Accelerate Learning STEMscopes Science TX Grade 3

Accelerate Learning STEMscopes Science TX 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.

Accelerate Learning STEMscopes Science TX Grade 3

- The materials include guidance that explains how to analyze and respond to data from assessment tools.
- The assessments are clear and easy to understand.

Section 7. Supports for All Learners

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

Section 8. Implementation Supports

- The materials include year-long plans with some 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 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.

Accelerate Learning STEMscopes Science TX 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 materials provide multiple opportunities to develop and practice grade-level appropriate scientific and engineering practices, as outlined in the TEKS. Materials include opportunities for students to refine a model or explanations using models, design and conduct grade-appropriate experiments, collect and analyze data, and develop and test hypotheses. For example, in grade 3 "Forces" scope, students build vehicles to solve a real-world scenario –designing a self-propelling vehicle that can be used to take pictures of unexplored parts of the world. In the "Soil Formation STEMscope," students engage in hands-on soil exploration that provides opportunities to develop SEPs including collecting observations and measurements as evidence and developing and using models to represent processes.

- The materials provide multiple opportunities to show mastery of grade-level appropriate scientific and engineering practices. For example, materials include opportunities for students to ask questions that can be answered using evidence from investigations or gathered by others. In the “Elaborate Science Connection of the Soil” scope, students explain how soil is formed based on observation and data collection. In the “Engineering Connection” scope, students design sections of a school garden that include healthy soil and plants that attract insects based on the students' understanding of soil formation.

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

- The materials identify overarching concepts using recurring themes and show how they connect within the materials. The scope and sequence includes specific information about when recurring themes are introduced and when they are spiraled back into the program. For example, “Virtual Explore Day-to-Day Weather” asks students to identify and use patterns to explain and compare the weather on the same day in various cities with the weather in a single location on different days. In the hands-on explore activity, students observe and record local temperature, rainfall, and wind patterns and compare it to the daily weather in other locations. Throughout this scope, students collect data, identifying patterns and cause-effect relationships.
- For example, in the “Soil Explore” scope, students identify and use patterns in Engineering Connection to look for patterns in soil that promote plant growth.
- Students consider cause and effect in the “Natural Resources” scope. After watching a video of a healthy environment with many resources, the materials direct teachers to ask, "How could this area change if its resources are not protected?" The students discuss some ways to conserve natural resources and possible solutions to the problem of lack of space for wind turbines.

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

- The materials support teachers in developing student content concepts and skills by giving them resources and cues at varying points in lessons and units throughout the grade level. Materials include a “Teacher Background” section, “Standards Planning” section, and lesson notes that explain, describe, and make connections between the SEPs and the development of conceptual understanding. For example, in the activity “Day-to-Day Weather Engineering Connection,” the material provides suggestions and guidance for teachers to facilitate the students learning with guiding questions with answer keys in the "If students are stuck, use the following guiding questions:" section. This section includes questions such as "How will you ensure your rain gauge holds water until you can read the measurement?"
- The materials strategically develop students’ content knowledge and skills appropriate for the concept and grade level as outlined in the TEKs. For example, the materials use the 5E+IA. For example, “Our Solar System” scope starts with a video of the eight planets and the Sun. A thinking/talking activity guides teachers and students in a discussion of observations. Students construct models and explain the orbits of the Sun, Earth, and the Moon in relationship to each other. The Explain section reconnects students to the phenomena with the Interactive Science Notebook that provides reflection opportunities for students to process the content from the Explore section and the STEMscopedia. Students have several opportunities to apply what they

have learned in the Science Connection, Engineering Connection, Science Today, and Virtual Experience activities.

- In the Motion scope, Elaborate Engineering Connection, students build, redesign, share, critique, and evaluate their designs. The lesson description states, "Students will focus on the last two steps of the Engineering Design Process to redesign a carnival ride using pushes and pulls, allowing it to stay in motion for one minute."

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 materials include opportunities for students to ask questions and plan and conduct investigations. Each scope contains an Engineering Connection activity in the elaborate tab that allows students to ask questions and plan and conduct investigations. For example, students design, build and test solar eclipse viewers that allow people to safely watch a solar eclipse answering questions like "If looking directly at the Sun can damage your eyes, how could you look at the Sun and the eclipse safely?"
- The materials include opportunities for students to engage in problem-solving to make connections across disciplines and develop an understanding of science concepts. For example, in the Engineering Connection in the Natural Resources scope, students design a sorter machine that separates materials into categories such as metals, paper or cardboard, and plastics. This activity matches the scope content TEKS and ties in with the Properties of Materials scope as students use water in their design (the plastics will float, and the metals will sink.). Students engage in problem-solving to develop an understanding of science concepts within other areas of the scopes.

Accelerate Learning STEMscopes Science TX 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.

- The materials use phenomena as a central anchor that drives student learning across grade-level content in each discipline (earth/space, life, physical science). Materials drive knowledge-building for students. Students examine phenomena using science and engineering practices through the lens of recurring themes and develop content knowledge as they work to construct explanations of the phenomena and/or solve engineering problems. Materials include an initial phenomenon in the first tab of every scope. The teacher shares phenomena through pre-assessment questions. Students then participate in investigations in which they collect data and apply their learning to find the correct answers or solutions.
- For example, in the Force and Motion Engage scope, students work in pairs to observe a phenomenon and answer questions about forces acting on an object. The lesson description states, "Students will watch a video showing the phenomenon of a group of children playing tug-of-war. Teachers can use a Sage on the Stage and Scribe on the Side questioning strategy for engagement. The goal of this phenomenon and questioning activity is to engage students and to have them begin developing their understanding of forces acting on an object." In another example, in the Types of Energy Engage lesson, students watch a video of a game being played

and answer questions about the types of energy that are being used. The lesson description states, “Students will view a video of a child playing the Whack-a-Mole arcade game and identify the types of energies that the game uses. Teachers can use Think-Pair-Share for classroom engagement.”

- The materials embed thought-provoking phenomena and engineering problems that require nuanced and appropriate grade-level explanations. Materials provide opportunities for students to develop, evaluate, and revise their thinking as they figure out phenomena and define/solve problems. For example, students consider what fossils can tell us about the environment. Students create an "I wonder” question. Students continue the lesson with teacher-guided questions about fossils before experiencing a fossil investigation activity. Students later research and share out information on fossils.

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

- The materials provide opportunities to leverage students’ prior knowledge and experiences related to phenomena and engineering problems, ensuring that connections are made to previous science TEKS while allowing students to communicate their experiences outside of school. For example, in the Day-to-Day Weather scope, students observe and record the temperature, rainfall, and wind patterns of their area and compare it to the daily weather in other locations and connect it back to the scope phenomenon weather forecast. Materials supply teachers with questions to facilitate the discussion such as "How is the weather described?" and "What kind of weather does our city normally have during winter?"
- For example, the States of Matter scope includes an activity called Agree or Disagree where students decide if they agree or disagree with claims made by three students after leaving a glass of iced lemonade outside and returning to find no ice left. The claims argue what could have happened to the ice. Students can revise their thinking after discussing their choices. The activity happens before evaluating the scope phenomena.
- Sometimes materials include a video with a relevant phenomenon, such as watching a short-time elapsed video or real-world image. The materials guide teachers and students to address potential areas of misunderstanding adequately. In the Force and Motion Explore: Forces at Work Starter section, teachers ask probing questions to gauge student knowledge and identify misconceptions. For example, in the Food Webs lesson, a common misconception is that students think the web refers to a spider web, whereas the intention is to show the flow of energy in an ecosystem.

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

- Materials include teacher information about scientific goals and concepts behind phenomena. For example, in the States of Matter scope, there is a reference to phenomena experienced in the Explore States of Matter Stations activity. Under Making Connections, it states, "Students experience phenomena related to solids, liquids, and gases by moving through 6 stations classifying the state of matter of the item at the station and thinking of an additional example and non-example of each state of matter. After students complete the activities, ask students how this activity relates to the Scope Phenomenon (found in the Engage section) of ice cream being prepared on a cold surface. Encourage students to ask questions and communicate what they observed about the three states of matter."

- The materials include a goal in the description of the Scope Phenomena that explains the scientific concept behind it. Concepts and goals behind the phenomenon are embedded in student handouts or explained implicitly in each scope. For example, in the Types of Energy Scope Phenomena, the materials state, “Students will watch a video showing the phenomenon of a person playing a Whack-A-Mole arcade game. Teachers can use the *Think-Pair-Share* questioning strategy for engagement. The goal of this phenomenon and questioning activity is to engage students and have them begin developing their understanding of everyday examples of energy and how the speed of an object is related to its mechanical energy.” The materials include a description in the Engineering Connection that describes the scope and the engineering problem in the investigation. For example, in the Types of Energy Engineering Connection, the description states, “Students will focus on the first five steps of the Engineering Design Process (defining the problem, brainstorming, planning, building, and testing). Students will use and expand their knowledge of types of energy by building and testing self-propelled vehicles that can carry cameras and take pictures of an unexplored part of the world. The winning vehicle will be the one that goes the farthest from its starting point.”

Accelerate Learning STEMscopes Science TX Grade 3

Indicator 3.1

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

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 systematically, coherently, and accurately build knowledge.

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.

- The materials connect new learning to previous and future learning within and across grade levels. For example, in the Teacher's Guide, materials include a vertical alignment of the Science TEKs section that contains a Flashback and a Fast-Forward that addresses what is taught within each unit and explains how it connects to previous and future learning goals.
- Materials are vertically aligned. For example, in grade 3, Quick Changes to Land, students model and describe rapid changes in Earth's surface, such as volcanic eruptions, earthquakes, and landslides. The Flashback connects to previously taught grade 2 investigate and describe how wind and water move soil and rock particles across the Earth's surface.
- For example, in grade 3, Animals Structures and Functions, students explore and explain how external structures and functions of animals, such as the neck of a giraffe or webbed feet on a duck, enable them to survive in their environment. The Flashback connects to grade 2 students identifying plants' roots, stems, leaves, flowers, fruits, and seeds and comparing how those structures help different plants meet their basic survival needs.
- The materials present content that builds complexity within and across units and grade levels. For example, the Scope Description includes information that addresses what is taught within each unit and explains how it connects to previous learning goals under Spiral Opportunity. In the Types of Energy scope, students build on prior knowledge of their understanding of how

different forms of energy are important to everyday life. The Spiral Opportunity states, "Students will see how mechanical energy is related to an object being pushed or pulled." Students apply knowledge by demonstrating how speed is related to mechanical energy.

- For example, in grade 2, students learn to classify matter by physical properties. Grade 3 students build on that knowledge by identifying how physical properties, such as their states of matter, can change. In grade 4, students observe different properties of matter and if those properties, when combined with other substances to make mixtures, can be conserved. In grade 5, students learn about physical properties, such as substances' states of matter and solubility in water. In grade 5, students explore how some liquids and solids dissolve in water while others do not and how some substances maintain their physical properties when mixed together while others do not.

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

- The materials include a progression of concrete, representational, then abstract reasoning when presenting concepts that allow for an increasingly deeper conceptual understanding. The materials use the 5E +IA model and are structured to build student knowledge and skills as students experience a phenomenon before utilizing models as a tool for reasoning. For example, Our Solar System Engage section begins with a Scope Phenomenon video of the Sun and the planets. In the Explore section, students construct and explain a model of the orbits of the Sun, Earth, and the Moon and a model of the order of the planets from the Sun. In Life Cycles, students watch a video showing the phenomenon of a daffodil's life cycle. Teachers use a Thinking Cap questioning strategy to facilitate understanding of the life cycle of a plant. A student hand-out includes questions related to the phenomenon, such as, "What does a daffodil flower start out as?"
- The materials sequence instruction in a way that activates or builds prior knowledge before explicit teaching occurs, allowing for increasingly deeper conceptual understanding. For example, The Lesson Planning Example suggests completing the Accessing Prior Knowledge Activity before beginning Scope Phenomena. The Scopes then progress to Explore, where students engage in the content through hands-on activities. In Explain, students get more content information and opportunities to explain their thinking.
- For example, in Soil Formation, students learn about soil and how it is formed from the decomposition of plants and animals before they learn about natural resources. In Natural Resources, students build on that knowledge as they discover that soil is a natural resource, as are plants and animals. They also learn about the importance of natural resources and their use, followed by conservation.
- Materials utilize visual aids and hands-on learning experiences as scaffolds to build an understanding of abstract concepts. In the grade 3 scope, Force and Motion, students rotate stations in groups to conduct a descriptive investigation to demonstrate and explain how position and motion can be changed by pushing and pulling objects such as swings, balls, and wagons. Students draw pictures of the objects labeled with push, pull, or both and identify if the force was in contact with or at a distance from the objects. Students also identify if the force changed the object's motion, position, or both.

