HMH Into Science Texas Grade 3 Executive Summary

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

Grade	TEKS Student %	TEKS Teacher %	ELPS Student %	ELPS Teacher %
Grade 3	100%	100%	100%	100%
Grade 4	100%	100%	100%	100%
Grade 5	100%	100%	100%	100%

Section 2. Instructional Anchor

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

Section 3. Knowledge Coherence

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

Section 4. Productive Struggle

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

Section 5. Evidence-Based Reasoning and Communicating

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

Section 6. Progress Monitoring

- The materials include a variety of TEKS-aligned and developmentally appropriate assessment tools.
- The materials include guidance that explains how to analyze and respond to data from assessment tools.

• The assessments are clear and easy to understand.

Section 7. Supports for All Learners

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

Section 8. Implementation Supports

- The materials include year-long plans with 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.

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

The materials provide students multiple opportunities to engage in hands-on activities to
practice and demonstrate scientific and engineering practices. For example, in the lesson "Types
of Forces," Days 2, 3, and 4 include hands-on activities such as "Move the Car," "Exploring
Gravity and Magnets," and "Oh My." Students develop evidence-based explanations and
communicate findings, conclusions, and proposed solutions in the lesson "Exploring Gravity,"
Day 3, "Explore/Explain." Students complete steps 1 and 2 of the lesson and develop a model;
they make a sketch to show what they learned by adding an arrow showing the direction of

Earth's gravity. Students then make a claim and support it with evidence and reasoning based on their observations.

- The SEP TEKS are integrated throughout the "Matter 3.6" unit. Students develop and practice the SEP in the lessons, as evidenced in the "Teacher Guide." For example, in the "Measuring Mass" lesson, "Explore" addresses students using tools to observe, analyze, and test information (3.1 D) by using a digital scale to measure the mass of solids.
- The "Scope and Sequence" illustrates how the SEP TEKS are integrated in each unit and spiraled throughout the program. The materials provide multiple opportunities to develop grade-level appropriate scientific and engineering practices, as outlined in the TEKS. In grade 3, students use phenomena to connect content standards to engineering practices in Lesson 3.11A "Can You Explain It?" guiding questions.

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

- There is evidence of the overarching concepts and recurring themes being integrated in all the units/lessons in the scope and sequence. For example, the RTC in 3.5A, 3.5B, and 3.5G are integrated in the grade 3 "Force and Motion" unit. Another example is found in the grade 4 "Magnets, Oh My," Day 4, "Explore, Explain" lesson. The lesson addresses 3.5 A (identify and use patterns to explain scientific phenomena or to design solutions).
- The "Teacher Guide" provides evidence in the form of an overview at the beginning of each unit, which highlights the recurring themes and concepts that students engage with and apply throughout that specific unit. For instance, in the grade 3 "Forces" unit, RTC 3.5A is integrated; the lessons involve identifying and utilizing patterns to explain phenomena and design solutions.
- The materials identify overarching concepts using recurring themes and show how they connect within the materials. In grade 3, the scope and sequence includes specific information about when recurring themes are introduced and when they are spiraled back into the program. For example, the materials include recurring themes of cause-and-effect relationships in the lesson "Conserving Natural Resources," Day 2; students "identify a cause-and-effect relationship between the conservation of natural resources and landfills."

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 and methodically develop and build student skills and content knowledge using phenomena appropriate to the grade level, as outlined in the TEKS. For example, the "Program Overview" document provides an explanation of the "5E Structure" for each lesson ("Engage, Explore/Explain, Elaborate, Evaluate"). It also shows how the units are organized to develop students' content knowledge based on the TEKS and themes.
- The "What Do You Already Know?" section activates students' prior knowledge. This section
 includes information for teachers about prior science concepts students should have mastered.
 For example, in the lesson "Investigate Properties of Matter," Day 1, materials state: "In prior
 grades, students learned that they could classify matter by physical properties such as color,
 texture, flexibility, relative temperature, and identify whether a material is a solid or liquid." The
 materials continue to support teachers in developing student content knowledge and skills by
 providing resources and cues for developing conceptual understanding at various points
 throughout. The materials contain a Teacher's Guide and lesson notes that explain, describe,

and make connections between the SEP and the development of conceptual understanding. For example, in the Teacher's Guide for the lesson "Investigate Properties of Matter," the planning of Day 1 includes the section "Phenomenon Teacher Background," which provides teacher support when students compare matter by its properties.

- The materials strategically develop students' content knowledge and skills appropriate for the concept and grade level, as outlined in the TEKS. Grade-level content knowledge and skills are taught using SEP and recurring themes in order for students to build and connect knowledge and apply it to new contexts. In grade 3, a lesson on the changes in states of matter within a unit about matter strategically builds on prior learning about the types of matter in previous learning experiences. Materials provide guidance for teachers to elicit students' previous learning experiences and use their knowledge of states of matter to connect the learning to a lesson later in the unit on changes in states of matter.
- The materials are systematically designed to develop and build student skills and content knowledge using phenomena appropriate to the grade level, as outlined in the TEKS. A grade 3 space unit begins with a review of objects in the sky. Lessons then build knowledge around objects in the sky related to the Sun, Earth, and Moon, then move to lessons on the solar system. Students build a model of the solar system with appropriate distance from the sun and appropriate planet placement. This learning is all built around phenomena introduced at the beginning of each lesson.

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

- The materials include sufficient opportunities to plan and conduct investigations throughout the year. The materials provide support for increasing complexity in student-led inquiry and investigation, including guidance for teachers to revisit topics with students in order to review previous learning and revise thinking on topics.
- The materials provide repeated opportunities for students to use grade-level appropriate scientific and engineering practices across various contexts throughout the course. For example, in the Teacher's Guide for the lesson "Changes in States of Matter," students complete a hands-on activity during Days 2, 3, and 4, then provide a written interpretation of an image related to the investigation on Day 5 and complete an assignment that connects to their community, researching a recipe to make snow cones.
- There is evidence that the materials include sufficient opportunities for students to engage in
 problem-solving to make connections across disciplines and develop an understanding of
 science concepts. For example, students ask questions, plan and conduct investigations in order
 to answer questions, and explain phenomena using appropriate tools and models. For example,
 during the lesson "Liquids Flow," students complete a hands-on activity and use scale,
 proportion, and quantity reasoning to determine how much the same amount of liquid will fill
 two containers of different sizes. Then, students make a claim and support it with evidence from
 the investigation. In the unit "Force and Motion," students plan an investigation to identify the
 effect of changes in height on speed. Students then set up the investigation, record their data,
 and revisit the investigation to improve their plan, if needed.

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.

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

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.

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

Evidence includes but is not limited to:

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

- The materials embed thought-provoking phenomena and engineering problems that require nuanced and appropriate grade-level explanations. Materials provide opportunities for students to develop, evaluate, and revise their thinking as they figure out phenomena and define and solve problems. In grade 3, each lesson begins with a "What Do You Already Know?" to elicit prior knowledge and introduce the phenomena. Students then participate in an "I Notice and I Wonder" activity, allowing them to develop thoughts about the phenomena and then engage in hands-on activities to evaluate and revise their thinking.
- The 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. In a grade 3 lesson on the Moon, teachers introduce the phenomena that the Moon moves around Earth and the Earth moves around the Sun. Throughout the unit, students construct models and explain the orbits of the Sun, Earth, and Moon in relation to each other.
- Materials embed thought-provoking phenomena and engineering problems that require nuanced and appropriate grade-level explanations. For example, in the "Teacher's Guide," in the

lesson "Measuring Temperature," students engage in a hands-on activity to measure, test, and record the physical property of temperature. Students analyze results and answer questions, such as "How did the temperatures you measured compare with the temperatures measured by other students? Why?" They also respond to the following prompt: "Identify some sources of error that could occur when you compare results with your classmates."

- Materials provide opportunities for students to develop, evaluate, and revise their thinking as they engage in phenomena and define/solve problems. For example, in the Teacher's Guide, in the lesson "Measuring Mass," students consider the phenomenon of measuring, testing and recording the physical property of mass. Students engage in a discussion about comparing the amount of mass of different objects and how the physical properties of mass help to classify different types of matter. Students also need to find patterns based on the data they collect during the investigation and have to support their answers to discussion questions with evidence. In another grade 3 lesson, students are introduced to the phenomena of weather changes and learn to make precise observations and describe changes in the weather. Students later conduct weather investigations using tools and look for patterns in multiple locations.
- The materials include the scientific concepts and goals behind each phenomenon and engineering problem for the teacher. For example, the Teacher's Guide includes a "Teacher Background" section that explains the phenomena throughout multiple lessons to provide background knowledge.

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

- The materials provide opportunities to leverage students' prior knowledge and experiences related to phenomena and engineering problems. For example, the lesson "Investigate Properties of Matter" begins activating prior knowledge; students review images of prior learning, such as the classification of matter by physical properties, such as color, texture, flexibility, relative temperature, and whether a material is a solid or a liquid.
- The materials elicit and leverage students' background knowledge and experience to adequately address potential areas of misunderstanding. For example, the exit ticket on Day 4 of the lesson "Let's Race," Part 2, guides the teacher to address misconceptions: "Provide feedback to students by identifying any misconceptions they have about how the height of a ramp relates to the speed of an object. Encourage students to look back at the data they collected in Parts 1 and 2 of this hands-on activity to help them answer the question." The materials also provide performance indicators and support for student answers. The Teacher's Guide provides feedback and support for possible student answers when activating students' background knowledge. This also provides guidance for teachers on students' misunderstandings. For example, lessons on types of forces include teacher guidance on identifying misconceptions about gravity when giving student feedback on an exit ticket.
- There is evidence that the materials allow different entry points to the learning phenomena and/or solving problems. Students experience the phenomena through various means. For example, during the lesson "Investigate Properties of Matter," students learn about phenomena through four hands-on activities to measure mass, measure temperature, measure with magnets, and observe if an object sinks or floats. Additionally, students look at images to activate prior knowledge, have class discussions to describe a phenomenon video, and analyze information and identify patterns.
- The materials intentionally leverage students' prior knowledge and experiences related to phenomena and engineering problems. Evidence of this can be found in the Teacher's Guide at

the beginning of each lesson. The section "What Do You Already Know?" activates students' prior knowledge of the phenomena being studied.

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

- The materials clearly outline the scientific concepts and learning goals behind each
 phenomenon and engineering problem corresponding to content concepts across the grade
 level. Materials provide opportunities for students to build an understanding of grade-level
 content through unit-level or chapter-level phenomena or problems. In many cases, multiple
 lesson investigations work together to connect to a single phenomenon and/or problem to
 develop an understanding of corresponding grade-level concepts. For example, in a unit on
 energy, the materials leverage the phenomenon of how the speed of a roller coaster is related
 to its mechanical energy. Throughout the lesson, students explore mechanical energy changing
 with speed and the speed of different objects moving down a ramp to engage in sensemaking
 around certain objects having greater mechanical energy than others.
- There is evidence that the materials clearly outline the scientific concepts and learning goals behind each phenomenon and engineering problem corresponding to content concepts across the grade level. For example, in the lesson "Changes in States of Matter," the materials clearly outline the lesson goal: "Students will be able to predict, observe, and record changes in matter due to heating and cooling."
- The materials clearly outline the student learning goals behind each phenomenon or engineering problem. For example, in the lesson "States of Matter," Day 1, the materials include the sections "Activate Prior Knowledge" and "Phenomenon Teacher Background" to address the overarching science concepts explored in the learning activities. In another grade 3 lesson, the learning objective is "students will be able to investigate and explain how soils such as sand and clay are formed by weathering or rock and the decomposition of plant and animal remains."
- There is evidence in the Teacher's Guide that the materials outline the scientific concepts and goals behind each phenomenon and engineering problem for the teacher. This can be found in the "Phenomenon Teacher Background" sections for each unit in grades 3–5.

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

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.

