a)</p>	<p><b>PATTERNS</b> Patterns of change can be used to make predictions.</p>

## ECOSYSTEMS: INTERACTIONS, ENERGY, AND DYNAMICS

<p><b>Performance Expectation</b></p>	<p>Construct and support an argument that some animals form groups that help members survive.</p>
<p><b>Clarification Statement</b></p>	<p>Arguments could include examples of group behavior such as division of labor in a bee colony, flocks of birds staying together to confuse or intimidate predators, or wolves hunting in packs to more efficiently catch and kill prey.</p>

Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<ol style="list-style-type: none"> <li>Asking questions and defining problems</li> <li>Developing and using models</li> <li>Planning and carrying out investigations</li> <li>Analyzing and interpreting data</li> <li>Using mathematics and computational thinking</li> <li>Constructing explanations and designing solutions</li> <li><b>Engaging in argument from evidence:</b> Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s). <ul style="list-style-type: none"> <li>Construct and/or support an argument with evidence, data, and/or a model.</li> </ul> </li> <li>Obtaining, evaluating, and communicating information</li> </ol>	<p><b>SOCIAL INTERACTIONS AND GROUP BEHAVIOR</b> Being part of a group helps animals obtain food, defend themselves, and cope with changes. Groups may serve different functions and vary dramatically in size. (UE.LS2D.a)</p>	<p><b>SYSTEMS AND SYSTEM MODELS</b> A system is a group of related parts that make up a whole and can carry out functions its individual parts cannot.</p>

## HEREDITY: INHERITANCE AND VARIATION OF TRAITS

<b>Performance Expectation</b>	Analyze and interpret data to provide evidence that plants and animals have traits inherited from their parents and that variation of these traits exists in a group of similar organisms.
<b>Clarification Statement</b>	Emphasis is on organisms other than humans and does not include genetic mechanisms of inheritance and prediction of traits. Data can include drawings, photographs, measurements, or written observations. Patterns are the similarities and differences in traits shared between offspring and their parents, or among siblings.

Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<ol style="list-style-type: none"> <li>Asking questions and defining problems</li> <li>Developing and using models</li> <li>Planning and carrying out investigations</li> <li><b>Analyzing and interpreting data:</b> Analyzing data in 3-5 builds on K-2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations. When possible and feasible, digital tools should be used. <ul style="list-style-type: none"> <li>Analyze and interpret data to make sense of phenomena, using logical reasoning, mathematics, and/or computation.</li> </ul> </li> <li>Using mathematics and computational thinking</li> <li>Constructing explanations and designing solutions</li> <li>Engaging in argument from evidence</li> <li>Obtaining, evaluating, and communicating information</li> </ol>	<p><b>INHERITANCE OF TRAITS</b> Many characteristics of organisms are inherited from their parents. (UE.LS3A.a)</p> <p><b>VARIATION OF TRAITS</b> Different organisms vary in how they look and function because they have different inherited information. (UE.LS3B.a)</p>	<p><b>PATTERNS</b> Similarities and differences in patterns can be used to sort, classify, communicate and analyze simple rates of change for natural phenomena and designed products.</p>

## HEREDITY: INHERITANCE AND VARIATION OF TRAITS

<p><b>Performance Expectation</b></p>	<p>Use evidence to support the explanation that traits can be influenced by the environment.</p>
<p><b>Clarification Statement</b></p>	<p>Examples of the environment affecting a trait could include normally tall plants grown with insufficient water are stunted or an animal that is given too much food and little exercise may become overweight.</p>

Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<ol style="list-style-type: none"> <li>Asking questions and defining problems</li> <li>Developing and using models</li> <li>Planning and carrying out investigations</li> <li>Analyzing and interpreting data</li> <li>Using mathematics and computational thinking</li> <li><b>Constructing explanations and designing solutions:</b> Constructing explanations (science) and designing solutions (engineering) in 3–5 builds on K–2 experiences and progresses to the use of evidence in constructing explanations that specify variables that describe and predict phenomena and in designing multiple solutions to design problems. <ul style="list-style-type: none"> <li>Use evidence (e.g., measurements, observations, patterns) to construct or support an explanation or design a solution to a problem.</li> </ul> </li> <li>Engaging in argument from evidence</li> <li>Obtaining, evaluating, and communicating information</li> </ol>	<p><b>INHERITANCE OF TRAITS</b> Other characteristics result from individuals' interactions with the environment, which can range from diet to learning. Many characteristics involve both inheritance and environment. (UE.LS3A.b)</p> <p><b>VARIATION OF TRAITS</b> The environment also affects the traits that an organism expresses. (UE.LS3B.b)</p>	<p><b>CAUSE AND EFFECT</b> Cause and effect relationships are routinely identified, tested, and used to explain change.</p>



## BIOLOGICAL EVOLUTION: UNITY AND DIVERSITY

<b>Performance Expectation</b>	Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.
<b>Clarification Statement</b>	Examples of data could include type, size, and distributions of fossil organisms. Examples of fossils and environments could include major fossil types such as marine fossils found on dry land, tropical plant fossils found in arctic areas, or fossils of extinct organisms and relative ages.

Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<ol style="list-style-type: none"> <li>Asking questions and defining problems</li> <li>Developing and using models</li> <li>Planning and carrying out investigations.</li> <li><b>Analyzing and interpreting data:</b> Analyzing data in 3-5 builds on K-2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations. When possible and feasible, digital tools should be used. <ul style="list-style-type: none"> <li>Analyze and interpret data to make sense of phenomena, using logical reasoning, mathematics, and/or computation.</li> </ul> </li> <li>Using mathematics and computational thinking</li> <li>Constructing explanations and designing solutions</li> <li>Engaging in argument from evidence</li> <li>Obtaining, evaluating, and communicating information</li> </ol>	<p><b>EVIDENCE OF COMMON ANCESTRY AND DIVERSITY</b></p> <p>Some kinds of plants and animals that once lived on Earth are no longer found anywhere. (UE.LS4A.a)</p> <p>Fossils provide evidence about the types of organisms that lived long ago and also about the nature of their environment. (UE.LS4A.b)</p>	<p><b>SCALE, PROPORTION, AND QUANTITY</b></p> <p>Natural objects and/or observable phenomena exist from the very small to the immensely large or from very short to very long time periods.</p>

## BIOLOGICAL EVOLUTION: UNITY AND DIVERSITY

<p><b>Performance Expectation</b></p>	<p>Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.</p>
<p><b>Clarification Statement</b></p>	<p>Examples of cause and effect relationships could be plants that have larger thorns than other plants may be less likely to be eaten or animals that have better camouflage coloration than other animals may be more likely to survive and therefore more likely to leave offspring.</p>

Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<ol style="list-style-type: none"> <li>1. Asking questions and defining problems</li> <li>2. Developing and using models</li> <li>3. Planning and carrying out investigations.</li> <li>4. Analyzing and interpreting data</li> <li>5. Using mathematics and computational thinking</li> <li><b>6. Constructing explanations and designing solutions:</b> Constructing explanations (science) and designing solutions (engineering) in 3–5 builds on K–2 experiences and progresses to the use of evidence in constructing explanations that specify variables that describe and predict phenomena and in designing multiple solutions to design problems. <ul style="list-style-type: none"> <li>• Use evidence (e.g., measurements, observations, patterns) to construct or support an explanation or design a solution to a problem.</li> </ul> </li> <li>7. Engaging in argument from evidence</li> <li>8. Obtaining, evaluating, and communicating information</li> </ol>	<p><b>NATURAL SELECTION</b> Sometimes the differences in characteristics between individuals of the same species provide advantages in surviving, finding mates, and reproducing. (UE.LS4B.a)</p>	<p><b>CAUSE AND EFFECT</b> Cause and effect relationships are routinely identified, tested, and used to explain change.</p>

## BIOLOGICAL EVOLUTION: UNITY AND DIVERSITY

<p><b>Performance Expectation</b></p>	<p>Construct and support an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.</p>
<p><b>Clarification Statement</b></p>	<p>Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitats make up a system in which the parts depend on each other.</p>

Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<ol style="list-style-type: none"> <li>1. Asking questions and defining problems</li> <li>2. Developing and using models</li> <li>3. Planning and carrying out investigations</li> <li>4. Analyzing and interpreting data</li> <li>5. Using mathematics and computational thinking</li> <li>6. Constructing explanations and designing solutions</li> <li>7. <b>Engaging in argument from evidence:</b> Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s). <ul style="list-style-type: none"> <li>• Construct and/or support an argument with evidence, data, and/or a model.</li> </ul> </li> <li>8. Obtaining, evaluating, and communicating information</li> </ol>	<p><b>ADAPTATION</b> For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all. (UE.LS4C.a)</p>	<p><b>CAUSE AND EFFECT</b> Cause and effect relationships are routinely identified, tested, and used to explain change.</p>

## BIOLOGICAL EVOLUTION: UNITY AND DIVERSITY

<b>Performance Expectation</b>	Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.
<b>Clarification Statement</b>	Examples of environmental change(s) could include changes in land characteristics, water distribution, temperature, food, and other biological communities. Louisiana specific examples could include impacts related to levees, dams, crop rotations, irrigation systems, hunting limits, diversion canals, or sea level rise.

