

# HMH Into Science Texas Grade 6

## HMH Into Science Texas Grade 6 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.
- The materials include guidance that explains how to analyze and respond to data from assessment tools.

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- The assessments are clear and easy to understand.

## Section 7. Supports for All Learners

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

## Section 8. Implementation Supports

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

## Section 9. Design Features

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

## Section 10. Additional Information

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

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## Indicator 2.1

Materials are designed to strategically and systematically integrate scientific and engineering practices, 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 the recurring themes.	M
3	Materials strategically and systematically develop students' content knowledge and skills as appropriate for the concept and grade level as outlined in the TEKS.	M
4	Materials include sufficient opportunities, as outlined in the TEKS, for students to ask questions and plan and conduct classroom, laboratory, and field investigations and to engage in problem-solving to make connections across disciplines and develop an understanding of science concepts.	M

### Meets | Score 4/4

The materials meet the criteria for this indicator. Materials are designed to strategically and systematically integrate scientific and engineering practices, recurring themes and concepts, and grade-level content as outlined in the TEKS.

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

Evidence includes but is not limited to:

Materials provide multiple opportunities for students to develop, practice, and demonstrate mastery of grade-level appropriate scientific and engineering practices as outlined in the TEKS.

- Materials provide multiple opportunities within each unit for students to develop, practice, and demonstrate mastery of grade-level appropriate SEPs as outlined in the TEKS. Concepts present within the grade level build a foundation to prepare students for the next grade level.
- All lessons contain activities that utilize the scientific method in which students are given multiple opportunities to plan investigations, collect and analyze data, develop models, and communicate results.
  - The “Hands-On Lab” “Investigate the States of Matter” in the “States of Matter Unit” is designed for students to plan and conduct investigations, organize data, and develop/use models. Students use materials such as marbles, cups, and water to observe what happens to the shapes of a solid and a liquid in different containers.

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- The “Hands-On Lab” “Separate a Mixture” in the “Introduction to Matter Unit” creates opportunities for students to separate a mixture of various materials in order to define properties.
- A quick lab in the “Introduction to Forces Unit” requires students to use a deck of cards to ask the question and investigate, “How does a house of cards stay standing?” The students then analyze the forces that keep the card structure standing.
- The “Force, Motion and Energy Unit” has an opportunity for students to explore the relationship between chemical energy and reactant mass. Students plan a lab investigation, gather materials, and perform the investigation to collect data in order to test their hypothesis.

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

- The recurring themes are systematically placed throughout the product to continuously have the student revisit and practice the RTCs. All the units spiral recurring themes in order to help students make connections between and within overarching concepts. Teachers are provided guidance in order to consistently apply recurring themes in the classroom routinely and effectively. Teachers are encouraged to assist students to apply recurring themes to everyday life and future lessons.
  - “Exploration 1” in the “Introduction to Matter Unit” expects students to identify properties of materials, using circuit testers to classify properties of metals. Connections are made to other metals students use every day and their properties.
  - In the “Engage” section of the “States of Matter Unit,” students predict how patterns relate to how food coloring spreads in water and ice. In the same unit, students identify and apply patterns for the lab investigation “It’s in the Bag,” where students compare solids, liquids, and gasses to find patterns in the properties. Lastly, in “Exploration 1,” students identify which patterns help classify any matter as solid, liquid, or gas.

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

- The materials systematically build content knowledge required to gain understanding and mastery of the TEKS by using the “5E Model” for each unit (“Engage, Explore/Explain, Elaborate, Evaluate”) and focusing primarily on one content TEKS in each unit. This focus within each unit is clearly shown in the Table of Contents of the “Teacher’s Edition” as well as in each “Lesson at a Glance.”
  - When viewing the Table of Contents for the “Structure and Variation in Organisms Unit,” TEKS 6.13 is systematically developed from “Cell Theory” (TEKS 6.13.A) to “Characteristics of Organisms” (TEKS 6.13.B) to finally “Variations of Traits in a Population” (TEKS 6.13.C)
  - The “Introduction to Forces Unit” builds on information in a systematic and logical order. Gravity, friction, magnetism, and applied and contact forces are introduced initially so that students understand the following content. Calculation of net forces follows the introduction before students interact with the lesson on Newton’s Third Law of Motion.
- Grade 6 content knowledge and skills are taught using SEPs and RTCs so students can build, connect, and apply knowledge in new contexts. The materials combine the use of short quick

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labs and longer hands-on labs to reinforce the SEPs and RTCs. In each unit, the student is spending 40% or more of the unit integrating SEPs through investigations in order to reinforce understanding of the TEKS.

- The “States of Matter Unit” (TEKS 6.6.A) has multiple systematic opportunities for students to reinforce understanding, as four of the six planned lesson days integrate SEPs practices into investigations. Days 1, 3, and 4 have students completing a quick lab in which they use models and patterns. On Day 2, students complete the “Hands-On Lab” “Investigate the States of Matter” to compare and contrast patterns of change. Students also explain science concepts in the “Can You Explain It?” sections, such as “Why does the food coloring spread out in the glass of water but stay in one spot on the ice cube?”

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 provide many opportunities to use grade-level SEPs across various contexts throughout the product. Students engage in problem-solving and make connections across disciplines while developing an understanding of science concepts by performing “Hands-On Labs,” located in all lessons’ “Engage” and “Explore” sections.
  - The “States of Matter Unit” contains the “Quick Lab” “It’s in the Bag,” where students plan and conduct an investigation to compare properties of matter by observing a solid, liquid, and gas. Within the same “Engage” section is the “Can You Explain It?” portion, where students ask questions after analyzing food coloring spreading in a glass of water. Students stay in one spot on an ice cube in order to make sense of the phenomenon.
  - In the “Introduction to Matter Unit” (TEKS 6.6.B), the “Exploration 2” activity for the “Separate a Mixture” “Hands-On Lab” provides multiple opportunities to ask questions as well as plan and conduct an investigation while demonstrating safety during the lab. The exploration activity opens up opportunities for students to recall prior knowledge about different methods of separating mixtures and to gain new knowledge with inquiry-based questions. After students organize and record their data, they explain and communicate their findings.

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## Indicator 2.2

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

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

### Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- Materials consistently embed phenomena and problems across lessons to support the development of knowledge through authentic application and performance of SEPs, RTCs, and grade-level content as outlined in the TEKS.
  - The “Ramping up Energy Transfers” lesson employs the engineering practice “Develop and Use Models” and the recurring theme “Energy and Matter” by having students create a ramp ending in a plastic cup that must be moved using different-sized balls. The students design a procedure to determine how the mass of the ball and/or the height of the ramp affect the distance the cup moves. Students implement their plan and explain how the mass and the height of the ramp affected the movement of the cup.
  - In the lab “Model Energy Transfer in a Food,” students watch a video and discuss the relationship between organisms and ecosystems. Students draw their own food web and correlate the information learned from the video to their own food webs.
  - In the “Pure Substances and Mixtures Unit” (TEKS 6.6.B), students use recurring themes and concepts of scale, proportion, and quantity as they investigate “What’s in water?” In the same unit, students revisit this RTC as they begin to describe mixtures. The

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teacher reminds students to think back to their learning from the “What’s in the water?” “Quick Lab.”

- In the “Importance of Resource Management Unit” (TEKS 6.11.A), students use the RTC of patterns as they look for patterns in different types of resources used. In the same unit, students continue to look for patterns as they plan and conduct an investigation in the “Hands-On Lab” “Model Ocean Pollution from Land.”
- In the “Energy and Energy Transfer Unit” (TEKS 6.8.B), students make cross-content connections between forms of energy and energy transfers from chemical to thermal and electrical energy. Students see that electrical energy flows through wires and relate that to the heat and light that are generated by batteries.
- In the “Structure and Variation in Organisms Unit” (TEKS 6.13.A), students use recurring themes and concepts about “Structure and Function.” Students act as scientists and describe the importance of research and innovation in technological advances such as microscopes and telescopes and how those advances assisted in cell theories.

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

- Materials intentionally leverage prior knowledge and experiences related to phenomena and engineering problems.
  - In the “Models of Matter Unit’s” (TEKS 8.6.A) “Elicit Prior Knowledge,” the teacher prompts students to think about elements that they use at home or in their community, such as helium, oxygen, or copper. The teacher uses students’ prior knowledge to help students make connections to new academic concepts.
  - In the “Properties of Waves Unit’s” (TEKS 8.8.A) “Elicit Prior Knowledge,” the teacher prompts students to think about where they have noticed different types of waves in their daily lives.
  - In the “Energy and Energy Transfer Unit’s” “Conservation of Energy in Systems” lesson (TEKS 6.8B), students engage prior knowledge of past experiences with saving energy in households. Students may suggest turning off lights or closing blinds to keep the house cooler to save energy.
  - In the “Earth-Sun-Moon System Unit” (TEKS 6.9), students use prior knowledge about the causes of tides.

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

- The material clearly outlines for the teacher the scientific concepts and goals behind each phenomenon and engineering problem on the planning pages before each lesson.
  - The “Standard Overview” for the “Conservation of Energy in Systems” lesson (TEKS 6.8.B) lists lesson objectives for “Energy and Energy Transfer” and gives “Scientific and Engineering Practices” with descriptions that align with the standards.
  - In the “Importance of Resource Management Unit,” the learning objective and sense-making gives a clear idea of the purpose of the lesson. The “Standards Overview” for the lesson identifies the SEPs and RTCs and provides teacher background. The teacher material contains a “Making Sense of the Phenomenon” section to aid the teacher.
- The material clearly outlines student learning goals as they move through the SEPs.

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- In the “Importance of Resource Management Unit,” students complete a hands-on lab where they model ocean pollution from land. Materials outline the lesson goals: 1) “Make a prediction about how point-source and nonpoint-source pollution on land may affect water pollution. 2) Explain how the model represents point or nonpoint-source pollution. 3) Design a method to simulate precipitation with the model. 4) Compare observations with other groups and answer the question ‘Is there a difference in how point and nonpoint-source pollution on land impacts ocean pollution?’”



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## Indicator 3.1

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

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

### Meets | Score 6/6

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

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

Evidence includes but is not limited to:

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

- Materials include a “Scope and Sequence,” which clearly lays out and follows the suggested vertical alignment from the TEKS, helping students to build and connect knowledge and skills within and across units and grade levels. For example, grade 6 students learn about the concept of force and its components and representations. In grade 7, the motion of objects lays the foundation to discuss the effects of forces on the motion of objects; in grade 8, students build on prior knowledge and learn about the effects of forces on the motion of objects as they investigate the laws of motion.
- In grade 6, students learn about “Organisms and Ecosystems”; in Grade 7, “Energy and Matter in Ecosystems”; and in Grade 8, “Stability and Changes in Ecosystems,” creating a gradual connection within each grade level.
- Materials are designed for students to build and connect knowledge across units. For example, the “Energy and Energy Transfer” (TEKS 6.8A) unit’s “Explore/Explain” lesson activity asks students to use a chart to identify sources of energy. The activity uses “Checking for Understanding” to expand into other energy transfers, like chemical to electrical energy when batteries are charged with electrical energy. Later in the “Scope and Sequence,” the “Resource Management” (TEKS 6.11) unit’s lesson “The Importance of Resource Management” has an

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“Engage” activity where students predict and connect how energy is related to the consumption of solar energy and other forms of energy.

