HMH Into Science Texas Grade 5

HMH Into Science Texas Grade 5 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.

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Indicator 2.1

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

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

Meets | Score 4/4

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

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 include hands-on activities that allow students to practice and demonstrate scientific and engineering practices. For example, the lesson "Weather and the Water Cycle," Days 2, 3, and 4, includes multiple hands-on opportunities to develop, practice, and demonstrate mastery of the SEP, including "Ocean Temperature and Weather" and "Rising Air and Cloud Formation."
- The materials provide multiple opportunities for students to show mastery of grade-level appropriate scientific and engineering practices. For example, students develop evidence-based explanations and communicate findings, conclusions, and proposed solutions in the lesson

"Forces of an Object," Day 2, "Explore/Explain." Students complete steps 1 through 5 of the lesson and analyze data by writing about their observations in step 2, when they apply equal forces to both sides of the ball. Students use this experience to make a claim and support it with evidence about "how scientists measure the forces acting on objects and the changes that the forces cause."

- The materials include opportunities for students to develop, practice, and master the SEP, as evidenced in the "Teacher Guide" and throughout the lessons. For example, in the lesson "Ocean Temperature and Weather," Day 2, "Explore/Explain," students use tools to observe and measure information, develop and use models, and perform mathematical calculations to compare relationships. In another lesson, "Where Is the Air?," Day 2, "Explore/Explain," students conduct an experiment to understand that air is a gas made up of particles and illustrate particles of air in a model to represent the movement of gas from one container to another. Students then find patterns and make a claim "about detecting the movement of particles that are too small to be seen."
- The materials provide multiple opportunities for students to show mastery of grade-level appropriate scientific and engineering practices. In each unit, students ask their questions about a scientific phenomenon and plan and conduct grade-appropriate investigations, collect and analyze data, and develop and test hypotheses. For example, in the "Force and Motion" unit, students design a lesson to investigate and explain how equal and unequal forces on objects cause motion patterns.

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

- The materials provide multiple opportunities to use recurring themes in making connections between and within overarching concepts. For grades 3–5, the Teacher Edition contains a scope and sequence that details grade-level RTCs revisited throughout the year. In addition, materials include RTC graphic organizers in the student-supporting materials.
- The materials include recurring themes, such as structure and function, systems, models, and patterns, to make connections within the overarching concepts. For example, in the lesson "Testing Thermal Conductors and Insulators," Day 6, "Explore/Explain," in the section titled "Patterns," students analyze their graphs and reflect on the rate of temperature change over time in cups made of two different materials.
- There is evidence that the materials provide multiple opportunities to use recurring themes in making connections between and within overarching concepts. The materials prompt students throughout the lessons and activities to look for relationships and patterns. For example, in the lesson "Forces and Patterns of Motion," Days 2, 3, and 5, students investigate and explain patterns of motion through hands-on activities. Another example is in the "Conservation of Matter" unit, where students investigate how matter is conserved through systems.
- Materials provide multiple opportunities to use recurring themes in making connections between and within overarching concepts. For example, the materials include across lessons the recurring theme of cause-and-effect relationships—a relationship between two phenomena where one event causes another event to happen. For example, in the lesson "Human Impact on Ecosystems," on Day 2, students use a model to "simulate and explain how an invasive species can affect an ecosystem."
- The materials identify overarching concepts using recurring themes and show how they connect within the materials. In grades 3–5, 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 RTCs are integrated into the grade 5 energy unit and appear again in the "Ocean Temperature and Weather," Day 2 "Explore/Explain" lesson.

