Accelerate Learning STEMscopes Science TX Grade 7

Accelerate Learning STEMscopes Science TX Grade 7 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 6	100%	100%	100%	100%
Grade 7	100%	100%	100%	100%
Grade 8	100%	100%	100%	100%

Section 2. Instructional Anchor

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

Section 3. Knowledge Coherence

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

Section 4. Productive Struggle

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

Section 5. Evidence-Based Reasoning and Communicating

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

Section 6. Progress Monitoring

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

Accelerate Learning STEMscopes Science TX Grade 7

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

Section 8. Implementation Supports

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

Section 9. Design Features

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

Section 10. Additional Information

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

Accelerate Learning STEMscopes Science TX Grade 7

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 some scientific and engineering practices, recurring themes and concepts, and grade-level content as outlined in the TEKS.

Materials provide multiple opportunities for students to develop, practice, and demonstrate mastery of grade-level appropriate scientific and engineering practices as outlined in the TEKS. Materials provide multiple opportunities to make connections between and within overarching concepts using recurring themes. Materials strategically and systematically develop students' content knowledge and skills as appropriate for the concept and grade level as outlined in the TEKS. Materials include 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.

- STEMscopes provides three tiered levels of opportunities for students to demonstrate mastery of key vocabulary. These also serve as opportunities to practice and receive feedback, completing activities that are tiered to students' abilities while providing multiple opportunities for students to develop and practice planning and conducting experimental investigations. These activities include an iterative process, allowing students to create a design and then make improvements to demonstrate growth.
- Students are given opportunities to use various tools, collect data, and interpret results to demonstrate mastery of given engineering practices. All three of these skills are evident in the "Explain" portion of the "Physical vs. Chemical Changes" unit. Students are given the

opportunity to plan and conduct experiments, collect data, and analyze data in the engineering connection of the elaborate section of the lesson plan.

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

- The materials have the recurring theme of cause and effect that is evident through multiple opportunities including a starter activity that has students break down the relationship between action and reaction and cause and effect. A virtual activity provides practice with simulations that illustrate cause and effect and provides multiple opportunities to tie in connections between recurring themes.
- An overarching concept in middle school science is force, motion, and energy. In the “Explore” portion of “Newton’s 1st Law” unit, students are given an opportunity to build a model and test out forces through a simulation. This model persists through the materials as a recurring theme. Another overarching concept in middle school is organisms and the environment. In the “Explore” portion of the “Organism Organization” unit, students organize parts of an ecosystem. This method of organizing is evident throughout middle school.

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

- The 5E lesson format of the materials allows scholars the opportunity to build upon the knowledge that they already have to create a basis of knowledge for the topic. STEMscopes provides intervention and acceleration information for proper progression or scaffolding of material based on the demonstrated progress of students. Questions are provided to ask learners, guiding their understanding of phenomena and promoting student inquiry. Sentence starters or stems are also provided.
- Each unit or scope is a 5E lesson plan that allows students to engage, explore, learn, elaborate on, and be evaluated on the material. This develops knowledge appropriately using widely recognized, research-based rationale. In the exploration, students are given questions to stimulate their thinking and then are presented with scaffolded steps to learn about the material. This methodology allows students to construct their understanding of the content in a manner that supports retention.

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

- The materials meet the criteria for including sufficient opportunities for students to ask questions and plan and conduct classroom, laboratory and field investigations. This is evident in the “I wonder” portion of the lesson where students are challenged with not only disigning questions, but also designing investigations to answer questions presented. In addition, in multiple units the publisher provided an “inquiry opportunity” under the explore tab. This is an opportunity to design questions and experiments within the unit. Students are able to design investigations by creating an “I wonder” board and create testable questionsin the “inquiry opportunity” sections. By testing these inquiries/investigations, students are given the opportunity to problem-solve.

Accelerate Learning STEMscopes Science TX Grade 7

- Each unit in the materials has an "engineering connection" for students. This is set up so that students can address a problem by asking questions and setting up a model or an experiment. Through this process, students have an opportunity to problem solve and develop connections within content.

Accelerate Learning STEMscopes Science TX Grade 7

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.

- There are recurring themes and phenomena listed and identified throughout each lesson and unit of the materials. The 5E lesson format allows for the building of knowledge based on what learners already know or can infer from hands-on activities and questioning strategies. A provided pre-assessment allows the teacher to assess the background knowledge of each student.
- The materials provide a specific outline of where in the 5E lesson plan each support is embedded, including the constructing, building, and developing of knowledge through recurring themes and concepts. Each scope includes an overview where the particular phenomena is embedded for additional support and guidance. The recurring themes and concepts are also embedded and identified in each section of the 5E lesson model.

Accelerate Learning STEMscopes Science TX Grade 7

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

- The materials provide formal and informal ways of intentionally accessing students' prior knowledge. These tools identify ways to help with common misconceptions while accessing prior knowledge and experiences related to phenomena and engineering problems.
- The Engage phase of the 5E lesson format provides a pre-assessment to determine students' prior knowledge and uncover misconceptions. The scope overview provides guidance to the teacher on instructional delivery with consideration given to science and engineering practices and an introduction to the scope phenomenon.

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

- The materials specify the goals behind each phenomenon and engineering problem in the "Scope Phenomenon" section. The Content Menu includes a description, materials, preparation, activity, and differentiation breakout for each scope, providing an outline of student achievement. The materials provide answer keys with guides to the ideal responses for each question.
- The materials provide the scientific concept and goals behind the phenomenon being taught in a teacher background section. Detailed background is provided on phenomenons including camouflage, infrared images, the properties of water, energy, and how trees change color across and unique to the grade level. The Engage phase of the 5E lesson module in each of the scopes presents a scope phenomenon and utilizes multiple approaches such as videos, question prompts, or an activity to introduce the phenomenon.

Accelerate Learning STEMscopes Science TX Grade 7

Indicator 3.1

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

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

Meets | Score 6/6

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

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

Evidence includes but is not limited to:

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

- A vertical alignment of 6th grade and Chemistry TEKS shows that the content is developed and integrated across multiple grade levels. This alignment describes where content and skills correlate to other units within the same reporting category. The spiral opportunity across other units aligns with “Aqueous Solutions” and “Earth and Life.”
- Each unit or scope is labeled with the TEKS that correlate to prior and future units. This is evident in the "Vertical Alignment of Science TEKS" section. Each unit provides the student with a 5E model that allows the student to start slow by accessing prior knowledge in the Engage portion. As the students move throughout the lesson, they build their knowledge, completing labs and activities and adding new content that creates depth and understanding. A "Spiral Opportunity" in each unit further connects students’ new content knowledge to their prior knowledge.

