Studies Weekly Texas Science Grade K

Studies Weekly Texas Science Grade K 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.

- 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 (SEP), recurring themes and concepts (RTC), 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.

- The materials provide multiple opportunities to practice grade-level appropriate scientific and engineering practices. The materials prompt students to engage in hands-on activities that provide the students with opportunities to practice and demonstrate SEP. For example, Unit 6 introduces phenomena and has the students record observations, ask questions, and analyze data on a student question board.
- The materials use phenomena to connect content standards to engineering practices. For example, the objective in Unit 3 is for students to investigate, describe, and predict the causes and effects of magnet interactions, as well as use engineering practices to design magnet-based

solutions to problems. This is seen in Activity 8 when the students construct a magnet design to locate Miguel's lost train.

- TEKS K.1. states, "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 materials provide multiple and recurring opportunities to develop the above SEP in Unit 1. This unit includes the SEP plan to conduct investigations, create and use models, collect and analyze data, and develop explanations. Then, in Unit 3, SEP K.1.B instructs to "use scientific practices to plan and conduct simple descriptive investigations and use engineering practices to design solutions to problems." Lastly, in Unit 10, the students master SEP K.1.B.
- The kindergarten materials provide multiple opportunities to practice grade-level appropriate scientific and engineering practices as outlined in the TEKS. For example, in Unit 2, in a section of the "Discovery Path for Collaborative Learning," the students investigate and classify objects. The materials direct the teacher, "At the texture station, have students feel each object in order; in their student edition, place an X under the word that describes the texture they feel in each cup." This step is followed with, "At the investigative properties shape station, have students work with a partner to describe, identify, and classify the items by shape."

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

- The vertical/horizontal alignment guide includes specific information about when recurring themes are introduced and spiraled back into the program. The materials utilize patterns as a recurring theme. In Unit 6, the students observe the phenomena. The materials provide probing questions designed to activate prior knowledge as well as draw students' attention to patterns throughout the year in Units 2, 7, and 9. For example, Unit 7, references patterns as a recurring theme and has five activities that include patterns. Also, Unit 9, includes the student resource "Poster Pal" which prompts students to identify weather patterns.
- The RTCs are clearly labeled in each unit, including the activities about daily weather and seasonal weather patterns. In Unit 10, "Engineering Design: Aleki's Windy Solution," the students use their prior knowledge of weather patterns to discuss how the students could make a tool that Aleki could use to measure wind speed.

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 provide support for increasing complexity in student-led inquiry and investigation throughout the year. This support includes guidance for teachers to revisit topics with the students in order to review previous learning and revise thinking on topics. For example, in Unit 6, students learn about patterns seen in both the day and night. They then analyze data that activates prior knowledge about patterns. Materials clearly outline the SEPs and RTCs for the unit in the "Standard Coverage."
- Grade-level content knowledge and skills are taught using SEP and recurring themes so students can build and connect knowledge and apply it to new contexts. The lesson in Unit 9 deals with observing and describing 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.

- 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 SEP and recurring themes throughout the units and clearly identifies and color codes them throughout the unit's grade-appropriate activities to support and guide teachers through the development of content concepts and skills. For example, in Unit 9, Activity 2, 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 states, "I can collect and analyze data to identify daily weather patterns."

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. For example, in Unit 6, questioning is evident before, during, and after the investigation. The teacher prepares the 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 the patterns of day and night?" A question section is included to use a think-out-loud model and discussion. Then, the teacher collaborates with the students to create a student-driven question board.
- Students make connections between science and math during a whole group lesson. The teacher asks if they know the following shapes, cylinder, sphere, cone, and cube. The goal is to compare, sort, and describe rocks by shape. After going over the three-dimensional solids, the students work in a group to compare the shapes of rocks.
- TEKS K.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's Edition* publication, "How to Use Studies Weekly K-1," states, "The first activity of each unit is for students to study the phenomenon and ask questions about it."
- The grade K materials include opportunities for students to ask questions and plan and conduct investigations. For example, in Unit 10, Activity 4, the teacher notes direct the teacher to use a small, electric, two-speed fan for this activity. During collaborative learning, the teacher says, "We are going to research, investigate, and take notes as we learn more about wind." The teacher is directed to ask students to "make predictions in their student editions on whether materials will be affected and if the force of moving air will cause movement." The students circle yes or no in their student editions to answer the question, "Will wind move these items?" in the column labeled "My Prediction." The students conduct the investigation and circle yes or no in the column labeled "Test". Then, the teacher is instructed to say, "Turn to a science partner and tell them how the evidence from your activity demonstrates how wind moves lighter objects more than heavier objects."

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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, "Animal Discovery," the teacher presents the phenomenon story about a character named Aleki and his visit to the Lady Bird Johnson Wildflower Center in Austin, Texas. Aleki notices butterflies flying all around, "Aleki even notices one butterfly tucked under a leaf on a tree seeking a safe spot to rest. While exploring the wildflower center, he also learned there are far fewer Monarch butterflies in Texas than there used to be." Students draw or write their observations and questions in the spaces provided in their student editions.
- In Unit 7, Activity 2, students use scientific practices to identify differences in clouds. As stated in TEKS K.5, "Recurring themes and concepts. The student uses recurring themes and concepts to make connections across disciplines." The Teacher's Edition publication, *How to Use Studies Weekly K-1* states, "The activities are specially designed to help students make sense of the anchoring phenomenon through the integration of SEP and RTC." Unit 1 includes these RTC: cause and effect, systems and system models, structure and function, energy-matter and stability and change, scale, proportion, and quantity.
- Students have a chance to develop, evaluate, and revise their thinking as they engage in phenomena in Unit 11 as they ask questions, collect observations and measurements as

evidence to explain the relationship between the structure and function of objects, organisms, and systems as they discover rocks, soil, and water and conduct investigations.

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

- In Unit 4, "Exploring Natural Bridge Caverns," the teacher activates prior knowledge and experiences when she asks, "Have you ever been in a cave? What did you see? What did you do? How can you describe your experience to people who haven't been in a cave?"
- Materials elicit and leverage students' background knowledge and experience to adequately address potential areas of misunderstanding. For example, Unit 5, Activity 1, includes the teacher's note "The students' initial ideas and understanding may consist of 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."
- In Unit 6, Activity 1, students listen to the phenomenon and make observations and build awareness of patterns of day and night. The students are placed in groups to create ideas and produce questions. Groups share their best questions. The teacher prompts the students to predict what Gina and Mae will notice about day and night to their partner.
- 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.

