

Studies Weekly Texas Science Grade 1

Studies Weekly Texas Science Grade 1 Executive Summary

Section 1. Science-Related Texas Essential Knowledge and Skills (TEKS) and English Language Proficiency Standards (ELPS) Alignment

Grade	TEKS Student %	TEKS Teacher %	ELPS Student %	ELPS Teacher %
Grade K	100%	100%	100%	100%
Grade 1	100%	100%	100%	100%
Grade 2	100%	100%	100%	100%

Section 2. Instructional Anchor

- The materials are designed to strategically and systematically integrate scientific and engineering practices, recurring themes and concepts, and grade-level content as outlined in the TEKS.
- The materials anchor the learning in phenomena and problems as the key lever for driving learning and student mastery of disciplinary knowledge and skills.

Section 3. Knowledge Coherence

- The materials are designed to build knowledge systematically, coherently, and accurately.
- The materials provide educative components to support teachers' content and coherence knowledge.

Section 4. Productive Struggle

- The materials provide opportunities for students to engage in productive struggle through sensemaking that involves reading, writing, thinking, and acting as scientists and engineers.

Section 5. Evidence-Based Reasoning and Communicating

- The materials promote students' use of evidence to develop, communicate, and evaluate explanations and solutions.
- The materials provide teacher guidance to support student reasoning and communication skills.

Section 6. Progress Monitoring

- The materials include a variety of TEKS-aligned and developmentally appropriate assessment tools.
- The materials include guidance that explains how to analyze and respond to data from assessment tools.

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- The assessments are clear and easy to understand.

Section 7. Supports for All Learners

- The materials provide guidance on fostering connections between home and school.
- The materials include listening, reading, writing, and speaking supports to help Emergent Bilinguals meet grade-level science content expectations.
- The materials include a variety of research-based instructional methods that appeal to a variety of learning interests and needs.
- The materials include guidance, scaffolds, supports, and extensions that maximize student learning potential.

Section 8. Implementation Supports

- The materials include year-long plans with practice and review opportunities that support instruction.
- The materials include classroom implementation support for teachers and administrators.
- The materials provide implementation guidance to meet variability in program design and scheduling.

Section 9. Design Features

- The visual design of materials is clear and easy to understand.
- The materials are intentionally designed to engage and support student learning with the integration of digital technology.
- The digital technology or online components are developmentally and grade-level appropriate and provide support for learning.

Section 10. Additional Information

- The publisher submitted the technology, price, professional learning, and additional language supports.

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Indicator 2.1

Materials are designed to strategically and systematically integrate scientific and engineering practices, recurring themes and concepts, and grade-level content as outlined in the TEKS.

1	Materials provide multiple opportunities for students to develop, practice, and demonstrate mastery of grade-level appropriate scientific and engineering practices as outlined in the TEKS.	M
2	Materials provide multiple opportunities to make connections between and within overarching concepts using recurring themes.	M
3	Materials strategically and systematically develop students' content knowledge and skills as appropriate for the concept and grade level as outlined in the TEKS.	M
4	Materials include sufficient opportunities, as outlined in the TEKS, for students to ask questions and plan and conduct classroom, laboratory, and field investigations and to engage in problem-solving to make connections across disciplines and develop an understanding of science concepts.	M

Meets | Score 4/4

The materials meet the criteria for this indicator. Materials are designed to strategically and systematically integrate scientific and engineering practices (SEP), recurring themes and concepts (RTC), and grade-level content as outlined in the TEKS.

Materials provide multiple opportunities for students to develop, practice, and demonstrate mastery of grade-level appropriate scientific and engineering practices as outlined in the TEKS. Materials provide multiple opportunities to make connections between and within overarching concepts using recurring themes. Materials strategically and systematically develop students' content knowledge and skills as appropriate for the concept and grade level as outlined in the TEKS. Materials include sufficient opportunities, as outlined in the TEKS, for students to ask questions and plan and conduct classroom, laboratory, and field investigations and to engage in problem-solving to make connections across disciplines and develop an understanding of science concepts.

Evidence includes but is not limited to:

Materials provide multiple opportunities for students to develop, practice, and demonstrate mastery of grade level appropriate scientific and engineering practices as outlined in the TEKS.

- In Unit 7, the materials prompt the students to develop explanations supported by data. The students also learn to communicate, develop, and use models.
- The objective of Unit 6 is for students to be able to investigate and describe applications of heat in everyday life and how some changes caused by heat may be reversed. Activity 8 allows students to explore and investigate the effects heat has on buttered popcorn.
- The *Teacher's Edition* publication, "Correlation to TEKS and ELPS," aligns with standard reference 1.1.F: "record and organize data using pictures, numbers, words, symbols, and simple graphs." The reference corresponds to Unit 13 because the student resource "Water Use at Home" includes a graph.
- In Unit 2, Activity 2, "Color, Shape, and Size," students sort and classify objects from a mystery bag by color, shape, and size. In Activity 3, "Texture, Lightness, and Heaviness," the teacher asks,

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“If you held a stapler in one hand and a tissue box in the other, which one would take more arm strength to hold? Why?” The students take turns telling a science partner one way that they are making sense of the phenomenon so far. In collaborative learning groups, students investigate using their five senses, and classify objects based on their attributes. Collaborative learning stations include the texture station, along with the heavier vs. lighter station. In Activity 4, “Phenomenon Explanation,” students sort sports balls to determine if they function like a basketball. Students write or draw on a T-chart to sort the sports balls.

Materials provide multiple opportunities to make connections between and within overarching concepts using recurring themes.

- The materials use recurring themes, such as models and patterns, to make connections within the overarching concepts. For example, in Unit 6, materials instruct students to identify and describe patterns as a recurring theme and reference other activities in which these concepts have been studied. These themes include: “day and night,” “all about Mae,” “patterns of day and night,” and “day and night art.”
- The vertical/horizontal alignment guide includes specific information about when recurring themes are introduced and spiraled back into the program. Grade 1 materials use cause and effect as a recurring theme. This theme is used across scientific disciplines, such as matter/energy, force/motion, and Earth/space. One example of cause and effect is demonstrated in Unit 5. Students use scientific practices to plan and conduct a descriptive investigation and use engineering practices to design a solution to change the speed or direction of a golf ball to improve Miguel and Claire's golf score.
- The materials provide multiple opportunities for students to develop, practice, and demonstrate mastery of grade-level appropriate scientific and engineering practices as outlined in the TEKS. For example, in Unit 5, the students continue to practice cause and effect with a game. Players take turns rolling the die and moving the number of spaces indicated. The player has to tell their partner whether the picture is a push or pull and the effect of the push or pull on the object.
- The materials identify overarching concepts using recurring themes and show how they connect within the materials. For example, in Unit 1, Activity 1, the success criteria are “I can recognize the purpose of recurring themes and concepts and identify what a pattern is.”
- The grade 1 materials provide multiple opportunities to use recurring themes in making connections between and within overarching concepts. For example, in each unit, the recurring themes and concepts are clearly labeled and include the activities where they are presented. In Unit 4, Activity 1, the materials provide a section titled “Unit Transition.” The section informs the teacher that “In the last unit, students learned how different materials can be heated and cooled. This unit will guide students in learning that materials can also be used to create a system of parts that make up a whole object.” In a section titled “Discovery Path,” the teacher asks, “What parts have you seen on a car?”

Materials strategically and systematically develop students’ content knowledge and skills as appropriate for the concept and grade level as outlined in the TEKS.

- The materials systematically develop students’ content knowledge and skills appropriate for the concept and grade level as outlined in the TEKS. For example, in Unit 7, students learn how a

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farm boy notices differences in the farm at different times of the year to reflect on their own experience. The objective is to identify, describe, and predict patterns of seasons of the year.

- The first lesson within a unit on physical properties is classifying objects by attributes. Qualities such as differences in size and weight may be familiar to many students. Later in the year, lessons that investigate and describe how water can move rock and soil particles from one place to another within the earth and space may include some grade 1 content knowledge that is less familiar to students.
- The materials systematically develop students' content knowledge and skills appropriate for the concept and grade level as outlined in the TEKS. For example, the teachers' edition publication "How to Use Studies Weekly k-1" explains that the curriculum is structured with an introduction to science and engineering practices in Unit 1, then "Each subsequent unit is anchored by phenomenon-driven inquiry or a problem to solve."
- Each unit integrates both SEP and recurring themes throughout the units and clearly identifies and color codes them throughout the unit's grade-appropriate activities. This clarification supports and guides teachers through the development of content concepts and skills. For example, in Unit 12, Activity 4, the left-hand side of the lesson plan strategically organizes the materials and resources. This portion also establishes vocabulary with child-friendly definitions; encourages color-coded SEP such as: collecting evidence, collecting and organizing data, developing explanations and purpose solutions, and actively listening and discussing; establishes RTC such as cause and effect, energy and matter, structure, and function. On the right-hand side of the page, the materials provide the Success Criteria that state, "I can identify and describe how humans use soil."

Materials include sufficient opportunities, as outlined in the TEKS, for students to ask questions and plan and conduct classroom, laboratory, and field investigations and to engage in problem solving to make connections across disciplines and develop an understanding of science concepts.

- Students ask questions, plan and conduct investigations to answer and explain phenomena using appropriate tools and models. This is accomplished by connecting to previous learning and making their own conclusions based on evidence. In Unit 7, questioning is evident before, during, and after the investigation. The teacher prepares students to introduce the phenomena by asking them what they know about it and what they wonder about. The teacher uses a question to guide the investigation: "What are ways we can describe and predict the seasons?" A section is intentionally included to use a think-out-loud model and discussion. Then, the teacher collaborates with students to create a student-driven question board.
- The materials strategically develop students' content knowledge and skills appropriate for the concept and grade level as outlined in the TEKS. Grade-level content knowledge and skills are taught using SEP and recurring themes so the students can build and connect knowledge and apply it to new contexts. In Unit 9, students observe and describe the weather changes from day to day and over seasons. The materials provide guidance for teachers to elicit students' previous learning experiences, in which they identify day and night and objects in the sky, such as the sun and clouds. Throughout the unit, they write, draw, and describe the type of weather and the season.
- In Unit 12, Activity 3, "Precipitation," the teacher notes direct the teacher to use the student edition so students can record precipitation for a week or use a weather tracking printable to record precipitation for longer than one week. In a section titled "Introduce Activity," the teacher guides the students in the planning. The teacher asks, "Where can we find predicted temperatures? Do you ever look up the temperatures before you come to school?" The teacher

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discusses how to measure and record the temperature by modeling how to use a thermometer. In a section for collaborative learning, the teacher displays the weather report and has students write down the predicted temperatures. The materials direct the teacher to “have students measure the temperature with a thermometer and record the data” daily for a week.

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Indicator 2.2

Materials anchor the learning in phenomena and problems as the key lever for driving learning and student mastery of disciplinary knowledge and skills.

1	Materials embed phenomena and problems across lessons to support students in constructing, building, and developing knowledge through authentic application and performance of scientific and engineering practices, recurring themes and concepts, and grade-level content as outlined in the TEKS.	M
2	Materials intentionally leverage students' prior knowledge and experiences related to phenomena and engineering problems.	M
3	Materials clearly outline the scientific concepts and goals behind each phenomenon and engineering problem for the teacher.	M

Meets | Score 4/4

The materials meet the criteria for this indicator. Materials anchor the learning in phenomena and problems as the key lever for driving learning and student mastery of disciplinary knowledge and skills.

Materials embed phenomena and problems across lessons to support students in constructing, building, and developing knowledge through authentic application and performance of scientific and engineering practices, recurring themes and concepts, and grade-level content as outlined in the TEKS. Materials intentionally leverage students' prior knowledge and experiences related to phenomena and engineering problems. Materials clearly outline the scientific concepts and goals behind each phenomenon and engineering problem for the teacher.

Evidence includes but is not limited to:

Materials embed phenomena and problems across lessons to support students in constructing, building, and developing knowledge through authentic application and performance of scientific and engineering practices, recurring themes and concepts, and grade level content as outlined in the TEKS.

- In Unit 13, "Water Watchers," the teacher presents the phenomenon's introductory story about a character named Jackson brushing his teeth, "His mom comes to check on him and sees that he left the water running as he brushes. She asks him to turn the water off while he brushes his teeth. Jackson is confused. Why does he have to turn the water off when the water never runs out?" Students watch a phenomenon video. Students draw or write their observations and questions in the spaces provided in their student editions.
- The publication *How To Use Studies Weekly K-1* addresses TEKS 1.1.B, "use scientific practices to plan and conduct simple descriptive investigations and use engineering practices to design solutions to problems." The publication also states that "The activities are specially designed to help students make sense of the anchoring phenomenon through the integration of SEP and RTC." Unit 1 includes the following SEP, "plan and conduct investigations; develop and use models; collect and analyze data; and, develop explanations."
- Unit 8 embeds phenomena about soil using the following scenario. "Gina is hiking in Galveston Island State Park. As she walks along the trail, she notices the ground changes as she goes from shaded woodland to prairie land. She wonders why the soil is different at different parts of the

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hike." Students can investigate and document the properties of particle size, shape, texture, and color and the components of different types of soil such as topsoil, clay, and sand by doing an authentic application of scientific and engineering practices.

Materials intentionally leverage students' prior knowledge and experiences related to phenomena and engineering problems.

- The section in Unit 13, "Unit Transition" instructs the teacher to "Explain to students that in the previous unit, they learned about how other living things use water." In this unit, the students will review how they use water, and learn why it is essential to use water carefully.
- The publication *How to Use Studies Weekly* explains how to use embedded technology. "*The Background Information Podcast*" is described as "a podcast that discusses information to aid teachers in instructional strategies, content, and misconceptions students might have in the unit." Unit 2 includes the *Let's Bounce!: Topic Background Information Podcast*.
- The materials provide an overview summarizing the unit objectives and the student learning goals behind each phenomenon or engineering problem. For example, a lesson on motion provides the background scenario and the recurring themes. In Unit 5, "Engineering Design," Activities 3, 4, and 5, call for students to investigate and make predictions using the recurring theme of cause and effect.
- The "Discovery Path" section of Unit 8, prompts teachers to "Have students look over the data they have recorded in their student editions about the different types of soil." Then the "Discovery Path" guides the teacher to ask: "What have you learned about soil so far? How does this help you make sense of our phenomenon?"

Materials clearly outline the scientific concepts and goals behind each phenomenon and engineering problem for the teacher.

