Accelerate Learning STEMscopes Science TX Grade K

Accelerate Learning STEMscopes Science TX Grade K Executive Summary

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

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

Section 2. Instructional Anchor

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

Section 3. Knowledge Coherence

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

Section 4. Productive Struggle

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

Section 5. Evidence-Based Reasoning and Communicating

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

Section 6. Progress Monitoring

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

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- 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 mostly intentionally designed to engage and support student learning with the integration of digital technology.
- The digital technology or online components are developmentally and grade-level appropriate and provide support for learning.

Section 10. Additional Information

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

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Indicator 2.1

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

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

Meets | Score 4/4

The materials meet the criteria for this indicator. Materials are designed to strategically and systematically integrate scientific and engineering practices, 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 the recurring themes. Material 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 "Standards Planning" section of each scope includes a list of the scientific and engineering practices addressed in the scope. The Scope Matrix includes a "Scientific and Engineering Practices" section with more detailed information about where the SEPs appear within the lessons. For example, in the "Weather and Air" unit, students will have the opportunity to construct an explanation to support an argument that weather changes from day to day. Additionally, each scope includes an opportunity for students to write a scientific explanation using the CER Framework to respond to a scenario.
- Throughout the year, students have multiple opportunities to ask questions and develop their understanding using a provided Interactive Science Notebook. In Lesson 1 of Scope 1, students

draw and color an object. Then, in Lesson 3 they engage in a lab and problem-solve as they identify and describe textures of objects.

- Each scope includes an opportunity for students to write a scientific explanation using the Claim, Evidence, Reasoning (CER) Framework to respond to a scenario. In the unit for “Rocks, Soil, and Water,” students respond to a scenario in Claim-Evidence-Reasoning when they construct and support an argument that shows how to describe and classify objects by size, color, and texture. In the same unit, students respond to a scenario in Writing Science as they look at pictures, think about how the pictures connect to the science they have been learning, and write a response to explain the uses of rocks, soil, and water.
- The materials help students develop, practice, and demonstrate SEPs by conducting a claim, evidence, and reasoning (CER) protocol. In Lesson 1 of the “Properties of Objects” scope, students organize objects by shape. Students state the reason for the sorting method to a partner, then draw or write the classification method they used. Mastery can be checked using the Unit Assessment cards. The cards ask students to identify the physical properties of objects in different ways. Each of the six lessons in this scope has the same CER activity. Students can get additional practice from the teacher as needed based on the results of the CER.

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

- In each scope, the Standards Planning page lists the recurring themes and concepts (RTCs) addressed in the scope. Students make connections as the content in the scope progresses. For example, in Lesson 1, “Patterns in the Sky,” students engage in an activity about the apparent movement of the Sun during the day. Students respond to, "What pattern does the sun have everyday?" In Lesson 3, students respond to, "What pattern do stars have?" In Lesson 5, the teacher explains what a pattern is for students to make a connection to the patterns of objects in the sky.
- Recurring themes such as patterns, cause and effect, scale, portion and quantity, systems, energy and matter, structure and function, and stability and change are included with Recurring Themes (RT) cards. The RT cards are used each time the same theme or concept is taught. The connections trigger previous learning. Each Recurring Theme card guides what students do, what it looks like in the classroom, critical vocabulary, discussion prompts, and teacher notes.
- The materials allow for multiple opportunities to teach and make connections between science concepts using the recurring themes. The materials give examples of how to adapt and integrate concepts into other subject areas, and they allow students the opportunity to explore more scientific experiences and real-world connections. The “Properties of Objects” lesson provides a Student Handout for students to practice the Engineering Design Process; Define the Problem, Brainstorm, Plan, Build, and Test.

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

- Materials suggest ways to develop students' content knowledge using Leveled Readers. Leveled Readers provide teachers with science reading selections appropriate for students with varied reading levels. The reading selections provide support in literacy blocks, guided reading blocks, or any other time designated for reading during the day.

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- Each lesson includes the use of Story Cards to introduce phenomena and give students an entry point to engage in the learning. The Story Cards tie each lesson together as students develop conceptual understanding within the allotted number of days.
- Students develop content knowledge as they progress through the components of the lesson such as circle time, mini-lesson, and formative assessments. The “Accessing Prior Knowledge” section at the beginning of Lesson 1 of each scope includes preconceptions about the concept that students may be bringing with them.
- Students gain content knowledge as they work through each unit. For example in the Magnet Unit, students discuss magnets in their homes during circle time. This allows them to consider what they know about the concept, then deepen their knowledge of the concept as they play Polar War! during the Mini-Lesson to determine which objects are magnetic.

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.

- All scopes include multiple lessons where students plan and conduct investigations that are centered around answering a question. For example, in the “Plant Life Cycles” unit, students plant marigold seeds in order to observe and record the progress as the marigold grows.
- Each lesson uses Story Cards to introduce a phenomenon. Students make observations and ask questions as they learn the concept with Story Cards. The Story Cards tie each lesson together. In the unit for “Rocks, Soil, and Water,” Lesson 1, the teacher uses the Story Card to guide students as they collect and make observations about rocks, including color, shape, size, and texture of the rocks. In Lesson 2, the Story Card guides students to group rocks by size and shape. In Lesson 3, the Story Card guides students to make observations about the color and shape of the rocks. In Lesson 4, the Story Card prompts students to think about the uses of rocks and soil. In Lesson 5, the Story Card prompts students to think about the uses of water.
- The lesson on magnets allows students to ask questions, plan, and conduct classroom laboratory and field investigations. An example is located under “Additional Resources.” These resources are designed to allow for other opportunities to teach science concepts. They can be adapted and integrated into other subject areas, and they allow students the opportunity to explore more scientific experiences and real-world connections.

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Indicator 2.2

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- Each scope has multiple opportunities for students to use scientific and engineering practices as they engage in the lessons. Students can ask questions, make observations, plan and conduct investigations, gather data, and write scientific explanations.
- All lessons in a scope start with a Mini-lesson using Story Cards that help drive student conceptual understanding while embedding recurring themes and concepts (RTCs). The cards state that phenomena start with observing the world around us and that engineers ask questions, investigate, and record and analyze data. These cards are available in grades K-2, and the lessons align with the TEKS. For example, the kindergarten TEKS state that a student will predict how a magnet interacts with various materials.
- Each lesson begins with the use of Story Cards as phenomena. The Story Cards give students a common entry point for learning. The Story Cards follow a "story" that connects all lessons in the scope and drives students' conceptual development. Story Cards ask students to observe and discuss phenomena such as a pencil in water, a magnet attracting materials, and lighting coming from a storm cloud.

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

- Each lesson begins with the use of Story Cards as phenomena. The Story Cards give students a common entry point for learning. The Story Cards follow a "story" that connects all lessons in the scope together and drives students' conceptual development. Lesson 1 of each scope includes an "Accessing Prior Knowledge" section that engages students in an activity to access their prior knowledge/experience related to a phenomenon or problem-solving.
- The first lesson in each scope includes an "Accessing Prior Knowledge" section that engages students in an activity to access their prior knowledge/experiences related to phenomena or problem-solving. For example, in the unit, "Weather and Air," students look at pictures of weather and discuss what different weather looks and feels like before beginning the unit. In the "Light" unit, students look at things on the wall while shining a flashlight.
- Materials include opportunities for teachers and students to use the Engineering Design Process. For example, in the "Light" lesson, students build and design kaleidoscopes. The lesson leverages 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.

- Materials outline the concepts and goals behind engineering problems. For example, the first lesson plan provides information for the teacher about how scientists conduct an investigation.
- Each scope outlines key concepts for teachers in the Engineering Connection description. For example, in Lesson 1, Rock, Soil, and Water, the description focuses on the first five steps of the engineering design process to create a fence to keep a rabbit out of a vegetable garden. The first five steps are 1. Define the Problem, 2. Brainstorm, 3. Plan, 4. Build, and 5. Test.
- The Standards Planning page provides an overview of student expectations for each scope. In all scopes, each lesson begins with using Story Cards as phenomena. The Story Cards follow a "story" that connects all lessons in the scope together and drives students' conceptual development. Guiding questions are provided for each Story Card, along with the expected sample students' responses.

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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 the indicator. The 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 an 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 include a Vertical Alignment of Science TEKS section with a "flashback" and "flash-forward" for each TEKS. The "flashback" informs teachers about what students learned in previous grade levels. The "fast-forward" tells teachers what students will learn about the concept in future grade levels.
- The materials present content in a way that builds complexity within and across units and grade levels. They are designed to help students connect new learning to previous and future learning. For example, each scope includes an Accessing Prior Knowledge (APK) section that teachers use to assess students' understanding of learning from the previous grade level. In the APK for Lesson 1 of the Light Unit, the teacher has students predict what they will see when they shine a flashlight on different objects. Students use knowledge from Properties of Objects, an earlier unit, to make predictions.

- The materials are designed to help students connect new learning to previous and future learning. The Standards Planning section for each unit lists the Vertical Alignment for each TEKS in the scope. For example, students group similar objects in the kindergarten lesson, Classify Objects. The vertical alignment lists the standard for grade 1, where students classify objects by color, shape, and texture. Additionally, in the kindergarten unit, Patterns in the Sky, students study objects in the sky and observe their characteristics to make predictions. The vertical alignment states that students build on this learning in first grade when they describe and predict patterns of seasons.
- The materials build from least complex to more complex within a grade level. For example, in grade K the students start with classifying everyday objects such as toys, food, and household items. They move to classify the physical properties of objects in different ways within that same scope. The later scopes, such as Plant Life, guide students to observe and record a plant life cycle, including seeds, seedlings, plants, and flowers. Students later move to a Plant Life Scope, where they learn new vocabulary while identifying and recording changes. Within this scope, the student's goal is to identify young plants that resemble the parent plant.