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

- The materials sequence instruction in a way that scaffolds learning to allow for deeper conceptual understanding. The “Energy and Energy Transfer” (TEKS 6.8A) unit’s “Explore/Explain” lesson activity asks students to use a chart to identify sources of energy. The activity uses “Checking for Understanding” to expand into other energy transfers, like chemical to electrical energy when batteries are charged with electrical energy. Later in the “Scope and Sequence,” the “Resource Management” (TEKS 6.11) unit’s lesson “The Importance of Resource Management,” has an “Engage” activity where students predict and connect how energy is related to the consumption of solar energy and other forms of energy. This scaffolds learning intentionally for students and creates a deeper understanding of energy around the globe.
- In the “Introduction to Matter” unit’s “Density” lesson, students first review volume and mass in the “Vocabulary Science Words” section. The background information prompts discussion on whether less dense items will float and more dense items will sink. The students look at how changing the mass or volume of an item impacts density. In “Exploration 1,” students explore density by calculating and comparing the densities of different objects. Students identify the pattern for substances that will float on water and understand the density of water. Students explore this further in the hands-on lab “Will It Float? Part 2” by placing objects, such as clay, cork, and marble in water. The hands-on lab deepens learning by tasking students to look at these same objects floating in salt water to explore how salt impacts water’s density.
- In the “Organisms and Ecosystems” unit, students investigate an ecosystem in their local area as outlined in the “Exploration 1” hands-on lab. By understanding a local ecosystem, students build upon prior knowledge of levels of organization and apply this across different ecosystems. As stated in the “Lesson at a Glance Planning Page,” students must apply their knowledge of levels of organization to answer “How is the coral reef ecosystem organized?” Within the unit is practice for students to identify abiotic and biotic factors, organisms, populations, and communities. This culminates with the students writing “Claims, Evidence, and Reasoning” about the phenomenon in the “Can You Explain It?” section.

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

- Each unit of the Teacher Edition has a “Standards Overview” where the materials clearly and accurately present grade-level-specific core concepts, recurring themes and concepts, and science and engineering practices. For example, the “Forces” (6.7A) lesson begins with a task to build structures using playing cards and then asks students to explain a phenomenon. Students are provided with vocabulary information followed by a series of exploration opportunities (exploring gravity, friction, magnetism, applied and normal forces) that are clearly connected to the core concepts. Science and Engineering Practices are present as students ask questions about the forces acting on a hoverboard, conduct investigations to differentiate between mass and weight, collect and analyze data to differentiate between mass and weight, and construct explanations when they write conclusions of their investigations on how friction depends on the surface material. The lesson also clearly presents Recurring Themes and Concepts when students work with cause-and-effect relationships in the “Science Themes” section.

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- In the “Energy and Energy Transfer” (TEKS 6.8A) unit’s “Explore/Explain” activity, students use a chart to identify sources of energy. The activity uses “Checking for Understanding” to expand into other energy transfers, like chemical to electrical energy when batteries are charged with electrical energy. Later in the year, to build sequencing and progression, the “Resource Management” (TEKS 6.11) unit’s lesson “The Importance of Resource Management” has an “Engage” activity where students predict and connect how energy is related to the consumption of solar energy and other forms of energy.
- In the “Matter and Energy” unit, students compare solids, liquids, and gasses in terms of their shape, structure, and volume. Students investigate the three states of matter before delving into atoms and molecules and making a model. The content further connects concepts by looking at a forensic scientist's job and how the content is used to solve crimes, tying in a real-world example.

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

- Materials define the boundaries of the main concepts that students must master for the grade level or course and include learning targets for grade-level concepts. Learning targets are presented with grade-level core concepts within each “Lesson At a Glance Planning Page.” Each TEKS has a corresponding lesson and lesson objective. Underneath each lesson objective is a student learning objective defined to guide the students toward mastery of the content. Each unit contains a “Check Your Learning” to assist the teacher in determining whether students are on the path to mastering the learning objective through formative assessment. In the “Evaluate” section of each unit, the material provides a TEKS item analysis. A chart shows the specific standards the lesson covers in order to assist in monitoring student progress.
- In the “Structure and Variations in Organisms” (TEKS 6.13) unit, students use conceptual learning as they describe differences in the fur color of mice that enhance chances of survival. “TEKS Quiz Analysis” charts at the end of the unit show specific standards to assist teachers in progress monitoring and TEKS mastery levels.
- In the “Introduction to Forces” unit, the lesson objective on the “Standards Overview” page clearly states that for TEKS 6.7.A, students are able to identify and explain how forces act on objects, including gravity, friction, magnetism, applied forces, and normal forces, using real-world applications. In the “Quick Lab” “Build a Card Tower,” the learning objective states that students engage with the concept of analyzing the forces involved in building a card tower. For the hands-on lab “Relate Mass and Weight,” the learning objective for students is to know that gravity is a noncontact force that attracts all matter, and the force of gravity depends on mass and distance. At the end of the “Explore/Explain” part of the lesson, the teacher has questions to ask from the “Check Your Learning” section to formally assess student learning.

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## Indicator 3.2

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

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

### Meets | Score 6/6

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

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

- In the "Teacher Resources: Grade 6," there is a "Program Overview," which explains the intent and purpose of the instructional design of the program. The "Built for Texas" section presents the following ideas of the design: the time to cover TEKS for lessons, the "5E" structure, each lesson focuses on one TEKS, flexibility, and how the program allows students to take ownership of their learning through activity-based learning and "Student Scientist" sections. The "Scope and Sequence" shows the vertical alignment of each standard in each unit and the RTCs and SEPs in each unit.
- There is a "Learning Journey" for grade 6, which describes horizontal alignment that guides the development of grade-level content. This "Learning Journey" is hyperlinked to the "Scope and Sequence" chart in the electronic Teacher Guide.
- The scope and sequence provides vertical alignment of grade-level content for TEKS 6.12, 7.12, and 8.13, showing RTCs in levels of organization in cells, organisms, and species survival. Guided development of these TEKS happens with exploration activities and opportunities for students to investigate, build models, identify organisms, and sketch locations within ecosystems within each TEKS unit.

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- The scope and sequence provides vertical alignment of grade-level content for TEKS 6.6A, 7.6A, and 8.6A. In grade 6, students are introduced to matter; in grade 7, students look at “Changes in Matter,” in grade 8, students continue to build their knowledge by studying “Properties and Systems of Matter.” The RTCs build from one grade level to the next; in grade 6, students identify and apply patterns to matter; in grade 7, students analyze and explain relationships between the structure and function of objects; and by grade 8, students are to identify patterns and examine and model the parts of a system.

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

- The “Standards Overview” page provides teacher background knowledge of the content, along with the common grade-level misconceptions within each lesson. An analogy that would work with students is also specified in the teacher’s background information.
- Materials provide misconceptions within each lesson. For example, in the “Levels of Organization in Ecosystems” unit, misconceptions are listed in the introduction of the unit, such as that living factors are more important than nonliving factors within ecosystems. One way to dispel the misconception is shown with images of water and air being nonliving factors that are essential for living things. Recognizing barriers to conceptual development is shown with a section to support challenging concepts and also lists teacher background information for key terms such as *organisms*, *population*, and *community* within ecosystems that have student challenges.
- Materials contain explanations to support teacher recognition of barriers to student conceptual development. For example, in the unit “Sun, Earth, and Moon Systems,” the teacher is made aware of the new vocabulary words that will be introduced in the lesson that the students are not used to in their everyday language. The teacher's background suggests using diagrams and models to help the students learn the concept of tides
- In the “Introduction to Matter” (TEKS 6.6) unit’s “States of Matter” Lesson, the teacher's background is provided in the “Standards Overview.” Some of the background information includes the forms in which matter exists, that matter is made of atoms, and that speed and attraction of the particles determine the state in which the matter will exist. Some of the misconceptions the material addresses are that particles making up solids do not move, that gasses do not matter because most are invisible, and that particles in a liquid do not hold together because the liquid is fluid.

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

- The materials provide a purpose for the instructional design of the program in the “Teacher’s Resources Program Overview.” The “Program Overview” shows how the program is built for student simplicity to support all outcomes and is built for Texas. Within these descriptions, the material explains how to incorporate student scientists so that students may take ownership of their learning through activity-based learning, how lessons are structured around phenomena and direct experiences, and how the Teacher's Guide is streamlined so that the teacher can launch into the content with minimal planning.
- The materials provide a framework explaining the main goal of the program. It begins by providing a “Lesson Overview” for each lesson within the unit in the “Lesson at a Glance,” where the TEKS objective is clearly stated as well as the plan for engaging students to take ownership

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of their learning by the “5E” method. Each lesson mentions one TEKS and covers that concept using labs and written and constructed responses; it builds up gradually on the content. In the materials, the teacher assumes the role of facilitator by guiding discussions and asking questions. The emphasis of the material is on students constructing their own understanding of a scientific idea through firsthand observations, hands-on labs, and developing and using models.

- For example, the “Force, Motion, and Energy” lesson for TEKS 6.7A identifies and explains how forces act on an object, including gravity, friction, magnetism, applied forces, and normal forces, using real-world applications. Students’ activities allow students to explain, model, and identify within these lesson objectives. Students clarify terms and write and express verbally or nonverbally, then explore through hands-on labs to understand the content. The lesson map lays out all the components of the lesson to cover all the parts of that TEKS. It provides individualized built-in mini lessons to incorporate each concept of that TEKS using the “5E” model.
- For example, in the “Earth's Structures” unit, objectives in the planning pages are clearly stated as to differentiate the *biosphere*, *hydrosphere*, *atmosphere*, and *geosphere* and to identify components of each system. Students' activities allow them to explain, model, and identify these lesson objectives. Students clarify terms and write and express verbally or nonverbally before exploring through hands-on labs to understand the content.

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## Indicator 4.1

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

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

### Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- Materials clearly define sensemaking and identify specific sensemaking behavior for students by consistently providing learning activities that support students' meaningful sensemaking through writing, thinking, and acting like scientists and engineers.
- The "Program Overview" in "Teacher Resources" states that "lessons are structured around phenomena and direct experiences that lead students through the productive struggle necessary for sense-making." The material provides specific sensemaking behaviors expected of students, such as 1) using a claim-evidence-reasoning ("CER") approach to take learning experiences and turn them into scientific explanations, thus allowing students to take ownership of their learning; 2) putting students in the scientist role as they make claims based on evidence-based learning by completing hands-on labs and other collaborative activities and; 3) through the embedding of "Students as Scientists" sections in which students are to use previous learning to think deeper about each science phenomenon.

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- In the “Forces” unit (TEKS 6.7), in the “Exploration 1” “Hands-On Lab” section titled “Relates Mass and Weight,” students read a balance and spring scale. Students then think like scientists as they share with peers why scientists would use a balance or spring scale to measure different items.
- The grade 6 Teacher’s Edition identifies and explains the sense-making behavior of students in the first “Exploration” lesson of the “Matter” unit. Exploring the properties of solids, liquids, and gasses allows students to investigate how matter is different depending on its state. Students are provided an opportunity to make sense of their observations.
- In the “Methods of Resource Management” lesson, the students’ task is to gather data to use as evidence to answer the driving question: “How can people use resource management to affect atmospheric carbon dioxide levels?” Students develop an understanding of how a scientist acts by creating models to use to study the greenhouse effect in “Exploration 2.” The students gather data and compare their results with their peers to find similar patterns. In step 9 of the analysis section, the students use the “CER” approach to support their claim about which bottle best models the greenhouse effect. In “Exploration 4,” students test and evaluate their prototype model before explaining in writing, using their collected data, if the prototype is an acceptable solution.