- The Teacher's Edition Unit 4, "Engineering Design: If Life Gives You Lemons," clearly identifies the science discipline, the science standard 1.6C, the engineering design scenario, unit objectives, SEP, and RTC. The Activity Summary outlines all activities for the week's lesson cycle. The "Standards Coverage" chart clearly outlines all standards covered in this unit in bold type font. SEP and RTC are color-coded in the chart and within the lesson plan. The "Teacher Support Resources" and "Student Support Resources" are clearly labeled with the title, icon for media type, and a thorough description. A table identifying students' success criteria and formative assessment evidence is provided and included within the lesson plan.
- Unit 10 identifies the goal for Activity 2's success criteria as "I can identify and illustrate different bodies of water."
- The materials provide a "Vertical and Horizontal Alignment" document indicating that "*Texas Science from Studies Weekly*" has intentionally leveraged and spiraled this content, guiding the development of grade-level content, recurring themes and concepts, and scientific and engineering practices.

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Indicator 3.1

Materials are designed to build knowledge systematically, coherently, and accurately.

1	Materials are vertically aligned and designed for students to build and connect their knowledge and skills within and across units and grade levels.	M
2	Materials are intentionally sequenced to scaffold learning in a way that allows for increasingly deeper conceptual understanding.	M
3	Materials clearly and accurately present grade-level-specific core concepts, recurring themes and concepts, and science and engineering practices.	M
4	Mastery requirements of the materials are within the boundaries of the main concepts of the grade level.	M

Meets | Score 6/6

The materials meet the criteria for this indicator. Materials are designed to build knowledge systematically, coherently, and accurately.

Materials are vertically aligned and designed for students to build and connect their knowledge and skills within and across units and grade levels. Materials are intentionally sequenced to scaffold learning in a way that allows for increasingly deeper conceptual understanding. Materials clearly and accurately present grade-level-specific core concepts, recurring themes and concepts, and science and engineering practices. Mastery requirements of the materials are within the boundaries of the main concepts of the grade level.

Evidence includes but is not limited to:

Materials are vertically aligned and designed for students to build and connect their knowledge and skills within and across units and grade levels.

- Each strand is described and explains how each TEKS progresses from kindergarten to grade 5. The materials include knowledge, expectations, spiraling concepts, SEP, RTC, and new vocabulary. For example, the strand: “Matter and Its Properties and Matter and Energy,” includes the TEKS and location of the units in the materials for each grade level. The materials include a TEKS-aligned scope and sequence that shows how to teach science knowledge and skills throughout the year and a side-by-side document showing the TEKS from unit to unit.
- The “Vertical Alignment” document addresses required skills according to the TEKS. For example, in the “Force, Motion, and Energy” unit for grade 1, students explain how pushes and pulls can start, stop, or change the speed or direction of an object's motion. In grade 5, students investigate and explain how equal and unequal forces acting on an object cause motion patterns to transfer energy.
- The publication “Texas Science Vertical and Horizontal Alignments” uses bolded words to show new concepts based on previous grade levels. For example, the strand “Matter and its Properties” connects new learning goals to previous and future learning. For instance, kindergarten and grade 1 students know that “objects have physical properties that determine how they are described and classified.” But the statement is bolded only for kindergarten. The

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grade 2 student knows “matter has physical properties that determine how it is described, classified, and used” with the words *matter* and *used* bolded.

Materials are intentionally sequenced to scaffold learning in a way that allows for increasingly deeper conceptual understanding.

- The unit overview under “Teacher Support Resources” includes an ELD lesson: “Differentiated language scaffolds can be projected to students and taught before or after the core science activities.” Unit 6 consists of the “A Day at the Fair” ELD lesson and refers to a PDF file. The unit also gives optional differentiation suggestions: “Developing: Allow developing students to draw their questions rather than write them. Advanced: Provide advanced students extra writing paper if they fill the question box in their student edition.”
- The materials include a progression of concrete and symbolic before abstract reasoning when presenting concepts that allow for an increasingly deeper conceptual understanding. For example, In Unit 19, Activity 3 for grade 1, students identify and compare how flamingos and young tapirs resemble their parents. Students look at various images and compare the features and patterns of the young animals and their parents. Students turn to a partner and explain how the young animals' parts change or stay the same as they age. Students discuss how their answers possibly changed.
- The materials introduce units with a real-world phenomenon or engineering problem featuring “Studies Weekly Characters” followed by hands-on “Discovery Path,” learning activities scaffolded through visual aids (i.e., “Poster Pal,” videos, and the interactive student edition), and student-driven inquiry. In Unit 5, the students read a story about Claire and Miguel, who love playing mini-golf at different courses in San Antonio. The teacher shows the “Golf Course Engineers: Engineering Scenario Video.” Students record their observations by drawing or writing in the spaces provided for observations and questions in their student edition. Throughout the two-week unit, students engage in activities to investigate the causes and effects of motion.

Materials clearly and accurately present grade level specific core concepts, recurring themes and concepts, and science and engineering practices.

- The materials use the 5E instructional model for sequencing science instruction. The “Engage” segment captures the students' interest by introducing the phenomenon with a comic strip.
- The “Texas Science Vertical and Horizontal Alignments” publication lists the TEKS objective 1.7A, “explain how pushes and pulls can start, stop, or change the speed or direction of an object's motion” for Unit 5. The student’s success criteria for Unit 5, Activity 3 is “I can investigate and predict causes and effects of motion. I can identify a push and a pull.”
- In Unit 12, the lesson plan lists, “Science Standard 1.11 A: Identify and describe how plants, animals, and humans use rocks, soil, and water.” The lesson plan clearly labels the phenomenon “Phenomenon: Alana and Jackson notice ivy growing up the side of the brick school building. They wonder why it grows like that instead of growing in a garden.” “The Standards Coverage Chart” lists SEP and RTC in detail with the activities in the lesson plan.

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Mastery requirements of the materials are within the boundaries of the main concepts of the grade level.

- The materials provide student learning objectives, targets, and “I can” statements for each unit. For example, Unit 6 begins with the objective. “Students will be able to investigate and describe applications of heat in everyday life and how some changes caused by heat may be reversed while other changes cannot be reversed.” This unit’s learning targets/success criteria are: “I can ask questions about the changes I observe in the phenomenon. I can plan and investigate how funnel cakes and pretzels change as they cook. I can collect evidence about how heat causes change. I can explain how engineered objects that use heat help people and create change. I can explain how engineered objects that use heat help people and create change. I can plan and conduct an investigation to see how ice cream and ice pops change when heated and cooled.”
- The “Texas Science Vertical and Horizontal Alignments” publication identifies what the student should know about each unit’s main concept(s). For example, for the strand “Matter and its Properties and Matter and Energy,” in Unit 2, the student is expected to “classify objects by observable physical properties, including shape, color, and texture, and attributes such as larger and smaller and heavier and lighter.”
- The materials provide the teacher with “Success Criteria” and “Formative Assessment Evidence” for each activity in the unit. Unit 13, Activity 2 guides the teacher to ascertain student mastery of the “Success Criteria - I can identify and describe why water is important.” The teacher uses the student edition responses as a formative assessment check of student content mastery. Activity 2 of the student edition displays pictures depicting people drinking and using water with the explanation, “It helps us survive. It keeps plants alive. It washes things.” and prompts students to complete the sentence, “Water is important because:....”

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Indicator 3.2

Materials provide educative components to support teachers' content and knowledge coherence.

1	Materials support teachers in understanding the horizontal and vertical alignment guiding the development of grade-level content, recurring themes and concepts, and scientific and engineering practices.	M
2	Materials contain explanations and examples of science concepts, including grade-level misconceptions to support the teacher's subject knowledge and recognition of barriers to student conceptual development as outlined in the TEKS.	M
3	Materials explain the intent and purpose of the instructional design of the program.	M

Meets | Score 6/6

The materials meet the criteria for this indicator. Materials provide educative components to support teachers' content and knowledge coherence.

Materials support teachers in understanding the horizontal and vertical alignment guiding the development of grade-level content, recurring themes and concepts (RTC), and scientific and engineering practices (SEP). Materials contain explanations and examples of science concepts, including grade-level misconceptions, to support the teacher's subject knowledge and recognition of barriers to student conceptual development as outlined in the TEKS. Materials explain the intent and purpose of the instructional design of the program.

Evidence includes but is not limited to:

Materials support teachers in understanding the horizontal and vertical alignment guiding the development of grade level content, recurring themes and concepts, and scientific and engineering practices.

- Each strand is described and explains how each set of TEKS progresses from kindergarten to grade 5. The materials include knowledge, expectations and spiraling concepts, new concepts (SEP) (RTC,) and new vocabulary. For example, the strands: "Matter and Its Properties" and "Matter and Energy," include the TEKS and the units' locations in the materials for each grade level. The materials include a TEKS-aligned scope and sequence that illustrate the presentation of science knowledge and skills throughout the year. The grade level scope and sequence include a side-by-side document showing the TEKS from unit to unit.
- The online resource document, "Texas Science Vertical and Horizontal Alignment," shows the progression of the TEKS by unit and strand grouped by grade level. In the document, teachers can "see the Texas Essential Knowledge and Skills (2021) progression for a particular grade level, including RTC and SEP. Additionally, each alignment visually shows the unit(s) and vocabulary within the associated TEKS." For example, for grades kindergarten-2, the strand "Force, Motion, and Energy" expects students to know that energy is everywhere in everyday life. By grade 3, students know energy is everywhere and occurs in cycles, patterns, and systems. For example, in Unit 6 Activity 3, students explore how heat is used in everyday life by participating in a "Heat Hunt" around the school. The teacher and students walk around the school looking for things

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that supply heat. Students share their findings with peers. Afterward, the class discusses questions such as, “What did our class find on the heat hunt?” “How do these things help people?” “What example did we see of things changing due to heat?”

Materials contain explanations and examples of science concepts, including grade level misconceptions to support the teacher's subject knowledge and recognition of barriers to student conceptual development as outlined in the TEKS.

- The materials identify common grade-level misconceptions students may have about science concepts. For example, in grade 1, in the “Standards Coverage” section of Unit 17, “Earth and Space,” materials identify misconceptions students may have, such as animals being born with all the parts they need to live, move, and meet their needs.
- The teachers' edition includes the publication “How to Use Studies Weekly,” which explains how to use the embedded technology, “The Background Information Podcast,” which “discusses information to aid teachers in instructional strategies, content, and misconceptions students might have in the unit.” For example, In Unit 2, a common misconception is “You can tell how heavy something is by looking at it.” Activity 1 includes the teacher's note: “The students' initial ideas and understanding may include some misconceptions. However, at this point, do not correct any false assumptions. Rather, let students discuss and encourage them to revise their initial ideas throughout the unit as new evidence builds on their prior knowledge.”
- The grade 1 materials identify common grade-level misconceptions students may have about science concepts with an icon of an exclamation point inside a yellow triangle in the lesson activities. The highlighted text guides the teacher in addressing misconceptions within the context of the current activity and the icon's location.

Materials explain the intent and purpose of the instructional design of the program.

- The materials include a guiding document for the program called “How to Use Studies Weekly,” which explains the core components of the materials and the purpose of the program's instructional design. “Instructional Design Texas Science is built upon the principles of the Framework for K-12 Science Education, published by the National Research Council. This curriculum supports Three-Dimensional Learning. 3D learning means that the SEP, RTC, and TEKS content are integrated into lesson plans when teaching science. This three-dimensional approach to science continues to and through the assessments.” Materials highlight critical features of the instructional design. For example, the teacher training resource “Webinar - Introducing the New Texas Science K-1 Curriculum” states the publisher's “why” as “Texas has embraced the principles of the framework for K-12 science education” and identifies the 5E framework as their structural framework to organize materials, and explains the material's guiding principles.
- The grade 1 materials explain the intent and purpose of the program's “Standards Coverage Chart” instructional design included in every unit. For example, the “Texas Science How to Use Studies Weekly” document contains a section titled “Texas Science: Additional Highlights,” which explains, “The Standards Coverage Chart shows where the SEP and RTC are covered in the unit. Since the TEKS content permeates the entire unit, you can be assured that it's thoroughly integrated.”

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Indicator 4.1

Materials provide opportunities for students to engage in productive struggle through sensemaking that involves reading, writing, thinking, and acting as scientists and engineers.

1	Materials consistently support students' meaningful sensemaking through reading, writing, thinking, and acting as scientists and engineers.	M
2	Materials provide multiple opportunities for students to engage with grade-level appropriate scientific texts to gather evidence and develop an understanding of concepts.	M
3	Materials provide multiple opportunities for students to engage in various written and graphic modes of communication to support students in developing and displaying an understanding of scientific concepts.	M
4	Materials support students to act as scientists and engineers who can learn from engaging in phenomena and engineering design processes, make sense of concepts, and productively struggle.	M

Meets | Score 4/4

The materials meet the criteria for this indicator. Materials provide opportunities for students to engage in productive struggle through sensemaking that involves reading, writing, thinking, and acting as scientists and engineers.

Materials consistently support students' meaningful sensemaking through reading, writing, thinking, and acting as scientists and engineers. Materials provide multiple opportunities for students to engage with grade-level appropriate scientific texts to gather evidence and develop an understanding of concepts. Materials provide multiple opportunities for students to engage in various written and graphic modes of communication to support students in developing and displaying an understanding of scientific concepts. Materials support students to act as scientists and engineers who can learn from engaging in phenomena and engineering design processes, make sense of concepts, and productively struggle.

Evidence includes but is not limited to:

Materials consistently support students' meaningful sensemaking through reading, writing, thinking, and acting as scientists and engineers.

- All unit overviews consistently include an engineering design scenario, standards coverage, scientific and engineering practices (SEP), recurring themes and concepts (RTC), English language proficiency standards (ELPS), common misconceptions, vocabulary review, wellness connections, math, and English language arts and reading (ELAR) connections. In addition, The "Poster Pal" and student materials are labeled "Engineering Design." These use pictures to guide observations and student-generated questions, assist in identifying problems, build vocabulary, support investigations, help students organize information through graphic organizers and collect data, and provide science reading materials with writing and reasoning opportunities.
- In grade 1, the units include a "Prior Knowledge Review Vocabulary" section. Unit 6 has vocabulary lessons for Activities 2, 6, and 7. For example, in Activity 7, the focus vocabulary word is *irreversible change*. The teacher points out the ir prefix before reversible and says "ir-"

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means not. Students practice saying the word with a peer before writing it in their student editions.

