

Studies Weekly Texas Science Grade 3

Studies Weekly Texas Science Grade 3 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 3	100%	100%	100%	100%
Grade 4	100%	100%	100%	100%
Grade 5	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 some guidance that explains how to analyze and respond to data from assessment tools.

Studies Weekly Texas Science Grade 3

- 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.

Studies Weekly Texas Science Grade 3

Indicator 2.1

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

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

Meets | Score 4/4

The materials meet the criteria for this indicator. Materials are designed to strategically and systematically integrate scientific and engineering practices, recurring themes and concepts, 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 TEKS Alignment Citation Table demonstrates how the materials include opportunities for students to engage in scientific and engineering practices (SEP) through multiple formats across the year. For example, the chart summarizes three opportunities across the year for students to practice standard 3.1.A., which calls for students to ask questions, plan, and conduct investigations to answer questions and explain phenomena. Unit 2 introduces SEP 3.1 during a collaborative learning activity in which students make observations about an image of a submerged glacier. Students discuss questions with partners about noticings from the image, hypothesize about what they observe, and describe their wonderings about the iceberg.

Studies Weekly Texas Science Grade 3

Additionally, the materials provide multiple opportunities for students to practice asking questions and making connections to prior knowledge through “Framing Out Thinking.”

- Materials for each unit include a “Standards Coverage” chart highlighting the opportunities for students to develop, practice, and demonstrate mastery of grade-level appropriate SEP throughout the unit, as outlined in the TEKS. For example, the activities in Unit 5, focus on students asking questions and defining problems. In subsequent activities, students then plan and conduct investigations while developing and using models. Finally, in additional activities, students communicate explanations, listen actively, and discuss, while explaining their discoveries and innovations. Units 15 and 20 also address these concepts by including opportunities to create models and ask questions to justify their reasoning.
- Units alternate between a focus on SEP as students develop, practice, and demonstrate mastery of TEKS concepts within each unit. In Unit 8, “Engineering Design: The Fastest Car”, students engage with SEP 3.1B “Use scientific practices to plan and conduct simple descriptive investigations and use engineering practices to design solutions to problems” by designing a race car that will move using materials such as craft sticks, rubber bands, bolts, and straws. Students work collaboratively to plan and create a race car design, build a prototype, and test the design. After completion of the unit learning, teachers assess student understanding of the TEKS with questions such as, “What is the purpose of a prototype?” Students revisit the standard in Unit 8 as they ideate plans for improving a car model design. Students explain the reasoning behind their ideas and use their prior experiences with mechanical energy and the constraints from the scenario to justify their decisions for revising the model.

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

- Each Teacher Edition unit includes a section outlining the recurring themes and concepts (RTC) students learn about within the unit and the activities with which they align. For example, in Unit 1 students are introduced to seven RTCs including cause and effect, scale, proportion and quantity, and energy and matter. Subsequent units focus on one RTC focus per unit, as well as spiraling in other relevant RTCs.
- The materials include resources such as Framing Out Thinking, Team Task Challenge Cards, and the “Studies Weekly Recurring Themes and Concepts” article which outlines the related crosscutting concepts. For example, weekly Student Readers indicate the specific RTC an activity focuses on. For example, the Student Edition for Activity 6 contains an RTC label indicating that students will consider energy and matter as they brainstorm the types of energy around a campfire.
- For most units, the weekly teacher documents provide the section “Unit Transition”. Teachers highlight the connection to previous units of study. For example, in Unit 6, “Investigating Forces”, teachers remind students that in the previous unit, they learned about the effect of forces on objects and that in this unit, students will plan and conduct investigations to describe the motions of objects after they are pushed or pulled. Students then engage in direct experience of a related phenomenon by kicking soccer balls against a wall and using a printable tool, “Asking Phenomenon Questions”, to record their ideas before beginning the new unit.

Studies Weekly Texas Science Grade 3

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

- The “Vertical and Horizontal Alignment” document shows the progression of each TEKS from grade to grade increasing in difficulty. For example, in grade 3 the student is expected to know that matter has measurable physical properties that determine how matter is identified, classified, changed, and used after learning in grade 2 that matter has physical properties that determine how they are described and classified. Students continue deepening their understanding in grade 4, by conducting more investigations using acquired learning from grade 3. Additionally, the online lesson plan includes an explanation of the science TEKS and how they are addressed in the lesson.
- Each unit provides a *Teacher Background* podcast that outlines content knowledge and skills from grade 2 and explains how the current unit builds on students' prior knowledge. For example, Unit 13 “Natural Resources”, explains that in second-grade students learned to distinguish between natural resources and human-made resources and how to limit human impact on Earth by conserving and properly disposing of materials. In grade 3, students learn how humans use natural resources and why conservation of natural resources is important. The podcast also guides teachers to the misconceptions students have about natural resources. In addition, materials explain how activities are intentionally aligned with best practices for improving science education based on the “National Science Report” findings from 2012.
- The *Teacher Background* podcast explains the standards which support the nature of scientific work to develop science literacy in students. The materials provide a more equitable approach to student learning by not basing learning on a lecture or teacher-centered instruction, but by grounding learning in student ideas, and student contribution, and giving opportunities for students to connect to their own life experiences. When discussing the methods of instruction in the webinar, the presenter explains how it integrates strategies that promote student demonstration of learning versus just recall or understanding levels of learning.
- The materials provide a “Correlation to the TEKS and ELPS” document that reflects how concepts and skills are taught and built over the units of instruction. For example, 3.5.Bi is taught within Unit 2, “Explore Words and Ideas”, Unit 9, “Phenomenon Explanation”, and Unit 13, “Explore Words and Ideas”. The materials also include student vocabulary at the beginning of the lesson with leveled vocabulary activities for students to “strategically and systematically develop students' content knowledge.”

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.

- The *Texas Science Vertical and Horizontal Alignments* teacher resource, outlines how the SEP is integrated across the academic year. The resource provides sufficient opportunities to ask questions and plan and conduct classroom, laboratory, and field investigations, and engage in problem-solving. For example, in Units 3-7 students engage in the SEP, and collect observations and measurements as evidence.
- Unit printables included in the Teacher Edition provide support for teachers to facilitate students asking questions about phenomena that are used to develop investigations throughout the unit. For example, the printable includes the following sections: “Produce Questions”, “Collect Questions”, and “Create a Student-Driven Question Board”. The

Studies Weekly Texas Science Grade 3

Phenomenon Questioning Technique procedures illustrate how teachers can group students and model producing questioning strategies and record them on the “Asking Phenomenon Questions” printable.

- Students plan and conduct investigations in most units of the materials (except the first and last). Consistent procedures and tools in the materials facilitate student investigation of science concepts. Concepts align with the TEKS and for each unit, students follow a consistent procedure to investigate questions such as "How are the properties of matter tested?" Because these procedures and tools are consistent, students have abundant opportunities to conduct investigations as outlined in the TEKS.

Studies Weekly Texas Science Grade 3

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

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.

- Each unit begins with a focus on a natural phenomenon to support students in constructing, building, and developing knowledge through authentic application. In Unit 3, students begin by reading the phenomenon, "An ice storm covered the state of Texas in a thick layer of ice." Students begin this study with a short video, a graphic text with a dialogue of students encountering the phenomenon, and an activity for students to develop a guiding question for their investigation and hypothesize about the cause of the phenomenon.
- The "Texas Science Weekly" Teacher Guide explains how teachers can use the resources to support student learning, including a rubric for phenomenon introduction and a phenomenon explanation. The "Introduction Resource" describes the inclusion of phenomena by saying, "Each phenomenon anchors the unit by providing relevance and motivation to study the science concepts of the unit." The guide explains how these help support learning by being applicable and accessible to all students. The phenomena may be a student experience students can relate to, a demonstration, or a video.

Studies Weekly Texas Science Grade 3

- Units throughout the materials embed TEKS-aligned phenomena through a comic and lesson activity as teachers introduce the concepts for the week. This can be seen in Unit 9, “We Are In Orbit!”. Students read a phenomenon comic about why the year is 365 days long, discuss their thoughts, and formulate questions as the teacher records them on a Student-Driven Question Board. Each phenomenon comic relates science concepts to a real-life situation that students have encountered - in this case, the fact that it has been 365 days since the last school picture.
- Units begin with an introduction to a phenomenon across the grade-level content in all disciplines as the big idea or anchor to create a purpose for learning. For example, Unit 12, Activity 1, “Changes to the Earth’s Surface,” presents the phenomenon through a comic strip that prompts students to ask questions about the type of changes to the Earth’s surface the kids witnessed on the bike path. Activities 2-4 provide a student-driven inquiry wherein students create a model of a volcanic eruption, an earthquake, and a landslide to demonstrate a change to the Earth’s surface. In the phenomenon explanation for Activity 5, the students describe the cause-and-effect relationship between the rapid changes to the Earth’s surface based on the demonstrations.
- The Student Edition opens each unit with an introduction to the phenomenon through a comic strip and/or video presentation. The various activities provide students with opportunities to investigate the phenomenon. The unit culminates with an opportunity for students to reflect and discuss their learning about the phenomenon presented at the beginning of the unit. For example, in Unit 2, “Hidden Treasures,” the comic strip introduces the phenomenon through a scenario where kids are finding treasures at the beach using a metal detector. Students ask questions, plan, and investigate the different physical properties of matter. The students also use the RTC of cause and effect to test the magnetism of objects and then explain the phenomenon by describing the properties of the items the kids found at the beach.

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

- The materials guide students to connect to prior knowledge and experiences related to phenomena and engineering problems. In Unit 5, the Student Edition connects a need for protective gear in football to the principles of force and motion. This theme is carried throughout the week. After an investigation of arm wrestling, students write a letter to a lineman about how force can help him win the line of scrimmage. Students then read a short article describing how football players employ force as they tackle other players successfully.
- The Teacher Edition section of the “Introduction to Texas Science Weekly” document explains how teachers can use the resources to support student learning. The Introduction Resource describes the inclusion of phenomena by stating, “Each phenomenon anchors the unit by providing relevance and motivation to study the science concepts of the unit.” The guide goes on to explain how this help learning by being applicable and accessible to all students. The phenomena may be a student experience students can relate to, a demonstration, or a video.
- Materials include a teacher questioning resource that encourages students to think about and build upon prior knowledge as they explore phenomena and solve engineering problems. This is seen in Unit 9, “We Are In Orbit!” The teachers refer to a common wonder presented in the phenomenon comic and ask the students to reflect on similar wonderings they have had during the lesson introduction. In Unit 8, “Engineering Design: The Fastest Car”, resources provide model questions such as, “Have you ever seen a car race?” “What was it like?” “Have you ever built a car?” as students begin to consider creating their own car from given materials.

Studies Weekly Texas Science Grade 3

- The unit lesson guides include the unit objectives that indicate the TEKS, SEP, and RTC that will be covered throughout the unit. The materials include lesson plans that help the teacher facilitate personal connections to the phenomenon comic strip by sharing prior knowledge and experiences and rubrics for phenomenon introduction and a phenomenon explanation.

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

- The unit Teacher’s Edition begins by explaining the phenomenon for the week and unit, and how it connects to real-world situations in the student materials. The “Student Support Resources” portion of the Teacher Edition illustrates how media helps students understand the phenomenon. For example, in “Life Cycles: Phenomenon Home Letter”, there is a guide for teacher communication teachers give to parents to help them understand how to reinforce concepts with students outside of school.
- The unit Teacher’s Edition includes guided questions and scripts that outline the scientific concepts for the teacher. In Unit 4, the Teacher Edition explains how the teacher guides students to define the problem. The lesson plan continues to help the students define the criteria and constraints to determine if the solution they generate is successful or not through discussion.
- The Success Criteria chart, found at the beginning of every unit in the Teacher Edition, outlines the goals behind each phenomenon and engineering problem. Teacher resources also include rubrics for phenomenon introduction and a phenomenon explanation. Unit materials contain a chart outlining concepts and success criteria goals for the phenomena being studied. In Unit 9, “We Are In Orbit!”, the concepts include Scale, Proportion and Quantity, and Systems and System Models. Teachers focus on success criteria goals such as, "I can use a model to explain the orbit of the sun, Earth, and moon system."
- In the unit/weekly “Teacher Guidance” document for most units, the materials provide a chart outlining concepts and success criteria goals for engineering problems being studied. Unit 8, “Engineering Design: The Fastest Car,” outlines the concepts: Cause and Effect, Systems and Models, and Structure and Function. Teachers focus on success criteria goals such as, "I can identify ways to improve my prototype.”

Studies Weekly Texas Science Grade 3

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.

- Materials include a “Vertical and Horizontal Alignment” document for the teacher to better understand how the skills students are learning to connect to other grade-level learning standards. For example, in grade 3, when studying Force, Motion, and Energy, the “Vertical Alignment” resource explains that students should know “The nature of forces and the patterns of their interactions.” The materials explain that in Unit 5, students engage in the 3.7A standard as they “Demonstrate and describe forces acting on an object in contact or at a distance, including magnetism, gravity, and pushes and pulls.” The portions of the standard that are new for the grade level are bolded for reference. In grade 2, the standard requires students to explain but not demonstrate. Grade 3 students focus on the push against one another and how the shape may change from this force. In grade 4, the standard requires students to plan, conduct, and describe investigations about forces, and this expands to include friction and an additional force. By grade 5 students, “Investigate and explain how equal and unequal forces acting on an object cause patterns of motion and transfer of energy.”
- The “Vertical Alignment” section of the “Vertical and Horizontal Alignment” document shows how concepts taught in the materials are divided into strands that mirror those in the TEKS. Units are listed under grade levels, illustrating the progression of standards over time. For

Studies Weekly Texas Science Grade 3

example, in grade 3, Unit 4 includes TEKS 3.6D, “Students demonstrate that materials can be combined based on their physical properties to create or modify objects, such as adding clay to sand to make a stronger brick.” This standard builds on the grade 2 TEKS 2.6C, in which “Students combine small units such as building blocks to form new objects,” and progresses in grade 4 to TEKS 4.6B, in which “Students investigate and compare mixtures and solutions composed of liquid and solid matter.” The document also explains what skills spiral in the unit, important terms students are focusing on in the grade level, and the SEP and/or RTC for the strand.

- The materials are vertically aligned and designed for students to build and connect their knowledge and skills within and across units and grade levels. For example, the Unit 7 *Teacher Background Information* podcast reviews what students should have learned the previous year about sound energy in grade 2, and how the standard expands to include more types of energy in grade 3.
- The “Horizontal Alignment” section of the “Vertical and Horizontal Alignment” document outlines the progression of TEKS throughout the units within the grade level. For example, in grade 3, the Matter and Energy strand states that the student knows that “matter has measurable physical properties that determine how matter is identified, classified, changed, and used.” The materials introduce this concept in Unit 2, when the students measure, test, and record the physical properties of matter. Unit 3 includes learning progression describing and classifying samples of matter. In Unit 4, the student materials include predicting, observing, and recording changes in the state of matter, and culminates in Unit 5 when students demonstrate that materials can be combined based on their physical properties to create or modify objects.
- In addition to the unit podcast to support instructional understanding, unit lesson plans also include scripting or prompts for teachers to make connections with students about prior learning, with the sections labeled “Unit Transition.” For example, in Unit 17, in the section “Unit Transition,” the materials provide a script, “Explain to students that in the next unit, they will learn about organisms from long ago and the environments they lived in” to build learning unit-to-unit.