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 students with multiple opportunities to engage in purposeful and targeted activities with grade-level-appropriate scientific texts, such as pre-reading and vocabulary.
- Every “Engage” lesson in every unit includes a “Science Words” section in the Student Edition where students interact with new vocabulary.
  - In the “States of Matter” lesson, students are given a definition and must choose the correct corresponding vocabulary term. The lesson provides a picture and brief description for each vocabulary word: *atom*, *molecule*, and *kinetic energy*. After the vocabulary lesson, the material provides a vocabulary activity in which the student chooses one of the “Be Creative” activities to reinforce vocabulary comprehension. In this lesson, students can choose to make flashcards, a concept map, or write a paragraph using the terms for the vocabulary activity.
- In the “Conservation of Energy in Systems” (TEKS 6.8) “Exploration 3” activity, step 1 of the hands-on lab is to read about antarctic krill and their ecosystem. The student’s task is to take notes as they read and keep track of the relationships between organisms. Using the evidence from the article, students place the organisms in a food web and answer the prompt: “How is energy flowing through the food web?”
- In the “Seasons” (TEKS 6.9) unit, students read a brief paragraph about Johannes Kepler and his first law of planetary motion. This reading supports the hands-on lab “Model Orbital Ellipses,” in which students model Earth’s elliptical orbit. In “Part 2” of the lab, students read about eccentricity in order to help calculate the eccentricity of their ellipses from “Part 1.”



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

- Materials consistently provide many opportunities for students to develop and show understanding of the science concept being taught in each lesson and communicate scientifically through writing and various forms of graphics such as diagrams and graphs.
- In the “Introduction to Forces” unit, graphics are used in “Exploration 5,” where students create a diagram illustrating forces that cause motion in kinetic art models.
- Every “Engage” section expects students to explain a phenomenon through writing.
  - In the Engage section of the “Cell Theory” lesson, students are presented with images of certain specimens and are then tasked to describe and write what they see. Students prepare slides from different samples and observe the slides under a microscope. The students then draw the samples at different magnifications before building a data table from their recorded data.
- In the “Explore” section of the “Forces” unit, students draw a diagram with forces that are acting on the object and write a description of the image.
- Every “Evaluate” section requires students to summarize what they learned and produce a scientific argument based on evidence using the “CER” scaffold. There is also a reflection portion of every Evaluate section that requires students to write explaining how their understanding of the subject changed and how this new information connects with previously learned knowledge.
- In the “Potential and Kinetic Energy” lesson, students participate in a ball bounce quick lab in which they gather data in a data table, look for patterns, and then write about the connection between the height of the ball drop and the height of the ball bounce. In the same lesson for the hands-on lab “Roll, Roll, Rollback Can,” students build a rollback can, make predictions about the motion of the can, and write about how the types and forms of energy of the can change over the course of its motion. In step 6 of this lab, students are to include a sketch of the path the rollback can use and label the type of energy at the start, middle, and farthest point of its path.

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

- Materials consistently support students to act as scientists and engineers using phenomena to engage in learning throughout each unit. Students develop an understanding of the subject matter and construct explanations and/or solutions to the presented phenomenon.
- In the “States of Matter” lesson, students are trying to explain why food coloring spreads through a glass of water but sits on top of the ice. Students complete two quick labs and a hands-on investigation using SEPs, such as plan/conduct an investigation, organize data, and develop/use models to study the phenomenon. Students work as scientists as they engage in observations and experiments, create and use models, collect and analyze various types of data, and work with scientific explanations and sensemaking.
- In the “Methods of Resource Management” Lesson, students work as engineers by using engineering practices to figure out a solution to the solid waste problem, especially plastic waste.
- The hands-on labs, driven by phenomena and purposeful use of the SEPs, are used in all unit lessons.

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- The SEPs that students will use in the “Organisms and Ecosystems” unit include 1) Asking questions, 2) Demonstrate safety, 3) Use scientific tools, 4) Communicate information, and 5) Relate the impact of research.

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## Indicator 5.1

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

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

### Meets | Score 4/4

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

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 to 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.**

- Materials provide opportunities for students to use evidence to support their hypotheses and claims.
- Students are presented with a phenomenon (or an engineering problem) in the “Engage” section of every lesson. Here, students attempt to produce an initial explanation (or a solution to the problem). In the following “Explore” and “Explain” sections, students construct new knowledge. In the “Evaluate” section of each lesson, there is an opportunity for students to use evidence to support their claims in an effort to improve their initial explanations based on what they learned throughout the module.
  - In the “Student Digital” lesson “Organisms and Ecosystems,” students plan a way to organize the people in a photo of a crowded beach. Afterward, students observe the parts that make up a coral reef ecosystem. Throughout the lesson, students investigate and gather data about ecosystems in “Exploration 1, 2, and 3.” The students use the data from the explorations to answer the driving question, “How is the coral reef ecosystem organized?” at the end of the lesson.
- Each lesson has a driving question for the students to answer. At the end of each lesson in the Teacher Edition, information is provided on how to elicit student thinking for the claims,

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evidence, and reasoning (“CER”) process. Students review the driving question and write a short draft of their claim by reviewing data collected throughout the lesson and highlighting information to use as evidence and reasoning. Students write short annotations next to each piece of data to indicate how it relates to the claim. The material in the “Support for Student Claims and Reasoning” section has students discuss their CER with other students to receive peer feedback. Materials also provide teachers tips and encouragement for students who need to revise their claims, identify further evidence, and/or adjust their reasoning.

- In the “Evaluate” section of the “Introduction to Matter” unit, the material specifically prompts students to use vocabulary from the lesson to develop a claim that answers the driving question and use reasoning to describe how the data gathered can be used as evidence to support the claim.
- In the “Evaluate” section of the “States of Matter” lesson, students are expected to produce an explanation (their claim) to the driving question that was developed from the phenomenon “Why does the food coloring spread out in the glass of water but stay in one spot on the ice cube?” The Student Edition asks students to use evidence to support their claims.

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

- Materials provide opportunities to develop and utilize scientific vocabulary in context.
- In the Teacher’s Guide “States of Matter” lesson, students have support for vocabulary words by writing them down and adding examples or pictures to show meaning. Students are also hearing and speaking vocabulary words throughout the lesson. Emergent bilingual students repeat vocabulary words with peers, utilizing methods like “I Say, You Say.” Students use a “Language Development” worksheet to record new terms they encounter in the lesson. Materials also provide an anchor chart which students are reminded to use and refer to throughout the lesson.
- Every lesson has a “Science Words” section where the students recall vocabulary words from previous lessons. Students are provided with definitions and have to write down the word from the word bank, choose words from a choice of two provided, and match the word with its definition. The lessons also preview lesson vocabulary, where students are provided with the word and its definition. Students then take notes on the lesson vocabulary term as they encounter the words in the lesson.
  - In “Preview Lesson Vocabulary” of the “Importance of Resource Management” lesson, students click on flashcards to view the vocabulary words. Later, students are shown a list of vocabulary words such as *conservation*, *recycling*, and *environmental impact* to match with their correct definitions. Students are provided with different activities to help them remember and better understand vocabulary, such as creating a sketch note, making a flowchart, or writing a letter or poem.
- In each lesson, there is a vocabulary review and vocabulary activity at the end of the “Engage” section.
  - In the “States of Matter” lesson, students are expected to write a paragraph using the vocabulary words *atom*, *molecule*, and *kinetic energy*. Students are to write additional paragraphs as they learn more terms during the lesson. Later, students learn about the *states of matter* and *changes of state* before creating a concept map based on how those terms relate to the previously learned vocabulary words *atom*, *molecule*, and *kinetic energy*.

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

- Materials incorporate argumentation and discourse throughout lessons to support developing content knowledge.
- The Teacher's Guide "Forces" (TEKS 6.7) unit provides questions to pose to students to prompt brainstorming about the lesson. In the "Engage" section, students are asked, "What do you know about forces?" This question activates prior knowledge, helps spark discussion, and elicits student thinking through discourse. Further student thinking and discourse are elicited by posing the following questions to the class: "How come hoverboards don't touch the ground?" and "How do the different weights of people affect flotation?"
- The Teacher's Guide has instructions to ask students to discuss their arguments with their peers. For example, in the "Evaluate" section of the "States of Matter" lesson, the guide instructs teachers to have students discuss their claims, evidence, and reasoning with their peers.
- In the "Forces" unit, during the "Exploration 1" hands-on lab, the material directs the teacher to guide students in explaining how forces act on each tool and to share their ideas about why a balance or spring scale measures different objects. In the "Students as Scientists" section, students are to think of examples of why the data for mass versus weight might be important. Students then apply their learning about mass and weight to different scenarios, such as "Explain why when an astronaut's space suit weighs as much as a refrigerator on Earth, the astronaut is easily able to jump off the ground while wearing the suit on the moon" and "How does increasing gravity affect the mass and weight of an object?"

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

- Materials provide opportunities for students to create and present grade-level appropriate written and verbal arguments justifying their explanations to phenomena and/or solutions to problems using evidence acquired from the text and activities.
- The Teacher's Guide provides an activity titled "Can You Explain It?" in the "Evaluate" section in every lesson. This activity provides a question regarding the phenomena or problem presented at the beginning of the lesson. Students must answer the question with their own claim and support it with evidence gathered during the lesson. Students then share their work with their peers for feedback on the soundness of the arguments made to support their claims.
  - The "Can You Explain It?" question in the "Introduction to Forces" unit is "What would have to be true for the hoverboard in the video to become a reality?" Students will use both evidence and reasoning from knowledge and experiences gained from the lesson to support their claims.
  - The "Can You Explain It?" question in the "Introduction to Forces" unit is "How do forces combine when acting on a skydiver?" Students will use both evidence and reasoning from knowledge and experiences gained from the lesson to support their claims.
  - In the "States of Matter" lesson, students are expected to produce an explanation (a scientific argument) to the driving question that was developed from the phenomenon "Why does the food coloring spread out in the glass of water but stay in one spot on the ice cube?"

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## Indicator 5.2

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

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

### Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- Materials consistently provide guidance for the teacher on anticipating student responses and the use of questioning to deepen student thinking.
  - For example, in the "Introduction to Forces" unit, the material directs the teacher to ask, "How does the hoverboard not touch the ground? How does it stay at about the same height?" The "Differentiation Extra Support" of the "Gravity" lesson of this same unit elicits student thinking when the teacher is directed to ask questions on how increasing gravity will affect the mass and weight of an object. These questions help students apply and deepen their thinking to solve how forces (e.g., gravity) combined with mass and weight can fluctuate depending on given circumstances.
  - For example, in the "Engage" section of the "States of Matter" lesson, the teacher is provided with answers to look for from the students. Students explore the state of matter concept by comparing the properties of matter and are asked what properties were identified. The sample answer provided is "Students may use words such as clear, transport, liquid, flows, or note that it changes shape but not volume." In another portion of the "Engage" section, students are introduced to the phenomenon of food coloring movement in a glass of water before performing a lab and watching a short

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video. The teacher then leads a discussion as to what was observed in the video. Some sample answers provided are “The food coloring spreads out in the water” and “The food coloring stays pretty still on top of the ice cube.”

- For example, in the “Importance of Resource Management” lesson, the material directs the teacher to ask students to describe a pattern they observe in nature before students look at a map and are asked, “What patterns do you see in the map?” The materials always provide sample answers to each question. For this particular question, the sample answer is “Areas near the equator receive more solar energy than areas farther from the equator. Areas near the poles receive the least amount of solar energy.”
- Materials provide a natural progression of questioning that leads students to a deeper understanding of the concept and the ability to bring together the exploration and hands-on activities to the science concept.
  - For example, in the “Importance of Resource Management” lesson, one of the questions is “How might these patterns relate to the consumption of solar energy and other forms of energy around the globe?” The material is leading the students to think about energy in relation to location/latitude on earth and how it relates to resource management. A partial answer sample focuses on “people who live in places that receive less solar energy, such as near the poles, use more of other types of energy, such as fossil fuels.”