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 are systematically designed to develop and build student skills and content knowledge using phenomena appropriate to the grade level, as outlined in the TEKS. For example, the materials for grade 5 include a document titled "Program Overview," which explains how the program follows the "5E Structure" for each lesson ("Engage, Explore/Explain, Elaborate, Evaluate") and how the units are organized based on the TEKS.
- The materials support teachers in developing student content concepts and skills by giving them resources and cues at varying points in lessons and units throughout the grade level. For example, in the lesson "Properties of Mixtures," the planning for Day 1 includes a section titled "Phenomenon Teacher Background," which guides teachers to help students compare matter by its properties. Another lesson in the "Life Processes of Organisms" unit requires students to present on structures and functions of animals, building on learning from previous grades. Materials provide guidance for teachers to elicit students' previous learning experiences when exploring the different structures and functions of animals.
- Materials strategically and systemically develop students' content knowledge and skills as appropriate for the concept and grade level. For example, a lesson on "Forces" guides the teacher to activate prior knowledge by having students explore how objects and forces move by clicking through the images. Materials state that in prior grades, students learned about the nature and patterns of interactions of different forces, including gravity, friction, and magnetism. In another lesson, "Classify Compare and Contrast Properties of Matter," Day 1, the materials state: "In prior grades, students learned to classify and describe matter using observable physical properties such as temperature, mass, magnetism, relative density, and physical state."
- The materials support teachers in developing students' conceptual understanding and skills by giving them resources and prompts in lessons and units throughout the grade level. For example, materials in the Teacher's Guide support the teacher with focused connections regarding the transfer of energy by objects in motion, waves in water, and sound. The lesson informs the teachers of knowledge acquired in prior grades, such as the different types of energy and energy transfer.

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

- The materials provide repeated opportunities for students to use grade-level appropriate scientific and engineering practices across various contexts throughout the course. In grades 3–5, students are provided opportunities to engage with scientific and engineering practices multiple times and in multiple contexts. This includes multiple opportunities to ask questions, plan and conduct investigations to answer questions and explain phenomena using appropriate tools and models. Students have opportunities to identify problems and design solutions using appropriate tools and models.

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- Materials include opportunities for students to ask questions and plan and conduct investigations. For example, the lesson “Forces and a Ramp,” Part 2, Day 3, “Explore/Explain,” provides the teacher with a set of possible student questions, including guiding questions in different activities the teacher can ask to help students figure out how to find relationships of cause and effect, such as “What happened to the force when you changed the ramp height? What happened when you kept the same ramp height but increased the length of the ramp?”
- 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 “Lights and Mirrors” lesson, students complete a hands-on activity, then have guided discussions about analyzing the results of the investigation and make a claim and support it with evidence about how the path of light is changed when it strikes a mirror.
- Throughout, the Teacher’s Guide provides guiding questions of multiple levels for the teacher to use throughout the lessons and unit. For example, in the “Transfer of Energy” lesson, there are several teacher prompts to stir student questions, such as “What do you notice about the insulated cup?” and “What do you wonder about the insulated cup?”

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Indicator 2.2

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

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

Meets | Score 4/4

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

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 use phenomena as a central anchor that drives student learning across grade-level content in all disciplines. The grade 5 "Teacher's Guide" demonstrates that the materials embed phenomena across lessons to investigate forces and motion through lessons about patterns of motion, effects of forces on objects, energy transformations, electrical energy in circuits, and light. For example, in one lesson, students explore how energy stored in a battery can be converted to light. The lessons guide the students to elicit questions, then construct a flashlight system to explore the phenomenon.
- The materials embed thought-provoking phenomena and engineering problems that require nuanced and appropriate grade-level explanations. For example, in the lesson "Testing Solubility," students engage in a hands-on activity to test whether solids and liquids are soluble in water. Students conduct the activity and then analyze their data by answering questions like "Which substances had solubility in water? Which substances did not have solubility in water?" Students engage in a group discussion to compare observations and data.

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

- 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 "What Do You Already Know?" section activates students' prior knowledge of the phenomena being studied. In another section, "I Wonder," a question on the phenomenon prompts students and they discuss what they wonder about it.
- The materials provide opportunities to leverage students' prior knowledge and experiences related to phenomena and engineering problems. For example, in the "Properties of Mixtures" lesson, students work on activating prior knowledge by exploring images of mixtures and reviewing concepts they learned in prior years. In another lesson, "Behavioral Traits of Organisms," students experience a phenomenon through three hands-on activities. Additionally, students explore a video about animal traits to activate prior knowledge, have class discussions to describe a phenomenon video, and analyze the 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 grades 3–5 "Student Edition" at the beginning of each lesson. The "What Do You Already Know?" section activates students' prior knowledge of the phenomena being studied by asking them various questions about what they already know. The materials also address potential misconceptions within students' prior knowledge. For example, in a grade 5 lesson about ecosystem interactions, teacher guidance helps identify any misconceptions or omissions in students' prior knowledge regarding the biotic and abiotic factors their organisms will need when building a habitat.