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

- Grade 3 materials scaffold learning in a way that allows for increasing conceptual understanding within each strand within the same grade level. For example, the “Vertical and Horizontal Alignment” document follows the horizontal alignment of the TEKS. In the strand Force, Motion, and Energy, Unit 5, TEKS 3.7A, the materials have students first demonstrate and then describe forces acting on an object, including magnetism, gravity, pushes and pulls. In Unit 6, TEKS 3.7B, the materials provide a lesson in which students plan and conduct a descriptive investigation to demonstrate and explain how position and motion can be changed by pushing and pulling objects.
- Unit documents provide a “Transition” section at the beginning of and/or at the end of each unit that connects students’ previous learning to current learning objectives with increasing difficulty. For example, for the strands Matter and Its Properties and Matter and Energy in Unit 2, materials focus on the concept that all matter has properties. In Unit 3, the focus concept is that different factors can affect matter. In Unit 4, lesson resources focus on combining materials based on their physical properties to create or modify objects to solve a problem.
- Units begin with a task to activate students’ prior knowledge or to build background information. For example, Unit 18 has a Unit Transition, providing resources for the teacher to

Studies Weekly Texas Science Grade 3

explain the connection from the previous unit, in which students studied how environmental changes affect organisms, to the new unit, wherein students will learn about how fossils give scientists information about the changes that occurred in the environment in the past. Additionally, the Lesson Guide provides support for the teacher to make student connections of previous units to the problem-solving task for that day.

- Materials include units intentionally sequenced to scaffold students' learning, allowing deeper conceptual understanding. Units open with the introduction of a phenomenon to anchor learning. For example, in Unit 3, Activity 1 presents the following scenario as an entry point to the concept of states of matter changing, "An ice storm covered the state of Texas in a thick layer of ice." In Activity 3, the "Reading to Learn" section includes a correlation between temperature and the state of matter. Through Student-Driven Inquiries in Activities 2-5, students investigate to seek answers to questions such as "How does temperature affect water?" and "Where does water come from?" The unit culminates with students writing an explanation of what causes ice storms. Students apply their understanding of what causes matter to change to explain the phenomenon.

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

- The material's units follow a repeated pattern for instruction aligned to the 5E Model. Each unit begins with the Engage component, where after previewing the topic and vocabulary, students explore a specific RTC based on phenomena. On the following days, students engage in the Explore and Elaborate steps, and the 5E cycle concludes with an Explanation and an additional optional elaboration activity based on student needs.
- The materials include a clear and concise grade level scope and sequence document where the teacher gains an understanding of the sequence students will engage with all grade level concepts, SEP, and RTC. For example, in grade 3, the strand Organisms and Environments is spiraled into the RTC patterns, cycles, systems, and relationships within environments during Units 15-18.
- The materials include "Phenomenon Explanations" via audio and text that clearly and accurately present core concepts and recurring themes relating to that unit and week of study. In Unit 12, Changes to the Earth's Surface, the "Phenomenon Explanation" provides information and an illustration supporting TEKS 3.10C concerning rapid changes in Earth's surface, including, "The Earth's surface is always changing... Sometimes the changes take months or even years... Other changes can happen very quickly. Volcanic eruptions, earthquakes, and landslides are... known as rapid change."
- In grade 3, student materials present accurate information about matter, including giving examples of the physical properties of solids, liquids, and gasses. Materials address a common misconception among students that solids are large and hard materials that do not easily fill a container. Therefore, students may assume that sand is not a solid because it is small and looks as if it takes a container's shape.

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

- The "Vertical and Horizontal Alignment" document clearly explains the mastery requirements of the student lessons, which are within the boundaries of the main concepts of the grade level. The document provides teachers with the learning targets and how they progress across the

Studies Weekly Texas Science Grade 3

year. The materials content strands mirror the TEKS with the standard and units in which the TEKS are taught. For example, in Units 19 and 20, students learn how organisms undergo similar life processes and have structures that function to help them survive within their environments. The alignment document illustrates the connection to TEKS and how they align with student goals for students to explore and explain how external structures and functions of animals help them survive and explore, illustrate, and compare life cycles in organisms.

- Each unit lesson plan includes success criteria for the unit, which connect to each component of the unit. For example, in Unit 20, students begin the week engaging in activities to activate prior knowledge and introductions to the phenomenon. In the following lessons, students explore lima beans, sunflowers, and salmon through investigations, followed by students explaining the phenomenon as they develop and use models to identify patterns in the life cycles of different organisms. Materials include “Claims, Evidence, and Reasoning Rubric” to check for their proficiency in the success criteria.
- Mastery requirements of the materials are within the boundaries of the main concepts of the grade level. For example, Unit 9, We Are In Orbit! unit assessments include comprehension questions, such as, “Study the table. Which planet has the shortest orbit?” aligned to TEKS 3.2B, “Put the planets in order from nearest to farthest from the sun” aligned to TEKS 3.9B, and “Study the image. Which statement is true, based on the model?, aligned to TEKS 3.3A. Materials also include “Unit Assessment Answer Keys,” correlating the unit’s SEP and RTC to each question. For example, in Unit 6, questions 2, 5, 7, 9, and 10 correlate with SEP 1B, questions 1-6, 8, and 10 correlate with TEKS 3.7B, and questions 1, 3, 4, 6, 8-10 correlate with RTC 5B.

Studies Weekly Texas Science Grade 3

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.

- The materials in grade 3 include a horizontal alignment, allowing teachers to see the progression of the TEKS, including the recurring themes and concepts (RTC) and scientific and engineering practices (SEP) throughout the units within the grade level. For example, in grade 3, the Matter and Energy strand states that the student knows that matter has measurable physical properties that determine how matter is identified, classified, changed, and used. The learning begins in Unit 2, when the students measure, test, and record the physical properties of matter. In Unit 3, the Learning progresses to include describing and classifying samples of matter. Unit 4 consists of predicting, observing, and recording changes in the state of matter. This learning culminates in Unit 5, when students combine materials based on their physical properties to create or modify objects.
- In the horizontal alignment document, the materials clearly explain the mastery requirements of the student lessons, which are within the boundaries of the main concepts of the grade level. For example, in grade 3, Units 19 and 20, students learn how organisms undergo similar life processes and have structures that help them survive in their environments. The document demonstrates the connection to standards 3.13A and B, with aligned student goals for students

Studies Weekly Texas Science Grade 3

to explore and explain how external structures and functions of animals help them survive and explore, illustrate, and compare life cycles in organisms.

- The Vertical Alignment section of the “Vertical and Horizontal Alignment” document shows how concepts taught in the materials are divided into strands that mirror those in the TEKS. Strands Matter and Its Properties and Matter and Energy, Force, Motion and Energy, Earth and Space, and Organisms and Environments aligned with TEKS, and units are listed under grade levels so that teachers see the progression of standards over time. For example, in grade 5, Unit 4 has TEKS 5.6B. Students demonstrate and explain that some mixtures maintain the physical properties of their substances, such as iron filings and water, and investigate and compare mixtures and solutions composed of liquid and solid matter. This standard builds on grade 4 TEKS 4.6B, in which students investigate and compare mixtures and solutions composed of liquid and solid states of matter.
- Materials support teachers in understanding vertical alignment. For example, the material contains a Vertical Horizontal Alignment organized by RTC. It shows "What Unit the theme is in, what the students know, what they are expected to do, the spiraled concepts, new concepts, SEP, RTC, and new vocabulary and how it grows from Kinder to 5th grade."

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.

- Teachers access a “Common Misconceptions” section in the unit and weekly guidance documents to help recognize possible barriers to student learning. In Unit 14, Engineering Design: Reducing, Reusing and Recycling Paper, teachers learn about a common misconception, including, "Every time you use paper, a whole tree has to be cut down." Within the unit lesson plan, the Standards Coverage chart includes a teacher section to understand common misconceptions about the topic. For example, in Unit 20, Life Cycles, the teacher prepares to support the following student misconceptions, "Seeds are not alive, all plants are flowers, and eggs are not alive."
- Unit documents include Lesson Guides with a “Teacher Note” section after each “Success Criteria” section, which provides support for the teacher facilitating the activities. When applicable, the Standards Coverage Chart includes a “Misconception” section to guide the teacher on misconceptions to clarify.
- The 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. For example, in Unit 9, We Are in Orbit!, the *Teacher Background* podcast includes a common misconception that the moon and Earth are the same size, and that the Earth is the center of the solar system.

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

- The materials explain the intent and purpose of the instructional design of the program. For example, in the *What's New-Explore Science 3-5 National Webinar*, the speaker explains how the framework of the curriculum and the 5E model helps teachers guide students through the concepts, shifting from direct instruction toward inquiry.
- The Teacher Edition includes a “Science Weekly Grades 2-5” resource to gain an understanding of the intent and purpose of the instructional design of the materials. The document provides an understanding of how the materials help students gain an understanding of science content

Studies Weekly Texas Science Grade 3

while integrating Reading/Language Arts (RLA) and math standards. The guide explains the structure of the curriculum and student edition weekly readers, which support the 5E model of instruction. The introduction guide highlights other benefits of the instructional materials, including three-dimensional learning with SEP, RTC, and TEKS integration into science lessons and assessments.

- The Teacher Edition “Publication Resources” section includes the document “Texas Science: 2nd-5th Grades,” providing a detailed explanation of the intent and purposes of the instructional design of the materials. For example, in the section “Additional Highlights, 1. Instructional Design”, teachers access information including but not limited to the following: "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 Scientific and Engineering Practices, Recurring Themes and Concepts, and TEKS content are integrated into lesson plans when teaching science." The materials contain further details about formulating hypotheses, standards coverage, and student-led inquiry are integrated into the materials. Additionally, the “Core Components Description” document describes each component of the Texas Science program.

Studies Weekly Texas Science Grade 3

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.

- The materials support students' meaningful sensemaking through various modalities by integrating the 5E Model and Student-Driven Inquiry. In grade 3, Unit 2, students investigate the physical property of magnetism by testing the effect of a magnet on the objects found at Boca Chica Beach. After the exploration of the objects, students discuss their ideas and the cause and effect in the investigation. Students share how their thinking is changing based on their investigations. After the investigation, students read an article about magnetism to make meaning of the learning. Students identify key ideas from the text and discuss them with other students during collaborative work groups.
- In Unit 1, *Who Are Scientists and Engineers?* students reinforce their understanding of sensemaking through the use of vocabulary flash cards referring back to the definitions of *science*, *scientist*, *engineering*, *engineer*, *collaboration*, and *mindset*. Materials define science sensemaking as "the search for knowledge, applying knowledge, and understanding the world

Studies Weekly Texas Science Grade 3

through evidence gained from investigation." Definitions include the idea that science and engineering are collaborative processes that require a mindset open to learning new ideas.

- Materials include “Extended Reading: TEKS Explained” sections for each unit, providing student-friendly explanations of the TEKS through real-world investigation or simulation examples. For example, Unit 8, *Engineering Design: The Fastest Car*, “TEKS Explained,” demonstrates how speed is related to mechanical energy by adjusting the speed of a hammer when hitting a nail on a piece of wood.
- The material supports students' sensemaking through writing as scientists and engineers. For example, in Unit 5, *Forces*, the “Phenomenon Video” includes people playing football and explains that “football is a contact sport.” The video shows several examples of different types of contact in football. The material then guides students into producing questions using the Phenomenon Questions Technique.

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 with grade-level appropriate scientific text to gather evidence and develop an understanding of concepts. For example, Unit 6 includes a student article about how inventor and scientist Erin Smith utilizes the investigation process while studying neuroscience and computer science at Stanford. In Unit 14, *Engineering Design Problems* focuses on how engineering design can support reducing, reusing, and recycling paper. The article contains information about deforestation and associated problems. After reading, students define the term deforestation in their own words, highlight important ideas from the text, and discuss how changing the forest may have an impact on other life in the forest.
- Materials include pre-reading and vocabulary review before lessons via “Prior Knowledge Articles,” during lessons, and vocabulary cards. Materials provide embedded non-fiction articles within the activities for students to read and interact with for a deeper understanding of the content. Students answer questions, reflect, and connect using evidence from the article. For example, Unit 3, *Ice Storm*, focuses on TEKS 3.6B and 3.6C. Students describe and classify matter as solids, liquids, and gasses, and predict and record changes in the states of matter. In Unit 3, Activity 2, students listen to a podcast, take notes in science notebooks, write three words to describe ice storms, and then discuss. In Activity 9, students develop understanding further by reading an article, “Heating and Cooling Water,” about how water changes state during various types of weather and respond with explanations about what causes ice storms.
- Materials provide opportunities for students to engage in research by obtaining information from multiple sources throughout the investigation activities and/or through optional extension activities. For example, in grade 3, Unit 20, *Life Cycles*, students read an optional article to research the unique life cycle of the Darkling beetles.
- Materials provide multiple opportunities for students to engage with grade-level appropriate scientific text to gather evidence and develop an understanding of concepts. In Unit 13, Activity 5, *Air and Soil*, the student materials directions include reading the article, highlighting important information, and answering provided questions. Further guidance is provided through specific focus areas, such as, “Write two ways that humans use air. Make sure to think about the four categories that we have been discussing, construction, agriculture, transportation, and products.”

Studies Weekly Texas Science Grade 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.

- Materials consistently provide opportunities for students to graphically communicate understanding. For example, in Unit 19, Activity 4, *Diving, Flying, Waddling: Ducks*, students listen to a podcast about how ducks can fly, then "draw the external structures that are described in the podcast about duck flight," and completing a gallery walk and discussion using student drawings. In addition, in Unit 8, *Engineering Design: The Fastest Car*, students test the prototype they built in Activity 3 to investigate the relationship between mechanical energy and speed. Students record their observations on a table in the student edition and use data from the table to answer questions.
- The student materials include opportunities for students to engage in various formats of graphic communication, such as graphic text comics, which often build student understanding of real-world phenomena at the beginning of the unit. In Unit 14, the student edition includes a comic to introduce students to the phenomenon of students encountering dinosaur footprints at Dinosaur Valley State Park in Glenrose, Texas.
- In each unit, the materials provide multiple opportunities for students to write responses related to scientific concepts and engineering processes. In Unit 15, Activity 5, "Phenomenon Explanation," students answer the question, "How do plants and animals react to changes in weather?" after completing a sorting activity, Organisms' Reactions Concept Map, in which they classify pictures of animals and plants according to whether they hibernate, migrate, or go dormant during seasonal weather changes, students write their Claim ("the answer to your question"), Evidence ("How do you know?") and Reasoning ("Why did that happen?"), drawing on the activity and learning throughout the unit.
- 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. In Unit 17, Activity 2, *What is a Drought?*, students read and analyze the chart "*Texas Drought Conditions: 2023.*" Materials provide questions for students, including, "Based on what you know about where you live and the data in the map, what is the drought status of your hometown?" and "Based on the data in the map, how would you describe the drought status of the entire state of Texas?"