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

- Materials consistently provide guidance for teachers to support students' development and use of scientific vocabulary. There is guidance in the Teacher's Guide for lesson vocabulary, academic vocabulary, and prerequisite vocabulary. In all the lessons, in every grade level, the Teacher's Guide provides support for teachers to help students develop and use vocabulary in every “Engage” section, in the “Science Words” section for “Support for Vocabulary,” and in the “Be Creative” activities to help students use the vocabulary words in context.
  - For example, in the “Pure Substances and Mixtures” unit, the teacher material has scaffolding and support for vocabulary with the “Language Development Worksheet” and “Vocabulary Anchor Chart” for the vocabulary within this lesson. The lesson begins with clarifying the meanings of terms and having students follow teacher models to practice using terms on Day 1. On the other days within the lesson, students are given additional practice with oral, written, and nonverbal to demonstrate understanding. Students use vocabulary words from the lesson to develop a claim using the driving lesson question. The Teacher’s Guide also includes “Be Creative” activities for students to reinforce vocabulary comprehension within this lesson.
  - For example, in the “Organisms and Ecosystems” unit’s “Levels of Organization in Ecosystems” lesson, the “Vocabulary Overview” breaks the vocabulary down into three parts: “Lesson Vocabulary, Academic Vocabulary, and Prerequisite Vocabulary.” In the same unit, the material includes a review of the prerequisite vocabulary after the “Engage” “Can You Explain It?” section. Students match the terms *living thing*, *non living thing*, and *environment* to the correct definition. The material prompts the teacher to have students describe their favorite outdoor area and to use those three terms in the written description. Afterward, students preview the lesson vocabulary, which includes a “Language Development Worksheet” and a “Be Creative” activity.
- All lessons, at every grade level, begin with the lesson’s vocabulary words with the prerequisite vocabulary bolded and containing its definition.

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- For example, in the “Potential and Kinetic Energy” lesson, the teacher resource provides an image with each of the vocabulary words *gravitational potential energy*, *kinetic energy*, and *potential energy*. All of the vocabulary within the Teacher’s Guide correlates to the Student Edition.
- Materials provide embedded extra support activities at times throughout the lessons.
  - For example, in the “Organisms and Ecosystems” unit, the teacher’s prompt is to work with a small group of students who are still confused about the difference between *individuals*, *populations*, and *communities*. The teacher is to put pictures on cards and have students sort them so that they can use this vocabulary “correctly and confidently.”

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

- Material includes teacher guidance on preparing for student discourse and supporting students’ both written and verbal claims in various parts of the lessons.
- In the “States of Matter” lesson, the Teacher’s Guide directs teachers to provide feedback for students while they are crafting, revising, and sharing their claim, evidence, and reasoning (“CER”) with positive reinforcement; there are also tips for students who need to revise their claim, identify further evidence or adjust reasoning, and discuss their CER with peers in ways that explain the scientific concepts.
- In the “Evaluate” section of the “Introduction to Matter” lesson, teachers support students with supporting claims by using reasoning to describe how the data gathered can be used as evidence. For instance, food coloring and water in the glass are both liquids and move past one another causing the food coloring to spread out in the glass.
- Materials provide guiding questions for the teacher to use during the “Engage” section of the “Potential and Kinetic Energy” lesson. Students watch a video of a diver before the teacher asks, “What do you wonder about how energy relates to the diver and diving board?” In order to help with scaffolding, suggestions are given for sample questions like “What form of energy helps the diver go so high?” “When is the diver at their highest?” and “How far can the board bend?”
- In the “Organisms and Ecosystems” unit’s “Engage” section, the material directs the teacher to “help students communicate their ideas by showing examples of maps” and “encourage them to have an introduction, main points of their idea, and a conclusion.” In each “Exploration” activity, the teacher leads a class discussion as part of the routine established by the material. For “Exploration 2,” the teacher leads a class discussion about how increasing the size of the study area would affect the data collected in “Part 1” of the lab. In the hands-on lab “Investigate the Ecosystem (Part 2),” the material prompts the teacher to ask and answer questions when sharing with another group before refining the map. Scattered throughout the material are more prompts that support the teacher in facilitating student discourse.
- In the “Teacher’s Corner,” the material provides a lesson for teachers covering “Best Practices for Developing Evidence.” This article and video go into how to use evidence notebooks to organize their thinking, record observations, and perfect their language skills. The material states that “Into Science helps you (the teacher) teach students to support a claim by arguing scientifically using evidence they (the students) gathered.”
- In the “Teacher’s Corner” section “Make Science Fun: Facilitating Collaboration,” the material offers instruction on how to help student collaboration be successful in the classroom. For example, some tips suggested by the material to promote collaborative skills is to make sure students feel safe disagreeing with the teacher and each other, give students examples of how



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to properly respond to others, assign work that relates to situations in the real world that the students are excited about already, and prompt productive discourse among teams by asking questions like “What do you mean by that?” or “Can you explain what you’re seeing?”

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

- Materials provide consistent support and guide teachers in facilitating the sharing of students’ thinking and finding solutions. Facilitated group discussions can be found throughout the Teacher’s Guide.
- In the “States of Matter” lesson, the materials direct students to work together to research states of matter in hot air balloons while using their knowledge regarding patterns of properties of matter to explain how different states of matter serve the function of each component. In the “Elaborate” section, students share and explore their learning to find solutions to the driving questions. Students also write and draw, showing that matter changes from a solid to a liquid to a gas.
- In the “Properties of Matter” lesson, materials support student answers by directing teachers to facilitate learning from students as they complete statements to summarize the lesson. Materials state: “Matter is made of atoms and molecules and has the ability to change shape and volume as particles move. Check for understanding also supports solutions when students debate why one answer is better than another as they read summary sentences.”
- In the “Organisms and Ecosystems” unit’s “Levels of Organization in Ecosystems” lesson, the teacher performs a check for understanding found in the “Evaluate” section. The teacher reads a summary statement, and students respond by raising their hands to show which answer choice is correct. If and when there is a disagreement, the material prompts the teacher to “ask students to debate why one answer is better than another.”
- In the “Organisms and Ecosystems” unit’s “Levels of Organization in Ecosystems” lesson, a sample answer using evidence to support the claim is provided. The material directs the teacher to encourage the students to think about the “Connections to Consider” and discuss them with members of their community.
- In “Thinking Routines: Students as Scientists,” the material prompts the teacher to practice applying recurring themes and concepts to other lessons and to implement this routine of thinking and talking about RTCs as part of the classroom culture. For example, in the “Organisms and Ecosystems” unit, students are to think about and discuss how systems and system models apply to this unit and to other systems in everyday life.

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## Indicator 6.1

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

1	Materials include a range of diagnostic, formative, and summative assessments to assess student learning in a variety of formats.	M
2	Materials assess all student expectations over the breadth of the course and indicate which student expectations are being assessed in each assessment.	M
3	Materials include assessments that integrate scientific concepts and science and engineering practices with recurring themes and concepts.	M
4	Materials include assessments that require students to apply knowledge and skills to novel contexts.	M

### Meets | Score 2/2

The materials meet the criteria for this indicator. Materials include a variety of TEKS-aligned and developmentally appropriate assessment tools.

Materials include a range of diagnostic, formative, and summative assessments to assess student learning in a variety of formats. Materials assess all student expectations over the breadth of the course and indicate which student expectations are being assessed in each assessment. Materials include assessments that integrate scientific concepts and science and engineering practices with recurring themes and concepts. Materials include assessments that require students to apply knowledge and skills to novel contexts.

Evidence includes but is not limited to:

Materials include a range of diagnostic, formative, and summative assessments to assess student learning in a variety of formats.

- Materials consistently provide formative and informal assessment materials. For example, in the online resources, under "All Resources," there is a tab on "Assessment." All the assessments are available online, in a PDF file or an editable Word document. The assessments include Pre-assessments, unit Readiness Checks, Formative Assessments (Apply What You Know, Lesson Check and Evidence Notebooks), Making Sense of Phenomena Formative Assessments, Lesson Quizzes, unit Performance Task, unit Tests, You Solve It! Simulations, and Benchmark Assessments: Mid-Year Test and End-of-Year Test.
- Within each unit, the materials provide many opportunities to help teachers check for understanding at key points during the instruction. Examples include Elicit Student Thinking prompts, found in the "Introduction to Forces" unit. The materials prompt teachers to ask questions and review student force diagrams to see if the student can distinguish which object forces are acting and how they know. Another example is the Check Your Learning sections, as a quick check for understanding. Once students complete the hands-on lab, "Relate Mass and Weight," the materials provide four types of questions to check student understanding of mass, weight, and gravity. There is also a "Can You Solve the Problem?" section in each unit, where students sum up their learning from the unit by answering a Driving Question based on a real-

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world phenomenon through a claim-evidence-reason written format. The driving question for the "Introduction to Forces" unit is, "What would have to be true for the hoverboard in the video to be true?" Additionally, materials include practice questions to review the lesson and practice for the lesson quiz. These are just a few of the many examples of opportunities that the material provides for assessments, both formal and informal.

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

- Materials consistently indicate which TEKS are assessed and assess all student expectations as outlined in the TEKS by grade level. For example, the end of each lesson (Evaluate section) contains a TEKS Quiz, while in the Teacher's Guide there is an Item Analysis Chart showing which TEKS are covered and how many times it has been tested in the entire chapter along with the question number. For example, at the end of the "Introduction to Forces" unit, the Teacher's Guide provides a detailed TEKS Quiz Item Analysis Chart.
- Online Teacher's Guide resources include a tab titled "Reports" that provides Assessment results in colored coded graphs to include all student assessment, including proficiency, assessment average by student/date/class, average scores by unit lesson as well as printable results and export CSV for group recommendation.
- Materials contain details in the scope and sequence that identifies the specific TEKS, SEPs and RTCs that it will assess per unit. In the Scope and Sequence for the "Introduction to Matter" unit, the student assessments will cover the following: SEPs 1 through 4, RTC TEKS 5A, C and E, and TEKS 6.6. In the TEKS correlations, materials provide links that will take the teacher to specific questions, quizzes/tests, and skills banks that align with specific TEKS and RTCs. For example, if the teacher is looking for a quiz item that will assess a student's expectation for TEKS 6.6D, using scientific practices to plan experimental investigations, the link will take the teacher to item 4. Item 4 is a question over students designing an experiment to find the density of a goose egg. The material provides both TEKS correlation for each assessment item and the answer keys for every assessment.

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

- Materials consistently integrate the content TEKS, the Science and Engineering Practices, and the Recurring Themes and Concepts in assessments as applicable. For example, materials provide a supplemental item bank of SEP and RTC-aligned items for the teacher to utilize as they see fit. Some features of the Skills and Themes Bank are these items can be added to quizzes or summatives as needed to supplement content. The bank consists of anywhere from 35-80 items that are presented as multiple choice, drag-and-drop, hotspot, and multi-select items.
- TEKS titles and numbers are displayed at the top of each assessment. For example, Science and Engineering practice for TEKS 6.1-6.5 has a specific assessment instrument for recurring themes and concepts.
- Materials include "You Solve It" Simulations for students to demonstrate their ability to problem-solve and perform TEKS. These performance based tasks reveal students' understanding and mastery of the content as well as their thinking strategies by asking them to apply science concepts to real-world situations.

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- The Teacher's Guide provides online resources such as the Item Analysis Chart at the end of each Lesson, which covers all the TEKS along with the SEPs and RTC that are covered in the end-of-lesson TEKS Quiz.