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

- The materials clearly outline the scientific concepts and learning goals behind each phenomenon and engineering problem that correspond to content concepts across the grade level. For example, in the Teacher's Edition, Unit 3, "Engineering Design," the activity "Miguel's Train Trouble," has the following components identified for the teacher: the science discipline, the science standard K.7, engineering design scenario, unit objectives, SEP, and RTC. The "Activity Summary" clearly outlines all activities for the two-week lesson cycle. The "Standards Coverage" chart outlines the standards covered in this unit with bold type font, and SEP and RTC are color-coded in the chart and within the lesson plan. The sections "Teacher Support Resources" and "Student Support Resources" clearly label the title and icon for the media type while also providing a thorough description. A table identifying students' success criteria and formative assessment evidence is included within the lesson plan.
- 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 "Properties Matter: Teacher Background Information Podcast."
- The scope and sequence for kindergarten outlines the scientific concepts and learning goals behind each phenomenon and engineering problem. The vertical/horizontal chart depicts the recurring concepts and themes for kindergarten through grade 5.
- In Unit 11, students learn about rocks, soil, and water using the following scenario: "Jackson travels to Fort Worth, Texas, and one of his favorite things to do is visit the Fort Worth Botanical Gardens with his family. Jackson notices walls, paths, and waterfalls built from various shaped

rocks and stones throughout the Botanical Gardens." Students collect observations of the structure and the function of the materials to generate examples of practical uses for rocks, soil, and water by doing an authentic application of scientific and engineering practices. Unit objectives, TEKS, SEP, and RTC are clearly identified.

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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 “Standards Coverage Chart” indicates elements covered in each unit with bold print and presents content that builds complexity throughout the year. For example, the coverage chart displays RTC K.5.A, “identify and use patterns to describe phenomena or design solutions,” in bold print for units 3, 8, and 16.
- The “Matter and Its Properties and Matter and Energy” strand expects the kindergarten student to “identify and record observable physical properties of objects including shape, color, texture, and material, and generate ways to classify objects.” The strand expects the grade 1 student to classify the objects by shape, color, texture, and “attributes such as larger and smaller and heavier and lighter," as indicated in the grade 1 column by bolded text.

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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 English language development (ELD) lesson: "Differentiated language scaffolds that can be projected to students and taught before or after the core science activities." For example, Unit 12 reads "Plants Needs ELD Lesson” and refers to a media PDF file. The unit also has an optional “Differentiation” section: "Developing; Give students extra time to process and come up with their phenomenon questions. Advanced: Have extra writing paper if students produce more questions than can fit on their student editions."
- The publication *Introduction to Texas Science: K-1st Grades* demonstrates sequencing to allow for deeper understanding by designing lessons with a progression of concrete, representational, and then abstract reasoning when presenting concepts. It states, “Formulating hypotheses is a significant component of the TEKS. Therefore, many units are framed by a student-driven hypothesis statement, which is scaffolded. The hypothesis statement usually is coupled with gathering evidence, making claims, and supporting those claims with reasoning.” In Unit 9, students identify the daily weather patterns. The students activate prior knowledge with the *words sun, clouds,* and *sky*. The materials prompt the teacher to bring in other weather words: *rainy, snowy, windy,* and *hail.* Students use the words to assist with recording their evidence to track the weather.
- 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” and interactive “Student Edition”), and student-driven inquiry.

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

- The materials provide teachers clarity in understanding how activities connect. For example, each unit begins with a list of TEKS and SEP. Unit 12, “Plants Needs,” includes standards coverage, knowledge, expectations and spiraling concepts, new concepts, SEP, RTC, and new vocabulary.
- 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.
- In Unit 4, the publisher clearly labels the science standard “K.8A: Communicate the idea that objects can only be seen when a light source is present and compare the effects of different amounts of light on the appearance of objects.” The “Standards Coverage Chart” lists the SEP and RTC in detail.

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

- The materials provide student learning objectives, learning targets, and “I Can” statements for each unit. For example, Unit 12 begins with the objective, "The student will be able to observe and identify plants’ dependence on air, sunlight, water, nutrients in the soil, and space to grow." In this unit, the learning targets/success criteria are: “I can make observations about a phenomenon and ask questions based on what I notice or wonder about a phenomenon. I can

observe and identify that plants need water, sunlight, and air. I can identify and observe that plants need nutrients and space. I can explain that plants depend on the environment to meet their basic survival needs. I can identify the needs that plants depend on to survive."

- Every unit contains "I can" statements to let teachers know the objective. For example, in Unit 6, Activity 2, the "Success Criteria" says, "I can identify day and night."
- The publication "Vertical and Horizontal Alignments" connects strands and units to kindergarten TEKS. The "Earth and Space" strand aligns with TEKS K.9.A "identify, describe, and predict the patterns of day and night and their observable characteristics." "Vertical and Horizontal Alignments" identifies what the student should know for each concept. Unit 6 expects the student to identify, describe, and predict the patterns of observable characteristics.

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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 learn that energy is everywhere and occurs in cycles, patterns, and systems. For example, in Unit 4, Activity 3, students identify different light sources by reading the phenomenon and discussing the following questions: "Where did the light come from?" "What

light did Steven use in the cave?" "Which light source was made by humans?" "Which light source is a part of nature?"

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 the "Standards Coverage" section for Unit 3 on magnets, the materials identify common misconceptions students may have, such as all metallic or silver-colored objects are magnetic, magnetism is magical, and magnetic attraction doesn't go through objects.
- The teachers' edition includes the publication "How to Use Studies Weekly," which explains how to use the embedded technology, and "The Background Information Podcast," which "discusses information to aid teachers in instructional strategies, content, and misconceptions students might have in the unit." Unit 2 includes the "Jiggly Gelatin: Topic Background Information" podcast.
- The kindergarten 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" (2mins) states the publisher's "why" as "Texas has embraced the principles of the framework for K-12 science education" (8 mins) and identifies the 5E framework as their structural framework to organize materials, and (9 mins into the video), explains the material's guiding principles.
- The kindergarten materials explain the intent and purpose of the instructional design of the program's "Standards Coverage Chart" 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.
- Each unit begins with a phenomenon that includes success criteria. For example, before introducing the phenomenon in Unit 16, Activity 1, the teacher prepares the students by asking them to pay attention to what they wonder, their questions, and prior knowledge as they listen to the phenomenon story. The students write or draw their observations in the student edition.

For example, Unit 3 includes the success criteria for each activity using different language skills: Activity 1, “I can make observations and ask questions about the engineering scenario.” and Activity 5, “I can read and identify ways a magnet causes pushes and pulls on materials.”

- In Unit 7, Activity 3, a “Reading to Learn” section directs the teacher to “distribute crayons and read the article on the ‘Poster Pal’ and model tracking text as students read along in their student editions.” After the teacher and students circle vocabulary words on the ‘Poster Pal’ and student edition, the teacher asks, “What kind of evidence can you collect by observing the moon and stars?” Students share their answers. The teacher says, “In your student edition, draw an illustration that includes both the moon and stars in the night sky. You can use the ‘Poster Pal’ to help you.” The materials suggest that the teacher has the “students use prior knowledge and their understandings from today’s activity to illustrate a pattern they have observed in the night’s sky involving the moon and stars.”