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

- The materials state the “curriculum is written to fully cover every science standard in each grade level. As the curriculum is built, lessons are ordered in the scope to help students construct an understanding of the content. Scopes are ordered to support the scaffolding of students' learning.” Each scope includes a succession of lessons the teacher implements to scaffold student learning while taking them deeper into the content toward conceptual understanding. The lessons start with prior knowledge activation and work through a structured plan starting with Circle Time and centers to ensure understanding. For example, in the Plant Life Cycles Unit, there are six lessons that begin with Accessing Prior Knowledge. As each lesson continues, some mini-lessons and activities scaffold students to the preciseness of the standard. In the last lesson, students apply what they know when they read a book to discuss the life stages of a pumpkin that Eli grows to use in a pumpkin pie.
- The materials include a progression of reasoning. Starting with concrete, representational, then abstract reasoning when presenting concepts allows for an increasingly deeper conceptual understanding. The Scope Matrix for the Light scope includes six planned lessons for K.8A (communicate the idea that objects can only be seen when a light source is present and compare the effects of different amounts of light on the appearance of objects). The lessons progress and present concepts in a way that allows for increasingly deeper understanding, including; “I Can't See! I Can See," where students view and describe an object with and without light; "Light Makers'' where students sort items based on whether or not they are light sources; "Light differences" where students observe and compare objects viewed in bright, dim, and no light; "Traveling Light" where students explore how light travels through some objects and not others; "Shadow Puppet Show" where students create a shadow puppet and present what they learned about light, and finally, " An EnLIGHTENing Adventure" where students show what they know through an activity that includes Claim-Evidence-Reasoning.
- The Scope and Sequence for each grade level suggests the order in which to teach the lessons. This order follows the numbers in the TEKS. K6A is taught first using the Properties of Objects Scope, and K13A is taught last using the Plant and Animal Structure Scope. The objectives are listed for each scope using ‘I Can’ Statements. For example, in the Magnets scope, ”I can describe how magnets interact with various materials.” The teacher provides materials to help

students master that magnetic materials have common properties and are different from non-magnetic materials such as crayons or glue sticks. The materials support teachers as they guide students to discover the difference between a push and a pull.

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

- The materials accurately present core concepts across lessons, units, and grade levels and are free from scientific inaccuracies. The materials present grade-level core concepts through TEKS-aligned lessons in each scope. For example, in the Magnets scope, the core concept, TEKS K.7A (describe and predict how a magnet interacts with various materials and how magnets can be used to push or pull), is presented accurately in the Teacher Background section. The Teacher's Background information includes accurate details to support teachers as they guide students through the lessons of the scope. For example, “The ends of magnets, called poles, have an invisible force. A force is a push or a pull. Two magnets can snap together to hold like glue and require effort to separate. Magnets can also push each other away. The two ends of a magnet that have the force to attract (pull) or repel (push away) are called the north and south poles of the magnet. You can cut a magnet in half, and each half will still have north and south poles.” This supports teachers as they guide students to “discover how to make magnets push apart or pull together, noting the position of poles.”
- The materials accurately present recurring themes and concepts in the Recurring Theme Cards (RTC). The purpose of the cards is to help students deepen their understanding of concepts. The cards provide teacher guidance on what students do, critical vocabulary, discussion prompts, and teacher notes. The cards are available in grades K-2.
- The materials present grade-level core concepts, recurring themes and concepts, and science and engineering practices. For example, the materials provide teachers with a Lesson Planning Guide that guides teachers as they lead science instruction. The Lesson Planning Guide includes an example lesson plan that provides teachers with a lesson plan that maps the scope in the 5E Instructional Model. This document also includes grade-level student learning objectives to show how the concept develops over time and what is expected from the students at each stage.

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

- The materials present grade-level core concepts, recurring themes and concepts, and science and engineering practices. For example, the materials provide teachers with a Lesson Planning Guide that guides teachers as they lead science instruction. The Lesson Planning Guide includes an example lesson plan that provides teachers with a lesson plan that maps the scope in the 5E Instructional Model. This document also includes grade-level student learning objectives to show how the concept develops over time and what is expected from the students at each stage.
- The materials have a claim, evidence reasoning assessment section in which students exhibit mastery of a concept. For example, in Plant Life Cycles, students read a scenario about planting a bean plant with young lima beans that grow after a few weeks. Then, the students will state a claim as to why this is happening and give evidence and reasoning. The exercise meets grade-level expectations while staying within the boundaries as students identify and record the changes from seed, seedling, plant, flower, and fruit in a simple plant life cycle.

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- In the assessment section of each scope, students demonstrate mastery of grade-level concepts when they write an explanation in Writing Science. In the kindergarten unit for Basic Needs, students look at pictures, think about how the pictures connect to the science they have been learning, and write a response describing what plants need to survive.
- The materials include a data sheet for each scope to support teachers in checking for student mastery of each concept taught in that scope. The data sheets stay within the boundaries of the grade level, addressing mastery of all main concepts of the grade level. The Scope for each grade level suggests the order teachers should teach the scopes. This order follows the progression in the TEKS; first from K.6.A, using the Properties of Objects Scope, and last is K.13.A, using the Plant and Animal Structure Scope. Each Scope includes a list of objectives using 'I Can' Statements. For example, in the scope for Magnets, the statements include, *"I can describe how magnets interact with various materials."* The teacher provides materials to help students master the fact that magnetic materials have common properties and are different from nonmagnetic materials such as crayons or glue sticks. The materials support teachers as they guide students to discover the difference between a push and a pull. Teachers use the data sheet in the Scope for Magnets to check for mastery by marking whether students can explain that a magnet can be used to push or pull.

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Indicator 3.2

Materials provide educational 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 program's instructional design.	M

Meets | Score 6/6

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

The 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 (SEPs). Materials contain explanations and examples of science concepts, including grade-level misconceptions to support the teacher's subject knowledge and recognition of barriers to student conceptual development as outlined in the TEKS. The materials explain the intent and purpose of the program's instructional design.

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 section of the Scopes Landing Page includes the TEKS covered by the scope and an explanation of what students should have learned before the scope and what students will learn in the next grade level. For example, in the Patterns in the Sky unit, the teacher materials inform the teacher that in kindergarten, students study objects in the sky and observe their characteristics to make predictions. Students build on this learning in first grade when they describe and predict patterns of seasons.
- The instructional materials include guiding documents that support teachers in understanding how new learning connects to previous and future learning across grade levels. For example, the materials include a vertical alignment section with a "fast-forward" and "flashback" with TEKS for each scope. For example, the fast-forward in the kindergarten scope, Properties of Objects, informs the teacher that in grade 1, students will classify objects by physical matter, shape, color, and texture.

- The materials include guiding documents that explain how content and concepts increase in depth and complexity across lessons and units within the grade level. In each scope, the succession of lessons supports the teacher in scaffolding student learning while taking them deeper into the content toward conceptual understanding. For example, in the kindergarten unit, Plant Life Cycles, there are six lessons that start with Accessing Prior Knowledge. As each lesson continues, there are mini-lessons and activities that scaffold students to the rigor of the standard. In the last lesson, students apply what they know when they read a book to discuss the life stages of a pumpkin that Eli grows to use for making a pumpkin pie.

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

- The materials support the teacher's content knowledge. The materials provide background information for teachers and information about common grade-level misconceptions, supporting teachers in developing their own understanding of more advanced grade-level concepts. For example, in the kindergarten Light unit, the teacher's background knowledge includes that the Sun is the most important light source. Materials provide a list of recommended adult-level learning resources for the science concepts.
- The materials include information for teachers about common grade-level misconceptions that hinder student conceptual development. The materials include a Preconceptions section that informs teachers about misconceptions students may have as they enter the scope and guides teachers on how to address them. The guidance suggests that teachers keep the preconceptions uncovered during this Accessing Prior Knowledge (APK) in mind as they move through the scope. For example, in Lesson 1 of the Properties of Objects scope, the materials guide the teacher to engage students in APK to assess their understanding. The materials inform the teacher that 1) Students may not understand that every object has unique properties that can be compared to the properties of other objects. Students should be given opportunities to observe and record the properties of objects. 2) Students might think that all properties can only be observed. Students should know that all the senses can be used to identify the properties of objects. 3) Students might think that only the senses can be used to identify the properties of objects. Students should know that some properties are discovered by measurement.
- The Teacher Background tab provides teacher guidance and information about the science content, examples of content, and common misconceptions. For example, in the Light unit, guidance is provided that supports teachers in communicating the idea that objects can only be seen when a light source is present and compares the effects of different amounts of light on the appearance of objects.

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. For example, the STEMscopes Framework includes an explanation of the STEMscopes Pedagogy. It states, "STEMscopes is a tightly and 100% TEKS aligned, online curriculum, which provides a complete, coherent, and supported pathway for the academic success of students using an enhanced 5E instructional model."
- The materials provide a framework explaining the goal of the program. For example, the STEMscopes Pedagogy states, "It is 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)."

- The materials have a pedagogy section that explains the 5E model that the lessons are based on. The curriculum is inquiry-based. The lessons match the TEKS and include the ELPS. Teachers are provided a sequenced pathway, resources, and support for meeting the needs of all students. This model supports the program's purpose by incorporating the 5E design in the structure of the lessons. For example, a phenomenon is introduced through the story cards to activate prior knowledge inviting students to ENGAGE. Students work through the skill introduced in the mini-lesson in a hands-on way to activate the EXPLORE. Students pair up with a partner to EXPLAIN what the new learning is. Students record their learning in the Interactive Science Notebook to ELABORATE on the learning. Lastly, during EVALUATE, teachers assess student understanding to inform instruction.

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Indicator 4.1

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- The materials support students' sensemaking through reading, writing, and thinking as scientists and engineers. For example, in Lesson 2 of the Light scope, the teacher gets students thinking with the provided Story Card scenario. The story is that three animals can't find a rock they have selected after the light goes out. Students discuss the scenario with a partner. Then, watch a video called "See With Flowers Blooming in the Light and Fireworks in the Dark." Students use their journals to read and write about different light sources. Students practice writing letters using vocabulary words related to light.
- The materials in each grade build on activities to help with sense-making. The steps in each lesson help close gaps and make sense of each topic. Each lesson starts with circle time, moves to the mini-lesson, and wraps up the mini-lesson. Then students have activity time, word wall connections, and lastly, differentiation. Additionally, each Scope has reading and writing

activities embedded. For example, in the scope for Patterns in the Natural World, Lesson 1: Fun in the Sun!, students review the Story Card about activities they do during the day and night and how the appearance of the Sun changes throughout the day. Students then use various materials to create a model to demonstrate how the appearance of the Sun changes throughout the day. Additionally, in Lesson 4, Moonbeams, students review the Story Card about how the Sun and the Moon are similar, but the Moon appears to change shape, and the Sun does not. Students use a mirror and flashlight with the Day and Night Models they made in Lesson 1 to model how the Moon reflects the Sun's light.