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

- The materials provide student learning goals for each phenomenon or engineering problem. The teacher resource materials provide a "Can You Explain It?" section, which includes "Phenomena Teacher Background." This section clearly outlines the scientific concept for the teacher and provides detailed student learning goals related to the lessons in the unit.
- The materials clearly outline student learning goal(s) behind each phenomenon or engineering problem. For example, in the lesson "Conservation of Matter," the materials clearly outline the lesson goal: "Students will be able to compare the properties of substances before and after they are combined to demonstrate that matter is conserved in solutions."
- The materials identify the student learning goals for each phenomenon or engineering problem by stating the learning objective at the beginning of each lesson. For example, in one grade 5 lesson, the "Learning Objective" is that students will be able to describe what they already know about energy transformation and make observations about light switches.

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Indicator 3.1

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

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

Meets | Score 6/6

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

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

Evidence includes but is not limited to:

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

- 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 materials provide a scope and sequence, which outlines the vertical alignment throughout. 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, the TEKS addressed are 3.6, 4.6, and 5.6. The SEPS and RTCs addressed by grade are also addressed to support vertical alignment.
- The materials are vertically aligned across grade levels. An example of vertical alignment can be found in the Teacher’s Guide, in the “What Do You Already Know?” section. In grade 5, for TEKS 5.9A covering Earth’s rotation, the students are asked to think of the day/night cycle. In previous

grades, students are taught how and why the day/night cycle occurs as they learn about the Sun's apparent movement across the sky, which is taught in grade 4.

- The materials present content in a way that builds complexity within and across units and grade levels. Materials include a scope and sequence that 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 4. Materials state that lessons within the unit will build in complexity, from teaching students requisite knowledge and skills to engaging them in analyzing the structures and functions of different species to identify how organisms survive in the same environment. In grade 5, students must demonstrate, observe, and measure plant structures to explain the relationship between the structure and function of plants. They also must observe, collect, and analyze data on plant structures to develop explanations about plant structures and functions. Over the course of the unit, students apply their knowledge and skills to then analyze different species and the environment they live in to identify how all organisms survive in the same ecosystem. Materials further explain how complexity builds in grade 5 when students communicate their analysis of an environment and structures of organisms that function for survival and explain their analysis to others.

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

- The materials sequence instruction in a way that activates or builds prior knowledge before explicit teaching occurs that allows for increasingly deeper conceptual understanding. Throughout the lessons, sensemaking prompts are given in the teacher's edition to build scaffolded understanding that relates back to the unit phenomenon. In the unit on "Ecosystems," during the "What's Out There" lab, students understand how living things survive in a local ecosystem and then in a habitat. As the unit continues, students are sensemaking through biotic and abiotic factors in healthy environments. Students then take that knowledge to apply it to how living organisms use biotic and abiotic factors in the ecosystems in the world. In the "Light" lesson, students click through images about how energy is transformed to create light. The teacher guides students to share what they know about light and to focus on how energy is transformed to create light. 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. Students watch a phenomenon video and have a class discussion about "Why does a straw look broken in a glass of water?"
- The materials provide intentional scaffolding of learning in a way that allows for an increasingly deeper conceptual understanding. An example of this can be found in the grade 5 Teacher's Guide for TEKS 5.9A, covering Earth's rotation. In Parts 1, 2, and 3 of the "Hands-On Activities," students are creating sundials. In Part 1, students are researching sundials. In Part 2, students are building a prototype of a sundial and recording data of shadows created by the Sun. In Part 3, students are analyzing data they've collected to identify patterns and draw conclusions about the Sun and shadows.
- The materials are intentionally sequenced to scaffold learning from concrete to abstract, in order to allow for a deeper conceptual understanding. An example of this is in the "Lesson at a Glance," for "5.8 B Force, Motion, Energy," which shows the progression of the lessons across the entire unit. The progression covers conceptual understanding through completing hands-on investigations of exploring electric currents; students then build electrical circuits and switches to help solidify their understanding of electrical energy and how it works. The lesson has students begin to apply their understanding in a more abstract way by the end of the unit by

drawing models, explaining how the flow of energy works, and applying it to more complicated circuits.