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

- The Teacher Resources include “Unit Printables” that provide additional opportunities for students to engage with grade-level appropriate scientific texts to gather evidence and develop an understanding of concepts. For example, Unit 2, “Properties of Matter,” has 12 PDF files with activities to identify, use, investigate, and compare shapes and sizes; vocabulary cards to use in a Word Wall; an I Spy Properties table to draw, label and collect information about texture, color, and shapes; labeled pictures of Texas fruit and an Adventure Reader about properties that students can color and personalize.
- The materials provide opportunities for students to engage with scientific texts to include activities, such as pre-reading and vocabulary to help them develop an understanding of concepts. In kindergarten, the units include a “Prior Knowledge Review Vocabulary” section. In Unit 16, there are vocabulary lessons for Activities 2-4. For example, in Activity 2, the focus vocabulary word is seed. The teacher cuts into each fruit one at a time to show what is inside. Students look for patterns from each fruit. The teacher says, "What you have just identified is what we as scientists refer to as seeds. A seed is something that grows a new plant and is made by plants.” For example, in the teacher’s edition Unit 7, 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 2-7 introduce new vocabulary: *earth, moon, stars, sky,* and *sun*.
- The kindergarten materials provide opportunities for students to engage in purposeful and targeted activities with grade-level appropriate scientific text and vocabulary. For example, in Unit 7, Activity 4, the teacher presents unit vocabulary found on the student edition and in the classroom “Poster Pal” for the Sun, Earth, and Moon content. The teacher says, “Scientists have done a lot of research about the sun. Science tells us the sun is a big star that is the brightest object in the sky. The sun gives off heat and light.” After a collaborative learning activity, the directions guide the teacher to “Read the content on the ‘Poster Pal’ as a class to review what you have learned about the Sun, Moon, and Earth.”

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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.

- Many articles, activities, and games are interactive to provide opportunities for student's responses and checkpoints for understanding. The “Poster Pal” and the student's materials for Texas Science Studies Weekly 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 16, Activity 6, during the “Explore” phase, students observe their plants and record their seedling drawings for the day. The students refer to the “Poster Pal” and discuss what they've learned about the life cycle of plants and the observations of their seedlings.
- Also, Unit 1 begins with an RTC that will continue throughout the year. In Activity 2, “Cause and Effect and Systems and System Models,” students define the word *model,* and draw a model of a system using a printable during independent work. Then, in Unit 7, Activity 5, students create models based on observations about the Sun, Moon, stars, and clouds. For example, in Unit 13, Activity 2, in a section titled “Whole Group,” the teacher plays the video “Take A Breath.” The teacher asks, “What evidence did you have that the animals were breathing?” The students draw two animals from the video and the evidence of breathing that they collected. The teacher writes “air” on the board and says, “Humans and animals need air to survive. Using the word wall card and my example, write the word ‘air’ in your student edition in the sentence frame.”

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 think like a scientist and observe the world around them. They make observations about objects using the phenomenon "Gina and her classmates in Mrs. Garcia’s class need to clean up their messy classroom." 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. For example, the students work in small groups or as a class to generate a list of questions they “wonder about or are trying to understand?” If the students struggle, the teacher guides them with suggestions and a think-aloud using one of the question starters: how, why, what, when, or where.
- The materials create transfer opportunities for students to take what they have learned and use it flexibly in new situations. After a unit on things in the sky, students transfer their knowledge in Activity 5 of Unit 7. The students create a model of the Sun, Earth, Moon, and stars from air dry clay, and use sticky notes to label their models. For example, the teacher’s edition publication *Introduction to Texas Science: K-1st Grades* explains how their curriculum is structured: “The first unit of Texas Science consists of several weeks of material as an introduction to science and engineering. These lessons introduce students to the big ideas of scientific thinking and inquiry. Each subsequent unit is anchored by phenomenon-driven inquiry or a problem to solve.” Units 2-17 begin Activity 1 with this note to teachers: “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.”

- In Unit 8, Activity 3, in the “Discovery Path” section, the teacher uses the Poster Pal for a rock sorting activity with 3D shapes and “Rock Picture Cards.” The teacher uses a think-aloud model, “This rock looks most like a [3D shape] to me. I am going to put it in this column. The rocks in this group are all [3D shape]. We’ll name this group [3D shape].” The students assist the teacher in naming and describing each group. After a Reading to Learn article titled “Rocks Come In Many Shapes,” the students engage in a collaborative learning activity. The teacher says, “Now it’s your turn! You’re going to work with a group of science partners to sort your sample rock kit and describe each group of rocks like we did together.” Students draw at least one model in their student edition. If students struggle, the teacher assists by asking questions such as, “What shape is this rock? Are there other rocks that are similar in shape? Should this rock go in this group or another group?”

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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.

- In Unit 5, students research the effect of light using cups of different materials. After making predictions and collecting data, students use evidence to reflect on their learning and discuss if their thinking has changed based on their investigations. "Today, you will make predictions and demonstrate light's effects on four objects. Then you will investigate and draw the evidence from your observations."
- The materials prompt students to use evidence to support their hypotheses and claims. For example, in Unit 3, Activity 9, kindergarten students test the solution using magnets to solve problems. In the "Debrief" section, the students turn to their science partners and explain whether the design solves the engineering problem. The teacher asks, "What claim can you make based on the collection of evidence?" The teacher reminds students to use scientific language such as "I agree because…" or "I disagree because…." The teacher allows for wait time before moving on.
- In Unit 7, Activity 2, the teacher asks students, "How did observing the patterns in the different clouds help us collect evidence and data?" In Unit 13, Activity 2, the teacher prompts students before watching a video "Remind them they are watching to collect evidence, based on their observations, about the causes and effects they see happening to the animals."

- The “Debrief” section of Unit 4, Activity 8, directs the teacher to “Discuss students’ answers to the questions in the student edition. Make sure the students provide their evidence and reasoning for their answers. a) With light, how easy is it to see the objects? b) Can Steven see his flashlight in the light? Ask: What was the cause? What was the effect?”

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

- In Unit 5, the teacher reviews and reflects on the word *material* after investigating the effect of light in cups of different materials.
    1. Have students gather near the “Poster Pal.” 2. Ask: What caused the differences you observed during your investigations? What evidence did you have? (Answers may vary but could include differences students observed in the materials they investigated.) 3. Say: Scientists call what you just experienced material. Material is what something is made of. Material affects the changes you can observe when light shines on an object. [ELPS 2C] 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 include opportunities to develop and utilize scientific vocabulary in context. Students use the words in a sentence and share them with a partner. In Unit 11, Activity 9, the students use academic vocabulary words soil, rocks, and water in the “Applied Science Writing.” The students write about when they used soil, rocks, and water within their homes or community.
- 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.”
- In Unit 3, the teacher provides magnetic trains and pairs students with a science partner; the students join their trains, separate them, and move them around. The teacher says, “What you have just experienced with the trains is what scientists call being magnetic.” In subsequent activities, students use magnetic trains to investigate magnetic push and pull.