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

- Each unit provides teachers with a 5E lesson model that allows students to access prior knowledge in the engage section. As the students move throughout the lesson, they build their

knowledge, completing labs and activities and adding new content that creates depth and understanding. Each unit provides an "Explain" section that has an “Interactive Student Notebook" component. The Interactive Student Notebook allows students to process the content by writing, organizing, and drawing their thoughts and understanding regarding the material. This component is part of a scaffold that allows students to develop a deeper understanding through reflection and clarification.

- The materials have a pre-assessment to assess what students already know, provide a section of “Scope Phenomenon,” which details what students should be learning, and offers progress monitoring or reflection measures for assessing students throughout and at the end of each unit. The provided “Input/Output Strategy” activity in the Explain portion of “Human Impact on Watersheds” has students complete a graphic organizer, describe an image, and complete a writing assignment.

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

- Each unit provides the students with a "STEMscopedia" in the Explain section of the lesson. The STEMscopedia provides students with a reading assignment over the level-specific core concepts that are clear and accurate. Each unit provides the teacher with a "Making Connections" section that provides the teacher with the relevant content standards and the science and engineering practices that align with the scope.
- Stemscopes provides a STEMscopedia that presents the grade-level specific core concept and a “Scope Overview” that provides the standards and recurring themes, concepts, and science and engineering practices the 5E lesson model covers. In each of the Elaborate activities, the preparation directions clearly identify how to implement the science and engineering practices.

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

- The “Scope Assessment” in the materials provides multiple question types to identify mastery of concepts. These include multiple choice, drag and drop, two-part questions, and open-ended questions. The “Claim Evidence Reasoning” activity provides opportunities for students to show depth and mastery of the main concepts in a given scenario.
- Each unit provides the teacher with an answer key to the multiple-choice assessment. Each question is aligned to and identified with a specific TEKS. In the “Organism Organization” unit, students are given a chart and asked to use the data provided to explain the organization of the nervous system. This mastery assignment directly relates to the TEKS of how organisms are organized.

Accelerate Learning STEMscopes Science TX Grade 7

Indicator 3.2

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

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

Meets | Score 6/6

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

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

Evidence includes but is not limited to:

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

- The materials provide support for the teacher to understand the horizontal alignment guiding the development of the grade-level content. The materials provide a vertical alignment in the "Standards Planning" section of the teacher resource. The scope overview provides suggestions for students to act as scientists and engineers as they solve problems related to different phenomena. The materials outline the science and engineering practices as well as recurring themes.
- Each unit of the materials provides the teacher with a list of TEKS that the unit connects with across other disciplines and grade levels. The Standards Planning tab is above the TEKS. Each unit provides teachers with a "Teacher Background" section, an in-depth reading of the unit that provides the teachers with everything that they need to know to teach the unit. Teachers can look at this section for the unit they are on, as well as review previous or future unit content. The Teacher Background section provides teachers clarity on what students should already know and what they will need to know for upcoming work.

Accelerate Learning STEMscopes Science TX Grade 7

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.

- Each unit in the materials provides teachers with an answer key with explanations and examples of concepts, a pre-assessment of prior knowledge at the beginning of the unit, and a section on identifying misconceptions that tell the teacher what students will read and how they may misinterpret it. In the grade 7 unit *Plate Tectonics,* the materials list the following misconceptions:
    - Students may think that mountains always form when two continental plates converge. Mountains can also form when an oceanic and continental plate converge (volcanic mountain ranges) and when two oceanic plates converge.
    - Students may think that the puzzle-like fit of the continents is the only support for the theory of plate tectonics. In fact, fossil and rock evidence are also supporting evidence for the theory of plate tectonics.
- The materials provide explanations and examples of science concepts in the teacher background section of the resources. The Engage phase of the 5E lesson model includes a pre-assessment and accessing knowledge section designed to uncover student misconceptions.

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

- STEMscopes provides a "5E and IA Instructional Model" page under the STEMscopes framework tab in the Resources section. This instructional model explains the 5E model and why it is important to use this instructional design. Under the "Planning Instruction" tab in resources, teachers are provided with the purpose of each section and what each student is expected to do in the different parts of the 5E lesson.

The materials include a rationale of the STEMscopes pedagogy that outlines the 5E + AI (artificial intelligence) Instructional Model. The explanation for the 5E model states, “Developed in the 1980s, the 5E Model consists of five phases: engagement, exploration, explanation, elaboration, and evaluation. Each phase has a specific function and contributes to the teacher’s coherent instruction and to the learners’ formulation of a better understanding of scientific concepts.” (Bybee et al., 2006) The 5E Instructional Model is an effective way of engaging students and successfully meeting the varied academic and learning needs of the students in their classrooms.

Accelerate Learning STEMscopes Science TX Grade 7

Indicator 4.1

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- Within STEMscopedia, STEMscopes provides students with the opportunity to read and understand the science that accompanies each topic. In the interactive notebook, STEMscopes provide strategies for writing, thinking, and acting like a scientist. They provide an activity called "The Traveling Paragraph" as well as a virtual explore opportunity for "Shifty Plates" that has students utilizing graphic organizers. A lab is provided, which allows students to act as scientists.
- In the "Earth and Life" unit, under the explore portion handout, students have to read about various planets using information cards. The students then have to talk to other students in order to sort the planets. When students agree, they then write about it and answer questions. All of this is evidence of acting like a scientist. In the "earth and life" unit, under the elaborate portion handout, students have to read a science article and then organize information for it in a graphic organizer. This allows students to practice reading and writing over science content.

Accelerate Learning STEMscopes Science TX Grade 7

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

- In the “Learner Supports” section within the teacher resources, the materials provide multiple opportunities for students to gather evidence and develop their understanding of age-appropriate concepts through advanced strategies. Students write questions to assess each other on the concepts they are learning and make new connections with related topics. Students also have the opportunity to use resource cards designed to incorporate Science and Engineering Practices.
- Within the STEMscopedia reading, students are asked questions and given definitions. Each page is chunked so that it is easier for students to read and understand. There are two “Interactive Science Notebook” activities that can be completed to analyze students’ understanding of the materials. For example, students are asked to complete a vocabulary prediction chart with the following instructions that will help them develop their understanding of vocabulary as they begin learning new concepts:
    - Before reading the STEMscopedia, students will review the vocabulary terms listed and write a short definition of each term in the second column. These will be the students’ predictions about the meanings of the terms.
- After reading the STEMscopedia, students will fill in the third column with an updated definition for each term and the fourth column with the clues from the text that helped them understand each term’s meaning.