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

- There is evidence that the materials clearly present grade-specific core concepts, recurring themes and concepts, and science and engineering practices. For example, materials utilize the "5E" structure for each lesson. Students engage in the lesson, explore/explain, elaborate, and evaluate. For example, in the lesson "Energy Transformation," on Day 1, students are activating prior knowledge, watching a phenomenon video, and having group discussions. On Days 2 to 5, students explore and explain by doing hands-on and engineering activities. On Day 6, students elaborate, explain, and apply their knowledge using new vocabulary and having discussions about what a physicist studies.
- The materials present grade-level-specific core concepts, recurring themes and concepts, and science and engineering practices. An example of a grade 5 lesson presenting recurring themes and concepts is from "5.7A Force and Motion." In the Teacher's Guide, the lesson addresses RTC 5.5A, which is to identify and use patterns to explain scientific phenomena or to design solutions. The lesson introduces the phenomenon that energy from a force like a push or pull transfers to an object and causes motion. This motion can occur in observable patterns.
- There is evidence that the material clearly and accurately presents grade-level-specific core concepts, recurring themes and concepts, and science and engineering practices. An example of this can be found in a Day 4 activity, "Engineer It: Part 3 Hands-On Activity." Students create a sundial and gather data. Next, they identify patterns of shadow change and position throughout the day. Students are also asked about the patterns of the Sun's position throughout the day. The recurring theme and concept for this TEKS is 5.5A which states, "identify and use patterns to explain scientific phenomena or to design solutions."
- The materials clearly present grade-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 the "Changes in Ecosystems" lesson, a hands-on experience provides the opportunity for students to ask questions to design a lab test, construct appropriate graphic organizers to represent data, and develop models to represent phenomena. Students explain the relationship between the structure and function of systems while observing and describing how a variety of organisms survive by interacting with biotic and abiotic factors in a healthy ecosystem.

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

- There is evidence that the materials' mastery requirements are within the boundaries of the main concepts of the grade level. For example, in the "Properties" lesson, there is an "Exit Ticket" that asks students to evaluate another student's claim and to use evidence from their investigation to support or correct the student's claim and present their reasoning. This aligns with learning objective 5.6A, which is that students should be able to compare and contrast properties of matter, including mass, magnetism, relative density, physical state, volume, solubility in water, and the ability to conduct or insulate energy.
- The materials clearly define the boundaries of content that students must master for the grade level. For example, in the scope and sequence document, the materials specify the content and

skills students learn in each grade level. For instance, 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 materials address science concepts for earlier grades such as K-2 and later grades such as 6-8.

- The materials' mastery requirements are within the boundaries of the main concepts of the grade level. For example, the lesson objective for "Environmental Impact Solutions" states: "Students will be able to design, evaluate, and explain solutions that minimize environmental impacts from people's use of natural resources."
- The materials include specific learning targets for each grade level. For example, materials provide unit objectives for each unit and student learning objectives for each lesson. For the "Ecosystems" lesson on how organisms interact with their ecosystems, the learning objective states students should be able to build habitats they planned as models of healthy ecosystems.

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Indicator 3.2

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

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

Meets | Score 6/6

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

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

Evidence includes but is not limited to:

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

- There is evidence that 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. There is evidence that the materials support teachers in understanding the horizontal and vertical alignment guides the development of grade-level content. An example can be found in the "Scope and Sequence" for grade 5. This document illustrates the TEKS taught in previous, current, and future grade levels. 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.
- The materials include guiding documents that support teachers in understanding how new learning connects to previous and future learning across grade levels but without ongoing vertical alignment support. 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 4, students explain how producers make their own food through the cycling of matter. Grade 5 materials contain a scope and sequence that shows students describing how a variety of organisms survive by interacting with biotic and abiotic factors. Students will build on this understanding in grade 6 when they learn about how organisms and populations in an ecosystem depend on and may compete for biotic factors and abiotic factors.

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. 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 grade 5 unit about ecosystems, materials emphasize where student thinking could be inaccurate about distinguishing between biotic and abiotic factors. Additionally, materials contain support for possible student answers for correcting misconceptions.
- The materials explain the intent and purpose of the instructional design of the program. This evidence can be found in the “Teacher's Corner” section of the materials. This section includes a look inside the “Into Science Texas Classroom (K-5)” and gives a quick introduction to learn how the programs support the students. This inside look into an interactive classroom allows teachers to become acquainted with key instructional resources to help them better organize their classroom. Then, teachers can watch a short model lesson to see how the resources they will need in their first week should come together in a lesson.
- The material contains explanations and examples of science concepts, including grade-level misconceptions. An example of this can be found in the Teacher Guide for “TEKS 5.11A,” in the “Exit Ticket/Formative Assessment” sections. The “Support for Student Answers” section helps teachers guide students through the process of clearing up misconceptions.
- The materials include background information for teachers that provides explanations and examples of science concepts. For example, in the lesson “Light,” the section “Phenomenon Teacher Background” contains information for teachers: “Light always travels in a straight path. In order for us to see an object, light must reflect off it. Light can also refract, or bend, when it strikes an object, creating an optical illusion that the object is bent or broken. Light can be absorbed by objects. Dark objects absorb more light than light-colored objects. Objects can be described as being opaque (no light passes through), translucent (some light passes through), or transparent (all light passes through).”