- The materials connect new learning to previous and future learning within and across grade levels. For example, in grade 3, in the lesson "Types of Forces," students "demonstrate and describe the effects of forces acting on objects." In grade 4, in the lesson "Patterns of Forces," the students "plan and conduct investigations to explore the patterns of forces such as gravity, friction, or magnetism in relation to an object." In grade 5, in the lesson "Forces and Patterns of Motion," students "investigate and explain how equal or unequal forces acting on an object cause patterns of motion and transfer of energy."
- The scope and sequence provides a vertical alignment view across the grade levels. The units are
 designed for students to build and connect their knowledge and skills across the units. For
 example, the scope and sequence notes that in grades 3-5, materials address the following
 Texas Essential Knowledge and Skills (TEKS) regarding matter: 3.6, 4.6, and 5.6. The SEPs and
 RTCs are addressed by grade (horizontally) and across the grades (vertically).
- There is evidence that the materials connect current learning with past grade levels. In the "What Do You Already Know?" section for "TEKS 3.11B&C," the students are supposed to classify materials as natural or human-made. In previous grade levels, students learned how to distinguish between natural and human-made materials as well as how to conserve and dispose

of materials. In the "Lead a Group Discussion" section, the teacher asks guiding questions to get students to think about where natural resources can be found and what happens when they're not cared for appropriately.

• The materials present content in a way that builds in complexity within and across units and grade levels. Materials include a scope and sequence, which outlines student knowledge and skills learned in the previous grade levels, broken down into grade-level TEKS, and summarizes the progression from grades K through 2. Materials state that lessons within the unit will build in complexity, from teaching students requisite knowledge and skills to engaging them in designing descriptive experiments to explore, illustrate, and compare life cycles in organisms. In grade 3, students must demonstrate how plants change through their life cycle. They also must observe the life cycle of an organism. Over the course of the unit, students apply their knowledge and skills to then compare life cycles. Materials further explain how complexity builds in grade 4 when students design a simple experimental investigation that tests how sunlight impacts stability and changes in the structure of producers.

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

- There is evidence that the materials sequence instruction in a way that activates or builds prior knowledge before explicit teaching occurs that allows for increasingly deeper conceptual understanding. For example, in the grade 3 lesson "Energy and Speed of Objects," students explore energy by clicking pictures. Teachers lead a group discussion about "how students know whether something has energy, such as whether it has motion." Students watch a phenomenon video and then have a class discussion about "How is the speed of a roller coaster related to its mechanical energy?"
- The materials are sequenced to scaffold the learning from the concrete to the abstract to allow
 for deeper conceptual understanding. An example of this is in the grade 3 "Investigate
 Properties of Matter" unit. The lessons begin by notifying the teacher of previous grade skills in
 classifying matter. Then, the teacher asks students what they already know about classifying
 matter. The phenomenon that fruits have physical properties and these physical properties can
 be used to compare different fruits is discussed along with a video shown. Students then
 complete hands-on activities measuring mass, measuring with magnets, measuring
 temperature, and testing whether objects will sink or float. Within these investigations, students
 will apply more abstract thinking when they measure, record data, analyze results, look for
 patterns in data, and then make a claim and support it with data.
- The materials include a progression of concrete and then representational before abstract reasoning when presenting concepts that allow for increasingly deeper conceptual understanding. For example, materials use a concrete-representational-abstract approach to identify cause-and-effect relationships by starting with a phenomenon or a problem. In grade 3, in a unit on patterns and cycles in environments, students develop a plan to figure out how temperature and precipitation affect how organisms grow and behave. Students first identify the cause-and-effect relationship between changes in temperature and precipitation and the growth and behavior of animals that respond by migrating or hibernating. Students then describe how an organism responds to migrating or hibernating and analyze other's information on hibernating and migrating in a data chart. Students analyze data to identify why and how animals change their behavior based on collected evidence.
- The materials develop a deeper understanding of concepts for students and their relevance. In the "Connection to Community" section of the grade 3 Teacher's Guide, the teacher walks with

students and challenges them to identify and record all of the natural resources they can find. By doing this, students are connecting what they have learned in the classroom to the real world.

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

- The materials clearly present grade-level-specific core concepts, recurring themes and concepts and science and engineering practices. Materials include SEPs, RTCs, and content TEKS throughout each unit in each lesson. For example, in grade 3, "Patterns and Cycles in Environments," in the lesson on "Food Chains," hands-on experience provides the opportunity for students to use graphic organizers, use mathematical calculations to compare relationships tied to interdependence and flow of energy theme while identifying and describing the flow of energy in a food chain and predicting how changes in the food chain are affected by the removal of an organism.
- The material clearly and accurately presents grade-level-specific core concepts, recurring themes and concepts, and science and engineering practices. For example, on Day 2 of the "Interactive Lesson" "TEKS 3.10C," the students are creating a model to show the rapid changes of Earth's surface caused by an earthquake. During this activity, students explain how factors can cause a change in objects, organisms, and systems, which is the 3.5G TEKS RTC.
- The materials clearly and accurately present grade-level specific core concepts, recurring themes and concepts, and science and engineering practices. An example of this is in the hands-on activity "Exploring Gravity" from the "3.7A Forces" lesson. When students complete the hands-on investigations, they collect observations and measurements as evidence, which is Science and Engineering Practice 3.1 E. The grade 3 lesson objective of "Changes in Position and Motion" states: "Students will be able to plan and conduct investigations to demonstrate, model, and explain how pushes and pulls can cause changes to the position and Pulls": "Students will be able to plan and conduct investigation and Pulls": "Students will be able to plan and conduct investigation and Pulls": "Students will be able to plan and conduct investigation and Pulls": "Students and pulls can cause changes to the position and Pulls": "Students will be able to plan and conduct investigations to demonstrate, model, and explain how pushes and pulls to demonstrate, model, and explain how pushes and pulls can cause changes to the position and Pulls": "Students will be able to plan and conduct investigations to demonstrate, model, and explain how pushes and pulls can cause changes to the position and motion of objects, such as a ball."

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

- The materials' mastery requirements are within the boundaries of the main concepts of the grade level. For example, in the "Ways Humans Use Natural Resources" lesson, the "Lesson Objective" states, "Students will be able to explain how humans use natural resources to make products."
- The materials provide mastery requirements within the boundaries of the main concepts of the grade level. For example, in the hands-on activities for "Properties 3.6A," there is a learning objective stated for each activity. The learning objective for the activity "Measuring Temperature" states, "Students will be able to measure, test, and record the physical property of temperature."
- The materials clearly define the boundaries of content that students must master for the grade level. For example, in the grade 3 scope and sequence document, the materials specify the content and skills students learn in each grade level. For example, in grade 3, students learn TEKS 3.7 about "Forces and Motion." In grade 4, they learn TEKS 4.7 about "Forces." In grade 5, students learn TEKS 5.7 about "Forces and Motion." The scope and sequence addresses science

concepts for earlier grades such as K-2 and later such as 6-8, including identifying content students should understand from the prior grade level and additional learning from the next grade level, including student tasks that activate prior knowledge and engage students in group discussions. For example, in the "Pattern and Cycles in Environments" unit, in a lesson on structures and functions of animal parts, students identify structures and behaviors of animals to help them find and take in food, water, and air prior to learning about external structures and functions of animals.

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.	м
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.	Μ

Meets | Score 6/6

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

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

Evidence includes but is not limited to:

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

- The materials support teachers in understanding the horizontal and vertical alignment guiding the development of grade-level content. An example of this would be the scope and sequence document. The scope and sequence shows the vertical alignment of each grade level content standard and the progression of the units/lessons. This document provides the TEKS taught in previous, current, and future grade levels.
- The materials include guiding documents that support teachers in understanding how new learning connects to previous and future learning across grade levels. Materials contain a scope and sequence that showcases which skills and standards students should have mastered in previous grades and how learning will progress in the subsequent grades. In grade 2, students create food chains identifying producers and consumers to demonstrate how animals depend on other living things. Grade 3 materials contain a scope and sequence that shows students identifying and describing the flow of energy in a food chain and predicting how changes in a food chain affect the ecosystem. Students build on this understanding in grade 4 when they learn about the cycling of matter and the flow of energy through food webs.

• The materials include guiding documents that support teachers in understanding how new learning connects to previous and future learning across grade levels. For example, the "Grade 3 Scope and Sequence" document charts which skills and standards per science strand students should have mastered in previous grades and which ones they will learn in the subsequent grades. The teacher edition contains a material titled "Learning Journey," which provides information for teachers to understand how the SEP, RTC, and science concepts build over time across the grade levels. This resource can be invaluable to grade levels above and below to see what students should have learned and what their current learning will need to connect to in the next grade level.

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

- The materials identify common grade-level misconceptions students may have about the science concepts. For example, in the grade 3 lesson "Investigate Properties of Matter," Day 4, for "Provide Feedback," materials state: "Provide feedback to students by identifying any misconceptions they have about magnetism. Discuss the meaning of magnetic and nonmagnetic, such as magnetic objects are attracted to magnets and nonmagnetic objects are not."
- The materials contain explanations and examples of science concepts, including grade-level misconceptions, to support the teacher's subject knowledge and recognition of barriers to student conceptual development as outlined in the TEKS. An example of this is in the lesson on "Forces," Day 5 "Elaborate," "Can You Explain It?" section: Background is provided for the teacher to interpret student thinking and suggestions for what to do when students have misconceptions. For example, the Teacher Guide states: "Students should have grown into their depth of knowledge about how changes in position and motion relate to push and pull forces. If students struggle to answer the question, pose a question such as: What forces keep the balls moving smoothly?"
- The materials support the teacher's subject knowledge and recognition barriers to student conceptual development as outlined in the TEKS. An example of this can be found in the Teacher Guide for "TEKS 3.11A" in the "Can You Explain It?" section. The "Phenomenon Teacher Background" provides more details for teacher support in each lesson.
- The materials identify common grade-level misconceptions students may have about the science concepts. In the teacher edition, the differentiation section and the exit ticket section include opportunities for teachers to address student misconceptions for each lesson. For example, in the unit on life cycles, materials emphasize where student thinking could be inaccurate about the relationship between the structure and function of bird beaks. Additionally, materials contain support for possible student answers for teachers to assist in correcting misconceptions.

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

• The materials provide a purpose or rationale for the instructional design of the program. Materials provide an explanation for why they are designed the way they are. Materials highlight key features of the instructional design. In grades 3-5, the teacher edition includes an explanation of how to use the program, which contains a purpose for key learning and the 5E

structure for each lesson. Students have the opportunity to make their initial ideas and test them through hands-on labs while teachers assume the role of the facilitator.

- The materials provide a purpose or rationale for the instructional design of the program. Materials provide an explanation for why they are designed the way they are. Materials highlight key features of the instructional design. For example, in the grade 5 Teacher's Guide, the section "Built for Texas" highlights program features such as the lessons' primary focus on one content TEKS student expectation; and formative and ongoing assessment at the center of lessons through student interactions and daily exit tickets, which provide the teacher with a grasp of how students are doing every day.
- The materials explain the intent and purpose of the instructional design of the program. This evidence can be found in the "How to use this program" in front of the teacher guide. This program guide explains that the materials are structured to support both teachers and students and that they cover a wide variety of instructional needs, such as TEKS, SEPs, RTCs, and their connection throughout each lesson; differentiation; guiding questions; teacher background support; the flow and sequence of the lessons/TEKS; hands-on investigations; the structure of the 5E model, and much more. In the Teacher Guide, the "Lesson at a Glance" focuses on the TEKS for the unit as well as provides a lesson map for each day during the unit.

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,	Μ
L	thinking, and acting as scientists and engineers.	
2	Materials provide multiple opportunities for students to engage with grade-level appropriate	Μ
2	scientific texts to gather evidence and develop an understanding of concepts.	
	Materials provide multiple opportunities for students to engage in various written and	Μ
3	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	Μ
4	phenomena and engineering design processes, make sense of concepts, and productively	
	struggle.	

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- The materials consistently provide learning activities that support students' meaningful sensemaking. For example, in the grade 3 Teacher Guide, in the lesson "Types of Forces," Day 6, the materials include an extension titled "FUNomenal Reader: The Circus is Coming!" Students will read this after watching a video about safety engineers and sharing an example of a safety problem solved shown in the video. Also, in lesson "3.10.C," Day 6, "People in Science," the students read a selection and are asked to research. They also answer questions about the text that they have read.
- The materials provide a definition of sensemaking and identify specific student sensemaking behaviors. For example, the "Orbits of the Sun, Earth, and Moon" lesson's "Sense-Making" section contains a hands-on activity. The Teacher Guide suggests that students take on the roles of objects in space and move together as a small group. Students observe and experience the ways the movements of the Sun, Earth, and Moon relate to one another. This activity prepares

students for the next activity, which is to create a model of the Sun-Earth-Moon using craft materials.