- Materials consistently support students' meaningful sensemaking through reading, writing, thinking, and acting as scientists and engineers. For example, Unit 3 includes the success criteria for each activity using different language skills. Activity 1 states, "I can ask questions based on my observations of the causes and effects in the phenomenon story," and Activity 4 states, "I can develop and communicate an explanation of the phenomenon with evidence." For example, in the "Whole Group" section in Unit 12, Activity 2, the teacher is directed to "Read the article 'Summer' to students. Have students act out what they feel like when it is really hot outside." The teacher asks, "How do you stay cool in the summertime?" Students share their answers. The teacher displays the picture of a tree on the Poster Pal. The teacher asks the students to think about what trees look like in the summertime and describe them. The teacher colors the tree portion under the "Summer" label on the "Poster Pal." Then, the teacher writes the students' answers on the lines under the portion of the tree she colored. Students complete an activity in their student edition regarding appropriate clothing to wear in the summer.

Materials provide multiple opportunities for students to engage with grade level appropriate scientific texts to gather evidence and develop an understanding of concepts.

- In addition to the activities in the Studies Weekly website, the "Poster Pal," the students' materials guide observations, build vocabulary, and provide science reading materials with writing opportunities and graphic organizers that help students organize information to gather evidence and develop an understanding of concepts. For example, in Unit 7, Activity 2 students read along with the teacher in the "Reading-to-Learn" section about Spring. During collaborative learning, students focus on the weather for the month of March in the city of Austin. Students talk to their partners, explaining what they notice about the weather in March. The teacher asks, "What weather patterns do you see in Austin? Can you use evidence to find a pattern?" Students write how many rainy days there are in the month of March. The teacher asks the students to "Count the number of sunny days and partly sunny days during the month of March." The students complete and solve pictorial math problems and write the answers in their student editions. For example, in the teacher's edition Unit 11, Activity 1 begins with a pre-reading activity "Before introducing the phenomenon, prepare students by asking them to pay attention to what they wonder, the questions they have, and what they already know as they observe the phenomenon." Activities 2-5 introduce new vocabulary *clear*, *cold*, *hot*, *icy*, *impact*, and *observe*.
- The grade 1 materials provide opportunities for students to engage in purposeful and targeted activities with grade-level appropriate scientific texts. For example, in Unit 13, Activity 2, in a section titled "Reading to Learn," the teacher is directed to have students do a chorale reading of the article "The Importance of Water" in the student editions. The article includes the following text, "Water is very important. It helps us survive. It keeps plants alive. It washes things." The page shows photographs of people drinking and using water. In a "Collaborative Learning Explore Path" activity, the students complete "Water-Uses in the Home" printable and share with a science partner how they use water in their homes.

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Materials provide multiple opportunities for students to engage in various written and graphic modes of communication to support students in developing and displaying an understanding of scientific concepts.

- The Studies Weekly website provides various written and graphic modes of communication such as pictures, illustrations and text that include audio to support students in developing and displaying understanding of scientific concepts. Many articles, activities and games are interactive to provide opportunity for student's response and check points for understanding. The "Poster Pal" and the student's materials build vocabulary, provide science reading materials with writing opportunities and graphic organizers that help students organize information to gather evidence and develop understanding of concepts.
- The materials provide opportunities for students to communicate thinking on scientific concepts in written and graphic modes. For example, in Unit 13, Activity 3, students use a chart to figure out how much water they use every day. The students complete the first column "Times Per Day," in their student editions. The teacher asks, "Which activity students do the most in one day?" Students calculate how much water they use by adding the total for each task.
- Unit 18, in Activity 9 during Applied Science Writing, students write about their own life cycle and the different stages they go through as they grow
- The grade 1 materials provide opportunities for students to communicate thinking on scientific concepts in written and graphic modes. For example, in Unit 11, Activity 7, in a section titled "Discovery Path," the teacher asks, "What weather systems do you think the symbols on the calendar show? We are going to collect and analyze the data from the calendar and create a graph to show the weather in February." The teacher models and completes the sunny section with students. The teacher asks, "How many sunny days were there in February?" The students color eight boxes for eight days of sunny weather in February and trace the word sunny. The students complete the rest of the graph and fill in the blanks with their science partners.

Materials support students to act as scientists and engineers who can learn from engaging in phenomena and engineering design processes, make sense of concepts, and productively struggle.

- In Unit 2 students learn how to classify objects by observable physical properties, including, shape, color, and texture, and attributes such as larger and smaller and heavier and lighter using the phenomenon, "Some balls can be used for multiple sports, whereas some can only be used for one sport," and recording observations. The teacher guides them to ask questions based on what they notice or wonder about. Then students draw or write their observations in their student edition. The students begin to think about what they want to make sense of or what questions might be forming about the phenomenon. Materials provide strategies to help students produce their own questions and support struggles. "Say: Last year in kindergarten you learned that objects have different physical properties. Can you see any of those physical properties in these different sports balls? Have students write or draw their observations of the phenomenon in their student editions. Have students begin to think about what they want to make sense of or what questions might be forming about the phenomenon." The materials instruct teachers to put students in small groups or generate and write or draw questions in the student editions. The materials guide teachers in a model think-aloud if students are struggling.
- The materials provide authentic student engagement and perseverance of concepts through productive struggle while acting as scientists and engineers. For example, in Unit 5, Activities 7-9, students think like scientists to design a mini-golf course, create a solution for the

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phenomenon, and collect data to test the design. The following questions are listed in the improvement section in Activity 9: What new scientific understanding do you have after testing your design solutions and analyzing the data we collected?, Did your design work like it was supposed to? Could it be better? Why or Why not? What do you think can cause the biggest improvement in your design?

- The materials provide authentic student engagement and perseverance of concepts through productive struggle while acting as scientists and engineers. For example, the teacher’s edition publication, *Introduction to Texas Science: K-1st Grades*, explains how the student edition is structured. First, the phenomenon involves a real-world relatable experience; second, students learn to ask questions about the phenomenon; then, students engage in activities that are intentionally designed to help students make sense of the anchoring phenomenon through the integration of SEPs and RTCs. Unit 12, Activity 1, “Discovery Path” includes these teacher prompts: “Before introducing the phenomenon, ask the students to pay attention to what they wonder, the questions they have, and what they already know as they observe the phenomenon.”; “If students struggle to produce questions, remind them of the phenomenon story and what they already know.”; and, “Discuss: Are there any questions on your list that we cannot test or investigate? Why?”
- In the independent work section of Unit 6, Activity 6, students ideate and draw two solutions for the mini-golf course to get the golf ball into the hole in the fewest hits possible. Students will also show where their ball will start and stop. The teacher is directed to provide scaffolding and support as needed by asking questions: Where will your ball start? Where will your hole be? Do you want your ball to stop anywhere else besides the hole? If yes, where would that be? How could your ball change directions? Where will your ball go faster? Where will your ball slow down?

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Indicator 5.1

Materials promote students' use of evidence to develop, communicate, and evaluate explanations and solutions.

1	Materials prompt students to use evidence to support their hypotheses and claims.	M
2	Materials include embedded opportunities to develop and utilize scientific vocabulary in context.	M
3	Materials integrate argumentation and discourse throughout to support students' development of content knowledge and skills as appropriate for the concept and grade level.	M
4	Materials provide opportunities for students to construct and present developmentally appropriate written and verbal arguments that justify explanations to phenomena and/or solutions to problems using evidence acquired from learning experiences.	M

Meets | Score 4/4

The materials meet the criteria for this indicator. Materials promote students' use of evidence to develop, communicate, and evaluate explanations and solutions.

The materials prompt students to use evidence to support their hypotheses and claims. Materials include embedded opportunities to develop and utilize scientific vocabulary in context. Materials integrate argumentation and discourse throughout to support students' development of content knowledge and skills as appropriate for the concept and grade level. Materials provide opportunities for students to construct and present developmentally appropriate written and/or verbal arguments that justify explanations to phenomena and solutions to problems using evidence acquired from learning experiences.

Evidence includes but is not limited to:

Materials prompt students to use evidence to support their hypotheses and claims.

- The materials specifically prompt students to use evidence when supporting their hypotheses and claims. For example, in Unit 5, students research ways to improve their design. "Say: In today's activity, we will be researching and thinking of ways to improve Claire and Miguel's golf scores by designing a solution to change the speed or direction of a golf ball. Think about how you have practiced changing an object's direction in this unit."
- In Unit 15, Activity 6, the students describe how living and nonliving components depend on each other. The "Reflect and Connect" section provides the following questions for the teacher to ask. "What questions did we ask on our student-driven question board today? Do the activities and investigations throughout the unit help understand the phenomenon? What claim about the terrarium and what living things need to survive inside it? What evidence do you have to support this claim?" The teacher reminds the students to use the data inside of the student editions as evidence.
- The teacher publication, *Introduction to Texas Science: K-1st Grades*, includes icons that help students identify scientific and engineering practices (SEP), such as collecting evidence integrated throughout the student edition. The "Poster Pal" of Unit 1 identifies collecting

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evidence as a SEP with an icon of a magnifying glass and some leaves. Unit 2 student edition includes the collect evidence icon on the “Phenomenon Explanation” activity.

- The “Debrief” section of Unit 2, Activity 4, directs the teacher to ask questions after the students classify materials by their properties and attributes, “What did you notice as you sorted the sports balls? What sports balls are similar to a basketball? How do you know? Determine with the class whether the student-driven questions have been answered. Ask: What evidence and reasoning can you use to show that your claim is correct?”

Materials include embedded opportunities to develop and utilize scientific vocabulary in context.

- In Unit 5, the materials guide the teacher to review and reflect on the unit vocabulary after investigating forces and motion.
 1. Ask: What was the ball doing when it was going between you and your partner? (Answers could include: rolling, moving, traveling, etc.)
 2. Say: In science, instead of “moving,” we say motion.
 - a. Have students repeat the word.
 3. Say: Let’s do the same thing we did, but use the word *motion*.
 - Person 1, make the ball start its motion. Person 2, make the ball stop its motion.
 - a. Allow students to do the movement.
 4. Say: Now, let’s switch.
 - Person 2, make the ball start its motion. Person 1, make the ball stop its motion.
 - a. Allow students to do the movement.
 5. Ask: Based on what you know, which word means when motion begins: start or stop? (start) Which word means when motion ends? (stop)
 6. Say: A “start” is when motion begins, and a “stop” is when motion ends.
 7. Ask: Did you use a push or pull to make the ball start its motion? (push, pull, or both).
- In Unit 8, Activity 1, the teacher asks, “As you observed the ground outside, did you see things mixed in the soil? If so, what did you see? Those bits and pieces are called components. Components are parts of a whole.” The teacher attaches the word to the word wall. This vocabulary routine repeats throughout the materials.
- Materials include embedded opportunities to develop and utilize scientific vocabulary in context. For example, the teacher publication *Introduction to Texas Science: K-1st Grades* states that the materials “follow a disaggregated approach to vocabulary. This means that students grapple with the science concepts before introducing new science vocabulary.”
- After the phenomenon introduction, Unit 3, Activity 1 instructs the teacher to use a blow dryer with hot and cold settings to help students experience the vocabulary *heated* and *cooled* for the rest of the activity, “As you talk about objects getting cold or cooled, blow cold air on students. When you talk about objects getting hot or hotter, blow hot air on students. Do not blow air on students who have an aversion to this.”

Materials integrate argumentation and discourse throughout to support students’ development of content knowledge and skills as appropriate for the concept and grade level.

- Unit 5 guides students to construct an argument to present their ideas to create a mini golf course in a collaborative learning activity.

Have students discuss their initial ideas for their mini golf courses with their engineering groups. Remind students to: Listen actively to one another. If they don’t understand something a group member says, they should ask questions to help clarify. [ELPS 2D] When students share their ideas, they should speak clearly and at a good pace. [ELPS 3G] If asked a question, they should answer using more than one word.
- In Unit 8, Activity 3, in the “Collaborative Learning” section, students investigate and record the textures and shapes of soil. The students discuss what shapes they think topsoil, sand, and clay

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are. The students collaborate with their peers by turning and telling their partners what they think the texture of topsoil is. The partner listens and discusses what they thought it felt like. Students use the sentence frames, “I agree because...” “I disagree. I felt like because...”

- In Unit 4, Activity 1, the teacher introduces the phenomenon, and students engage in discussions, ask and share questions or observations, and identify the problem. In Activity 2, students engage in a hands-on activity to find and ideate solutions to problems and debrief content learned. In Activity 3, students make a plan and share it with several groups. In Activity 4, students create prototypes and discuss the engineering design process by asking and answering questions.
- The success criteria of Unit 10, Activity 7, is “I can compare the shape of different bodies of water.” The teacher highlights the questions on the student-driven question board associated with water shapes, such as, “What shape is a river? Are oceans just big lakes?” In a “Collaborative Learning” activity, students create the shapes of bodies of water using salt dough and discuss it with a partner. The “Reflect and Connect” section directs the teacher to “Have students turn to a science partner and share how today’s activities helped them describe the properties of water?” The teacher asks, “What new things did you notice about the phenomenon? How would you describe the shape of the bodies of water in the phenomenon?”

Materials provide opportunities for students to construct and present developmentally appropriate written and verbal arguments that justify explanations to phenomena and/or solutions to problems using evidence acquired from learning experiences.

- The materials recommend that after investigating solutions to their problem, the teacher should:
 1. Have students share their explanations in small groups or with the class. a. Listening students should identify the evidence the student gave and share what they heard. 2. Say: Think about the examples you put in your student edition today. Could you use any of those in your mini golf course? (Answers may vary. Example: I drew a golf ball hitting a wall and changing direction. I can use that in my mini golf course!)
- In Unit 8, Activity 4, the students explain the soil types, what composes soil, and the best uses of soil. Students record observations in the “Applied Science Writing” as they apply what they have been investigating about soil from the home and community. The students work collaboratively to complete “Activity 4: Phenomenon Explanation” in their student editions, “1) Type of soil: 2) What it’s made out of:, 3) Other observations:, 4) This soil is good for....because” The materials direct the teacher to “Have students compare their answers with a science partner and respond as well. As they respond, have students use the sentence stem, ‘I agree with your answer because’ or ‘I disagree with your answer because’”
- The success criteria for Unit 3, Activity 4 is “I can develop and communicate an explanation of the phenomenon with evidence.” During the activity’s debrief, the students in small groups, pairs, or with the whole class “share their phenomenon explanations.” The materials provide criteria for guiding students in developmentally appropriate arguments: “Listening students should: a. Listen actively to others’ explanations. b. Identify important evidence the student shared. c. Engage respectfully in scientific discussion.” The criteria then state to “Have students give feedback to those in their group by using one of the following: a. The evidence I heard was.... b. I like how you said.... c. I think you add to your explanation by....”