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

- In the explain portion of the "Earth and Life" STEMscope, students must collectively build an interactive visual word wall. Students are provided with Picture Vocabulary, including the terms atmosphere, composition, ozone, and proximity. In addition, students are provided with a graphic organizer that details the factors supporting life on Earth. Students must use the Picture Vocabulary to complete the connected bubbles on the graphic organizer. In the acceleration portion of the "Organism Organization" STEMscope, students create "science art" by creating paintings of examples of organism organization. This painting can be done digitally or by hand and must feature all the hierarchical levels of organization in an organism.
- The activities provide multiple opportunities for writing and answering questions. There are graphic organizers with claim, evidence, and reasoning sections built in to continuously support students in developing their understanding of concepts. For example, in the grade 7 unit Organism Organization, students are prompted to write a scientific explanation of the hierarchy of the nervous system based on the data provided about the number of cells, tissues, organs, and organ systems found in the nervous system. STEMscopedia provides written communication to support students in developing scientific concepts. They utilize visual representation to accompany written material for multiple types of learners. When explaining solids, liquids, gasses, and their particles, the text gives a visual representation for students to reference for clarity.

Accelerate Learning STEMscopes Science TX Grade 7

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

- In the elaborate phase of the 5E lesson plan, the materials provide opportunities for students to focus on the Engineering Design Processes of defining a problem, brainstorming, and planning to design interactive models. For example, in the grade 7 unit Elements and Compounds, students must determine two or more examples of elements or compounds to use in place of plastic for a shopping bag. In the engage phase of the 5E lesson plan, the scope phenomenon challenges students in a “Think-Pair-Share" approach to ask questions and come up with answers to explain the phenomena. For example, in the grade 7 unit Distance-Time Graphs, students are shown a video phenomenon of the start of a motocross race. Students can work with partners to graph the motion of the riders at the beginning of the race.
- In the “Engineering Connection" section, students are expected to define their problem, brainstorm a solution to the problem or phenomena, and create a plan to discover the solution to the problem or explanation of the phenomena. For example, in the grade 7 unit Celestial Objects, students focus on redesigning, sharing, and critiquing proposed solutions and data presented in the lesson. A rubric is provided for students to self-assess throughout the assignment.

Accelerate Learning STEMscopes Science TX Grade 7

Indicator 5.1

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- At the end of the Explore activity in each STEMscope, students are required to state their answer to a question and use evidence and reasoning to support their claims. For example, in the grade 7 unit Thermal Energy, students participate in a station lab demonstrating conduction, convection, and radiation. In addition to questions, reflections, and conclusions, students are asked to write a claim based on the prompt, "How does a hot drink cool off?" They must provide evidence and reasoning for their claim.
- The lessons use Claims, Evidence, and Reasoning strategies. At the end of each Explore activity, there are open-ended questions for students to answer using evidence to support their answers. For example, in the grade 7 unit for Gravity, students must make a claim about the prompt, "What would you need to do differently to represent the planet Neptune in the model?" They must use evidence from the class demonstration of the movement of the planets and scientific reasoning to justify their claim. In each lesson plan's "Elaborate" sections, students use their knowledge of the topics to construct multiple output types and use evidence to support them. For example, in the "Writing Science Elaborate" portion of the grade 7 lesson about Natural and Artificial Selection, students are provided a quote from Richard Dawkins, "Natural selection is

anything but random," and asked to write an expository essay that compares natural and artificial selection and gives examples of each.

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

- Each lesson's "Explore" section includes "Vocabulary in Context." This section contains new vocabulary for students throughout the STEMscope. STEMscopes states that students should apply these words to the content that they are learning, as well as their responses to questions and work in their notebooks.
- The "Explain" section of each lesson includes "Picture Vocabulary." In this section, students utilize vocabulary in multiple ways, including playing games and interacting with a word wall. The materials also encourage students to integrate new terms in other STEMscope activities.
- Throughout each section of the lesson plans, key vocabulary is highlighted in the teacher's directives. The "Overview" section outlines specific vocabulary so that the teacher knows what keywords ensure student understanding and when they are used throughout the lessons.

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

- The materials provide opportunities for student discourse in the pre-assessment portion of the engage phase of the STEMscopes in an "Agree or Disagree" activity. For example, in the grade 7 unit Plate Tectonics, students are given cards labeled always, sometimes, and never. Students use these cards to respond to prompt questions from the teacher. The Explain phase of the STEMscopes allows students to play a game-like assessment to help measure their comprehension of scope concepts. For example, in the same unit's explain section, students play a vocabulary drawing game where they work in teams to guess the vocabulary word being drawn by a team member. They move around a game board based on the number of correct responses they accumulate.
- The explain sections of the materials utilize color cards, hand signals, and whiteboards to engage students in discourse. In the Evaluate phase of the 5E lesson model, the materials provide opportunities for students to construct and support arguments on the scope topic by providing claims with evidence and reasoning. For example, in the grade 7 unit Human Impact on Watersheds, students are asked to write a scientific explanation that describes which city is downriver from the new factory based on before and after percentages of lead, nitrate, and cadmium in four cities.
- In the pre-assessment section in the Engage part of each lesson plan, there is an opportunity for students to debate or argue their point of view. For example, in the grade 7 unit Earth and Life, students are provided three student opinions about the characteristics of Earth that allow life to survive. Students must either agree or disagree with the student's opinions.

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

- In the elaborate section of each lesson plan, students have the opportunity to justify their work and construct and present written and verbal arguments. These activities place students into groups to argue their reasoning for the content knowledge.

Accelerate Learning STEMscopes Science TX Grade 7

- In the elaborate portion of each unit, students have the opportunity to partake in a "Science, Engineering, or Technology Connection" activity that allows students to construct and present solutions to problems.
- In the engage portion of each STEMscope, there are various ways for students to engage in argumentation. While participating in "Sometimes, Always, or Never" and "Agree/Disagree?" students state their opinion and defend it when given a question.