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.

- Materials include opportunities for students to engage in student-driven inquiry and investigations using materials to represent and investigate real-world phenomena using SEP. Unit materials provide phenomena and resources to problem-solve and explain the phenomenon. For example, in Unit 10, students consider what may prevent an oven from functioning properly. Then, students investigate the parts of an electrical system by constructing and testing a model and then model energy transformations within electrical circuit systems. Unit materials also include teacher resources to help students think like a scientist or engineers as they look through a lens of patterns. For example, Unit 6, Activity 1 directs teachers to, "Encourage students to view the phenomenon through the lens of cause and effect or scale."
- 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

Studies Weekly Texas Science Grade 3

struggle. Unit 5, Activity 4, *Demonstrating Force*, directs students to "use the marbles to demonstrate forces acting on an object." The students record the data collected in the investigation on the chart in the Studies Weekly Student Edition. Materials include resources for students to engage with phenomena in the form of comics. After reading the comic, teachers guide students to ask questions about the situation they have read using the Phenomenon Questioning Technique. Students begin each unit by thinking of their own thoughts and questions about natural phenomena and then record their questions on the *Asking Phenomenon Questions* printable. Both tools are transferable to any situation and allow students to develop scientific habits of mind over time. Materials encourage students to write down all questions without judgment, discuss, and select the most interesting question.

- Materials include multiple opportunities for students to define problems and create solutions using a consistent process of Define, Ideate, Develop, Test, and Optimize. In Unit 14, *Engineering Design: Reducing, Reusing and Recycling Paper*, students learn how paper is created from trees and work with partners and groups to create a recycled paper structure to hold pencils. Students engage in a planning and creation process, including improving upon their original design through testing and collaboration. The materials give students time over a two-week period to fully explore, improve, and communicate their findings. In addition, in Unit 4, Activity 5, *Engineering Design: The Strongest Fort*, students create a poster displaying the process, solution, and results, including the information about the properties of the materials used and how that helped or did not help the design.

Studies Weekly Texas Science Grade 3

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.

- Materials prompt students to use evidence to support their hypotheses and claims. For example, Unit 17, Activity 1, *Phenomenon Introduction*, focuses on creating a hypothesis using the "My Hypothesis" chart. This resource prompts students to create their hypothesis using sentence stems such as, "I think...", "because (reason)," and "I think this because (observation/what you already know)." Unit 17, Activity 5 poses the student question, "Did a drought cause the organism you studied to thrive, perish, or move to a new location?" Students use evidence to support their response using the "Claim, Evidence, Reasoning" chart using sentence stems such as, "Claim (the answer to your question)," "Evidence (How do you know?)," and "Reasoning (Why did that happen?)."
- The materials include an instructional design that guides students to design student-driven question boards. Students use their question boards to investigate, research, and collect evidence to support or revise the hypothesis generated at the beginning of the unit. For example, in Unit 2, Activity 5 asks students to make observations about a picture of an iceberg as they review their previous hypotheses about what types of objects will sink or float. After an investigation, students share their ideas about the properties and patterns of objects based on whether they sank or floated.

Studies Weekly Texas Science Grade 3

- At the beginning of each unit, students read a comic strip as an introduction to a phenomenon and create a hypothesis from the questions they find most interesting. Subsequent unit activities provide students with evidence that may or may not support their hypothesis. Students complete each activity and consider the evidence they gathered and how it may impact their hypothesis. For example, in grade 3, Unit 12, Activity 2, *Model a Volcanic Eruption*, students create a model of a volcano to demonstrate a change to the Earth's surface. In the "Reflect & Connect" section, students re-read the comic and find the evidence of a volcano they see in the phenomenon and the evidence of a volcano that is or is not happening. Students revise their initial hypothesis based on their evidence.
- Materials include resources that support students' use of evidence in claims. For example, in Unit 19, Activity 5, students make a claim about how the external structures and functions of a duck allow it to survive in its environment. Before writing, students share their claims using sentence stems that refer back to evidence such as, "I agree (disagree)_____ because_____" and "What evidence can you provide for that?" Students record their thinking on a provided graphic organizer that includes definitions: "Claim (the answer to your question), Evidence (How do you know?), Reasoning (Why did that happen?)" In addition, teachers use a Claim Evidence Reasoning Rubric to check for proficiency.

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

- The *Introduction to Texas Science- 2nd-5th Grades* includes the support for introducing vocabulary terms embedded in the teacher materials. The guide states, "Texas Science strives to follow a disaggregated approach to vocabulary. This means that students grapple with the science concepts before introducing new science vocabulary." The guide outlines the intentional structures that support students to learn terms in their own language or vernacular before teaching them in scientific, academic language. After this, lessons give students time to practice the terms in context to lower the cognitive load and increase accessibility for all students. The guide gives an example of the phenomenon of comics at the beginning of the units to allow students to access the concepts in a format more accessible to most students than a traditional article or other academic text.
- Materials in the "ELD Teacher Edition" include a picture walk of the new vocabulary, which guides the teacher to place labels in specific parts of the picture while discussing new vocabulary. For example, in Grade 3, Unit 16, a slide for the vocabulary word *essential* shows pictures of fruits, a television, a water bottle, and air. Teachers put an X through the television and write the following sentence as a caption at the bottom of the photo, "Many things are absolutely necessary to live." The Unit 17 Teacher Edition, "Unit Printables," provides flashcards for students in English and Spanish. The flashcards include the term on one side and the definition on the other side.
- Materials include embedded opportunities to develop and utilize scientific vocabulary in context. Grade 3 materials include an "ELD Student Edition," providing a slide with a short "Close Reading" passage, allowing students to manipulate vocabulary in a different way. For example, in Unit 20, students read a short text about the life cycle of a salmon and follow directions such as: "Read the paragraph. Draw a life cycle of a salmon based on the reading. Don't forget to include all the different stages, from an egg to a spawning adult salmon." Unit 17, Activity 2 provides guidance to teachers to have students "use accessible language to describe to a peer the phenomenon they simulated in the game." The teacher is directed to "explain to students that in science, this phenomenon is called a drought." Students record the definition of *drought*, write it, and draw a sketch in the student edition.

Studies Weekly Texas Science Grade 3

- Materials include embedded opportunities to develop and utilize scientific vocabulary in context. In Unit 7, Activity 3, students complete a hands-on investigation of sound using a tuning fork to show how sound waves can move salt particles. Students then read a related article using related vocabulary, such as *sound energy*, *waves*, and *vibrations*. Students then write a response to the question, "Explain sound energy and how it is related to a campfire." The words *sound energy* are in bold print to emphasize their importance. An additional example includes Unit 19, Activity 2, where students simulate eating with different types of beaks by using tweezers, tongs, and a toothpick. After each round, they record how much food they could "eat" on a provided graphic organizer in the student edition. Students define and illustrate the vocabulary *external structure*, read the article, "What Do Ducks Eat?" and respond to the question: "How does the external structure of the beak help ducks eat their food?" relating new vocabulary to a hands-on activity, definition, and writing response.

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

- Materials integrate argumentation and discourse throughout to support students' development of content knowledge and skills as appropriate for the concept and grade level. For example, in Unit 14, Activity 7 guides students to work in collaborative groups to create a prototype. Students assign roles for the work to various team members. After building the prototype, the students engage in reflection questions and share their opinions with the team to consider how they can improve the team dynamics. Students assess the value of the feedback received while sharing with other teams and plan to utilize the feedback. This activity requires students to engage in feedback and to work as a cooperative team.
- Unit 1 of the materials integrates argumentation and discourse to support students' development. For example, Unit 1 in grade 3 introduces scientific and engineering practices (SEP). Activity 5 provides an explanation of what an argument is and how scientists and engineers use arguments to explain and communicate their explanations and solutions, such as, "Along with a claim and evidence, an argument also includes reasoning. Reasoning tells how or why the evidence supports the claim." In Unit 1, Activity 5, teachers review the experimental design and lead students to understand how this connects to a claim, evidence, and reasoning. Teachers define an argument as a written claim backed by evidence and reasoning instead of a disagreement in the lesson. Then, students read an article in the student edition giving more information about what an argument is. Students work in groups to write an explanation of their experiment using the "Create An Argument" printable.
- In grade 3, Unit 8, Activity 4, *Engineering Design: The Fastest Car*, students make a claim about how mechanical energy is related to the speed of their cars. Students use the "Claim, Evidence, Reasoning Rubric" to employ self-correcting techniques. Students read their claim to a peer and check it with the rubric. Students make adjustments and reflect on their writing by filling out a new rubric to turn in.

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.

- Materials provide opportunities for students to construct and present developmentally appropriate verbal arguments that justify explanations of phenomena and solutions to problems

Studies Weekly Texas Science Grade 3

using evidence-acquired learning experiences. For example, in Unit 2, students engage in several speaking opportunities to generate the collaborative meaning of the concepts related to the phenomenon of magnetic attraction. During collaborative learning, students test the magnetic properties of objects found at a beach. After the investigation, students discuss the results compared to their hypothesis. Students discuss how their hypothesis changed with their partners and work together to identify the cause and effect.

- Throughout the program, students begin each unit with phenomena that they then proceed to investigate through related experiments and engineering design processes. At the culmination of each unit, students revisit their initial thoughts on the phenomena to give a revised explanation of their thinking based on what they have learned during the unit. For example, in Unit 19, Activity 5, students write a response to the question, "What external structures and functions of ducks allow them to survive in their environment?" Students have a space to write their Claim, Evidence, and Reasoning based on what they learned during the unit.
- Unit materials provide opportunities for verbal arguments that justify explanations of phenomena and solutions to problems. For example, in Grade 3, Unit 8, Activity 2, students ideate possible solutions on how to provide energy to the car to increase its mechanical energy or speed. Students gather in their groups to discuss their research findings and brainstorm solutions based on new or existing ideas. The lesson guide directs the teacher to circulate and ask students to explain the reasoning behind their ideas, using their prior knowledge of mechanical energy, the engineering problem, the criteria, and the constraints.
- Materials provide opportunities for students to construct and present developmentally appropriate written/or verbal arguments that justify explanations of phenomena and solutions to problems using evidence-acquired learning experiences. For example, students create models of volcanic eruption, earthquake, and landslide and fill in a table describing the cause and effect of each model. Based on the evidence they gathered from the model demonstrations, students decide which rapid change they think the kids in the phenomenon comic saw on their bike path. Students write to explain their answers by providing evidence of the rapid change.

Studies Weekly Texas Science Grade 3

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.

- Materials provide teacher guidance on anticipating student responses and the use of questioning to deepen student thinking. In Unit 5, "Questioning Techniques" guides teachers in supporting students in producing questions, collecting questions, and creating a student-driven question board. For example, guidance for producing questions includes putting the students into groups of two to four, reviewing the rules with the students, and providing students with five minutes to write questions based on the phenomenon. The materials also include guidance if students struggle to produce questions by pointing out any observations from the phenomenon and having students review their list to change any statements into questions. The "Questioning Techniques" then direct teachers to finish with a class discussion and check in to see if any questions are not testable or investigable.
- Materials provide teacher guidance on anticipating student responses and the use of questioning to deepen student thinking. For example, in Unit 16, *The Texas Bluebonnet*, students listen to *The Missing Frogs* podcast to confirm or correct their predictions. Lesson plans list questions such as "How does the availability of one organism affect the rest of the ecosystem?" with scaffolded student responses such as, "There is no effect on the ecosystem" (incorrect answer), "All the organisms that rely on the one organism will die" (partially correct),

Studies Weekly Texas Science Grade 3

and “it makes the rest of the ecosystem more desperate for that organism and the competition increases” (correct answer). The materials list the following questions to deepen student thinking, “People are not so different. When there are shortages of things like toilet paper or baby formula, the cost of those items increases. Have you ever experienced something similar to this? How did that affect your family?”

- Grade 3 materials provide teacher responses to possible students’ responses and questions to deepen student thinking. For example, in Unit 20, *Life Cycles*, students develop a model of a salmon's life cycle during the collaborative learning phase. Materials list questions such as: “How is this life cycle the same or different from other life cycles we have learned about this week?” with possible responses such as, “Oak trees are long, but lima beans and salmon are much shorter.” Materials follow with the question, “Do you notice patterns?” and the possible student response that students can explain that all life cycles show growth and change. Materials also provide questions that may have multiple answers, such as, “What questions about life cycles are you still wondering about?”
- The teacher's lesson plan includes possible student response questions in specialized fonts to find easily. For example, Unit 4, Week 8, includes the question for students, "How will we know we have been successful in finding a solution?" as students define criteria and constraints for their investigation. In Unit 19, Activity 2, students use models to describe the external structure and function of a duck beak. Students then use tweezers, tongs, or a toothpick to simulate different types of beaks. Teacher guidance directs teachers using the Student-Driven Inquiry process by providing discussion questions such as, "Based on your observations, which 'beak' was the most difficult to get lots of food with? Which 'beak' allowed you to pick up the most food? What does that tell you about a duck's beak?" Materials then provide possible student answers such as, "Ducks need beaks that are wide so they can get all the food they need."

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

- Materials include teacher guidance on how to scaffold and support students' development and use of scientific vocabulary in context. The Unit 17 lesson plan provides teachers with an optional vocabulary review and sample directions, including, "It would be a good idea to review the prior vocabulary before beginning. You may already have these words on your word wall." An additional example includes Unit 16, *The Texas Bluebonnet*, in which students learn about the flow of energy in a food chain. The materials guide the teacher to take the students to the gym to run around until they feel tired before explaining the multiple meanings of the word *energy*. Students then return to the classroom and share how they are feeling. Materials guide teachers to ask students, “How can you become less tired?” and provide possible responses such as eating food, drinking water, and rest. Materials guide teachers to help students understand the meaning of the word *energy* in the context they just experienced in comparison to the definition learned previously in Unit 7. Teachers explain to students that they will explore how Texas bluebonnets get the energy to grow and how energy affects an ecosystem.
- The materials have various supports embedded to help the teacher scaffold and support student development of scientific vocabulary in context. For example, in Unit 7, Week 12, students review familiar terms such as *heat*, *light*, and *sound*. For new and more abstract terms such as *energy*, *light energy*, *mechanical energy*, *sound energy*, and *thermal energy*, additional support is also provided, such as student-friendly definitions to support scaffolding. Additional scaffolds include word wall cards, flashcards, slides to explain terms, close reading texts, and application discussion stems.