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Indicator 5.2

Materials provide teacher guidance to support student reasoning and communication skills.

1	Materials provide teacher guidance on anticipating student responses and the use of questioning to deepen student thinking.	M
2	Materials include teacher guidance on how to scaffold and support students' development and use of scientific vocabulary in context.	M
3	Materials provide teacher guidance on preparing for student discourse and supporting students in using evidence to construct written and verbal claims.	M
4	Materials support and guide teachers in facilitating the sharing of students' thinking and finding solutions.	M

Meets | Score 4/4

The materials meet the criteria for this indicator. Materials provide teacher guidance to support student reasoning and communication skills.

Materials provide teacher guidance on anticipating student responses and the use of questioning to deepen student thinking. Materials include teacher guidance on how to scaffold and support students' development and use of scientific vocabulary in context. Materials provide teacher guidance on preparing for student discourse and supporting students in using evidence to construct written and verbal claims. Materials support and guide teachers in facilitating the sharing of students' thinking and finding solutions.

Evidence includes but is not limited to:

Materials provide teacher guidance on anticipating student responses and the use of questioning to deepen student thinking.

- The “Debrief” section in the “Discovery Path” of Unit 16 directs the teacher to:
 1. Ask: What living organism does a penguin depend on for food? (fish)
 2. Say: We have learned that a system is a collection of parts that work together. A food chain is a system made of living organisms. It shows which organism eats another organism.
 3. Discuss: What would happen if the parts of the food chain we filled in were missing in real life? (Animals would die because they wouldn't get food.)
- In Unit 10, Activity 3, the student-driven inquiry includes discussion questions such as, "What are some similarities and differences that you noticed about these colors of the oceans?", "What are some similarities and differences that you noticed about the colors of these lakes?" The materials guide the teacher to discuss the misconception that all water is blue but explain that water is colorless and takes on the color of what is in or around the water.
- The teacher publication, *Introduction to Texas Science: K-1st Grades*, states it “employs a ‘Phenomenon Questioning Technique,’ which will help build students' ability to ask good questions throughout the school year.” The teacher printable “Phenomenon Questioning Technique” includes these instructions for the teacher: “Review and model the questioning rules in student-friendly language. For example: Ask as many questions as you can. Just let them fall

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out of your mouth,” and “Model: Write the questions exactly as they are said without changing any wording.”

- The materials support teachers to deepen student thinking through the “Create a Student-Driven Question Board” in each unit. Each unit provides a guiding question and directs the teacher to group questions with similar themes or ideas, rewrite new questions on the “Poster Pal,” and consider aligning questions with examples of questions already provided in this section of the materials.

Materials include teacher guidance on how to scaffold and support students’ development and use of scientific vocabulary in context.

- In Unit 16, materials give teachers a preview of the vocabulary for the unit. “Review Vocabulary It would be a good idea to review the prior vocabulary before beginning. You may already have this word on your word wall: *depend*”. Materials also guide an activity to develop an understanding of the word living.
 1. Have students share with a science partner what it means if something is living.
 2. Ask: What is something that is living? (Answers may vary. Example: a bird)
 3. Say: Scientists call living things organisms.
 - a. Refer to the word wall card and attach the provided picture, or, if time allows, choose a student to illustrate the word wall card.
- The materials guide the teacher in supporting students’ use of scientific vocabulary in Unit 8, Activity 2. The materials provide the vocabulary words and the meanings in the sidebar. The teacher says, “ This soil is called clay. Clay is a powdery natural soil material. ” The teacher refers to the Word Wall Card and attaches the picture to the word wall. The teacher instructs the students to trace the word clay in their student editions. The teacher repeats these steps for the terms *particle* and *sand*. The materials guide the teacher to instruct the students to turn and tell their partners what the words mean.
- The teacher publication, *Introduction to Texas Science: K-1st Grades*, states it is “a full-spectrum of vocabulary support. It begins by informing the teacher of the review and new vocabulary for the unit. Teachers can continually build and add to a classroom word wall using the provided “Word Wall Cards” for each unit.” Materials also state that it “strives to follow a disaggregated approach to vocabulary. This means that students grapple with the science concepts before introducing new science vocabulary.”
- The materials provide embedded support for the teacher in introducing and scaffolding students’ development of scientific vocabulary. The materials introduce the science concepts with a phenomenon story and allow students to express their observations and questions using their natural language before the academic scientific vocabulary is introduced and practiced in context with hands-on activities using the interactive student edition.

Materials provide teacher guidance on preparing for student discourse and supporting students in using evidence to construct written and verbal claims.

- The materials provide teacher guidance on possible student responses “Discovery Path” Unit 16 evidence-supported debrief:
 1. Have students think about all of their learning throughout the unit.
 2. Ask: How do living organisms depend on each other through food chains? (They need each other for food. Living things cannot live without food.)
 3. Have students use evidence from their student edition to explain their understanding of the phenomenon to a science partner.
 - a. This is an opportunity for students to use content-based vocabulary as they give

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information. [ELPS 3F] 4. Ask: Were you able to answer the question asked in the phenomenon story? (Yes, the grasshopper eats grass.)

- The materials provide teacher questions for supporting student discourse and using evidence in constructing written and verbal claims. In the Collaborative Learning section, Unit 17, Activity 8, the materials guide the teacher to have the students think about whether their claim was correct. The teacher asks, "Did the structure work as intended?" Students finish the sentences in their student editions with the following criteria: "Did their structure work as intended? Does it help their animal live, move, and meet its needs?"
- In Unit 11, Activity 9, the "Phenomenon Explanation" section includes these guiding questions: "How has your understanding of the phenomenon changed? What surprised you? What was most interesting?" Students discuss their claims with a partner using reasoning to explain the phenomenon. The teacher continues with the question, "Did we notice the same things in our world as Jackson did at the Fort Worth Botanical Garden?"
- The materials provide a lesson plan consistent with engaging students in questioning, discussions, and sharing with a peer, science partner, or collaborative group. In Unit 8, Activity 3, in a section for "Discovery Path" titled "Reflect and Connect", the teacher is directed to ask, "What questions did we answer in the Student-Driven Question Board today? How have the activities and investigations throughout the unit helped us to make sense of the phenomenon? Discuss: What claim can you make about a type of soil and what it is used for? What evidence do you have to support this claim?" The teacher reminds the students to use their data from their student edition to support their claims.

Materials support and guide teachers in facilitating the sharing of students' thinking and finding solutions.

- In Unit 5, after investigating forces and motion, students connect their learning to think about solutions to their problem:
 1. Have students share their explanations in small groups or with the class. a. Listening students should identify the evidence the student gave and share what they heard. 2. Say: Think about the examples you put in your student edition today. Could you use any of those in your mini golf course? (Answers may vary. Example: I drew a golf ball, hitting a wall and changing direction. I can use that in my mini golf course!)
- Materials support and guide teachers in facilitating the sharing of students' thinking and finding solutions. In Unit 4, Activity 5, students describe how an object is best suited to solve the problem and make the object better. In the "Analyze Data" section, the teacher asks, "What did you learn about your solution as you tested it?" "Based on what you learned while testing the solution, what claims can you make about the design solution you created?" "What do you think caused your design to be successful?" "What new discoveries have you made about altering your solution to be even better?" and "What do you think can cause the biggest improvement in your design?"
- Materials support and guide teachers in facilitating the sharing of students' thinking and finding solutions. In Unit 17, Activity 9, in the Analyze section, the teacher guides students to "record the similarities and differences between their engineering solution and other groups' engineering solutions in the Venn Diagram in their student editions."
- The materials support and guide the teacher in facilitating the sharing of students' thinking in various modes of communication throughout the year. Every unit begins with a phenomenon introduction or problem to solve. The materials provide prompts for the teacher throughout the

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unit's activities to have students share their thinking with the whole group, a partner, in small groups, or write in their student edition. For example, in Unit 2, Activity 3:

As students are working at the heavier vs. lighter station, circulate, take anecdotal data and provide support as needed, using the following responses to assess students' understanding of heavier and lighter. a) Example of a correct response: the paper clip is lighter than the stapler. b) Example of a partially correct response: the apple is different from the kiwi. c) Example of an incorrect response: the crayon is lighter than the die.

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Indicator 6.1

Materials include a variety of TEKS-aligned and developmentally appropriate assessment tools.

1	Materials include a range of diagnostic, formative, and summative assessments to assess student learning in a variety of formats.	M
2	Materials assess all student expectations over the breadth of the course and indicate which student expectations are being assessed in each assessment.	M
3	Materials include assessments that integrate scientific concepts and science and engineering practices with recurring themes and concepts.	M
4	Materials include assessments that require students to apply knowledge and skills to novel contexts.	M

Meets | Score 2/2

The materials meet the criteria for this indicator. Materials include a variety of TEKS-aligned and developmentally appropriate assessment tools.

Materials include a range of diagnostic, formative, and summative assessments that include formal and informal opportunities to assess student learning in a variety of formats. Materials assess all student expectations and indicate which student expectations are assessed. Materials include assessments that integrate scientific concepts and science and engineering practices with recurring themes and concepts. Materials include assessments that require students to apply knowledge and skills to novel contexts.

Evidence includes but is not limited to:

Materials include a range of diagnostic, formative, and summative assessments to assess student learning in a variety of formats.

- The materials include various assessment tools, such as formative assessment suggestions, reading comprehension multiple-choice assessment items for each nonfiction article, and summative unit assessments using a variety of question types that assess learning of the unit material. The publication contains an assessment map for identifying scientific engineering practices (SEP), recurring themes and concepts (RTC) components, depth of knowledge levels, answer rationale, and remediation or review suggestions. Finally, the materials contain performance tasks and summative assessments designed to test student performance of what was learned in the unit, using a novel context and prompts. For example, in Unit 14, “Basic Needs,” the materials provide a reading comprehension assessment that evaluates students' learning with questions that analyze multiple dimensions of learning.
- The materials include formative assessments in a variety of formats. The teacher edition publication, *Introduction to Texas Science: K-1st Grades*, states, “Formative assessments are available with every activity. These are found at the end of each activity in the teacher edition. Each formative assessment can be used to assess the student’s proficiency in the activity’s success criteria. Proficiency indicators usually include the key concepts and vocabulary from the activity.” For example, In Unit 2, Activity 2, the success criteria are “I can classify objects based on their color, shape, and size.” The materials guide the teacher to assess the students by using

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“student participation from the collaborative learning activity to check for the proficiency of the success criteria.” The materials also provide opportunities to gather informal data during the lesson cycle, “Circulate around the room, observing and taking anecdotal data on students’ understanding of the following ideas: classifying; sorting by color, size, and shape.”

Materials assess all student expectations over the breadth of the course and indicate which student expectations are being assessed in each assessment.

- The materials clearly indicate student expectations assessed as outlined in the TEKS. Science Weekly includes all assessments in the unit and the student expectations assessed by each in each unit overview. The first-grade materials provide lesson plans that clearly identify each activity's standards and student expectations. Science Weekly guides the teacher on assessment for the success criteria (student expectations) in the “Formative Assessments” section at the end of the activity’s lesson plan. The “Texas Science Answer Key” provided in the teacher edition includes a general formative assessment rubric to help assess students’ proficiency in the success criteria provided for each activity.
- Materials assess all student expectations. The teacher edition for Unit 3 includes a chart with three columns that indicate each activity’s title, success criteria, and formative assessment evidence. Activity 2, “Cool it Down,” indicates the success criteria: “I can do an investigation to explain and predict changes in materials that are cooled,” and “Student Edition Response” as formative assessment evidence.

Materials include assessments that integrate scientific concepts and science and engineering practices with recurring themes and concepts.

- SEP is included for Unit 5 as students plan and conduct descriptive observations that predict the effects of pushes and pulls on starting, stopping, or changing the speed or direction of an object’s motion to design a solution to the engineering scenario. The formative assessment directs, “Use the 'Define' step of the “Engineering Design Rubric” to check for the proficiency of the success criteria on a scale from 1 to 4.”
- Unit 14, Activity 7, demonstrates the recurring theme of patterns as students use patterns to identify which things need space to live and which do not. As a formative assessment, the teacher uses students' responses to check for proficiency in the success criteria.
- Science Weekly includes assessments that integrate scientific concepts and SEP with RTC. The teacher edition publication, *Introduction to Texas Science: K-1st Grades*, includes a “Summative Unit Assessments” chart that “indicates how each assessment item (numbers along the top row) addresses the three dimensions of learning: SEP, RTC, and content.”
- The grade 1 materials include assessments requiring students to integrate scientific knowledge and SEP with recurrent themes appropriate to the student expectation. For example, in Unit 17, “Students will be able to identify and create an external structure that helps animals live, move, and meet basic needs for survival.” The materials provide an “Engineering Design Rubric” to assess students’ proficiency skills with this task. The rubric provides criteria for the following scores, “1) Beginning: Does not meet expectations, 2) Progressing: Partially meets expectations, 3) Competent: Meets expectations, 4) Advanced: Exceeds expectations.”

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Materials include assessments that require students to apply knowledge and skills to novel contexts.

- Materials include assessments that require students to apply knowledge and skills to novel contexts. The teacher edition publication, *Introduction to Texas Science: K-1st Grades*, states that in the performance task, “Students are assessed by demonstrating their understanding of the science content. The novel situation also reinforces the transfer of science concepts.”
- Each activity in the unit includes success criteria and an assessment to determine the student's success. A sidebar next to each activity clearly labels RTC. In Unit 8 for first grade, students explore soil. The students investigate and record the textures and shapes of soil, then look at topsoil, sand, and clay and examine the different textures when dry and wet as a group. Finally, the students discuss what shape each soil may be.
- The grade 1 materials require students to apply knowledge and skills in the Unit 6 performance task when students apply what they have learned about changing weather to a new situation they haven't seen before. In Task 1, students draw and label three ways of using heat daily. In Task 2, students cut out images of heat sources and glue them on a chart next to the image that shows the use of the heat source. In a column titled “What did the heat do?” Students circle an answer from the options provided.