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

- The materials introduce students to constructing an argument using their design to solve engineering problems. Materials provide instructional support to help students go beyond simply making claims. "When your plan is finished, be ready to share with a science partner, small group, or the class. Prepare to share your materials, your design features, and how your design will help the audience see the puppet show by blocking light, allowing the puppet to be seen on stage."
- In the “Make a Plan” section of Unit 3, Activity 7, the students choose an idea to plan and test. The teacher reminds the students that the plans need a drawing of their design with labels and arrows to show how the structure functions to solve the problem of the magnet with a push or pull. Students use evidence to defend their plan and write why they think it will work in the student edition. Students circulate the room and defend why they believe their plan will work.
- In Unit 3, Activity 1, the teacher introduces the phenomenon before the students engage in discussions, ask questions, make observations, and define the problem. In Activity 2, students engage in student-driven inquiry, conducting research, investigating, and reflecting on solutions to problems. In Activities 3-4, students engage in group discussion and collaborative learning as they discuss prior learning, new vocabulary, and engage in further investigations and reflections.

- Throughout the lesson cycle, materials direct the teacher to have students work collaboratively or with a science partner to share evidence and provide their reasoning for their thinking. In Unit 4, Activity 6, the success criteria are, “I can explain the effects a light source has on the appearance of objects in the dark.” The teacher highlights the question on the student-driven question board associated with the phenomenon story, such as, “What causes Steven and his friends to be unable to see in the cave?” The teacher emphasizes looking for cause-and-effect relationships as they revisit the phenomenon story and read the article “Deep in the Cavern” together. The “Reflect and Connect” section directs the teacher to ask, “If the cavern is dark and Steven does not have his flashlight on, do you think he can see objects around him? Why or why not?” As the students discuss their answers, the materials direct the teacher, “Be sure to have students share their evidence and reasoning for their thinking regarding whether or not Steven can see his surroundings.

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.

- Unit 5 conducts a student-driven inquiry board to create a plan to solve their engineering problem: Create a puppet that is visible in a puppet show. The teacher asks, “Based on what you know, using your own words, turn and tell a science partner how the different effects of light you observed will help you plan your solution." In the “Applied Science Writing” extension activity, the students write about one idea for using materials that block light to help in their homes, communities, or cultures in their science notebooks.
- In Unit 11, Activity 9, in “Applied Science Writing,” the students observe evidence of practical uses for soil, water, and rocks to explain the phenomenon. The students demonstrate their understanding by writing about a time they have used soil, water, or rocks or seen them used in a practical way in their home or community. Students can write or draw their responses.
- Unit 2, Activity 9 includes the success criteria, “I can explain a phenomenon based on making observations and asking questions about physical properties and attributes.” The materials provide standards for guiding students in developmentally appropriate arguments, “Students pair with a science partner and, using their own words and vocabulary from the unit, explain the way they have made sense of the phenomenon.” The teacher directs students “to their student edition and the ‘Applied Science Writing’ box. 5.” Then, the teacher says, “We are going to draw or write about how we can use what we learned about properties of objects and how we can use what we have learned in a different setting in our lives.”
- In Unit 10, Activity 2, students work with a partner to see whether they need air. The students investigate by holding their breath while their partner counts to 20. They record observations in the student edition. The teacher says, “What you’ve observed through your research and investigation is what scientists call observing air. Air is a material you can’t see that surrounds everyone and everything on Earth.” In a collaborative learning activity, students investigate whether they can trap air using a plastic bag and a straw. The teacher asks, “What evidence did we collect to support the claim that air is all around us. Students say, draw, and write their evidence in their student editions and complete the sentence, “Air is all around….”

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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 materials provide guidance on possible student responses in the "Discovery Path" of the "Debrief" section from Unit 14, which includes these instructions for teachers:
  1. Direct students' attention to the student-driven question board. 2. Discuss: a. How did your questions help you understand the phenomenon more clearly? (Answers may vary but could include thinking about what foods come from which plant parts.) b. Have students discuss with a peer their thinking and initial answer to the guiding question or the question you created as a class. 3. Remind students that their answers will likely change throughout the unit, and their understanding will deepen. This is how science works!
- In Unit 3, "Engineering Design," the materials provide questions with possible student answers. In the activity, "Miguel's Train Trouble Performance Task," materials list questions such as, "Which object could push a magnet without touching it?" with the response being the magnet can push another magnet using force. The materials follow with the question, "Which images show a magnet pulling something?" and the possible response that the students can state is, "The boy is pulling the train over the hill."

- 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 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 14, 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 these words on your word wall: *nutrients, plant, structure*". The materials guide the teacher to use the student edition to support understanding of the unit's vocabulary. The materials include pictures and definitions of *roots, leaves,* and *stems.* There is also an activity for students to add leaves and stems to a picture, room to make their own picture of a plant, and the sentence "Today I saw leaves and stems." Dotted font for the words *leaves* and *stems* allow the students to trace those words. The materials also include the vocabulary definition "Sidenotes" as a resource. For example, in the section where students identify leaves as part of a plant, the lesson says:

  > Ask: Using your prior knowledge and observations, what plant structures can you identify on this page? [ELPS 1A] (leaves and stems) 7. Say: We, as scientists, refer to the flat parts of a plant that are usually green as leaves. Leaves are a plant structure. a. Have students turn to a science partner and share an observation they can make about the leaves on this page. b. Refer to the word wall card and attach the provided picture, or, if time allows, choose a student to illustrate the word wall card. 8. Say: Each plant structure has something they do for the plant. One of the functions of leaves is to collect sunlight". The sidenote reads: "Vocabulary leaves: the flat and green parts of a plant.
- The materials guide the teacher on how to support students' use of scientific vocabulary in context. In Unit 3, Activity 3, provide the vocabulary words and the meanings in the sidebar. The teacher directs students' attention to the "Poster Pal" to find the vocabulary words and pictures introduced so far. The teacher repeats each word and helps students understand the meanings of the words by having them act them out using kinesthetic hand and body motions. The teacher says, "Turn to a science partner and tell them what each word means using your own words.
- 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 "Discovery Path" from Unit 14 includes an evidence-supported debrief.
  Ask: What observations did you make about leaves and stems during the lesson today? What data did we collect? (Answers may vary but could include noticing that there are lots of types of leaves and that you can identify where the leaves attach to the stems.). Direct students' attention to the student-driven question board. Have students share questions that have been answered about the leaf and stem structures of a plant.
- In Unit 10, Activity 2, the teacher uses questioning to prompt the students to give evidence about the air in the "Collaborative Learning" section. The students demonstrate that air is all around and invisible. The teacher asks, "What evidence did we collect to support the claim that air is all around us? Who has air surrounding them?"
- 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?"
- In Unit 2, Activity 10, the teacher says, "Claims, evidence, and reasoning help us think like scientists. How can we make a claim to answer our guiding question? What evidence did we collect through our observations during this unit?" The teacher writes students' ideas on the "Poster Pal." The teacher asks, "What reasoning can we use to support our claim? Why does this evidence make sense?" The materials direct the teacher to have students share their thinking by using the "Poster Pal" to restate and narrate the claims, evidence, and reasoning they discussed with a science partner.