Studies Weekly Texas Science Grade 3

- Lessons include teacher guidance to assist students in using new vocabulary. In Unit 15, Activity 2, students analyze weather data to find patterns that explain how weather changes affect animal behaviors. Teacher guidance directs teachers with a vocabulary icon and suggested definitions as students describe the term *migration* in their own words. The materials' plan has students record their definitions, and teachers ask, "Can you think of any other animals that migrate like the ruby-throated hummingbird?" Word wall vocabulary cards are also provided to assist students in using new vocabulary.

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

- The materials provide teacher guidance for student discourse. For example, the *Introduction to Texas Science-2nd-5th Grades* resource provides teachers with guidance for developing student questions. The summary outlines how each unit begins with students studying the phenomenon and then generating questions about the topic. The guide provides a "Phenomenon Questioning Technique" document supporting the teacher's building students' questions throughout the year.
- Teacher lesson guides provide routines and scaffolds as students construct written and verbal claims. In Unit 15, Activity 5, students claim how animals react to changes in the weather. The materials provide teachers with specific verbiage to review the meaning of claim, evidence, and reasoning (CER). In Unit 13, teacher guidance includes "make a claim about why it is important to conserve natural resources. Review with students each portion of the argument: Claim, evidence, and reasoning. Give students the Claim, Evidence, Reasoning Rubric. (and) have students record their thinking in the student edition." Students record their thinking on a graphic organizer and revise their first draft using the "Claim, Evidence, Reasoning Rubric" to self-correct and improve their work. Students then submit their final self-rated rubric and essay as a formative assessment and share and discuss their writing with a peer.
- The materials provide routines and scaffolds as students construct written and verbal claims. In Unit 19, Activity 5, students make a claim about how the external structures and functions of a duck allow it to survive. Before writing, students verbally share a claim with a partner. Teachers post prompts such as "I agree/disagree... because... Why do you think that?" to assist student discussions. After discussions, students write a response on a graphic organizer outlining the claim, evidence, and reasoning with a definition of each. Additionally, in Unit 20, *Life Cycles*, students create a hypothesis focused on the lesson phenomenon using their observations and prior knowledge. Materials suggest that if students struggle, teachers can provide the following differentiated example, "I think (part of the question) because (reason). I think this because (observation/prior knowledge)." and/or example, "I think the flower wilts because it doesn't get enough water. I think this because when we went on vacation, we didn't water our plants, and the plants were all wilted when we got back."

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

- Teacher lesson guides provide routines and scaffolds as students share their thinking. For example, in Unit 15, Week 23, Activity 5, teacher guidance illustrates methods for differentiation by allowing students to orally share their *Independent Work* responses in pairs before writing to allow them to clarify. The materials also include a questioning rubric to assist teacher instruction in student questioning and discussions aligned to the investigation focus. The rubric is designed

Studies Weekly Texas Science Grade 3

as a reference for students across multiple units with descriptors for levels of questions. For example, in grade 3, Level 1 is described as "I did not participate," while Level 4 is described as "I asked as many questions as I could think of and encouraged my group members. I even revised and improved my questions from feedback."

- Grade 3 materials support and guide teachers in facilitating the sharing of students' thinking and finding solutions. For example, in Unit 19, Activity 5, students make a claim about how the external structures and functions of a duck allow it to survive. Before writing, students verbally share a claim in pairs, and teachers post prompts such as "I agree/disagree... because... Why do you think that?" to assist student discussions. In Unit 12, Activity 2, students model a volcanic eruption to describe the rapid changes that occur to the Earth's surface. Materials prompt the teacher to present an image of a mountainous landscape before the investigation and to discuss prompts to describe what they notice, what they are wondering, and why they think it was formed. Materials guide the teacher to have the students discuss in pairs and to allow students to express their ideas. Materials prompt the teacher to call on students to share their ideas and responses to each question in single words or short phrases.
- Materials provide teacher support and guidance to engage students' thinking in various modes of communication. For example, in Unit 12, Activity 3, students build a structure with toothpicks and marshmallows to use during a demonstration. The materials prompt the teacher to have students draw a visual of a building in their student edition to help enhance understanding after building the structure. After students finish the demonstration, teachers prompt students to describe the model in their own words. An additional example includes the Unit 9, *Lesson Guide Debrief*. This document guides teachers to "circulate, support and deepen students' thinking in their discussions with the following questions: a. What did each item represent in our model? b. What is something we did not represent in our model? c. How could our model have been improved?"

Studies Weekly Texas Science Grade 3

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

- 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, described in the “Core Components Descriptions (Grades K-5)” document. This resource describes the various assessment types for each unit, such as formative assessments, performance tasks, comprehension reading assessments, and summative unit assessments. For example, the assessment types are explained in the “Teacher Lesson Plans” for each unit, including formative assessments. In the online student tools, teachers can enable the students to complete all assessment types, both formal and informal, in the online format. The “Core Components Descriptions” also include a visual example of the assessments and an assessment map for each unit.
- Materials include a range of assessments in a variety of formats. For example, the unit and weekly teacher guidance documents include a chart showing unit activities, success criteria, and formative assessment evidence. For example, in Unit 3, Activity 3, students analyze data to explain what causes a water trough to freeze. Teachers evaluate students’ written responses to vocabulary definitions, observations during an investigation, and responses to the question, “What caused the water to freeze?” to assess their understanding of unit TEKS 3.6C. This activity

Studies Weekly Texas Science Grade 3

occurs earlier in the unit, allowing teachers the opportunity to monitor and adjust instruction for students who don't meet success criteria before the end of the unit.

- The materials include a variety of formal assessment types, including performance tasks, reading comprehension assessment, and a summative unit assessment. Assessments are available in a variety of formats, including online or printed copies. For example, in Unit 8, *Engineering Design: The Fastest Car*, the unit materials include a Reaching Comprehension Assessment with multiple choice questions about an article. In the Unit 8 Unit Assessment, different question types give the teacher various ways to analyze multiple dimensions of student learning, such as multiple choice questions, short answer, example identification with matching, and true or false question types. Also included are “Performance Tasks,” a summative assessment that provides students the opportunity to apply what they have learned to a novel situation and allows students to demonstrate understanding through application.
- Materials include a range of assessments in a variety of formats. For example, Unit 5, Activity 1, Formative Assessment, provides students the opportunity to self-assess their understanding of the concept using a “Questioning Rubric” to check for understanding and proficiency. The Activity 2, Formative Assessment includes a student-written letter to a lineman describing the force they think will help him to win at the line of scrimmage. Formal assessments for Unit 15 include the “Survival Through Change Reading Comprehension,” “Survival Through Change Unit,” and “Survival Through Change Performance Task” assessments. Informal assessments include the self-assessment for Activity 1, written responses for Activities 2-4, as well as the “Claim Evidence Reasoning” chart for Activity 5.

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

- The materials provide a “Texas Science Scope and Sequence” document that shows TEKS correlation for each unit so teachers know where and when TEKS are assessed. Because every unit contains both formative and summative assessments, this reflects assessment for all grade 3 science TEKS.
- Materials assess all student expectations and indicate which student expectations are assessed. For example, the materials provide a “Citation to the TEKS and ELPS for Studies Weekly” document that shows TEKS correlation for formal, informal, formative, and summative assessments throughout each unit, indicating where and when each student expectation will be assessed. Unit lesson plans include resources that indicate the content, SEP, RTC, and other content area standards, such as reading/language arts or math, which the unit addresses. Within the activity lesson plan, aligned RTC SEP and ELPS are listed. The chart includes evidence for all the assessed standards during the school year. In addition, the “Unit Assessment Answer Keys” provide an Assessment Map listing the science standards covered in that unit.
- Materials assess all student expectations and indicate which student expectations are assessed. For example, the Unit 13 Assessment Map includes a detailed listing of aligned student expectations such as SEP 1G Develop and Use Models is addressed in Task 2A, SEP 2D Evaluate Designs is addressed in Task 2B, SEP 3A Develop Explanations and Purpose Solutions is addressed in Tasks 1, 2A, 3A, and 3B. RTC 5B Cause and Effect is addressed in Tasks 1, 2A, 2B, 3A, and 3B.

Studies Weekly Texas Science Grade 3

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

- Materials included assessments that integrate scientific concepts and science and engineering practices with recurring themes and concepts. For example, the unit and performance assessments include an Assessment Map containing a list of the Science and Engineering Practices (SEP) and Recurring Themes and Concepts (RTC) covered within the task. For example, Unit 20, Task 1 assesses SEP Collect Evidence, and Tasks 2 and 3 assess SEP Develop and Use Models. Tasks 1, 2, and 3 assess RTC Structure and function. Task 3 assesses RTC Patterns.
- The Student Edition highlights the SEP and the RTC covered during each activity and formative assessment. For example, Unit 20, Activity 3 is aligned to SEP Develop and Use Models and RTC Patterns. The student puts the pictures of the different stages in the life cycle of a sunflower in the correct order by numbering them from 1-6. The student identifies the similarities and differences between the life cycle of an oak tree and a lima bean by creating a model to describe the differences. The teacher uses the models as a formative assessment to check for proficiency in the success criteria. Unit 7, Activity 6, “Phenomenon Explanation,” integrates SEP Developing Explanations with RTC Energy and Matter. After reading an article about friends on a hike, students identify the types of energy the friends encountered while hiking, such as thermal energy from the sun. Teachers evaluate student responses to this final activity of the unit as a formative assessment.
- Materials included assessments that integrate scientific concepts and science and engineering practices with recurring themes and concepts. The informal assessments include opportunities for the teacher to analyze student understanding of the SEP and RTC. For example, Unit 1, Week 4, Activity 4 evaluates the SEP Evaluate Designs and Collect and Organize Data by using students' tests and discussion on improvements to check for proficiency of the success criteria using the “Test” and “Improve” sections of the “Engineering Design Rubric” in the “What do Engineers Do? Answer Key.” In addition, the Unit 17, “Unit Objectives” states, “Students will be able to develop explanations that describe how natural changes to the environment cause stability and change for organisms,” which aligns with SEP 3A Develop Explanations and RTC 5G Stability and Change.

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

- Students apply their learning from each unit to novel stimuli during summative assessments. In Unit 7, students complete the summative performance task “Energy All Around Us” summative performance task to demonstrate their knowledge of TEKS 3.8A. Students label all the forms of energy in a video game system and identify the types of energy used by a microwave oven, as well as create a drawing of their own system that uses all four types of energy they have studied. These are novel tasks that differ from those in the unit materials. In Unit 11, students complete the summative performance task “Ever Changing Soil” to demonstrate their knowledge of TEKS 3.10B. Students collect a new soil sample, analyze it with a hand lens, pour water into the sample, and then make a claim about whether it is sand, clay, or topsoil and how it was formed. The students support their reasoning with evidence. An example of reasoning with evidence can also be seen in Unit 17, Activity 1, “Phenomenon Introduction.” This activity introduces the phenomenon, and students write a guiding question and create a hypothesis from the question written. The materials instruct students to form their response in the format, “I think...” “because...(reason),” and “I think this because... (observation/what you already know).”

Studies Weekly Texas Science Grade 3

- The performance assessments include student application of knowledge and skills to novel contexts. For example, in the Unit 11 Performance Task, students demonstrate an understanding of standard 3.10B. Students have the opportunity to respond to three different tasks. Students complete a graphic organizer to explain how soil is formed, including using key vocabulary in Task 1. In Task 2, students engage in an investigation of soil, which they collect from various locations. In Task 3, students consider four different student responses and select which one best represents the soil formation process.
- Each unit includes a performance task that allows students to apply what they have learned in a novel context. For example, in grade 3, Unit 4, students build a bridge that supports a golf ball and justify their selection and modification of the materials used. Students then determine what physical properties they should consider when building a bridge, and design a plan for their creation. Students build, test, and modify their bridge and communicate how the design plan needs to be modified. Students draw and label their final bridge and justify their material selection based on the structure and function of the bridge. An additional example includes a Unit 19 assessment in which students consider the various adaptations that help animals survive. Students consider the structures of various animals, such as blue whales and ducks, and which structures help them survive in their environments. The assessment also has students determine which animal would best be suited to survive in a lake and mountain environment. The assessment also includes applications about the structure and function of alligators and squirrels.

Studies Weekly Texas Science Grade 3

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.

- Materials include information and/or resources that provide guidance for evaluating student responses. The "Core Components" document describes the unit answer keys as "A teacher tool that provides teacher guidance, support, and suggestions for student work in the student editions as well as the formative assessment." The unit assessment answer keys include the correct or approximate responses for open-ended responses to support the teacher with scoring and include links to rubrics for the teacher to check the understanding and proficiency of formative assessments. The unit answer keys also include the correct responses to open-ended or short answer responses in the student editions for each unit in a specialized font. Formative assessment activities are labeled to direct teacher attention to opportunities for evaluation. Included in the unit answer keys are the Rubric for Phenomenon Explanation and General Formative Assessment Rubric, which gives teachers further information to determine whether students are meeting success criteria.
- Each unit of the materials provides guidance for teachers in evaluating student responses via provided rubrics. For example, in Unit 16, Activity 4, students explain how the availability of one organism affects the rest of the ecosystem. The materials indicate that an incorrect answer states that there is an effect on the ecosystem, while partially correct states that all organisms

Studies Weekly Texas Science Grade 3

that rely on one organism will die. The correct answer states that it makes the rest of the ecosystem more desperate for that organism, and the competition increases. In Unit 7, Activity 1, students use a rubric to self-assess their questioning and responses. Teachers and students assess proficiency according to descriptors from 1, Below Proficient: "I did not participate," to 4, Above Proficiency: "I asked as many questions as I could think of and encouraged my group members. I even revised and improved my questions from feedback."

- Materials include information and/or resources that provide guidance for evaluating student responses. For example, the Unit 13, Claim, Evidence, Reasoning Rubric provides teachers with an evaluation tool that scores student responses from 1-4 in the Writing Conventions and Claim, Evidence, and Reasoning categories. Each score includes descriptors for each category. For example, a score of 1 in Claim "does not make a claim." A score of 4 in Claim "makes a claim that answers the guiding question using appropriate science vocabulary correctly." The Unit 13, Lesson Plan, Activity 3, "Debrief" section provides guiding questions with possible student answers such as, "Ask: What natural resources did you find that humans use in construction? (Answers may vary but should include resources such as wood, oil, and rocks.)"