Accelerate Learning STEMscopes Science TX Grade 7

Indicator 5.2

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

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

Meets | Score 4/4

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

Materials provide teacher guidance on anticipating student responses and the use of questioning to deepen student thinking. Materials include teacher guidance on how to scaffold and support students' development and use of scientific vocabulary in context. Materials provide teacher guidance on preparing for student discourse and supporting students in using evidence to construct written and verbal claims. Materials support and guide teachers in facilitating the sharing of students' thinking and finding solutions.T

Evidence includes but is not limited to:

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

- In each STEMscope, teachers are given a list of questions under "Activity" that not only provides questions to deepen thinking but also provides anticipated student responses. For example, in the "Elements vs. Compounds" STEMscope, teachers may ask, "What is water made of?" and the materials note that responses may vary, but answers that incorporate the word "atom" are correct.
- In the engage portion of each lesson, there is an "Accessing Prior Knowledge" section with a "Misconceptions" tab. The teacher is given words that are used and what students might think they mean versus what they actually mean. For example, in the "Elements vs. Compounds" STEMscope, students may believe the word "atom" is a name, but students need to know that it is actually the "smallest unit of matter."
- In the elaborate section of the lesson plans, students are provided specific extensions that include science, technology, engineering, and math connections. In these activities, teachers are provided a copy of student expected answers. Students are asked probing connections to deepen student thinking, and teachers are provided anticipated responses for students.

- Throughout each section of the 5E lesson model, teachers are provided detailed guides that anticipate student responses. In the overview section, teachers are also provided with anticipated student misconceptions so the teacher can prepare accordingly.

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

- In the 7th Grade STEMscope "Organism Organization," within the explain tab, there is a vocabulary game for students that gauges their understanding by "compar(ing) vocabulary terms to solidify vocabulary terms acquired during Explore and Explain activities." Additionally, there is a slideshow of vocabulary words with short, direct, and easily digestible definitions to present. Students are provided a graphic organizer that helps to put the terms presented into the correct order based on the hierarchy of the organization.
- The materials provide picture vocabulary slides and definitions. Students have the opportunity to build an interactive word wall, and vocabulary games are built into the STEMscopes. The materials provide tiered interventions for students; the use of the English Proficiency Standards (ELPS) and STEM Choice Boards provide scaffolding. For example, in the grade 7 unit, Gravity, teachers are provided with tiered intervention strategies that include having students read definitions aloud either before the game begins or during the game that matches definitions with academic vocabulary.

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

- In the elaborate section of the 7th Grade STEMscope on "Temperature and Kinetic Energy," there is an activity called "Inner/Outer Circle," where students are divided into two groups called "Heat" and "Kinetic Energy." The materials indicate that at the end of a designated time frame, students "should be prepared to discuss how the amount of kinetic energy can be changed and its effect on the temperature of an object or substance."
- In the elaborate phase of the STEMscopes lesson plans, students construct and support an argument using claims, evidence, and reasoning. The engage phase uses "I Wonder...." sentence starters for classroom engagement.

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

- In the "Engineering Connection" in the elaborate section of the 7th Grade STEMscope on "Physical and Chemical Changes," students participate in a design process, critique others' work, and then redesign their own work. The criteria include "Build a model of a reversible physical change," "Build a model of an irreversible chemical change," and "Compare and contrast your two models by sharing them with your class."
- In the elaborate section of the lesson plans, students are given the opportunity to complete a project following the "Engineering Design Process." This allows students to share their thinking and find solutions to problems that they are creating given the STEMscope topic.
- The "Engineering Design Process" in STEMscopes allows for differentiation based on student and teacher needs. The materials read, "If you have more time to dedicate to this challenge or if you

have specific students who would benefit from exploring all seven steps of the process, you can print the Engineering Design Process: Define the Problem, Brainstorm, Plan, Build, Test, Redesign, and Share and Critique blank template."

Accelerate Learning STEMscopes Science TX Grade 7

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.

- Within each scope and at every grade level under the engagement section, the materials provide a pre-assessment to activate student's prior knowledge. For example:
  Students will determine whether projected images are good or bad examples of vocabulary terms and make their choices known by physically moving to one side of the classroom or the other. They will then be assessed on their current knowledge of the content covered by this scope through a multiple-choice pre-assessment. This element is designed to uncover student misconceptions and provides a measurement of student learning to act as a baseline. It should not be taken for a grade.
- Every scope within each grade level ends with an assessment that enables teachers to assess student mastery from all the activities in the scope. This assessment is in the "Evaluate" section. The materials state, "Students will be assessed on the knowledge gained after completing the activities in the Engage, Explore, Explain, and Elaborate sections of the scope."
- In every unit under the "Engage" tab, there is a "Pre-Assessment and Accessing Prior Knowledge" tab that provides the educators with a baseline of the knowledge that the students know (diagnostic assessment). This resource informs the educator that "this element is designed

to uncover student misconceptions and provides a measurement of student learning to act as a baseline. It should not be taken for a grade."

- A summative assessment is provided at the end of each unit in the Evaluate portion of the lesson under "Scope Assessment." This assessment consists of multiple-choice and free-response questions.

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

- STEMscopes provides educators with a "Standard matrix" checklist of each TEKS, science and engineering practice, and recurring theme and concept. This resource checks which standards are taught in each unit. This comprehensive grade level matrix lists all of the content TEKS, Science and Engineering Practices (SEPs), and Recurring Themes and Concepts (RTCs) down the left side. The different types of standards are color-coded. The top of the matrix lists the STEMscopes units. The standards covered by the units are shown with stars in each cell where a standard is addressed in the materials. This matrix is evidence that all student expectations over the course are being taught and assessed.
- Each unit has a breakdown of the standards taught and assessed in a section titled "Standards Planning." This resource indicates where each standard is taught and assessed. For example, "7.9C is taught/assessed in Accessing Prior Knowledge, Scope Phenomenon, Explore, etc."

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

- Within each unit in every grade level, the post-assessment or "Scope Assessment" provides various ways for students to demonstrate their understanding of a concept. These include multiple-choice, open-ended, multi-select, and multi-part questions that reflect the new style of STAAR assessment questions.
- The materials provide a "Scopes Overview" outlining the standards to be taught and assessed, including the science and engineering practices embedded in the scope and recurring themes. This overview aligns with assessments in the evaluate portion of each unit. For example, in the grade 7 unit Natural and Artificial Selection, questions 1, 3, 5, and 6 are dual-coded with both a content TEK and a SEP.

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

- STEMscopes allow students to complete "Claim-Evidence-Reasoning" (CER), an assessment that has students apply their knowledge to a challenging question. For example, in the Earth and Life Unit, students "Write a scientific explanation that describes which planet humans would be most likely to inhabit."
- In each unit, students have various Elaborate assignments that range from applying their knowledge to engineering problems to answering science problems. The students must complete each assignment using their acquired knowledge and skills.
- Within each unit in each grade level, there is a "Claim-Evidence-Reasoning" that allows students to practice critical thinking. For example, in the grade 7 unit Thermal Energy, the CER prompt is, "Students will construct and support an argument that describes which location displays an

energy transfer through convection.” Students are provided a scenario of a grandmother boiling water on the stove to make lunch for her granddaughter. A diagram showing a clear pot with water boiling on a stove has confection currents depicted with arrows, heat escaping the bottom of the pot with wavy arrows, and steam escaping the top of the pot with wavy lines. Each of these features is labeled with a letter, A, B, and C. Students must use the labeled diagram as evidence to complete the prompt. The skill of using evidence to support a claim is applied to this novel context. .”