The materials provide support to identify specific student sensemaking behaviors and give the definition of sensemaking. For example, materials in the Teacher Guide include a program overview section that states that students' use of RTC and concepts of the TEKS are scaffolded to support sensemaking about phenomena within and across lessons. For example, for TEKS 3.13A, during lessons on "Structure and Function," materials provide students with background knowledge about how animals' bodies help them take in food, air, and water. Students work through adaptation labs to build sensemaking in order to explain the phenomena of how external structures and functions help animals survive in their environment and to write evidence and reasoning on how the shape and size of a bird's beak help it to survive.

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

- The materials provide multiple opportunities in regard to scientific texts. They include informational text in all the sections that relate to real-world careers and advancements in science. The students are asked meaningful sensemaking questions to extend their thinking after reading the text.
- The materials provide multiple opportunities for students to engage with scientific texts, including activities such as pre-reading and vocabulary, to help them develop an understanding of concepts. For example, at the beginning of each unit, there are vocabulary cards that include visuals and definitions; some units also include prior knowledge vocabulary discussions as well as supports such as the "Language Development" chart that students can use to record vocabulary words, definitions, pictures, examples, and synonyms.
- The materials provide multiple opportunities for students to engage with scientific texts to gather evidence and develop an understanding of concepts. For example, grade 3 students explore the life cycles of organisms. Students use grade-level texts and pictures to gather evidence that the life cycle of a plant is similar to the life cycle of animals. Students use the material to write about patterns they see in life cycles and write a CER on the similarities and differences.
- The materials provide opportunities for students to engage in purposeful and targeted activities with grade-level appropriate scientific texts. For example, on the grade 3 "Discover" site, in the section "FUNomenal Readers" in "All Resources," the materials include several texts about science topics for students; the stories relate to the phenomena they explore in the lessons.

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

- The materials provide multiple opportunities for students to engage in written and graphic modes to communicate developing and understanding of scientific concepts. For example, in the "Life Cycles" unit, the "Structures and Functions of Animal Parts" lesson includes a "Language SmARTs" section, which has students describe a new discovery and draw an organism. Students show their understanding and communicate their learning through graphic modes.
- The materials provide opportunities for students to engage in purposeful and targeted activities with grade-level-appropriate scientific texts. The materials also provide opportunities for students to engage in productive struggle through sensemaking that involves reading, writing,

thinking, and acting as scientists and engineers. For example, in the grade 4 "Patterns in Seasons" unit, there are multiple opportunities for students to engage and interact with the text. There are vocabulary words with pictures and definitions that provide support at the beginning of each lesson. There are guiding questions and hands-on activities that students can read and work through, then respond to. There are frequent checks for understanding and CER prompts that students can read, discuss with partners, and write about. There are also exit tickets with word banks, fill-in-the-blanks, and graphic organizers (tables) that students can respond to throughout the unit and at the end of the unit. In other lessons, blank tables are provided throughout the text, where students have to use what they have learned and display their understanding. The text also has constructed responses for the students to display their understanding.

Materials provide opportunities for students to communicate thinking on scientific concepts in written and graphic modes. For example, in the lesson "Types of Forces," on Day 5, after conducting the hands-on activity, the students write and collaborate with a partner. The materials state: "Collaborate with a partner to write a script for a 15-second radio commercial. Your commercial should communicate how magnets can be a solution to the problem of holding things together."

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

- The materials support students in acting as scientists and engineers in the "Hands-On" sections found throughout the text. For example, in section "3.6.D," the students are acting as both scientists and engineers. As scientists, they create an experiment with a control and a variable. After they have conducted several tests, they analyze the data and use it to engineer a better product.
- The materials provide for authentic student engagement and perseverance when working with concepts; students productively struggle while acting as scientists and engineers. For example, the "Can You Explain It?" section in the "Life Cycles" lesson provides teacher instructions on how students use their hands-on activities and explorations to re-visit a phenomenon and use the material learned through the unit to create claims, evidence, and reasoning. Students explain how they think both the plant and the alligator will change throughout their lives.
- The materials support students as "practitioners" while they are figuring out (sensemaking) and productively struggling. For example, in the grade 3 Teacher Guide for the lesson "Energy and Speed of Objects," Day 4, after an investigation, students write a scientific explanation about how energy affected an object's speed as it went down a ramp.
- The materials create transfer opportunities for students to take what they have learned and use it flexibly in new situations. For example, students complete multiple hands-on investigations on classifying matter by physical properties. At the end of the hands-on investigations, the guide suggests the students apply what they have learned so far about properties by choosing a type of matter they saw in a meal, listing as many properties as they can to describe the matter without naming it, then trade the list with a partner and try to identify the matter their partner chose based on its properties. This is evidence of students transferring their learning to new situations.

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

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.

- The materials provide opportunities for students to use evidence to support their hypotheses and claims. For example, in the lesson "Types of Forces," Day 4, the section "Claims, Evidence, and Reasoning" includes a prompt for students that states: "Make a claim to describe how magnetic forces push and pull in contact and at a distance. Support your claim with evidence from your investigation. Explain your reasoning." The materials include a sample answer that states: "My claim is that magnets can push or pull another magnet. My evidence is that my magnet did both...."
- Materials prompt students to use evidence to support their hypotheses and claims at the end of all of the "Hands-On" activities. For example, during Day 2 of TEKS 3.6.B, after the students investigate a solid, they are asked: "Make a claim to describe the relationship between the structure and function of solids. Support your claim with evidence from your investigation. Explain your reasoning."
- The materials specifically prompt students to use evidence when supporting their hypotheses and claims. For example, in the "Texas Fossils" lesson, students are prompted to use evidence from the lesson to write evidence and reasoning on what scientists learn by studying fossils. Teacher Guide materials provide prompts for teachers to assist students when they are

struggling to use evidence to answer the guiding question. The teacher prompt guides students to think about what fossils tell us about organisms from long ago.

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

- The materials consistently include embedded opportunities to develop and utilize scientific vocabulary in context. The "TEKS 3.11.B, Conserving Natural Resources" lesson's "Vocabulary" page includes *nonrenewable resources, renewable resources,* and *conservation*. On the next page, in the "Language SmArts" section, the students are given a constructed writing response to complete: "How could you respectfully discuss conservation with someone who does not think it is important? Write a letter to explain to that person why the conservation of natural resources is important. Be sure to include landfills in your discussion." This prompt guides the students to use the vocabulary words introduced in this TEKS.
- The materials include opportunities to develop and use vocabulary after having a concrete or firsthand experience within which they can contextualize new terms. For example, students are presented with fossil vocabulary words during the "Engage" section of the lesson. Students observe fossil picture cards to compare images of living organisms to fossils from the past through a series of hands-on activities. In the "Explain" section of the learning sequence, teachers elicit students' thinking about how fossils are formed and engage students in exploring ecosystems to learn more about the organisms that lived in ancient environments. Students write sentences about what fossils tell us about organisms and environments of the past.
- Opportunities are embedded to develop and utilize scientific vocabulary in context. An example is found in the "Energy" unit during an exit ticket. Students are asked to identify what type of energy is found in each toy. Students are to label the toys with each type of energy using the vocabulary words.
- Multiple opportunities are provided for students to apply scientific vocabulary within context. For example, in the grade 3 Teacher's Guide, during the lesson "Energy and Speed of Objects," Day 5, students interact with the vocabulary words *energy* and *speed*. The materials state: "Put the words *energy* and *speed* up or down on the board to represent a faster or slower speed. Then have the student show what happens to the energy of that object when its speed increases by moving the word *energy* up or down on the board. Remind students that there is a connection between energy and speed, whether speed increases or decreases."

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

- The materials integrate discourse and argumentation within stages of the learning cycle. For example, in the "Changes in Weather" lesson, students record weather data over a two-day period for two different locations. Students use their collected data for discourse with other students, looking for patterns and making predictions about current weather.
- The materials provide opportunities for students to develop how to engage in the practice of argumentation and discourse. For example, in the lesson "Types of Energy," Day 3, the materials state: "Make a claim about how a person can use everyday examples of energy to communicate without speaking. Support your claim with evidence from your investigation. Explain your reasoning to connect your claim to your evidence."
- Materials provide opportunities for students to engage in argumentation and discourse. For example, during the "Energy" unit, the students are instructed to compare their solutions: "Partner with another team who used a different kind of energy. Compare your solutions and

your test results. What are the advantages and disadvantages of using each kind of energy to communicate?"

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.

- The materials provide instruction on constructing and presenting a verbal or written argument for problems using evidence acquired from learning experiences. For example, in the lesson "Energy and Speed of Objects," students conduct investigations about how an object's speed relates to its mechanical energy. After the hands-on activities, on Day 4, students analyze data and find patterns, then write a scientific explanation to discuss how energy affects an object's speed as it goes down a ramp.
- The materials consistently provide opportunities for students to construct and present developmentally appropriate written and/or verbal arguments that justify explanations of phenomena and solutions to problems using evidence acquired from learning experiences. For example, for "TEKS 3.6, Matter," at the end of the "Measuring Temperature" activity, in the "Claim, Evidence, and Reasoning" section, the students write a conclusion: "Make a claim about the physical property of temperature. Support your claim with evidence from your investigation. Explain your reasoning to connect your claim."
- The materials provide opportunities for students to justify explanations of phenomena and solutions to problems using written and verbal arguments using evidence acquired from learning experiences. For example, in grade 3, the "Organisms and Environments" lesson "Can You Explain It?" section has students use the knowledge that they acquired through hands-on activity labs (on how plants and animals respond to changes in their environments) to write a claim, evidence, and reasoning (CER). Students refer back to the phenomena presented at the beginning of the lesson—that temperature and precipitation affect how organisms grow and behave.

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

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.

- The materials provide teachers with possible student responses to questions and tasks. For example, in the lesson "Types of Energy," Day 1, the materials include a guiding question and provide sample student answers: "What kinds of energy could be dangerous to a construction worker and cause her to need different kinds of safety gear? Sample answer: falling objects, bright light, loud noises, flying objects."
- The materials provide support for teachers to deepen student thinking through questioning and student responses. An example of this can be found in the "Forces" lesson in the "Exploring Gravity" investigation. The guide suggests leading a group discussion about the forces involved in making a pizza. Students examine images of a man making a pizza. Questioning prompts provided for the teacher to use to deepen the discussion include: "Complete the sentences to describe the push and pull forces affecting the pizza dough." "Use evidence from the image to describe how the force of gravity is acting on objects on the desk." "Explain what forces keep the objects from falling to the ground."
- The materials consistently provide the teacher with guidance on anticipating student responses and the use of questioning to deepen student thinking. For example, in the lesson "TEKS 3.6B, States of Matter," there is a section called "Lead a Group Discussion." The text states teachers

should have students "rewatch the video or closely observe the picture of the flashlight" and "record what they notice and wonder about the fruits." The next section is "Student Questions": "By eliciting student questions, you are both tapping into their identity as scientists and eliciting, in an indirect way, their prior knowledge. Encourage students to ask questions about what interested them in the video. Remind students that they are being scientists when they ask questions and figure out ways to answer them through observations, experiments, and gathering evidence. Record the questions, and put a checkmark by a question that has more than one student who is interested in it. Let students know they will not answer the questions right now. It will be answered as students move through the lesson. They should use the evidence they gather through the hands-on activities and explorations to answer questions and generate new questions."

 Teachers are provided with possible student responses to questions and tasks in the materials. For example, in the "Processes on Earth" unit, in the "Changes in Weather" lesson, students are learning to compare and describe day-to-day weather in different locations. The Teacher Guide provides questions to help students describe changes in weather day to day across places. A sample answer is "I can find out the air temperatures and compare the numbers." Later in the unit, the materials provide a student task: "Make a claim about the weather in different locations at the same time." A sample answer is the following: "My claim is that the weather in Florida is different from the weather in Vermont. My evidence is that it was 20 degrees cooler in Vermont on the days I measured. My reasoning is that it was snowing in Vermont. It doesn't snow in Florida, so it definitely won't be as cold."