- Materials include activity connections that "bridge the gap between activities they have done in class and what they are reading in the text." Three different types of activities can be used during the connectors phase. Students read and think about how the information in the text relates to the activities they have completed. Then, students record the related topic and describe the part of the text they read, explaining what class activity relates to it. Finally, teachers facilitate a class discussion by allowing students to share the connections they made. The materials support students' meaningful sensemaking through thinking and acting as engineers. Grade K, Plant Life Cycles; Engineering Connection includes an activity focusing on three steps of the Engineering Design Process (defining the problem, brainstorming, and planning) by creating a diagram that a nursery owner could use to arrange their plants using the life cycle as the grouping rule. The activity includes a list of materials needed, preparation before the activity, and the activity itself. The activity includes students defining the problem, considering criteria and constraints, brainstorming, planning, and evaluating the design.

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

- The materials provide opportunities for students to engage with scientific texts to develop their understanding of concepts. For example, the lesson on Light provides literacy resources, including Leveled Readers and an Active Reader. Leveled Readers provide teachers with science reading selections appropriate for students with varied reading levels. In this activity, students read words and make sentences about light. The Active Readers require students to make decisions about light. When making decisions about light from the active readers, students can participate in performing an investigation to develop an understanding of the concept.
- The materials provide opportunities for students to use text to gather data and develop understanding. For example, in the unit for Weather and Air, students use an Active Reader (Weather and Air) to read and respond to prompts throughout the book. Examples of student activities are drawing the day's weather and using evidence from pictures to determine sunny, windy, cloudy, and rainy days.
- The materials include readers to support students in reading and developing an understanding of the concepts. For example, in the Rocks, Soil, and Water scope, the teacher reads the Active Reader, Rocks, Soil, and Water Rock!, with the class and asks comprehension questions throughout the reading. Students work independently to complete the activities within the reader. The activities include observing a rock and circling words that describe it, and observing animals (elephant and ant) and circling the one with a habitat in soil.
- The materials provide opportunities for students to use text to gather data and develop understanding. For example, in the scope for Basic Needs, Lesson 6: Eli to the Rescue, students listen to the book *Eli to the Rescue* and discuss birds' basic needs and how to meet them.

- The Leveled Readers and Activity Readers can be used in literacy blocks, guided reading blocks, or any other time designated for reading during the day. For example, in the Light scope, students read words and make sentences about light. The Active Readers requires students to make decisions about light. Active Readers include investigations that allow students to use the text to develop their understanding of the concept.

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 graphic modes of communication to demonstrate understanding. For example, in the scope for Plant and Animal Structures, Lesson 3: Grow Plant, Grow!, students complete a picture of a plant where they draw the roots to include in their Interactive Science Notebook. This scope contains a mini-lesson where students use a Venn diagram to compare plant needs with animal needs.
- Students engage in written and graphic communication when using their Interactive Science Notebooks. For example, in the Light scope, students draw how a rock looks in dim light and how it looks in bright light.
- The materials for Lesson 4, Traveling Light, provide opportunities for written modes of communication to demonstrate an understanding of scientific concepts. For example, students complete Claim-Evidence-Reasoning as they write an explanation that supports an argument and shows how light travels through some objects and is blocked by others, creating shadows. The materials also include a video showing how flashlights are used to explore how light travels through transparent, translucent, and opaque objects.
- The materials include opportunities for students to engage in graphic modes to develop an understanding of scientific concepts with videos in the scope. For example, In the kindergarten scope on Light Lesson 1, a video shows flowers blooming in the light and fireworks in the dark. After watching, students give examples of things that give off light.

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

- Materials support students as they act like scientists and engineers. For example, in the Scope for Patterns in the Sky, in Engineering Connection, students focus on the first five steps of the Engineering Design Process (defining the problem, brainstorming, planning, building, and testing) to create books that, when flipped through, show events that happen in a repeating pattern. Additionally, in the scope for Properties of Objects, in the Engineering Connection section, students focus on the first five steps of the Engineering Design Process (defining the problem, brainstorming, planning, building, and testing) to design and create pictures from different shapes and colors.
- Materials include an “Exploring as Scientists and Engineers” pdf that includes activities for the students to practice their investigation skills. One example includes Phenomenon-Observing the World Around Us. In this activity, the students look at images and describe the phenomenon in each image.
- The Engineering Connections section of the Magnets lesson provides criteria and constraints which produce a struggle for the students as they act like engineers and follow the engineering design process to “design and carry out methods for removing buried treasure from boxes of

sand." The constraints include; using a magnet in some way, the student can not touch the sand or the treasure with their hands when removing it from the box, and the method must work for every person who uses it.

- Students engage in phenomena when listening to and discussing the Story Cards. For example, in the Magnets scope, students listen to and look at a picture of items spilled from a desk. The students talk with a partner to see what items a magnet will pick up. Later in another lesson, students experiment to see what the magnet will pick up.

Accelerate Learning STEMscopes Science TX Grade K

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' content knowledge and skills development 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. The materials promote students' use of evidence to develop, communicate, and evaluate explanations and solutions.

The materials prompt students to use evidence to support their hypotheses and claims. The materials include embedded opportunities to develop and utilize scientific vocabulary in context. Materials integrate argumentation and discourse throughout to support students' content knowledge and skills development as appropriate for the concept and grade level. These 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 prompt students to use evidence to support their hypotheses and claims. For example, in the Scope for Weather, the teacher asks students about daily weather changes during the mini-lesson. Then, students write about the daily weather in their Interactive Notebooks. Recording their observations as evidence of the weather changes helps students support the claim that weather changes over time. Students support this claim by tracking weather over time. Later in this Scope, after discussing weather changes, the teacher directs students to look outside. If students see a sunny day and feel the warmth, the teacher asks if they think it will snow today. The teacher prompts students to use evidence about weather and how it changes over seasons to support the claim that it will not snow on a hot sunny day.
- The materials prompt students to use evidence to support their hypotheses and claims. For example, in the Scope for Magnets, Lesson 1: Stuck on You, students predict whether objects at their stations will be picked up by a magnet. Students are given the prompt, "Eli was cleaning out his desk at school. As Hanan walked by, he bumped into Eli. Eli spilled everything out of his desk, including paper clips, coins, scissors, and paper. Hanan saw the mess and offered to help Eli pick up the objects using his favorite magnet from home. Help Hanan figure out which items

he can pick up for Eli with his magnet." Students then test objects with a magnet to determine if their prediction is correct and record their findings.
- Materials prompt students to use evidence to support their hypotheses and claims. For example, in the Scope for Properties of Objects, students complete a Claim-Evidence-Reasoning to write an explanation to respond to a scenario using the evidence provided. The scenario prompts students to determine what physical property sorted the objects provided.

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 help students contextualize new terms. For example, in the Scope for Basic Needs, Lesson 1: Walking in Nature, students learn that living things have specific requirements to stay alive, called basic needs. They learn the basic needs of animals are food, water, shelter, and space. They also learn the basic needs of plants are nutrients, water, air, sunlight, and space. Students explore and observe multiple representations of these needs in the Vocabulary Cards. Students use the new vocabulary in their Interactive Science Notebooks when they draw a plant or animal they saw on a nature walk and draw two of its basic needs.
- The materials include opportunities to develop and use vocabulary after having a concrete or firsthand experience to which they can contextualize new terms. For example, in the Scope for Rocks, Soil, and Water, Lesson 1: Rock Hounds!, students learn that we use physical properties to describe rocks. They describe them by size, shape, color, and texture. Students explore and observe multiple representations of the vocabulary shown in the Vocabulary Cards. Students can use the new vocabulary in their Interactive Science Notebooks when they identify the properties of three rocks.
- The materials provide opportunities for students to use science vocabulary in context. For example, in the Scope for Plant and Animal Structures, students talk about how students look alike, then discuss how animals look alike. They use vocabulary terms such as tail and fur. This scope also provides students the opportunity to use science vocabulary in the Literacy Center, where they use craft sticks and describe a plant structure, such as a stem, or animal behavior, such as hopping.

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

- The materials integrate argumentation and discourse within stages of the learning cycle. For example, in the Scope for Plant Life Cycles, Lesson 3: Sweet Seedlings, students construct an argument for their interpretation of the phenomena they observe during Circle Time. Materials provide instructional support, including guiding questions for the teacher to help students provide information about the phenomena. The materials direct students to include reasons or references as evidence.
- The materials provide opportunities for students to understand how to engage in regulated argumentation and discourse. For example, in the Scope for Weather and Air, in the Engineering Connection, students engage in argumentation and discourse as they engage in the Engineering Design Process to design and construct air-powered puff cars. Students are expected to define the problem, brainstorm, plan, build, and test as a group. Support is provided to teachers for implementation during this process.
- The materials integrate argument and discourse throughout the lesson to support content knowledge. For example, in the Scope for Basic Needs, the teacher guides students in discussing

what is a want and a need. The teacher records the replies. Then, students evaluate each response to decide if an item listed is a want or a need. The teacher is directed to tell students that a need is something you must have to grow and live. Possible replies are listed to guide the teacher, such as food is a need for nutrition and a toy is a want for entertainment. Later in this scope, students give reasons why people would not be able to live and grow without a specific item. The students give specific reasons, such as your body would not be healthy without food and water.