Accelerate Learning STEMscopes Science TX Grade 7

Indicator 6.2

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- In each unit, there is a Scope Assessment that has an answer key attached to it. This answer key informs teachers what the answers should look like so that the educators have a baseline for evaluating student responses. For example, in the unit Aqueous Solutions, the "answer to q1 is A while B is Incorrect. The solvent is the liquid, in this case, water. The solute is the solid that is being dissolved." The answer key shows that teachers are given reasoning and support for evaluating responses and why certain answers are correct.
- Each unit has a Claim, Evidence, Reasoning (CER) activity that proposes a question for students to answer in a free response. The teacher given an answer key with expected answers to evaluate the student's work. For example, in the "Aqueous Solution" STEMscope, the answer for the claim portion of the assignment reads, "Temperature, surface area, and agitation affect the rate of dissolution of a solid solute in an aqueous solution."
- Every grade level has a CER in each unit that has an answer key so that the educator has a reference to gauge student understanding of the material. Answer keys and possible answers are provided for each activity within each unit of every grade level.

Accelerate Learning STEMscopes Science TX Grade 7

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

- The materials provide learner supports, Tiered Intervention strategies, English language support, and advanced strategies in the "Teacher Resource" section.
- The materials provide literacy strategies and leveled readers at all grade levels to meet students at their reading level. In the Engage phase of the 5E lesson model, the materials provide pre-assessments and possible student misconceptions. Choice boards are provided to differentiate student activities that demonstrate learning.
- Teachers are provided with intervention activities to meet all the needs of students while conducting a lesson. Each intervention comes with tiered activities based on the students' needs.
- Teachers are provided pre-assessment and prior knowledge assignments for students. The teacher receives guidance on what to do next based on the student's's response. For example, in the Aqueous Solutions Unit, the materials state, "Changing states of matter, such as ice melting or water freezing, does not involve dissolving. Dissolving is when a solid disappears into a liquid."

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

- Each seventh grade unit, has a section titled "Pulse Check." It allows the teacher to gauge student understanding without a formal assessment. For example, "Students will play a game-like assessment to help measure their comprehension of scope concepts."
- Each seventh grade unit, has a section titled "Progress Monitoring and Reflection." It allows the teacher to gauge student understanding without a formal assessment. For example, "Students will rank their understanding of the scope's fundamental ideas prior to any formal introduction to the topic. Then, they will be asked to reassess their understanding at other checkpoints throughout the scope. Students will also track their data on TEKS mastery following the same checkpoints, and they will create bar graphs to better visualize the data."
- Teachers are provided with an End-of-Unit claims, Claims-Evidence-Reasoning activity, and an exam. These two resources determine if a student should do a reteach through the intervention activity or an extension through the acceleration assignment.

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

- The materials provide small group instruction to meet individual student needs through guided practice and tiered interventions at all grade levels. In the acceleration section of the STEMscopes, the materials provide English language support and advanced strategies such as choice boards to differentiate for students at all grade levels.
- Teachers are provided a tiered intervention resource under the resource tab. This resource informs educators how they should progress based on a student's performance. For example, it says, "administer pulse check," then based on how students score, the teacher puts a student in tier 2 supplemental or tier 2 targeted. Each category has different assignments that the teacher can use to meet the students' needs based on the data.

Accelerate Learning STEMscopes Science TX Grade 7

- Within each “Explore” section, there is a “Differentiation” section that guides how to meet the needs of different students on different levels. For example, in Aqueous Solutions Unit, the materials direct the teacher to assign Tier 1 students “to a group that is compatible with their skills and personality traits,” and assign Tier 2 students to “a group responsibility that matches their ability.”

Accelerate Learning STEMscopes Science TX Grade 7

Indicator 6.3

Assessments are clear and easy to understand.

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The Pre-Assessment within the 7th-grade Thermal Energy Unit does not show any bias, is scientifically accurate, and is error-free. For example, in question 1, the metal cubes are clearly differentiated using shading and are labeled with temperatures, including units. In question 4, the image of water in a pan over a flame is clear, and the direction of the arrows and bubbles accurately represents the convection process.
- The Post-Assessment within the 7th-grade Thermal Energy Unit does not show any bias, is scientifically accurate, and is error-free. For example, in question 1, the diagram of the boiling clear liquid is labeled accurately in three distinct locations. Most students would be familiar with the example of boiling water, regardless of background. Therefore, this question avoids bias.

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

- Within each grade level unit, a Pre-Assessment provides multiple questions with associated graphic images. These graphics are clear and developmentally appropriate. For example, the Pre-Assessment in the seventh-grade Plate Tectonics Unit has two questions with pictures and graphics. In question 4, the model shows different layers of rock. Each layer has a different background, and the layers are clearly labeled with “Oldest layer” and “Youngest layer.” These labeled models are developmentally appropriate for middle school. Question 5 presents a world map with outlines of plates superimposed on it. The map and plates are depicted in a clear, developmentally appropriate manner.
- Within each grade level unit, a Post-Assessment provides multiple questions with associated graphic images. These graphics are clear and developmentally appropriate. For example, in

question 1, a diagram of ocean basin formation is depicted. Arrows show the direction of movement, and each surface layer band is labeled with either normal magnetism or reversed magnetism through color coding. In addition, each surface layer band is labeled separately with letters A - L. This diagram is developmentally appropriate for middle school students to use to determine which surface-level band is the youngest.

Materials provide guidance to ensure accurate administration of assessment tools.

- The materials provide Pre-Assessments with predicted student misconceptions to guide their understanding. This information is available on all content standards within STEMscopes. For example, in the grade 7 Plate Tectonics Unit, student misconceptions include students thinking that mountains form when two continental plates converge, or that earthquakes only happen at transform boundaries. These misconceptions are followed by tiered differentiation strategies such as providing additional modeling guided practice and pairing struggling students with a partner in Tier 1. This support and guidance ensure that teachers can consistently and accurately administer assessment tools and use the assessment data to guide instructional decisions.
- In the "Claim-Evidence-Reasoning" section in each STEMscope, exemplar student responses are given. Each assessment piece provides an answer key. For example, in the seventh-grade Taxonomy lesson, teachers are provided sample student answer choices for claim, evidence, and reasoning. The sample student answers are clear and complete. The sample responses allow teachers to evaluate student answers consistently and quickly.