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Indicator 6.2

Materials include guidance that explains how to analyze and respond to data from assessment tools.

1	Materials include information and/or resources that provide guidance for evaluating student responses.	M
2	Materials support teachers' analysis of assessment data with guidance and direction to respond to individual students' needs, in all areas of science, based on measures of student progress appropriate for the developmental level.	PM
3	Assessment tools yield relevant information for teachers to use when planning instruction, intervention, and extension.	M
4	Materials provide a variety of resources and teacher guidance on how to leverage different activities to respond to student data.	PM

Partial Meets | Score 1/2

The materials partially meet the criteria for this indicator. Materials partially include guidance that explains how to analyze and respond to data from assessment tools.

Materials include information and/or resources that provide guidance for evaluating student responses. Materials partially support teachers' analysis of assessment data with guidance and direction to respond to individual students' needs, in all areas of science, based on measures of student progress appropriate for the developmental level. Assessment tools yield relevant information for teachers to use when planning instruction, intervention, and extension. Materials somewhat provide a variety of resources and teacher guidance on how to leverage different activities to respond to student data.

Evidence includes but is not limited to:

Materials include information and/or resources that provide guidance for evaluating student responses.

- The materials include information and resources that provide guidance for evaluating student responses. The teacher edition publication, "Texas Science Components," states that the unit answer keys are "A teacher tool that provides teacher guidance, support, and suggestions for student work in the student edition as well as the formative assessment."
- The first-grade materials include a "General Formative Assessment Rubric" that guides teachers in evaluating student responses. The rubric suggests proficiency scores of 1-4. For example, a proficiency score of 3 indicates, "Student shows an understanding of the topic with very few errors and misconceptions and can explain their thinking with reasons and evidence."
- The Unit 5 overview includes suggestions for assessing student learning during each lesson section. For example, "Use students' drawn or written explanations to check for the proficiency of the success criteria. Students can orally explain their writing/pictures if they are not clear."
- The materials include information that guides teachers in evaluating student responses. The teacher edition Unit 9 "Assessments" section consists of the "Where Did My Rocks and Soil Go": Performance Tasks Answer Key" with these instructions: "Answers may vary. The soil moved from the rainfall. As it rained, the water flowed across the land, moving some of the soil and grass."

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Materials support teachers' analysis of assessment data with guidance and direction to respond to individual students' needs, in all areas of science, based on measures of student progress appropriate for the developmental level.

- The materials partially provide guidance and direction to respond to individual students' needs, in all areas of science, based on measures of student progress appropriate for the developmental level. Materials provide a variety of reports to show students' level of mastery of the content and success criteria, but lack guidance and direction for teachers to respond to individual student's needs in all areas of science based on measures of student progress appropriate for the developmental level. However, the materials provide limited guidance for report use, including teacher guidance for analyzing assessment data from the reports.
- The materials provide partial guidance with little direction for responding to individual students' needs. The teacher edition publication, "Introduction to Texas Science: K-1st Grades," states, "Each formative assessment can be used to assess the students' proficiency of the activity's success criteria. Proficiency indicators usually include the key concepts and vocabulary from the activity. The teacher is able to use this information to remediate students' needs." While this is helpful, it speaks in general terms and isn't adequate guidance and doesn't provide much direction to respond to individual student needs as they arise. There is little support in translating data into actionable tasks for responding to students' needs.
- "Science Weekly" provides teachers with various assessments but lacks support for teachers' analysis of assessment data. Teacher edition Unit 3 includes the "Teacher Support Resources Chart" that lists "Cameron's Car Conundrum," unit assessment printable as "A summative assessment that evaluates students' learning from the unit. This assessment uses various question types to analyze multiple dimensions of learning."

Assessment tools yield relevant information for teachers to use when planning instruction, intervention, and extension.

- The information gathered from the assessment tools helps teachers when planning core science instruction by suggesting ways to make instructional decisions (e.g., how to group students who have mastered a concept with one that needs support or pairing students who cannot read with students who can provide reading support to convey meaning.)
- The assessment tools yield data teachers can analyze and interpret with the summative unit assessments to measure what the students have learned throughout the unit's activities, including content, scientific engineering practices (SEP), and recurring themes and concepts (RTC.) The "Assessment Map" in the unit answer keys includes suggestions for the teacher to plan remediation or review.
- Teachers can use the information gathered from the assessment tools when planning core science instruction. Based on the data, the teacher can decide if activities should be done as a whole class or in pairs. The teacher's training resource video reports, "The weekly progress report shows the number of students who have finished, started, and not started each week for the selected publication. The publication bases progress on articles read, questions read, and assessments. "Teachers can also see the list of students in each progress category. The classroom report shows each student's progress for the selected publication," and teachers can

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sort the data based on header categories such as average assessment scores, activities submitted, article comprehension questions answered, and more.

- The first-grade materials provide teachers with feedback for students who struggle with formative assessments at proficiency level. The “Answer Key” document for Unit 2, Activity 4, provides the following guidance, “Feedback: Scaffolded; If students struggled to complete the formative assessment at proficiency level, provide additional time for students to revisit the concept according to the following proficiency levels, Below 50%: One-on-one interventions, Below 80%: Small group interventions, Above 80%: Provide additional extension activities from current or past units.”

Materials provide a variety of resources and teacher guidance on how to leverage different activities to respond to student data.

- The materials provide various resources but limited guidance for teachers to use in planning how to respond to student data. Some resources that teachers can leverage for use with students include: vocabulary cards, pictures, games, videos, readers according to concept categories, and skills for intervention and enrichment for the teacher to support all students’ needs.
- Materials provide some teacher guidance on student support materials. For example, the teacher can customize the online activities and content seen by the students, allowing differentiation according to students' needs. Teachers can tailor their instructional materials to suit individual students or groups. Teachers can provide appropriate challenges or support based on students' abilities and preferences By adjusting the complexity, pace, or activity formats. There is very little guidance about which activities or changes to activities would be best leveraged for specific TEKS in response to student data.
- The materials provide limited guidance on how to leverage activities to respond to student data. While there are formative assessments for each activity, unit assessments, and performance tasks that yield relevant student performance data for each student, there is very little guidance for how to use that information to select activities that will improve student outcomes.. Materials provide teachers with feedback for students in the answer keys for all unit activities and formative assessments based on students’ proficiency levels, but nothing about which activities to use for different students based on data results.

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Indicator 6.3

Assessments are clear and easy to understand.

1	Assessments contain items that are scientifically accurate, avoid bias, and are free from errors.	M
2	Assessment tools use clear pictures and graphics that are developmentally appropriate.	M
3	Materials provide guidance to ensure consistent and accurate administration of assessment tools.	M
4	Materials include guidance to offer accommodations for assessment tools that allow students to demonstrate mastery of knowledge and skills aligned to learning goals.	M

Meets | Score 2/2

The materials meet the criteria for this indicator. Assessments are clear and easy to understand.

Assessments contain items that are scientifically accurate, avoid bias, and are free from errors. Assessment tools use clear pictures and graphics that are developmentally appropriate. Materials provide guidance to ensure consistent and accurate administration of assessment tools. Materials include guidance to offer accommodations for assessment tools that allow students to demonstrate mastery of knowledge and skills aligned to learning goals.

Evidence includes but is not limited to:

Assessments contain items that are scientifically accurate, avoid bias, and are free from errors.

- The assessments appear to contain accurate content and information on the assessments reviewed. Answer keys are free of wrong answers to assessment questions. Assessments are free of spelling, grammar, and punctuation errors. The unit tests and test keys are free from omissions, substituting scientific terminology, and spelling.
- The assessments contain items that are scientifically accurate. The teacher edition publication, *Introduction to Texas Science: K-1st Grades*, states that “Summative Unit Assessments measure what the student has learned across the three dimensions of learning. A handy assessment chart is available for every assessment. This chart indicates how each assessment item (numbers along the top row) addresses the three dimensions of learning: SEP, RTC, and content.”
- The grade 1 unit assessments contain items for the grade level that are scientifically accurate. For example, in Unit 19, a unit on animals and their offspring includes images of animals and their young, aligning with the unit objectives and content taught in the unit. Question 4 is a multiple choice question with three answer choices, “Look at the lions. How is the cub different from the male lion? (The adult has a mane, The adult has black lips, The cub has no claws).” The image shows a male lion with a lion cub.

Assessment tools use clear pictures and graphics that are developmentally appropriate.

- Assessment tools use clear pictures and graphics. For example, the Unit 9 assessment uses real pictures of landscapes, beaches, and sand to identify where soil and rocks come from. In grade

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1, the assessment items include photos of the life cycle of a sea turtle to show the different stages and for students to determine the missing stage.

- The assessment tools use clear pictures and graphics that are developmentally appropriate. Unit 5's digital format, student view, and unit assessment include colorful images of children playing and a black-and-white image of a horse carriage. The grade 1 assessment tools contain pictures and graphics that are developmentally appropriate. For example, in Unit 19, the unit assessment contains photographs of adult animals and their young, such as a male lion with its cub, and photographs of adult animals for matching with young animals, such as whales, giraffes, and elk.

Materials provide guidance to ensure consistent and accurate administration of assessment tools.

- The materials include detailed information supporting the teacher's understanding of assessment tools and scoring procedures. The "Core Components Descriptions (Grades K-5)" document explains the purpose of the unit assessment answer keys. "A teacher tool that provides teacher guidance, support, and suggestions for student work in the student edition as well as the formative assessment."
- The "Introduction to Science K-1" guide includes a section on assessments that supports the teacher in understanding the types of informal assessment tools included in the curriculum, such as formative assessments that teachers can use to remediate based on student's needs and a summative unit test that contains suggestions for remediation and review.
- The materials provide guidance to ensure consistent and accurate administration of assessment tools. The "General Formative Assessment Rubric" is included in each answer key for the units and guides proficiency of the success criteria provided in the lesson plan for each activity. In Unit 17, Activity 3, the Formative Assessment section guides teachers to "Use students' responses in the student edition to check for the proficiency of the success criteria."

Materials include guidance to offer accommodations for assessment tools that allow students to demonstrate mastery of knowledge and skills aligned to learning goals.

- Materials include guidance to offer accommodations for assessment tools that allow students to demonstrate mastery of knowledge and skills aligned to learning goals. Unit 6, Activity 2, the Formative Assessment is to "Use students' drawings and observations to check for proficiency of the success criteria." The activity includes allergy accommodation instructions for the teacher: "For students with severe food allergies, have your class view the videos of the foods being made rather than having the foods in your classroom."
- The digital materials provide a text-to-speech feature on the web-based assessment platform, allowing students to hover over the text using a speech symbol cursor and converting it into a digital text read aloud.
- The teacher can view the unit assessment in student mode. The materials allow the teacher to omit questions while still holding true to the objectives covered as a student accommodation. The teacher goes to the unit of study, clicks on the assessment, and chooses the "Edit" tab. Each question has a red 'x' beside the question, which allows the teacher to delete a question.
- In the "Training and Resources" section of the online materials, teachers can find an assessment video that offers a step-by-step tutorial on how to edit and customize the assessments for each unit, including changing question types, adding and deleting questions, and adding articles, media, and games as needed.

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Indicator 7.1

Materials include guidance, scaffolds, supports, and extensions that maximize student learning potential.

1	Materials provide recommended targeted instruction and activities to scaffold learning for students who have not yet achieved grade-level mastery.	M
2	Materials provide enrichment activities for all levels of learners.	M
3	Materials provide scaffolds and guidance for just-in-time learning acceleration for all students.	M

Meets | Score 2/2

The materials meet the criteria for this indicator. Materials include guidance, scaffolds, supports, and extensions that maximize student learning potential.

Materials provide recommended targeted instruction and activities to scaffold learning for students who still need to achieve mastery. Materials offer enrichment activities for all levels of learners. Materials provide scaffolds and guidance for just-in-time learning acceleration for all students.

Evidence includes but is not limited to:

Materials provide recommended targeted instruction and activities to scaffold learning for students who have not yet achieved grade level mastery.

- Lessons include optional differentiation recommendations. For example, Unit 2 makes the following recommendations for developing students: "Allow students to work with a partner to come up with their phenomenon questions..Pair students needing support with a partner who has demonstrated mastery to help the student complete the work at a proficient level..If students need additional support to describe the texture of the different materials, remind them of words they can use, such as *rough* and *smooth*...Students who need additional support with writing can draw pictures in their student edition."
- The "Optional" section of Unit 3, Activity 1, suggests that teachers allow students to draw their questions rather than write them. The Teacher Edition publication, *Introduction to Texas Science: K-1st Grades* explains, "The summative assessment map also includes suggestions for remediation and review."
- Each unit offers an optional "Differentiation" section at the end of the lesson plan after each activity. The "Differentiation" section provides options for students still developing who may need accommodations. Unit 2, Activity 2, offers the following suggestions for students still developing: "Pair students who need additional support with a proficient teammate to complete the work at a proficient level." As for the students needing accommodations, "If a student cannot bend down to participate in the physical activity for the 'Reading to Learn' section, allow them to give a thumbs up if it is larger and thumbs down if it is smaller."

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Materials provide enrichment activities for all levels of learners.

- The materials provide enrichment resources for all students, such as printables for extension activities, games, and videos. For example, the “Training and Resources” section includes multiple videos for virtual field trips, such as “Virtual Field Trip: Dinosaur Valley,” “Virtual Field Trip: NASA,” and a video about bodies of water to encourage further exploration of science concepts allowing students to make connections and extend the learning for students who have mastered grade-level skills.
- The Teacher Edition publication, *Introduction to Texas Science: K-1st Grades*, states, “Our differentiation suggestions can support struggling or advanced students. Differentiation sometimes addresses accommodation ideas for students with physical or sensory impairments.” Unit 4, Activity 1 includes a “Differentiation Box” with the “Developing” and “Advanced” activities. The “Developing” activity states that “If students need more support to draw or write questions or observations, allow them to use the ‘Poster Pal’ with class responses to scaffold their learning,” where as the “Advanced” activity encourages to “Have extra writing paper if students produce more observations or questions than can fit on their student edition.”
- The kindergarten materials provide enrichment with an optional “Explore Path” set of activities accessible to all learners. These activities extend the core curriculum's learning, clearly labeled in the Teacher Edition with an “Explore Path” icon and a green border. For example, in Unit 10, Activity 8, the optional “Explore Path” saltwater experiment directs the teacher to “Explain to students that they will be experimenting to see if rocks can float based on if the water is saltwater or freshwater.” Students experiment with a partner and draw what happened in their student edition. In the “Discussion” section, the teacher asks, “What happened to the rocks in the cup full of fresh water? What happened to the rocks in the cup of salt and water?”