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 material's criteria for developmentally appropriate arguments is to explain a phenomenon or defend a solution to problems using evidence acquired from learning experiences. For example, in the Scope for Plant and Animal Structures, as students complete the Claim-Evidence-Reasoning to write and support an argument for a scenario, they are provided with a rubric for the explanation.
- The materials provide an opportunity for students to justify explanations of phenomena and solutions to problems using written and verbal arguments using evidence from learning experiences. For example, in the Scope for Plant Life Cycles, students examine an apple seed. Then they think of the cause and effects of the seed growing into a seedling and discuss it. They justify their explanations after watching a seed video.
- The materials provide criteria for developmentally appropriate arguments to explain a phenomenon or defend a solution to a problem using evidence acquired from the learning experience. All K-2 materials have a Claim-Evidence-Reasoning assessment for students to complete at the end of a scope. Students state their claim, provide evidence in writing, and give a reason for the claim. In the Scope for Magnets, students write a claim on what a magnet would pick up, such as a nail or a puzzle piece. Then they draw an observation, including the magnet and what it will attract. Finally, they explain why a magnet will attract certain items. The students are evaluated on their responses.

Accelerate Learning STEMscopes Science TX Grade K

Indicator 5.2

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- The materials provide teachers with possible student responses to questions and tasks, as well as support for the teacher to deepen student thinking through questioning. For example, in the Scope for Light, Lesson 4: Traveling Light, students view a video before investigating during Circle Time. The teacher materials provide questions to guide student thinking through the activity and expected student responses to each question. First, the teacher asks, "Why did the people need to use light in the cave?" The expected student response is, "The cave was dark. They needed light to see what was in the cave and where they were going." Then, the teacher states, "The cave was dark. They needed light to see what was in the cave and where they were going." The expected student response is, "Different amounts of light change what we see and how things look. Objects can be seen in bright light. When there is less or dim light, they are harder to see and may appear gray. When there is no light, objects cannot be seen."
- The materials provide teacher responses to possible students' responses, including how to build on students' thinking. For example, in the Scope for Patterns in the Sky, Lesson 5: Day and Night Patterns, during the Mini-Lesson, students engage with the Story Card to frame their thinking before they investigate. The teacher materials provide questions to guide and build on student thinking through the activity and possible student responses. Teachers ask questions such as,

"Which object do we always see in the day sky?" The expected student response is "The Sun." Teachers continue with, “Which objects do we sometimes see in the day sky?" The expected student response is, "The clouds and moon." Then, teachers ask, "Which object do we never see in the day sky?" Students should respond with, "The stars." This questioning continues with objects in the night sky.

- The materials provide guidance on anticipating student responses and the use of questioning to deepen student thinking in the Scope for Magnets. In Lesson 4, Mini Lesson: Magnetic or Not, students experiment with which items are magnetic and which are not. After the students experiment with various materials, the teacher asks, "What makes an object magnetic?" "What will happen to an object when a magnet is held next to a magnetic object"? Expected student responses include, “It is made of metal” and “It will pull the object toward the magnet.”

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 on how to introduce and scaffold students’ development of scientific vocabulary. For example, in the Scope for Properties of Objects, Lesson 1: Describe It!, the Word Wall with Wallace, the Wordy Wallace is an activity used to introduce and scaffold new vocabulary with students and have students practice using the words in context. During this lesson, students learn the words, *physical properties* and *objects*. The materials include vocabulary cards with pictures and definitions to review with students. There are also Vocabulary Rap Videos for both terms.
- The materials provide embedded support for the teacher in how to introduce and scaffold students’ development of scientific vocabulary. For example, in the Scope for Basic Needs, Lesson 1: Walking Through Nature, the Word Wall with Wallace, the Wordy Wallace is an activity used to introduce and scaffold new vocabulary with students and have students practice using the words in context. During this lesson, students learn the word *needs*. The materials include a vocabulary card with a picture and definition to review with students. There is also a Vocabulary Rap Video for *needs*.
- Materials include teacher guidance on scaffolding and supporting students' development and using scientific vocabulary in content. For example, in the Scope for Properties of Objects, Lesson 3: Differentiation English Language Support Strategies, the intermediate Q3SA strategy provides scaffolding for the teacher to use when guiding students to use vocabulary words correctly in context. The teacher asks an explicit question using verbal cues and provides a short sentence stem with simple structures and tenses for academic language support. The sentence stem is, "_____ is an example of _____because_____, and I can use the word _____ when I_____ ."

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 by providing opportunities for students to practice sharing, listening to, and evaluating whether they agree with one another’s ideas. For example, in the Scope for Plant Life Cycles, Lesson 1: A Plant's Life, students engage in a four corners activity to stand by the picture of the young plant that resembles the parent plant. They then pick a partner in the group and explain why they chose that picture. Then each group explains why they chose the young plant they are standing by.

- The materials provide teacher questions for supporting student discourse and using evidence in constructing written and verbal claims. During each lesson, in the Wrap-up, students discuss the evidence they collected during an investigation. For example, in the Scope for Magnets, Lesson 5: Lead Me with Your Magnet, students discuss how they could move magnets without touching them. The teacher materials provide guiding questions for the discussion and expected student responses. The activity closes with the student completing a sheet for their Interactive Science Notebook to draw a model of how they used the magnet to move a paper clip through a maze. They circle words that explain how and why the paper clip moved.
- The materials provide guidance for teachers to use when giving feedback to students while engaging in discourse. For example, in the Scope for Patterns in the Sky, as students complete the Claim-Evidence-Reasoning response, the rubric gives the teacher guidance on providing students feedback. Also, on the landing page for Claim-Evidence-Reasoning, in the Activity section, it offers possible responses for students based on their performance during the activity.
- The materials provide guidance on preparing the teacher for classroom student discourse. “Exploring as Scientists and Engineers” is a document that gives steps into student discourse for the teacher to follow. The steps include observing the world around us and then asking questions. As students work through a skill, the teacher asks questions and then has students talk about when and where the question can be answered. The students work with classmates and practice listening and then talking.
- The materials support teachers in asking questions and help students in making verbal and written claims. For example, in the Scope for Light, the teacher asks questions regarding how well students can see a rock with various amounts of light. The students predict that seeing the rock in the dark might be difficult. Then students draw a picture of a rock and explain how it might look in dim and bright light. The teacher asks students to talk about their drawings. In writing and conversation, the students compare the look of the rock in light and dark, confirming the claim that it is difficult to see the rock in the dark.

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 Scope for Rocks, Soil, and Water, Lesson 3: Look and Feel, the teacher asks students guiding questions to preview the expectations for the activity together as they describe and classify rocks by color and texture. Then, students complete the activity with a partner. The teacher asks, "What color are your rocks?" and "Texture is how something feels. How do your rocks feel?"
- The materials provide teacher support and guidance to engage students’ thinking in various modes of communication throughout the year. For example, in the Scope for Pushes and Pulls, students discuss (in a group) things you push, such as a grocery cart, and things you pull, such as a wagon. Then students move into small groups and talk about pictures on cards, discussing whether the picture shows a push or a pull and how the movement might change. The students sort the cards into groups of push or pull. If the students disagree, they discuss the best place to put the card. The materials direct the teacher to ask students about the cards’ placement and which were easy or hard to sort and why. The materials suggest that some cards could fit into both categories, which may cause some difficulties for students.
- 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. For instance, in the Scope for Rocks, Soil, and Water, the teacher asks students how a bunny might get into a garden to eat the plants and how they might keep it out. If students are stuck on a solution after a discussion, the materials prompt the teacher to ask, “Do you need a roof?” “Do you need a concrete floor?” and “What type of structure might keep a bunny out?”

Accelerate Learning STEMscopes Science TX Grade K

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, in the Scope for Plant Life Cycles, Lesson 1: A Plant's Life Cycle, during Accessing Prior Knowledge, the teacher can pre-assess a student's prior knowledge before they begin grade-level learning. During this activity, students use pictures of a parent plant and baby plants to determine which baby plant best resembles the parent plant.
- Materials include formative assessments in various formats to measure student learning and determine the next steps for instruction. For example, in the Scope for Plant and Animal Structures, each lesson ends with an opportunity for students to show what they know. The students' knowledge can be evaluated during the Wrap-Up as they respond to a prompt about what they have learned as they complete a sheet for their Interactive Science Notebook. In Lesson 1, students draw an animal with structures similar to an animal. In Lesson 2, students draw lines from the structures of an elephant to the words See, Hear, Move, and Grasp. In Lesson 3, students draw the roots of a plant. In Lesson 4, students follow directions that help them identify different parts of a plant. In Lesson 5, students label the features of a plant. In Lesson 6, students complete the Claim-Evidence-Reasoning and Writing Science activities.

- Materials include diagnostic assessments for measuring student learning and identifying learning gains in various formats for both formative and summative assessments. For example, there is a written beginning and end-of-year review that students take independently. These tests address questions that cover a majority of the standards. In addition, there are data sheets after each scope that allow teachers to assess the learning from that scope. In the Scope for Magnets, the teacher uses "I can make statements'' such as "I can predict how magnets will push or pull." The students reply orally, and the teacher checks under each corresponding standard that the student has mastered.

Materials assess all student expectations 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. For example, the materials include TEKS-aligned assessments that align the curriculum standards and student expectations, and are designed to measure student understanding and mastery of the concepts and skills taught in the materials. The Standards Matrix indicates the TEKS taught and assessed in each Scope.
- Additionally, the materials indicate which student expectations will be assessed. For example, Standards Overview lists the TEKS taught and assessed in the scope on the landing page for each Scope. Students' Learning Objectives state what students should be able to do by the end of the scope. The suggested Scope Calendar provides a list of assessment opportunities in each lesson.
- Materials assess all students' expectations. The lessons include detailed TEKS-based plans that include a way for each standard to be taught. They guide how to access student learning. For example, the Scope for Magnets starts by naming standards and then lists student learning objectives that mirror the standards.