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

- Material consistently poses questions in assessments that require students to apply knowledge and skills to new phenomena or problems. For example, in the "Newton's Third Law of Motion" unit, students have a section titled "Engineer It" where they design a virtual ritual experience for why gloves are needed in virtual reality. The Formative Assessment for this standard 6.7C asks students to apply what they learned about forces, relate their knowledge to a soccer ball being kicked, and reflect on what was learned.
- Materials include "Making Sense of Phenomena" which is part of a formative assessment outline in each lesson that gives students the chance to revisit anchoring phenomena and apply Claims, Evidence, and Reasoning models to demonstrate learning. Remediation for struggling students is given to teachers, which helps students connect investigative phenomena back to anchoring phenomena.
- Material also includes different Performance Tasks centered around real-world phenomena. The Performance Task "Save the sea turtle eggs!" has the student act as a marine biologist who must transport sea turtle eggs that are in danger. The scenario provides the student with information and requirements that would be necessary to keep the eggs safe during transport. The students must define the problem, conduct research, analyze data, construct a written explanation to explain their recommendation for the best solution, and prepare a presentation of their recommendation.

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## Indicator 6.2

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

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

### Meets | Score 2/2

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

Materials include information and/or resources that provide guidance for evaluating student responses. Materials support teachers' analysis of assessment data with guidance and direction to respond to individual 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 a variety of resources and teacher guidance on how to leverage different activities to respond to student data.

Evidence includes but is not limited to:

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

- Materials consistently provide guidance on evaluating student responses. For example, when assessments are given on Ed Online, there are reporting capabilities that provide data by class or student. From these reports, students can be grouped by ability level. This provides teacher feedback and guidance on what standards need reteaching. Under the Reports tab, in the Assessment Report section, a detailed report is provided for each TEKS. It also displays Assessment Proficiency which can be exported in CSV format or printed. This report allows ability grouping and gives teachers data to foster intervention for students who may not have mastered lesson TEKS. A list of TEKS is provided, as well as individual sample students to show data and facilitate future lessons.
- Materials consistently provide guidance for evaluating student answers only in Quizzes and Tests. There is a resource with the title "Assessment Guide Answer Key." This guide includes a key for every item in every quiz and test that appears in the program, along with a rationale for each choice that explains why a given wrong answer is wrong. This guide also contains a rubric to score student answers for the constructed response-type items. This guide can be accessed through the assessment section of the all resources section of the Discover page on the program website.

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- In each unit, the materials provide lab scoring criteria for each lab to rate students or groups in their participation in and understanding of the lab. The teacher will also find examples of acceptable answers and specific components to look for to guide them in evaluating student responses for the check for understanding that goes with each lesson, as well as, for the claim-evidence-reasoning written response that students complete at the end of the unit. In the "Resource Management" unit, the material in the Engage "Making Sense of the Phenomenon" points out five pieces of evidence that students should discover and apply to the Driving Question for the unit. In the Evaluate section, the material directs the teacher to check in as students complete their CER and includes tips for positive feedback. Some tips it provides are positive reinforcement for good examples and encouragement and guidance for those who need to revise. The material provides example claims and what support students should include to justify the claim.

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 consistently provide a Teacher's Guide that provides teachers with suggestions to direct to students as responses to checks for understanding. For example, materials provide various charts, graphs, and other images in Ed reports that will support the teacher in responding to data to inform instruction and facilitate tracking of student progress. The reports available are Assessment Reports that show information about student performance, Standards Reports that indicate whether students are meeting the state standard objectives, and Growth Reports that calculate a student's targeted and anticipated growth across the school year.
- Teachers can customize reports by skill, student, class, and grade level. The reports are color-coded to differentiate between below-level, on-level, and above-level for a quick visual. These reports provide guidance for targeted intervention for individual students and/or the whole class.
- Material provides guidance to the teacher on grouping recommendations based on assessment data. In the Reports Tab, teachers will find recommendations for student grouping based on skill and performance levels.

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

- Materials provide tools that consistently relay relevant information for teachers to use when planning instruction, intervention, and extension. For example, materials provide extension resources relating to concepts within the lesson. In 6.7A, the performance has a Hands-on Lab called "Forces Everywhere, Every Day," in which students must research and create a poster demonstrating force according to lab scoring criteria. Guiding student questions are given for teachers to informally check for understanding and predict and explain students' projects. Supports for students provide differentiation and extra support for claims and reasoning detailing feedback teachers are directed to provide students during intervention.
- Materials provide relevant information in the Assessment Report found under the Reports Tab. The reports can be broken down into an item analysis and also show the two lowest-performing standards. This Assessment Report provides recommendations for grouping and will produce a computer-generated grouping based on student mastery. It also allows the teacher to customize

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groups. The teacher can use the information from these reports to differentiate instruction, extension activities, and reteaching.

- Materials include Assessment Guide Answer Keys for all quiz, test, and skill bank items. In the Assessment Guide informational sheet, the materials provide reteaching support for all assessment items. If a student missed Unit 8, question #3, a drag-and-drop type question, the reteaching support states that students may need to review the systems by researching and then summarizing their functions. This guide also contains a rubric to score student answers for the constructed response-type items. This informational sheet provides a rationale for "why" answer choices are incorrect. The guide contains guidance for reteaching concepts related to each assessment item. This information about the content or skill students need to review, as well as suggested teaching strategies to support that review, can be found in the digital Answer Key.

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

- Materials provide a variety of student resources for teachers to use in response to student data. For example, materials provide direct instruction that includes background information, group discussion, suggestions for struggling students, extension and challenge activities, as well as ELPS resources for differentiation. In the Discover Tab, All Resources section, the teacher has access to extra resources such as Video-Based Projects like "A Prosthetic Hand," Project Worksheets, and Performance Task Activities.
- ELPS materials support emergent bilingual students with additional resources such as vocabulary builders, verbal/written question and answer sessions, and lab activities in each lesson to build concepts and reinforce lesson themes.
- Materials also provide online support, data reports, and recommendations for grouping students according to assessment results. Reteaching support for teachers can be found through Ed online. Materials provide three resources for reteaching in the Planning for Differentiation for the "Introduction to Matter" unit: ScienceSaurus Topic 253, Supplemental Lesson: Introduction to Matter, and Supplemental Lesson: Temperature. The material offers many of its resources in different formats such as Word, PDF, or Online Interactive Lessons for teacher/student choice. Materials also provide tips for extra support, such as in this unit, the teacher is to review the properties of solids, liquids, and gasses by making a class list, and then the teacher leads students to summarize details about each category. Materials in the Evaluate/Assessment section state that "more review and remediation strategies are in the Answer Keys on Ed."

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## Indicator 6.3

Assessments are clear and easy to understand.

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

### Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- Materials consistently provide assessments that contain items that are scientifically accurate and free from errors.
  - For example, in the "Forces" unit, the assessments contain scientifically accurate information regarding forces and avoid bias with multiple Exploration activities, provide background knowledge, and enhance learning to target all students from various backgrounds and ethnicities.
  - In grade 6, in the unit assessment "Introduction to Forces" (TEKS 6.7A) Quiz A, item 3 accurately states that friction acts against the forward motion.
- Assessments consistently avoid bias. For example, formative unit assessments test student knowledge acquired from the unit regardless of the student's background or origin of location.
  - For example, in the "Net Force" (TEKS 6.7B) Quiz A, item 2 has a picture that includes both males and females, as well as includes people from different cultures.
  - The test for the "Properties and Systems of Matter" unit assesses knowledge and skills learned in the unit and contains phenomena/situations in question stimuli that every student can come across regardless of their background.

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

- Materials consistently include assessment tools with clear pictures and graphics that are developmentally appropriate.



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- In the Evaluate section Practice Questions of the "Force" unit, there are clear and age-appropriate images shown alongside the questions. The Evaluate question contains a graphic of iron-filled rock and iron filings, and students must answer which image contains rock with iron.
- The pictures in the "Forces" unit show a student using two magnets, a girl applying force on a large box, and a group of children playing the tag of war are all clear and developmentally appropriate.
- In the "Potential and Kinetic Energy" Quiz A, a picture showing a girl tossing the ball has clear labels for all four positions showing the path of the ball. This is necessary as students must identify how the gravitational potential and kinetic energy of the ball changes from one position to the next.
- The "States of Matter" Quiz A contains pictures showing particle models of the three states of matter in a number of flasks and a table that shows the characteristics of different states of matter that are all clear and developmentally appropriate.
- The "Earth's Layers" Quiz A contains pictures and graphics of the Earth's Interior Layers that are developmentally appropriate. The layers are easy to distinguish one from another by the use of different shades, and the labels for crust, mantle, outer core, and inner core are clear.

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

- Materials include a formal assessment guide for teachers to ensure consistent and accurate administration of assessment tools.
- Materials include Ed online Teacher Help Tools that offer customizable assessments to provide teacher guidance on creating and administration of assessment tools.
- Materials include the Science Assess and Differentiate Instruction section in Ed online. This section contains a beginning of the year and formative assessments guide for online assessments, assigning assessments, reporting, and options for differentiated instruction.
- Materials provide an assessment guide referred to as Assessment Front Matter which provides guidance and details about each type of assessment. This includes tips for classroom discussions, Check Your Learning, quizzes, and summatives. This guide supports the teacher in the types of assessment tools that are within the material.
- Materials offer two options (A and B) for both quizzes and summative assessments. Both A and B options are equivalent, accurately assess the same TEKS and skills consistently, and can serve as an accurate reflection of student progress and mastery.

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

- Materials consistently include guidance to offer accommodations for assessment tools that allow students to demonstrate mastery of learning goals.
- Materials include guidance for teachers to offer accommodations for ELPS and EL Learners. The ELPS includes assessments that are in multiple languages and offer review and remediation strategies in the Answer Keys in Ed online. These assessments are aligned to the learning goals and show progress monitoring with TEKS bullets in each unit as well as assessment reports that highlight standards met or unmet for every student.
- Materials provide on-level and modified versions as well as audio support for all assessments. Another example is found in the interactive online version of the Student Edition. The video clips use a closed-captioning feature to help all students see and hear scientific content.

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- Materials provide text-to-speech features in the online Student Edition. Students can play and pause the text read to them for the assessments. They also can adjust the volume. Under the Accessibility options, students can choose Color scheme, font size, and zoom features while taking the assessment.
- Materials include a Skills and Themes bank that teachers can use to modify and add items to quizzes and summatives. With the use of the Skills and Themes bank, a teacher can customize quizzes and summatives to differentiate for student learning levels.

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## Indicator 7.1

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

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

## Meets | Score 2/2

The materials meet the criteria for this indicator. Materials include guidance, scaffolds, supports, and extensions that maximize student learning potential.

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

Evidence includes but is not limited to:

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

- Materials include teacher guidance for scaffolding instruction and differentiating activities for students who have not yet achieved mastery.
  - For example, in the Exploration 1 section of the "Cell Theory" unit, extra support is provided to help students clearly see objects under different magnifications. Further help is provided to the students with articulation, recording, and analyzing observations.
  - In the Engage section of the "States of Matter" unit, support is provided to the students by the teacher reviewing the properties of solids, liquids, and gasses. Materials then instruct the teacher to lead the students to self-summarize the properties of solids, liquids, and gasses.
- The Planning for Differentiation section of the Teacher's Guide for every unit provides guidance for teachers.
  - For example, in the unit "The Earth-Sun-Moon Systems," the "Seasons" lesson, the teacher can find materials for reteaching and extension resources. Throughout the "Season" lesson, the materials provide Differentiation Challenges or Extra Support. For example, after the Quick Lab: "The Four Seasons," the challenge asks students to write descriptions of seasons in their own words and work with a partner to see if they can correctly guess the season. In the "Seasons" lesson Hands-on Lab, "Model Sunlight Distribution," the differentiation to scaffold learning is to provide extra support for students struggling with how to compute the partially lit squares.