Materials provide scaffolds and guidance for just in time learning acceleration for all students.

- Lessons provide support and resources for students ready to accelerate their learning. These include printables for extension activities, games, and videos. For example, Unit 3 has a “Cameron’s Car Conundrum: Applied Science Writing” activity and a “Change Controller” activity that uses a video game controller example and an activity to help students understand the ideas of change and control. The materials include enrichment activities that contain challenging activities in the “Project Time” section. Students can engage in the “Solar Oven” project.
- The materials develop perseverance in learning in Unit 5, Activity 4 by including these lesson instructions “Provide scaffolding and support, as needed, by asking one or more of the following questions:” In addition, Unit 16, Activity 2, includes this recommendation “As students complete the activity, have them identify the words they routinely see in each title (food chain).”
- Unit 6, Activity 2, guides just-in-time learning scaffolds for all students with a printable “Phenomenon Questioning Technique” document, which lists steps to follow to support students with producing and improving their questions for investigations. The steps are as follows: introduce phenomenon, review, create questions, (optional) improve questions, prioritize/focus questions, (optional) reflect, and next steps.

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Indicator 7.2

Materials include a variety of research-based instructional methods that appeal to a variety of learning interests and needs.

1	Materials include a variety of developmentally appropriate instructional approaches to engage students in the mastery of the content.	M
2	Materials consistently support flexible grouping (e.g., whole group, small group, partners, one-on-one).	M
3	Materials consistently support multiple practices (e.g., modeled, guided, collaborative, independent) and provide guidance and structures to achieve effective implementation.	M
4	Materials represent a diversity of communities in the images and information about people and places.	M

Meets | Score 2/2

The materials meet the criteria for this indicator. Materials include a variety of research-based instructional methods that appeal to a variety of learning interests and needs.

Materials include a variety of developmentally appropriate instructional approaches to engage students in the mastery of the content. Materials consistently support flexible grouping (e.g., whole group, small group, partners, one-on-one). Materials consistently support multiple types of practices (e.g., modeled, guided, collaborative, independent) and provide guidance and structures to achieve effective implementation. Materials represent a diversity of communities in the images and information about people and places.

Evidence includes but is not limited to:

Materials include a variety of developmentally appropriate instructional approaches to engage students in the mastery of the content.

- The materials use collaborative learning and a reading-to-learn approach. Materials build background knowledge using recurring themes and concepts (RTC,) integrate scientific and engineering practices (SEP) based on the phenomenon, and use questioning techniques and a think-aloud model to create a student-driven question board that guides investigations. The phenomenon of each unit is relevant and engaging to students.
- In the “Explore Path” of Unit 6, students work in small groups or pairs to conduct their cooking investigation. Students can draw or write how their food changed with heat. Students share their observations with their partner or with another group.
- TEKS 1.1 is “Scientific and engineering practices. The student asks questions, identifies problems, and plans and safely conducts classroom, laboratory, and field investigations to answer questions, explain phenomena, or design solutions using appropriate tools and models.” The Teacher Edition publication, *Introduction to Texas Science: K-1st Grades*, states that “each student edition is designed around four essential components:” Units are anchored with a phenomenon which can be “a student experience, demonstration, or video. Most phenomena include an accompanying phenomenon comic, providing students with alternative access in a

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fun and relatable way;” materials employ “a phenomenon questioning technique, which will help build students' ability to ask good questions throughout the school year;” the “activities are intentionally designed to help students make sense of the anchoring phenomenon through the integration of SEP and RTC;” and, to ensure mastery of content materials include “formative assessment can be used to assess the student’s proficiency of the activity’s success criteria.”

- Every unit emphasizes hands-on activities for exploration and collaborative learning structured within a 5E model of instruction. For example, in Unit 12, after the phenomenon introduction (Engage), in Activity 2, “Plant Use Soil and Water,” students work with a partner to identify and describe how plants use soil and water (Explore), in the optional Explore Path, students work with a partner to look at pictures of things that plants use and things plants do not use, students record their answers with words in a printable sheet titled “Do Plants Use These?” (Elaborate).

Materials consistently support flexible grouping (e.g., whole group, small group, partners, one on one).

- The teachers give the whole group lessons on core content and concepts. Units include activities for partners, small groups, or independent work—the materials content differentiation considerations for “Developing” and “Advanced” students.
- In Unit 17, Activity 9, the materials guide the teacher. In the whole group lesson, the teacher explains they will use the data from their test and graph it as a class. Each group tells if their external structure works accurately. The teacher uses tally marks to record the results. The students create a bar graph showing how many groups' external structures work. The materials suggest pairing students needing support with a partner who demonstrates mastery to help the student complete the work proficiently.
- Materials provide teacher guidance on using specific grouping structures based on student needs. The “Differentiation Box” in Unit 13, Activity 1, recommends that teachers allow developing students “to work with a partner to come up with phenomenon questions.”
- “Science Weekly” contains sections titled “Whole Group,” “Collaborative Learning,” and “Independent Work,” which the materials use consistently throughout the grade 1 activity lesson plans for both “Discovery” and “Explore Path” activities.

Materials consistently support multiple types of practices (e.g., modeled, guided, collaborative, independent) and provide guidance and structures to achieve effective implementation.

- The materials provide teacher guidance and structures for effectively implementing multiple types of practices. For example, materials state clear success criteria for group and independent practice activities contained in units to ensure that various types of practices lead to student mastery.
- The materials provide teacher guidance and structures for effectively implementing multiple types of practices. For example, in Unit 5, Activity 5, the “Teacher Note” section gives advice. Before the lesson, the teacher decides how to divide the class. The materials suggest small groups, science partners, or individuals. The materials also provide a teacher instruction video, “Setting Up Your Mini Golf Course.” After the research is complete, the materials provide a list of questions for the teachers to use in the Debrief section.
- The materials provide multiple types of practices. In Unit 6, Activity 2, the students investigate how funnel cakes and pretzels change when you cook them. The collaborative learning lesson begins when students watch the “Funnel Cake and Pretzel” videos. Students record their observations before and after the funnel cake and pretzels are cooked. Students write down in their books what makes the food change. The teacher asks: What made the pretzel and funnel

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cake change from beginning to end? Why did the pretzel and funnel cake change? What causes them to change?

- Materials consistently support multiple types of practices (e.g., modeled, guided, collaborative, independent) and provide guidance and structures to achieve effective implementation. For example, Unit 3, week 6’s activities in the “Discovery Path” engage students in a phenomenon story, asking questions, defining vocabulary, recording their observations, student-driven inquiry, planning an investigation, collaborative learning, connection, and reflection, whole group sharing, hands-on activities, read to learn, independent work, and discussions and debriefing.
- Materials provide teacher guidance and structures for effectively implementing multiple types of practices. For example, Unit 13, Activity 1, provides explicit instructions on how to: prepare students before reading the phenomenon using a scripted story, showing a video; apply question-producing techniques such as a Think-Aloud Model that will guide a discussion by explaining, guiding, and reminding; and closing the day’s activity by debriefing. Activity 2 includes a direct script in the Student-Driven Inquiry section “Ask: What do you use water for?” and in Reading to Learn, “Say: Lake Meredith is at risk of drying up.”

Materials represent a diversity of communities in the images and information about people and places.

- The Unit 6 phenomenon occurs at The Texas State Fair, where a diverse group of children try several fair foods. The unit includes pictures and illustrations of different types of people.
- The Teacher’s Edition publication *Introduction to Texas Science: K-1st Grades* explains that the Student’s Edition includes relatable characters that guide students through the unit. These caricatured characters have children with black, brown, and white shades of skin tones: black, brown, blonde, red, straight, short, and curly hair, and diverse names such as Aleki, Natalia, and Cameron. Unit 5 of the Student Edition includes caricatures of a diverse group of children, including a child using crutches to walk.
- The grade 1 materials represent a diversity of communities in the images and information about people and places. For example, in Unit 17, the phenomenon story is about a “Studies Weekly” character named Claire, who uses crutches to move around. Claire visits the Underdog Coalition, Inc. in Italy, Texas, which helps animals that need support. “Claire thinks about how her crutches help her move around and do daily tasks. She wonders if objects could be created for these animals to help them move and live better.”

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Indicator 7.3

Materials include listening, speaking, reading, and writing supports to assist emergent bilingual students in meeting grade-level science content expectations.

1	Materials include guidance for linguistic accommodations (communicated, sequenced, and scaffolded) commensurate with various levels of English language proficiency as defined by the ELPS.	M
2	Materials encourage strategic use of students' first language as a means to linguistic, affective, cognitive, and academic development in English.	M

Meets | Score 2/2

The materials meet the criteria for this indicator. Materials include listening, speaking, reading, and writing supports to assist emergent bilingual students in meeting grade-level science content expectations.

Materials include guidance for linguistic accommodations (communicated, sequenced, and scaffolded) commensurate with various levels of English language proficiency as defined by the ELPS. Materials encourage strategic use of students' first language as a means to linguistic, affective, cognitive, and academic development in English.

Evidence includes but is not limited to:

Materials include guidance for linguistic accommodations (communicated, sequenced, and scaffolded) commensurate with various levels of English language proficiency as defined by the ELPS.

- Each Unit Overview in the “Standards Coverage” section includes a description of the ELPS and guidance for linguistic accommodations in listening, speaking, reading, and writing. The materials include a sidebar or footnote demonstrating ELPS connections and the correspondent reference numbers.
- The materials include suggestions at critical points in the main lesson. In Unit 3, Activity 1, in the vocabulary section, students learn about the causes and effects of the phenomenon story. The teacher reminds the students of the prior knowledge and experiences from the previous lessons to help them understand the vocabulary meanings of the words heated and cooled. The students practice saying the vocabulary in context to internalize the words and build academic language proficiency. “The _____ is heated in the hot car. The _____ is cooled in the cold car.”
- The materials include guidance for linguistic accommodations in the teacher edition publication, *Introduction to Texas Science: K-1st Grades*, which states, “The Texas English Language Development or ELD slides, customized for each unit, provide additional linguistic support for the whole class or small groups.” In Unit 1, the Teacher Edition includes teacher guidance to use strategies such as a picture walk and framing our thinking for beginners, exploring words and ideas for intermediates, and framing our learning for advanced and advanced high.
- The “Standards Coverage Chart” identifies the ELPS integrated into every unit and locates the activities within the lesson plan. The “Teacher Support Resources” section of the lesson plan contains a resource titled the “English Language Development (ELD) Lesson” with the following

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description, “Differentiated language scaffolds that can be projected to students and taught before or after the core science activities.” The materials customize the presentation slides for each unit.

Materials encourage strategic use of students’ first language as a means to linguistic, affective, cognitive, and academic development in English.

- The “Training and Resources” section includes the “Primary Source Analysis Tools” used in the units in English and Spanish and multiple graphic organizers in both languages. The “Training and Resources” section also includes instructional strategy templates used in the units in English and Spanish, including the 5E template, the Frayer Model, the Inquiry Planning template, the Know, Want to Know, and Learn template, the One-Sentence Summary template, the See, Think, Wonder template, and more.
- In Unit 2, Activity 1, in the “Vocabulary” section, students make observations and ask questions about the phenomenon. As students discuss the attributes, they turn to their neighbors and tell them the new vocabulary word and what it means using basic, accessible language. The materials suggest that students may define the word in their first language before attempting it in English.
- The Teacher Edition publication, *English Language and Proficiency Standards (ELPS) Strategies and Leveling*, includes teacher guidance for learning strategies. For K-1 grades listening as a beginner, the text recommends, “Preteach unit vocabulary and concepts using flashcards with accompanying visuals and the word in the student’s first language.” For speaking K-1 intermediate, the publication states to “Provide students with a version of the anchor chart to keep at their desks that contains their first language and English.” For reading in K-1, the text recommends that the teacher “Provide one-on-one instruction using the unit’s ELD lesson with extensive linguistic supports, such as flashcards with visuals and students’ first language.”
- In the “Studies Weekly Strategies and Leveling for the ELPS” guidance document, teachers are encouraged to allow students to express their understanding in their first language, especially students working at the beginning and intermediate levels. “Beginner: Model the strategy using words familiar to the students. Show only visuals for examples and allow students to describe in their first language. Have students repeat and mimic the definition while using visuals. Within the lesson, have students trace the word or draw the word to describe its definition.”

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Indicator 7.4

Materials guide fostering connections between home and school.

1	Materials provide information to be shared with students and caregivers about the program's design.	M
2	Materials provide information to be shared with caregivers to help reinforce student learning and development.	M
3	Materials include information to guide teacher communications with caregivers.	M

Meets | Score 2/2

The materials meet the criteria for this indicator. Materials guide fostering connections between home and school.

Materials provide information to be shared with students and caregivers about the program's design. Materials provide information to be shared with caregivers to help reinforce student learning and development. Materials include information to guide teacher communications with caregivers.

Evidence includes but is not limited to:

Materials provide information to be shared with students and caregivers about the program's design.

- The "Teacher Resources" section includes tools to help the teachers communicate with parents and caregivers about the curriculum. This document contains a one-page information flier to send home with students informing their caregivers about the curriculum their students will be using. It also explains the purpose of the home letters. "The 'Home Letter' shares the following information with the child's caregiver: unit objectives, home activities to continue learning, unit vocabulary, possible student misconceptions, and suggested questions to help caregivers continue the classroom conversation." The "Home Letter" in Unit 12 shares the objective that students identify that plants need water, sunlight, and air. The "Home Learning Letter" includes the following vocabulary words: *environment*, *sunlight*, *nutrients*, *plant*, and *space*.
- The materials provide information for sharing with students beginning in Unit 1, Activity 1, when the teacher introduces the materials by saying, "Each week, you will get a new student edition. Your student edition has articles we will read together and activities that we will do." The teacher also explains how they will use Word Wall cards for vocabulary, what science is, and who scientists and engineers are. In Activity 2, the students learn about safety. In Activity 3, students learn about teamwork and collaboration. In Activity 4, students learn about growth mindsets. In Activity 5, students learn about "Best Science and Engineering Practices." These themes will repeat in all units throughout the year.
- The "Publication Resources" section of the online Teacher Edition provides a one-page that includes detailed information about the instructional design and how the curriculum is structured, with a weekly student edition anchoring the learning with a phenomenon or problem to solve student-led inquiry and learning activities. The flier also includes a graphic representation of the student edition and the core components of the student materials.