Accelerate Learning STEMscopes Science TX Grade 3

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

- The materials present grade-specific core concepts, recurring themes and concepts, and science and engineering practices. For example, materials use the 5E instructional model for sequencing science instruction. Students are exposed to a phenomenon and access prior knowledge in the Engage section. Then, they get hands-on experience in the Explore section before learning the why in the Explain section. In Elaborate, they apply what they have learned in various situations.
- For example, in the Day-to-Day Weather Scope, students dialogue with classmates about their understanding of weather through a four-corner discussion. Teachers then show the Scope Phenomenon video, and students discuss the questions on the student handout. Students observe and record local temperature, rainfall, and wind patterns and compare them to the daily weather in other locations. Students construct explanations based on the weather data collected. Students present persuasive speeches about the best place to live based on weather preferences. Finally, students build rain gauges that measure the amount of water that has fallen.
- For example, in the Fossil scope, students discuss how fossils are evidence of past organisms. Students create models and record information about fossils found in different environments. They present newscasts about new and improved technology available to archaeologists that help them locate fossils thousands of feet below the Earth's surface. Finally, they construct and support an argument that explains which layer was once covered by ocean water.
- The materials accurately present core concepts, recurring themes and concepts, and science and engineering practices (SEPs). Materials are free from scientific inaccuracies across lessons, units, and grade levels. Materials present scientific content reflecting the most current and widely accepted explanations. For example, in grade 3 materials for Day-to-day Weather, students are given several opportunities to compare and describe day-to-day weather in different locations at the same time, including air temperature, wind direction, and precipitation, and reminds teachers to "make sure that students are using the weather report for the weather that is currently happening at the same time in each of the cities for an accurate comparison."
- For example, in grade 3 Force and Motion, Teacher Background materials list the forces that act upon objects, such as magnetism, gravity, pushes, and pulls. Students explore connections and applications of how pushing forces are found in specific sports by observing an authentic, real-world photograph provided by The Associated Press (AP) and answering reflection questions that assess comprehension.

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

- The materials include specific learning targets within the boundaries of the main concepts for grade 3. For example, the grade 3 Natural Resources scope contains Explore labs for physical science content, including properties of matter: temperature, mass, magnetism, relative density, and state of matter. These match TEKS 3.6, which states, "The student knows that matter has measurable physical properties that determine how matter is identified, classified, changed, and used." Later, in the Evaluate assessment, the students encounter an open-ended question with different natural resources and examples of use by humans. The students need to use their knowledge of properties of matter and their knowledge of natural resources to write about

"which type of natural resource is most useful for construction." This helps define the mastery requirements for the grade level in both physical science and earth and space science.

- The materials have specific statements that clearly state the level of competency for any given TEKS within each scope. For example, in the grade 3 Fossils scope, the materials list two learning objectives: "I can find examples of different types of fossils" and "I can explain how fossils help scientists learn about the animals, plants, and environments in the past." The materials include a Progress Monitoring and Reflection log. Students track their data on TEKS mastery following the three checkpoints in each scope.
- Each scope contains a Stemscopedia that includes explanations, pictures, diagrams, response prompts, and a Connect It section to elicit student thinking and outline the mastery requirements for the grade level. The Stemscopedia for the grade 3 Physical Properties of Materials scope includes a section on volume, which is necessary for TEKS 3.6B in understanding that matter takes up space (has volume), and graduated cylinders are included in the required tools for grade 3 to measure the volume of liquids. This provides foundational knowledge for mastery within the grade level and prepares students for subsequent grades to understand volume in more complex terms.

Accelerate Learning STEMscopes Science TX 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, and scientific and engineering practices. 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 Standards Planning tab for each scope includes a Vertical Alignment of Science TEKs section with a Flashback to previous grade-level standards and a Fast-Forward to the next grade level's standards. There are cards under the Resources Tab and Instructional Supports for the SEPs for each grade level. Materials state that "Science is more than just knowing a specific set of knowledge. It is a set of processes that are used to determine, extend, and refine that knowledge to always better reflect the world around us…SEPs are standards that help students emulate behaviors that scientists engage in as they investigate and build models and theories about the natural world." The materials contain the following explanation about the RTCs: "Science has recurring themes that can be found throughout the content. These recurring themes provide an opportunity to make connections between concepts taught throughout the year." RTCs "help bridge disciplinary boundaries."
- Materials contain a Vertical Alignment of Science TEKS section in Quick Changes to Land, with a Flashback to grade 2, investigating and describing how wind and water move soil and rock particles across the Earth's surface, such as wind blowing sand into dunes on a beach or a river carrying rocks as it flows. The Vertical Alignment also contains a Flash-Forward to the grade 4 model. It describes how slow changes to Earth's surface are caused by weathering, erosion, and

deposition from water, wind, and ice. This section also includes connections to the College and Career Readiness Standards, such as I.A.2: use creativity and insight to recognize and describe patterns in natural phenomena.

- The materials include guiding documents that explain how content and concepts increase in depth and complexity across lessons and units within the grade level. Under the Resources tab and the Planning with Stemscopes tab, there is a section titled Grade Level Standards. The drop-down menu has a document titled "Texas Standards Snapshot" that contains a grid for all three of these sets of TEKS by grade level.

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 contain explanations and examples of science concepts. For example, the material includes a vertical alignment document that explains how energy and food chain concepts build from lower grades to higher grades.
- The materials include background information and common grade-level misconceptions of science concepts. The Engage section identifies misconceptions with suggestions for addressing them. For example, Physical Properties of Matter addresses one common misconception instructing teachers, “If students choose the giraffe, they understand that temperature, weight, and magnetism are ways to measure matter. If they choose anything other than the giraffe, refer to their justification to identify what they believed the giraffe represented and how it references matter. Students may need further instruction on measurable properties of matter.”
- The materials include background information for teachers that provides explanations and examples of science concepts. For instance, in grade 3 Soil Scope, students investigate and explain how soil is formed by the weathering of rock and the decomposition of plant and animal remains. The Teacher Background page gives the teacher an overview of the Earth and its "naturally occurring materials." This page uses multiple pictures and diagrams to explain soil formation by weathering and soil components. Materials provide a Teacher Background Tab that contains information on each concept for teachers who may need to build their subject knowledge—for example, grade 3 Ecosystems Scope addresses 3.12A, 3.12B, and 3.12C TEKS. The Teacher’s Background information includes information on how temperature and precipitation affect the growth and behavior of animals and plants, how to identify the flow of energy in a food chain, and how changes in food chains affect ecosystems.
- The materials identify common grade-level misconceptions students may have about science concepts. For example, all units provide teachers with a Pre-Assessment and Accessing Prior Knowledge tab, which includes an Identifying Misconceptions section. Materials identify possible student thinking and the intention and context of a given word or concept. For example, the materials provide a chart explaining the word Product, which shows Possible Student Thinking as "An item you buy at a store; the answer to a multiplication problem." Then, it defines Our Intention as "Something made from resources that we can use." Finally, the word is used In Context with the sentence, "Plastic is a product created from oil or natural gas."
- Natural Resources has three bullets that explain what students might be thinking when they choose one of the answers in the activity. For example, "If a student believes Phoebe is incorrect, they may need more instruction on the ways that natural resources such as wood from trees and cotton are used in everyday materials that we use and wear."

Accelerate Learning STEMscopes Science TX Grade 3

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

- The materials provide a purpose or rationale for the program's instructional design. Materials highlight key features of the instructional design. For example, the materials explain the 5E Instructional Model plus Intervention and Acceleration for learning. The materials include STEMscopes Pedagogy, which states, "The 5E Instructional Model and the additional Intervention and Acceleration (+IA) within the resources provide teachers, additional opportunities to identify and close the gaps in student content knowledge that lead to achievement gains, as well as provide enrichment activities for other content areas linked to science content. Resources and strategies to meet the ELPS and RtI are integrated throughout all phases of the 5E model." The materials sequence lessons to incorporate student-centered, hands-on investigations to challenge current understanding and provide opportunities for the construction of students' knowledge.
- The materials provide a framework explaining the primary intent or goals of the program. Materials offer a Teacher's Guide that describes the program's instructional approaches and references the research-based strategies present in each unit. Each unit has a section for specific supports in the Unit Overview. For example, the materials include a STEMscopes Pedagogy page that explains "the goal of STEMscopes to provide an inquiry-based curriculum, which incorporates the research-based, constructivist phases of the BSCS 5E Instructional Model (Bybee et al., 2006), the Key Findings from the National Research Council's report How People Learn (2000), the Texas Essential Knowledge and Skills (TEKS) (TEA, 2021), and an additional level of support for English Language Proficiency Standards (ELPS) (TEA, 2017)."

Accelerate Learning STEMscopes Science TX 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.

- Materials provide multiple opportunities within each scope for students' meaningful sensemaking. Students read the Stemscopedia to understand the content and its application in Science Today articles. The Explore labs support students acting like scientists by completing and recording investigations. The Engineering Connection activities support students learning the Engineering Design Process and acting as engineers.
- For example, in Our Solar System Scope, students start with a phenomenon video of the plants and the Sun, then participate in a group activity to discuss and make sense of the video using question prompts and sentence stems. Students discuss what is happening among the planets and the Sun and sketch the different movements. After the discussion, they construct models and explain the orbits of the Sun, Earth, and the Moon in relation to each other.
- The materials consistently provide learning activities that support students' meaningful sensemaking. For example, in Types of Energy Scope, students will read and comprehend grade-

appropriate complex text about how to identify everyday examples of energy, including light, sound, thermal, and mechanical energy, before planning and conducting investigations that demonstrate how the speed of an object is related to its mechanical energy.

- In the Force and Motion Scope, students view a video of children playing tug of war and ask questions about the observed forces in the game. Students work in partners to answer and present their responses to the class. The teacher provides sentence stems and questions to beginning learners as needed.

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 texts to gather evidence and develop an understanding of concepts. For example, every scope includes a Stemscopedia that explains the content TEKS for that unit. These documents have built-in questions to guide student thinking and help them make connections. The scopes also include a Reading Science activity under the Elaborate tab that includes a story about a concept presented in the scope. For example, the Physical Properties Scope includes an article about cooking spaghetti. The story has questions to help guide student thinking. For example, the text asks students to give an example of matter, and then it asks, “The law of conservation of mass explains that matter cannot be created or destroyed, but it can change from one form to another. Give an example from the reading of matter changing form.” Materials include Response Logs for student use during reading and questions to guide student thinking after reading.
- The opportunities for students to engage with scientific texts include activities, such as pre-reading and vocabulary, to help them develop an understanding of concepts. All grade levels and units provide guidance documents that instruct students to review and complete a before-reading activity that includes a preview of the text and images and an after-reading activity that includes discussions and summarizing. For example, in Our Solar System Scope, students give their opinions on each statement in the before-reading activity. Once students complete the stop-and-jot questions embedded in the reading, they return to the before-reading activity to share which ideas they changed their minds about after reading. The Stemscopedia instructs students to create a vocabulary map that includes the new vocabulary word, its definition (in the student’s own words), a drawing, and a sentence using the word.
- The materials provide multiple opportunities for students to engage with scientific texts to gather evidence and develop an understanding of concepts. For example, in the Reading Science portion of Our Solar System Scope, students use the claim and evidence strategy to create one-sentence summaries of the beginning, middle, and end of the reading passage on the positions of Earth, the Moon, and the Su. They will then answer questions to assess their understanding. In the Virtual Experience, students will complete a guided inquiry where they read information about the solar system and then explore "3-D renderings of the solar system on their own, noting observations and any outstanding questions."
- The materials include a section entitled “Science Today,” where Students explore real-world connections and applications of science content through interactions with media provided by the Associated Press. In Forces and Motion, students read an article about a baseball player and answer questions about the force and motion of the game and the player.

Accelerate Learning STEMscopes Science TX 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.

- The materials provide opportunities for students to communicate thinking on scientific concepts in written and graphic modes. For example, in the Explain section, the Interactive Science Notebook (ISN) section provides reflection opportunities for students to process the content they learned by doing the Explores and reading the STEMscopedia. This section explains the Input and Output strategy, giving prompts and techniques that facilitate communicative thinking.
- For example, students engage in written and graphic modes using the Interactive Student Notebook pages for the Explore labs and Virtual lab in each scope. For instance, in the Physical Properties of Materials Scope, the ISN page for the Virtual Explore has students create a concept map describing the properties of the best materials for playground swings. The Hands-on Explore Stations ISN page has students summarize their learning by creating a sample test problem.
- In the Force and Motion Scope, students investigate how the amount of mechanical energy in a pull-back car is related to the car's speed and organize their data in a table.