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

- The materials provide embedded support for the teacher in how to introduce and scaffold students' development of scientific vocabulary. For example, in the "Forces and Motion" unit, the guide suggests the teacher activate prior knowledge by having students explore different types of forces and discuss what they learned in previous grades. The guide then suggests leading a group discussion about push, pull, and forces and having students demonstrate pushes and pulls in the classroom. Next, it gives suggestions for having students write the words down, provide examples, and draw pictures to help them connect to the words. They can also use a support scaffold, the "Language Development Worksheet," to record key vocabulary and terms they come across in the unit. The teacher can also create a vocabulary anchor chart for students to refer to throughout the lesson/unit.
- The materials include teacher guidance on how to scaffold and support students' development and use of scientific vocabulary in context by providing language support minilessons. For example, for TEKS 3.12.D, the minilesson "Language Objective" is "Listen to a text to find what they can learn from fossils." The teachers are provided with both "Strategy" and "Scaffolding" sections. In the Strategy section, they are guided: "Set a listening focus: ask students to listen for the phrase can tell you. Explain how they will learn what fossils can tell you." The teachers are then guided: "Provide frames to help students restate ideas in the text." The Scaffolding instructions are broken into "Beginning, Intermediate, Advanced, and Advanced High" to support the students in their reading and writing levels.
- The materials provide guidance for the teacher on how to support students' use of scientific vocabulary in context. For example, in the "ELPS Minilessons," in the lesson "What is Speed?" the materials state: "Point out that speed is something in the student's everyday lives. Say: It is how fast someone or something is moving. Provide an example, such as A turtle moving at a

slow speed. An airplane moves at a fast speed. Guide students to connect to previous knowledge and experiences and share examples of things they know that have slow speeds and fast speed...."

The materials provide guidance for the teacher on how to support students' use of scientific vocabulary in context. For example, in a lesson on "States of Matter," the "Can You Explain It?" section prompts the teacher during "Check Student Understanding" to encourage students to use scientific vocabulary such as *solid*, *liquid*, *gas*, and *states of matter* to write a claim about "How does filling a floating toy with air affect the toy?"

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

- The materials consistently provide teacher guidance on preparing for student discourse and supporting students in using evidence to construct written and verbal claims. For example, in "TEKS 3.12.B, Energy Flow in Food Chains," there are links to minilessons that provide support in teaching the students to write out their claims. The teachers are instructed: "Have students write about the food chain in the text using basic vocabulary and content-based vocabulary from these minilessons. Distribute the Writing Graphic organizer and monitor students' progress using the differentiated supports." This section also provides leveled support for the student writers.
- Materials provide teacher supports to prepare students for discourse. An example of this can be found in the "Energy" unit. The teacher materials include a section for "Leading a Group Discussion," which includes guidance such as having students watch a video and make observations about a scientist and his contributions to society. The section continues to offer support through guiding questions to encourage student discourse, such as "What other jobs do you know that use Science and Art together?" Students discuss with each other.
- The materials provide teacher questions for supporting student discourse and the use of evidence in constructing written and verbal claims. Questions push students to use evidence to support their claims in both written and spoken discourse. Teacher edition materials provide teachers with questions designed to help students write a claim, evidence, and reasoning (CER). For example, in the "Can You Explain It?" section of the "Using Physical Properties" lesson, teachers are prompted to pose a question such as "If you want to build a strong structure, what physical properties would you look for in the materials?" when guiding students to write a CER on how properties of matter are useful to know when building a strong structure.
- The materials provide teacher questions for supporting student discourse and the use of evidence in constructing written and verbal claims. Questions push students to use evidence to support their claims in both written and spoken discourse. For example, in the lesson "Energy and Speed of Objects," Day 1, in the section "I Notice/I Wonder," the materials state:
 "Encourage students to ask questions about what interested them in the video. Remind students that they are being scientists when they ask questions and figure out ways to answer them through observations, experiments, and gathering evidence... They should use the evidence they gather through the hands-on activities and explorations to answer questions and generate new questions."

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

- The materials provide teacher support for facilitating the sharing of students' finding solutions. The Teacher Guide provides feedback tips and examples teachers can use to support students throughout the learning cycle. For example, the "Teacher's Corner" includes a section on "Make Science Fun: Facilitating Collaboration," which includes a section on embracing failure and states: "In engineering, failure is actually a good thing. Teach your students that not only is it okay, but it's also expected for them to fail along the way to their solution. Encourage them to modify their initial ideas as they learn what causes a failure." The materials included in this section are intended to be used as best practices across all units and lessons.
- The materials support and guide teachers in facilitating the sharing of students' thinking and finding solutions. For example in the "TEKS 3.8A, Types of Energy" lesson, teacher guidance includes "Cross-Curricular Connections," which supports students writing their claims and evidence. Under a "Language SmArts" tag on Day 3, students write a description and draw a model to communicate their solution. Then they propose ways to tailor communication to different audiences. Materials state, "Suggest different audiences they could choose, such as younger students." On Day 4, "Students write questions about energy in everyday life to reflect on the information and observations they have gathered from the text and images."
- The materials provide teacher supports and guidance for facilitating the sharing of students' finding solutions. An example of this can be found in the "Weather" lesson, in the "Model and Explain Content" section. In this section, the teacher guide suggests that teachers model and explain the content using sentence frames in the "Claims, Evidence, Reasoning (CER)" section— modeling a simple claim, supporting it with evidence, and explaining how the evidence supports the claim. Modeling for the students allows them to see an example of how to structure their thinking by putting it into writing and having it make sense.
- The materials provide teacher support and guidance to engage students' thinking in various modes of communication throughout the year. For example, in the "Energy and Speed of Objects" lesson, on Day 2, in the section "Support for Student Answers," the materials include an exemplar student response: "My claim is that people can agree on speed if they measure it. My evidence is I thought that I ran fast, then when we measured it, I was not very fast. My reasoning is everybody thinks they are fast, but the numbers are probably different."

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- Materials include formative assessments in a variety of formats to measure student learning and determine the next steps for instruction. For example, in the grade 3 Teacher's Guide, "Changes in Position and Motion" Day 4 lesson, the materials include an Exit Ticket/Formative Assessment. The materials state, "Provide feedback by encouraging students to read the statement and examine the image carefully before choosing accurate statements about the force of gravity and pulling a wagon. Which statements correctly describe the forces that affect the position and motion of the wagon? Select all that apply."
- The materials include summative assessments in a variety of formats. In the grade 3 Reports section, there is evidence that there are summative assessments in two formats (Form A and B) that assess students on the concepts in that unit. An example of this is the "Life Cycles and Body Parts" unit test report. The Reports for this assessment give crucial data to help teachers determine progress by student, class, and grade. There is also information to help drive the instruction, including item analysis data and students that are on, below, and above level by unit.
- The materials include a range of diagnostic, formative, and summative assessments, including formal and informal opportunities to assess student learning. An outline for the summative

assessments states, "They consist of an average of 10 items, that are approximately 50% multiple choice, 40% technology-enhanced items, including drag-and-drop, hotspot, and multi-select item types, and 10% short constructed response items."

• Formative assessments are presented in a variety of formats included in the materials to measure student learning and determine the next steps for instruction. For example, at the beginning of the lesson in grade 3, "Types of Energy," students activate prior knowledge of what they know about vibration. The teacher guide gives guidance for the teacher to guide students' thinking around prior grade knowledge, such as learning that force and motion are related and that energy exists in many forms as a part of everyday life. The materials guide teachers to lead a group discussion for students to make a claim about energy using their prior knowledge, including words such as energy and sound energy.

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

- The materials assess all student expectations, as outlined in the TEKS by grade level. The materials contain a cohesive scope and sequence and pacing guide that maps out and outlines what will be taught in a specific course and grade level. The materials note the formative assessments and TEKS assessed for each unit and lesson.
- The materials assess all student expectations and indicate which student expectations are assessed. For example, in grade 3, for each summative assessment, the teachers are provided an outline of the test questions. The spreadsheet includes the item type, reteaching support, and rationale for the students' selections, whether correct or incorrect. In the summative assessment for "Energy Flow in Food Chains," the correct answer says, "This is correct because if there is more food available to eat, then more fish will live in the pond to eat the food." An incorrect answer example is, "This is incorrect because if more people are fishing in the lake, the population of fish will decrease rather than increase."
- The materials assess all student expectations, as outlined in the TEKS, by the grade level. The materials include detailed TEKS-based lesson plans at the beginning of each unit that outline how the materials can be used to teach specific concepts and skills, address specific students' expectations, and provide guidance on how to assess student learning in the Lesson at a Glance: Lesson Planning section.
- The materials indicate which student expectations are assessed. For example, the materials provide the TEKS correlation for each assessment and the answer keys, i.e., grade 3 Teacher's Guide "Changes in Position and Motion" lesson, Planning for Assessment section, the materials list the daily formative assessments for days 2-4, formative assessments or TEKS quizzes for 3.7B and answer key, and summative assessments or TEKS tests for 3.7B and answer key.

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

• The materials include assessments that integrate scientific concepts and science and engineering practices. For example, in grade 3, TEKS 3.7A, "Types of Forces," the students are investigating push and pull forces acting on a toy car. The students use a meterstick to measure the effects of the push and pull. When they have collected their data, the students, "Develop a model in the form of a diagram showing the push or pull forces that acted on your toy car. Use an arrow in your model to show the effect that the forces caused."

- Materials include assessments that integrate scientific concepts and science and engineering
 practices with recurring themes and concepts. For example, in grade 3, TEKS assessment
 materials ask students to complete a data chart by making observations and measurements of
 the physical properties of an unlabeled object by analyzing previously made observations.
- The materials include assessments that require students to integrate scientific knowledge and science and engineering practices with recurrent themes appropriate to the student expectation being assessed. For example, in the grade 3 Teacher's Guide, "Changes in Position and Motion" lesson Day 2, the materials complete a performance task by making a claim about how pushes and pulls change the motion and position of an object after their investigation. The materials include a chart with performance indicators for the performance task.
- Assessments that integrate scientific concepts and science and engineering practices with
 recurring themes and concepts are included in the materials. An example is from the grade 3,
 "Force," 3.7A Test A. Students have to apply their knowledge of different forces to explain how
 different strengths of kicks affect the position of a ball. Students then will read descriptions of
 forces and determine which ones are pushes and which ones are pulls.

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

- Materials include assessments that require students to apply knowledge and skills to novel contexts. Materials include assessments where students apply knowledge and skills to a phenomenon that is presented at the end of each unit. For example, in the grade 3 "Fast Changes To Earth's Surface" lesson in the "Space" unit, students are given a phenomenon around "How do the orbits of the sun, Earth, and moon relate to each other?" At the end of the unit, students are asked to create a claim, evidence, and reasoning using knowledge and vocabulary obtained from the unit.
- Materials include assessments that require students to apply knowledge and skills to a new phenomenon or problem. For example, in the grade 3 Teacher's Guide lesson, "Types of Energy Day 6," students work on an activity after they conduct the investigations of the lesson in the previous days. The materials state, "Describe two problems that an acoustic engineer might help solve."
- The materials include assessments that require students to apply knowledge and skills to novel contexts. In the grade 3, 3.6A lesson on "Properties of Matter," students are introduced to the phenomenon that properties of matter can be used to combine materials, and they can use those properties to create strong structures. Students will then explore making salt dough by combining amounts of materials and investigating how it affects the physical properties of the dough. Students will then continue their investigation by using the salt dough to combine materials to create a structure, and then continue even further by improving upon their first prototype. By the end of the investigation, students will complete a Claims, Evidence, and Reasoning (CER) prompt where they apply their learning and make a claim about how the properties of the ingredients impacted the dough. They then have to cite evidence from the investigation and explain their reasoning.
- The materials consistently include assessments that require students to apply knowledge and skills to novel contexts. For example, in grade 3, TEKS 3.10A, "Changes in Weather," the students apply their knowledge and skills to describe the day's weather. The students are required to write about the different locations where they collected data. The text directs them to "Be sure to include air temperature, wind direction, and precipitation in each description."

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

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. Assessment tools yield relevant information for teachers to use when planning instruction, intervention, and extension. Materials provide a variety of resources and teacher guidance on how to leverage different activities to respond to student data.