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

- Unit 5 utilizes a student-driven inquiry board to create a plan to solve their engineering problem. The student board states for students to:
  1. Ask: What is the problem we are trying to solve? (creating a puppet that can be seen in a puppet show) 2. Say: Based on what you know, using your own words, turn and tell a science partner how the different effects of light you observed will help you plan your solution." In Unit 10, Weeks 18-19, Activity 9, in the applied science writing section, the teacher guides students to "share ideas by brainstorming how the patterns they noticed about wind could be used to solve other problems in their homes, cultures, or communities.
- The materials guide teachers to engage student thinking through verbal response. In Unit 10, Activity 9, the students use evidence from testing the design that wind is moving air. The "Discovery Path" in the "Debrief" section calls for the students to turn to their science partners and describe in detail and explain if their design solved the engineering problem. The teacher

says, "Turn to a science partner and tell them a claim you can make based on the evidence you gathered." "What caused your design to be successful?" "What were the effects?"

- 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 unit's activities to have students share their thinking with the whole group, a partner, in small groups, or write in their student edition. In Unit 4, Activity 2, in a section titled "Discovery Path, Introduce Activity," the students must:

    1) Discuss: What did we experience in the previous activity with our class cavern? (Answers may vary. Example: We read the phenomenon story and acted out what was happening so we could experience what Steven and his friends experienced.) 2) Have students review the observations they wrote or drew in their student edition from Activity 1 and share them with a partner. a) Have students share the observations their partner had with the class.

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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 9, “Changing Weather,” the materials provide a summative assessment that evaluates students' learning with various questions to analyze multiple dimensions of learning from multiple-choice to true-false.
- 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 4, Activity 2, the success criteria are “I can ask questions based on my observations of the causes and effects in the phenomenon story.” A printable student self-

assessment provides formative assessment evidence for the teacher. Science Weekly includes printable weekly assessments in the online materials. These include various question types to assess the learning for the week's activities.

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 kindergarten materials provide lesson plans that clearly identify the standards and student expectations addressed in each activity. 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.
- The materials assess all student expectations. The teacher edition for Unit 2 includes a chart with three columns that indicate each activity's title, success criteria, and formative assessment evidence. Activity 4, "I Can Feel," indicates the success criteria "I can identify and sort objects according to their texture and material;" 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.

- The kindergarten materials include assessments that expect students to integrate scientific knowledge and SEP with recurrent themes appropriate to the assessed expectations. For example, in Unit 3, "Students will be able to investigate, describe, and predict the causes and effects of magnet interactions, as well as use engineering practices to design magnet-based solutions to problems." 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."
- The "Engineering Design Rubric" in Unit 10 uses a formative assessment that asks students to identify evidence of the presence of air, demonstrate the causes and effects of wind, and use engineering practices to solve a problem. The formative assessment has the students "Check for proficiency in the success criteria," "I can come up with ideas to plan a solution to a problem that uses wind....using the 'Ideate' section of the 'Engineering Design Rubric.'"
- The kindergarten materials provide a performance task in which students create a model of the plant life cycle. The students follow a series of steps to complete the task. Students label the pictures and draw arrows to show the flow of a plant's life cycle, cut out the plant life cycle, and continue following the steps to complete the performance task.
- Materials include assessments that integrate scientific concepts and science and engineering practices with recurring themes and concepts. The teacher edition Unit 5 includes the "Engineering Design: Save the Puppet Show: Unit Assessment Answer Key" document with an "Assessment Map" that integrates SEP "K.1B: Plan and Conduct Investigations and Design Solutions" and RTC K.5B: Cause and Effect.

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

- Kindergarten materials include assessments that require students to apply knowledge and skills to a new phenomenon or problem. In Unit 10, students identify evidence of the presence of air, demonstrate the causes and effects of wind, and use engineering practices to solve a problem. Students make observations and ask questions about the engineering scenario, demonstrate that air is all around us, but it is invisible, and identify evidence that wind is air moving. They then read, discuss, and identify the causes and effects of wind, come up with ideas to plan a solution to a problem that uses wind, create a solution that works to demonstrate that wind is moving air, use evidence from testing to learn whether my design shows that wind is moving air, and identify ways to improve my engineering design solution.
- In Unit 8, the students explore rocks. The students compare, sort, and describe rocks by color. Finally, the students look at groups of rocks or pictures of rocks, sort the rocks, and discuss the patterns they notice.
- The materials include assessments that require students to apply knowledge and skills to novel contexts. The teacher's 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."
- The kindergarten materials assess students with a performance task in Unit 9, where students apply what they have learned about changing weather to a new situation they haven't seen before. In Task 1, students look at a calendar with pictures depicting sunny, rainy, or cloudy weather. The students answer questions such as "How many sunny days are there? How many cloudy days are there?" In Task 2, students draw a picture of winter and describe the weather during winter. In Task 3, students cut out images and glue them under the correct word in a chart. The words are *sunny, windy, cloudy, rainy, fall, winter, spring,* and *summer.* In Task 4, students look at pictures depicting a type of weather and circle the correct weather symbol or symbols for that type of weather.

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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 kindergarten 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 teacher edition Unit 7 "Assessments" section includes the "Look Up at the Sky: Performance Tasks Answer Key" with these instructions: "Answers may vary but could include: In box 1 you may see a drawing of the sun, the moon, and clouds, a blue or light gray sky, and daytime activity. In box 1 you may see a drawing of the moon, stars, and clouds, a black or dark gray sky, and nighttime activity. Clouds and the Moon are the 2 objects that could be seen in the day or night sky."
- The Unit 10 overview includes suggestions for assessing student learning during each lesson section. For example, "Formative Assessment: Use the student responses to the engineering

problem to check for proficiency of the success criteria. Use the 'Define' section of the 'Engineering Design Rubric' printable for guidance."

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 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. Just-in-time assessment feedback is also available within the unit's answer keys."
- "Science Weekly" provides teachers with various assessments but lacks support for teachers' analysis of assessment data. Teachers' edition Unit 2 includes the "Teacher Support Resources" chart that lists the "Properties Matter: 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 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.
- 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.)
- 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 states, "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 sort the data based on header categories such as average assessment scores, activities submitted, article comprehension questions answered, and more.

- The kindergarten 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 student support materials and some teacher guidance on using them. 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.