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

- Within each grade level and STEMscope, there are guidelines for how the educator should present the information to students. The resource provides step-by-step instructions and differentiation techniques. One tiered intervention strategy reads, "Prior to testing day, review with the student the keywords that will be used in written-response questions. Specify expectations associated with the keywords (i.e., compare means write at least two similarities and two differences)." Intervention strategies such as this example provide teachers with practical guidance to apply accommodations in instruction. When using these accommodations, barriers to learning, such as misunderstanding expectations, are removed. These strategies allow a more accurate demonstration of mastery of knowledge and skills.
- Another Tier Two intervention strategy in the resource states, "Be the timekeeper by giving the student one part of the test at a time. Continue providing the remaining test portions at a pace that enables the student to complete the entire assessment within the allotted time. If needed, provide the student with additional time to finish." This type of intervention strategy helps keep students from becoming overwhelmed during assessments. Pacing questions and providing extra time allows all students to demonstrate mastery accurately.

Accelerate Learning STEMscopes Science TX Grade 7

Indicator 7.1

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

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

Partial Meets| Score 1/2

The materials partially 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 not yet achieved grade-level mastery.

- Each unit provides a Differentiation section under the Explore tab with targeted instruction and activities for different tiers and emergent bilingual students. These benefit students who need extra support or have yet to achieve mastery of the content. Each unit also has an Intervention tab with a small group intervention resource for students who have not mastered the content.
- The intervention section includes Guided and Active Practice sections with multiple-tiered differentiation opportunities to accompany activities. These activities include open-ended questions for opportunities to explain student thinking, along with student handout pages. A concept attainment quiz is provided to check for understanding of key vocabulary, picture identification, and short-constructed response questions.

Materials provide enrichment activities for all levels of learners.

- The materials include an Acceleration tab that provides a STEM Choice Board for students who have completed their understanding of the topic. The STEMscopedia tab has “Advanced Strategies” at the bottom of the section for students who understand the content and need an additional academic challenge.
- All STEMscopes provide an Elaborate activity that is an enrichment for students after they have been introduced to the content. There are different types of activities to meet the needs of a variety of students. The activities also have differentiation and accommodations for students at different levels. STEMscopes also provide an Acceleration tab with a STEM Choice Board and an ART challenge for the unit. These activities provide another perspective or challenge for advanced or struggling students to support understanding.

Accelerate Learning STEMscopes Science TX Grade 7

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

- The materials lack a reference point or resource for teachers if students struggle to find the information they need "just in time" while completing the activities. While intervention strategies include materials to follow up or pathways, such as Tiered Intervention Strategies, English Language Support Strategies, and Advanced Strategies, very little teacher guidance is provided if students continue to struggle despite the directions.
- Materials include Response for Intervention (RTI) and Check for Understanding Learning Pathways. Materials do not include just-in-time learning supports that address struggles at the point at which they initially occur. No support for immediate and specific feedback, prompts, and cues to support student understanding during an activity or tips for maintaining student engagement are included throughout tasks.
- The intervention section for all scopes can be used as “just in time” learning. This section includes scaffolds for Guided Practice, Active Practice, and Tiered Differentiation outside the traditional 5E model. For example, in the grade 7 scope Temperature and Kinetic Energy, the intervention section includes a card game and a reinforcement note sheet.

Accelerate Learning STEMscopes Science TX Grade 7

Indicator 7.2

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

1	Materials include a variety of developmentally appropriate instructional approaches to engage students in the mastery of the content.	M
2	Materials consistently support flexible grouping (e.g., whole group, small group, partners, one-on-one).	M
3	Materials consistently support multiple practices (e.g., modeled, guided, collaborative, independent) and provide guidance and structures to achieve effective implementation.	M
4	Materials represent 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 various research-based instructional methods that appeal to a variety of learning interests and needs.

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

- Following the 5E lesson model, the materials include appropriate instructional approaches to get students' attention in the Engage portion by discovering connections to their current knowledge and building upon it for mastery. The materials reference recurring themes and scientific processes that sequentially move throughout the lesson to engage students and support student mastery of the content.
- STEMscopes provide labs, books, passages,, starters, math, and reading and writing in science. STEMscopes provide multiple avenues in multiple sections of the unit to assess student understanding, including the elaborate, explain, explore, and evaluate tabs.

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

- Throughout each STEMscope activity, students are put into different groupings to achieve mastery of the content. The materials provide teacher guidance in each lesson to support each type of grouping required.
- The guided practice provides whole group instruction, while the active practice provides partner learning or small group activities. The scope phenomenon provides individualized practice with whole-group instruction.

Accelerate Learning STEMscopes Science TX Grade 7

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

- In each unit, there are opportunities to have guided practice. In the “Human Impact on Oceans” STEMscope, students complete a think, pair, share activity as guided practice. In the STEMscopedia aspect of each unit, students are given an activity that allows independent practice by thinking and answering questions independently.
- Each 5E lesson model has a description, materials, preparation, activity instruction, and identified standards. In addition, there is tiered instruction and an English Language Proficiency Standard (ELPS) proficiency level prediction to help with effective implementation. In anticipated areas of questioning, there are listed student responses so the teacher has guidance and can gauge student achievement levels for effective learning.

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

- STEMscopes provide information in their STEMscopedia readings, highlighting Asian-American researcher Dr. Won Jun Choi and Filipino-American Microbiologist and Botanist Roseli Ocampo-Friedmann.
- In the STEMscopedia aspect of each lesson, various scientists are highlighted in each unit. In the elaborate portion of the activity under the “Science Today” tab, there is a story in the newspaper from somewhere in the world connected to what the students are learning while integrating diverse people and places.

Accelerate Learning STEMscopes Science TX Grade 7

Indicator 7.3

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- In the Teacher Resources, the materials provide opportunities for literacy development through various literacy strategies, including support for reading in science, activity connections, categorizing words, and round table reviews. Leveled readers are also provided to scaffold reading at appropriate reading levels for students. The materials provide support for English Language Learners (ELLs) and opportunities to scaffold for students through the English Language Proficiency Standards (ELPS) within the STEMscopes.
- Within each STEMscope unit, English Language Learner Accommodations are provided for the teacher based on the student's demonstrated language proficiency levels.