<b>Science &amp; Engineering Practices</b>	<b>Disciplinary Core Ideas</b>	<b>Crosscutting Concepts</b>
<ol style="list-style-type: none"> <li>Asking questions and defining problems</li> <li>Developing and using models</li> <li>Planning and carrying out investigations.</li> <li>Analyzing and interpreting data</li> <li>Using mathematics and computational thinking</li> <li>Constructing explanations and designing solutions</li> <li><b>Engaging in argument from evidence:</b> Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s). <ul style="list-style-type: none"> <li>Make a claim about the merit of a solution to a problem by citing relevant evidence about how it meets the criteria and constraints of a problem.</li> </ul> </li> <li>Obtaining, evaluating, and communicating information</li> </ol>	<p><b>ECOSYSTEM DYNAMICS, FUNCTIONING, AND RESILIENCE</b> When the environment changes in ways that affect a place’s physical characteristics, temperature, or availability of resources, some organisms survive and reproduce, others move to new locations, yet others move into the transformed environment, and some die. (UE.LS2C.a)</p> <p><b>BIODIVERSITY AND HUMANS</b> Populations live in a variety of habitats, and change in those habitats affects the organisms living there. (UE.LS4D.a)</p> <p><b>DEVELOPING POSSIBLE SOLUTIONS</b> At whatever stage, communicating with peers about proposed solutions is an important part of the design process, and shared ideas can lead to improved designs. (ETS.UE.1B.b)</p>	<p><b>SYSTEMS AND SYSTEM MODELS</b> A system can be described in terms of its components and their interactions.</p>

## EARTH'S SYSTEMS

<b>Performance Expectation</b>	Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.
<b>Clarification Statement</b>	Examples of data could include average temperature, precipitation, and wind direction. Examples of data representations could include pictographs and bar graphs.

Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<ol style="list-style-type: none"> <li>1. Asking questions and defining problems</li> <li>2. Developing and using models</li> <li>3. Planning and carrying out investigations</li> <li>4. <b>Analyzing and interpreting data:</b> Analyzing data in 3-5 builds on K-2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations. When possible and feasible, digital tools should be used.               <ul style="list-style-type: none"> <li>• Represent data in tables and/or various graphical displays (bar graphs, pictographs and/or pie charts) to reveal patterns that indicate relationships.</li> </ul> </li> <li>5. Using mathematics and computational thinking</li> <li>6. Constructing explanations and designing solutions</li> <li>7. Engaging in argument from evidence</li> <li>8. Obtaining, evaluating, and communicating information</li> </ol>	<p><b>WEATHER AND CLIMATE</b> Scientists record patterns of the weather across different times and areas so that they can make predictions about what kind of weather might happen next. (UE.ESS2D.a)</p>	<p><b>PATTERNS</b> Patterns of change can be used to make predictions.</p>

## EARTH'S SYSTEMS

<b>Performance Expectation</b>	Obtain and combine information to describe climates in different regions around the world.
<b>Clarification Statement</b>	Information could include rainfall and temperature data.

<b>Science &amp; Engineering Practices</b>	<b>Disciplinary Core Ideas</b>	<b>Crosscutting Concepts</b>
<ol style="list-style-type: none"> <li>1. Asking questions and defining problems</li> <li>2. Developing and using models</li> <li>3. Planning and carrying out investigations</li> <li>4. Analyzing and interpreting data</li> <li>5. Using mathematics and computational thinking</li> <li>6. Constructing explanations and designing solutions</li> <li>7. Engaging in argument from evidence</li> <li>8. <b>Obtaining, evaluating, and communicating information:</b> Obtaining, evaluating, and communicating information in 3-5 builds on K-2 experiences and progresses to evaluating the merit and accuracy of ideas and methods <ul style="list-style-type: none"> <li>• Obtain and combine information from books and/or other reliable media to explain phenomena or solutions to a design problem.</li> </ul> </li> </ol>	<p><b>WEATHER AND CLIMATE</b> Climate describes a range of an area's typical weather conditions and the extent to which those conditions vary over years. (UE.ESS2D.b)</p>	<p><b>PATTERNS</b> Patterns of change can be used to make predictions.</p>



## EARTH AND HUMAN ACTIVITY

<b>Performance Expectation</b>	Make a claim about the merit of a design solution that reduces the impact of a weather-related hazard.
<b>Clarification Statement</b>	Examples of design solutions to weather-related hazards could include barriers to prevent flooding (including levees), wind-resistant roofs, tornado shelters and lightning rods.

Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<ol style="list-style-type: none"> <li>1. Asking questions and defining problems</li> <li>2. Developing and using models</li> <li>3. Planning and carrying out investigations</li> <li>4. Analyzing and interpreting data</li> <li>5. Using mathematics and computational thinking</li> <li>6. Constructing explanations and designing solutions</li> <li>7. <b>Engaging in argument from evidence:</b> Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s).               <ul style="list-style-type: none"> <li>• Make a claim about the merit of a solution to a problem by citing relevant evidence about how it meets the criteria and constraints of the problem</li> </ul> </li> <li>8. Obtaining, evaluating, and communicating information</li> </ol>	<p><b>NATURAL HAZARDS</b> A variety of natural hazards result from natural processes. Humans cannot eliminate natural hazards but can take steps to reduce their impacts. (UE.ESS3B.a)</p> <p><b>DEVELOPING POSSIBLE SOLUTIONS</b> Research on a problem should be carried out before beginning to design a solution. Testing a solution involves investigating how well it performs under a range of likely conditions. (ETS.UE.1B.a)</p>	<p><b>CAUSE AND EFFECT</b> Cause and effect relationships are routinely identified, tested, and used to explain change.</p>