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Materials provide enrichment activities for all levels of learners.

- Materials provide enrichment activities for all levels of learners
  - For example, in the online Student Edition, the Engage section for each TEKS has a variety of different ways to show mastery of the concept for the students. It gives the students the ability to choose what path they would take in order to show an understanding of the concept.
- There are multiple Elaborate lessons in all units, which allow students to extend their knowledge and apply new knowledge to new situations.
  - For example, in the Elaborate section for the "Levels of Organization in Ecosystems" lesson, the students can choose to further their knowledge by selecting Research on Biomes, Populations, Community and Ecosystems, and Science Themes-Systems and System Models.
- Each lesson provides Exploration sections for the student to learn the concept encompassing some different learning styles. In the "Potential and Kinetic Energy" unit, there are four different Exploration activities provided. The students use cans to analyze the energy in a system, explore potential and kinetic energy, use chemical energy, and compare energy in systems.

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

- Each lesson provides scaffolding for vocabulary, extension or reteaching activities, challenges, and questions for teachers to use as a means of supporting learning for students.
- In the Teacher's Corner, there is a variety of guidance for teachers in the form of videos and articles.
- In the "Potential and Kinetic Energy" lesson, for students who are struggling to generate questions about the phenomenon for the "Can You Explain It?" section, the product suggests telling students to look for places that the diver on the diving board changes, or how energy might relate to the diver diving into the pool. For vocabulary (Support for Vocabulary), one suggestion given is for students to write down the terms and add examples or pictures. The Planning for Differentiation section of the material provides an extension activity, "You Solve It: How Can You Transform Potential Energy to Do Work?" for students who are ready to dig deeper. In the Hands-on Lab Exploration 3, "Use Chemical Energy," the material provides a differentiation component for learners who need a challenge and for learners who need extra support. For example, the learner who needs a challenge is to make a list of experiences with containers that have exploded (i.e., soda can), and then find out if it was due to a chemical reaction. For the students who need extra support, the teacher has directions to take students through a question-answer discussion approach to help students realize that the chemical reaction in the lab caused carbon dioxide gas to form, making the balloon expand, like in a can of soda.

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## Indicator 7.2

interests and needs.

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

### Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- Materials include a variety of developmentally appropriate instructional approaches such as inquiry-based learning centered around real-world phenomena, collaborative learning, hands-on explorations, a Claim-Evidence-Reasoning (CER) approach to communicate findings with scientific explanations, and an instructional model centered around a driving question about a real-world phenomenon.
  - In the "Organisms and Ecosystems" unit, the real-world phenomenon is about how the coral reef ecosystem is organized. Collaborative and hands-on inquiry based learning takes place as students develop an organization scheme for a busy beach, investigate an environment and gather data on the biotic and abiotic factors, and practice the mark and recapture method for estimating population size. At the end of the unit, students write a claim about the driving question, use evidence gathered throughout the lesson, and reason based on the scientific concepts learned to support their claim.
  - To explore the "Introduction to Forces" unit, students perform a lab on stacking cards. They observe an image in a group, discuss and write down how the hoverboard floats and carries the person, read the text and answer questions based on the reading, and

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do more Hands-on Labs with repeated trials to gather data and then analyze it. Students are provided with ample opportunities to understand and grasp the concept.

- In the "States of Matter" lesson, students observe a real-life phenomenon regarding the states of matter. They generate questions they have about this phenomenon and attempt to explain why and how this phenomenon occurs. They answer some questions, which collectively help elicit student prior knowledge. The Anchor Phenomenon is visited in the Evaluate lesson, and students' initial explanation of the phenomenon gets revised based on the new information and evidence collected in the Explore lessons.

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

- Material consistently uses flexible grouping such as independent learning, small group activities, paired work as well as full class activities.
- In the "Cell Theory" unit, students work independently to observe cells under microscopes before participating in a full class discussion about what was observed, and then in small groups, to record everything about images viewed under the microscope.
- In the "Seasons" unit, students work in partners to model the sunlight distribution before then working in groups to model the patterns of sunlight. Afterward, students then work on their own to model the orbital ellipses.
- In the "Resource Management" unit, the teacher is directed to "Lead a Group Discussion." Once students start the Exploration, the grouping is either small groups or individuals. In Step 2 of the Hands-on Lab, "Model Ocean Pollution from Land," the material provides the teacher with tips on how to "Manage Small Group Work." The students do independent work for journaling, practice questions, and CER writing. In some places, the material suggests students work with a partner or in a small group. The product consistently makes suggestions for grouping based on the given task.

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

- Materials provide guidance to teachers on how to use the instructional strategies for student mastery of the concept.
- In the "States of Matter" lesson, students observe a phenomenon as a class and have a whole class discussion as their teacher leads it. They work in collaborative groups to conduct investigations and make sense of models (physical and pictorial models of structures of different states of matter). Students then work independently on answering questions in the "check your learning" portion of each Explore section and the "summarize/explain it" portion of each Evaluate section.
- There is detailed guidance in the Teacher's Corner section. For example, an article titled "Make Science Fun: Facilitating Collaboration" provides ample guidance on facilitating collaboration in groups.
- In the "Energy and Energy Transfer" unit, students work in groups of 3-4 to complete the "Ball Bounce Quick" Lab. The teacher leads the whole class in a discussion when introducing the phenomenon and driving question. In the Elaborate section, students are to collaborate to create an infographic. For the CER and practice questions, the material suggests students work independently; this is the same for every CER in every lesson.

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

- Materials take an approach of equitable representation when it comes to diversity. Diversity in images and references is equitable based on ethnicity, gender, and age. Information in teacher guidance documents, student materials, scientific texts, and assessments does show diversity, and is equally represented in age, race, ethnicity, body shape, size, and hair texture. The "Why It Matters" section on the Reflection screen of each lesson gives students an opportunity to make connections to their own life or community.
- Materials include representations of rural and urban communities, including pictures such as sheep shearing, corn crops, a NASCAR racetrack, a school bus dropping off students, and steppe farming.
- Materials include images that show scenery from global communities, including a family from Australia eating together, a person working in a rice field, and a Canadian scientist.
- The labeling of images with demographic information is included in alternative text (ALT text), as appropriate. Students who can see the images can interpret the demographics for themselves. Students using screen readers can access this information through the ALT text.
- Materials positively portray a diverse group of scientists, engineers, and people who have contributed to science in the Elaborate Overview found in each unit. For example, in the "Energy and Energy Transfer" unit, Path 2 spotlights Dr. Ellen Ochoa, an electrical engineer and astronaut who became the director of the Johnson Space Center. Other people that students can learn about throughout the product include, but are not limited to, Leon Foucault, a physicist, Mau Piailug, a wayfinding master navigator who built navigational tools, Dr. Shreyas Sundaram, who researches national economies, and Henrietta Lacks, from whom scientists started the first "immortal" cell line (cloning) without permission.

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## Indicator 7.3

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

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

## Meets | Score 2/2

The material meets the criteria for this indicator. Materials include listening, speaking, reading, and writing support 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 encourages strategic use of students' first language as a means to linguistic, affective, cognitive, and academic development in English.

Evidence includes but is not limited to:

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

- Materials include guidance for linguistic accommodations commensurate with various levels of English language proficiency as defined by the ELPS. There is detailed guidance for teachers to support EBs in the Planning for Differentiation section of the Teacher's Guide. The guide recommends teachers clarify the meanings of terms and model completing sentence frames to help students express understanding.
- For each TEKS there is an ELPS Mini-Lesson which is broken down into three sections: Clarify Ideas, Respond to Questions, and Collaborate. The ELPS Mini-Lessons provide strategies and scaffolding for Beginning, Intermediate, Advanced, and Advanced High learners. The Mini-Lessons model fluent reading, use gestures, short explanations, and pictures to support comprehension.
- In the "Comparing States of Matter" (TEKS 6.6A) unit, materials provide sequenced and scaffolded reading and writing accommodations from Beginning, Intermediate, Advanced to Advanced High. The read-aloud text models fluent reading and re-reads to pause for explaining vocabulary with gestures, explanations, and pictures to support comprehension.
- In the "Types of Mixtures" lesson, students explore and identify types of mixtures and solutions. Students are provided with a graphic organizer to complete while reviewing the passage on mixtures. To preview student reading, students are asked to describe the image which shows a mixture of fresh fruits. Students are given sentence stems, including "I notice a mixture/combination of..." For scaffolding, a beginner Emergent Bilingual (EB) is provided with a sentence stem, "A fruit salad is an example of a..." Intermediate EB students complete the



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sentence orally. Advanced EB students are asked the questions, "What is an example of a mixture? A solution? A suspension?" Advanced High EB students write examples for the vocabulary words *mixture*, *solution*, and *suspension* before they exchange with partners and check their work.

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

- There are opportunities where students are expected to "express their understanding in ways that are accessible to them, such as writing a term in another language they know then looking it up in a bilingual dictionary to confirm its meaning."
- Materials include "Language X-Rays," with one to accompany each lesson in the program. These are resources specifically designed for teachers who do not speak students' first language. Cognates are covered in the "Language X-Rays" that are available with the program, with one for each TEKS Lesson.
- In grade 6, in the "Forces" unit (TEKS 6.7), the lesson planning for differentiation pages offer emergent bilingual support. These lessons include clarification of meaning of terms and modeling completing sentence frames to help students express understanding. Students express knowledge by writing a term then looking it up in a bilingual dictionary for meaning.
  - Within the electronic Student Edition, every glossary term has been hyperlinked. Clicking on the term will reveal the term and definition in English, Spanish, and Vietnamese.
  - Materials include a Multilingual Glossary, with translations of terms and definitions for 12 languages: English, Spanish, Vietnamese, Chinese, Arabic, Tagalog, Korean, Brazilian Portuguese, Russian, Punjabi, Haitian Creole, and Hmong.
- In the Engage section of the "Energy and Energy Transfer" unit, the material reminds the teacher that it is helpful for EBs to hear and speak the words and to go through the vocabulary list using an "I say/You say" routine several times. Material also provides a Language Development Worksheet to record new terms found in the lesson and a reminder to review terms on the Vocabulary Anchor Chart.
- In the ELPS Mini-Lesson, "Action and Reaction Forces," material directs teachers to encourage students to describe the image in their own words.

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## Indicator 7.4

Materials provide guidance on fostering connections between home and school.

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

### Meets | Score 2/2

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

Materials provide information to be shared with students and caregivers about the design of the program. Materials provide information to be shared with caregivers for how they can help reinforce student learning and development. Materials include information to guide teacher communications with caregivers.

Evidence includes but is not limited to:

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

- Materials provide information to be shared with students and caregivers about the design of the program.
- In the Teacher's Corner "Reaching Out With Home Letters" section, the materials provide information about the design of the program through a "Beginning of the Year" letter. This Beginning of the Year Home Letter is an editable document and explains the basic design and why of the program. It includes statements such as "provide your child with opportunities to step away from their books or computers and actively participate" and "develop skills they can apply to other situations," along with activities such as Hands-on explorations and "investigate engineering." As the document is editable, the teacher can include more information as needed to share with caregivers about the overall design of the material and how it will be utilized in the classroom.
- In the Teacher's Corner, there is a section called "Step Inside the Family Room." The purpose of the Family Room is "to help families and caregivers become active partners in teaching." The teacher first shares the Family Room Video with caregivers through email. According to the video, caregivers will find general tips on how to navigate Ed, the online resource for students.
- Materials provide digital Home Letters in the Teacher's Corner tab and also the Discover tab. The Home Letters are available for each unit and provide specific designs of the product, including TEKS and titles that explain each unit/lesson.