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 provide limited guidance for report use, including teacher support for analysis of reports and limited teacher support for printed assessments. For example, the teacher *Reports* video gives guidance on how to navigate and access the weekly assessment reports and weekly progress reports to analyze student achievement and progress. Teachers have access to a line graph that demonstrates students' weekly assessment scores and comprehension progress; however, the materials lack significant guidance and direction to respond to individual students' needs.
- The materials provide limited guidance for report use, including teacher support for analysis of reports and limited teacher support for printed assessments. For example, the answer key for Unit 3, Activity 8, serves as a formative assessment guiding teachers to review student classifications of solids, liquids, and gasses. The materials support that if students are not meeting success criteria, they are advised to "circle incorrect ideas and/or areas for improvement on their responses and ask them how to problem-solve their errors." This technique demonstrates the lack of teacher guidance provided when teachers are instructed to ask students to problem-solve their own errors.
- Materials provide a variety of reports to show student 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. For example, teachers can access reports via the program's online data management system. Teachers view Weekly Assessments by class, student, and student responses, Weekly Progress Reports, Customized Content Reports, and Classroom Reports to view average assessment scores. Data is presented both in graph and list form. Teachers can also monitor whether students have started, not started, or finished articles and activities. The materials also provide a training video, *Reports*, to familiarize teachers with available reports and ways of viewing student data and progress. However, the materials lack guidance and direction for teachers to respond to individual students' needs.
- Materials provide some guidance to support teachers in analyzing formative assessment data and student understanding. For example, the Unit 14, Activity 4 teacher edition includes

Studies Weekly Texas Science Grade 3

probable student responses, and some lessons include guidance for the teacher about using guided questioning or small group instruction to respond to students who only demonstrate partial mastery. The unit answer keys, comprehension assessment answer keys, and performance assessment answer keys provide correct or partially correct answers, and the performance assessment includes a table with guidance on which activities to reteach. However, there is a lack of teacher resources or direction to respond to individual student needs based on measures of student progress. The materials lack novel resources for the teacher to use for reteaching or responding to student needs based on performance.

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

- Assessment tools contain relevant information for teachers to use when planning instruction, intervention, and extension. The Unit Assessment Answer Key in the Assessment Map lists the activities from the unit lesson plan that support the remediation or review of specific skills. For example, in Unit 19, the answer key includes teacher advice for Activity 4 to partner students to problem-solve with a peer who showed mastery and compare their responses. After Activity 5, the teacher recommendation is listed as reteaching or using small groups for students who struggle to complete the formative assessment at proficiency.
- The materials consistently provide reteaching suggestions within the unit/weekly teacher guidance documents. For example, in Unit 19, Activity 2, the materials provide a lower-level lexile article on the unit topic, Diving, Flying, Waddling: Ducks Lower Lexile Articles, and suggest that teachers have students work in a small teacher-led group to read and analyze the article, stopping periodically to check for comprehension. In addition, the Unit Assessments include an Assessment Map that matches each question on the assessment to the number of the activity from the unit related to it. Teachers use this information to plan for student remediation or review. For example, in Unit 16, Assessment Item 1 is correlated to Activities 2 and 4.
- Activities within the Unit Lesson Guides, in the Teacher Edition, include a “Formative Assessment” chart providing the teacher with the evidence to look for when evaluating student understanding and mastery of the success criteria. For example, in grade 3, Unit 16, teachers use students’ pond food chain drawings to check for proficiency in the success criteria. Teachers use the evidence to plan for instruction, interventions, or extensions. Unit 9, Activity 2, “Reflect and Connect,” asks students, “What does the sun have to do with the length of one year on Earth?” The Unit 9 Teacher Edition Answer Key Formative Assessment states “If students struggled to complete the formative assessment at proficiency level, reteach the concepts in small groups or one-on-one time” before the next activity.

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

- The materials provide limited resources for teachers planning for responding to student data and lack teacher resources that explain how to leverage various tools aligned to student performance on assessments or at various knowledge levels. For example, the Unit 14 post-activity guidance encourages the teacher to circle evidence using the rubric and allow students to revise their responses. The answer key for Unit 5, Activity 3, encourages the teacher to reteach if students struggled to complete the formative assessment at proficiency level using small groups or one-on-one time but lacks the resources for the teacher to perform the reteach.

Studies Weekly Texas Science Grade 3

- The materials provide limited resources for teachers planning for responding to student data. For example, in Unit 2, Activity 5, developing learners work with a partner who demonstrated mastery. At the same time, advanced students extend their learning by writing and illustrating their own books based on the activity. These differentiation suggestions lack clarity on which data the teacher should analyze to determine which students may benefit from these tasks.
- Materials provide additional student support materials along with some teacher guidance on how to use them. For example, in Unit 7, word wall cards with blank boxes are provided for the unit vocabulary words such as *thermal energy*, *mechanical energy*, and *light energy*. Teacher guidance includes having the class create a drawing for each vocabulary word, post the drawings on the classroom word wall, and refer to the cards throughout the unit. However, the materials do not provide a list of suggested activities to assign individual students and a set of lessons for students scoring below expectations.
- The materials provide teachers with reports of students' weekly progress, weekly assessments, and the status of student's completed work. However, the materials' data systems do not group students for reteaching or have alternate lessons and activities related to the assessment data.

Studies Weekly Texas Science Grade 3

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.

- Assessments include scientifically accurate terminology, are free from bias, and are error-free. Summative assessments use terms students can understand. For example, in the Unit 7 unit assessment, Question 2 asks students to, "Put the colors in order from least to most energy. blue; red; violet; yellow." This terminology accurately asks students to apply their understanding of how color represents energy. The Question 3 scenario states, "Sarah noticed that the television noise decreased when the door was closed," rather than saying it got quieter.
- The assessment items utilize scientifically accurate vocabulary and set expectations for students to use accurate vocabulary in their written responses. For example, in the Unit 3 unit assessment, students view an image of molten metal and answer, "Look at the worker in a metal factory. Which state of matter is the metal in?" Answer choices include A. gas, B. liquid, C. plasma, or D. solid. Another assessment asks students to write a short answer to the question, "Describe what would happen to a rock if it was placed in an oven with no limit on temperature. Use vocabulary from this unit in your description."
- Assessments contain items that are scientifically accurate, avoid bias, and are free from errors. Unit 5, "Down, Set, Hut!" explains, "Collisions often happen in sports because of the speed and force of movements in the game." The article illustrates how "Football is a sport that involves many collisions," and gives examples of different collisions within the game.

Studies Weekly Texas Science Grade 3

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

- Assessments use developmentally appropriate graphics that focus on the question asked. For example, in the Unit 3, Ice Storm “Unit assessment,” students match statements and images such as “The water is almost at freezing temperature” with color photos depicting effects such as a mountain lake with frozen chunks of ice throughout. Photos do not include any irrelevant material, such as a deer in the mountain lake photo that isn't related to the question and would be distracting for third-grade students. The Unit 18 performance task includes a detailed and clear image of a trilobite fossil, which prepares them to clearly identify the structures on the fossil in Question 1.
- Assessment tools use clear pictures and graphics that are developmentally appropriate. For example, in Unit 17, “Unit assessment,” Question 8 asks students to identify which animal benefits most from a shrinking lake from a selection of images. The answer choices are photographic images of a fish in a body of water, a deer in its habitat, a crane standing in water, and a mallard duck swimming in water. These graphics are clear, and one demonstrates a clear answer to the question.
- Online assessments include clear pictures and graphics that are developmentally appropriate. For example, in the Unit 2 online unit assessment, Question 1 asks students to identify tools that measure mass and includes four clear color images of a graduated cylinder, a digital thermometer, a scale, and a ruler. In Question 2, as students answer a drop-down style question about magnet types, a color photo of a girl picking up paper clips with a magnet is visible. In Question 3, as students consider a question about which cup has the least mass, three color graphics are shown of a cup on a digital scale with numbers displaying their mass to support the three answer choices given.
- Assessment tools use clear pictures and graphics that are developmentally appropriate. For example, in grade 3, Unit 8, “Unit Assessment,” Question 5 includes a picture of a young girl in a car wearing a seatbelt, allowing students to make a connection to their own lives, before explaining the purpose of a seatbelt. Unit 20, “Unit Assessment,” Question 6 asks students to put six images of a man in order to represent his life cycle. The pictures include realistic images of a human wearing the appropriate type of clothing for each stage during different times in his life.

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

- The materials provide guidance for consistent and accurate administration of assessments. For example, the “Introduction to Texas Science 2nd-5th Grades” PDF states, “Every unit includes a variety of assessments,” and describes the various types of assessments, where to find them, and how teachers may use this evidence to inform instruction. Materials also include a “Tips for Administering Assessments” document, which includes step-by-step directions for assessment administration. The steps provide teacher guidance for different phases of assessment, including “Preparation,” which guides the teacher to prepare the written and technological tools and test the technology prior to testing to avoid potential interruptions, and “Accommodations,” which reminds the teacher to provide accommodations to eligible students according to their Individualized Education Program (IEP). Additional guidance is provided in the “Privacy, Distractions,” “Monitoring,” and “Stress Management” sections of the document.
- The materials contain an overview document, “How To Use Studies Weekly,” outlining the available assessments and the consistency of assessments from unit to unit. In the “Tips for Administering Assessments, Accommodations,” the directions state that the teacher must not

Studies Weekly Texas Science Grade 3

prompt or hint during the duration of the assessment nor assist students in constructing or rephrasing their responses. The “ Monitoring “ section guides the teacher to ensure that there is no talking during the test, and to allow students to take breaks as needed. If students request help related to the assessment’s content, the document guides the teacher to respond naturally with, “I can’t answer that for you; just do your best.”

- The materials provide teacher resources to understand assessment procedures for the variety of provided assessment types. For example, the training video “Assessments” provides teachers with information about how to navigate the assessments, access a student view, grade, view classroom test statistics, and edit or print the test. The “Tips for Administering Assessments” document provides a script to ensure consistency of the administration, guides the teacher to space student desks apart or use privacy folders to ensure accurate assessment results, and provides student activities to help manage testing anxiety.

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 include an option for teachers to assess students using a printable copy of assessments or an online format. The online format of assessments includes an audible reading of the assessment materials and additional graphics which support the students with the directions of the task. The training materials include a video that explains assessments and their capabilities. The video explains how the unit assessment allows the teacher to edit, delete, and add to the questions, which are included in the unit assessment. The questions are defaulted to allow for audible reading of questions and answers. The teacher may customize assessments such as adding or deleting answer choices to questions. Assessments include eleven different question types which the teacher can use as they add questions. The questions give the options for teachers to include other materials such as images, articles, crosswords, and misspelled words for students to unscramble. The teacher can add additional instructions for students to access prior to beginning the assessment.
- Unit “Performance Tasks” provide different options that teachers choose to meet the needs of their students. For example, the Unit 15 performance task provides teachers with a choice of three different task options. In Task 1, students complete a provided table, label landforms for given images, choose words from a bank to describe the creation process of the landform and explain their evidence. In Task 2, students cut out words and images from a given handout, gluing them next to the correct definition, and then write about how water, wind, or ice create the landform. In Task 3, students read statements and decide if they are true or false, changing statements to make them true, then illustrating, labeling, and describing the formation of a landform formed by wind. Teachers could select one, two, or all three tasks for assessment depending on their students' needs.
- Materials include guidance to offer accommodations for assessment tools that allow students to demonstrate mastery of knowledge and skills aligned to learning goals. For example, the teacher answer keys for each unit assessment indicate the depth of knowledge rankings for each question to support remediation or review. These tools facilitate teacher understanding of the level of mastery students are demonstrating and how to address it if gaps exist. In Unit 17, Activity 5, the formative assessment guides teachers to reteach the concepts in small groups or one-on-one if students struggle to achieve proficiency. The proficiency is based on the Claim, Evidence, Reasoning Rubric, which the materials provided.
- Materials include guidance to offer accommodations for assessment tools that allow students to demonstrate mastery of knowledge and skills aligned to learning goals. For example, students

Studies Weekly Texas Science Grade 3

who are developing their reading fluency can read the lower Lexile measure version of the articles included in the unit printables. Digital materials offer a text-to-speech software feature that students can use to listen to questions in the assessments. In addition, the digital Student Edition's Unit Assessments labeling and grouping questions allow students to drag and drop answers instead of writing them manually.

Studies Weekly Texas Science Grade 3

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 have not yet achieved grade-level mastery. Materials provide enrichment activities for all levels of learners. Materials provide scaffolds and guidance for just-in-time learning acceleration for all students.

Evidence includes but is not limited to:

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

- The materials embed recommended targeted instruction and activities for students who have not yet achieved mastery of the unit lesson plans. The materials include suggestions for optional differentiation at the end of the activity lesson plan. The materials include resources to support teachers with small group reteaching or activities to support students with mastering skills. For example, in Unit 18, Activity 4, the lesson provides sentence stems providing support such as, "I believe....", "Another example is...." or "I want to add...." Materials provide a specific example in case teachers need to model, such as "*I think the flower wilts because it didn't get enough water. I think this because when we went on vacation, we didn't water our plants, and the plants were all wilted when we got back.*"
- Materials provide recommended targeted instruction and activities to scaffold learning. In Unit 6, Week 11, Activity 4, the optional differentiation suggests the teacher plan strategic groups to scaffold learners who need more support with the activity. In Unit 18, Activity 5, the differentiation suggests the teacher pair students with another student who is demonstrating mastery for peer support.
- Materials include Unit Lesson Guides containing detailed steps for each activity in the unit. Each unit provides an optional opportunity for differentiation. For example, in Unit 4, Activity 1, students can report their findings through audio/video recording, dictation, or speech-to-text software. In addition, the materials consistently provide a lower Lexile version of student articles included in the weekly materials. For example, in Unit 19, a 500 Lexile (grade 2 level) of the article "Duck Beaks" is included for students who need it. The end of the unit provides an optional extension activity with an article and questions for students who need further practice with the unit's content.

Studies Weekly Texas Science Grade 3

Materials provide enrichment activities for all levels of learners.

- Teacher guidance materials include optional activities for unit elaboration or additional learning. For example, after Unit 2, Activity 5, students may extend their understanding by using a printable graphic organizer for students to complete a Claim-Evidence-Reasoning writing task.
- Grade 3 materials include optional enrichment connections within many units. For example, in Unit 18, Activity 4, materials connect with wellness/health through an article about how to adapt when change happens. The materials provide several Project Time videos outlining extracurricular projects students can complete as enrichment activities. Materials provide a single collection of 24 videos for grades 3 - 5. Video topics are related to units of study within the materials, such as the video “Weather and Unit 10: Compare Day-to-Day Weather.”
- Materials for grade 3, Unit 8, Activity 2, provide an opportunity for enrichment. Students extend learning by researching the history of the volcanic activity that once occurred at Davis Mountain State Park. In Unit 16, students participate in the “Laos Rainforest Food Chain Sprint,” and use components from a Laotian rainforest and race with each other to create food chains.
- Unit 17, Week 25, *Activity Summary, Optional: Extension Activities, Animal Migration* provides the opportunity to further explore animal migration through an article and comprehension questions, “What is the term for moving from one location to another?”, “What highway cuts through pronghorn territory?” and “How much money is spent because of wildlife accidents each year?”