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

- The materials include assessments that require students to integrate scientific knowledge and science and engineering practices with recurring themes and concepts appropriate to the student expectation being assessed. In the Scope for Plant Life Cycles, Lesson 4: The Cycle's Complete!, students review and discuss different images of an apple tree and describe what stage in its life cycle it is in, and what happens at the end. This activity assesses students' knowledge of plant life cycles. The recurring theme of patterns is integrated as students discuss the different stages of the life cycle for a plant in this activity. The students also utilize the scientific and engineering practices to make observations that are included in the activity.
- The materials assess all student expectations by grade level, as outlined in the TEKS. For example, in the Scope for Plant Life Cycles, the Claim-Evidence-Reasoning activity assesses the life cycle of a lima bean plant while integrating the recurring theme of patterns. The activity also utilizes the scientific and engineering practices of analyzing and interpreting data and communicating explanations. Pictures are given to the students that demonstrate the life cycle of a lima bean, including seed, seedling, young plant, adult plant, and seedpod. The student has to analyze this data and determine which stage was not seen between planting the lima beans and seeing lima bean plants. Students also draw the life cycle of the lima beans that were presented.
- The materials include assessments that integrate scientific concepts with recurring themes and concepts. The Recurring Themes and Concepts Cards are the same for K-2. Each card consists of

a standard and questions to help students explore and make connections between concepts. For example, "Describe the properties of objects in terms of relative size and relative quantity." Questions on this card include: "How long is it? How heavy is it? Which is longer/shorter? Which is heavier/ lighter?" There is a section for teacher notes so teachers can assess if students have mastered them.

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 a new phenomenon or problem. For example, in the Scope for Plant Life Cycles, Lesson 6: Eli's Thanksgiving Pie, students listen to the book *Eli's Thanksgiving Pie* to discuss the pumpkin life cycle. While reading the story, the teacher asks students the following questions, "How would Eli get a watermelon from planting a seed?", "What is going to happen to Eli's seed next?" "What has to happen to the plant before the plant grows a pumpkin, which is the fruit?, and "Do you think Eli will grow any other plants besides pumpkins next year?" This discussion assesses students' ability to apply their knowledge of the life cycle of a plant. Also, as students listen to the story, they will acknowledge each stage of the life cycle.
- Materials include assessments that require students to apply knowledge and skills to a new phenomenon or problem. For example, in the Scope for Plant and Animal Structures, in the Writing Science activity, students analyze the picture of the eagle and identify its structures and how it functions. This activity assesses students' ability to identify animal structures.
- Materials include assessments that require students to apply knowledge and skills to a new phenomenon or problem. For example, in the Scope for Magnets, students use various materials to check on the push or pull of the magnet. Students discuss the materials and sort with a partner in columns of push or pull. Then, students are assessed by being asked to predict how different materials will interact with a magnet.

Accelerate Learning STEMscopes Science TX Grade K

Indicator 6.2

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

1	Materials include information and/or resources that provide guidance for evaluating student responses.	M
2	Materials support teachers' analysis of assessment data with guidance and direction to respond to individual 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 to use when planning instruction, intervention, and extension.	M
4	Materials provide a variety of resources and teacher guidance on how to leverage different activities to respond to student data.	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 provide guidance for 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 to use when planning instruction, intervention, and extension. Materials provide a variety of resources and teacher guidance on how to leverage different activities to respond to student data.

Evidence includes but is not limited to:

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

- The materials include information that guides teachers in evaluating student responses. The materials guide teachers to look for specific components when evaluating student responses. For example, the Scope for Plant Life Cycles provides teachers with questions before, during, and after Lesson 2: The Seeds of Life. Before the lesson, students are asked, "What sorts of fruits have seeds in them?" Since this question occurs before the lesson begins, teachers accept any answers that may vary from students. During the lesson, students are asked, "What is your favorite type of fruit?" and "What do you notice on the inside of your favorite type of fruit?" as they engage in the investigation. Answers to these questions can vary. After the lesson, students are asked, "What do seeds do?" Students are expected to respond, "They grow new plants."
- The materials include resources that guide teachers in evaluating student responses as they write scientific explanations. The materials provide a generalized rubric teachers can use to evaluate whether students are rated as 2, 1, or 0 for each component of the explanation. This rubric can be used within any Claim-Evidence-Reasoning activity. The rubric defines the criteria for each component. For example, students are rated as a 2 if they make a claim and draw and write accurate pieces of evidence. Students are a 1 if they make an inaccurate claim and draw or

write an accurate piece of evidence. Students are a 0 if they did not make a claim and did not draw or write accurate pieces of evidence.

- Materials include information for teachers to evaluate students' responses. The materials include a Checking For Understanding Learning Pathways, which has a flow chart explaining to teachers a path a student can take after completing an assessment. For example, if a student is successful on an assessment, the acceleration might include a choice board. If the students require intervention, small group resources are available. The teacher is directed to the available resources on this flow chart.

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

- The materials include assessment tools that yield data teachers can easily analyze and interpret. The materials provide guidance documents and resources to support teachers' analysis and interpretation of assessment data. For example, The Scope for Properties of Objects includes data sheets to analyze data by concepts mastered.
- The materials provide BOY and EOY assessments and answer keys for kindergarten, grade 1, and grade 2. Teachers can use this data to respond to individual student needs in all areas of science, based on measures of student progress appropriate for the developmental level.
- Each Scope K-2 has a data sheet at the end of the Scope. Materials provide guidance instructing teachers to evaluate the data responses and mark the level of mastery for each key concept. The levels are novice, gaining proficiency, or expert.

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

- The materials guide the teacher to identify the students who will need more practice to achieve mastery of the content and provide the teacher with tiered intervention strategies for each Scope. For example, students who are novice, gaining proficiency, or an expert can go to the math center, but activities do not address how to meet the needs of students at each level.
- Materials provide the key concepts students should master by the end of the scope. The materials guide teachers on the next steps based on student performance on assessments. For example, in Plant Life Cycles, the materials state students should know 1) In a simple plant life cycle, the changes from seed to seedling to adult plant to flower to fruit can be seen and identified, 2) During a plant's life cycle, the changes from seed to seedling to adult plant to flower to fruit can be recorded, and 3) Young plants resemble parent plants in some ways. The materials explain that the teacher will identify the students who need more practice to achieve mastery of the content and need to engage in additional learning/practice.
- The materials include an RTI chart explaining student success and related responses. However, the materials include limited guidance for teachers on the next steps based on student performance on assessments. For example, if 80% of students understand a concept, they would engage in the Scope phenomenon. The 10-15% of students needing reinforcement would meet with the teacher 30 minutes daily and use Picture Vocabulary. The 5-10% of students needing intervention would meet in a small group daily and use Guided Practice.

Accelerate Learning STEMscopes Science TX Grade K

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

- The materials provide a variety of student resources for teachers to use in responding to performance data. For example, in the Scope for Plant and Animal Structures, the Small-Group Intervention tab includes Guided Practice and Active Practice for teachers to have students further practice the concepts in the scope as needed.
- The materials provide resources and guidance for teachers to respond to performance data. Teachers may use the K-2 Differentiated Pathway document to determine students' next steps as they develop understanding within a scope.
- Each scope contains one small-group intervention activity. Each activity breaks down into guided and active practice sections. These intervention lessons include a key concept, such as "Objects can only be seen when light is present." Each lesson guides the teacher to lead students through activity and questioning. After the lesson, materials provide additional Tiered Intervention Support teachers can use with students who need more practice. Additionally, the Scope for Properties of Objects includes a Small Group Intervention tab with tiered intervention strategies for teachers to use with students. Tier 1 has the student's separate cards face down into two groups. There are two piles, one for vocabulary words and one for definitions. The object is to match the card to the definition. Tier 2 includes half the vocabulary terms and definitions. Students take turns matching the cards.

Accelerate Learning STEMscopes Science TX Grade K

Indicator 6.3

Assessments are clear and easy to understand.

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- Assessments contain items for each grade level that are scientifically accurate. For example, in the Scope for Plant Life Cycles, Lesson 2: The Seeds of Life, in the Wrap-up Interactive Science Notebook activity, students draw seeds on a picture of an orange and color the orange. In the answer key, it states that in the picture, students should draw seeds in the middle of the cut orange and color the orange.
- Assessments contain items for the grade level that are scientifically accurate. For example, the assessment in the Scope for Basic Needs accurately asks students to pick a meal for a fox who eats plants and animals after the Basic Needs Scope. Learning that a fox eats plants and animals during the study is accurately assessed.
- Assessments contain items for the grade level or course that avoid bias. For example, in the Scope for Plant and Animal Structures, Lesson 2: Seeing, Moving, Hearing, and Grasping, the character pictured on the handout has a cochlear implant.
- Assessments contain items for the grade level or course that avoid bias. In the assessment, there are black and white and a few colored pictures of things in nature, which are free of bias.
- Assessments contain items for the grade level or course that are error-free. For example, in the Scope for Plant Life Cycles, the Writing Science handout shows a picture of a young plant and an adult plant and asks students how the young plant and the adult plant are alike. The expected response states they both have leaves and stems that are green.

- The assessments are error-free. For example, in the assessment at the conclusion of the Scope for Rock, Soil, and Water, the student looks at pictures of several rocks showing different colors, and sizes. The student describes the rocks that are accurately pictured.

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

- Assessment tools use clear pictures and graphics. For example, in the Scope for Plant and Animal Structures, in the Claim-Evidence-Reasoning activity, there is a clear illustration of a strawberry plant that includes the structures mentioned in the scenario, including roots, stems, flowers, and fruit.
- Assessments contain pictures and graphics that are developmentally appropriate. For example, in the Scope for Plant Life Cycles, Lesson 5: The Circle of Life, Interactive Science Notebook activity, students draw lines that match the young plant to the parent plant. The pictures are developmentally appropriate because the leaves of the young and parent plants match, as does the soil of both.
- The assessments use clear pictures that are developmentally appropriate. For example, in the K BOY assessment, the pictures are large and detailed. The picture of a squirrel is detailed and easy for a student to identify.
- Assessment tools use clear pictures and graphics that are developmentally appropriate. In the Scope for Magnets, the Writing Science handouts include pictures that are appropriate for the age group. The pictures have a writing section that has an image to label. They are clear and colorful.