Evidence includes but is not limited to:

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

- Materials include information that guides teachers in evaluating student responses. For example, in the grade 3 Teacher's Guide lesson, "Changes in Position and Motion Day 3," the materials include follow-up suggestions for formative assessments and provide examples of acceptable answers for evaluating student responses. For example, the materials state, "Exit Ticket/Formative Assessment. Support Student Answers: Explain how the forces cause the object's position and motion to stay the same or change. Complete the paragraph to explain how pushes and pulls combine to affect the position and motion of objects. Sample answer: A student holds an apple in her hand. The force of gravity pulls the apple down, and her hand pushes the apple up. The apple's position stays the same. Then the student lets go of the apple. Because of the force of gravity, the apple moves, so its position and motion will change."
- The materials include information and/or resources that provide guidance for evaluating student responses. In grade 3, after each Claim, Evidence, and Reasoning (CER) prompt, there is guidance that includes performance indicators, sample student answers, and guidance on how to check for student understanding and how to intervene if students do not understand. An example from the grade 3, "Life Cycle and Body Parts," 3.13 CER prompt notes for teachers includes the suggestions, "Check for student understanding by having students revisit the

question they asked at the beginning of this activity and determine whether they have answered it."

- The materials consistently provide guidance for evaluating students' responses. At the end of the hands-on activities, the students are required to make a claim and support it with evidence and reasoning. The teacher guide provides *Support for Student Answers* that provides sample answers. For example, in grade 3, TEKS 3.8B, "Energy and Speed of Objects," the students are investigating the speed difference of objects as they move down a ramp. The sample answer provided is, "My claim is that speed is greater when a ramp is higher. My evidence is that the time it takes to get to the bottom of a ramp is longer when the ramp is shorter. My reasoning is that the taller ramp allows the object to move faster than a shorter one."
- Materials include information and/or resources that provide guidance for evaluating student responses. Materials include information that guides teachers in evaluating student responses. At the end of each lesson, students are asked to write a claim, evidence, and reasoning (CER) response to their learning, and materials give teachers performance indicators for evaluating students' CER writing response. For example, in the grade 3 unit on "Forces and Motion," in the "Types of Forces" lesson, students are asked to make a claim about how pushes and pulls can affect objects they are touching, or in contact with. The performance indicators for teacher evaluation include student responses that demonstrate the push and pull forces that act on a toy car, describe the forces that act on the toy car, and use tools to measure distances to use as evidence.

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

- The materials support teachers' analysis of assessment data with guidance and direction to
 respond to individual students' needs. For example, in grade 3 an assessment key is provided for
 the quizzes that includes reteaching support. If a student does not answer a question for TEKS
 3.6A, "Investigate Properties of Matter," correctly, the teacher is guided to reteach with the
 following example: "If students miss this item, they may need to review measurement tools.
 Show students different tools that are used to measure mass, temperature, and magnetism."
- Materials provide guidance and tools to support teachers in responding to data to inform instruction. Materials for grades 3-5 are included in the Teacher Edition reports tab. The growth report includes data reports that inform instruction and facilitate tracking of student progress toward skill mastery by class or by individual student. This report is customizable by the teacher to guide their decisions on student instruction.
- Materials provide guidance documents and resources to support teachers' analysis of assessment data. For example, the grade 3 materials include a data analysis section in the *Assessment Reports* option of the landing page that supports the teacher's analysis of assessment data by skills and themes with an option to group students based on needs.

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

• The materials provide assessment tools that yield relevant information for teachers to use when planning instruction, intervention, and extensions. For example, in grade 3 the teachers have access to reports that break down the students' performance from assessment. These reports

not only show the lowest performing standard, but also creates small groups based on the data for reteaching purposes.

- Assessment tool materials suggest ways to make instructional decisions. Materials include an Assessment Report which is color-coded by "Below-Level, On-Level, and Above-Level," which groups students based on their mastery and identifies objectives that need to be retaught by whole group or by student groups.
- The information gathered from the assessment tools helps teachers when planning differentiated instruction. For example, in the grade 3 Teacher's Guide lesson, "Energy Day 6," the materials include an assessment section that states, "More review and remediation strategies are in the Answer Keys on Ed."
- There are assessment tools that yield relevant information for teachers to use when planning instruction, intervention, and extension. Teachers can access an Assessment Report that includes assessment proficiency by students and groups them into below-level, on-level, and above-level groups. The report also includes the two lowest-performing standards so teachers can use that data to focus on specific concepts to fill gaps for intervention purposes. An example of this is found in the grade 3 "Life Cycles and Body Parts" 3.13 unit, Test A.

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 responding to
 performance data. Materials include intervention activities teachers can use for reteaching
 concepts. For example, in the Teacher Edition for grade 3, Planning for Differentiation in the
 "Matter and Energy" unit, "Investigating Properties of Matter" lesson, has a reteaching support
 section that includes a supplemental lesson on, "What are some physical properties?"
- Materials provide a variety of teacher guidance for responding to student data. For example, in the grade 3 Reports section of the landing page, the materials include the Assessment Report for assessment proficiency, which classifies student proficiency and has the option to export the data report per student to an Excel sheet.
- The materials provide a variety of teacher guidance for responding to student data. The teacher's guide provides a Differentiation Challenge in every lesson to challenge students based on whether they need clarification of a concept or need to be challenged in their thinking. A grade 3 Differentiation Challenge example for Life Cycles states, "Have students discuss their experiences with plants. Do they have potted plants at home? Are they able to locate and observe plants during outside recess? Discuss how they can apply their knowledge of today's lesson to plants they have observed outside of the classroom."
- The materials provide a variety of resources and teacher guidance on how to leverage different activities to respond to student data. For example in grade 3, *Differentiation: Extra Support* is provided throughout the text. In lesson TEKS 3.9B, "Our Solar System," the students are studying the Earth's solar system. The teachers are guided to support the students' learning as the materials state, "Teach students a mnemonic to remember the order of the plants, such as: My Very Eager Mother Just Served Us Nachos. Or you may choose to have students think of their own mnemonic example."

Indicator 6.3

Assessments are clear and easy to understand.

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

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 are offered through the materials.

Evidence includes but is not limited to:

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

- Materials include assessments that contain items for the grade level that are scientifically
 accurate. For example, the formative assessments include assessment items that align with
 taught objectives. For example, in the grade 3 Student Interactive Lessons, lesson "Types of
 Forces Day 3," students conduct a hands-on activity to demonstrate the force of gravity acting
 on an object in contact or at a distance. The Exit Ticket at the end of the activity asks students to
 select the statement about how the force of gravity acts on objects.
- The assessments contain items that are scientifically accurate, avoid bias, and are free from errors. In grade 3, Quiz A on 3.6A, "Properties of Matter," the items avoid bias by focusing on factual and accurate information asking students to define mass.
 The assessments consistently contain items that are scientifically accurate, avoid bias, and are free from errors. For example, in the grade 3, "Structures and Functions of Animal Parts" 3.13A Quiz, the students are provided illustrations of a black-tailed jackrabbit and a snowshoe hare. They are told, "Move ONE correct answer to each blank to explain how the structures and functions of the two rabbits help survive in their environments."
- Assessments contain items for the grade level or course that avoid bias. Formative and summative assessments include assessment items that present content and examples in a fair and impartial manner with no impact on student performance based on such factors as a student's home language, place of origin, gender, or race and ethnicity. In grade 3, the unit on "Resources," on ways humans use natural resources, the formative assessment presents situations to students that include individuals of diverse backgrounds as scientists and engineers.

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

- The assessment tools use clear pictures and graphics that are developmentally appropriate. For example, grade 3 assessment items contain clear pictures of property tools on the "Properties of Matter" 3.6 Quiz.
- The assessment tools use clear pictures and graphics that are developmentally appropriate. For example, in grade 3, in the "Structures and Functions of Animal Parts" 3.13A Quiz, illustrations are provided for the feet of a house wren and bald eagle. These illustrations provide details to support the students' answers.
- Assessment tools use clear pictures and graphics. In grade 3, assessment items include easy to read, labeled graphics on food chains.
- Materials include assessments containing pictures and graphics that are developmentally appropriate. For example, in the grade 5 "Energy" Test A, the materials present simple and clear graphics to show circuits. The graphics include pictures and arrows to show directionality.

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

- The materials provide guidance to ensure consistent and accurate administration of assessment tools. For example in grade 3, they provide an Assessment Frontmatter that includes a breakdown of the Scaffolding in HMH Into Science Texas Assessments, Depth of Knowledge Progression in HMH Into Science Texas Assessment, Rigor Measurement in HMH Into Science Texas Assessment, and Webb's Depth of Knowledge for Science.
- Materials provide clear guidance for teachers to consistently and accurately administer assessment tools. Clear guidance for teachers to efficiently administer the assessment, such as reminders or tips that give suggestions for the time allotted to complete the assessment and recommendations for breaking parts of a long assessment across days or class periods is provided by the materials.
- The materials include detailed information that supports the teacher's understanding of assessment tools and their scoring procedures. For example, in the grade 3 Teacher's Guide, "Changes in Position and Motion" lesson in the Planning for Assessment section, the materials state, "Evaluate. When administered online on Ed, reporting capabilities will be available to provide data by student or by class. When administered online on Ed, audio is available for additional reading support. The TEKS is provided in two formats, Test A and Test B. Test B has a reduced difficulty and reading load, to be used in the classroom for differentiation."
- The assessment tools use clear pictures and graphics that are developmentally appropriate. For example, the grade 3, Quiz A, on the Earth, Moon, and Sun has a clear and developmentally appropriate graphic of the Earth, Moon, and Sun system.

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

- Materials offer accommodations for assessment tools so that students of all abilities can demonstrate mastery of learning goals. For example, materials provide a text-to-speech feature on the web-based assessment platform. In the grade 3 Teacher's Guide, "Types of Energy" lesson, in the Planning for Assessment section, the materials state, "When administered online on Ed, audio is available for additional reading support."
- Materials include guidance to offer accommodations for assessment tools that allow students to demonstrate mastery of knowledge and skills aligned to learning goals. In grade 3, the Exit

Ticket formative assessments have a text-to-speech feature where students who need that accommodation can have the text read to them. This is seen in the grade 3, "Space" 3.9A Exit Ticket.

- The materials include guidance to offer accommodations for assessment tools that allow students to demonstrate mastery of knowledge and skills aligned with learning goals. For example in grade 3, an Assessment Frontmatter is provided that includes an Additional Resources section. One section is for Modified Quizzes/Tats & Audio. It states, "The modified TEKS Quizzes (Quiz B) and TEKS Test (Test B) are targeted to help struggling readers and emergent bilingual students demonstrate their abilities related to the TEKS. These items have a slightly lower difficulty and reading level but are visually identical to the on-level assessments and assess the same TEKS."
- Materials include guidance to offer accommodations for assessment tools that allow students to demonstrate mastery of knowledge and skills aligned to learning goals. For example, materials in grades 3-5 include audio options for students to listen to administered online assessments for additional reading support. These audio options are available across all assessments in the Planning for Assessment: Ed Online section of the Teacher's Guide.

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	Μ
L T	students who have not yet achieved grade-level mastery.	
2	Materials provide enrichment activities for all levels of learners.	Μ
3	Materials provide scaffolds and guidance for just-in-time learning acceleration for all students.	М

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 also 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 guidance to teachers for scaffolding instruction and differentiating activities for students who have not yet achieved mastery. For example, lessons include recommendations for downward scaffolds to support students in successful science learning and knowledge building. In the grade 3 Teacher's Guide, lesson "Energy and Speed of Objects," the materials include a section titled Planning for Differentiation and extra resources for reteaching the concepts of the lesson, i.e., EdOnline lesson "ScienceSaurus Physical Science: Motion."
- The materials include teacher guidance for scaffolding instruction and differentiation activities for students who have not yet achieved mastery by providing anchor charts and graphic organizers that help students clarify academic vocabulary. An example of this can be found in the grade 3 "Force" unit in the Vocabulary section. The teacher guide suggests having students use the Language Development Worksheet throughout the lesson to record key vocabulary and to review terms on the Vocabulary Anchor Chart that students can use to refer to throughout the lesson.
- The materials provide recommended targeted instruction and activities to scaffold throughout the Teacher's Guide. Teachers are provided with links to EdOline that have differentiation/reteaching support that scaffolds to the current lesson they are teaching. For example, in the grade 3 Teacher's Guide, when the students are studying TEKS 3.6A, the teacher is provided with this differentiation/extra support: "Show two cups, one that is empty and one that has a pencil in it. ASK: Which cup has more mass? Explain. Discuss with students that a cup

of pencils has more mass because each pencil has mass. Each pencil adds to the total mass of the cup."