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Materials provide information to be shared with caregivers for how they can help reinforce student learning and development.

- For example, Unit 2 includes a “Let’s Bounce!: Home Letter.”. The letter states:
Dear Families, During science instruction at school, your child will be learning how to observe and classify objects by their observable physical properties. By the end of this unit, students should be able to meet the following learning objectives: I can classify objects based on their color, shape, and size; I can identify which objects are heavier or lighter; I can explain a phenomenon based on classifying different properties. To help support your child in understanding this concept, we suggest the following: When you are making dinner, have your child identify the objects that are heavier and lighter than the dinner plate. When you go to the grocery store or at home, have your child name the texture, color, shape, and size of a few different foods. Have your child identify the different shapes of the furniture in your home. Give your child ten random objects and ask them to classify the objects by their physical properties. Have your child tell you how they sorted the objects.
- As a home activity, to support the concepts for grade 1, Unit 18, “Life Cycles,” the materials suggest creating a list of mammals and describing the characteristics of a mammal. Students can draw the life cycle of their favorite mammal. The materials also provide questions caregivers can ask, “How do different animals change as they grow?” and “Are all animal life cycles the same?”
- The teacher’s publication, “Parent Communication Tools,” provides “The ‘Home Letter’ shares the following information with the child’s caregiver: unit objectives, home activities to continue learning, unit vocabulary, possible student misconceptions, suggested questions to help caregivers continue the classroom conversation.” Each unit provides a “Home Learning Letter,” which includes learning objectives and suggestions for activities to support the child in understanding the concept.

Materials include information to guide teacher communications with caregivers.

- The materials in the “Publication Resources” section of the online Teacher Edition include “Parent Communication Tools.” The document consists of a letter for the teacher detailing resources, such as the “Home Letter” for each unit, to print or email to parents and caregivers. In the letter for the teacher, the materials highlight the importance of keeping caregivers informed and supported throughout the school year so that they can continue the learning process at home.
- Each unit provides a family-friendly “Home Letter” for parents and caregivers that explains what the student will learn in each unit. It “includes common misconceptions, home activities, and conversation starters that can be used to strengthen and support what is learned in class.” For example, in Unit 16, “Eat or Be Eaten,” the teacher materials describe the “Home Letter” as a “helpful resource to guide teacher communication. It provides information about the design of the program and how caregivers can reinforce student learning and development.” The “Home Letter” for Unit 18 describes the student’s goals and objectives and the misconceptions. The “Home Letter” addresses the misconception that all animals go through the same amount of cycles by explaining that animals can have more or fewer stages in their life cycle.

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Indicator 8.1

Materials include year-long plans with practice and review opportunities that support instruction.

1	Materials are accompanied by a TEKS-aligned scope and sequence outlining the order in which knowledge and skills are taught and built into the course materials.	M
2	Materials provide clear teacher guidance for facilitating student-made connections across core concepts, scientific and engineering practices, and recurring themes and concepts.	M
3	Materials provide review and practice of knowledge and skills spiraled throughout the year to support mastery and retention.	M

Meets | Score 2/2

The materials meet the criteria for this indicator. Materials include year-long plans with practice and review opportunities that support instruction.

Materials are accompanied by a TEKS-aligned scope and sequence outlining the order in which knowledge and skills are taught and built into the course materials. Materials provide clear teacher guidance for facilitating student-made connections across course concepts, scientific and engineering practices, and recurring themes and concepts. Materials provide review and practice of knowledge and skills collected throughout the year to support mastery and retention.

Evidence includes but is not limited to:

Materials are accompanied by a TEKS aligned scope and sequence outlining the order in which knowledge and skills are taught and built in the course materials.

- The materials include a TEKS-aligned scope and sequence that shows how science knowledge and skills are addressed over the course of the year.
- Each strand is described and explains how each TEKS progresses from kindergarten to grade 5. Knowledge, expectations and spiraling concepts, new concepts, scientific and engineering practices (SEP), recurring themes and concepts (RTC), and new vocabulary are included. For example, the strands “Matter and Its Properties” and “Matter and Energy” are introduced along with the corresponding TEKS and the location of the units in the materials for each grade level.
- Materials are accompanied by a TEKS-aligned scope and sequence outlining the order in which knowledge and skills are taught and built into the course materials. For example, the *Grade 1 Digital Teacher’s Edition* includes a “Texas Science Scope and Sequence” chart showing grade 1 TEKS standard 1.6.B: “Explain and predict changes in materials caused by heating and cooling” below the core concept of matter and its properties.

Materials provide clear teacher guidance for facilitating student made connections across core concepts, scientific and engineering practices, and recurring themes and concepts.

- The materials provide the teacher clarity in understanding how activities and experiences connect concepts and SEP. For example, in Unit 6, Activity 2, the lesson plans include a gray table on the left with this SEP “Plan and conduct investigations.” Then, under Student-Driven Inquiry, it guides the teacher to “Discuss: How can we investigate our question?”

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- The materials provide teacher clarity in understanding how activities connect. For example, the beginning of each unit provides a list of TEKS and SEPs.
- Unit 1 lists the science standards at the beginning of the unit. A complete description of the standards coverage includes SEP, RTC, and English Language Proficiency Standards (ELPS.) The next page includes the materials list and teacher support resources.

Materials provide review and practice of knowledge and skills spiraled throughout the year to support mastery and retention.

- The materials provide a vertical and horizontal alignment document indicating that "Texas Science from Studies Weekly" has intentionally leveraged and spiraled this content, guiding the development of grade-level content, recurring themes and concepts, and scientific and engineering practices.
- The vertical and horizontal alignment document provides a table with sections indicating spiraled concepts, new concepts, SEP, RTC, and vocabulary.
- The newly learned science knowledge and skills taught within the school year are intentionally practiced and spiraled over the course of the year. For example, in Unit 1, the "Standards Coverage" chart states, "Within Unit 1, all SEP and RTC are introduced as foundational concepts. All other sections show bolded text that indicates coverage within the activities listed." In Activity 1, Discovery Path, the RTC patterns are taught using the student resource, "Poster Pal," and the vocabulary section. Then in Unit 14, the RTC is identified as "identify and use patterns to describe phenomena or design solutions."

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Indicator 8.2

Materials include classroom implementation support for teachers and administrators.

1	Materials provide teacher guidance and recommendations for the use of all materials, including text, embedded technology, enrichment activities, research-based instructional strategies, and scaffolds to support and enhance student learning.	M
2	Materials include standards correlations, including cross-content standards, that explain the standards within the context of the grade level.	M
3	Materials include a comprehensive list of all equipment and supplies needed to support instructional activities.	M
4	Materials guide safety practices, including the grade-appropriate use of safety equipment during investigations.	M

Meets | Score 2/2

The materials meet the criteria for this indicator. Materials include classroom implementation support for teachers and administrators.

Materials provide teacher guidance and recommendations for the use of all materials, including text, embedded technology, enrichment activities, research-based instructional strategies, and scaffolds to support and enhance student learning. Materials include standards correlations, including cross-content standards, that explain the standards within the context of the grade level. Materials include a comprehensive list of all equipment and supplies needed to support instructional activities. Materials guide safety practices, including the grade-appropriate use of safety equipment during investigations.

Evidence includes but is not limited to:

Materials provide teacher guidance and recommendations for the use of all materials, including text, embedded technology, enrichment activities, research based instructional strategies, and scaffolds to support and enhance student learning.

- The materials include an overview at the beginning of each week and a Unit of Instruction that emphasizes the purpose of the lessons and activities to come. This supports teachers in purposeful planning and making connections. For example, Unit 4 includes the learning standard, Scientific and Engineering Practices (SEP,) Recurring Themes and Concepts (RTC,) math and ELAR connections, English language proficiency standards (ELPS), and common misconceptions. The teacher guidance materials include a comprehensive materials list for preparation and additional resources, including technology to support instruction, such as differentiated language for scaffolding, background information and answer keys, rubrics, and feedback suggestions for all activities in the unit. The student support documents indicate the use of a home letter. The end of the overview includes success criteria and scripted teacher notes.
- The materials are organized in a way that facilitates ease of implementation and use. For example, the materials are available in both print and digital formats.
- The materials provide teacher guidance and recommendations for using all materials, including researched-based instructional strategies. For example, the Teacher's Edition includes the

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publication *How to Use Studies Weekly*, which explains how to use embedded technology. Also, the *Background Information Podcast* is described as “a podcast that discusses information to aid teachers in instructional strategies, content, and misconceptions students might have in the unit.” Then in Unit 11, the Teacher’s Edition includes the podcast, *What’s with the Weather: Topic Background Information*.

- The grade 1 materials provide Core Components Descriptions (Grades K-5) in the publication resources. All the components in the Texas science curriculum are identified with a picture or icon and a description of how teachers can use it to implement the curriculum. For example, the Teacher’s Edition states that “this component provides teacher guidance and recommendations for use of all materials. This includes a Pacing Guide, Standards Coverage, Materials List, how to use student and teacher resources, success criteria, technology use, formative assessment, wellness, and extension activities, all to support student learning.”

Materials include standards correlations, including cross content standards, that explain the standards within the context of the grade level.

- The materials include standard correlations, including cross-content standards, that explain the standards within the context of the grade level. The unit overview indicates math, ELAR, wellness, and social studies connections.
- The materials include cross-content standards in math. For example, in Unit 10, the students begin their independent practice comparing lengths and widths of different bodies of water using the "<," ">," and "=" symbols.
- The materials include science standards correlations for lesson activities within the context of the grade level. For example, Unit 6, Activity 4, lists ELAR standard 1.6.H “Synthesize information to create new understanding.”
- Materials include cross-content standards for math within the context of the grade level. For example, Unit 11, Activity 5, lists Math standard 1.8.A “Collect, sort, and analyze data, in up to three categories using models/representation such as tally marks and T-Charts .”

Materials include a comprehensive list of all equipment and supplies needed to support instructional activities.

- The unit overview includes a comprehensive list of all equipment and supplies needed to support instructional activities. For example, Unit 4, has bubble wrap squares, small colored attribute blocks, coloring supplies, corrugated paper squares, cotton balls, faux fur fabric squares, feathers, small felt squares, small foil muffin cups, glue sticks, index card, long socks, magazines or catalogs marbles, opaque fabric samples, paper clips, jumbo plastic cups, 9 oz plastic dinosaur, small ribbon samples, rocks, small scissors, self-adhesive googly eyes, sorting trays straws, cube-shaped tissue boxes, empty transparent tape, unsharpened pencils, and wax paper.
- The materials include a comprehensive list of all equipment and supplies needed to support instructional activities. For example, the Teacher's Edition includes the publication *Core Components Description Grade K-5*, which describes the teacher edition as “This component provides teacher guidance and recommendations for use of all materials. This includes a pacing guide, standards coverage, and materials list.”
- The materials provide a materials list for each unit within the grade 1 Teacher Edition. The materials list includes the activities where the materials will be used and the quantity needed for each activity. For example, in Unit 10, “Water, Water, Everywhere!,” the Explore Path

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Materials List includes but is not limited to six blue markers, six spray bottles, six trays, and six sheets of wax paper for Activity 6. A separate Discovery Path Materials List is also provided. The materials list is also included in the left-hand column of the lesson plan for each activity.

Materials include guidance for safety practices, including the grade appropriate use of safety equipment during investigations.

- The materials provide teacher guidance for safety practices and grade-appropriate use of safety equipment during investigations. For example, in Unit 1, “Tools and Safety,” materials direct the teacher to display a safety poster. Teacher guidance has the students discuss ways to stay safe in the classroom and trace the sentence “I can stay safe.” Materials provide a teacher script that states, “By tracing this sentence, you are agreeing to follow the science rules.” Additionally, the teacher’s edition includes the publication *How to Use Studies Weekly K-1*, which lists colored icons found in the student’s edition, including the icon ‘!’ to denote “SEP demonstrates Safety.”
- The grade 1 materials include teacher guidance for safety practices within the lesson plans. For example, in Unit 1, Activity 2, “Tools and Safety,” the “Reading to Learn” section has the teacher read an article titled “Safety First” with students. The teacher’s script for the lesson states, “Based on this article, I know that one way to stay safe in the classroom is to keep areas clean.” The teacher then displays the Poster Pal and discusses ways students can stay safe in the classroom as they do science and engineering. The teacher writes ways to stay safe in the “Our Safety Rules” box of the Poster Pal.

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Indicator 8.3

Materials provide implementation guidance to meet variability in program design and scheduling.

1	Materials support scheduling considerations and include guidance and recommendations on required time for lessons and activities.	M
2	Materials guide strategic implementation without disrupting the sequence of content that must be taught in a specific order following a developmental progression.	M
3	Materials designated for the course are flexible and can be completed in one school year.	M

Meets | Score 2/2

The materials meet the criteria for this indicator. Materials provide implementation guidance to meet variability in program design and scheduling.

Materials support scheduling considerations and include guidance and recommendations on required time for lessons and activities. Materials guide strategic implementation without disrupting the sequence of content that must be taught in a specific order following a developmental progression. Materials designated for the course are flexible and can be completed in one school year.

Evidence includes but is not limited to:

Materials support scheduling considerations and include guidance and recommendations on required time for lessons and activities.

- The “Activity Summary” chart in the Unit Overview indicates the recommended time for all activities. This is to be used as guidance for scheduling science instruction time. This information is replicated at the activity level in the teacher’s edition
- At the beginning of each unit, an activity summary is provided, listing the activity name and page number. The table of contents also provides another chart breakdown by the week.
- The grade 1 materials include guidance and recommendations on required time for lessons and activities with options for additional extension activities. For example, the materials provide a document titled “How to Use Studies Weekly” with a section to answer the question, “How much time does it take?” The materials suggest two options, the Discovery Path and the Explore Path. The Discovery Path is designed to meet the TEKS and takes 60 minutes of total time per week in four 15-minute blocks. The Explore Path is recommended but not required to meet the grade level TEKS requirement and states that “The Explore Path is optional enhancement materials that compliment the Discovery Path.”
- The grade 1 materials include guidance and recommendations on required time for lessons and activities with options for additional extension activities within the lesson plan. For example, the activities listed on the teacher’s lesson plan include the time required for the required Discovery path and also offer the Explore path. The materials include a message with an asterisk in the activity summary for the Explore Path, which says that “*The purpose of the Explore Path content is to supplement the existing Engineering Design Process in the Discovery Path. This content is shown in green.”