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.

- The materials provide authentic student engagement and perseverance of concepts through productive struggle while acting as scientists and engineers. For example, in the Elaborate Engineering Connection for the Physical Properties of Materials Scope, students brainstorm, design, and test a prototype timer. Step four instructs students to "Build your design, and test it. Does it meet all the criteria and constraints? Does it solve the problem? Use the space below to list what problems you need to fix in your design."
- For example, in Our Solar System, students engage in the phenomena of a solar eclipse. A student handout includes the problem, criteria, and constraints for students to build and test solar eclipse viewers so that people can safely observe a solar eclipse. The materials give teachers facilitation instructions and guiding questions.
- For example, in Animal Structures and Functions Scope, students explain how their given animals survive based on their structures. The students fill in the sentence stem to guide their explanations, "If I were a (an) _____, I would survive in the (describe the environment) because (pick one external structure and explain its function to help the animal)." In the embedded CER, students write a scientific explanation describing how a duck's webbed feet help the duck survive in its environment.
- The materials support students as "practitioners" while they are figuring out (sensemaking) and productively struggling. For example, in the Elaborate Engineering Connection of Physical Properties of Materials Scope, students brainstorm, design, and test a prototype timer. Step 4 says, "Build your design, and test it. Does it meet all the criteria and constraints? Does it solve the problem? Use the space below to list what problems you need to fix in your design." There are also teacher guidance questions, such as "Could you combine more than one of the materials to get your desired outcome?"

- The materials create transfer opportunities for students to take what they have learned and use it flexibly in new situations. Students take what they learned in the Explore and Explain tabs and apply the knowledge in the elaborate Engineering Connection and Science Connection.
- For example, in the Properties of Materials Scope, the phenomenon is an image of magnets on the refrigerator. Students receive a handout asking why they think the items stick to the fridge and, "What would happen if you tried to stick a piece of paper to the front of the fridge? What if you tried to stick a magnet to a wooden door?" The materials ask if they can think of other places where the magnets might stick. Finally, the last question gets to the heart of eliciting student inquiry through phenomena when the materials state, "Your teacher normally hangs a calendar on their fridge at home, but none of the magnets will hold up their calendar. Why do you think the magnets won't hold up the new calendar?"

Accelerate Learning STEMscopes Science TX 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 of 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.

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 verbal arguments that justify explanations of phenomena and/or solutions to problems using evidence acquired from learning experiences.

Evidence includes but is not limited to:

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

- The materials provide opportunities for students to develop how to use evidence to support their hypotheses and claims. For example, in Our Solar System, the materials include a CER task connected to the explore activity. The materials provide a handout for students and teacher guidance. The handout includes pictures, a scenario connected to the explore activity, and fill-in-the-blank sentences to guide the students in the claim and evidence with sentence stems for the reasoning. The materials teacher guidance for struggling students states, "If students struggle with how to begin, remind them of the following points: For the claim section, students should each finish a single sentence stem that highlights the relationship between the Sun, Earth, and the Moon in our solar system. For the evidence section, students should cite data or observations that can be pulled directly from the scenario and external data using the sentence stems. For the reasoning section, students should make connections between the scenario and the scientific knowledge they have gained about the orbits of the Sun, Earth, and the Moon in relation to each other throughout the scope activities using the sentence stem."
- For example, in exploring Force and Motion Scope, students use a virtual slider to push or pull a ball to make it go into a hole. Then, students complete the embedded CER for the lesson. Materials provide a script for the teacher to use if students struggle to begin. For the claim

section, students write a single sentence that highlights what changed about the ball when it was pushed and pulled. For the evidence section, students cite data or observations that can be pulled directly from the scenario and external data. For the reasoning section, students make connections between the scenario and the scientific knowledge they have gained about how positions and motions can be changed by pushing and pulling objects, such as balls, throughout the scope activities.

- The materials specifically prompt students to use evidence when supporting their hypotheses and claims. For example, in Physical Properties of Materials, the CER activity provides sentence stems to support students in completing the activity. Students write a scientific article explaining which materials a builder should use to build a house that can withstand a hurricane and be cool in the summer heat. The claim stem provided says, "I claim that the builder should use___." Three stems for the evidence say, "The outside walls in the building I chose are a better choice because___. The windows in the building I chose are a better choice because___. The inside walls in the building I chose are a better choice because___."
- For example, in Force and Motion, students complete an anticipation guide worksheet where students circle agree or disagree with statements about force. Students then read an information handout about forces such as magnetism, gravity, and pushes and pulls on objects. Students reread the statements from the worksheet, circle agree or disagree, and support their stance with evidence from the text.

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

- The materials include opportunities to develop and use vocabulary after having a concrete or firsthand experience to which they can contextualize new terms. Each scope is constructed so students are introduced to vocabulary as they explore the concept and begin using the new vocabulary in the Explain section. For example, in Day-to-Day Weather, students are introduced to vocabulary by observing and recording local temperature, rainfall, and wind patterns and observing daily weather in other locations. Students begin using the vocabulary in the explain ISN activity when they compare the weather of the different locations.
- For example, in Types of Energy, students sort pictures of items from everyday life and identify whether they mainly produce light, sound, thermal, or mechanical energy. Students then show what they learned by describing the different types of energy and providing examples of those that produce that type of energy. The lesson directs teachers to encourage students to use introduced content vocabulary in their Interactive Science Notebooks.
- The materials present scientific vocabulary using multiple representations. For example, in the Day-to-Day Weather Scope, the materials provide three vocabulary-specific activities to engage students. In the first activity, students click buttons to scroll through the picture vocabulary and review the definitions. The second activity is an interactive word wall, in which students can interact with the vocabulary terms on a class bulletin board to comprehend and recall their meaning. In the third activity, students play a kinesthetic game where they silently act out vocabulary terms or definitions and find their partners to solidify vocabulary terms acquired during Explore and Explain activities.
- The materials embed application questions about vocabulary within the components of the elaborate tab. For example, in Physical Properties of Materials, the *Science Today* article asks, "What are some physical properties of bricks? How do they look and feel? Are they solids, liquids, or gasses?" A virtual experience under this tab allows students to explore the content using vocabulary words with application questions. The Small Group Intervention lesson includes vocabulary dominoes for students to practice matching words and definitions.

- The materials provide opportunities for students to apply scientific vocabulary within context. Explore activities introduce content vocabulary in the context of the associated hands-on activity. As students perform the hands-on activities and complete the handouts, they begin to use the vocabulary in context before being formally exposed to definitions in the Explain section of each scope. For example, in Physical Properties of Materials, an ISN page asks students to "summarize what they have learned about the properties of matter by creating a sample test problem."
- Each scope also contains a Stemscopedia that presents scientific vocabulary terms using clear photographs and student-friendly definitions. For example, the Stemscopedia includes application questions for the vocabulary word physical properties, such as "What physical properties can describe a skyscraper?" There is also a picture vocabulary slide deck for each scope that students can use to review the words under the Explain tab. The teacher can also print vocabulary game graffiti cards to practice using the words.

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

- The materials provide opportunities for students to develop how to practice argumentation and discourse. For example, The Accessing Prior Knowledge Agree or Disagree activity introduces students to how to construct an argument using a handout. Students evaluate whether they agree or disagree with statements on the handout, then explain their reasoning behind their decision.
- For example, in States of Matter, students independently evaluate statements to determine whether they agree. Then, they find a partner to discuss their answers. Students practice several times before the teacher conducts a class discussion of the responses.
- For example, in Day-to-Day Weather Scope, students construct and support an argument about snowfall chances between two cities based on forecasts. Materials provide instructional support to students for writing a scientific explanation by giving a sentence stem for their claim. The materials direct students to use scenarios and external data to complete a sentence stem for the evidence portion.
- The materials integrate argumentation and discourse within stages of the learning cycle. For example, In Quick Changes to Land, students evaluate and redesign a solution to stop landslides from destroying towns and businesses. Students present their redesign, and the teacher leads a class discussion about the strengths and weaknesses of the redesigned solutions.
- For example, in Forces and Motion, students build a roller coaster that models forces. Students work in groups to design and plan their tracks to get a marble to run through the entire track. Groups test their roller coasters, find the movement pattern of the marble, and label the directions of forces in a drawing of the roller coaster. Then, as a class, students pair off to ask and answer debriefing questions, such as, "Do you see evidence of pushing and pulling in this model?" to share with the class.

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

- The materials provide instruction for how to construct and present a verbal or written argument to problems using evidence acquired from learning experiences. For example, in Quick Changes

to Land, students complete an investigation that includes a model landslide formation. Students use the data collected in the investigation to support the claim in their scientific explanation that describes why a landslide is considered a rapid change to the Earth's surface.

- For example, in Physical Properties of Materials, the Engage phenomenon is a photo of pictures and magnets on a fridge. Materials direct teachers to ask, "What would happen if you tried to stick a piece of paper to the front of the fridge? What if you tried to stick a magnet to a wooden door? and give students 15 seconds to think before they discuss their answers. Students write down their responses to the questions.
- The materials provide criteria for developmentally appropriate arguments to explain a phenomenon or defend a solution to problems using evidence acquired from learning experiences. For example, in Physical Properties of Materials, there is an embedded CER after the Explore lab "Properties of Matter Stations." The prompt says, "Write a scientific explanation that describes how you could tell whether an object was magnetic." There is a clearly defined section for students to write their Claim, and the Evidence section contains the sentence stem "The magnet___ all the magnetic items. The magnet ___ any of the nonmagnetic items."
- For example, in Types of Energy Scope, students plan and conduct investigations to show how the mechanical energy of a toy car is related to its speed. Students collect data on the distance the car traveled and the distance it was pulled back and use that data to write a scientific explanation that explains how the amount of mechanical energy the car had affected the speed it traveled. Students justify the claim by completing the sentence stem, "My claim is valid because…"

Accelerate Learning STEMscopes Science TX Grade 3

Indicator 5.2

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

1	Materials guide the teacher in anticipating student responses and using 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 guide the teacher in anticipating student responses and using 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 guide the teacher in anticipating student responses and using questioning to deepen student thinking.

- The materials provide teachers with possible student responses to questions and tasks.
    - For example, in the Explore Activity throughout all units, materials provide a list of questions with possible student responses to gauge current student knowledge and identify potential misconceptions.
    - For example, the Ecosystem Scope lists questions such as, "What are some behaviors animals have that help them survive a cold winter when food is scarce?" with the possible response that animals can hibernate or migrate to survive. Materials follow with the question, "What is an environmental change other than cold weather that would cause animals to migrate?" The possible student response is flooding, forest, fire, and drought. For an open-ended question such as "Can a lack of precipitation cause a plant to go dormant?" materials state when water is available, some plants may be able to go dormant to conserve energy until more rain is available to help them grow.
    - For example, the Soil Formation Scope Assessment has a short constructed response section that asks, "What is different about the properties of each, and how were they formed with those properties?" The teacher's answer key provides a possible student response: “Clay and sand are both created by the weathering and erosion of rocks, then the mixture and compaction of minerals, and then decaying organisms along with water

and air. Clay is soil that does not have much air but retains lots of water, making it very thick with sediments and wet soil. Sand is mostly small sediments that lack as many once-living organisms (and the nutrients they provide to the soil). There is a lot of air between the sediments of sand."

- For example, in Types of Energy, students view a video of a child playing the Whack-a-Mole arcade game and identify the types of energies in use. After viewing the video, the teacher asks questions about the investigations in the Think-Pair-Share format. Materials provide teachers with questions such as, “What examples of energy did you notice in the video as the child played Whack-a-Mole?” Materials provide possible student answers, such as, “There was light and mechanical energy. If the video had sound, there would probably be sound, too.” The teacher asks students to explain how they know energy is used and what energies they use in real life. Materials provide possible answers, such as, “There are lights on the game that flash to show that light energy is present. The mallets make a sound when they hit the mole for sound energy. The moles are moving up and down for mechanical energy.” Answers may vary. A possible student response could include the following: “Lights are used in my house to help me see. I use sound to talk to my friends. I use mechanical energy when I ride my bike.” Materials direct teachers to allow students to pair up and share their responses.