The materials include teacher guidance for some scaffolding instruction and differentiating
activities for students who have not yet achieved mastery. For example, materials for grades 3-5
provide sentence stems for teachers to guide students in writing their claims, evidence, and
reasoning, such as, "My claim is....(I think that....)(I noticed that....) or My evidence is.... These
sentence stems are used in all units and are repetitive throughout the materials."

Materials provide enrichment activities for all levels of learners.

- The materials include enrichment activities that account for learner variability. This evidence can be seen in the Elaborate section of each lesson inside each unit that extends the learning for students. An example of this can be found in the grade 3 "Force" unit. Students can learn about how force and motion benefit society, discuss careers that require equipment and supplies to be moved around, and complete an activity, such as writing a job advertisement for a crane operator that describes some of the force and motion that happens with a crane.
- Materials provide enrichment activities for all levels of learners in every lesson section. The
 resource provides links to alternate lessons/extensions, ELPS support, and
 differentiation/reteaching support. For example, in lesson 3.7A on the Planning for
 Differentiation page, there is a section called FUNonmenal Reader: "The FUNomenal Readers
 are organized into three Lexile levels so students can be assigned readers based on their
 appropriate reading level." In this lesson, the teachers are provided with a leveled reader called
 "The Circus Is Coming" that focuses on force and motion. It also includes links to ELPS MiniLessons.
- Enrichment activities are consistently provided in the materials that account for learner variability. Teacher guidance and additional resources encourage the exploration and application of grade-level science knowledge and skills in a variety of ways, including applying new learning to things such as project-based explorations. For example, online materials include a variety of real-world scenarios students can explore based on their interests in particular areas of science or community needs. For example, in grade 3, the unit covering patterns and cycles in the environment, the lesson "Effects of Natural Changes and Organisms," the Teacher Edition provides an opportunity for students to participate in an extension resource project on environmental change and performance task: change it up.
- Activities for all levels of learners are included in the materials. For example, the grade 3 Teacher's Guide contains a section titled Elaborate for every lesson. In the lesson "Types of Forces Day 6," the materials have seven extension resources, such as *You Solve It: Egg Drop Challenge*.

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

- Materials provide scaffolds and guidance that support the teachers in just-in-time learning acceleration for all students. For example, in grade 3, lesson 3.9B, "Space," the materials provide a Differentiation/Reteaching Support section. In this example, the materials include *ScienceSaurus Earth Science: Space,* and *Supplemental Lesson What Are the Planets in Our Solar System?*
- The lessons include recommendations for just-in-time scaffolds to develop productive perseverance in learning at the moment. Materials include questions for the teacher as a means of supporting students when they struggle to maintain engagement on a task within the lesson.

For example, in grade 3, teacher resource materials for the "Life Cycles and Body Parts" unit, in "Structures and Functions of Animal Parts" provide teacher guidance for when students need extra support in understanding bird beaks. Materials prompt the teacher to discuss two different beak types and give question prompts that include how the size and shape compare, and then guide the teacher into a discussion on how each model picks up food and describes how each model functions differently.

- Materials include teacher guidance for scaffolding instruction and differentiating activities for students who have not yet achieved mastery. For example, lessons include recommendations for downward scaffolds to support students in successful science learning and knowledge building. In the grade 3 Teacher's Guide, lesson "Types of Forces Day 4," the materials include a section titled Differentiation: Challenge. The materials state, "Challenge students to identify which objects around the classroom will be pulled by magnets and describe patterns in their observations."
- There is evidence throughout the lessons that the materials include recommendations for justin-time scaffolds to develop productive perseverance in learning at the moment. For example, in the grade 3 "Energy Engage" lesson, the materials include suggested immediate and specific feedback to help learners. This can be seen in each section titled, Support for Student Answers.

Indicator 7.2

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- Materials engage students in the mastery of the content through a variety of developmentally appropriate instructional approaches. For example, lessons include authentic tasks in which students use tools to measure and collect data. In the grade 3 Teacher's Guide lesson, "Types of Forces Day 2," students use a meterstick to measure how a push or pull affects a toy car. Students collect the data and use it to develop a model. Another example can be found in the lessons that include authentic tasks in which students use tools to measure and collect data. For example, in the grade 3 unit on "Life Cycles and Body Parts," students are collecting data to estimate the growth of a plant over the course of a week.
- The materials include a variety of developmentally appropriate instructional approaches to
 engage students in the mastery of the content. An example of this is found in the lessons in each
 unit in the Vocabulary section, such as the grade 3 "Resources" unit under the Vocabulary
 section in the Teacher Guide. The purpose of the Vocabulary section is to guide teachers to
 remind students that people learn and remember some words better if they write down the
 word and add examples or pictures to show what the word means. It also discusses an "I
 say/You say" routine where students hear and speak the vocabulary words.

• The materials consistently include a variety of developmentally appropriate approaches to engage students in content mastery. The use of sentence stems for the Claim, Evidence, and Reasoning section is one example. In grade 3, Lesson 3.9A, "Space," the teachers are guided to provide the students with the following sentence stems: "My claim is.... (I think that....) My evidence is.... My reasoning is...." The teacher is also provided with *Support for Student Answers*, where a guide is provided to help the students use their evidence to fill in the sentence stem and an example answer.

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

- The materials consistently support flexible grouping by promoting small groups for Hands-on Activities. In the grade 3 unit on "Space," the Hands-on Lab teacher guidance suggests students complete the Hands-on Investigations in small groups.
- The materials support a variety of instructional groupings (e.g., whole group, small group, partners, one-on-one). In the Teacher Edition, all lessons in the grades 3-5 materials provide a Key Learning Activity section at the beginning of every lesson, which includes multiple instructional grouping strategies teachers can utilize with their students. For example, the grade 3 unit on "Patterns and Cycles in Environments," the "Energy Flow in Food Chains" lesson, the Key Learning Activity section guides teachers to use small group instruction to assist students in choosing what food chain model they want to design.
- Materials consistently support flexible grouping, including partner work. Throughout the Student Edition, materials guide students to work in small groups, whole groups, partners, and one-on-one. This example includes students working with a partner in the Hands-on Activity for TEKS 3.6C in the lesson "Temperature Takes a Dive!" Part 2. In the text, teachers can have students work together to answer the prompt, "Imagine that a friend wants to help with the hot plate. With a partner, discuss what you might say to this friend to help them understand why only the teacher should use the hot plate."
- The materials support a variety of instructional groupings. For example, materials include opportunities for students to engage in collaborative or cooperative learning activities. In grade 3, the Teacher's Guide lesson, "Types of Forces Day 5," materials state, "Students will collaborate with a partner to write a script for a 15-second radio commercial to communicate how magnets can be a solution to the problem of holding things together."

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

- The materials demonstrate that evidence consistently supports multiple types of practices, and they provide guidance and structures to the teachers in supporting the students' understanding of the phenomena at all levels. In grade 3, Lesson 3.7A, the text guides the teachers to lead the class in a group discussion after watching a video. It states, "Encourage students to ask questions about what interested them in the video. Remind students that they are being scientists when they ask questions and figure out ways to answer them through observations, experiments, and gathering evidence."
- The materials provide teacher guidance and structures for the effective implementation of multiple types of practices. Materials state a clear purpose and learning goals for groups contained in units and lessons. Every lesson states a learning objective. For example, in the grade 3 unit on "Patterns and Cycles in Environments," the lesson focusing on "Organisms and Their Environments," the Hands-on Lab starts by stating the learning objective that students

should be able to identify the cause-and-effect relationship between changes in temperature and precipitation and the growth and behavior of animals that respond by migrating or hibernating. The section of each lesson titled Planning for Differentiation lists the resources available to support the lesson. For example, in the grade 3 Teacher's Guide lesson, "Types of Forces," the materials state, "Use the reader, 'The Circus is Coming' and its Teacher Support as a science Mini-Lesson to reteach, reinforce, and supplement types of forces... You can use the reader after Day 6 for independent reading, small group, or whole-class instruction."

• The materials show evidence that consistently supports multiple types of practices, and they provide guidance and structures to achieve effective implementation. An example of this can be found in the grade 3 "Energy" unit, "Communicate With Energy," Part 2. The Teacher's Guide materials state a clear purpose and learning goals for the group Hands-on Activity contained in the lesson. After the learning goals are stated, there are explicit step-by-step instructions along with suggested feedback to guide the teacher throughout the investigation.

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

- The materials represent diverse communities using images and information that are respectful and inclusive. Information in teacher guidance documents, student materials, scientific texts, and assessments positively portrays a diverse group of scientists and engineers representing genders, races, ethnicities, abilities, religions, and national origins. There are numerous images of a diverse group of scientists and engineers representing genders, races, and ethnicities. For example, in the grade 3 "Matter" unit, there are pictures featuring a female, Asian meteorologist and a feature article about a black, female science researcher.
- The materials represent diverse communities using images and information that can be found in the grade 3 Teacher's Guide lesson, "Investigate Properties of Matter Day 6," discussing the contributions to society of the scientist Shirley Ann Jackson.

Indicator 7.3

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- Materials include teacher guidance for communication with Emergent Bilingual students, with the goal of creating comprehensible input. For example, in the grade 3 Teacher's Guide in the lesson "Types of Force" in the section Emergent Bilinguals Support, the materials state, "Have students express their knowledge 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 the term's meaning."
- The materials include linguistic accommodations commensurate with various levels of English proficiency as defined by the ELPS. The materials include teacher guidance for communication with Emergent Bilingual (EB) students, with the goal of creating comprehensible input. In the teacher resources, there are ELPS Mini-Lessons to support each of the units. An example of a grade 3, "Samples of Matter," ELPS Mini-Lesson includes guidance for teachers to preview student reading. The guide suggests showing students the passage on the last page of the Mini-Lesson. The teacher should tell the students to review the image and identify the iceberg, the clouds, and the ocean. Point out that the word ice is found in the word iceberg to help students understand how the image is connected with the text. The guide then has the teacher display the sentence frame and have partners take turns answering and asking questions such as "What do you notice? I notice.... What is this about? I think this is about.... Remind students to ask questions when they encounter confusing words or ideas."
- The materials consistently include guidance for linguistic accommodations commensurate with various levels of English language proficiency as defined by the ELPS. For example, in grade 3,

TEKS 3.7A, "Forces and Motion," the teachers are provided Emergent Bilingual Support that includes Language Objective, "Orally describe and compare the properties of different types of matter through science investigation with peer collaboration. Write about these Properties. ELPS: 3H, 4C."

 Materials include teacher guidance for communication with EB students, with the goal of creating comprehensible input. Materials provide specific guidance for linguistic accommodations commensurate with various levels of English language proficiency. For example, in grade 3, the lesson on "How Animals Survive" Teacher Edition, the ELPS Mini-Lesson provides scaffolding for intermediate, advanced, and advanced high learners when the teacher is identifying and expressing ways animals survive. Teacher Edition materials guide teachers to guide the students to use non-verbal cues, illustrations, and other means to complete sentence work and guide students to pantomime to show the body part that helps the animal survive.

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

- Materials provide opportunities to encourage strategic use of students' first language as a means to linguistic, affective, cognitive, and academic development in English. For example, in the grade 3 Teacher's Guide, in the lesson "Types of Force," in the section Emergent Bilinguals Support, the materials state, "Have students express their knowledge 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 the term's meaning." Another example can be found in the grade 3 "Structures and Functions" unit. In the unit, there is a section for Emergent Bilingual Support. This section suggests that students express their knowledge in ways accessible to them, such as writing a term in another language they know, then looking it up in a bilingual Cupport. This section suggests that students express their knowledge in ways accessible to them, such as writing a term in another language they know, then looking it up in a bilingual dictionary to confirm the term's meaning.
- Materials include textbooks or audio/video clips that explain concepts in languages other than English. All materials, grades 3-5, student and teacher-facing, are available in Spanish. Materials provide an equitable experience for emergent bilinguals, including vocabulary support within the English materials.
- The strategic use of students' first language as a means to linguistic, affective, cognitive, and academic development in English is encouraged in the materials. For example, in grade 3, TEKS 3.7, "Forces and Motion" lesson, the teachers are provided a video to show the students with a guiding question. In this section, the question is, "What forces are acting on the rings that touch each other and on the ones that are not touching?" In the Support Vocabulary section, students are prompted to "Review terms on the vocabulary anchor chart and remind students to refer to it throughout the lesson." This, paired with using the subtitles on the video showing the words in English, will support English development of academic language.