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

- The materials explain the intent and purpose of the instructional design for the program. There is evidence of this in the grade 5 Teacher Guide. These pages focus on the engineering design process and how to move between the problem, the exploring stage, make and test, improving and test, and finding a solution. These practices can be found in each of the lessons for the units.
- The “Lesson at a Glance” overview document found at the beginning of each unit covers the intent and purpose of the instructional design of the program. This document gives teachers an at-a-glance look at the flow of the unit, the TEKS covered, the overview of the “5E” model, what

each lesson covers, including the hands-on investigations, as well as how students can show mastery of the concepts. An example of this Lesson at a Glance can be found in the grade 5 “Changes in Ecosystems” unit covering 5.12B.

- The materials provide a framework explaining the main intent or goals of the program. Materials provide a Teacher’s Guide that thoroughly describes the program's instructional approaches and references the researched-based strategies. In grades 3-5, Teacher Edition materials include program goals with a broad overview of how the program is built for students. This section has the following descriptive subsections: sense-making, TEKS-based program, CER approach, hands-on activities, and embedded students as scientists with phenomena-driven units.
- The materials provide specific supports for each lesson in the “Overview.” For example, in the grade 5 Teacher's Guide, the “Lesson at a Glance” for the “Electrical Energy in Circuits” lesson describes the learning objective and the TEKS and provides a lesson map for each of the seven days of the lesson.

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Indicator 4.1

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- The materials consistently provide learning activities that support students' meaningful sensemaking. For example, in grade 5, TEKS 5.13A, during the "Structure and Function of Organisms" lesson, students work through labs to build science knowledge on structure and function. Students work to explain environments and the structures and functions that allow organisms to survive in their environments. Materials lack any rubric to evaluate the effectiveness of their explanations but give opportunities for students to give compliments and constructive suggestions and ask questions.
- Materials provide a definition of sensemaking and identify specific student sensemaking behaviors. For example, the "Forces and Patterns of Motion" lesson, on Day 4, includes a section titled "Sense-Making," which provides information for teachers to guide students. The materials state: "Students will understand that forces acting on objects can cause motion and transfers of

energy. Students will use this information to analyze the forces, motion, and energy in the table tennis game."

- The materials consistently provide learning activities that support students' meaningful sensemaking through reading, writing, thinking, and acting as scientists and engineers. In the "Water Cycle" lesson, students begin by reading through vocabulary terms, then watch a video and respond in writing to what they notice and wonder about the interaction of the Sun and ocean and its impact on the weather. They then conduct an investigation, draw a model of the water cycle, and record their observations. Students then finish by reading a diagram of the water cycle and responding in writing to the "Claims, Evidence, and Reasoning (CER)" prompt to explain what they have learned.
- The materials provide learning activities that support students' meaningful sensemaking through reading, writing, thinking, and acting as scientists and engineers. For example, students are led in a hands-on activity in testing solubility. After investigating, they are led in thinking like scientists to read through, use critical thinking, and write out their findings.

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 for students to engage with scientific texts to gather evidence and develop an understanding of concepts. An example of this can be found in the "Natural Resources" unit. In one of the hands-on activities, students look at the images and read the captions to learn how cities solve problems caused by using natural resources. They then have to define an environmental problem that each city is trying to solve based on the phenomena and captions in the gallery of images. Finally, they write a numbered list with one question for each image. Another example can be found in the "ELPS Minilesson" on "Force and Motion," where students silently read a short informational text and identify cause-and-effect relationships. Students write their responses using differentiated supports such as a graphic organizer and sentence stems.
- The materials provide multiple opportunities regarding 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 opportunities for students to engage with scientific texts, including activities such as pre-reading and vocabulary, to help them develop an understanding of concepts. Materials provide vocabulary anchor charts for students to refer to throughout the lessons. For example, the "Behavioral Traits of Organisms'' lesson includes vocabulary words such as *learned behavior* and *instinctual behavior* with definitions. Teacher resource materials guide teachers to have students record key vocabulary and review terms throughout the lesson.