- The materials provide general support for teachers to deepen student thinking through questioning.
  - For example, materials provide a section in The Teacher's Guide that gives general guidelines on deepening student thinking during a class discussion, such as Instructional Supports that include Scientific and Engineering Practices resource cards that help teachers incorporate the SEPs in the classroom. The materials contain a Learning Support Section, including activities paired with content to engage advanced learners' strategies, including 5 Question Quiz, Partner and Ponder, and Unanswered Questions. The materials include Literacy Resources, reading activities, and vocabulary strategies. These activities encourage teachers to engage students in partner, group, and class discussions.
  - For example, scopes include Think-Pair-Share activities to have students build on their thinking using peer responses. Materials state that discussions need to be grounded in facts. Materials direct teachers to ensure student responses on handouts for Claim-Evidence-Reasoning activities are based on text or investigation evidence.

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

- The materials provide embedded support for the teacher in introducing and scaffolding students’ development of scientific vocabulary.
  - For example, materials provide teachers with a Standards Planning page that previews the vocabulary used in the unit. Materials state, “The terms below and their definitions can be found in Picture Vocabulary and are embedded in context throughout the scope." In the Types of Energy Scope, materials identify the words *mechanical energy, light energy, thermal energy,* and *sound energy*. Materials provide picture vocabulary slides with a definition for each term.
  - For example, the Physical Properties of Materials Explain activity introduces students to vocabulary and then instructs teachers to encourage students "to use these terms in their ISNs and their responses to questions."

- The materials guide the teacher on how to support students' use of scientific vocabulary in context.
    - For example, the Explain picture vocabulary section alerts teachers of opportunities for students to use scientific vocabulary in context. This section guides the teacher to the Vocabulary in Context section of the Explore section and instructs teachers to "encourage students to practice using these terms in context during subsequent scope activities."
- In the Life Cycle Unit Virtual Explore: Life Cycles of Plants and Animals activity materials direct teachers to "hold a class discussion to remind students of the difference" between complete and incomplete metamorphosis before the students write in the ISN because the simulation does not explicitly mention these two vocabulary words.
    - For example, in Explore: Forces at Work in the Force and Motion Scope, materials direct teachers to use the Strategy: Vocabulary Alive "any time students use those vocabulary words in context."

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 support to prepare for student discourse. For example, materials include teacher preparation by setting up and reinforcing a class culture in which students listen to and evaluate whether they agree with one another's ideas. Materials include steps for establishing norms for class discussions. In the Types of Energy Scope, students work in groups to sort picture cards into types of energy. The lesson states, "When all groups are done sorting, discuss the activity as a class. If there is any disagreement about where an object should be sorted, allow groups to defend their reasoning to each other."
    - For example, in the Soil Formation Science Connection, teachers allow students to work in small groups and show students an actual public service announcement before they start writing their own. Teachers remind students, "While other groups are performing, they should be good audience members, perform active listening and polite applause, and ask appropriate questions after the presentations." Then, the class presents the PSAs and debriefs and discusses which is the most informative or effective.
- The materials provide teacher questions for supporting student discourse and using evidence in constructing written and verbal claims.
    - For example, in the Fossils Scope, materials encourage claim-evidence-response writing that prompts students to engage in written discourse to support a claim that explains what we can learn from the fossils found in different layers of Earth. In the Accessing Prior Knowledge activity of this scope, students have to give evidence to support why they chose the image they did that best explains what fossils can tell us about the past students while engaging in discourse.
    - For example, during the Exploring Our Solar System activity, teachers are guided to "Ask students to explain to their partners how many planets there are in our solar system, how many of them are inner planets, and how many of them are outer planets." Teachers ask students to identify the advantages of using these models to help them understand the order of the planets and how the solar system works. While the students work through the activity, teachers also ask students about the limitations of the models.

Accelerate Learning STEMscopes Science TX Grade 3

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

- The materials provide teacher support and guidance to engage students' thinking in various modes of communication throughout the year.
    - For example, in the Explore phase of the Types of Energy investigation, students view a virtual representation of a waterfall, basketball, bicycle, and marquee to create a chart displaying the types of energy produced. Students then create a summary statement about the important ideas about light, sound, and mechanical energy."
    - For example, in Physical Properties of Materials, the teacher materials for the Engineering Connection activity under the Elaborate tab say, "If students are stuck, use the following guiding questions: Will all the materials you have available behave in the same way as they move in the timer? No, different materials have different densities and will flow at different rates. Could you combine more than one of the materials to get your desired outcome? Yes, you could combine certain materials to make the timer last 60 seconds. Finding the combination of materials is the challenging part of this engineering design." There are also facilitation questions provided for the teacher to ask. Materials say, "Monitor the students as they build, and ask each design team the following questions: Does your solution meet all the criteria and constraints? Does it solve the problem?"
- The materials provide teacher support for facilitating the sharing of students' finding solutions. Materials provide feedback tips and examples teachers can use to support students throughout the learning cycle. Materials provide an answer key or sample response for verbal and written questions and rubrics for scoring.
    - For example, the materials provide an "Engineering Connection" flowchart defining all the steps in the engineering design process and a rubric that identifies the quality of redesigned solutions critique, creativity and innovation, and adaptability and resilience.

Accelerate Learning STEMscopes Science TX 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 various 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 various 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 various formats.

- Materials include diagnostic assessments for measuring student learning and identifying learning gains in various formats. For example, each grade level contains a multiple-choice diagnostic Beginning-of-Year (BOY) assessment and an End-of-Year (EOY) assessment available under the Resources Tab. The materials state, "Beginning-of-Year and End-of-Year assessments are designed to measure learning based on the standards addressed in that grade level and modeled after the state assessment for that grade level/band."
- Materials include formative assessments in various formats to measure student learning and determine the next steps for instruction. For example, there are embedded strategies with questions for teachers to ask after completing each Explore lab, including the virtual lab. For example, in Physical Properties of Materials, the first lab suggests a Think-Pair-Share strategy, the second recommends an I Wonder strategy, and the virtual lab proposes using Poll 0, 1, 2, and 3 to debrief students. Each Evaluate tab includes a CER, which requires a written response and information learned to support a claim. The Accelerate tab has a menu of nine project-based activities that can be included in a portfolio. Materials include multiple opportunities for class discussion and peer-to-peer discussion using provided prompts.

- For example, scopes include a short, multiple-choice pre-assessment and a mid-unit Pulse Check "designed to uncover student misconceptions and provide a measurement of student learning to act as a baseline. It should not be taken for a grade." For example, the beginning of the Force and Motion Scope assesses the students' current knowledge by playing Always, Sometimes, Never with statements or claims that are sometimes true, always true, or never true. Students use a Progress Monitoring and Reflection Log to rank their understanding before being introduced to the content. During the Evaluate section of the scope, the materials direct the teachers to review the pre-assessment questions and clarify any misconceptions students still have.
- Materials include summative assessments in a variety of formats. The materials provide a Scope Assessment at the end of every unit after students complete the activities in the Engage, Explore, Explain, and Elaborate sections that include multiple choice questions.
- For example, the Scope Assessment for Physical Properties of Materials question types includes six multiple-choice, one multi-select, one drag-and-drop, and one open-ended calculation for total mass and ends with a constructed response. The constructed response provides students with a chart describing the physical properties of four objects. The students decide which object is wood and then explain why they chose that answer. Materials also contain a Progress Monitoring chart that students and teachers can use to track their progress on assessments through the scope.
- For example, the question types on the scope assessment for Our Solar System include six multiple-choice, one multi-select, one drag-and-drop, and one constructed response that pictures different sports balls. Students explain which ball represents each celestial body and why, how the balls move around each other, and why they are good models of Earth, the Moon, and the Sun.
- Materials include a variety of informal assessments that give teachers feedback on student learning at the moment so that they can modify instructional approaches. For example, the STEMscopedia, located in the Explain section, has several opportunities to informally assess students' learning through a reading that includes questioning throughout and a quiz at the end. This reading has a before and after activity to complete in the ISN. These activities give teachers informal formative assessment opportunities to gauge student progress throughout the scope. This section guides students and teachers through the Input and Output activities.
- For example, in the Explore: Soil Profiles input strategy, students summarize what they learned about soil formation during the Explore activity by completing 3-2-1 summary notes. In the first row, students should write three facts about what makes up soil. In the second row, students should list two examples or uses of different kinds of soil. In the bottom row, students should write one question they still have about soil formation after the activity. As time allows, permit students to research their questions. For the Output, students use the 10-word Summary Strategy. Each student creates a facts summary with ten words or less. The materials describe the ISN activities as "reflection opportunities for students to process the content they learned by doing the Explores and from reading the STEMscopedia."
- For example, in the grade 3 Ecosystem unit, students read different responses to a posed question regarding whether an ecosystem can support life after a drought and other changes. Students agree and disagree, then explain their reasoning in writing. The material prompts the teacher to discuss the responses as a class before students complete a multiple-choice pre-assessment.
- For example, the grade 3 Soil Formation Scope includes an Accessing Prior Knowledge activity, Two Truths, and a Lie.

Accelerate Learning STEMscopes Science TX Grade 3

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

- The materials assess all student expectations by grade level, as outlined in the TEKS. Materials assess all student expectations, and answer keys clearly label the relevant expectations for each assessment item and are dual-coded. For example, each scope includes a tab called Standards Planning. This tab has a standards matrix that shows each standard in the scope (including RTCs and SEPs) and lists all the scope components that use the standard.
- The materials include detailed TEKS-based lesson plans that outline how the materials can be used to teach specific concepts and skills, address specific students' expectations, and provide guidance on assessing student learning. The materials indicate which student expectations are assessed. Materials provide the TEKS correlation for each assessment item and the answer keys for every assessment.

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

- The materials include assessments requiring students to integrate scientific knowledge and science and engineering practices with recurrent themes appropriate to the student's expectations. For example, in the Types of Energy Engineering Connection, students build and test self-propelling vehicles that carry cameras and take pictures of an unexplored part of the world. The winning vehicle will be the one that goes the farthest from its starting point. This exercise involves the first five steps of the Engineering Design Process (defining the problem, brainstorming, planning, building, and testing). The teacher evaluates each student's performance of the engineering design challenge by using the Engineering Design Process Student Rubric.
- Materials have a Science Connection and Engineering Connection within each scope. In Force and Motion, students redesign a carnival ride using pushes and pulls, allowing it to stay in motion for one minute. The materials provide a scenario of a traveling carnival needing help keeping a pirate ship ride moving back and forth. Students must redesign the carnival ride and share their ideas in a presentation. Peers note the strengths and weaknesses of redesigned solutions. The teacher evaluates each student's performance using an "Engineering Design Process Student Rubric.
- Materials include assessments that require students to apply knowledge and skills to a new phenomenon or problem. For example, in the grade 3 scope, Physical Properties of Materials, the CER activity has students evaluate a table showing data collected about different materials used to build a house to withstand a hurricane. Students then "Write a scientific explanation that explains which set of materials the builder should use to build a house that can withstand a hurricane and is cool in the summer heat."

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

- Materials include assessments that require students to apply knowledge and skills to novel contexts. For example, in Lifecycles Explore, students illustrate and compare the life cycles of various plants and animals, such as daffodils, sunflowers, butterflies, and frogs. Students apply their knowledge of life cycles within a Claim-Evidence-Reasoning Assessment by constructing and supporting an argument that explains how the life cycles of a beetle and lima bean are similar.

- For example, in grade 3 Transfer of Energy Scope, students observe a video of a lava lamp and describe the energy transformation that takes place in everyday objects. Students apply their knowledge of energy transformation by writing a scientific explanation about what happens to the energy in a hair dryer when it is on.

Accelerate Learning STEMscopes Science TX 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 guide evaluating student responses.	M
2	Materials support teachers' analysis of assessment data with guidance and direction to respond to individual student's needs in all areas of science based on measures of student progress appropriate for the developmental level.	M
3	Assessment tools yield relevant information for teachers when planning instruction, intervention, and extension.	M
4	Materials provide various resources and teacher guidance on leveraging different activities to respond to student data.	M

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

Materials include information and/or resources that guide evaluating student responses.

- Materials include information that guides teachers in evaluating student responses. For example, answer keys for formal summative scope assessments, the Pulse Check and Scope Assessment, include the correct answer and explanations for incorrect answers. In addition, each scope has a resource for Progress Monitoring and Reflection under the Engage tab, where students rate their understanding of the content broken down into "I Can" statements. For example, in the Life Cycles Unit, students' progress monitoring includes, "I can draw the life cycle of an insect. I can draw the life cycle of a plant. I can share a difference between two different life cycles." The materials prompt the teacher to have students gauge their understanding throughout the unit and to address misconceptions during specific times in the lesson. This unit also includes an assessment in which students create skits. Students follow a checklist of goals to achieve, and the teacher follows a rubric and scoring guide for evaluating student performance.
- The Engineering Connection activity in each scope contains a checklist of criteria and constraints and a rubric for scoring, and the CER for each scope includes an answer key with sample student responses and a rubric for scoring. The materials state, "The students' performances on this CER formative assessment affect what they will do next. Students who need more support can work with the teacher in small groups using the elements in the Intervention section before moving to the Scope Assessment. Other students should work on Elaborate or Acceleration elements."