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

- Materials include wellness articles that provide teachers with just-in-time scaffolds as students engage with particular lesson materials. For example, in Unit 3, teachers access a wellness article and lesson on “Coping Strategies for Fear.” The article and teacher guidance address student awareness of coping strategies and a new strategy to use (*Face Everything And Rise*) in the context of weather disasters. The materials provide suggestions for facing fears.
- Materials provide extension activities for students who are ready to accelerate their learning on unit topics. For example, in Unit 19, Activity 4, students explore how ducks fly. In the extension activity “Aerospace Engineers,” students research aerospace engineers online and write reports on how their discoveries have benefited society and science. Students relate their knowledge of animal flight to how humans fly, increasing their depth of understanding of unit concepts. For example, in Unit 10, Activity 3 encourages the teacher to differentiate the learning by asking advanced students to explicitly identify two main ideas and at least three key details to support the main ideas from the article. Students use these ideas to form a five or six-sentence paragraph.
- Unit materials include a document with step-by-step directions guiding students through the science and engineering problem-solving experience. Students use the “Phenomenon Questioning Techniques” printable to guide their process of producing questions and create a Student-Driven Question Board.
- Materials provide scaffolds and guidance for just-in-time acceleration for all students. In Unit 4, Activity 1, students define a problem and research possible solutions. Lesson guides provide sample questions for students who may struggle to come up with ideas. For example, the teacher asks, “What materials do you already know that could help you come up with a solution?” Unit 8, “Common Misconceptions” states one common misconception, “The moon is a planet.” The optional reading, *Our Solar System*, clears this misconception up. The text informs the reader, “The moon is Earth's only natural satellite.”

Studies Weekly Texas Science Grade 3

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.

- Materials engage students in the mastery of the content through a variety of developmentally appropriate instructional approaches. Unit materials introduce the phenomena using a cartoon comic format, engaging students' attention to the content. For example, in Unit 10, students move through a variety of instructional methods, from student-driven inquiry about what they noticed in the phenomenon video to reading and reflecting on the observations from a data set and informational text reading. Later in the week, students work in collaborative groups to create a weather data bar graph using a sample data set.
- Materials use a variety of developmentally appropriate instructional approaches, including but not limited to hands-on activities and collaborative learning. In Unit 7, Activity 2, students work in groups to plan, design, test, and improve a solution to the problem of a cup of hot liquid needing to be insulated to keep your hands safe from burns. At the same time, the cup prevents the loss of thermal energy, which keeps the liquid warm. Students work in groups to wrap various materials around styrofoam cups of warm liquid and measure temperature to determine how well each insulates the cups. Students record their findings and conclusions in writing on a

Studies Weekly Texas Science Grade 3

provided graphic organizer and temperature graph. Teachers monitor for gaps in understanding and misconceptions as students work.

- Unit materials include a variety of opportunities for hands-on learning, including creating or building models, conducting investigations, playing content-related games, formulating questions, and seeking answers to those questions by reading articles and/or conducting research. For example, in Unit 12, students model volcanic eruptions and earthquakes.

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

- The materials support a variety of instructional groupings (e.g., whole group, small group, partners, one-on-one). For example, Unit 2, Activity 6 directs the teacher to have students make connections and reflect in pairs or small groups. In Activity 7, the teacher guidance explains, "If you have access to more than one heat lamp, you may allow students to conduct the investigation in large or small groups." Unit 18, Activity 1 guides the teacher to introduce the phenomenon comic strip in pairs or small groups and share with one another their observations about the comic.
- Materials incorporate flexible grouping throughout the curriculum. In Unit 15, Activity 3, students engage in whole-group learning as they view and discuss a video on hibernation. During Activity 4, students work independently to read an article about plant dormancy, then find and record cause and effect relationships. During Activity 5, students may work in pairs to orally share their claim about how animals react to changes in the weather before writing.
- Unit Lesson Guides include various flexible grouping options such as student-driven inquiry, whole group, collaborative learning, and independent work. For example, in Unit 12, students share similar experiences in pairs after reading the phenomena comic. During Collaborative Learning, students work in small groups to mix vinegar with food coloring and vinegar with baking soda, discuss, and record their observations. During "Reading to Learn," students read the article in the student edition and take notes in their science journals to demonstrate comprehension. In Unit 17, Activity 2, students play the "Raindrop Game" in groups of four and also contains a "Reading to Learn" activity that gives the teacher flexibility to select the grouping needed, suggesting individual, group, or pair work.

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

- The teacher lesson plan provides guidance and structures to effectively implement various types of practice. For example, in Unit 6, the Activity 2 lesson guide prepares the teacher by saying, "To allow time for the discussion, students may construct their bar graphs and answer the 'investigation questions' collaboratively." The guide also gives advice for another portion if students run out of time to answer questions to have them do this verbally. The lesson guide encourages the teacher to collect anecdotal data as they observe students discussing the evidence they collected.
- Materials consistently incorporate flexible grouping throughout the curriculum and guide teachers to facilitate success in different learning settings. In Unit 7, students engage in whole-group learning during Activity 2 as they model light waves with jump ropes and debrief. During Activity 3, students view a video about sound energy and work in collaborative learning groups to create a model that demonstrates how sound travels through waves. For Activity 4, students needing support can pair with other students who have demonstrated mastery or, if advanced, can work independently to draw a model of thermal energy and explain this model to a peer.

Studies Weekly Texas Science Grade 3

- Unit materials include lesson plans guiding teachers as they model or demonstrate a new skill or concept. For example, in Unit 12, Activity 3, the lesson plan guide provides a “Teacher Note” section reminding the teacher to prepare 5-6 disposable pans of gelatin prior to the activity and to review the “General Laboratory Safety Rules” before students use lab materials.
- Materials consistently support multiple types of practices and provide guidance and structures to achieve effective implementation. For example, in Unit 5, Activity 2, the Student-Driven Inquiry includes discussing questions in pairs and progresses to independent work in which students read about the forces of football and then write a letter using new learning, including vocabulary, to a lineman.

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

- Materials represent a diversity of communities in the images and information. The *“Introduction to the Texas Science Weekly 2nd-5th Grade”* PDF states the goal of culturally responsive teaching within the lessons: “We strive to include abundant representations of children from diverse backgrounds. We also strive to point out children’s and adults’ contributions to their communities and to scientific discoveries.” Real-world examples and connections throughout the materials represent diverse communities and places, including rural, urban, and suburban communities, cities, and states across the U.S. and countries around the world. Depictions of places emphasize community strengths, resources, and unique characteristics. For example, in Unit 12, Activity 2, students discuss an image of the Chisos Mountains, watch a video about the Texas Bluebonnets in Unit 16, and read an article discussing the stock car race at the Texas Motor Speedway.
- Information in teacher guidance documents, student materials, scientific texts, and assessments positively portrays a diverse group of scientists and engineers representing genders, races, ethnicities, abilities, religions, and national origins. For example, the student edition includes pictures of a chemical engineer, civil engineer, computer engineer, geologist, and paleontologist. The pictures include people from various backgrounds, races, and both women and men.
- Graphics in student edition materials depict students from a variety of ethnic groups and backgrounds, including various types of names, clothing, and skin colors. For example, in the Unit 3, Phenomenon Comic *“Ice Storm,”* both boys and girls are represented. All characters speak in the comic; one girl appears to be Hispanic and has glasses; one girl is white with red hair; and one boy, Aleki, appears Asian. In Unit 11, *“Phenomenon Comic,”* a boy and a girl are depicted. The boy appears to be African American, and the girl appears to be white, and each has equal parts in the comic. Illustrations in Unit 3, Week 6 materials also depict an African American woman scientist with a magnifying glass and a boy with glasses who may be Asian or Hispanic. In Unit 9, pictures in the Student Material use both male and female characters.
- Grade 3 materials include representations of children from diverse backgrounds within the phenomenon comic strips. Students bring culturally specific examples into the science conversation by sharing similar experiences after reading the comic strips, reinforcing the need to solicit and respect perspectives from all cultures.

Studies Weekly Texas Science Grade 3

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.

- 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 a generalized guidance document, "Studies Weekly Strategies and Leveling for the ELPS," which provides a chart on how teachers can scaffold content for students of various English proficiency levels. The document includes the ELPS foundational skills of Listening, Metacognitive Thinking, Speaking and Problem Solving, Speaking, and Writing, as well as broader categories of Listening, Speaking, Reading, and Writing. For example, ELPS 5Bii focuses on writing using new vocabulary, Advanced High students may use the word wall as needed, and teachers provide sentence stems that promote elaboration. For Advanced students, teachers provide content-specific sentence stems as well, allowing students to use word banks. Intermediate student support provides sentences in which three to five words can be filled in, and for Beginners, teachers read the sentence aloud and/or include visuals. Teacher guidance documents include a list of aligned ELPS at the beginning of the document and in notations within lessons. For example, in Unit 11, Activity 2 is aligned with ELPS 2D. Students discuss questions such as, "What caused the rocks to be different sizes?" after viewing a visual of clay soil. A teacher notation reminds teachers to "Tell students they need to listen closely to their partner and monitor their understanding because they will be sharing their ideas with the class."
- Materials include guidance for linguistic accommodation. For example, unit lesson plans include guidance about how the teacher can integrate linguistic accommodations for each English

Studies Weekly Texas Science Grade 3

language proficiency level. In Unit 15, the “Reading to Learn” guides how the teacher may accommodate various learners, such as “Encourage students to seek support from teachers and peers to ensure comprehension with the reference of ELPS 4F” and “Allow developing students to complete their independent work in pairs or with teacher support,” as students read an article.

- Materials include guidance for linguistic accommodations commensurate with various levels of English language proficiency as defined by the ELPS. For example, the materials include an English Language Development (ELD) version of the unit teacher and student edition. This version includes accommodated content that is specific to the student's language proficiency level. For example, the Unit 12 ELD presentation includes a “picture walk” with various pictures to represent vocabulary critical to the understanding of the unit, such as *flowing* or *rapid*. An additional example includes the “Framing Our Thinking” structure supporting student language acquisition with sentence stems with the “I think _____.” and “In our solar system _____.”
- Materials include guidance for linguistic accommodation. For example, Unit Guides integrate and embed ELPS strategies in the lesson plans to scaffold and provide additional language proficiency support. In grade 3, Unit 4, Activity 1, “Collaborative Learning,” provides students with the topic-specific vocabulary before they read, aligned with ELPS 4D, and have them use a highlighter to emphasize important ideas and take notes as they read, aligned with ELPS 4G. Materials also include student resources containing leveled scaffolds such as “Explore Word and Ideas,” “Unpacking Text,” and “Apply What You Have Learned.”

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

- Materials provide a means to linguistic, affective, cognitive, and academic development in English. For example, in “The Introduction to Texas Science Weekly K-5” document, the various English Language Proficiency Standards (ELPS) support provides context such as, “Not only are ELPS integrated throughout every unit as shown by the Standards Coverage chart and point of use references, but there are several additional resources to support students and teachers. The Texas English Language Development (ELD) slides, customized for each unit, provide additional linguistic support for the whole class or small groups.” The resource describes additional teacher tools such as the Strategies and Leveling for ELPS with strategies for each proficiency level throughout the curriculum.
- Materials encourage strategic use of students’ first language. For example, the “Studies Weekly Strategies and Leveling for the ELPS” provides teacher support for scaffolding content for students with various English proficiency levels, including suggestions on when first language use is appropriate. To support 1Ai uses prior knowledge to understand meanings in English, materials suggest that teachers may pre-teach vocabulary with visuals and translations to students' first language. An additional example includes an “ELPS Strategies and Leveling” document that encourages the strategic use of students' first language, such as the “Foundational Skill: Speaking Grade Leveling Strategies” table. This resource suggests teachers “Prompt them to use first-language cognates as a guide when searching. Include instances to describe figurative language.” and “provide one-on-one instruction for the 'Picture Walk' with simplified language and gestures, allowing students to elaborate on what they see in their first language.”
- Materials encourage strategic use of students' first language as a means to linguistic, affective, cognitive, and academic development in English. For example, in grade 3, Unit 16, the Lesson

Studies Weekly Texas Science Grade 3

Guide, “What is Energy?” provides a teacher tip to review the definition of the word *energy* from Unit 7. Students share the word for *energy* and provide a definition in their native language. Additionally, materials include “Training & Resources” graphic organizers in English and Spanish, providing the opportunity for students to think and gather information in their first language while learning the content.

Studies Weekly Texas Science Grade 3

Indicator 7.4

Materials provide guidance on fostering connections between home and school.

1	Materials provide information to be shared with students and caregivers about the design of the program.	M
2	Materials provide information to be shared with caregivers for how they can 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 provide guidance on fostering connections between home and school.

Materials provide information to be shared with students and caregivers about the design of the program. Materials provide information to be shared with caregivers for how they can 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 design of the program.

- The materials provide the teacher with resources to inform caregivers about the curriculum students will experience throughout the year. For example, the one-page document “How to Use Studies Weekly” describes the overall instructional design and how the materials are organized, the emphasis on hypotheses, phenomena, science and engineering processes, and student-driven inquiry. The document provides context for the teacher regarding usage with statements such as, "As you know, it's important to keep caregivers informed and supported through the school year so that they can continue the learning process at home."
- The materials provide resources for parents and caregivers. For example, while not specifically geared for families, the teacher edition document “How to Use Studies Weekly” provides details about various components of the program that may be of interest to parents, such as instructional time and aligned Texas Essential Knowledge and Skills (TEKS). The document includes information such as how each grade is organized by units that consist of one or two weeks of instruction that align to a single standard. The materials also outline how the 3-dimensional instructional design aligns with the Scientific and Engineering Practices (SEP) and Recurring Themes and Concepts (RTC) and is integrated into the science lesson plans.
- Materials provide information to be shared with parents and caregivers about the design of the program. For example, Unit 9, “Student Support Resources Home Learning Letter,” informs families that "During science instruction at school, your child will construct models to explain the orbit of the Sun, Earth, and Moon system and identify the order of the planets in relation to the sun." The document also provides information regarding skills students should be able to demonstrate by the end of the unit, such as, "I can ask questions and hypothesize about the length of the year, I can use a model of the solar system to describe patterns in the orbits of the

Studies Weekly Texas Science Grade 3

planets around the sun, I can develop and use models to explain the interactions of the sun, Earth, and moon system, I can research and explore NASA resources to better understand the Earth and moon system, and I can use a model to explain the orbit of the sun, Earth, and moon system."

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

- The materials include a "Tools to Help You Communicate with Parents" document, which explains that each unit includes a "Home Letter," which is the primary means of communication for parents specific to the content of each week. The resource provides parents with "unit objectives, home activities to continue learning, unit vocabulary, possible student misconceptions, and suggested questions to help caregivers continue the classroom conversation." The resource explains that these tools aim to help teachers build stronger relationships with parents and caregivers.
- Materials include a "Home Learning Letter" for each unit of instruction to share with caregivers. The letter shares information regarding the unit objectives, home activities to continue learning, unit vocabulary, possible student misconceptions, and suggested questions to help caregivers continue the classroom conversation. The end of the "Home Learning Letter" suggests the caregiver check the student's edition of Studies Weekly, then go online for more content information.
- The materials include a "Student Support Resources Home Learning Letter" for each unit that describes what students are learning at school and ways to assist this learning at home. For example, in Unit 3, the letter outlines that students are classifying solids, liquids, and gasses, and provides a home activity to ask children to assist with cooking and identifying solids, liquids, and gasses. Materials emphasize that parents should use words such as *evaporation*, which supports students' understanding that gasses have mass, such as air in a balloon. Additional examples include the Unit 13 "Student Support Resources Home Learning Letter," which questions parents can ask their child, such as, "What causes changes in the states of matter throughout the water cycle?" and "What role does the sun have in the water cycle?"