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

- Materials provide clear guidance for teachers to consistently and accurately administer assessment tools. The Scope for Plant Life Cycles, Lesson 3: Sweet Seedlings, instructs teachers to implement the Wrap-Up activity. It states what teachers need for Preparation, the Activity, and what students will do on the Interactive Science Notebook page. It is suggested the activity take 5 minutes to complete while providing a script for teachers to scaffold the Wrap-Up activity.
- The materials include detailed information that supports the teacher's understanding of assessment tools and their scoring procedures. For example, the Scope for Plant and Animal Structures, for Writing Science, provides an answer key. The expected student responses are: 1. Eyes are for seeing. 2. Beak is for eating. 3. Wings are for moving. 4. Claws are for grasping.
- The materials provide guidance for accurate administration of the 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 Scope for Basic Needs, the materials instruct the teacher to read a scenario to students about a fox needing food and then ask them to pick what foods would be best for the fox. The materials instruct the teacher to remind students of what a fox might eat if they struggle. The end of the assessment states that the results of this will indicate what students do next. They will be placed into an intervention group or use materials for acceleration if needed.

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

- The materials include guidance that allows students to demonstrate mastery of knowledge and skills aligned to learning goals. Materials include BOY and EOY assessments that are aligned with the scopes studied. They also include a chart with answers to show which standard was tested.
- The materials include guidance to offer accommodations for assessment tools so that students of all abilities can demonstrate mastery of learning goals. For example, assessment guidance states, “For students needing accommodations during evaluation, you can simplify the questions and simplify rubrics. For additional student support, consider pulling struggling students 1:1 and administering the assessments orally, making notes on the assessment.” Additionally, materials offer suggestions to get students started with answering CER assessment questions if they are struggling.

Accelerate Learning STEMscopes Science TX Grade K

Indicator 7.1

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

1	Materials provide recommended targeted instruction and activities to scaffold learning for students who have yet to achieve 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 yet to achieve 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 yet to achieve grade level mastery.

- The materials provide targeted instruction for students who have not mastered the concept. For example, in the Scope for Magnets, in Small-Group Intervention, there is a Guided Practice where students review the interactions of magnets with various objects through a small-group activity led by the classroom teacher. Then in the Active Practice, students play the Act It Out game to practice scope concepts and vocabulary. There are also Tiered Intervention Strategies with Active Practice. In Tier 1, the student begins the activity as the timekeeper. After becoming familiar with how to play the game, the student will take a turn as the actor. In Tier 2, the timekeeper quietly reads and shows the student the vocabulary term(s). In Tier 3, the timekeeper brainstorms with the student a sentence or one-word clue as to what the student will act out. There is a Concept Attainment Quiz to reassess for mastery.
- The materials provide targeted instruction for students who have not mastered the concept. In the Scope for Plant Life Cycles, in Small-Group Intervention, there is a Guided Practice where students review plant life cycles through a small-group activity led by the classroom teacher. Then in Active Practice, students play the Concentration game to practice scope concepts and vocabulary. There are also Tiered Intervention strategies with Active Practice. In Tier 1, the student group members place the cards face down in two separate groups: one for the vocabulary terms and one for the definitions. Instruct the students to turn over a card from one group and look for its match in the second group. In Tier 2, begin the game with half the vocabulary terms and their matching definitions. When the students have made all matches, have the students place the remaining cards facedown on the table. In Tier 3, group members place the cards face down in two separate groups: one for the vocabulary terms and one for the

definitions. Unmatched cards remain face up. After completing a round, students repeat the game and allow only the unmatched cards from the vocabulary terms pile to stay face up. There is a Concept Attainment Quiz to reassess for mastery.

- The materials include teacher guidance and resources for supporting students who still need to reach mastery with Picture Vocabulary Cards. For example, the Scope on Light includes Picture Vocabulary Cards with words such as light and dark to support science vocabulary and concept development.

Materials provide enrichment activities for all levels of learners.

- The materials provide enrichment activities for all levels of learners. For example, the materials guide Centers that provide cross-curricular connections while applying grade-level science knowledge. Centers include Literacy, Math, Writing, Science, Technology, and Science Art. In the Scope for Patterns in the Sky, the Science-Art station consists of an activity where students choreograph dances that illustrate the patterns of objects found in the day and night sky.
- The materials provide enrichment activities for all levels of learners. For example, in Engineering Connection, an engineering challenge allows students to apply grade-level science knowledge in a new way. In the Scope for Rocks, Soil, and Water, students focus on the first five steps of the Engineering Design Process (defining the problem, brainstorming, planning, building, and testing) to design and construct model walls that could keep a rabbit out of a vegetable garden.
- The materials provide enrichment strategies that can go with any content. The strategies, organized by grade band, allow students to apply their science knowledge in different ways. For example, the Word Web Strategy will enable students to connect vocabulary words on the web and explain why they connected the terms the way they did. Additionally, the Zooming In Strategy allows students to "zoom in" on a topic they are curious about. As students wonder about a topic, they invite others to explore it.

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

- The materials provide just-in-time scaffolds and guidance to develop productive perseverance in learning for all students. For example, the teacher materials include Tiered Intervention Strategies to meet the varied needs of all students. In the Scope for Basic Needs, in Small Group Intervention, teachers are given strategies to engage all students based on performance as students engage in Active Practice.
- The materials provide support and resources for students ready to accelerate their learning. For example, the materials include project-based exploration for students. In the Scope for Magnets, in Engineering Connection, the materials support the teacher in engaging students in an engineering challenge using the Engineering Design Process.
- The teacher materials include recommendations for just-in-time scaffolds and guidance to support struggling students. After completing the Claim, Evidence, and Reasoning in the Magnets scope, the materials suggest asking the students struggling to write a single sentence for the claim, and drawing an observation for the evidence. Additionally, in the Scope on Light, if students need support with how light can travel through some objects while others block light, the materials include an intervention lesson for deeper understanding. The students and teacher discuss opaque objects that create a shadow, and those that light can pass through do not.

Accelerate Learning STEMscopes Science TX Grade K

Indicator 7.2

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The materials engage students in the mastery of the content by offering a variety of developmentally appropriate instructional approaches. For example, lessons include authentic tasks in which students use tools to measure and collect data. In the Scope for Magnets, Lesson 4: Magnetic or Not? students use a large magnet to pick up various objects of different sizes.
- The materials engage students in the mastery of the content by offering a variety of developmentally appropriate instructional approaches. For example, lessons include educational game-based learning opportunities where students apply scientific knowledge. In the Scope for Properties of Objects, students play the Concentration game to practice scope concepts and vocabulary.
- The materials include developmentally appropriate activities to engage the students in mastery. In the Scope for Plant and Animal Structures, the materials include center ideas that are developmentally appropriate for kindergarten students. For example, in the Science Center, students “put together a plant puzzle and label the parts of a plant.”

- The materials provide developmentally appropriate instructional approaches in the lesson structure. Each lesson starts by assessing background knowledge, moves to teacher modeling, and lastly, student practice. For example, in the Scope for Light, Lesson 1, students predict what items t when projected on a wall. Then the teacher models by showing a rock in the light and the dark. Lastly, students look at a rock but do not touch it. Then they describe it to a partner.

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

- The materials support flexible grouping. Each lesson includes Engage, Explore, and Explain routines for group instruction. The materials also include teacher guidance for small-group instruction.
- The materials support a variety of instructional groupings. Lessons on core content and concepts are provided to the whole group and include implementation instructions for the teacher. For example, in the Scope for Basic Needs, six lessons are provided to scaffold the learning of the concept and are for whole-group instruction. The lessons include activities where students work independently in small groups with partners.
- The materials support a variety of instructional groupings. For example, the Scope for Plant Life Cycles, Small-Group Intervention includes teacher guidance for small-group Guided Practice and Active Practice for small group or independent practice.
- Materials consistently support flexible grouping (e.g., whole group, small group, partners, one-on-one). In the Scope for Magnets, Guided Practice, students review the interactions of magnets with various objects through a small-group activity led by the classroom teacher. Then in the Active Practice, students play the Act It Out game in small groups to practice scope concepts and vocabulary.

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

- The materials consistently support multiple types of practices. Lessons begin with a whole group mini-lesson where the teacher models the activity. Then, students explore a concept with a partner as they collaborate, then work independently in their Interactive Science Notebook. The lessons include guidance to support teachers in achieving effective implementation. For example, in the Scope for Weather and Air, Lesson 1, the mini-lesson suggests that the teacher take the whole class outside to observe the weather. In the classroom, students discuss the weather with a partner and then work independently to draw and color a picture of the day's weather.
- The materials provide multiple types of practice for students. In the Scope for Plant and Animal Structures, Lesson 1: Same Structures, Different Animals, the teacher engages students in a guided discussion, using the Interactive Story Card, about how they look similar to other classmates. Students then work collaboratively in pairs to review animal pairs and determine how they are alike and different. Afterward, students independently draw an animal with a structure like a dog. The lesson provides step-by-step guidance and structures to the teacher for implementation.
- The materials provide multiple types of practices. In the Scope for Light, Lesson 2: Light Makers, the teacher engages students in a guided discussion about sources of light. Students then work collaboratively in pairs to sort objects that are and are not light sources. Afterward, students work independently to determine which objects are sources of light and which ones are not. The lesson provides step-by-step guidance and structures to the teacher for implementation.

Accelerate Learning STEMscopes Science TX Grade K

Materials represent diverse communities in the images and information about people and places.

- Materials represent diverse communities using images and information. For example, in the Scope for Magnets, the Story Cards, the characters include one in a wheelchair and another with cochlear implants.
- Materials represent diverse communities using images and information. For example, in the Scope for Light, the Interactive Science Notebook handout shows two students with different gender and skin tone, the Active Reader, Lighten Up!, includes a character in a wheelchair and another wearing glasses.
- The materials represent a diverse community in images of people and communities. The materials include pictures of animals, nature, objects, robots, and toys when covering science concepts. However, when images have people, such as the Pushes and Pulls: Explain_ Picture Vocabulary and the Push or Pull? cards in the Pushes and Pulls scope, the images reflect the diversity of school communities and match the content. Characteristics vary in images to include race and ethnicity, skin tone, gender, age, disability status, body size and shape, and hair texture.