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

- When looking at suggested supports for Emergent Bilingual students, many encourage the initial use of a student's native language and then translate it into English. This technique is shown in each lesson's STEMscopedia and Writing Science aspects. It allows students to engage with the material, incorporate and appreciate it in their native language, and develop their knowledge and skills of the English language.
- STEMscopes provide opportunities for English language learners at different proficiency levels within each lesson section.

Accelerate Learning STEMscopes Science TX Grade 7

Indicator 7.4

Materials guide fostering connections between home and school.

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- For each grade level, a one-page parent letter can be sent home to inform parents and guardians about the 5E lesson model. This letter begins, "Our [campus/district] has recently chosen STEMscopes, an online science curriculum from Accelerate Learning, as our primary instructional resource for teaching science in grades [grades]...."
- The materials provide a detailed information sheet to send home about the content within the lessons; this includes key vocabulary terms, TEKS, and background knowledge. It also includes a hands-on activity with guiding questions for students to complete at home.
- The materials provide one parent letter that gives information about the 5E lesson design and the research behind this method of instruction. The letter states, "We will do many explorations in class to help students learn these concepts."

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

- Within each grade level and STEMscope, a section called Science Outside the Classroom reinforces science concepts in everyday life. For example, in the grade 7 unit Aqueous Solutions, the Science Outside the Classroom handout provides the text of the two content TEKS in the unit, a paragraph of background information, eleven terms to know, and an activity called Solution Speed. In this activity, students and parents or caregivers are challenged to create two solutions and time how long it takes the solvent to dissolve. The variable in the experiment is the temperature of the water.
- The materials provide a parent letter with information, including background knowledge, vocabulary terms, and covered TEKS. The letter outlines STEMscopes' instructional philosophy of

student learning through exploration and inquiry. In addition, it explains the “5E+IA” model and alignment of the STEMscopes program to state standards, including literacy, math, and music.

Materials include information to guide teacher communications with caregivers.

- For each grade level, a one-page parent letter can be sent home to inform caregivers about the 5E lesson model. The parent letter guides educators in communicating with caregivers at the beginning of the school year. The letter includes an explanation of the STEMscopes digital platform and how it functions instead of a traditional textbook. This letter is fillable to ensure that parents have contact information for the teacher and administrator of the school and is available for download so that teachers can distribute it in multiple ways.
- The Science Outside the Classroom section in each unit has an answer key that can be used by teachers and parents or caregivers to provide possible answers to the discussion questions at the end of the activity. This key is designed to help parents understand the outcome of the activity and how the activity connects to classwork.

Accelerate Learning STEMscopes Science TX Grade 7

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.	M

Meets | Score 2/2

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

Materials are accompanied by a TEKS-aligned scope and sequence outlining the order in which knowledge and skills are taught and built 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 review and practice of knowledge and skills spiraled throughout the year to support mastery and retention.

Evidence includes but is not limited to:

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

- The materials provide suggestions for a timeline (sequence) in a column labeled with numbers, and how long to spend on each TEKS (scope) in another column labeled "suggested pacing."
- STEMscopes/Accelerated Learning provides a four-column scope and sequence for grade 7 content. The first column indicates the “Unit Number”, the second column indicates the Title of the Unit”, the third column indicates the TEKS within the unit, and the fourth column indicates the “Suggested Time Frame” or “Amount of Time” needed to teach the topic. The teacher homepage for each unit provides a scope and sequence for the teacher, spiral opportunity, intervention, and acceleration activities.

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

- The grade 7 STEMscopes materials add math and reading/language arts core concept connections. Clear teacher guidance is provided for all three areas of student-made connections: core concepts, scientific and engineering practices, and recurring themes and concepts. Advanced Strategies are provided and include justification of choice.
- In the "scope overview," the teacher is provided with an outline of what students are going to be completing. This provides clear guidance as it aids the teacher in implementing core concepts within activities. The content standards, recurring themes and concepts, and scientific and engineering practices are clearly listed for each unit. Teachers are provided with step-by-step

instructions on how to prepare materials for activities, dialogue to have with the students while teaching the materials, and tips and tricks on how to assist students throughout the material.

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

- The resource provides a "spiral" section that encourages educators to reference past concepts and tie them into the current concept, and a "review" section that has activities and a quiz. This can be utilized at any point during the year for students that are struggling or for students that need practice or reinforcement of concepts.
- The material provides differentiated guided practice and active practice into tier one, two, and three interventions as well as opportunities for Small-Group Interventions. They provide guided practice that allows students to review with teacher facilitation and cross-content elaboration of concepts.

Accelerate Learning STEMscopes Science TX Grade 7

Indicator 8.2

Materials include classroom implementation support for teachers and administrators.

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- STEMscopes provides a Suggested Scope Order, Lesson Planning Guide, “I Can” Statements, Learner Supports, Literacy Strategies, and BOY and EOY Assessments. The resource provides teachers with a Scope Kit List, STEMscopes Pedagogy, ELL Strategies, and Advanced Strategies to enhance student learning.
- The materials provide enrichment activities and guide the teacher through their implementation. This is evident under the "Acceleration" tab which offers students extra assignments or activities to extend their knowledge beyond the given lesson. The product provides ample ways for implementing research-based instructional strategies for a variety of learners. For example, under the "Teacher Resources" tab, there are resources that address the needs of EB students, RTI students, and advanced students. This includes general activities to keep students engaged as well as a guideline on how to identify which activities to do with certain students. The resource embeds technology by providing a virtual lab with every TEKS, complete with an explanation for the teacher and a trial run to assist with implementation.

Accelerate Learning STEMscopes Science TX Grade 7

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

- The materials provide educators with standard correlations, listing out TEKS and their associated scientific and engineering practices and ELPS for each unit. In addition, math and reading language arts TEKS that are covered in the activities are specified.
- The materials provide cross-content correlations for math, reading, and the English Language Proficiency Standards (ELPS) along with opportunities for students to listen, speak, read, and write. STEMscopes provides recurring themes and concepts, reading in science supports at grade-level appropriate reading levels, and tiered interventions with English language supports.

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

- The material provides a comprehensive list of all equipment and supplies to support instruction by grade level. The material outlines all equipment by grade level and concepts including consumables that are categorized by scope name, topic, and how many materials by student groups.
- The resource provides a list of materials and safety equipment needed for each individual activity within a unit and collectively for the entire school year. This list includes how many items are needed and indicates if they are reusable or consumable. Every item on the list correlates with an instructional activity.