Materials include information to guide teacher communications with caregivers.

- The materials provide information to guide teacher communication with caregivers. For example, in the video titled *Reports*, teachers can access *Weekly Assessment Reports* and *Progress Reports* that show student achievement and progress. Teachers can also view a line graph of progress to view student performance on reading comprehension questions from science articles. These reports guide teachers in how and what to include in parent and caregiver communication.
- The materials include reminders for teachers to utilize the unit "*Home Learning Letters*" for ongoing parent and caregiver communication as a tool for the home-school connection. For example, the materials include a "Parent-Communication Tools" document for teachers that explains the resources provided to help with parent or caregiver communication. The letter informs the teacher of the one-page information flier students can take home and about the "Home Letter" available to support communication throughout the school year. The grade 3, Unit 10 lesson plan includes the "Compare Day-to-Day Weather: Home Letter" as a reminder for teachers to print and share this resource with caregivers. The "Student Support Resources"

Studies Weekly Texas Science Grade 3

explains, "It provides information about the design of the program and how caregivers can reinforce student learning and development."

- Within the online training section of the materials, videos provide guidance on aspects of the program of interest to parents and help teachers navigate these features. In the video titled "What's New Webinar: Introducing the New Explore Science 3-5 Curriculum," teachers access further detail about how science learning has changed and information about the Science and Engineering Practices (SEP) and Recurring Themes and Concepts (RTC) that can provide more details to help families understand what their students are learning.

Studies Weekly Texas Science Grade 3

Indicator 8.1

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

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

Meets | Score 2/2

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

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

- Materials include a cohesive scope and sequence that outlines how science knowledge and skills are taught and built into the materials over the course. For example, materials found in the Teacher’s Editions include a scope and sequence outlining the order in which knowledge and skills are taught and the location within the course materials. All unit topics of study correspond to core ideas in the grade level Texas Essential Knowledge and Skills (TEKS).
- Materials found within the Teacher's Editions include a horizontal and vertical alignment for each TEKS covered during each grade level. For example, TEKS 3.7A in the “Force, Motion, and Energy” strand is covered in Unit 5 in third grade, and in Unit 7 in fifth grade.
- Materials included in the Teacher's Editions include a document correlating the TEKS and English Language Proficiency Standards (ELPS) showing how concepts are taught and built over the Units of Instruction. This document details how topics are spiraled throughout the year. Details include the specific pages, location description, and citation links for teacher access. For example, TEKS 3.5.B is introduced in Unit 2, in the materials, revisited in Unit 9, Activity 5, “Phenomenon Explanation”, and again in Unit 13, in the section(s) labeled “Explore Words and Ideas.”

Studies Weekly Texas Science Grade 3

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 teacher clarity in understanding how activities and experiences connect concepts, science and engineering practices (SEP), and recurring themes and concepts (RTC). Grade 3 materials provide an interactive Table of Contents linking a teacher's edition document providing clear teacher guidance for facilitating student-made connections across core concepts, SEP, and RTC. Materials also include a podcast to support teacher topic background, answer keys, and lab guides. The lab guides include materials lists, investigation set-up information, suggestions for the teacher to test out the lab materials before students, troubleshooting suggestions, and clean-up directions.
- Each unit includes introductory materials about the Unit Objectives for teachers. Teachers access bulleted information about SEP and RTC, clarifying student expectations within the unit. For example, in Unit 2, "Hidden Treasures", information on SEPs such as "Use scientific practices to plan and conduct investigations" and "Construct appropriate graphic organizers to collect data" are outlined for teachers. An additional example includes "Explain the relationship between the structure and function of objects" connecting the RTC Structure and Function.
- Training and Resources includes videos, audio, and pdf documents to support teacher navigation through the product. The Teacher Edition includes printables of all resources needed for each section/activity within the Unit. For example, in Unit 9, "*We Are in Orbit!*" under the Phenomenon Introduction, printable cards show phenomenon questioning techniques, question starters, and a question rubric to guide the teacher on how to produce and collect questions.
- Teacher support resources include topic background information, answer keys, reading comprehension questions, unit assessments, and performance tasks. For example, the SEP 3.1E (collect evidence) and RTC 3.5C (scale, proportion, and quantity) are listed and described under Unit Objectives for the Activity "Hidden Treasures" during Unit 2.

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

- The materials include intentional practice and spiraling of previously taught knowledge and skills from earlier lessons/grade levels and the current lesson's science knowledge and skills.
- Within "Teacher Materials", the "Vertical and Horizontal Alignment" document includes teacher guidance on when SEP and RTCs are introduced and when they reappear, facilitating student review and practice throughout the year.
- Standards are organized horizontally by grade level and unit. For example, grade 3 students develop explanations supported by data and models in Units 3, 5, 7, 9, 11-13, and 15-20. Students identify and investigate cause-and-effect relationships to explain scientific phenomena in Units 3, 5, 6, 11, and 13.
- The *Citations to the TEKS and ELPS* teacher resource details how standards are spiraled throughout the year and across units. Teacher links in the materials provide options for student practice and reteaching. For example, in Unit 4, students first demonstrate understanding of TEKS 3.1.G.ii as they respond to one of the performance task options. In Unit 9, students practice the skill again using Activity 3, "Collaborative Learning." Finally, in Unit 18, students practice this skill as they engage in the "*Salt Dough Models Part 2.*"
- Materials provide opportunities for review and practice through the reading of articles, conducting labs, and creating/answering questions. Materials provide some spiral review

Studies Weekly Texas Science Grade 3

opportunities. For example, at the end of the interactive table of contents, Unit 21, “Year in Review” provides resources to review Matter and Energy.

- The assessment materials support multiple opportunities for spiral review and demonstration of content mastery. For example, in the Unit 10 Assessment Map, students demonstrate mastery of the SEP to develop and use models, in performance tasks 1A, 1B, and 1D. Students demonstrate their understanding of RTCs in all 9 performance tasks for the Unit. For example, in Units 5, 12, and 17, students demonstrate mastery using short answers or Claim Evidence Reasoning (CER) extended responses with performance assessments.

Studies Weekly Texas Science Grade 3

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 include guidance for 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 include guidance for 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 overview documents to support teachers in understanding how to use all materials and resources as intended. Materials are organized in a way that facilitates ease of implementation and use, including the assessing and storing of materials.
- The online materials include additional tools teachers may access for increased support for specific strategies such as Think, Pair, Share, or 5E Model. Teachers reach these guides by using the Training and Resources button on the universal access sidebar.
- Materials include a Unit Guide in the online teacher materials Table of Contents. The Unit Guide is organized by week, covering the objectives, including text, technology, enrichment, instructional strategies, and scaffolds. For example, in Unit 1, teachers access a summary of activities and guiding implementation. Teachers access a list of materials for the unit and three content videos. Guidance materials suggest several supports for extensions. The materials include leveled Lexile addressing differentiation for students reading below grade level.
- Materials include a “Training & Resources” section with an onboarding guide. This section provides short video tutorials supporting the implementation process of each resource.

Studies Weekly Texas Science Grade 3

For example, the *What Comes in the Box* video tutorial provides explanations and suggestions for organizing and filing the student editions for easy storage and access during the year.

- Unit 3 materials include a teacher podcast, *Ice Storm: Topic Background Information*, to build teacher content knowledge, print materials, “Ice Storm: Reading Comprehension Questions” to help students assess their comprehension of an article, and a student project, “Ice Storm: ELD Lesson”, containing language scaffolds for unit information.
- Materials for grade 3, Unit 7, “The Energy of a Campout” lesson guide provides scaffolds for the developing student and advanced options for enrichment. For example, students needing scaffolds read a version of the article written in a lower Lexile level, provided in print form. Suggestions are given for the advanced student to write a five or six-sentence paragraph explicitly identifying two main ideas and at least three key details that support the main ideas from the article.

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 lessons units, lessons, or activities within the context of the grade level or course in teacher documents and online resources. The materials include cross-content standards for ELA, math, and social studies within the Teacher’s Guide to lessons.
- The *Teacher Edition* includes a weekly “Standards Coverage” chart. This chart includes cross-content standards addressed within the weekly lessons. For example, in Unit 2, the lessons include ELAR TEKS 3.1, “Developing and sustaining Foundational language skills.” In Activity 3, ELAR TEKS 3.1E, “Develop social communications such as conversing politely in all situations,” and in Activity 4, students practice ELAR TEKS 3.6G “Evaluate details ready to determine key ideas.”
- The materials include a correlation chart outlining the TEKS or ELPS and the component title, type, and audience for each item representing the standard. This chart also details the specific pages, location description, and a citation link to materials so the teacher can quickly access the materials. The chart details topics being spiraled throughout the year. For example, ELPS 1.A.i appears in the Student Edition, Unit 1, Activity 1, article, in the *Teacher Edition* for Activity 1 in “Collaborative Learning,” Steps 1-2. This standard is taught again in Units 3, 5, and 6.
- The *Teacher Edition* includes a Correlation to the TEKS and ELPS document that references how concepts are taught and built over the units of instruction. For example, ELPS 5.Bi is taught within Unit 2, “Explore Words and Ideas,” in Unit 9, Activity 5, “Phenomenon Explanation,” and in Unit 13, “Explore Words and Ideas.”
- Within the *Teacher Edition*, each unit includes a “Standards Coverage Chart,” which includes the cross-content standards correlations. For example, in Unit 13, “*Natural Resources*,” the English Language Arts and Reading (ELAR) TEKS 3.6H is embedded for students to synthesize information to create new understanding. Math TEKS 3.8 Data & Analysis is connected, asking students to describe the relationship between the availability or scarcity of resources and how that impacts cost.
- Materials for grade 3 include a correlation to the TEKS and ELPS chart under the *Teacher Edition* listing the spiraled opportunities for each TEKS. For example, ELPS 5.B.i appears in Unit 9, Activity 5, “Phenomenon Explanation,” Steps 1-2, and in Unit 5, Activity 2, Independent Work and Differentiation.”

Studies Weekly Texas Science Grade 3

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

- The materials include an appendix with a comprehensive list of all equipment and supplies needed to support students, teachers, and administrators during instructional activities.
- The *Teacher Edition* of the online materials in each unit contains downloadable files needed for all tasks or activities within the unit. For example, the *Teacher Edition* contains videos or audio recordings, activity guides for labs or demonstrations, and a list of materials that will be used in student activities.
- Weekly lesson plans contain all materials needed for that lesson. During Activity 1, teachers use *Phenomenon Questioning Technique* printables. For Activity 2, teachers use *Weather Data for Ft. Worth, Texas* printables. For Activity 3, teachers show an image of a squirrel burrow. Teachers easily view all materials for the week.
- Within the *Teacher Edition*, each unit contains a detailed lesson plan with a list of materials. For example, Unit 3, Activity 1 “Phenomenon Introduction-Engage,” lists “Ice Storm: Phenomenon Video” and “Phenomenon Questioning Technique Cards” as materials needed. An additional example includes Unit 4, “*Engineering Design: The Strongest Fort*,” a comprehensive list is included in the Unit Lesson Guide.

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

- The materials provide teacher and student guidance for safety practices and grade-appropriate use of safety equipment during investigations under *Texas Education Agency Science Safety Standards*.
- The unit materials include numerous opportunities for students to learn about safety practices. In Unit 1, in the Student Support Resources, materials include a video about staying safe while doing science. Students then reflect on what they heard in the video and connect it to their future explorations in Activity 2.
- Materials include a *Lab Safety Poster* and lab rules from a co-constructed student activity in Unit 1. For example, in Unit 4, Activity 3, students review general lab safety rules and expectations. Students reference the poster. The teacher's note reminds students about special precautions taken when handling potentially hazardous substances, like wearing safety gear.
- Lessons contain specific safety information relating to the activities students complete. In Unit 2, Activity 2, students use thermometers and a heat lamp to investigate temperature changes. Teachers review the General Lab Safety Rules within the Texas Safety Standards as directed by the lesson.
- Hands-on activities include a “Teacher Note” section at the beginning of the lesson plan that guides safety practices during the investigations. For example, Unit 4, Activity 3, “*Engineering Design: The Strongest Fort*,” reminds teachers to review general lab safety rules with students, establish procedures, and set expectations for students to keep the use of messy materials manageable.

Studies Weekly Texas Science Grade 3

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 support for specific scheduling considerations, with guidance for covering required science content for the grade level/course within a variety of schedules.
- The materials include a “Training and Resources” section and a webinar that overviews the new science curriculum for grades 2-5. In this webinar, the presenter explains an overview of the structure of the curriculum and clarifies what each unit represents. The curriculum has 1-2 weeks of instruction and about 3.75 hours of content per week about 45 minutes of instruction per day. Each unit focuses on 1-2 TEKS per week using the weekly student publication in a newspaper format. All weekly lesson plans list the time required for each activity at the top of the lesson, in a section heading along with the title.
- Each unit contains a “Unit/Weekly Guidance” document, in which teachers access weekly and daily lessons. Each weekly plan contains a table listing each daily lesson and the estimated time for completion. In addition, teachers access a list of optional activities which also provide times. For example, in Unit 4, “Engineering Design: The Strongest Fort” activity times for Ideate and Plan is 45 minutes, and optional activities such as “Connection to Math” is listed for 15 minutes.
- Teacher guidance materials in the units in the *Teacher Edition* include an “Activity Summary Chart” which indicates the recommended time allotted for each day's activity. Information presented on this chart lists the day for the activities, the lesson time allotted, the 5E stage, and the page number. For example, in Unit 1, the “Tools and Safety” activity is in the Explore section and scheduled for 45 minutes. In addition, each unit includes a lesson plan providing the recommended time for each instruction at the very top of each activity. For example, in Unit 7, the lesson plans suggest 30 minutes for Activity 1, “Phenomenon Introduction.”