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

- The materials provide opportunities for students to communicate thinking on scientific concepts in written and graphic modes. In the "Earth Processes" unit, a lesson focuses on the formation of sedimentary rocks and fossil fuels. Students understand how fossil fuel formation compares with the formation of sedimentary rocks and how this process may differ for coal, oil, and

natural gas. Students then compare and contrast the formation of sedimentary rock coal and natural gas and complete a Venn diagram.

- Students use written modes of communication to display an understanding of scientific concepts. In the lesson on "Shadows," students complete an exit ticket by responding in writing to explain how the position of the Sun in the sky relates to the shape and position of the shadows cast by the device they made.
- The materials provide multiple opportunities for students to engage in various written and graphic modes. Tables are provided with many of the "Hands-On" sections. Students are able to develop and display their understanding of scientific concepts. An example can be found in the lesson "Circuits and Systems," on Day 3: After conducting the hands-on activity, the students draw a model. The materials state: "Model of a complete circuit with a light bulb, including all parts of the system. Now draw a second model, but leave a break in the electrical circuit. Label your models to show how the interdependent parts function in the system, focusing on what happens to the light bulb in each circuit." Materials support students to act as scientists and engineers who can learn from engaging in phenomena and engineering design processes, make sense of concepts, and productively struggle.
- The materials provide for authentic student engagement and perseverance when working with concepts; students productively struggle while acting as scientists and engineers. For example, in the lesson "Energy Transformation," Day 2, students define a problem after conducting an investigation by building a flashlight. The materials state, "Define Problems: What are some potential problems if this was the flashlight you wanted to use in the real world?"
- The materials support students as practitioners while they are figuring out (sensemaking) and productively struggling. An example of this can be found in the "Energy" unit's hands-on activity "Build Your Own Flashlight." In this activity, students build their own flashlight when given a set of materials and instructions and identify the transfer of energy from electrical to light. Students work to design and build their prototype, discuss and observe if there are problems with their prototype, then through productive struggle come up with a solution to improve their prototype. Finally, students reflect on the science skills that they used to work through the investigation and discuss if their outcomes were what they expected.
- The materials support students in acting as scientists and engineers in the "Hands-On" sections found throughout the text. For example, in the section for TEKS 5.7A, the students act as both scientists and engineers in a hands-on activity that has the students engineer, design, and build a table tennis ball launcher. Once this is completed, the student moves into the role of a scientist and tests their launcher.
- 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 a "Behavior Traits of Organisms" lesson has students use their hands-on activities and explorations to re-visit the phenomena and use the material learned through the unit to create claims, evidence, and reasoning. Students explain the phenomenon that turtle hatchlings know how to go to the sea.

HMH Into Science Texas Grade 5

Indicator 5.1

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- The materials provide opportunities for students to develop how to use evidence to support their hypotheses and claims. For example, in the lesson "Effects of Forces on Objects," Day 3, in the section "Claims, Evidence and Reasoning (CER)," the materials include a prompt for students and state: "Make a claim about how different factors affect force. Cite evidence to support your claim and use reasoning to connect your evidence to your claim." The materials include a sample answer: "My claim is that ramp height impacts the amount of force needed. My evidence is that the highest ramp required the least amount of force…."
- The materials provide opportunities for students to develop how to use evidence to support their hypotheses and claims. For example, the "Behavioral Traits of Organisms" lesson provides sentence prompts for teachers to model and explain how to build a claim, evidence, and reasoning. The teacher edition guides the teacher with a student sample answer to assist students in using evidence to support their hypotheses and claims.
- There is evidence that the materials include embedded opportunities to develop and utilize scientific vocabulary in context. An example is found throughout the student edition. At the beginning of each lesson, there is a "Notice and Wonder" section where students discuss and record what they notice about something in the content they are studying. They then describe

something they wonder about within the same topic/context. The activity encourages the students to use scientific vocabulary in context based on what they notice and wonder about the topic they are studying.