Accelerate Learning STEMscopes Science TX Grade K

Indicator 7.3

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

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

Meets | Score 2/2

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

Materials include guidance for linguistic accommodations (communicated, sequenced, and scaffolded) commensurate with various levels of English language proficiency as defined by the ELPS. Materials encourage strategic use of students' first language for 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. In the Scope for Properties of Objects, Lessons 1-6 include a Differentiation section at the bottom of the lesson. In this section, teachers can find strategies to engage EB learners at various proficiency levels, beginner, intermediate, and advanced/advanced high. For example, in Lesson 2: Property Toss, the Strategy of Word Walls supports using accessible language in learning. For beginners, word walls include words and images provided by the teacher. For intermediate students, students create personalized word walls with high-frequency words. For advanced/advanced high students, students complete word walls with grade-level and complex vocabulary.
- Materials include linguistic accommodations commensurate with various levels of English language proficiency as defined by the ELPS. In the Scope for Magnets, Lessons 1-6 include a Differentiation section at the bottom. In this section, teachers can find strategies to engage EB learners at various proficiency levels, beginner, intermediate, and advanced/advanced high. For example, in Lesson 3: Pole War, the Strategy of Six-Step Vocabulary supports using accessible language in learning. For beginners, teachers describe the word, and students restate it in their own terms and then draw pictures using their descriptions. For intermediate students, students use the word and add more knowledge about the word in a small group. For advanced/advanced high students, students play games with others using more complex words.
- The materials include linguistic accommodations commensurate with various levels of English language proficiency as defined by the ELPS. For example, the scopes have realia during

investigations and lessons that can support EB students in connecting to their own lives as they make sense of new concepts. For example, in the Scope for Light, students observe a rock in the light and the dark. Additionally, the materials suggest concrete experiences as linguistic accommodations during direct instruction. For example, in the same scope, students explore how light helps us see by wearing dark glasses to examine items in the dark, then explore the same items in the light.

- The materials provide EB proficiency levels at the end of each lesson and activities for each level; beginning, intermediate, and advanced/advanced high students. For example, in the Scope for Weather, Lesson 2: Clouds All Around, the materials prompt teachers working with beginning students to ask simple academic questions giving students sentence stems like, "Name the _____, or List the _____."

Materials encourage strategic use of students' first language for linguistic, affective, cognitive, and academic development in English.

- The materials encourage strategic use of students' first language as a means to academic development in English. The Scope for Plant Life Cycles, Lesson 2: The Seeds of Life, includes a Differentiation strategy titled Adapted Text. The materials state that beginners develop lists of simple academic vocabulary words to use in a native-language glossary. Although the materials include strategies for teachers, there is no evidence of materials in languages other than English.
- The materials provide a "Learner Supports" document with English Language Support Strategies. The document includes strategies teachers can integrate into lessons to support students learning English as a second language. These categories include Learning, Listening, Speaking, Reading, and Writing. The document also contains details regarding how to implement the strategies with the materials based on the language proficiency level of students.

Accelerate Learning STEMscopes Science TX Grade K

Indicator 7.4

Materials guide fostering connections between home and school.

1	Materials provide information for students and caregivers about the program's design.	M
2	Materials provide information for caregivers on how 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 for students and caregivers about the program's design. Materials provide information for caregivers on how they can help reinforce student learning and development. Materials include information to guide teacher communications with caregivers.

Evidence includes but is not limited to:

Materials provide information for students and caregivers about the program's design.

- The materials provide information to share with students and caregivers about the program's design. For example, the materials include a parent letter template to send home that provides additional information about the materials, curriculum philosophy, and key features of the program that can be modified as needed.
- The materials inform students and caregivers about the program's design. A parent welcome letter includes an explanation of the 5E model, the statement that each Scope follows the TEKS, and that creative inquiry is the basis for learning in the program.
- In the K-2 Scopes, the parent letter highlights vocabulary, content, and activities students experience in class and suggested activities at home. The letter includes login credentials to access the program, which features some always-available resources that students can use at home, including a Glossary and a reference resource called STEMscopedia.

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

- Materials provide information to share with students and caregivers about the program's design and how it allows caregivers to reinforce learning at home through questions and activities. For example, in the Scope for Properties of Objects, the materials include a parent letter teachers can send home upon scope completion. The letter consists of key concepts, what students did in class, vocabulary information, questions for parents to ask their children, and a tic-tac-toe board with activities for students to do to reinforce the science concepts at home.
- The materials include Information to share with caregivers to reinforce learning at home. There is a Home School Connection page for each Scope. This page contains a vocabulary content section and suggested activities students can do at home to help continue classroom learning.

Accelerate Learning STEMscopes Science TX Grade K

Materials include information to guide teacher communications with caregivers.

- The materials include a parent letter in PDF format that explains materials taught with key concepts. Materials provide information to share with students and caregivers about the program's design. For example, in the Scope for Objects in the Sky, the materials provide a parent letter teachers can send home upon scope completion. The letter includes key concepts, what students did in class, vocabulary information, questions for parents to ask their children, and a tic-tac-toe board with activities for students to do to reinforce the science concepts at home.
- The materials include information to guide teacher communication with caregivers. The resources include Help Introduce Parents to STEMscopes page. This page instructs teachers that the resources have a one-page parent letter available for download, briefly describing the curriculum philosophy and some of the scopes' features. It also states that the teacher can modify the one-pager for distribution to parents and guardians of STEMscopes students.
- The materials include Student Data Sheets, allowing teachers to track or verify students' understanding and mastery of the standards with observational notes. Teachers can use these sheets to communicate student progress with the school or parents/caregivers. The data sheets include a detailed explanation of each level of mastery that allows the teacher to provide details about why a student is a novice, gaining proficiency, or an expert in each scope.

Accelerate Learning STEMscopes Science TX Grade K

Indicator 8.1

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

1	Materials are accompanied by a TEKS-aligned scope and sequence outlining the order in which knowledge and skills are taught and built 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 partially include year-long plans with practice and review opportunities that support instruction.

Materials are accompanied by a TEKS-aligned scope and sequence outlining the order in which knowledge and skills are taught and built 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 limited 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 TEKS-aligned scope and sequence that outlines the order in which knowledge and skills are taught. Under the Resources tab, the Planning with STEMscopes subtab provides teachers with a suggested scope order and pacing guide (by scope name), an outline of the Texas Essential Knowledge and Skills (TEKS) for each scope, and suggested pacing by instructional day.
- Teacher materials include a Standards Planning section within the Scopes tab, where the concepts and TEKS are listed in the order in which they are taught. While there is a suggested order of the scopes with the aligned TEKS, the materials state that "...the order of scopes in *STEMscopes* is suggested but not required; scope and sequence can be adjusted to fit the needs of the individual campuses and districts."

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

- Teacher materials include a Standards Planning section that details the TEKS that are addressed in the lessons, including core concepts, scientific and engineering (SEPs) practices, and recurring themes and concepts (RTCs).
- Materials provide teacher guidance for facilitating student-made connections to the RTCs under the Resources tab. In Unit 1, Properties of Objects, the aligned RTCs include patterns, cause-and-

effect, scale-proportion-and-quantity, systems, energy-and-cycling of matter, structure-and-function, and stability-and-change.
- Teacher guidance includes discussion prompts to help teachers facilitate student-made connections in all lessons for each scope.

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

- Materials suggest that teachers may choose to teach, or use, some parts of a module during the initial instruction and save other parts to assign to students at any time throughout the year. While this implies that materials provide review and practice of knowledge and skills throughout the year, materials provide limited guidance on spiraling content throughout the year to support mastery and retention.
- For example, materials suggest that during a scope, teachers use the Science Center to allow students to practice recently learned content; however, the guidance is unclear on how to address this within the Science Center. Beginning in the grade 1 materials, the Standards Planning section of each scope includes a “flashback” section that includes information regarding how the concept was addressed in the previous grade level. There are no “flashbacks” in the kindergarten curriculum.

Accelerate Learning STEMscopes Science TX Grade K

Indicator 8.2

Materials include classroom implementation support for teachers and administrators.

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- Materials are organized to facilitate ease of implementation, including guidance for using technology in the “Centers” component of each scope. Teacher guidance and recommendations for using the provided texts and recommendations are included throughout the components of each scope.
- The materials explain that the lessons are also designed to implement concept development over time. The Lesson Planning Guide provides support for the implementation of the covered concepts.
- The “Lesson Plans” tab at the top of any section includes specific lessons divided into individual tabs. Choosing one, a detailed lesson plan comes up that includes detailed teacher guidance for the activities included in the lesson. The tab includes a list of everything needed for that day's lesson and links embedded to refer back to it. It also includes whole videos if applicable for the day.

- Teacher guidance for providing scaffolds to support, enrich, and enhance student learning is included in the “Tiered Differentiation” section. Teachers can choose the strategy that works best for each lesson. For example, Unanswered Questions is a strategy to challenge students to think about what they do not know about a topic being studied. Other strategies include Think Alouds and Total Response Signal.

Materials have standards correlations, which includes cross content standards that explain the standards within the context of the grade level.

- The “Standards Planning” tab in each scope includes a list of the Texas Essential Knowledge and Skills (TEKS), Scientific and Engineering Practices (SEPs), and Recurring Themes and Concepts (RTCs). Information is provided about cross-content standards addressed and where they are addressed within the scope.
- The materials include TEKS for cross-curricular connections in the Standards Planning section of each scope.
- Teacher materials include guides in each Scope that explain student expectations for the content TEKS.

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

- The Planning with STEMScopes section includes the STEMScopes K-5 Texas Science Materials List. There is a comprehensive materials list for Kindergarten. The list includes the overall topic, the scope name, the lesson plan number, the name and quantity of the materials needed, whether the materials are per student, group, or class, whether the materials come in the kit or should be supplied by the school, and whether the materials are consumable or can be reused.
- The STEMScopes Kits List lists materials needed to implement the investigations referenced in the lessons in each scope.

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

- Teacher guidance for safety practices is under the Resources tab and includes “Lab Safety Information,” five Safety Posters K-2, a Safety Equipment PowerPoint, and a Safety Contract.
- The five Safety Posters include grade-appropriate pictures and rules for safe practices, including using safety equipment during investigations. For example, one poster has a bear wearing safety goggles.
- Teacher guidance for safety practices is addressed in lessons in the scopes. For example, the scope for Lesson 3, “Light Differences,” states to "Instruct students to stay in their seats while the lights are out.”