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	Μ
	the program.	
2	Materials provide information to be shared with caregivers for how they can help reinforce	Μ
	student learning and development.	
3	Materials include information to guide teacher communications with caregivers.	Μ

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 communication 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 share with students and caregivers about the design of the program. For example, in the grade 3 Overview, in the Built for Simplicity section, the materials include the components of the program, such as Student Interactive Lessons, Teacher's Guide, and ELPS Mini-Lessons.
- The materials provide evidence that there is information to share with students about the design of the program. Examples include the "Beginning of Year Home Letter" template teachers can send home to parents. The letter is editable and can be adapted for any grade level. It includes an overview of the program, notes from the teacher, and login information for the student for the online portion of the program so they can access it from home.
- The materials consistently provide information to be shared with caregivers about the design of the program. For example, in the Teacher's Corner under Program Support, the teachers are provided with "Step Inside the Family Room." It contains a video outlining how caregivers can access online help and see what their student is working on and learning. The introduction reads, "Empower the adults in your students' lives to act as your unofficial co-teachers. Introduce them to the Family Room, 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 provide information to share with students and caregivers about the design of the program. Examples for grades 3-5 include Teacher Resource Materials and the Teacher's Corner Tab. Additionally, translations of resources into multiple languages are included, or at a minimum, easily accessed in a format that can be translated (e.g., Word document).

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

- The materials provide resources and strategies for caregivers to help reinforce student learning and development. Examples include "The Family Room," an area in the online program that families can access. In this program, families can access program support that includes resources and strategies that the teacher might introduce in each lesson and give examples of how families can support students at home. There are also practice activities called missions that students can work on that caregivers can be involved in and check the student's progress. The Family Room also includes video resources that help with challenges many parents experience, such as talking to their children about learning.
- The materials consistently provide information to be shared with caregivers to help reinforce student learning and development. In grade 3 in Extra Resource, the teachers are provided a letter for each section, such as the TEKS 3.6 "Matter and Energy: Home Letter." This letter includes the sections *What We're Doing, At-Home Activity, Helpful Resources, Science Summary, Preconception Alert,* and a place for *Teacher Comments*. It guides the caregivers to support their student's learning.
- Materials provide at-home activities for caregivers to help reinforce student learning and development. Examples for grades 3-5 include at-home practice activities that involve caregivers and include ways they can log into their child's account to support student learning at home, such as access to current assignments and activities for caregivers, interactive activities for the student and caregivers, access to student resources within the program, and a virtual classroom schedule. Materials include access to the Family Room, which provides information for caregivers to provide focused areas for learning at home, utilizing brain breaks, and asking follow-up questions to get students talking about content.
- Materials provide at-home activities for caregivers to help reinforce student learning and development. For example, the grade 3 Discover section in the program's landing page has home letters for each unit students will learn throughout the program. For example, the materials state for the "Matter and Energy" At-Home Activity, "To prepare your child for this lesson, try this short activity: Name something, and your child names the state of matter. For example, say 'Milk!' your child says, 'Liquid!'"

Materials include information to guide teacher communications with caregivers.

- The materials include information to guide teachers' communications with caregivers by providing Reports & Insights that outline the standards and where their student falls in attaining them. The teachers can provide an Assessment Report, Standards Report, Growth Report, and Program Activity Report.
- Materials include teacher guidance for communicating with caregivers. Teacher guidance
 materials include templates for sharing and explaining how they scaffold and differentiate to
 support student learning. Use concrete, measurable terms to describe progress, including
 specific skills or concepts mastered or still struggling with. For grades 3-5, Teacher Edition
 resources, the Reports tab, include growth reports that teachers could share with caregivers.
 Reports can be printed by class or individual student to assist with identifying specific skills and
 areas of individual student growth.
- Materials include teacher guidance for communicating with caregivers. For example, in the grade 3 Discover section of the landing page, the materials include science multilingual glossaries. The material states, "This glossary is an alphabetical listing of key terms along with

their meanings, as used in HMH Science programs. The glossary is available in the following languages: English, Spanish, Vietnamese, Filipino/Tagalog, Simplified Chinese (for speakers of Mandarin and Cantonese), Arabic, Hmong, Korean, Punjabi, Russian, Brazilian Portuguese, and Haitian Creole."

• The materials include teacher guidance for communicating with caregivers. In the teacher online support section titled "Discover" are supplemental supporting documents for the teacher on assessments. This might be beneficial information to share with families about student assessments throughout the year. It includes information such as the types of assessments students will take, how many items are on those assessments, the purpose of each assessment, the depth of knowledge breakdown per item, and how teachers can use the assessments to address misconceptions and gaps with students.

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.	Μ
2	Materials provide clear teacher guidance for facilitating student-made connections across	Μ
2	core concepts, scientific and engineering practices, and recurring themes and concepts.	
2	Materials provide review and practice of knowledge and skills spiraled throughout the year	М
5	to support mastery and retention.	

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 materials contain a TEKS-aligned scope and sequence that outlines the order in which the knowledge and skills are taught and can be found in the "Teacher's Guide." The scope and sequence also notes where RTCs and SEPs are integrated.
- The materials contain a TEKS-aligned pacing guide that outlines units, lessons, review activities, investigations, and assessments for the year.
- The "Lesson at a Glance" offers multiple suggestions for the teacher to provide review and practice for the students, including scaffolding, extra practice suggestions, vocabulary focus, strategies for English Learners, and additional hands-on investigations.

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

- The materials provide teacher clarity in understanding how activities and experiences connect concepts and SEPs. The materials provide teacher guidance to help students make connections between units over the course of the year.
- The "Student Edition," under "Supporting Materials Grade 3," includes notes for students and teachers to make connections in the section "Recurring Themes and Concepts."
- At the beginning of each unit's concept lesson, a Teacher's Guide ties in the RTCs and SEPs into the overall big ideas of the unit. For example, at the beginning of the "Changing States of

Matter" lesson, there is a section that explicitly lists the RTCs and the SEPs found within the upcoming lesson.

• The hands-on activities found in the "Interactive Lessons" and in the Student Edition focus on integrating the SEPs and RTCs. Students are guided to ask a question, record and analyze data, explore the concept, reflect on patterns they notice, make a claim, support with evidence, and explain their reasoning.

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

- The materials provide practice opportunities that build on previously taught science knowledge and skills. The ELPS mini-lessons provide a "Connect to Prior Knowledge" with opportunities for students to connect their new learning with previously taught knowledge.
- The materials include intentional practice and spiraling of previously taught knowledge and skills from earlier lessons/grade levels and the current lesson's science knowledge and skills. For example, in the Teacher's Guide, the section "Recurring Themes and Concepts" provides a note for teachers about the concept and associated TEKS that connect with the lesson objective. The materials include intentional practice and spiraling of previously taught knowledge and skills from earlier lessons/grade levels and the current lesson's science knowledge and skills. The "What Do You Already Know?" prompts and the "Activate Prior Knowledge" section show how the content builds across science disciplines and between grades. For example, in grade 3, the lesson "Structures and Functions of Animals Parts" in the "Life Cycles and Body Parts" unit prompts teachers to activate students' knowledge from prior grades on structures and behaviors of animals that help them find and take in food, water, and air.
- Practice opportunities build on previously taught science knowledge and skills throughout the school year. Concepts within content TEKS build from lesson to lesson. For example, during the lesson "Types of Forces" in the "Force and Motion" unit, the Student Edition hands-on activity states: "As you may know, some objects are affected by magnetic force. Others are not." In addition, teacher materials suggest students share with a partner what they already know about magnets and share out with the whole class. Materials then list student responses and questions in a chart so that students can revisit prior knowledge as they conduct the hands-on activity.
- Materials include intentional practice and spiraling of previously taught knowledge and skills from earlier lessons/grade levels and the current lesson's science knowledge and skills. For example, in the Teacher's Guide, in the section titled "Recurring Themes and Concepts (RTC)," the materials provide a note for teachers about the concept and associated TEKS that connect with the lesson objective. For example, in the "Landslide! Hands-On Activity," the RTC focused on 3.5G (explain how factors or conditions impact stability and change in objects, organisms, and systems).

Indicator 8.2

Materials include classroom implementation support for teachers and administrators.

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- In the "Teacher Resources," the materials provide a "Teacher's Corner" section. Materials give guidance that includes recommendations for the use of all materials. This section allows teachers to sign up for a 30-minute session to help them navigate the platform and all its components. The resource can be found in all grade-level materials.
- The "Teacher Dashboard" gives teachers access to a pathway to follow that guides them through all the resources in the materials that will enhance student learning and their use.
- The materials include the "Walking Through Guide, Grades K-5" to support teachers in the first steps of using the materials. It has a list of the included materials, recommendations for navigating through the online features and learning platform, as well as tips to prepare for instruction.
- The materials are organized to facilitate effective implementation, including the assessing and storing of materials. Grade 3 includes teacher resource materials explaining each week,

including a "Lesson at a Glance," which includes a comprehensive materials list for preparation, resources to support instruction, and a lesson map.

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

- The materials include cross-content standards for math in sidebar supports within the "Teacher's Guide to Lessons." In the grade 3 Teacher's Guide, the lesson "Liquids Flow" contains a "Do the Math" section where students will use scale, proportion, and quantity.
- Evidence shows that the materials include cross-content standards for ELA in the sidebar supports within the Teacher's Guide. For example, the lesson "Solids are Solid" includes the section "Claims, Evidence, and Reasoning," where students use sentence stems to write about a claim and support that claim with evidence.
- The materials include teacher videos on cross-curricular connections, found in the Teacher's Corner. The videos showcase how the science materials include TEKS from mathematics and ELA throughout the resource.
- Each unit includes a "Lesson at a Glance" where the TEKS are aligned to each lesson; there is also a "Lesson Planning Section" where the SEPs and RTCs are aligned to each lesson.

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

- The "Materials List" module includes all the materials included/needed for each lesson and where teachers and students will use them. The materials include a comprehensive list of all equipment and supplies required to support lab investigations.
- There is an appendix with a comprehensive list of all equipment and supplies needed to support students, teachers, and administrators during investigations in accordance with and/or in addition to the grade-level lesson.
- In the "Discover" section of the grade 3 lesson "Ways Humans Use Natural Resources," the student activity includes a list of materials students will need to perform the task.

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

- The materials address safety in multiple ways. For example, in the "Discover" section of the "Energy" unit, Day 2, the student activity includes a section about safety, which warns students not to shine a flashlight directly at anyone's eyes.
- The Teacher's Guide contains a four-page safety overview and guides to assist teachers with safety in the science classroom and lab. It includes the purpose of safety in science, what the risks are, how to avoid risks, and more. There is also a guide on safety with chemicals and personal protective equipment (PPE).

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	Μ
2	Materials guide strategic implementation without disrupting the sequence of content that	М
	must be taught in a specific order following a developmental progression.	
3	Materials designated for the course are flexible and can be completed in one school year.	Μ

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The materials include support for specific scheduling considerations, with guidance for covering
 required science content for the grade level/course within various schedules. For example, the
 materials contain guidance on the amount of time in minutes needed for teacher-led science
 instruction and classroom collaboration. For example, the "Lesson at a Glance" section of the
 grade 3 Teacher's Guide indicates the time allocated for the unit is "7 days (25 minutes per
 day)."
- The "Pacing Guide" contains guidance for covering required science content for the grade level/course within various schedules. The guide includes three different paths: "TEKS Streamlined," "TEKS Emergent," and "TEKS Extended." Each path gives suggested days and minutes for science instruction.
- Materials include a guide for recommended time spent on each unit lesson. The "Lesson at a Glance" page suggests the number of days to spend on a unit and the number of minutes per day on each lesson.

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

 Materials provide guidance for strategic implementation that ensures the sequence of content is taught in an order consistent with the developmental progression of science. For grades 3–5, the pacing guide materials in the Teacher's Guide include a suggested sequence of units that considers the interconnections between the development of conceptual understanding and engineering practices.

- Materials purposely group modules that contain similar recurring themes and ideas, making it easier for students to connect scientific concepts. This can be found in the "TEKS Standards Correlation" document.
- The Teacher's Guide helps students make conceptual connections. For example, the teacher asks the students to use what they learned from the previous lesson and connect it to the current lesson.