- Materials prompt students to use evidence to support their hypotheses and claims at the end of all of their "Hands-On" activities. For example, on Day 4 of activities for TEKS 5.9.A, after the students have completed investigations of shadows, materials state: "Make a claim about how changes in shadows relate to the time of day and apparent position of the sun in the sky. Support your claim with evidence of patterns from your observations. Explain your reasoning to connect your evidence to your claim."

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

- The materials include opportunities for students to develop and use vocabulary after having a concrete or firsthand experience within which they can contextualize new terms. For example, in the "Energy Transformation" lesson, on Day 1, students explore different examples of energy transfer by flipping cards with visuals. After the card activity, students review vocabulary cards with visuals and short definitions.
- The materials consistently include embedded opportunities to develop and utilize scientific vocabulary in context. In "TEKS 5.6.A, Matter and Energy," students' "Vocabulary" pages include *electrical energy, conductor, insulator, density, solubility,* and *volume*. On Day 8, "Can You Explain It?" poses the guiding question: "How do the properties of bean bag chairs compare and contrast to the properties of typical classroom chairs?" Students are provided with a list that includes some of the vocabulary words. Materials guide students in answering the question and encourage them to use their knowledge of these words to answer: "Which of these properties of matter would be similar for the two types of chairs? Which ones would be different? For any that you don't know, explain whether you would measure, observe, or test to find out."
- The materials include opportunities to develop and use vocabulary after having a concrete or firsthand experience within which students can contextualize new terms. For example, students are presented with changes in vocabulary words during the "Engage" section of the lesson. Students model matter moving through ecosystems, exploring the negative and positive impacts of an ecosystem through a series of hands-on activities. In the "Explain" section of the learning sequence, teachers point out that a change in rainfall would negatively affect the producers in the ecosystem. Students build a food web of a new ecosystem to show their correct placement of how their energy flows through the ecosystem.

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

- The materials provide opportunities for students to develop the practice of argumentation and discourse. For example, during the "Earth's Rotation" lesson, students complete an engineering task to design and build a prototype of a model that uses shadows to tell time. After designing, building, and testing their prototype, students discuss results with partners and find patterns in data that reveal the apparent position of the Sun in the sky throughout the day. Teachers are prompted to lead a group discussion to help students discuss common ideas in students' models as students build their prototypes.
- The materials provide opportunities for students to develop the practice of argumentation and discourse. For example, in the lesson "Effects of Forces on Objects," Day 3, the materials state:

"Make a claim to explain how different factors affect force. Support your claim with evidence from your investigation. Explain your reasoning to connect your claim to your evidence."

- Materials provide opportunities for the students to engage in argumentation and discourse. For example, in "TEKS 5.11, Natural Resources," Day 4, students continue Using Engineering Practice. In Part 3, Step 1, "Get out the model of a possible solution that you made in Part 2. Propose it to your team as a possible solution. Discuss the pros and cons of each team member's solution for minimizing the environmental impact of using natural resources." Step 2, "As a team, decide on one prototype to build." Step 3, "Using your model, discuss how the prototype will look and work." This example shows both discord and argumentation, with discussion points.

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 opportunities for students to construct and present developmentally appropriate arguments to explain a phenomenon or defend a solution to problems using evidence acquired from learning experiences. For example, during the "Effects of Forces on Objects" lesson, on Day 3, the materials state: "Model and Explain Content by having students make a claim and support it with evidence and reasoning. Provide the following sentence stems to students who need extra support such as 'My claim is… I think that… I noticed that… My evidence is… I know because….'"
- 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, in "TEKS 5.11, Natural Resources," at the end of an engineering practices activity, the "Claim, Evidence, and Reasoning" section requires students to write a conclusion: "Make a claim about to explain your solution for minimizing the environmental impact of your school or community using natural resource. Support your claim with evidence from your use of engineering practices. Explain your reasoning to connect your claim to your evidence."
- The materials provide opportunities for students to justify explanations of phenomena and solutions to problems using written and verbal arguments as well as evidence acquired from learning experiences. For example, in a lesson on "Behavior Traits of Organisms," the "Can You Explain It?" section has students use the knowledge that they acquired through hands-on activity labs around how instinctual behavior traits increase chances of survival to write a CER. Students refer back to the phenomenon presented at the beginning of the lesson—how turtle hatchlings know to go to the sea.