- The student Interactive Science Notebook pages that accompany each Explore lab and the pages that accompany every STEMscopedia in each scope include an answer key that contains a sample student response. The Science Connection Elaborate activity for each scope has a self-evaluation and a rubric for scoring. The remaining Elaborate activities (Science Today, Reading Science, and Virtual Experience) contain an answer key with a sample student response.
- Materials include resources that guide teachers in evaluating student responses. For example, materials provide several rubrics teachers can use to evaluate whether students are confident, somewhat confident, or not confident in each component of the learning objectives. When students are required to use science or SEP reasoning, the materials include specialized rubrics aligned to the given task. For example, The Progress Monitoring and Reflection Rubric included in all units are student-driven responses that teachers can use to evaluate students' understanding of the topic before, during, and after the lesson.
- The materials include a Science Connection section and an Engineering Connection section, including specialized rubrics for the given assessments. For example, Our Solar System Scope Assessment: Our Solar System has a rubric with a 0 to 10 scale. The rubric states that to earn ten points, "The student's response correctly explained which ball should be used to model each object in space and accurately described the movements of the objects in space in relation to each other." A student earns 0 points "if the student's response incorrectly explained which ball should be used to model each object in space or incorrectly described the movements of the objects in space in relation to each other. OR The student's response is blank, irrelevant, or too brief to evaluate." For example, the Types of Energy Scope Assessment provides a graph that shows the relationship between speed and mechanical energy and asks students to write an investigation. The materials provide a "Constructed Response Rubric" with scores, descriptions, and a sample student response.

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

- The materials provide guidance documents and resources to support teachers' analysis of assessment data. For example, the material guides the teachers to click each standard on the reports page and see the activities in the scope associated with that standard. The teacher will then choose the appropriate activity to support students who may need intervention. "Teachers reference the differentiation pathways available in Resources to decide on what activities would be appropriate." Additionally, the materials include a grading system and data collection tool for use with assessments.
- The materials give teachers an answer key/rubric and guidance on what information to gather and how to use the information. For example, grade 3's Scope Assessment: Types of Energy provides an answer key and rubric, and the teacher guidance states, "As an optional part of the Evaluate, you may go over each question of the Scope Assessment with students to clarify any misconceptions that remain." Additionally, the materials state, "Gradebook view shows student performance on an assignment or assessment. This allows a teacher to see student performance by assignment or by question."
- Materials provide rubrics and guidance to analyze data and respond to students' needs on CER tasks. For example, in grade 3 Types of Energy Camping Trip, the CER provides a rubric, and the teacher guidance states, "The students' performances on this CER formative assessment affect what they will do next. Students who need more support can work with the teacher in small

groups using the elements in the Intervention section before moving to the Scope Assessment. Other students should work on Elaborate or Acceleration elements."

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

- The information gathered from the assessment tools helps teachers when planning core science instruction. Tools included in the materials to help teachers plan instruction, intervention, and extension include a Differentiated Pathways graphic that is "designed to support students based on performance level and identified need to intervention;" a Tiered Intervention Strategies page that "shows the suggested pathway to help support all students in the science classroom;" and a student data sheet to track "informal observations based on student learning during the various lessons and activities."
- Materials include data-management tools that allow teachers to organize student data to differentiate science instruction and easily group students according to assessment results. For example, the student data sheet has several suggestions for teacher use, including "During lesson discussions, use the datasheet to note students who are struggling with certain key concepts. During Explore activities, use the datasheet when asking the guiding questions to note student understanding. After Evaluate activities, the Data Sheet can also be used to mark students' levels of mastery for each Key Concept as novice, gaining proficiency, or expert." The datasheet teacher guidance includes descriptions of novice, gaining proficiency, and expert. The mastery is decided by the "Level of Mastery Key: Novice (N): A novice science student has a basic awareness of some scientific concepts, but requires significant guidance to understand and apply them. Gaining proficiency (G): A student gaining proficiency in science demonstrates increased understanding and ability to engage with scientific principles independently, and starts making connections between different concepts. Expert (E): An expert science student has fully grasped the curriculum, can articulate key principles, solve problems independently, make complex connections, and displays curiosity beyond the standard material."
- The information gathered from the assessment tools offers help to teachers when planning differentiated instruction. For example, the Claim-Evidence-Reasoning evaluation guidance for teachers states, "The students' performances on this CER formative assessment affect what they will do next. Students who need more support can work with the teacher in small groups using the elements in the Intervention section before moving to the Scope Assessment. Other students should work on Elaborate or Acceleration elements."

Materials provide various resources and teacher guidance on leveraging different activities to respond to student data.

- Materials provide student resources for teachers to respond to performance data. For example, the materials provide a Planning with Stemscopes tab with a drop-down for Differentiation Pathways graphics that specify which activities in the program to assign students when they have difficulty within the scope. The Planning with Stemscopes tab lists suggested activities to assign to all students that fall into three performance levels: Approaches, Meets, and Masters.
- Each scope contains one small-group intervention activity. Each activity breaks down into guided and active practice sections. There is also an included Concept Attainment quiz to administer afterward. For example, in grade 3 Soil Formation, Small-Group Intervention Guided Practice, students review soil formation through a small-group activity led by the classroom teacher.

Then, in the Active Practice, students play the Ask, Ask, Switch game to practice scope concepts and vocabulary before completing the concept attainment quiz.

- Materials offer teacher guidance for responding to student data. For example, in the above game, Tier 1 guides teachers to "Check the student's understanding of the game procedures by confirming with the student the question that will be asked on the original game card. The student plays the game with a partner. However, before switching cards and moving to another classmate, have the student repeat the question on the partner's card." Tier 2 guides teachers that "After the student and the partner have asked and answered their questions, have them move on to new partners without switching cards. Allow the student to reuse the card two to three times before switching with a partner." Tier 3 guides teachers to "Instruct the student to cover the answer on their card. When it is the student's turn to ask the question, the student will show the card to a partner, who will read the question aloud. After the question has been read and answered, the student will uncover the answer on the card. Students then switch cards and move on to new classmates."
- For example, each scope Pre-Assessment and Accessing Prior Knowledge assessments include assessment guidance for teachers such as in grade 3 Physical Properties of Materials. It states, "Taking grades from either part of this activity is not recommended. Teachers should use students' answers to drive their classroom instruction. Identify students needing focused support through Explores with Differentiation Tiered Support Activities at the bottom of each explore page. Students needing extra support can also be assigned Picture Vocabulary and Small Group Intervention elements to build their understanding of the content. Students who show mastery at the Pre Assessment and Accessing Prior Knowledge activities can be given STEAM Choice Boards as an acceleration to keep them engaged with the content as the class completes the lesson cycle."

Accelerate Learning STEMscopes Science TX Grade 3

Indicator 6.3

Assessments are clear and easy to understand.

1	Assessments contain scientifically accurate items, avoid bias, and are error-free.	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 with learning goals.	M

Meets | Score 2/2

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

Assessments contain scientifically accurate items, avoid bias, and are error-free. 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 with learning goals.

Evidence includes but is not limited to:

Assessments contain scientifically accurate items, avoid bias, and are error-free.

- Assessments contain items for the grade level that are scientifically accurate. Formative and summative evaluations include assessment items that align with taught objectives and present grade-level content and concepts, science and engineering practices, and recurring themes and concepts in a scientifically accurate way. For example, in grade 3, a summative assessment at the end of the Force and Motion Scope includes a graphic of an adult pushing a grocery cart and a child pulling it that accurately asks for the forces used in the image as a multiple-choice question. Additionally, the Our Solar System Scope Assessment items accurately assess planet order in relation to the Sun.
- Assessments contain items for the grade level or course that avoid bias. Formative and summative evaluations include assessment items that present content and examples fairly and impartially. The test will not impact student performance based on factors such as a student's home language, place of origin, gender, or race and ethnicity. For example, the Types of Energy summative assessment includes a graphic of children on a merry-go-round that includes both boys and girls. The grade 3 Day-to-Day Weather assessment items include a variety of cities in Texas, such as San Antonio and Brady, in other states, such as California, and various countries, such as Australia.
- Throughout the materials, assessments contain error-free items for the grade level and course.

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

- Assessment tools use clear pictures and graphics. For example, in the Day-to-Day Weather assessment, items contain pictures of maps that clearly show weather symbols, terrain, and city

names to aid students' understanding of the question. The Animal Structures and Functions Scope Assessment includes animated photos of animals that show details to support students' ability to answer even if they are unfamiliar with the animal. The Force and Motion assessment includes an image of a go-cart on a slope to display movement.

- Assessments contain pictures and graphics that are developmentally appropriate. For example, in the scope Comparing Forecasts, the CER has weather charts comparing weather forecasts for two cities that are simple and easy for grade 3 students to understand. The Soil Formation assessment items contain animated photos to display information, such as a diagram showing rocks being weathered over time to display data. The Force and Motion assessment includes a graph that shows the relationship between speed and mechanical energy that is developmentally appropriate for grade 3 students.

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

- Materials provide guidance for teachers to consistently and accurately administer assessment tools. For example, the instructions for the Grade 3 Pre-Assessment in the scope Physical Properties of Materials says, "Tell the students they have a specific amount of time to complete the Pre-Assessment. After time has elapsed, collect the Pre-Assessment from each student. Mark on each Pre-Assessment whether the student chose the correct answer." The materials do not state how much time should be allotted for the assessment.
- For the Pulse Check, under the Explain tab, instructions say, "If not assigning digitally, plan on projecting the questions and have a way for students to answer. Select a strategy to elicit responses from all students in your class. Sample strategies can include the following options: Color cards, Hand signals, and Whiteboards." The instructions for the Scope Assessment, under the Evaluate tab, mirror those for the Pre-Assessment.
- The materials guide the accurate administration of assessment tools. For each scope, there is a CER assessment with a teacher script. The script gives step-by-step directions for how to administer the assessment. For example, in the third-grade Animal Structures and Functions Scope, the CER Activity Section Materials direct teachers to read the scenario aloud about a third-grade class studying animal adaptations. Teachers instruct students to write a scientific explanation explaining which organism has structures to live in an environment that is mostly water.
- Teacher guidance for students who struggle to begin includes reminders of how to create a CER based on the scenario. For example, the teacher section of the grade 3 Day-to-Day Weather scope assessment states, "Give each student a copy of the Scope Assessment. Inform the students that they have a certain amount of time to complete the Scope Assessment."
- The materials include information that supports the teacher's understanding of assessment tools, such as answer keys and general guidelines for scoring. Materials provide the following guidance: "Mark on each handout whether the student chose the correct answer. As an optional part of the Evaluate, you may go over each question of the Scope Assessment with students to clarify any misconceptions that remain."

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

- Materials offer tips for tiered strategies for written response questions. For example, materials on the Our Solar System Scope Assessment suggest that students verbally report their answers on a recording device for written response questions. Such guidance to offer accommodations

allows students receiving Tier 3 interventions to demonstrate mastery of knowledge and skills aligned to learning goals.

- Materials offer multiple-choice tiered strategies for accommodating scope assessments according to three tiers of support. For example, teacher guidance for Tier 3 supports on the grade 3 States of Matter scope assessment states, “Provide the student with a copy of the test that has questions with underlined or highlighted keywords (i.e., not, never, none, always, only, often, usually, most, all, etc.).” Teacher guidance for Tier 2 accommodations on the same assessment states, “Prompt the student to skip a question they are stuck on. If time remains at the end of the assessment, remind the student to go back and answer skipped questions.”