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

- The materials clearly delineate the order of units to ensure students learn about precursor concepts first. The materials also provide guidance about the flexibility of the placement of specific units. For instance, in grade 3, the materials have students investigate different weather types before looking for patterns and maps.
- The materials include units, lessons, and activities for a full year of instruction. For grades 3–5, the materials include a sufficient amount of lessons and activities to support a full academic year of learning and include time for pre-teaching and re-teaching content and skills based on periodic formative assessments. For example, the grade 3 "Pacing Guide" includes three paths: a 146-day path, a 167-day path, and a 173-day path.
- The materials provide guidance for adjusting to local time and scheduling constraints. For grades 3-5, the pacing guide materials provide teacher guidance on how to make adjustments to extend or condense units and lessons within the Teacher's Guide in the event that scheduling allows for additional instruction or needs to be shortened due to lack of time.

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

Not Scored

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

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

Evidence includes but is not limited to:

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

- The digital materials include an appropriate amount of white space and an overall design that
 does not distract from student learning. For example, in the grade 3 Interactive Student Lessons,
 in the lesson "Types of Energy Day 1," the student materials have, in the "Can You Explain It?"
 section, only one guiding question and one video for students. The section does not have any
 other images that could distract students.
- The Hands-on Labs include an appropriate amount of white space and a design that supports and does not distract from student learning. An example of this is the grade 3 "Properties of Matter" 3.6A, Sink or Float lab. The lab pages (digital and print) have a clear purpose at the beginning of the investigation. They all start off by prompting students to ask a question and providing lined paper in a designated space for students to type or write their questions. There is a clear box with a list of easy-to-read and follow materials as well as safety information. The steps are then laid out and numbered to make it easy to follow. After the steps, there is some sort of data collection table or diagram modeled for students to use to set up their own or fill in this notebook. There is then space for analyzing data, writing a Claim, Evidence, and Reasoning (CER) prompt based on the investigation, and an Exit Ticket to answer. All of this is set up for students with plenty of white space around the margins and space for responses, and is wellorganized and easy to follow for most students.
- Materials consistently include an appropriate amount of white space and a design that supports and does not distract from student learning. For example, in grade 3 TEKS Lesson 3.10C, "A Model Volcano," Day 4, Hands-on Activity, the students are given lined space to write out their Stability and Change, Analyze Models, and Claims, Evidence, and Reasoning.

• Student materials are appropriately designed to support student learning. Student materials inside the student interactive textbook are appropriately designed to support student learning and include titles and headings, sections that are clearly marked, and content organized in a logical progression.

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

- The materials embed age-appropriate pictures and graphics that support student learning and engagement without being too visually distracting. An example of this is found in the grade 3 "Forces" lesson, which shows pictures of two dogs using a pulling force on a frisbee, clear pictures of bar magnets and like poles repelling, as well as opposite poles attracting on the adjoining page. These pictures are relevant for students and show clear images of the content being explained. The images are age-appropriate and not too distracting.
- The grade 3 TEKS 3.12B, "Energy Flow in Food Chains," cover page includes a photo of a bear eating a fish, which reinforces and starts students thinking about consumers.
- Materials in the Student Edition include vocabulary cards with clear and authentic images and graphics to define and support the new words students are learning. For example, grade 3 materials include multiple images to represent properties of matter. Photos of mass, magnetism, and temperature are included with a brief definition under each so students can connect their visual learning to vocabulary definition.
- Age-appropriate pictures and graphics that support student learning and engagement are included in the materials. For example, the grade 3 Interactive Student Lessons include videos that support concept learning. In the lesson "Energy and Speed of Objects Day 1," the materials include a video of a roller coaster to demonstrate mechanical energy.

Materials include digital components that are free of technical errors.

- Materials include digital components that are free of technical errors. For example, the grade 3 Interactive Student Lessons are free of spelling, grammar, and punctuation errors.
- Materials contain accurate content and information, including digital components that are free of technical errors. For example, the grade 3 Interactive Student Lessons materials are free of inaccurate content materials, including the lesson "Energy and Speed of Objects Day 1," section "What Do You Already Know?" which includes pictures of examples of mechanical energy.
- Digital components that are free of technical errors are included in the materials. An example of this is found in the grade 3 Student Interactive Edition for "Space" 3.9A. In the Day 1 Engage section, students are shown images and statements about objects in the sky and need to determine if the statements are true or false. Students can toggle through the images to read them and determine if they are true or false. The tools in this section are easy to use and free from technical errors.

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

Not Scored

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

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

Evidence includes but is not limited to:

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

- The materials integrate digital technology and tools that support student learning and engagement. For example, the grade 3 materials include digital technology and tools that enhance student learning through features such as online assessments. For example, in the grade 3 Teacher's Guide, "Types of Energy" lesson, in the Planning for Assessment, the materials state, "For the TEKS Quiz and the TEKS Test, assessments are available in an editable, printable format or can be administered and auto-graded online on Ed."
- The materials integrate digital technology and tools that support student learning engagement. Students are able to use interactive flashcards to learn vocabulary for each lesson. A grade 3 interactive lesson from 3.7A, "Forces and Motion," shows three digital flashcards with words and images. Then, when the student clicks on them, the cards flip over, and the definitions are on the back. Students can also be provided a Language Development Worksheet by the teacher that can help support their digital learning.
- The materials integrate digital technology and tools that support student learning when the teachers utilize interactive online lessons. For example, in grade 3, the students are able to highlight and make notes throughout the text that they can access later.

 Materials integrate digital technology and tools that support student learning and engagement. Materials provide teacher guidance for using simulations, interactives, and related activities to support student learning on a digital platform. For example, in the grade 3 lesson on "Changes in Weather," the teacher materials include interactive videos for teachers to show at the beginning and end of the lesson on a phenomenon based on comparing weather from day to day to engage students and allow them to connect their learning.

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

- The materials consistently integrate digital technology in ways that support student engagement with the Science and Engineering Practice (SEP), Recurring Themes and Concepts (RTC), and grade-level content. A grade 3 "Forces" lesson has students completing a hands-on investigation about how magnetic forces act on other magnets. After the investigation, students can interactively answer a prompt online to identify patterns they observed when the magnets were in contact and at a distance. This addresses Recurring Themes and Concepts (RTC) 3.5A, identify and use patterns to explain scientific phenomena or to design solutions.
- Materials integrate digital technology in a way that supports student engagement. For example, in grade 3, the students engage in a "Solve It" where the students virtually design containers to keep an egg safe when dropped for varying heights. They are able to insert illustrations into their lab also.
- The materials provide digital tools for students to engage with RTC through interactive online labs. For example, in the grade 3 Student Interactive Textbook, Discovery tab, students are able to complete the "Egg Drop" lab online. During the lab, students are using SEP and making RTC connections to labs and data.
- In a grade 3, student-facing digital platform, the materials include a section in the dashboard titled *Discover*, where students can choose among the several "You Solve It!" Simulations. The simulations like the "Launch a Roller Coaster!" provide opportunities for students to execute an investigation digitally and enter their observations into the platform.

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

- Materials integrate digital technology that provides opportunities for teachers and/or students to collaborate. Materials for grades 3-5 provide an online collaboration platform on the Dashboard tab in which teachers can post assignments and give immediate feedback to students. Teachers are able to collaborate with students on their assignments that are due, needing grading, and overdue.
- In a grade 3, student-facing digital platform, the materials include a section in the dashboard titled *Virtual Classroom*, where teachers can post virtual sessions for students.
- Teachers are able to project the Student Interactive Lessons while teaching. While they are teaching, teachers can read the answers that students submit online and give them feedback immediately. Students can then adjust their answers or ask questions based on this feedback, which allows for some teacher-to-student collaboration. A grade 3 example from the "Force" 3.7A lesson shows where students collaborate with a partner to create a commercial communicating how magnets can be a solution to the problem of holding things together. After students submit their idea, the teacher can give feedback and project it so students can share and collaborate with others on the ideas.

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

- Materials integrate digital technology that is compatible with a variety of learning management systems. Materials include an HMH Ed: Teacher Help Accessibility support section that states that recommended operating systems could be ChromeOS, Windows 10, Mac 10.15 & 11, iOS 13 & 14.
- The digital materials are accessible and compatible with multiple operating systems and devices. For example, the grade 3 Teacher's Guide materials are accessible with PCs and Macintosh computers.
- The materials integrate digital technology that is compatible with a variety of learning management systems. While there is nothing in writing about accessible, compatible devices, I was able to access the program using a desktop, iPad, and iPhone device. I was able to access and navigate both the student and teacher versions on my Samsung phone, tablet, and laptop. There are materials that can be downloaded to these devices and accessed when offline.

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

Not Scored

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

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

Evidence includes but is not limited to:

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

- The digital technology and online components are aligned with the grade-level scope and approach to science knowledge and skills progression. For example, the grade 3 Student Interactive Lessons are aligned with the lessons teachers follow in the grade 3 Teacher's Guide. Lesson "Types of Energy Day 1" includes a reference and link to the Interactive Student Lesson Day 1.
- The materials provide related TEKS and ELPS for online and digital components within the Teacher's Guide. For example, when accessing the grade 3 "Force, Motion, and Energy" 3.8A Teacher's Guide, it shows the alignment and pacing of lessons, including the TEKS and progression of the lessons, which are grade-level appropriate.
- The materials contain digital technology and online components that are developmentally appropriate for the grade level and align with the scope and approach to science knowledge and skills progression. For example, in grade 3, the students have online access to FUNomenal Readers. The students are provided with three books on the same subject, but on three different reading levels to support the students where they are in their reading acquisition.
- Materials provide information that identifies how online and digital components align with grade-level science knowledge and skills. The materials provide related TEKS and ELPS for online and digital components within the Teacher's Guide. For example, in grades 3-5, the Language Support section of the Teacher's Guides provides ELPS Mini-Lessons to go with TEKS lessons with an online component.

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

- The materials consistently provide teacher guidance for using embedded technology to support and enhance student learning. The Digital Learning Guide provides the teacher guidance on how to set up classes and create student groups. Once teachers set up their classes, they can assign lessons, interactive simulations, assessments, and more. Teachers also have the ability to create groups using data to help differentiate the learning and meet the students where they are. This guide is available in grades 3-5.
- In grade 3, in the teacher introduction, the tools HMH provides are listed. "The Student Interactive Lessons support science learning for all students, with hands-on activities and science readings in 30-minute blocks of time."
- The materials support teachers to successfully integrate the technology within the program. For example, all teacher guides contain an HMH ED: Teacher Help section that provides clear instructions and tutorials within the teacher platform on how to use the embedded technology. Specific examples of support include "Quick Tips for supporting parents with remote learning," "Using Virtual Classrooms on Ed," and "Making a Memorable Space."
- On the grade 3 digital landing page, the materials include a Walkthrough Guide that guides teachers to use the digital platform. The materials guide teachers in setting up classes, creating student groups, assigning content, and creating lessons and assessments on the digital platform.

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

- The materials are available to parents and caregivers to support student engagement with digital technology and online components. HMH provides a "Family Room" for all grade levels. On this online forum, the caregivers can access the student's assignments and grades. There is also access to the TEKS unit they are currently studying and a place for classroom support with articles and videos about the class they are taking with ideas for supporting them. All of the family resources are also available in Spanish. Also included are Shareables, "Strategies from the teachers in the community encouraging your child to learn."
- The Teacher's Edition includes a Teacher's Corner tab that provides Shareables that teachers can share with caregivers with quick tips about the challenges that they may experience and how they can support their children while they are learning online. An engineering design letter home gives caregivers engaging questions to ask their students. Some questions include, "Why do engineers try and solve problems?" and "How do engineers use observations to design solutions?"
- The materials include resources for parents and caregivers on supporting student engagement with digital technology and online components. For example, on the grade 3 Teacher's Corner site on the landing website page, the materials include a section titled "Step Inside the Family Room" that states, "Empower the adults in your students' lives to act as your unofficial co-teachers. Introduce them to the Family Room, where they'll find a collection of quick, easy-to-follow tips and explanations that help families and caregivers reinforce their child's learning."
- The materials are available to parents and caregivers to support student engagement with digital technology and online components. Parents and caregivers have access to the Family Room. This is an online resource section just for families. It includes access to Ed Online Learning for students. Families can get support and learn about using Ed, help their child with online

assignments, and find additional content to help support the entire family with supporting student digital learning. This is available to all students in grades 3-5.