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Indicator 8.3

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- Teacher materials include a K-2 Science Suggested Scope and Sequence that includes a list of the kindergarten scopes, the aligned Texas Essential Knowledge and Skills (TEKS), along with the suggested pacing of instruction days. A note for teachers suggests that the order of the Scopes of STEMscopes is suggested but not required. The scope and sequence can be adjusted to fit the needs of individual campuses and districts.
- Materials include recommendations for the required time for lessons and activities. For example, Lesson 4 includes the following scheduling considerations; Circle Time- 5 minutes; Mini Lesson- 5 minutes; Wrap Up-5 minutes; Word Wall with Wallace the Wordy Walrus-5 minutes.

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

- Teacher guidance in the Development and Delivery of the 5E+IA STEMscopes Science Curriculum Model includes a sequenced pathway, resources, and support for meeting the needs of all students in K-12 science classrooms.
- The K-2 suggested scope and sequence includes a note that states the order of scopes is suggested but not required and can be added to the instructional time based on class time options.
- The materials include a TEKS and Topic Sequence that shows the order of instruction from least to most complex. For example, in kindergarten, classifying objects is taught before patterns in the sky.

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

- The Lesson Planning Guide provides teachers with the required time for lessons and activities. Each scope includes the following teacher guidance, "This schedule assumes there is a 35-minute period for science instruction each day. If 35 minutes of science instruction is not feasible, lessons and activities are designed flexibly to allow for cross-curricular integration with other subject areas."
- The Suggested Scope Order and Pacing Guide includes the Suggested Scope and Sequence for Concepts that helps the teacher plan instruction within a number of suggested days, which is provided by the pacing guide. If the teacher follows the suggested number of days, they can teach all content for the designated grade level in one year.

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Indicator 9.1

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

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

Not Scored

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

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

Evidence includes but is not limited to:

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

- The digital materials include an appropriate amount of white space and an overall design that does not distract from student learning. For example, in the Scope for Plant Life Cycles, Lesson 1: A Plant's Life, the student handout for What Do You See? Nature Walk has a clear main subject, topic, or purpose; the title and heading are prominent and clear; sections are marked with subheadings; the subheadings have a clear, relevant hierarchy; and the content is organized logically.
- Materials include an appropriate amount of white space and a design that supports and does not distract from student learning. The Scope for Weather and Air includes the digital reader, "My Weather Book." It is written with appropriate-sized text for students, the print is clear, and there are no distracting materials.
- The teacher guidance materials are appropriately designed with clear, designated places for important information. Teacher guidance documents can be located on the main landing page for each Scope and are designed so that teachers can locate important information easily for planning and implementation.

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, in the Scope for Plant and Animal Structures, the materials include vocabulary cards with clear and authentic images and graphics to define and support the new words students are learning.

- The materials embed age-appropriate pictures and graphics that support student learning and engagement without being visually distracting. For example, in the Scope for Plant Life Cycles, the Interactive Story Cards used for each lesson include age-appropriate pictures and graphics that support student learning and engagement.
- The Scope for Properties of Objects includes Safety Posters K-2 that embed age-appropriate pictures and graphics to support student learning and engagement without being visually distracting. The K-2 posters include an image in the middle and the lab safety rule on the top in bold. Under the picture is the rule in a single sentence.
- Materials in Scope for Magnets include interactive notebook handouts. In these handouts, there is an image of a hand holding a pencil, which signifies drawing. The picture is age-appropriate and clear.

Materials include digital components that are free of technical errors.

- The materials include digital components that are free of technical errors. In each scope, the teacher resources are free of spelling, grammar, and punctuation errors, inaccurate content materials or information, and materials are free of wrong answer sheets to problems.
- The materials include digital components that are free of technical errors. In each scope, the student materials are free of spelling, grammar, and punctuation errors, inaccurate content or information, and materials free of wrong answer sheets to problems.
- Materials are free of technical errors. Each scope includes a video and each video is clear and error-free. The student handouts and graphic organizers are free from spelling and grammar errors. For example, in the Basic Needs Scope, the Our Plant And Animal's Basic Needs student graphic organizer, all spelling is correct, and each arrow pointing to a box to complete is clear.
- The materials include digital components that are free of technical errors. Students can select the option of reading the virtual Active Reader online or using the text-to-speech feature. The materials are free of spelling, grammar, and punctuation errors.

Accelerate Learning STEMscopes Science TX Grade K

Indicator 9.2

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

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

Materials integrate digital technology and tools that support student learning and engagement. Materials integrate digital technology in ways that support student engagement with the science and engineering practices, recurring themes and concepts, and grade-level content. Materials 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. Digital technology and tools enhance student learning through such features as learning games, interactives, simulations, and online assessments. For example, in the Scope for Plant Life Cycles, in the Technology Center, students play an online game and watch the Science Rock video and Vocab Raps video. During the interactive game, students place the pictures to show what a plant needs to grow. The game also serves as a check for understanding to evaluate student understanding of the concept.
- The materials provide teacher guidance for using simulations, interactives, and related activities to support student learning. For example, in the Scope for Plant Life Cycles, Lesson 5: The Circle of Life, teacher guidance includes suggestions for time and pacing, as well as ways to assist students with making observations and participating in discussions. It states the activity will take 15 minutes. Students review the Interactive Story Card to review the plant life cycles. Then, students watch the Content Connections video, and the teacher is provided with questions and anticipated student responses. The teacher asks, "When does the cycle of the plant begin each year?" and the expected student response is Spring. Another question is, "In what ways do young plants look like their parents?" The expected student response is color and leaf shape.

- The materials integrate digital technology tools and support students' engagement with online games, Science Rock videos, and online assessments. For example, in the Scope for Basic Needs, students play a game by dragging basic needs pictures such as air and water to a bunny. In addition, they digitally write or draw the basic needs of any living organism.
- The materials include digital technology and tools that support student learning and engagement. The Scope for Magnets includes the student interactive notebook. In the online lesson, the virtual students will predict whether 12 objects are magnetic or nonmagnetic. Virtual students will drag a magnet to each object to test it. Virtual students will record their results digitally.

Materials integrate digital technology in ways that support student engagement with the 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, in the Scope for Plant and Animal Structures, in the Technology Center, during the Let's Sing Activity, students watch the Science Rock Song video and draw and write about what plant or animal structure they think is most important. They also write a response to answer, “What plant or animal structure do you think is most important?” Then, write the reason(s) they chose it. Students engage in grade-level content about plant and animal structures. This activity also embeds recurring themes and concepts for Structures and Functions as students identify how plant and animal structures function for their survival. Students also use scientific and engineering practices as they watch the Science Rock Song to collect evidence to respond to the two questions. They also explain by drawing and writing to respond to the questions.
    - For example, in the Scope for Plant Life Cycles, in the Technology Center, during the Let's Sing Activity, students watch the Science Rock Song video and pretend they are a seed to draw a story that shows what will happen to the plant in its life cycle, as well as write about the what is happening in the plant life cycle. Students engage in grade-level content about plant life cycles. This activity also embeds recurring themes and concepts for patterns as students identify the pattern of stages in the life cycle of a plant. Students also use scientific and engineering practices as they watch the Science Rock Song to collect evidence to respond to the two questions. They also explain by drawing and writing to respond to the questions.
    - For example, in the Scope on Basic Needs, students drag basic needs to the proper habitat after listening to a description of each need and then write digitally about the basic needs of living things. The game is self-correcting. If the picture of shelter is selected for a plant, the message "try again" will appear. Reoccurring themes such as cause and effect are present. Each "need" presented in the game is essential for survival. If the organism has needs met, it will survive.

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

- The materials do integrate digital technology; however, it does not provide opportunities for teachers and/or students to collaborate. Digital technology included in the materials lacks components like discussion boards, video conferencing, and cyber spaces that would allow

collaboration. Digital technology for student use lacks such components as platforms to post class discussions or enhance digital group projects.
- While the materials integrate digital technology as learning games, these 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 information was provided in documents outside of the review in the Rubric Tool. For example, the materials provide 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.
- Digital materials are accessible and compatible with multiple operating systems and devices. For example, MacBook, Google Classroom, and Canvas.
- Materials provide Technical Roadmap K-12, which gives information about Rostering and Integration Options. Rostering can be done with OneRosterCSV, Classlink, Clever, Schoology, EdFi, and Skyward. LMS Integration can be done with Canvas, Schoology, Google Classroom, Safari Montage, and SRG. SSO can be done with Classlink, Clever, Schoology, Canvas, Ed-Fi, and SAML.

Accelerate Learning STEMscopes Science TX Grade K

Indicator 9.3

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

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

Not Scored

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

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

Evidence includes but is not limited to:

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

- The digital technology and online components in the materials are developmentally appropriate for the grade level. For example, in the Scope for Plant Life Cycles, Lesson 3: Sweet Seedlings, in the Word Wall with Wallace the Wordy Walrus activity, students view the seedling Vocabulary Card and watch the Seedling Vocab Rap video to help students engage in learning about the vocabulary word through song.
- The digital technology and online components are aligned with the grade-level scope and approach to science knowledge and skills progression. For example, in the Scope for Plant and Animal Structures, at the end of lessons 1-6, there is a Word Wall with Wallace the Wordy Walrus activity that provides teachers instructions for implementing the activity that identifies new vocabulary and allows students to practice using it.
- The online components are developmentally appropriate and align with the scope and approach to science knowledge. For example, all K-2 Scopes have videos in the lessons to reinforce word wall words. Each video is an appropriate length. Most are no longer than 1 minute 20 seconds. In addition, each online component matches TEKS for that grade level. In the Scope for Basic Needs, one video is on Needs and is 33 seconds long. There are technology lessons sections for each lesson. For the Basic Needs section, the teacher is instructed to tell students to watch a Science Rock Video and draw about living and nonliving things.

- 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. Scopes include digital components with the interactive notebook that directly correlate with what the scope was taught for the week.

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
    - Teacher guidance for the use of 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."