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

- While the materials Include ten science safety practices posters, there are no specific references to safety during the lesson. The materials include lab investigations with no safety warning beyond the science posters and a general guideline to "Follow all appropriate safety procedures while using lab equipment and different chemicals and liquids."
- Materials include guidance for safety practices, including the grade-appropriate use of safety equipment during investigations. The materials include ten science safety practices posters, and safety guidelines for individual scopes. The resource provides general safety practices by providing the educator with ten posters that can be printed and hung in the classroom. The posters explain generalized grade-level appropriate safety practices.

Accelerate Learning STEMscopes Science TX Grade 7

Indicator 8.3

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The materials provide a clear calendar for teachers to follow with 45 minutes anticipated for each lesson. The materials bundle pacing suggestions based on the complexity of the concept, designating two days of instruction for certain concepts.
- The materials provide a Suggested Scope Calendar that paces out activities over seven days and offers suggested activities for intervention or acceleration if needed. This is in addition to other scheduling considerations provided in the 5E lesson plans.

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

- The resource follows a 5E instructional model that follows a logical progression with appropriate pacing. The resource starts with an engagement that is simple and gets the students' attention. The student then dives deeper into the material by completing an exploration. After this, students participate in an explanation to make connections and expand on the knowledge of what they have already learned. The material provides intervention and acceleration suggestions to be used as indicated based on student demonstration of mastery. These strategies and structures are designed to reach all learners and address any missing gaps in knowledge or skills.
- Each unit provides a clear scope and sequence that includes tiered interventions that can be used as needed. Progress monitors are built within each lesson or day as a "pulse check" and means of formative assessment.

Accelerate Learning STEMscopes Science TX Grade 7

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

- The materials provide a suggested scope and sequence that specifies the time in days to be allotted per topic, allowing for flexibility in teaching or applying at various times during the school.
- The scope and sequence provided by STEMscopes incorporates approximately 150 days, roughly the number of instructional days in a given school year. The resources provide ample activities and differentiated lessons that can be utilized in a variety of ways to meet the needs of all student populations.

Accelerate Learning STEMscopes Science TX Grade 7

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 material includes an appropriate amount of white space and a design that supports student learning without being distracting. The grade 7 STEMscope on “Speed and Velocity” includes a clear visual of a compass rose beside a view of the top of a desk. This visual supports student learning by clearly outlining the cardinal directions for the student desk that are integral to differentiating between speed and velocity. No distracting elements were observed.

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

- The materials embed age-appropriate pictures that support student learning and engagement without being visually distracting. The materials have picture vocabulary slides that are age-appropriate and support student learning and engagement without being visually distracting. In addition, the STEMscopedia provides pictures and graphics that tie reading to the activities in the interactive student notebook. This connection between reading and notebook is engaging but not visually distracting.

Materials include digital components that are free of technical errors.

- No technical errors have been observed. For example, in the Teacher Background section of the lesson Physical and Chemical Changes in grade 7, properties of matter, states of matter, and endothermic and exothermic reactions all have colorful, accurate diagrams and graphics to support deep teacher understanding of the concepts.

Accelerate Learning STEMscopes Science TX Grade 7

Indicator 9.2

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

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

Not Scored

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

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

Evidence includes but is not limited to:

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

- 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. The Explore section of each Scope contains a virtual activity that includes content information, digital manipulatives, and self-assessment for students.
- The resource includes materials that integrate technology. For example, the “Aqueous Solutions" unit offers a virtual lab as an explore activity.
- In most content sections of STEMscopes, there is a virtual lab in the explore section and a virtual experience in the elaborate section.

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 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. The Explore section of each Scope contains a virtual activity that includes content information, digital manipulatives, and self-assessment for students.

- The materials integrate technology such as Tuva for the gathering and analyzing of data. There are examples in 7th and 8th grade where students use Tuva to analyze data sets on chromosomes in living organisms and debris in coastal locations.
- The materials provide technological simulations such as Phet simulations for student learning and engagement. Students can conduct these simulations individually on their devices or in groups.

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

- The materials integrate digital technology that supports student-to-student and teacher-to-student collaboration. This collaboration is evident in the Explore section of each Scope. This section contains a virtual activity that includes content information, digital manipulatives, and self-assessment for students. This can be completed individually, in pairs, in small groups, or as a whole class, allowing students to collaborate. The instructions ask teachers to "Prompt students to turn and talk to their partners" or "Allow students to continue turning and talking with classmates." These statements are evidence of student collaboration while completing the virtual exercise.
- In the 7th Grade Unit of "Temperature and Kinetic Energy," there is a virtual explore that allows students to discover the difference between different types of forces. The materials suggest, "As a class, debrief students using this questioning strategy: I Wonder…"
- In the 7th Grade unit "Plate Tectonics," there is a virtual explore that allows students to discover what the Earth used to look like. The materials suggest, "As a class, debrief students using this questioning strategy: I Wonder…"

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

- The materials are compatible with single-sign-on learning management systems, including "Clever, MS SAML, Google SSO, LTI SSO, ClassLink, and Schoology," according to the STEMscopes reference tool provided. In addition, the STEMscopes reference tool outlines the Content Integration ALI that supports integration with LMS systems through a Thin Common Cartridge (ThinCC) protocol.
- PHET, the main technology tool integrated into STEMscopes, is accessible on any platform or learning system. It is free to the public and not exclusive to STEMscopes.

Accelerate Learning STEMscopes Science TX Grade 7

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 virtual technology aspects provided within the STEMscopes platform are user-friendly and developmentally appropriate. The PheT simulations, TUVA, and virtual explores aid in the understanding of the content and follow the TEKS. For example, in the virtual explore portion of the grade 6 lesson, Spheres and Layers of Earth, a multilayered magnification of Earth is pictured with labels and short instructions for using the simulation. Students can zoom in and out on the pictures for more detail, and the simulation changes to highlight each labeled component. This detail aligns 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.

- The materials thoroughly provide teacher guidance within each unit in each grade level for every activity. For giving “Scope Assessments,” “Pre-Assessments,” and “Virtual Explore” activities, they provide suggestions as to what the instruction should look like. For example, in the Virtual Explore Small but Mighty in the grade 7 lesson Elements and Compounds, teachers are guided to lead students through a thinking activity to activate prior knowledge. In addition, they are prompted to provide interactive student notebook pages for students to bridge the virtual experience with the classroom reality.

Accelerate Learning STEMscopes Science TX Grade 7

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

- STEMscopes provides teachers with a letter to give to parents or guardians. This letter informs them about the technology aspect of STEMscopes and some important components that go with it. For example, “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.” In addition, teachers are guided to use the “Science Outside the Classroom” portion of the materials that provides background knowledge and activities that could be completed at home. These two resources work hand-in-hand to support student engagement.