Studies Weekly Texas Science Grade K

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 kindergarten unit assessments contain items for the grade level that are scientifically accurate. For example, in Unit 14, the identifying parts of a plant section includes a plant diagram where students label the correct features, such as leaves, roots, and stems, aligning with the unit objectives and content taught in the unit. Question 1 provides the diagram of a plant with an area to write the correct word for each part of the plant. The instructions state to “Label the parts of a plant.” The exam provides a word bank: leaves, roots, stem, and flower.

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

- The assessment tools use clear pictures and graphics. For example, Unit 5’s digital format, student view, and unit assessment include colorful images of caricatured children and a graphic of marbles colliding. The Unit 6 assessment uses real pictures of objects in the sky to identify the

sun and the moon. Finally, Unit 14 includes photos of adult plants with their young plants to show what similarities there are and the growth process from the beginning to the end and a simple diagram of a plant that shows the parts that need to be labeled, such as the flower, leaf, roots, and stem.

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.

- The materials offer accommodations for assessment tools so that students of all abilities can demonstrate mastery of learning goals. For example, 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 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.
- The kindergarten materials offer accommodations for assessment tools so that students of all abilities can demonstrate mastery of learning goals. 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.
- Unit 11, Activity 7, the Formative Assessment is to "Use student edition responses to check for proficiency of the success criteria." The activity includes these sensory accommodation instructions for the teacher: "Students who need accommodations for sensory processing can be provided gloves or other tools to complete the work."

Studies Weekly Texas Science Grade K

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 yet to achieve grade level mastery.

- Lessons include optional differentiation recommendations. For example, Unit 2 makes the following recommendation for developing students. "Pair students needing support with a partner who has demonstrated mastery to help the student complete the work at a proficient level," "Provide scaffolding for students who are still developing the motor skills necessary to cut with precision," and "As the teacher or peer is completing the sentence frames, have the other students use their fingers to write the letters on the floor or desk in front of them."
- The lessons include scaffolds to support students in successful science and learning and knowledge building. For example, in Unit 7, Activity 1, of the “Optional” section, the teacher reads the comic in a small group with students who struggle to read independently. The teacher encourages students to look for sight words and spelling patterns they already know. 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. In Unit 5, Activity 8 provides the following guidance for students needing accommodations, “If a student has sensory or auditory sensitivities, provide several locations around the classroom that may be quieter or more private so they can focus on their work.” and “Students participating in occupational therapy may need additional scaffolding to create their structure.”

Studies Weekly Texas Science Grade K

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, including a cloud video that students can view 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 *Texas Science Components (Grades K-5)* includes a variety of materials for all types of learners, such as the student edition “The primary student learning component, provided in weekly consumable newsprint-style printed papers;” the printable “materials that the teacher can print out to support lesson activities;” “the ‘Poster Pal’ helps students complete select activities;” the unit media “all the videos, pictures, and podcasts that are integral to the unit instructional material;” and the word wall and flash cards.
- 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. In Unit 8, Activity 3, the optional “Explore Path” activity is a “Texas Geology: Virtual Field Trip with a connection to Geography.” The teacher says, “Today, we are going to look at a few geological sites around Texas to look at the shapes of rocks there!” After the virtual field trip, the students discuss the shape of the rocks they saw.

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

- The materials include enrichment activities that contain challenging activities and assignments that extend beyond the regular curriculum and stimulate critical thinking, problem-solving, and creativity. For example, in Unit 4, students communicate that objects can only be seen when a light source is present, and compare the effects of different amounts of light on the appearance of objects. This unit includes the following “Dark and Light Art” activity that has the students:

  1. Show students the Dark and Light Art image. 2. Tell students this is called Dark and Light Art. 3. Ask: Why do you think it’s called that? (because there is a balance of light and dark in the art) 4.—Model for students how to cut shapes along one long edge of their white paper. Ensure students keep the piece they cut out and the piece of white paper they cut out. 5. Then, glue the remaining white paper onto the black construction paper so the three straight edges line up with the edges of the black paper, and the cut edge is in the center. 6. Lastly, glue the pieces they cut out of the white paper onto the other half of the black paper, lining it up so it mirrors the shape in the center and creates a symmetrical piece of art in black and white.
- The Teacher Edition publication, *Introduction to Texas Science_2nd-5th Grades,* states, “Our differentiation suggestions can support struggling or advanced students. Differentiation sometimes addresses accommodation ideas for students with physical or sensory impairments.” Unit 5, Activity 2 includes a “Differentiation Box” with the “Developing” and “Advanced” activities. The “Developing” activity encourages teachers to “allow students to verbally express their response to the writing question as you dictate, prompting them to identify pictures, symbols, and words to represent their thinking.” The “Advanced” encourages teachers to “allow higher-performing students to support their struggling classmates as peer models.” The materials include enrichment activities that contain challenging activities in the “Project Time” section. Students can engage in the “Magnifying Glass” project.

- The materials provide guidance for creating a student-driven question board and “Next Steps” section for the teacher, “Throughout the unit, refer to 1.) the guiding question; 2.) students’ other questions to see which questions have been answered and which need their own investigations; 3.) new questions that students have throughout the unit.”

Studies Weekly Texas Science Grade K

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 types of 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 with 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. For example, in Unit 2, “Properties and Matter,” the teacher exposes the students to the phenomenon. The students pay attention to what they wonder, their questions, and what they already know about the phenomenon. The students record their observations. The students return to the phenomenon in Activity 2 to identify and sort objects of color.
- TEKS K.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.” This practice aligns with developmentally appropriate materials as stated in the Teacher Edition publication, *Introduction to Texas Science: K-1st Grades,* “each student edition is designed around four essential components.” The phenomena anchors the units 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 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 11, after the “Phenomenon Introduction” (Engage), in Activity 2, “Rock On,” students observe and collect evidence about the uses of rocks (Explore). In the optional Explore Path, students draw how they have used rocks in their lives (Elaborate).

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

- Teachers give lessons on core content and concepts to the whole group. Units include activities for partners, small groups, or independent work. The materials provide differentiation considerations for “Developing” and “Advanced” students.
- Materials consistently support flexible grouping. For example, in Unit 11, Activity 3, the materials guide teachers to use specific grouping instructions based on the needs of students. In the collaborative lesson, the teacher separates the students into six groups. Each group collects evidence about their soil samples. The teacher directs students' attention to their Student Editions and says, “You will observe and investigate their soil sample and draw their observations.” The materials suggest strategically grouping students to scaffold learners who need additional support.
- Unit 12, Activity 1, provides the following directives in the “Differentiation Box" that teachers allow developing students “needing additional support to complete their independent work with partner or teacher support.”
- The texts suggest the teacher group students with a science partner or small group throughout the kindergarten lesson plans in the Teacher Edition. Additionally, optional activities for students still developing suggest pairing students with a partner demonstrating mastery or one-to-one with the teacher.