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

- Materials provide information to be shared with caregivers for how they can help reinforce student learning and development.
- In the Teacher's Corner, in the section called "Reaching Out With Home Letters," the materials provide information to share with caregivers. The materials include a set of letters for each grade level and for each unit within the grade, with details about the learning going on in class and age-appropriate suggestions that families can use to learn more about science and support their child. According to the materials, the Home Letter for each unit describes the focus of each unit and the Performance Expectations for students, and includes additional activities that families can do at home to reinforce their child's learning. These Home Letters are editable files so that the teacher can personalize them, add details about class, provide helpful websites, or include instructions for upcoming assignments.
- Home letters are one of the resources found on the Teacher's Discover page. In "Reaching Out With Home Letters" from the Teacher's Corner, the materials include a sample letter for "Engineering Design," which contains several topics for caregivers. The first topic is "What We're Doing," and it covers the lesson objectives. For example, "by the end of this lesson, your child will 1) design solutions to a problem and 2) investigate how engineers improve designs to meet needs or wants." The second topic is "At-Home Activity" and has short activities for the student to try at home. For example, the student is to find examples of technology around them and then identify the problem that the item was engineered to solve. The letter also contains online Ed helpful resources, a Science Summary, and a Preconception Alert, in which caregivers and students can look at and discuss some misconceptions about the topic.
- Materials include product support for teachers to connect with caregivers in the "Step Inside the Family Room" section. This section provides a Teacher's Corner Team, where they'll find a collection of quick, easy-to-follow tips and explanations that help families and caregivers reinforce their child's learning.

Materials include information to guide teacher communications with caregivers.

- Materials provide information to help the teacher communicate with caregivers.
- In the Teacher's Corner, "Reaching Out With Home Letters" section, the materials include encouragement to teachers to keep parents and caregivers informed about what their child is learning in school and how to reinforce it at home. In order to promote this partnership, the materials provide Home Letters to help teachers stay connected and communicate important information.
- In the Teacher's Corner of the material, there is a section called "Step Inside the Family Room." The materials say this can be used to "empower the adults in your students' lives to act as your unofficial co-teachers."
- Materials include a Beginning of the Year Home Letter that gives a grade-level introduction to the units and lessons that will be learned throughout the year. These guide communication and open with information to be shared between teacher and caregiver.
- Materials provide Home Letters in the Teacher's Corner tab and also the Discover tab. The Home Letters are provided for each unit. The letter details a Science summary of the lesson as well as at-home activity and material resources.

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## 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 in the course materials.

- The “Scope and Sequence,” provided in the “Dig into the Details” as well as the “Teacher Edition,” lays out the vertical alignment of the TEKS along with the individual lessons in each unit.
- The year-long “Scope and Sequence” in “The Guide” also includes the SEPs and RTCs by grade band (K-2, 3-5, 6-8). Additionally, on the left-hand side of the document, each unit is labeled by its overall science theme, such as “Life Science,” “Earth and Space Science,” and “Physical Science.”
- The TEKS section includes overarching concepts in grade 6, such as “Forces,” “Earth’s Structure,” and “Organisms and Ecosystems.”
- Each unit of the “Student Edition” also provides a scope and sequence so that students may know what they are expected to learn and how to apply that learning.
  - For example, in the “Forces Unit,” students can read the “Scope and Sequence” to understand what forces are and how to apply them whilst performing a hands-on activity.

# HMH Into Science Texas Grade 6

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

- The materials provide “Extensions” and “Cross TEKS” resources in each lesson in the “Teacher Edition.” In addition, for each unit, the product identifies the “Recurring Themes and Concepts” in the “Planning” section of each lesson in the “Standards Overview.”
  - For example, in the “Seasons Unit” “Planning” section, underneath “Standards Overview,” the product identifies the specific “Science and Engineering Practices” and “Recurring Themes and Concepts” that the teacher uses in the lesson.
- In the “Teacher Edition,” “Science and Engineering Practices” for students are readily available in the “Engage” section of each lesson. The number of engineering practices contained within each lesson varies, but every single lesson requires students to practice engineering principals.
  - Examples are, but are not limited to, the “Quick Lab” located in the “Density Unit,” titled “Will it Float?” The students are tasked with analyzing data pertaining to how different materials’ density affects their flotation. Within the same unit, students once again analyze data during “Exploration 1,” “Investigating Density.”

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

- The “Scope and Sequence,” located in both the “Teacher Edition” and “Dig into the Details,” shows the spiraling of the SEPs and RTCs throughout the year, thus promoting mastery and retention.
  - For example, SEP 2 and 3 for TEKS 1–4 are covered in the “Energy Transfer Unit” and then again in the “Earth-Sun-Moon System Unit.”
  - For example, the RTC TEKS 5A is covered in the “Physical Science Unit’s” lesson on “Waves and Energy” and seen again in the “Earth and Space Science Unit” in the lesson on “Resource Management.”
- There are multiple opportunities for hands-on learning grounded in SEP to support mastery and retention.
  - For example, in the “States of Matter Unit,” students plan and conduct investigations for the “Quick Lab” “It’s in the Bag.” The investigation is on the properties of matter for three different materials. Within the same unit, the students once again plan and conduct investigations in the “Hands-On Lab” “Investigate the States of Matter.” Students investigate how the volume of a solid, a liquid, and a gas may change depending on their state of matter, applying knowledge they acquired in the previous quick lab.

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## Indicator 8.2

Materials include classroom implementation support for teachers and administrators.

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

### Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The materials support consistency and organization of lesson planning and implementation. Examples of included materials are:
  - Lesson plans constructed using the “5E” model and similar activities for consistency.
  - The “Lesson at a Glance,” which gives a “Lesson Map” of the TEKS in each lesson, SEPs and RTCs, lesson objectives, and teacher background material.
  - Support for addressing misconceptions for each lesson.
  - Vocabulary overview for each lesson.
  - Access to online resources for each lesson (lesson plans, assessments, and enrichment activities) through technology links in the text labeled “Ed: Online.”
  - Specific content that addresses planning for differentiation as well as emergent bilingual support.
  - Color-coding for each lesson to make finding the content easier.
  - Overview documents to support teachers in understanding how to use all materials and resources

## HMH Into Science Texas Grade 6

- For example, the “Set Up” section located in each lesson lists needed materials as well as teacher guidance for the “Pocket Labs.”

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

- The “Student Edition” and “Teacher Edition” provide opportunities for cross-content standards with Math and ELA.
  - For example, the “Seasons Unit” utilizes math concepts as students use a protractor and draw angles and use rulers to measure. They also read about seasons, tying in ELA concepts.
  - For example, the “Unit on Variations” has a section called “Language SmArts,” where students read “Case Study: Lack of Variation in Banana Crop Populations” in order to practice ELA nonfiction skills.
  - For example, in the “Hands-On Lab” “Model Sunlight Distribution,” students must calculate the area of a square.
- Below the title of each lesson, the standards are clearly presented. The standard correlations by each grade level are also provided in the “Teacher Guide’s” “Lessons at a Glance” (within the “Planning” pages). ELPS are listed in the “Elaborate” pages.
  - A routine practice within each lesson unit is the “Teacher’s Guide” making use of phenomena in varying places within the instructions. Lessons include student tasks to ask questions, solve problems, and move through the SEPs throughout the instructional sequence.

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

- Materials include a comprehensive list of all equipment and supplies needed to support instructional activities. Examples include:
  - A comprehensive alphabetical list of all the materials and supplies needed for each lesson related to the individual TEKS.
  - A hands-on materials list of equipment and supplies that the students need for the “Exploration” activities. Located in “Supporting Materials: Grade 6” is the comprehensive list for grade 6, where each supply item is associated with the unit’s TEKS. The “Student Edition” also presents a list of materials for the “Hands-On Labs,” located in the “Exploration” section of the lesson. An example of some supplies included in the list are calcium chloride, dropper pipette, forceps, gloves, and graduated cylinders.
  - Each “Quick Lab” within the unit includes a specific list of materials. For example, in the “Quick Lab” “Free a Grounded Ship,” the materials list includes aluminum foil, modeling clay, pennies, a plastic tray, and water.
  - Individualized materials lists are also provided for each group, along with easy-to-follow setup instructions for “Hands-On” and “Quick Labs.”

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

- Each lab and exploration has its own individualized safety information. The detailed safety procedures are provided in the beginning of the material, with precise information on the handling of chemicals, PPE, and lab and field activity safety.
  - “Teacher Resources” provide “Lab Safety Support” and detail lab safety requirements for all labs and activities.
    - “States of Matter Unit’s” “Exploration 1” lists safety symbols and words. For example, there is a picture of a lab apron with “Apron” next to the symbol.
    - Another example is located in the “Quick Lab” “The Four Seasons”: the teacher directs students to be careful of sharp objects.
  - The “Student Edition” contains reference material titled “Safety in the Laboratory and Field” so that students have clarification on expected safety practices.



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## Indicator 8.3

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

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

### Meets | Score 2/2

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

Materials support scheduling considerations and include guidance and recommendations on required time for lessons and activities. Materials guide strategic implementation without disrupting the sequence of content that must be taught in a specific order following a development 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.

- In “Dig into the Details,” there is a guide and recommendations for the entire year that outline each unit by days and minutes.
- The “Map Out Your Year Pacing Guide” provides comprehensive timing for TEKS with a further timing breakdown of each individual TEKS.
- The “Pacing Guide” provides three different tracks based on the teacher’s preference. Forty-five minutes represents one day’s lesson.
  - Streamlined path (6300 minutes/140 days)
  - Emergent bilinguals path (7380 minutes/164 days)
  - Extended path (8010 minutes/178 days)
- The “Teacher Guide” includes recommendations for times for lessons as well as incorporated activities, investigations, and differentiation.
  - In “Exploration 1,” “Model the Earth-Moon System” in the Unit covering 6.9B, the “Hands-On Lab” time is 25 minutes.
  - The “States of Matter Unit” shows 6 days at 45 minutes per day. The breakdown includes times for lab, summary, questions, and reflection/assessments.
  - For the “Planning Differentiation” section in the “Introduction to Matter Unit,” pacing is suggested as 15 minutes for Day 1 and as needed for the rest of the lesson.

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

- The “Teacher Edition” includes a Table of Contents that shows the TEKS are taught in sequential order, and lessons are organized to support the progression of content and skills.
  - In the “Tides Unit,” the lesson map gives seven days to complete the unit, with “Assessment of TEKS 6.9B” on Day 7.
  - The “States of Matter Unit’s” “Lesson at a Glance” page provides a Day 1 to Day 6 lesson progression, from introduction to exploration to the assessment.
  - The “Introduction to Matter Unit’s” “Planning for Differentiation” lists steps for reteach, extension, and the developmental progression within the lesson.
- The “5E” model is consistently followed throughout the “Teacher” and “Student Edition.” The unit begins with the “Engage” (a hands-on lab), before moving onto the “Exploration” and “Explanation” of the unit’s TEKS. “Extend/Elaborate” is used to clarify any remaining misconceptions before ending with “Evaluation.”
- Lessons in the “Teacher Edition” sometimes include a “Short on Time” or “Have Extra Time” suggestion for “Quick Labs” and “Hands-On Labs” in units.
  - In the “Tides Unit,” both “Short on Time” and “Have Extra Time” are present. For “Short on time,” the teacher completes the lesson’s activity as a demonstration. For “Extra time,” students are given the opportunity to calculate the diameter of the Moon based on the diameter of the Earth.