Accelerate Learning STEMscopes Science TX 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 include teacher guidance for scaffolding instruction and differentiating activities for students who have not yet achieved mastery. Teacher guidance materials include a Tiered Intervention Strategies page that identifies two "suggested pathways to help support all students in the science classroom" displayed in graphic organizers. These pathways connect the Tier levels to the material components that support the students at their level. For example, materials suggest using the Explain Interactive Notebook for Tier I, the Explain Picture Vocabulary for Tier II, and Intervention Guided Practice for Tier III.
- For instance, in the Properties of Materials Scope, for the Accessing Prior Knowledge Activity "Does Not Belong," the Tier 1 strategy is "Explain to the student how to use a process of elimination strategy by first reading all four terms, then circling terms that they now go together, and then finally selecting the term that does not belong from the remaining choices." The Tier 2 strategy says, "Before working independently, model the first problem for the student; then provide guided practice for the second problem." The Tier 3 strategy says, "Provide the student with a handout that has one of the Go Together terms removed from each grouping. The students will choose which phrase does not belong from the three remaining terms."
- Materials ensure teachers can target instruction to develop precursor skills necessary to access grade-level content. For example, all units have a Pre-Assessment and Accessing Prior Knowledge section for teachers to build background knowledge and pre-teach skills when beginning a new scope. In the Lifecycles Scope, students will examine a series of groups and determine which term or phrase does not belong with the group. Then, they will be assessed

on their current knowledge of the content covered by this scope through a multiple-choice pre-assessment.

- Materials provide additional resources for targeted instruction and differentiation to support students who have not yet achieved mastery. The materials provide an Intervention tab as part of the 5EJ+IA model. This section includes a Small Group Intervention activity that includes tiered intervention strategies. For example, in the Properties of Materials Scope, the small group activity includes steps for guided practice of testing the properties of matter, followed by a Beat the Clock activity matching picture cards with definition cards. The Intervention tab also includes a concept attainment quiz to check student mastery after completing the practice and activity.
- Materials include an Intervention tab with small group lesson instructions that include Key Concepts and Tiered Intervention Strategies. For example, in Our Solar System, a small group of students models the Sun, Moon, and Earth while chanting rhymes about each position. Students end the activity by playing a card game matching terms with definitions.

Materials provide enrichment activities for all levels of learners.

- The materials provide enrichment activities that account for learner variability. For example, each scope has a choice board under the Acceleration Tab that provides students with many different approaches to creatively connect what they are learning to the world around them. Students choose from nine extension activities, such as creating a movie advertisement or picture book, then complete a self-assessment and reflection questions.
- For example, in the Physical Properties of Materials Scope, the advanced strategy says, "Using specific vocabulary, have students construct a paragraph worth a set amount of money. Be sure to tell students how much each word is worth. Generally, vocabulary words are worth $1, and non-content words are worth $0.10, but this amount can be adjusted as needed to fit the level of your students."
- Each unit includes a Reading Science section. The passages are provided in two Lexiles-one on grade level and the other below grade level. The materials include instructions to support all levels of readers. For example, teachers are instructed to assign reading passages to students ahead of time for them to act out. The additional time allows beginner students time to prepare for their portion of the passage, while advanced students should be able to act out any passage as it is read aloud.

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

- The lessons include recommendations for just-in-time scaffolds to develop productive learning perseverance. Materials include resources for teachers to create a content plan to deliver content at the moment of need. Teacher resource materials provide five Differentiation Pathways graphic organizers that suggest pathways for learners based on where they are, approaches, meets, and master levels of content knowledge and skills. For example, the master (90%-100%) pathway assists students who have a strong understanding of the current content and can apply science content to extend their learning. These students follow the pathway of Elaborate: Science Today, Elaborate: Technology Connection, and Acceleration: STEAM Choice Board to extend their learning.
- For example, each scope contains a section in the Engage tab entitled “Progress Monitoring and Reflection.” The description states, “Students will rank their understanding of the scope’s fundamental ideas prior to any formal introduction to the topic. Then, they will reassess their understanding at other checkpoints throughout the scope. Students will also track their data on

TEKS mastery following the same checkpoints and create bar graphs to visualize the data better."

- The materials include Learner Supports that give teachers the Advanced Strategies page to engage advanced learners. Strategies are named, with a provided description and the appropriate grade for the strategy.
- The Advanced Strategies page has a collection of activities that, when paired with content, can be a tool to engage advanced learners. For example, in the activity Everyday Objects, teachers give students a single everyday object (paper clip, penny, nail...). Each student will use their everyday object to create a sketch of something relevant to the current topic of study. If time permits, have students partner after completing their first sketch and work to combine their two sketches of everyday objects into one scene
- Materials include a variety of student activities that can be assigned based on the achievement of the student's grade-level mastery of scientific knowledge and skills such as the Acceleration Tab that contains STEAM Choice Board. For example, in Ecosystems, some choices on the choice board include students creating a top-10 list of how temperature and precipitation affect animal growth and behavior. Or, the students can create a piece of art to represent a food chain using only things found in the trash or recycling.

Accelerate Learning STEMscopes Science TX 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 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

Meet | 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 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 mastery of the content through various developmentally appropriate instructional approaches. For example, all lessons include video clips or images to introduce and reinforce specific science concepts, as seen in the Scope Phenomenon in each scope. Materials include multiple opportunities for students to engage in collaborative or cooperative learning activities before, during, and after learning a concept. Materials include virtual educational experiences for all units where students complete guided inquiries using simulations. Students note observations and clarify questions.
- For example, the materials support student discourse with authentic opportunities to engage in structured conversations at the partner, small group, and whole group levels throughout the 5E lessons. For example, the hands-on exploration and engineering connection presents student-led investigations, questioning, and discussions. In *Science Today*, students explore real-world connections and applications of science content through interactions with media provided by the Associated Press. In the Virtual Experience, students interact with content using a self-guided interactive.
- For example, the Physical Properties of Materials scope has two inquiry-based labs for students to complete in person and one virtual lab. In the Science Connection, students write a

persuasive speech. The Reading Science contains an article for students to evaluate that is available on level and below level and includes a game-based virtual experience. A guided exercise for teachers to use with small groups is under the Intervention tab. The Accelerate tab has a STEAM choice board that gives nine different options to meet student abilities and interests, such as creating a presentation, making a model, creating a graphic organizer, reading an article, creating a piece of art, or a teaching video.

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, in Types of Energy, students work independently to answer questions from the teacher about energy and then work in groups to sort pictures of everyday life by the energy they produce. Students then work independently in their interactive notebooks to include images of different forms of energy in everyday life.
- For example, in the Soil Formation scope, the teacher preparation notes for the Explore state, "Divide students into groups of 3." The Soil Formation scope Science Connection activity suggests allowing students to work in small cooperative groups, and the Soil Formation scope engages a whole group-guided practice. At the same time, the intervention section has students work independently and in 1-2 partnerships.
- For example, in Natural Resources, the Accessing Prior Knowledge activity under Engage has students find a "high five partner." The Explore labs divide students into groups of three to four or four to five. The Elaborate activities include small group work and whole class discussions. The Reading Science activity suggests putting students in groups of varying abilities.
- The materials guide teachers on when to use specific grouping structures based on the needs of students. For example, materials suggest a Tier 3 strategy to allow a partner to read the scenario sentences to the student. The partner may remind the student to circle either agree or disagree and then prompt the student to note an explanation.
- The materials guide teachers on when to use specific grouping structures based on the needs of students. The materials provide a graphic representation of intensity support across tiers one, two, and three. The materials state the percentages of the student population within each tier, along with the identified components for student understanding.

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

- The materials provide multiple types of practices (e.g., modeled, guided, collaborative, independent). For example, students engage in collaborative learning structures, such as roundtable reviews, while learning a new concept. Students engage in guided practice during the engage scope phenomenon and intervention guided practice, and students engage in independent practice during the STEMscopedia reading activity.
- For example, in States of Matter, the Explore activity begins with a guided class discussion with provided questions and answers. Students complete the stations in partners. Afterward, students work with their collaborative groups to think of a third example and nonexample of each state of matter. Finally, there is a group activity where students respond to questions on anchor charts in groups. They complete rotations for all the charts using a gallery walk discussion structure where they agree or disagree with what the previous group(s) have written.

- For example, in Force and Motion, students pair off to watch a group of children playing tug-of-war and answer questions in a handout about force using sage on the stage strategy, where students take turns asking and answering questions.
- The materials provide teacher guidance and structures for effectively implementing multiple types of practices. For example, each activity explains how students will work and how the activity will be structured, including grouping, talk structures, and routines. Activities vary in type of practice throughout the scope and year-long resource, giving students opportunities to engage in guided practice, collaboration, and independent work.
- The materials state a clear purpose and learning goals for group and independent practice activities in units and lessons. Scopes provide "I Can" statements for the lessons. Materials recommend frequent and varied learning assessments to ensure that multiple types of practices lead to student mastery. The Progress Monitoring and Reflection Description states, "Students will rank their understanding of the scope's fundamental ideas before any formal introduction to the topic. Then, they will reassess their understanding at other checkpoints throughout the scope. Students will also track their data on TEKS mastery following the same checkpoints, and they will create bar graphs to better visualize the data."

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

- Materials represent diverse communities using images and information that are respectful and inclusive. Information in teacher guidance documents, student materials, scientific text, and assessments positively portrays diverse scientists and engineers representing genders, races, and ethnicities. 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 worldwide. Depictions of places are respectful and inclusive, emphasizing community strengths, resources, and unique characteristics. The videos portray diverse student races and settings.
- For example, images reflect the diversity of school communities and match the content. Characteristics vary in images to include race and ethnicity, skin tone, gender identity and expression, age, disability status, body size and shape, and hair texture. For example, the grade 3 Day-to-Day Weather STEMscopedia has a cartoon picture of a meteorologist giving a weather report; she is an amputee with a prosthetic leg, wears classes, has black hair and medium skin tone, and in the *Science Today,* a picture of a volunteer shoveling snow wears glasses, has red hair and fair skin tone.
- Materials contain a variety of people from different ethnicities and information from various places. In Physical Properties of Materials, the STEMscopedia describes an Interior Designer with a picture of a non-white female. The Engineering Connection has students create timers for Mrs. Garcia's classroom, and the Science Today activity has an image of daily life in India with men making bricks. The Reading Science article is about a boy named Lim making spaghetti and lemonade with his mother.

Accelerate Learning STEMscopes Science TX 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 material meets 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 linguistic accommodations commensurate with various levels of English language proficiency as defined by the ELPS. For example, scopes embed scaffolds for emergent bilingual (EB) students into all sections: Engage, Explore, Explain, Elaborate, and Evaluate. It includes suggestions for concrete experiences and explicit modeling as linguistic accommodations when delivering direct instruction.
- For example, English Language Supports are in each section of the Fossils scope. In the Explain section, teachers assign Mix and Match to allow students to interact with classmates using formal and informal English. The teacher encourages student interactions to informally assess understanding of new content. In the Reading Science section, teachers provide students with Picture Vocabulary cards to review before scanning the text. Students scan the text backward, referencing the visual cues and noting unfamiliar words that seem important to the passage to define after.
- For example, the Resources tab and Learner Supports tab have a drop-down list of graphic organizers based on teaching strategies for use with English learners. Examples include B-M-E Fiction Chart, Claim and Evidence Map, and Main Topic and Contributing Factors Graphic Organizer.
- For example, in the Quick Changes to Land scope, the materials include a section that demonstrates ELPS connections by referencing the language of the ELPS and how the lesson supports any given ELPS. The materials guide linguistic accommodations (communicated, sequenced, and scaffolded) commensurate with various levels of English language proficiency as

defined by the ELPS. The materials provide sentence stems to support speaking and writing. An example, a beginner EB sentence stem is "The plants near the volcano will _____."

- Most activities in the scope have a section at the bottom of the teacher page with English Language Support Strategies. The applicable ELPS is listed, followed by a proficiency level tabbed chart. The levels are beginner, intermediate, and advanced/advanced high. For example, in the Matter Scope, the stations suggest that the beginners utilize small groups to collaborate verbally and designate one person to write down the ideas. For intermediate, the materials suggest allowing small groups to collaborate verbally, and then ensure that they are the first to have the opportunity to write down an idea. The materials for the advanced/advanced high state, "Ensure the English language learner is the first student to write down an idea in the group but run the activity the same as with native English speakers."
- For example, the English Language Support Strategies suggest using graphic organizers to classify information, order steps in a process, or scaffold written tasks such as BME Fiction Chart, Claim and Evidence map, and flowcharts.