Studies Weekly Texas Science Grade 3

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

- Materials provide guidance for strategic implementation that ensures the sequence of content is taught in an order consistent with the developmental progression of science.
- Materials found within the *Teacher's Editions* under "Publication Resources" include a horizontal and vertical alignment document showing when each TEKS is covered during each grade level. For example, for the strand "Force, Motion, and Energy," TEKS .7A is covered in Unit 5 during third grade and in Unit 7 during fifth grade.
- Within each grade level scope and sequence, core concepts are organized in alignment with the TEKS and reflect a systematic sequence of skills from more basic to more complex. In third grade, students learn about foundational ideas in Unit 1, "Introduction to Science and Engineering." In Unit 2 and subsequent units, standards progress from simpler skills, such as measuring and recording physical properties of matter, to predicting and recording changes in matter, to demonstrating that matter can be combined according to physical properties to create or modify objects.
- Unit lesson plans include differentiation based on student needs with the strategies in call-out boxes. The teacher considers how students respond to the daily formative assessment task and then considers if students would benefit from using the differentiation options to either reteach, scaffold, or accommodate their current lesson, or extend the next day's activity. In Unit 20, the formative assessment invites students to reflect on their proficiency in the success criteria. The materials include options for a lower Lexile article to increase student understanding of plant development or extend student learning by engaging them in a study of the life cycle of the darkling beetle.
- Lessons are organized consistently throughout the program supporting student learning from more basic understandings to more complex ideas. For example, in Unit 6, students read a phenomenon comic strip about how a soccer ball moves when it is kicked. Following this, students explore a push motion outside on swings, then apply their knowledge to generate questions and form their ideas about soccer ball motion.

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

- The materials include units, lessons, and activities for a full year of instruction. The materials guide adjusting to local time and scheduling constraints.
- The scope and sequence document in the Teacher Edition section online details how the teacher may accomplish all units of study within the course of the regular school year across 32 weeks of instruction. The materials allocate 4 weeks of flex into the schedule for either extension, reteaching, or increasing prior knowledge.
- In the *Teacher Edition*, the "Publication Resources" includes a Table of Contents listing 32 weeks of instruction covering the Science TEKS. These are organized by Introduction to Science and Engineering, Matter and Energy, Force, Motion, and Energy, Earth and Space, and Organisms and Environments. Unit 21 is titled "*Year in Review*," and includes optional materials to extend the learning.
- The *Teacher Edition* includes a table of contents guide document. Each unit includes a chart about how many weeks it encompasses and how much time per week to plan for the content. For example, Unit 5 represents Weeks 9 and 10 with each week's content representing 3.75 hours or about 45 minutes per day, if the teacher is teaching 5 days a week.

Studies Weekly Texas Science Grade 3

- Online materials include a *Help Center* providing an *Onboarding Guide* including instructions for *How to Reorder/Move Units, Weeks & Articles*. For example, the teacher may drag and drop units, weeks, and articles in the Table of Contents or move a week to another unit.
- Each weekly plan contains a table listing five daily 45-minute lessons. In addition, teachers access a list of optional activities, each with a suggested time. For example, in Unit 8, Week 15 “Engineering Design: Runaway Trucks,” teachers complete lessons such as “Refine Your Prototype” for 45 minutes and choose optional activities such as “The Driving Force of Motion” for 25 minutes.

Studies Weekly Texas Science Grade 3

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 are free of 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.

- Materials include an appropriate amount of white space and a design that supports and does not distract from student learning. For example, teacher materials such as lesson plans, table of contents, and assessment answer keys include appropriate margins and adequate white space. The materials utilize subheadings in bold font and follow a logical progression. The Student Editions begin with a Phenomenon, phenomenon graphic, phenomenon introduction, and activities with “Reflect & Connect” opportunities. Each phenomenon ends with an activity that has the student explain the phenomenon.
- Materials are designed in a way that does not distract from student learning. For example, white space is used strategically on the Student Edition pages in combination with contrasting colors and page borders to attract the eye yet not interfere with the content. The unit title, unit number, and week number corresponding to each unit are consistently displayed in the same place, using the same size style and font, providing easy identification for the student.
- Materials include a design that supports and does not distract from student learning. For example, the Teacher Edition materials follow the same format for each unit. Each Lesson Plan contains a unit objective, activity summary, standards coverage, materials list, teacher support resources, prior knowledge, and student edition preview. The Student Edition materials are separated with headers such as activity numbers to help guide the student through the materials. Within the activities, the pages are broken into tasks by task headings using colored blocks to divide tasks. The materials provide Teacher Edition and Student Edition slides to support student learning. Premade slides contain enough white space and avoid being crowded with too much information on one slide.

Studies Weekly Texas Science Grade 3

- Online materials are broken down with one activity on screen at a time. The viewer can access the subheadings at the top of the page to help with navigation between activities. The pages also include a “Next Article” or “Previous Article” button in large font at the bottom of the page to support the student in navigating between activities.

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

- Materials embed age-appropriate pictures and graphics that support student learning and engagement without being visually distracting. The Unit 9 Student Edition includes historical images of the first moon landing when students are learning about space exploration. The unit includes realistic depictions of planets in the solar system when the students are investigating the solar system. Units introduce the phenomenon through a comic strip, engaging students from the very beginning using age-appropriate characters relatable to students and background settings matching the topic or content presented. Characters are presented in a fun way, showing facial expressions and helping students make inferences about the scenario. For example, in Unit 9, the Student Edition begins the lesson with the phenomenon comic strip that features characters who appear similar in age to grade-level students. The characters are having a conversation about aging 365 days, which is one year from the date of the picture they are examining.
- The materials strategically embed photos and images to support student understanding of content. For example, in Unit 7, The Energy of a Campout, the students see a comic that depicts students sitting around a campfire. The surrounding border of the first page includes images of flames to grab the student's attention. As students study light and visible light waves in Activity 2, the materials include a graphic of a student turning on a light switch and a visual of a yellow wave and a lightbulb, which support students' understanding of the terms described in the text. This page also includes a color graphic with the colors of visible light in order from longest wavelength to shortest wavelength as the colors fade from red to violet. This graphic supports students with an investigation they will do, creating wave models with a jump rope.
- Materials include visuals and graphics to support student understanding. For example, in Unit 14, Activity 7, Engineering Design: Reducing, Reusing, and Recycling Paper, students create a prototype. The word *create* is shown in large block letters to emphasize the importance of this verb for the task. Additionally, the page includes a gray bubble with an audio play tool to read the task directions. This page includes an image of a student talking as a method of instructing students to describe how the creation of the solution went. In Activity 10, students read and respond to a short text about how they engineered paper to create a pencil holder. On the screen is an image representing recycle, reuse, and reduce to remind students of the focus of the unit.
- The materials consistently present Science and Engineering Practices (SEP) in a student-friendly, organized, comic format. Phenomenon comics appear at the beginning of the student materials, and subsequent activities are organized consecutively by number. Activity numbers and names are listed in a larger font across the student page. Graphic organizers are provided to connect to lesson plans and focus step-by-step on activity and unit learning objectives without including extraneous information.

Studies Weekly Texas Science Grade 3

Materials include digital components that are free of technical errors.

- Materials include digital components without technical errors. For example, the online Help Center includes an information page titled “How to Monitor Student Article Questions.” This document guides teachers to click on a link to learn more about what happens when students answer article comprehension questions incorrectly. The link successfully accesses the resource.
- Student online materials operate effectively with no errors. Videos and audio files play without lag time, and visuals load without errors.

Teacher answer keys contain accurate content information. For example, in Unit 11, Soil Formation, students identify four causes of weathering. Teacher answers include correct responses that align with current scientific knowledge, including increasing and decreasing temperature, moving water, rocks falling on each other, and roots growing.

Studies Weekly Texas Science Grade 3

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

Materials integrate digital technology and tools that support student learning and engagement. Materials integrate digital technology in ways that support student engagement with the 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.

- Materials integrate digital technology and tools through the online student edition, student response and review opportunities, and online assessment options. Students have online versions of the printed Student Editions, which include videos, podcasts, and interactive response options. For example, in the Unit 3 online student edition, students read or listen to an article, watch a short video, follow directions to investigate soil formation, and interact with a graphic to identify forest decomposition examples.
- Materials integrate podcasts and videos to build student understanding or prior knowledge about the concepts at the beginning of each unit. The lesson plans suggest the teacher may show the videos to the whole group or enable them in the online student edition for individuals to view. For example, in Unit 7, The Energy of a Campout, teachers can share the background information podcast with students to build student knowledge about the unit. The unit materials include “The Energy of a Campout Phenomenon” video, a podcast about windmills, and a video about how we hear sounds. The teacher may show these as part of a whole group lesson or may assign them to students by adding them to the student edition online.
- The materials provide digital technology and tools that support student learning and engagement. For example, students access digital materials that are engaging and student-friendly, with a colorful, comics-inspired weekly phenomenon that is accompanied by student-led questioning and inquiry. Students use the digital materials to complete activities as they

Studies Weekly Texas Science Grade 3

work through the program, which includes fillable question blanks, clickable images, video, and audio files.

- The program uses gamification to encourage additional practice. For example, students collect coins as they progress through activities and play games such as crosswords and “Misspilled” for vocabulary and spelling practice. Students are encouraged to collect virtual coins by completing activities online. Unit 5 Student Edition rewards students with five coins when they read or listen to the Phenomenon Comic, and accumulated coins are displayed to add motivation.
- Materials integrate digital technology and tools that support student learning and engagement. The activities embed short video clips throughout the activities within the units that provide brief explanations of the content and show relevant connections to the real world. The videos are short and engaging as they include visuals connecting the content to the real world. For example, Unit 5, Activity 1, Explore More includes the “Investigating Forces: Phenomenon Video” to help students make a real-world connection to the phenomenon of a soccer ball moving when it is kicked.

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

- Materials integrate digital tools to support student engagement with science and engineering practices (SEP). For example, Unit 14, Activity 5, includes structure and specific questioning for students as they work through the planning and creative steps of making a plan for their task. Students answer specific questions and can save and revise their responses to questions such as in “Criteria: must hold a minimum of three pencils / Constraints: we can use _____ other materials” rather than simply providing a text box labeled “Plan.”
- Materials integrate digital technology to support student engagement through embedded online videos, pictures, illustrations, and podcasts that motivate students to engage in their learning. For example, in grade 3, Unit 16, Activity 5, students watch the “Texas Bluebonnet” video about the ecosystem that Texas Bluebonnets live in, take notes, and find answers to the questions they wrote down during the Student-Driven Inquiry section of the lesson. The Unit 9, Activity 4, Differentiation Advanced, includes the option for students to choose a scientist to research on the NASA website.
- Digital materials offer a text-to-speech software feature students can use to listen to the questions within the assessments. Students who may have difficulty writing may type in the answers in the Digital Student Edition. In addition, questions requiring labeling and grouping allow students to drag and drop answers instead of writing them in.

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

- Materials provide feedback for students based on answers to assessment questions chosen during digital assessments. For all online unit assessments, materials provide additional information on why questions are correct or incorrect, and students can communicate additional confusion or questions with teachers for all unit assessments.
- The materials provide opportunities for students to collaborate. For example, the Unit 4, Activity 2 online materials include opportunities for students to type a summary of a group discussion or planning as they generate ideas to solve the engineering problem of creating a stronger type of brick to use for building.

Studies Weekly Texas Science Grade 3

- Across the materials and within all units, materials provide the ability for teachers and students to annotate the student-facing materials. Annotations are editable and available for teachers to review and provide feedback and include the ability to highlight text in various colors. In the online Student Edition, students can type, sort, and select responses to questions found in the print version on the Studies Weekly Online platform.

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

- Materials integrate digital technology that is compatible with a variety of learning management systems. The *Introduction to Texas Science 2nd-5th* grade explains that the Studies Weekly Online product offers links to Google Classroom. Teachers connect Studies Weekly to Google Classroom by matching Google Classroom email addresses and Studies Weekly usernames or by importing new students from Google Classroom to Studies Weekly Online.
- The materials integrate with several different learning management systems to import rosters and set up classrooms that teachers and students can use to post lessons, administer assessments, and communicate with students. Studies Weekly Rubric Tool (3-5) Sections 6 and 9 state that Texas Science can integrate with Classlink.
- The printable files include downloadable PDF files and links to videos, which may work with other learning management systems. For example, Unit 12 includes the “TX-03-SN Unit 12: Prior Knowledge Article,” which provides information for teachers to download and utilize with their LMS, such as assigning the article for homework.

Studies Weekly Texas Science Grade 3

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 and grade-level appropriate and provide support for learning.

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 digital materials provide developmentally appropriate text that aligns with the grade’s Lexile levels. In Unit 7, Activity 2, the “Energy of a Campground” article level is 550L, falling within expected reading levels for the year. The digital materials also provide articles that convey the needed information at a developmentally appropriate length. In Unit 7, Activity 2, the “Energy of a Campground” article contains 207 words and 1 paragraph, allowing students to complete the reading within the 30 minutes allotted for Activity 2.
- The digital materials are developmentally appropriate for the grade level. Digital technology and online components include easy-to-navigate functions, such as the “Next Article” and “Previous Article” buttons at the bottom of the pages and breadcrumb subtitles at the top of the page. The webpage displays large print for easier reading, arrows at the bottom of the page to read on or go backward for review, a blue “Save” button to save their progress and continue later, and a green submit button to turn in their assignment.
- 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. For example, the Unit 10 Student View includes the *Compare Day-to-Day Weather Phenomenon Comic* with digital support. The comic has an audio component as well as the ability to zoom in on the comic. Unit 10, Activity 2, Wind Direction, the Student View supports students by choosing to have the directions read to them digitally. In addition, the materials have an online-text reading feature supporting students who may benefit from this by reading the text to them.

Studies Weekly Texas Science Grade 3

This feature is also part of the extended reading section where the TEKS are explained to the students.

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

- Materials guide teachers with the use of embedded technology to support and enhance student learning, such as training videos, webinars, and resource files. In the “Introduction to Texas Science 2nd-5th Grade” document, the online materials section describes how teachers may use the online tools and resources to enhance student learning. This section describes the various types of tools available and some ways teachers may customize the student experience, such as enabling audible content, revising questions, or adding additional response types within lesson content. For example, in the “Training and Resources” section, teachers may view videos about how to customize student content to edit, revise, or add to the online materials. The teacher resources provide directions for teachers to enable additional content or reorganize units to better align with the student's instructional needs.
- Materials provide teacher guidance for the use of embedded technology. For example, the product website provides 22 informational articles to guide teachers in using program technology. Articles include but are not limited to: “How Does Studies Weekly Integrate with LMSs,” “How to Use Google Classroom with Studies Weekly,” and “How to Navigate Rostering and Integrations.” Unit 5 Lesson Plan, “Student Support Resources,” includes a table to show teachers where the student media supports are embedded.
- Teacher unit/weekly guidance documents recommend when to use technological components of the program with students, such as podcasts. For example, in Unit 11, Activity 8, students listen to the *Soil Layers* podcast to answer their student-generated questions. In Unit 12, the “Unit Lesson Guides” prompt the teacher to present students with the “Marble Rolling Down an Incline” video as an introduction to the student-driven inquiry part of the lesson.

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

- The materials include resources available 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” guides parents to review the online videos used in class and asks questions, such as, “What do you think causes this?” Parents also explore the unit activities and the “TEKS Explained” articles.

Studies Weekly Texas Science Grade 3

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,” providing guidance for 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.