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

- The Teacher’s Edition publication *Introduction to Texas Science* explains instructional strategies and shares information on the 5E model and Science and Engineering Practices, including a collaborative approach.
- Unit 5 includes student-driven inquiry, modeling, and collaborative learning. For example, Activity 2 begins with a student-driven inquiry. Students reflect on the engineering scenario and their learning. A whole group lesson directs students' attention to the “Poster Pal" as the teacher asks, "Based on what you know, what are some things that make light?” The teacher models the think-aloud. “I'm noticing there are many types of light sources. I'm predicting there are just as many different types of shadows." The “Collaborative Learning” section directs students' attention to their Student Editions, where they investigate and make shadows in pairs or groups.

- Unit 2, Week 5's activities in the "Discovery Path" engage students in a phenomenon story, asking questions, defining vocabulary, recording their observations, student-driven inquiry, collaborative learning, connection and reflection, whole group sharing, hands-on activities, read-to-learn, independent work, and discussions and debriefing.
- The kindergarten materials provide guidance and structures for effectively implementing different practices. In each unit, sections are clearly labeled and provide a numbered or bulleted list of steps for the teacher to follow, including a script with possible student answers written in red text. For example, in Unit 9, Activity 2, the "Collaborative Learning" section prompts the teacher to "1. Direct students' attention to their student editions.; 2. Read the article 'Weather Types,' modeling tracking text as you read aloud; 3. Have students turn to a science partner and share what weather pattern they observed today, using a vocabulary term they have learned, and ask: What evidence or data did you observe that helped you describe the weather pattern today?"

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

- Unit 4 phenomenon occurs in Natural Bridge Caverns in San Antonio, and the characters are a diverse group of children relatable to many different students.
- Materials represent a diversity of communities in the images and information about people and places. Unit 6 introduces Mae Jemison, allowing students to learn about the astronaut and her contributions. The unit includes pictures and illustrations of different types of people.
- The Teacher 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 4 of the Student Edition includes caricatures of a diverse group of children, including a child using crutches to walk.
- In Unit 16, Activity 8, students read the article "Plant Passion with Ynes," an article about a girl named Ynes Mexia who wanted to save the Earth's plants and grow up to be a botanist. She grew up in Texas, loved the tall, old redwood trees, and tried to save them. The materials include a photograph of Ynes Mexia and a photograph of a giant redwood tree on the "Poster Pal."

Studies Weekly Texas Science Grade K

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.

- The materials include resources for linguistic accommodations, particularly for students at the beginning and intermediate levels. For example, the curriculum contains printable materials with additional visual support or a word bank, student audio with adjustable rates of speed to provide comprehensible input, vocabulary cards, pictures, video, graphic organizers to classify information, and scaffold written tasks or simplified text. In Unit 4, the "Discovery Path" includes sentence stems. "Have students use the following sentence frames to help them discuss: I think ___, I can try ___, I can do ___."
- In Unit 5, Activity 1, the teacher introduces the engineering scenario. The students use their prior knowledge and experiences when the teacher asks, "Have you ever seen something that light can shine through?" The teacher reads the engineering scenario and says, "Now, you will record your observations and questions. Before you share with the class, it is helpful that you practice with a partner. As you share, think about the words you are saying and how you say them." The teacher circulates the room and monitors what students share. The materials suggest if students make a syntax error, the teacher says, "I heard you say _____. In English, we say _____. Now you try."
- The Teacher's Edition publication *Introduction to Texas Science: K-1st Grades* states, "'Weekly Strategies and Leveling for ELPS' is a teaching tool that provides beginning, intermediate, advanced, and advanced high strategies for every applicable ELPS in the curriculum." The ELPS Strategies and Leveling includes strategies 1.A.i and ii for the foundational listening skills for students in grades K-1. The leveling strategies apply for beginner, intermediate, advanced, and

advanced high. The publication also includes the Standards and Leveling strategies to scaffold learning for students at beginner, intermediate, advanced, and advanced-high levels of English proficiency for the four language domains: listening, speaking, reading, and writing. The information is included in a table divided into Grades K-1 and Grades 2-5. In addition, the section below each table contains techniques, sentence stems, teacher prompts, and additional teacher actions.

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.
- Materials encourage strategic use of students' first language in the "Collaborative Learning" section of Unit 5, Activity 3. The students discuss their thinking on the effects of light traveling through objects. The teacher guides the discussion with questions and writes the ideas on the "Poster Pal." The materials provide these instructions for the teacher: "If students request assistance, allow them to demonstrate their ideas using science tools or describe them using synonyms and circumlocution, describing terms in their preferred language."
- 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."
- The "Studies Weekly Strategies and Leveling for the ELPS" guidance document encourages teachers 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 students. Show only visuals and allow students to describe in their first language. Have students repeat and mimic the definition while using visuals.

Studies Weekly Texas Science Grade K

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 for sending 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, suggested questions to help caregivers continue the classroom conversation." The Unit 12, the home letter 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.

Studies Weekly Texas Science Grade K

Materials provide information to be shared with caregivers to help reinforce student learning and development.

- The materials provide information for the parents in Unit 2's "Properties Matter: Home Letter," which gives an overview of classroom instruction and objectives covered in the unit. The letter offers the following suggestions for caregivers to help reinforce learning at home:

  When you are making dinner, have your child identify all the different textures of the food or materials you are cooking with. Have your child help fold clothes and sort them by their color. Read a book with your child and have them identify the different shapes they see in the pictures. 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.
- To support the concepts for kindergarten, Unit 12, "Plant Needs," the parent materials suggest getting a plant for the home and having the child care for it. Caregivers can also have their child draw a picture of a plant and label the five things it depends on for survival.
- The Teacher's Publication includes a "Parent Communication Tools" section that states, "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. The letter "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 14, "Wonderful Plants:" 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."

Studies Weekly Texas Science Grade K

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 collected 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. The grade level scope and sequence includes a side-by-side document showing the TEKS from unit to unit.
- Each scope is described and explains how each TEKS progresses from kindergarten to grade 5. The knowledge, expectations, 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.
- The 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 *Kindergarten Digital Teacher's Edition* includes the “Texas Science Scope and Sequence” chart that shows the kindergarten TEKS standard 6: “Identify and record observable physical properties of objects, including shape, color, texture, and material, and generate ways to classify objects.” The standard is found 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 clear teacher guidance for facilitating student-made connections across core concepts. For example, in the teacher's edition Unit 2, the “Standards Coverage” chart

includes a bolded list of scientific and engineering practices that will be covered, for example, K.1.E “Collect observations and measurements as evidence.” It also includes a list of recurring themes and concepts. For example, K.5.A “Identify and use patterns to identify phenomena.”

- The materials provide the teacher clarity in understanding how the activities connect. For example, each unit begins with a list of TEKS and SEP.
- For example, Unit 1, “What do Scientists Do?” includes standards coverage, knowledge, expectations, spiraling concepts, new concepts, SEP, RTC and new vocabulary, teacher support resources, and student support resources.