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

- In the “Map Out Your Year Pacing Guide,” located in “Dig into the Details,” unit lessons are built in 45-minute increments to allow for blocks of time for each lesson.
- The pacing is a suggestion, as teachers have access to editable lesson plans for each unit.
  - In the “Ed Online” section of each unit’s “Lesson at a Glance,” there is a link to the editable lesson plan.
  - Lessons also include suggestions for “Short on Time” or “Have Extra Time.”
  - The “Map Out Your Year Pacing Guide” provides comprehensive timing for the TEKS and further breaks down each individual TEKS. It also provides three different tracks based on the teacher’s preference.
    - Streamlined path (6300 minutes/140 days)
    - Emergent bilinguals path (7380 minutes/164 days)
    - Extended path (8010 minutes/178 days)
    - “Mix and Match” path to meet the needs of the individual classroom

# HMH Into Science Texas Grade 6

## Indicator 9.1

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

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

## Not Scored

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

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

Evidence includes but is not limited to:

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

- Materials consistently include an appropriate amount of white space and a design that supports student learning that is free from distractions. The margins/edges are consistent throughout the unit and are just the right amount of space for the page.
- Materials are consistent in the use of color, font type, and size. Materials use one main font for most of the text, while using color and other fonts to bring attention to key items that the student or teacher would need to pay special attention to within the text. Locations of important information, such as titles, subtitles, and notes, are created with their indicative colors, font types, and sizes. The design of the font is easily legible and is limited in font styles for simplicity and freedom from distraction. Visually highlighted tabs and bolded titles and subtitles are student-appropriate. For example, the steps in the Quick Lab are bolded and stand out to the reader.
  - Titles for sections are in brown, action steps students need to do are in blue, gather data for the driving question is in a yellow box, and Exploration Hands-on labs are introduced in a large blue box. The blue, yellow, and white colors are complementary and draw the eye to important aspects of the material.
- The planning page for each lesson in the Teacher Edition follows a consistent pattern throughout each lesson. The TEKS are specified at the top of the page with the lesson map below it. There is a consistent use of the 5E model, which is color-coded to represent each E in 5E. The Engage title has a green background, the Explore title has blue, Elaborate has purple, and Evidence has yellow. The activity title for each section is color-coded based on where it would fit in the 5E model. If it's in the Engage section, the title is colored green.

## HMH Into Science Texas Grade 6

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

- Materials consistently use age-appropriate pictures and graphics that support student learning and engagement without being visually distracting. For example, the Student Edition uses at most two pictures per page. These images are clear, size appropriate for the page view, and highly relevant to the content. The pictures are accompanied by a short description of the image to help students connect the images with the content. There is no overuse of visuals that could cause distractions.
- In the "Energy and Energy Transfer" unit in the Preview Lesson Vocabulary section, each image is surrounded by a box and includes a (half of the box size) colorful image to represent the vocabulary word along with a smaller text of the actual vocabulary word. The materials embed three pictures that represent the vocabulary terms: *wave*, *longitudinal wave*, and *transverse wave*. Underneath each picture is the description/definition of the vocabulary word. The pictures are simple, clear, and engaging and help clarify the meaning of the term with the visual representation.
- Materials make use of the same or similar pictures throughout units to reinforce learning and be consistent. In the "Energy and Energy Transfer" unit, a picture of a stretched spring coil (slinky) is used to represent a longitudinal wave and a wavy slinky to represent a transverse wave, both with arrows representing the direction of particle movement in relation to the direction of the wave. The materials continue to use the slinky pictures in the Lesson Summary and again in the Practice Question section of this unit. In the Lesson Summary, the picture represents how a wave can be a repeating pattern. In the Practice Question section, the materials instruct students to "use this diagram (slinky pictures representing particle and wave movement) to answer questions 1 and 2."

Materials include digital components that are free of technical errors.

- Materials provide digital components that are free from error. As you move through the digital Interactive Student Lessons, the materials are free of technical errors such as spelling, grammar, and punctuation. The materials also represent accurate content and information.
- Materials are also free from inaccurate content materials or information and free from wrong answer sheets to problems. For example, student activity guides are free of inaccurate content materials or information and free of wrong answer sheets to problems. When viewing the Assessment Guide Answer Keys for summatives, the answer key identifies the correct answer choices and provides accurate and relevant rationale for why the other answer choices would be incorrect.
- The student digital materials and Quick Lab videos are free of technical errors and provide accurate information.
- Materials are error-free in the Student Interactive Lessons tab. The digital interactive lessons are textually and visually error-free, and the audio works properly along with text words for read-aloud support.

# HMH Into Science Texas Grade 6

## Indicator 9.2

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

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

## Not Scored

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

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

Evidence includes but is not limited to:

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

- Materials consistently integrate digital technology and tools that support student learning and engagement.
- In the Student Edition's "Forces" unit, students engage with the Test Your Science Words section by using a drop-down menu to select the correct vocabulary word.
- Interactive digital lessons include questions where students are able to type their own answers. In the "Forces" unit, students watch a video regarding how forces act upon objects before typing their observations.
- Students' digital components include embedded tools such as text-to-speech, bookmark, note-taking, and read-along highlight. The notes are in the right-hand margin, and students have the option to edit, delete, and/or print their notes, providing ample opportunities for engagement.
- Students can use interactive vocabulary cards to develop and practice new vocabulary words. This interactive tool can be accessed in the Science Words section in each grade level.
- There are simulations for students to conduct additional/further investigations that are available through the Discover page of the product website. Students can use a simulation to test two chemicals to see which can be used to construct a better heat pack.
- The "States of Matter" unit's digital component includes short video clips that allow students to observe food coloring moving in a glass of water and then how food coloring moves on an ice cube. Students can watch these clips as many times as they need to make the observations. On

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the same digital page, students record their observations by typing in the box the materials provide. Not only does this engage students more, but it is also a useful feature for students with dysgraphia.

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 consistently integrate digital technology in ways that support student engagement with the SEPs, RTCs, and grade-level content. Lessons consistently include scientific investigations where students use SEPs. Students interact digitally with the materials during this process, such as watching a video about the investigation and answering questions in order to evaluate and communicate information, all of which integrate RTCs.
- The "Earth's Structure" unit's digital materials have students examine systems as part of the RTCs. Students are to describe some of the components of their school and how it works together.
- In the "Forces" unit, students watch digital videos and use SEPs to sketch or draw in the digital worksheets. In the same unit is a Quick Lab, "Build a Card Tower," and students use SEPs to answer questions regarding the lab activity on the digitally downloaded worksheet.
- In Exploration 2 of the "Potential and Kinetic Energy" unit, students perform a lab on baking soda and vinegar to observe chemical reactions. Students plan an investigation comparing differing amounts of reactants and analyze how the amount of reactants impacts the amount of chemical potential energy
- Materials also include SEPs in each Interactive Digital Lesson that coincides with the print edition. In Exploration 1 of the "Earth's Systems" Lesson, students make observations, sketch drawings, gather data, and communicate information as part of the investigation.

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

- Materials include a digital platform, HMH Ed, which supports digital teacher-student collaboration. Materials also include teacher-teacher collaboration through sharing customized lesson plans and assessments through the My Stuff feature of the HMH digital platform. Teacher's Corner can be used as a forum for teachers to collaborate with other teachers and join the Materials Teacher's Corner Facebook community.
- Materials provide PocketLab notebook functionality and digital and student collaboration. PocketLab Notebook allows for digital student-student collaboration and digital teacher-student collaboration during Hands-on Labs, as well as for teachers to monitor student progress, review responses, and give feedback.
- Some examples from the "States of Matter" unit Interactive Student Lesson include, but are not limited to, the following: 1) In the quick lab, students pass 3 different bags around their group and describe one property of the matter without repeating another group member; 2) In the "Can You Explain It?" section, students work together to make observations about the food coloring in water and on ice, and; 3) Together the students brainstorm to form questions. Each time, however, students can only edit their personal lesson and are unable to collaborate digitally through the readily provided materials.
  - In the Engage section of the "Levels of Organization in Ecosystems" Lesson, students must organize the world based on the given paragraph. Materials prompt students to work with a partner and brainstorm ideas on organization before they model it with a

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drawing, prose, or verbal expression. Afterward, students compare their model with another group, but the response cannot be shared online with their peers.

- Materials do provide an option for teachers to leave general feedback on tests and quizzes with one overall comment.

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

- Materials are compatible with various learning management systems such as Google Classroom, Canvas, Schoology, etc. Materials provide guidance as to how to set up the integration of the materials to a given LMS. This information can be found in the Teacher's Corner on Ed Program Support. The digital guide to get started teaching with Ed online and an LMS provides step-by-step instructions, video tutorials, and tips from instructional coaches and other teachers.
- Materials are accessible through a variety of web browsers. They are compatible with various devices, including mobile devices, as long as there is internet connection and a web browser. The digital materials are accessible on Windows 11, iPad, and iPhone, as well as Chrome, Chrome iOS, and Safari.

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## 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.

- Digital technology/online components within the materials are developmentally appropriate for the grade level and align with the scope and approach to skills progression.
- The Interactive Student Lessons are broken down by each day's content with a "Stop" sign to show the end of the lesson. This reflects the developmental abilities of the grade level, with the design keeping in mind how much content the student can cover in one lesson. The "Resource Management" unit's Lesson at a Glance planning page suggests the Engage portion of the lesson take one day (35 minutes).
- In the "Forces" unit, the EdOnline Reteaching Support TEKS for the grade level are provided along with ScienceSaurus lesson numbers that align with grade level TEKS to support student learning and engagement with digital tools.
- Materials identify skill bank items, quizzes, assessments, explorations, review/practice questions, and performance tasks by TEKS. The materials link the resources with their point of use within the lesson. Reteaching support is built in by TEKS, and these supports can be found in the digital Answer Key on Ed. Materials also progress through the TEKS as they are outlined in the scope and sequence. The scope and sequence is accessible through the Teacher's Edition or through the Dig into the Details: Scope and Sequence.



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

- Materials provide teacher guidance for the use of embedded technology to support and enhance student learning.
- In the Lesson at a Glance page at the beginning of each unit, Ed Online specifies that the links for specific resources will be at their point of need. In the Teacher's Corner, teachers will find many digital resources that provide step-by-step instructions, video tutorials, and professional development videos by other teachers that provide ongoing support for the teacher. A teacher can access a "Master Class: Best Practices for Developing Evidence" in the Teacher's Corner. This class supports teachers in teaching students how to support a claim by using the evidence they gathered to be able to argue scientifically.
- Materials provide a Digital Walkthrough guide with step-by-step instructions for setting up and using the technology, along with tips for troubleshooting. This guide provides detailed information with screenshots for setting up classes, creating student groups, viewing resources, assigning content, customizing assessments, using data to inform instructions, standards reports, assignments and scores, access to professional learning, and more.
- Materials use best practices for using embedded technology for differentiating instruction using technology to promote collaboration and incorporating multimedia resources into lessons. Ed Online support provides Editable lesson plans as well as reteaching supports, extensions, and cross-TEKS resources. In the Teacher's Corner, a variety of resources are offered, including classroom videos, teacher tips, and program support.

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

- Materials are available to parents/caregivers to support student engagement with digital and online components.
- In the Family Room, parents and caregivers will find program support, tips on how to navigate Ed, and Shareables for challenges to student learning.
- Under the Discover tab in HMH Resources, each TEKS has an Introductory Resource which contains Home Letters that can be sent home, which contain the Science Summary of that particular TEKS being taught, At-Home Activity, and Online Resources. These letters are editable, and the teacher can provide links to important digital resources.
- A Beginning-of-Year Home Letter provides information about what topics the students will be exploring and how the lesson is structured by incorporating scientific phenomena and engineering problems.