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

- Materials somewhat encourage strategic use of students' first language as a means to linguistic, affective, cognitive, and academic development in English. For example, in the Physical Properties Scope materials, the beginner English Language Support Strategies for the STEMscopedia say, "Allow students at the beginning level to question and respond in their native language. Then, repeat the activity by translating their conversation into English. Proofread the English translation, and give students feedback on how to improve upon formal and informal English or expert and novice English." The intermediate strategy also suggests students write their questions and responses in their native language and translate them into English before completing the activity. Teachers are to listen to the students speak and provide feedback on improving the formal or expert side of the conversation. The Advanced/Advanced High strategy suggests students write out their formal or informal questions and responses or expert and novice questions and responses in English before completing the activity. Teachers then give feedback to the students on terms to make the text more formal or expert.
- For example, activities in the scope have a section at the bottom of the teacher page with English Language Support Strategies. The applicable ELPS is listed, followed by a proficiency level tabbed chart. The materials provide English Language Support Strategies in the resources tab. "The strategies are grouped by Learning, Listening, Speaking, Reading and Writing." Strategies that support using a students' first language include "Allow students at a beginning level to question and respond in their native language. Then, repeat the activity by translating their conversation into English. Proofread the English translation, and give students feedback on how to improve upon formal and informal English or expert and novice English."

Accelerate Learning STEMscopes Science TX Grade 3

Indicator 7.4

Materials guide fostering connections between home and school.

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- Materials provide information to share with students and caregivers about the program's design. For example, the materials include a one-page letter to parents explaining the material's instructional philosophy and lesson model. The letter explains that the instructional philosophy "Centers on students learning science through hands-on exploration and inquiry. Each lesson includes a series of investigations and activities to bring science to life for our students so they can 'learn by doing' and fully engage in the scientific process." It explains the 5E+IA model, and the letter states, "Each one of the components of the lesson cycle features specific resources to not only support our students' understanding of scientific concepts but also that of our teachers."

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

- Materials provide resources and strategies for caregivers to help reinforce student learning and development. For example, the parent letter includes a paragraph explaining how students can log in to the program at home to find resources, including a Glossary and a reference resource called STEMscopedia. "Each of these STEMScopedia reading passages incorporates hands-on activities. Additionally, rather than a traditional textbook, your student may come home with various assignments, like reading passages, vocabulary exercises, and at-home hands-on lessons."
- For example, each scope has a Science Outside the Classroom section to print or access online from home or school. This section includes a letter for parents with the TEKS covered, background knowledge, terms to know, hands-on activity, and questions to ask students.

- For example, the Quick Changes to Land Scope includes a background knowledge section with three paragraphs explaining rapid changes. The Terms to Know section defines terms and explains, "We will do many explorations in class to help students learn these concepts from firsthand experiences. Encourage students to share these experiences with you and to teach you what they have learned." The activity provided has a four-step process to model quick change using a cracker, an empty water bottle, sand, and butter or peanut butter. The letter ends with three questions to discuss with their student.
- For example, the Physical Properties of Materials Scope begins with a list of the TEKS covered, followed by a Background Knowledge section that includes a common misconception (not labeled as such) that "It is important for students to understand that an object's weight and size do not determine whether it will sink or float in water..." Materials include a list of Terms to Know with definitions. The last page of the letter contains an activity to help students test magnetism, relative density, and temperature with items from around the house. There are simple follow-up questions for caregivers with possible responses, such as "What objects were attracted to a magnet? A possible student response could include a nail, a washer, and the refrigerator door."

Materials include information to guide teacher communications with caregivers.

- Materials include information for parents in the form of the initial parent letter under the Resources tab, the Science Outside the Classroom parent letter explaining the scope (including key concepts), and the home activity. The materials state, “This one-page parent letter, available for download by clicking on the book icon in the upper right corner, briefly describes the curriculum philosophy along with some of its features and can be modified for distribution to parents and guardians of STEMscopes students.” For example, in Force and Motion, the materials provide Science Outside the Classroom, which includes background knowledge, terms to know, questions to discuss with students, and an activity exploring forces to reinforce the science concepts at home.
- The materials include information to guide teacher communication with caregivers. The resources include a Help Introduce Parents to STEMscopes page. This page instructs teachers that the resources have a one-page parent letter available for download that briefly describes the curriculum philosophy and some of the scope’s features. It also states that teachers can modify the one-pager for distribution to parents and guardians of STEMscopes students. Materials provide clear teacher guidance for inviting ongoing partnerships and sharing progress updates with parents and caregivers. For example, teacher guidance suggests the “Progress Monitoring sheet is a useful communication tool to use with a student’s caregiver about the successes and/or needs of the student with specific learning goals. This sheet can be referenced when discussing student progress, areas of concern, or needs for differentiation throughout the instructional period of this scope.”

Accelerate Learning STEMscopes Science TX 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 in 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.	PM

Partial Meets | Score 1/2

The materials partially meet the criteria for this indicator. Materials include year-long plans with some 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 in 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 some 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 in the course materials.

- The materials include a year-long programmatic scope and sequence that show how science knowledge and skills are addressed for the year. The scope and sequence include the science objectives aligned to grade-level TEKS and suggested pacing instructional days for each scope.
- Materials also list in each scope overview, and there is a correlation document that includes all other remaining TEKS. The Standards Planning tab on each scope includes a Scope Matrix and a Scope Overview that explains how the scientific and engineering practices and recurring themes and concepts are supported in the scope.

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, SEPs, and RTCs applicable to each scope, or unit, for all grade 3 scopes. For example, the Explore Activities tab has a Making Connections section that lists the exact TEKS, SEPS, and RTC that are used in the scope. This section has a blurb describing the students' experience as they make connections using the resource. For example, in the grade 3 States of Matter scope, the resource states "After students complete the activities, ask students how this activity relates to the Scope Phenomenon (found in the Engage section) of ice cream being prepared on a cold surface".

- For example, materials contain two student handbooks: one about the scientific method and another about the engineering process. The materials also have a set of Scientific and Engineering Practices Resource Cards to help teachers incorporate the SEPs in the classroom. The program also includes cards for grade 3 for the science and engineering practices, and cards for grades 3-5 for the recurring themes that have discussion prompts and provide guidance for teachers to help students make connections.
- For example, in the grade 3 “Physical Properties of Materials” scope, the Properties of Matter Stations lab lists all the science and engineering practices and recurring themes. It includes questions for teachers to use to make connections to core concepts such as “Why do you think some objects float and some do not?” and “Can you describe the differences in their properties?”

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

- The materials include some intentional practice and spiraling of previously taught knowledge and skills from earlier lessons/grade levels and the current lesson’s science knowledge and skills. The practice opportunities somewhat build on previously taught science knowledge and skills. Scopes include a spiral opportunity section but not direct information on how to implement the spiral and no specific activities for spiraling. For example, in grade 3, this section states, "During the Physical Properties of Matter scope, students learn about substances’ physical properties of matter, including their states of matter. Students will be able to recognize, measure, test, and record the different properties. They will also demonstrate how physical properties are used to combine objects to make them stronger."
- Materials include teacher information on how to utilize specific components of other scopes as a review within a scope. For example, in the Physical Properties of Materials scope, materials include several suggestions for spiral review opportunities from previous scopes. Materials state, “You can utilize the Science Today in the States of Matter scope before starting the Hands-on Explore: States of Matter Stations to support mastery of identifying how a materials’ physical properties can change states of matter,” and, “You can utilize the Virtual Experience in the Animal Structures and Functions scope before starting the Hands on Explore: Comparing Life Cycles to support mastery of how an animal’s structures and functions help them to survive through the different stages of their life cycles.” Materials also cite the Reading Science in the Our Solar System scope before starting the Hands-on Explore: Comparing Weather to support understanding of the change in seasons occurring because of the Earth orbiting the Sun for a spiral review.
- Scopes also include sections for pre-assessments, a Pulse Check (check for understanding), and a Scope Assessment for standards practice within each scope for Grade 3. However, there is no spiral practice for the core concepts within other scopes and the scopes stand alone.
- Materials include the intentional practice of the current lesson's science knowledge and skills. Each scope follows the 5E lesson plans, which include several opportunities for students to practice their knowledge and skills in the Explain, Elaborate, and Evaluate sections. There is also a STEAM Choice Board in the Acceleration tab.

Accelerate Learning STEMscopes Science TX Grade 3

Indicator 8.2

Materials include classroom implementation support for teachers and administrators.

1	Materials provide teacher guidance and recommendations for 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 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 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 provide an introductory video that describes the curriculum components of lessons that include phenomena, scientific processes, and recurring themes to ease the search through the materials.
- Materials include a Resources Tab on the learning platform that offers teacher resources, including videos, Planning with STEMscopes (which provides a Lesson Planning Guide), and Instructional support. For example, the Instructional Supports tab provides resource cards to guide teachers on implementing the SEPS and RTCs that explain "what the student is doing," and Teaching Notes to support implementing TEKS.
- Each scope includes Teacher Background Instructional support and guidance, virtual experiences, instructional strategies on intervention, and differentiation that includes a teaching strategy. For example, the material includes Enrichment activities for grade 3 with a STEAM Choice Board with nine activities, a self-assessment, and reflection questions to help students connect what they are learning with real-world experiences. Materials direct teachers to

"Review the options on the Choice Board and decide how many activities to ask students to complete. You can instruct students to complete one activity per row, to complete all activities, or to play tic-tac-toe and complete a row, column, or diagonal line."

- The materials are organized to facilitate ease of implementation and use. For example, the materials have tools to support navigating the resources, including a Suggested Scope Calendar with daily planning, Intervention, and Acceleration. Each scope is formatted the same and has the same pathways. Materials also include a Digital Texas Navigation Guide with a visual representation of the location of the scopes. Materials include a graphic organizer that describes the lesson cycle and has dropdowns that include tips for 5E + IA Instructional Model, Teacher Preparation, Planning Instruction, and Differentiation Pathways.

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 guidance documents and online resources. For example, grade 3 materials include a Standards Correlation document and a Standards Snapshot table that indicates where each content SEPs, RTCs, and TEKs are within the program. There is also a side-by-side document that compares the new TEKS with the 2017 TEKS. Grade 3 materials also contain a Teacher Background tab for each scope that explains the content TEKS in detail. There are visuals and text included. Components of each scope also include TEKS information. For example, within each scope of the Picture Vocabulary activity, there is a Standards button that lists all the Texas TEKS covered in this lesson. This Standards button is in multiple lessons inside each scope.
- Materials include a Scope Matrix, which designates where individual TEKS are applied within scope activities. The content TEKS are also broken down into "I Can Statements" for student use and into verbs and nouns under the Standards and Vocabulary Unwrapped section.
- The materials include cross-content standards for ELA, Math, and Social Studies in sidebar supports within the teacher's guide to lessons. Materials include cross-content standards for ELA, Math, and Social Studies in sidebar support within the Standards Planning tab within each scope. For example, in the Force and Motion scope included on the Standards planning page, there are Math, Reading Language Arts, English Language Proficiency Standards, College, and Career Readiness Standards connections to the lessons in this scope. The ELA TEKS connects to the Reading Science lesson under the Elaborate Tab of each scope. The Math Moments included in some Explore activities are connections to the math TEKS.
- Materials embed cross-content correlations through tips, reminders, and examples for reinforcing reading and writing, calculations, and problem-solving skills as students apply them to science learning.

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

- Materials include a Science Materials List for grade band K-5 on the Resources tab of the learning platform. There is a list of materials needed to complete the activities, including consumable and reusable supplies by grade levels and scopes.
- In the Scope Kit List tab, there is a Science Materials list for each grade level that includes detailed information, including the scope name and section where the materials are required,

along with the suggested quantity. Grades 3 materials include: marbles, potting soil, clay soil, silt soil, and coarse sand.
- Within each scope, materials include a list of needed supplies and equipment for each portion of the scope. For example, in the Properties of Matter Scope, the Explore: Properties of Matter Stations activity includes a Materials section broken down into Activity Files, Reusable Materials, and Consumable Materials. In the Activities file, the materials list one set of Properties of Matter Stations handout per student and a paper bowl per class as consumable. It also includes one double pan balance, one set of gram stackers, and a rock per class as reusable.

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

- The materials provide teacher guidance for safety practices and grade-appropriate use of safety equipment during investigations, in accordance with Texas Education Agency Science Safety Standards. For example, in the grade 3 Resource tab, the Lab Safety section includes grade-appropriate Safety Posters and Safety Equipments Posters that teachers can post in the classroom and reference during lessons. The posters include safety instructions such as, “Read all instructions carefully and understand the purpose of the investigation before you begin the investigation” and “Read all instructions carefully and understand the purpose of the investigation before you begin the investigation.”
- Materials provide teacher guidance for safety practices within each scope. For example, the grade 3 Explore activity for the States of Matter scope has the following guidance, "Follow all appropriate safety procedures while using the hot plate and tea kettle to create steam during the Explore. Teachers need to wear safety gloves or other protective equipment." In the Physical Properties of Materials scope, the Explore: Properties of Matter Stations activity reminds teachers to "remind students of safety needs in a science classroom."
- The materials provide student guidance for safety practices and grade-appropriate use of safety equipment during investigations, in accordance with Texas Education Agency Science Safety Standards. Grade 3 materials provide student guidance for safety practices within each scope. For example, Explore activity in the States of Matter scope provides the following guidance, "Make sure the hot plate and tea kettle are stationed on a heat-safe table with nothing flammable nearby." and "Students need to observe with their eyes only, seated at least 3 feet away."