Materials provide review and practice of knowledge and skills collected 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, RTC, and SEP.
- 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 SEPs and RTCs are introduced as foundational concepts. All other sections show bolded text that indicates coverage within the activities listed.” Activity 1 introduces students to the resource “Poster Pal,” in which RTC patterns are displayed. Then in Unit 7, the RTCs require the students to “identify and use patterns to describe phenomena or design solutions.”

Studies Weekly Texas Science Grade K

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, supporting teachers in purposeful planning and making connections. For example, Unit 2, “Properties of Matter,” includes a multitude of resources, such as the document, standards coverage which scientific and engineering practices (SEP,) recurring themes and concepts (RTC,) math and English language arts and reading (ELAR) connections, English language proficiency standards (ELPS) and common misconceptions. 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. Success criteria and scripted teacher notes can be found at the end.
- The grade K materials provide a PDF document titled “Introduction to Texas Science: K-1st Grades”, which details how to use the Studies Weekly science curriculum to support teachers with implementation, materials, and resources. For example, the materials provide a detailed description of how the curriculum is structured through an interactive, consumable student

edition that is provided weekly, “Each physical publication encourages students to engage in science through writing, drawing, and highlighting as they progress through the week. A whole class Poster Pal complements the student edition, which together forms the student materials.”

- The materials provide teacher guidance and recommendations for using all materials, including text. For example, the Teacher’s Edition includes the publication *Core Components Description Grade K-5*, which lists “Poster Pals K–1” as “A tool for teachers to present to the students while they are working through the activities in their student editions.” In Unit 1, Activity 1, it states under the teacher notes that “The Poster Pal will be used in all activities this week.”
- 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.

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

- The materials include science standards correlations for units, lessons, or activities within the context of the grade level in teacher guidance documents. For example, the kindergarten Teacher’s Edition includes a “Standards Coverage” chart delineating the TEKS, SEP, and RTC addressed in every unit. The chart also includes the activities where these standards are implemented.
- The materials include standards correlations, including cross-content standards, that explain the standards within the context of the grade level. The Unit Overview has math, ELAR, wellness, color explorations, and textures in art.
- The materials include cross-content standards. For example, Unit 4 includes ELAR standards. Students read the article "Entering into the Cavern," and identify the characters, setting, and events within the article.
- The materials include science standards correlations for lesson activities within the context of the grade level. For example, Unit 5, Activity 1, lists the following ELAR standard K.10.A “Plan by generating ideas for writing through class discussion and drawing.”
- Materials include cross-content standards for math within the context of the grade level. For example, Unit 15, Activity 1, lists the following math standard K.2.F “Generate a number that is more than or less than another number up to at least 20.”

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

- The materials provide a materials list for each unit within the Teacher Edition. The materials list includes the activities where the materials will be used, including the quantity of materials needed for each activity. For example, in Unit 5, “Engineering Design: Save The Puppet Show,” the Discovery Path Materials List includes but is not limited to 6 pairs of 3D glasses, six doilies, six mesh sieves or sifters, and six sticky notes for activity 4. A separate Explore Path Materials List includes but is not limited to coloring supplies as needed for Activities 5,8 and 9. The materials list is also included in the left-hand column of the lesson plan for each activity.
- The materials include details for preparing lab investigations. For example, in Unit 3, the Discovery Path materials are listed for the magnetic research.
- The materials include a comprehensive list of all equipment and supplies needed to support instructional activities. For example, the tab Training and Resources includes the training media “Onboarding, What Comes in the Box,” in which they unpack all the materials, including the Teacher's Edition, and the Collated Student Edition, and how to sort and organize them.

- 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.”

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

- Materials provide teacher guidance for safety practices and grade-appropriate use of safety equipment during investigations. For example, the Teacher Guide for Unit 1 includes Scientist and Engineers Stay Safe talks about tools, the five senses, and rules.
- Grade K materials include teacher guidance for safety practices within lesson plans. For example, the Week 1, Activity 2 lesson guides the students to identify tools and safety procedures. The teacher explains that they will use their five senses to observe an interesting item. The materials direct the teacher to inform students not to use the sense of taste when observing slime because it is unsafe. Additionally, in the “Reading to Learn” component of Unit 1, Activity 2, the materials guide the teacher to read aloud an article titled “Scientists and Engineers Stay Safe” and watch videos titled “Let’s Investigate: Safety First” and “Let’s Investigate: Using the Right Tools.”

Studies Weekly Texas Science Grade K

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 materials include an “Introduction to Texas Science Guide” to support teachers. For example, the guide indicates that there is an average of 28 weeks which will allow teachers to spend up to 60 minutes a week with science concepts.
- The materials include guidance and recommendations within each lesson for appropriate pacing suggestions for the grade level. For example, Unit 7 includes the chart “Activity Summary,” in which each lesson component is broken down. The chart gives a total time of 2 hours and 30 minutes for the whole week, then 30 minutes for each day, and a 15-minute breakdown for each of the two components of the lesson.
- The kindergarten 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,” which includes 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 Texas Essential Knowledge and Skills (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.”

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. 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, found 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 kindergarten, the students identify and record the physical properties of objects.
- The 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 10, Activity 1, the lesson header suggests 30 minutes for the lesson. 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.

- The Texas science curriculum 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.
- Materials include units, lessons, and activities for a full year of instruction. For example, the kindergarten scope and sequence lists 17 units with 32 “weekly issues.”
- The grade K materials include units, lessons, and activities for a full year of instruction. The approximate time needed for instruction is provided in the “How to Use Studies Weekly” document found in the publication resources. The document states that “Grades K-1 consist of an average of 28 weeks of instruction using our flexible newsprint consumable student materials and online digital solution.” The materials have the core Discovery Path and also provide extension activities with the Explore Path. The materials can be reasonably implemented within one school year.

Studies Weekly Texas Science Grade K

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

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. Kindergarten materials include photos that identify the parts of a plant, flower, stem, root, and leaves. Also, print and digital Student Editions include colorful caricatures and color-coded text.
- In the online teacher resources, the kindergarten 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 five senses: sight, hearing, smell, taste, and touch with an eye, ear, nose, mouth, and hand. The slide lists the five senses on the right side of the slide (eyes, ears, taste, touch, smell, senses) with instructions such as "Draw a line to the eye. Draw a line to the ear."

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.

Studies Weekly Texas Science Grade K

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

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

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 13, Activity 2, contains a video called "Take a Breath."
- 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 in Unit 3, Activity 2: “Magnetic Research,” students investigate items to see if they are magnetic, listen to the text article, “I can think like an engineer. I can research, collect evidence, and learn.” Students answer the question: “Was the item magnetic or not magnetic?” by clicking and dragging images of items into a table titled “Not Magnetic and Magnetic.”

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

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.”

Studies Weekly Texas Science Grade K

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 texts include articles with multiple paragraphs, 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.”

Studies Weekly Texas Science Grade K

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.