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Materials guide strategic implementation without disrupting the sequence of content that must be taught in a specific order following a developmental progression.

- The primary purpose of the Teacher Edition is to give teachers strategic implementation of the curriculum that follows a developmental progression. The evidence of this progression can be found in the Vertical and Horizontal Alignment document (found online at the Publication level). In addition, the Activity Summary chart on the second page of each unit's Teacher Edition provides suggested guidelines for implementation. In addition, optional extension materials are indicated in the Activity Summary chart with their expected time for implementation. This is keenly evidenced by the optional Explore Path in grades K-1 and the frequent optional "beige" activities with their respective time for implementation. All of this follows the sequence of the TEKS and stays within the boundaries defined by those TEKS.
- The materials provide a Vertical/Horizontal alignment guide that ensures the sequence of content is taught in an order consistent with the developmental progression of science. In grade 1, students classify observable physical properties.
- Materials guide strategic implementation without disrupting the sequence of content that must be taught in a specific order following a developmental progression. For example, in Unit 14, Activity 1, the lesson header suggests 30 minutes for the lesson, and it gives this tip "If you are following the Discovery Path, continue below the Explore Path content to wrap-up the activity." In the Explore Path, the teacher is guided to "Allow students time to draw their plans to improve, individually or collaboratively."

Materials designated for the course are flexible and can be completed in one school year.

- Texas Science provides 32 weeks of science instruction. Generally speaking, each unit covers a single student expectation 6 - 13. TEKS 1 - 5 are integrated throughout the school year. Within every unit are optional materials to extend the learning.
- The materials include units, lessons, and activities for a full year of instruction. For example, the units can be reasonably implemented within the time constraints of the school year, giving the teacher flexibility and choice.
- Materials guide adjusting to local time and scheduling constraints. For example, the teacher's edition publication *How to Use Studies Weekly for Kindergarten-First* states that "To meet the TEKS, only the Discovery Path is necessary, but the Explore Path adds so much more if your class time permits."

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Indicator 9.1

The visual design of materials is clear and easy to understand.

1	Materials include an appropriate amount of white space and a design that supports and does not distract from student learning.	Yes
2	Materials embed age-appropriate pictures and graphics that support student learning and engagement without being visually distracting.	Yes
3	Materials include digital components that are free of technical errors.	Yes

Not Scored

The visual design of materials is clear and easy to understand.

Materials include an appropriate amount of white space and a design that supports and does not distract from student learning. Materials embed age-appropriate pictures and graphics that support student learning and engagement without being visually distracting. Materials include digital components that contain technical errors.

Evidence includes but is not limited to:

Materials include an appropriate amount of white space and a design that supports and does not distract from student learning.

- The overall design and layout of digital components included in the materials adhere to the *Texas Resource Review Digital Design Guide Guidelines*. The materials include appropriate use of white space and design that supports and does not distract from learning—pictures and graphics support student learning and engagement without being visually distracting. For example, the student view articles include a reading mode option that allows students to enlarge text and focus on relevant content and illustrations.
- Teacher guidance materials design contains precise, designated places for important information. Teacher guidance materials design makes it easy for teachers to locate important information for planning and instruction.
- Digital materials include an appropriate amount of white space that does not distract from student learning. The background of the Digital Student Edition is white, with a gray left navigation panel that includes an orange “Activities” header. The right side consists of a white box under a blue heading that contains the content’s title and an audio tab above black text.
- The digital materials include an appropriate amount of white space that does not distract from student learning. The content is organized logically by unit, week, and activity. Upon clicking on each week, students find the week’s activities, articles, and games listed by title.

Materials embed age appropriate pictures and graphics that support student learning and engagement without being visually distracting.

- The materials embed age-appropriate pictures and graphics that support student learning and engagement without being visually distracting. For example, the “Poster Pal” includes magnified

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pictures and photos that guide questioning, support understanding of phenomena and engineering scenarios, illustrate vocabulary, and help students organize information. Student digital components include embedded tools, such as reading mode to minimize distractions, help students focus on the article and the images that go with it, allow note-taking, text-to-speech that can be adjusted, annotations, and highlighting.

- The materials include vocabulary Word Wall cards with clear and authentic images and graphics to define and support the new words students are learning. Grade 1 materials include magnified photos that identify the four seasons through the illustrations of trees. Also, print and digital Student Editions include colorful caricatures and color-coded text.
- In the online teacher resources, the grade 1 materials include digital presentation materials, including a digital copy of the student edition and slides for a picture walk activity. The teacher's presentation slides contain additional text for instruction, while the student slides do not. In Unit 2, the English Language Development (ELD) teacher slides display pictures depicting the properties: color, shape, size, and texture. The images include a box of crayons, geometric solids, large and small red spheres, and a rectangular object with raised bumps. The slide lists the vocabulary words "color," "shape," "size," and "texture" on the right side of the slide with instructions such as "Draw a line to several of the crayons. Draw a line to the shapes. Draw a line to the bumpy image."

Materials include digital components that are free of technical errors.

- The materials are free of spelling, grammar, punctuation errors, and erroneous content materials or information. "Poster Pals," unit overviews, and student materials are error-free. Answer keys are free of wrong answers to assessment questions.

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Indicator 9.2

Materials are intentionally designed to engage and support student learning with the integration of digital technology.

1	Materials integrate digital technology and tools that support student learning and engagement.	Yes
2	Materials integrate digital technology in ways that support student engagement with science and engineering practices, recurring themes and concepts, and grade-level content.	Yes
3	Materials integrate digital technology that provides opportunities for teachers and/or students to collaborate.	Yes
4	Materials integrate digital technology that is compatible with a variety of learning management systems.	Yes

Not Scored

The materials integrate digital technology and tools that support student learning and engagement. Materials integrate digital technology in ways that support student engagement with science and engineering practices, recurring themes and concepts, and grade-level content. Materials integrate digital technology that provides opportunities for teachers and/or students to collaborate. Materials integrate digital technology that is compatible with a variety of learning management systems.

Evidence includes but is not limited to:

Materials integrate digital technology and tools that support student learning and engagement.

- Digital technology and tools enhance student learning through games, interactive activities, articles, and online assessments. As students complete activities, answer article comprehension questions, explore media, and play misspelled games, they earn coins to spend on two games in their student profile. In “Study Buddies,” they can choose a character and build a home, while “Explorers” allows them to create an avatar and a tree house accessing different levels. The teacher training resource, “Online Onboarding Guide,” includes digital tools such as “Student Article Navigation,” digital reading features, and assessments.
- Student digital components include embedded tools. The materials provide text-to-speech audio support with word highlighting. The audio support has pacing control and reads all text and describes images. When enabled, accessibility adjustments are available to all students in the bottom-left corner of the student page—these adjustments allow various changes to content orientation, color, and font appearance to maximize student engagement.

Materials integrate digital technology in ways that support student engagement with science and engineering practices, recurring themes and concepts, and grade level content.

- Materials provide opportunities for students to obtain, evaluate, and communicate information using digital tools. For example, the online students' view includes visuals or a video at the beginning of the unit to promote inquiry and activate prior knowledge. The online phenomenon introduction allows students to add observations, respond to open-ended questions, and make predictions. As the unit progresses, multiple activities guide students' learning, check for

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understanding with multiple-choice questions, and allow students to explain their reasoning as they verify or modify their thinking.

- The materials integrate digital technology in ways that support student engagement with the science and engineering practices, recurring themes and concepts, and grade-level content. With teacher guidance, students' online experience includes using online videos, images, illustrations, and podcasts designed to engage students in all three dimensions of learning. For example, Unit 18, Activity 2 of the online Teacher Edition includes a video called "Northern Mockingbird."
- The teacher training resource, "Online Onboarding Guide," includes information on how to find training and resources; it states, "From your Studies Weekly Online account, teachers have access to various Training and Resources. Those include interviews, project demos, virtual field trips, K-2 videos, and instructional resources that include graphic organizers, instructional strategy templates and more."
- In the online materials, after watching the phenomenon video and listening to the phenomenon story, students listen to the following text: "Motion is when things move. Motion can be in any direction. Motion can be changed." In Unit 5, Activity 3: Research Push and Pull, students identify pushes and pulls with images showing examples of push and pull.

Materials integrate digital technology that provides opportunities for teachers and/or students to collaborate.

- The materials guide integrating digital technology and tools in whole group and individual settings with a "share into Google Classroom tool." This tool allows teachers to customize and differentiate content and activities for student group work.
- Studies Weekly Online can support co-teachers who can log in and share access with the primary classroom teacher. This feature allows co-teachers to collaborate to modify tests, change grades, and manage all aspects of the online class.
- Materials integrate digital technology that allows teachers and/or students to collaborate. The teacher training resource "Online Onboarding Guide" includes information on grading assignments that allow teachers to share grades with students. Students can view their overall scores each week, scores for teacher-created tasks, and the date, score, and attempts for each submission.
- In the online Teacher Edition, teachers can find all the printable resources, student resources, and assessments needed for implementing the "Studies Weekly Science Curriculum." In this section, teachers can find presentation slides titled "ELD Teacher Edition" and "ELD Student Edition."

Materials integrate digital technology that is compatible with a variety of learning management systems.

- The materials are accessible and compatible with various devices such as Chromebooks, iPads, PCs, Apple computers, and smartphones. Science Weekly integrates digital technology that is compatible with a variety of learning management systems. Texas Science can integrate with Google Classroom, Classlink, Clever, and any Common Cartridges system.
- Materials integrate digital technology that is compatible with a variety of learning management systems. The teacher training resource, "Online Onboarding Guide," contains a link for the help center, a technology selection, and hardware FAQs that state, "Studies Weekly's online content site is designed as a Bring Your Own Device (BYOD) service." For use with many hardware and software platforms." In the "Assistive Technology and Browser Compatibility" section, the

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materials state the following, “We have worked very hard to be able to support all major systems that comprise over 95% of the user market share, including Google, Chrome, Mozilla Firefox, Apple Safari, Opera and Microsoft Edge, JAWS, and NVDA (screen readers), both for Windows and Mac users.”

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Indicator 9.3

Digital technology and online components are developmentally and grade-level appropriate and provide support for learning.

1	Digital technology and online components are developmentally appropriate for the grade level and align with the scope and approach to science knowledge and skills progression.	Yes
2	Materials provide teacher guidance for the use of embedded technology to support and enhance student learning.	Yes
3	Materials are available to parents and caregivers to support student engagement with digital technology and online components.	Yes

Not Scored

Digital technology and online components are developmentally appropriate for the grade level and align with the scope and approach to science knowledge and skills progression. Materials provide teacher guidance for the use of embedded technology to support and enhance student learning. Materials are available to parents and caregivers to support student engagement with digital technology and online components.

Evidence includes but is not limited to:

Digital technology and online components are developmentally appropriate for the grade level and align with the scope and approach to science knowledge and skills progression.

- The “How to Use Studies Weekly” document explains how digital technology and online components are developmentally appropriate for the grade level and align with the scope and approach to science knowledge and skills progression. The materials state:
The curriculum materials are designed to support you and lead your students to TEKS mastery. By the end of the unit, students will be able to demonstrate the student performance as described by the standard.", "The student starts with the student edition. One of the reasons why kids love Texas Science is because of its fun, engaging, and interactive student materials. The relatable Studies Weekly Characters guide students through the unit. The majority of student work will occur here.
- The student digital editions for kindergarten include short paragraphs with simple sentences and easy questions. First-grade text becomes progressively longer with new vocabulary and more extended questions. Second-grade text includes articles with multiple paragraphs with new language and complex questions.
- The Studies Weekly online platform offers the interactive version of the student edition with audio support and word highlighting to accompany the audio support.
- Students can accumulate coins for completing the online materials. Positive reinforcement feedback messages accompany the coins. Students can use their earned coins to update features of the games “Studies Weekly Study Buddies” and “Explorers.”

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Materials provide teacher guidance for the use of embedded technology to support and enhance student learning.

- Materials provide a Newsletter for ongoing support and guidance. The Newsletter states, "Join our Teacher Newsletter! Need online help, teaching strategies, and activity ideas? Join the Studies Weekly Teacher Talk."
- The materials support teachers in successfully integrating the technology within the program. The online platform has an apple in the bottom right corner for teachers to access. The materials offer a live chat feature, Studies Weekly online updates, and customer support.
- Materials provide teacher guidance for the use of embedded technology to support and enhance student learning. The training resource Online Onboarding Guide states its purpose: "This self-paced onboarding guide shows all the essential functions in Studies Weekly Online for initial implementation." It also identifies the following learning outcomes: "Participants will know how to: Navigate Studies Weekly Online; Create and manage online classes and publications; Utilize resources and tools to support instruction." For example, The online materials offer a Training and Resources section with training videos for managing the weekly publications and navigating the articles.

Materials are available to parents and caregivers to support student engagement with digital technology and online components.

- The materials include resources for parents and caregivers to support student engagement with digital technology and online components. For example, the *Tips for Caregivers to Support Online Engagement* infographic includes five tips for caregivers and students to Experience, Explore, Learn, and Review together at home.
- The materials include teacher resources to help communicate with parents and caregivers about the curriculum, which can be emailed or printed and sent home. The document "Tips for Caregivers to Support Online Engagement" provides guidance for parents to review the online videos used in class and offers questions to ask, such as, "What do you think causes this?" Parents also explore the unit activities and the "TEKS Explained" articles.
- Materials provide online student access from home. For example, the parent "Home Learning Letter" includes a brief reminder, in the form of a small clipart of a blackboard instructing parents to "Check out your student's edition of Studies Weekly, then go online for more great content!" The materials also include "Tips for Caregivers to Support Online Engagement," guiding parents to review assessments that students have taken, connect to online unit materials to address mistakes made, and use the online feedback option to communicate questions to teachers."
- Studies Weekly includes the following information to help families support student engagement with digital and online components: "The ability to create parent accounts through Studies Weekly Online is one of the greatest tools we have available to you and your students' parents. It allows parents to closely monitor how their kids are doing and how they're using the Studies Weekly Online resources."
- The student resources section offers a home letter PDF for delivering to parents and caregivers electronically. The home letter provides vocabulary terms, learning objectives, misconceptions, and questions to support their child at home. A text box says, "Check out your student's edition of Studies Weekly, then go online for more great content." Students log in to their student accounts remotely, so they have full access through their student accounts.