Accelerate Learning STEMscopes Science TX 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. Materials include a Suggested Scope Order and Pacing Guide for the entire year. The materials state that "suggested Pacing is currently based on the time needed to cover the majority of Stemscopes elements in each scope," and include the estimated days to complete activities. For example, the grade 3 Force and Motion Suggested Scope Calendar gives three days for the two Explore activities.
- Grade 3 materials include a “Getting Started with Stemscopes” planning section with a graphic explaining the 5E + Intervention and Acceleration model. The planning instruction drop-down menu breaks down each of the E's. In addition, there is a sample lesson planning guide for a typical eight-day scope. In the “Properties of Matter” Scope, one class period is designated for each of the E’s. However, the “Explore and Elaborate” Scope allows for flexibility depending on the activity, and both E’s are allotted two class periods.
- The materials include guidance and recommendations on required time for lessons and activities with options for various scheduling considerations. Each scope homepage has a suggested scope calendar that includes the number of days and the statement. Materials state that the schedule assumes a 45-minute science period each day.

Accelerate Learning STEMscopes Science TX 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 include a suggested sequence of units that considers the interconnections between the development of conceptual understanding and scientific and engineering practices.
  For example, the resource materials contain a Differentiation Pathways graphic illustrating how teachers can strategically implement the activities within the scopes. Activities on the suggested calendar are marked with one asterisk for low-complexity elements, such as “Reading Science and Connect Science Video,” and two asterisks for high-complexity elements, such as “Science Connection and Engineering Connection.” The asterisks allow teachers to tailor instruction.
- Each scope follows the 5E model: Engage, Explore, Explain, Elaborate, and Evaluate. Grade 3 materials contain multiple activities within each of the 5Es, as well as the Intervention and “Acceleration” tabs. Teachers have the flexibility to determine what their students need based on the built-in tools and assessments like the Progress Monitoring and Reflection Activity and Pre-Assessment on the Engage tab, the Pulse Check under the Explain tab, and both the Claims-Evidence-Reasoning and Scope Assessments under the Evaluation tab. The teacher uses the tools to determine whether to use the small group intervention and concept attainment quiz under the Intervention tab or give students the choice to extend their learning with the STEAM Choice Board on the Acceleration tab.

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. All grade-level scopes can be reasonably implemented within the time constraints of a school year, and the activities and routines within each lesson can reasonably be completed within the length of time suggested. Grade 3 materials include 13 scopes with a suggested time frame of 99 instructional days.
- Materials provide guidance for adjusting to local time and scheduling constraints. For example, each scope has multiple lessons to choose from with various times to complete them. Teachers can plan for their classes by choosing the activities the students complete based on the varying lengths of school years and class times.
- Materials provide teacher guidance on adjusting to extend or condense units and lessons within the Lesson Planning Guide. The Lesson Planning Guide states, "Use the Lesson Plan Template along with the Suggested Scope Calendar on the home page of each scope to plan your lessons before providing instruction to your students."

Accelerate Learning STEMscopes Science TX 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 not 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.

- The digital materials include appropriate white space and an overall design that does not distract from student learning. For example, student materials have an appropriate design to support student learning. Student-facing materials include a clear assignment type and concept heading. Titles and headings are prominent and clear; sections have marked subheadings in a clear, relevant hierarchy. The content is organized logically, with each scope organized the same throughout the year.
- For example, below-level reading science text incorporates less text and more white space than the on-level text. Student handouts include graphics and charts that have easy-to-read labels. Materials provide identified areas under questions that ask for written responses or drawings from students. Materials use similar spacing between sections, equal line height in body text, and slightly larger spacing between paragraphs within reading materials within Reading Connection.
- The grade 3 Quick Changes to Land Reading Science Student handout includes appropriate use of white space around the text, making content easy to read and comprehend. The Reading Science handout uses two fonts: one for the heading and another for the passage.
- The Virtual Explore section in Physical Properties of Matter displays a large picture of a swingset with a broken seat. The right side of the section contains information about different seat types, and has Reset and Information buttons. White space dominates the remaining area.
- The STEMscopedia, designed as a newsletter, has two columns of text interspersed with full-color photographs and diagrams. It includes highlighted vocabulary words with definitions on yellow sticky note graphics and thinking questions on spiral notebook graphics.

Accelerate Learning STEMscopes Science TX Grade 3

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

- The materials embed age-appropriate pictures and graphics that support student learning and engagement without being visually distracting. For example, the materials include an age-appropriate picture of a volcano in the Quick Changes to Land Reading Science student handout. The image is put in the paragraph unobtrusively and is the right size for the page.
- For example, the grade 3 Quick Changes to Land STEMscopedia has a labeled visual of a volcano's component elements in color. It is not distracting and aids students in understanding the components of volcanoes and how they vent. Six colored images of the three changes to land covered in third grade, including landslides, earthquakes, and volcanic eruptions, are also included in the STEMscopedia.
- Resources include vocabulary cards that clearly and accurately clarify and illustrate the new terms the students are learning. The materials use focused photos, arrows, and labels to highlight important features. The vocabulary word appears at the top and center of the slide, followed by a large, clear image of the word in the middle and a bolded, brief definition at the bottom of the image. For example, the Force and Motion Scope includes magnified images, demonstrating magnetism using a horseshoe magnet with a north-south label and attracted particles.
- For example, the activity Problem-Solving Steps in Pictures includes graphics with a simple image and a succinct one-sentence description that depicts a clear transition from one stage to the next.
- The materials include a diagram illustrating how icicles melt from the sun and evaporate in Stemscopedia's section on States of Matter for third grade. The next page shows a photo of condensation on a window. Further along in the scope, another diagram illustrates how everything fits together and depicts a solid ice cube melting, evaporating into a gas, condensing back into a liquid, and then freezing back into a solid.
- Materials include 3D Virtual Experiences using school-aged children and simple zoomed-in manipulation activities, such as pushing a ball into a hole.

Materials include digital components that are free of technical errors.

- The materials include digital components free of technical errors. For example, in the Physical Properties of Materials Scope for grade 3, the description at the top of the Scope Phenomenon says, "Students will view an image of magnets on a fridge and think about why some objects stick to a refrigerator while others do not. Teachers can use a Timer strategy for classroom engagement."

Accelerate Learning STEMscopes Science TX Grade 3

Indicator 9.2

Materials are intentionally designed to engage and support student learning by integrating digital technology.

1	Materials integrate digital technology and tools that support student learning and engagement.	Yes
2	Materials integrate digital technology to support student engagement with science and engineering practices, recurring themes and concepts, and grade-level content.	Yes
3	Materials integrate digital technology that provides opportunities for teachers and/or students to collaborate.	No
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 by integrating digital technology.

Materials integrate digital technology and tools that support student learning and engagement. Materials integrate digital technology to support student engagement with science and engineering practices, recurring themes and concepts, and grade-level content. Materials do not 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.

- The materials integrate digital technology and tools that support student learning and engagement. For example, materials are fully digital, with all components available online as web pages or PDF digital downloads. Each scope contains a virtual Explore lab and a Virtual Experience as an Elaborate activity. Assessments are available online. Materials have interactive, online assignments.
- Materials guide integrating digital technology in multiple settings. For example, the Teacher's Instructions for the Virtual Explore in the grade 3 Physical Properties of Materials Scope states, "Ideally, students should access the simulation on a device. The activity can be done in groups or individually. If devices are not available, you can project the simulation for students to complete as a class."
- For example, the Quick Changes to Land Scope contains a Virtual Explore: Quick Changes to Landin the Explore tab. The teacher notes explain materials require "no alterations for students to complete in either a synchronous or asynchronous virtual environment."

Accelerate Learning STEMscopes Science TX Grade 3

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

- The materials integrate digital technology in ways that support student engagement with science and engineering practices, recurring themes and concepts, and grade-level content.
    - For example, materials provide interactive simulations and models for students to explore scientific and engineering practices in a virtual environment.
    - For example, the Acceleration Steam Choice Board for the grade 3 Life Cycles Scope provides options such as creating a website, a word cloud, or a movie.
    - For example, each scope contains a Virtual Experience activity that allows students to interact with the content of the scope. For example, in the Grade 3 scope Physical Properties of Materials, digital technology provides a virtual experience in which a robot explains the physical properties of Mass, Magnetism, Temperature, and Relative Density. Students click on each property and listen to a description.
    - For example, students use a digital notebook when enrolled in a STEMscopes 3-5 class. The digital notebook can be customized by the teacher for students and contains resources to support learning and engagement.

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

- The program does not integrate digital technology that provides opportunities for teachers and/or students to collaborate, though it does integrate digital technology to support student engagement,
- Digital technology included in the materials lacks components like discussion boards, video conferencing, and cyber spaces that would encourage collaboration.
- The program documents lack guidance and resources to provide opportunities for teachers and/or students to collaborate using digital technology.
- Digital learning games included in the program are not designed to be completed by interacting or collaborating with others.

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

- Digital materials are accessible and compatible with multiple operating systems and devices. The materials are accessible on iPads, iPhones, iPods, tablets, and mobile devices. Material requirements state that the program is compatible with the “Latest Google Chrome, IE 11, Latest Microsoft Edge, Latest Safari.” For example, the STEMscopes website explains, "A web-capable device (tablets, phones, computers) requires no additional software, apps, or updates to be able to fully use STEMscopes." The website explains that STEMscopes provides single-sign-on ability via Clever, MS SAML, Google SSO, LTI SSO, ClassLink, and Schoology. We support integration with client LMS systems through IMS Global’s Thin Common Cartridge (ThinCC) protocol.

Accelerate Learning STEMscopes Science TX 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 guide teachers in using 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 some 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.

- Digital technology and online components are developmentally appropriate for the grade level. The simulations and interactive activities components are developmentally appropriate. For example, in grade 3 Soil Formation Virtual Explore activity includes developmentally appropriate graphics such as easy-to-follow pie charts and simulations of what soil is made of and the process needed for soil formation. Materials include a simple virtual simulation in the Force and Motion virtual explore activity. Students demonstrate forces of push and pull acting on an object by using a virtual simulation to use a slider to apply a push or pull to a ball to make it go into a hole.
- Materials provide information that identifies how digital and online components align with grade-level science knowledge and skills. The materials include several pages of relevant information under the Resources tab. For example, materials provide a section called Suggested Scope Order and a Grade Level Standards section on the Planning with Stemscopes tab that includes a Texas Standards Snapshot document that lists all the TEKS and where the TEKS are included in each scope. The Planning with Stemscopes tab also has Grade Level I Can Statements with the following explanation "Student-friendly learning objectives help lay the foundation for a great lesson. Helping students understand what they should learn that day provides a basis to really gauge learning." Materials have a teacher's guide for each scope that includes the content TEKS, SEPS, and RTCs for the scope and a Scope Matrix lists each TEKS and tells where to find them. The Matrix also includes the ELPS and their location.

Accelerate Learning STEMscopes Science TX Grade 3

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

- Materials provide teacher guidance for the use of embedded technology to support and enhance student learning
    - For example, in the Grade 3 scope, Physical Properties of Materials, when viewing the Virtual Experience, the teacher guide says, "Verify that the 3-D renderings load and function on each internet-enabled device that students will use to access the experience." It also directs teachers to demonstrate how to access the 3-D renderings and monitor students as they use them.
    - Teacher guidance for using embedded technology with learning center activities includes a Preparation section with instructions for getting students logged into the website and navigating to the Technology Center for the Scope. It also includes an Activity section with instructions for guiding students to use the embedded technology to enhance learning.
    - The materials provide a guidance video for the Scope lesson format.

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

- The materials provide parent letters for each Scope to support student engagement with the digital platform at home. This letter explains the program, its benefits, and its usage within the classroom. The parent letters state, "Your student will receive login credentials to access the program, which features some always-available resources that can be browsed at home, including a Glossary and a reference resource called STEMscopedia. Each of these STEMscopedia reading passages incorporates hands-on activities Additionally, rather than a traditional textbook, your student may come home with a variety of assignments, like reading passages, vocabulary exercises, and at-home hands-on lessons."