HMH Into Science Texas Grade 5

Indicator 5.2

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- The materials provide support for teachers to deepen student thinking through questioning. For example, in the lesson "Energy Transformation," Day 6, the section "Can You Explain It?" provides guidance for teachers to prompt students: "Interpret Student Thinking by having students answer the Can You Explain It? question. Have students answer the Guiding Question using evidence from the Hands-On Activities and explorations. Students should have grown in their depth of knowledge about energy transformations. If students struggle to answer the question, pose questions such as: 'What kind of energy was in the flashlight battery? The wires? The bulb?' GUIDING QUESTION: How does energy change as it moves through the flashlight system?"
- The materials provide possible student responses to questions in tasks. An example of this can be found in the "Patterns in Space" lesson, in the "Engineer It, Shadows" hands-on investigation in the "Explore/Explain" section. At the end of the investigation, "Support for Student Answers" gives support for providing feedback for students and example student answers to prompts given at the end of the investigation to encourage discussions on student conclusions.

- 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 "TEKS 5.7A, Forces and Patterns of Motion" lesson, "Support for Students Answers" provides a possible teacher question and student answer: "I Wonder: What do you notice about the motion of the table tennis ball in the video? Sample Answer: I noticed that the table tennis ball was bounced low to the table in the beginning of the video, but it was bounced higher at the end of the video."
- The materials provide teachers with possible student responses to questions and tasks. For example, in the "Matter and Energy" unit, "Properties of Mixtures" lesson, students are learning to demonstrate and explain how some mixtures maintain the physical properties of their substances. Materials provide questions for students to make a claim, evidence, and reasoning for a physical properties experimental design. Sample answers provided are "My group decided to separate items by size and color. The other group decided to separate items by weight and size. We both recorded the sizes of the objects but chose a different physical property for our other criteria." Further into the unit, students pose the question around examples of mixtures where the substances keep some of their properties, but some properties might change. A sample student answer is "Dissolving salt or sugar into water is an example of making a mixture that can allow some physical properties to stay the same, while others may change. Salt dissolved in water will still taste salty, but the salt can disappear because the particles are too small."

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

- The materials provide embedded support for the teacher on how to introduce and scaffold students' development of scientific vocabulary. For example, in the "Patterns in Space" unit, the guide suggests the teacher activate prior knowledge by having students discuss day/night patterns and remind them that in prior grades, they learned that the Sun is a star and the Earth revolves around it. The guide then suggests having a group discussion about the patterns in day and night. Students can offer their explanations for why it's dark and night and what causes day and night to happen. The guide then gives support for the teacher to have the students write down the words and add examples and pictures to help them remember the words. Students use the language development worksheet to record key vocabulary and other new terms they come across in the unit/lesson. The teacher can also record terms/definitions on a vocabulary anchor chart that students can then refer to throughout the lesson.
- 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 5.6.C, the minilesson "Language Objective" states, "Listen to a passage about solutions and take notes about making a solution." Teachers are provided with "Strategy" and "Scaffolding" sections. In the Strategy section, they are guided: "Read the text. Set a listening focus: ask students to listen for the explanation that helps to define the word *solution*." The teacher is then guided to tell the students: "Reread the test. Say: Take notes about explanations and examples of solutions." The Scaffolding instructions are broken into "Beginning, Intermediate, Advanced, and Advanced High" to support the students in their reading and writing levels.
- The materials consistently provide embedded support for the teacher on how to introduce and scaffold students' development of scientific vocabulary. Across all grade levels, teacher edition materials provide sections on "Planning for Differentiation" and "Language Support," which direct teachers to reinforce vocabulary, including signal words and sentence frames, throughout

the units. Teacher materials also provide vocabulary anchor charts and vocabulary writing graphic organizers. The teacher edition prompts teachers to use these materials throughout the students' learning to support targeted concepts and to gauge their process on the language development continuum.

- 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 "Electric Circuits," the materials state: "Have students use the organizer to analyze vocabulary such as electric/electrical, circuit, flow, device. Point to and discuss devices that use electricity in the classroom, such as lights, lamps, computers, and pencil sharpeners. Ask: What device uses electricity? How can you turn it on? Model and discuss words…."

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 5.6C, there are links to minilessons that provide support in teaching the students to write out their claims. The teachers are instructed: "Ask students to write a short paragraph about another solution that they could make from two substances 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 a leveled support for the student writers.
- 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. For example, in the "Formation of Landforms" lesson, the "Can You Explain It?" section prompts teachers to use the question "How do landforms form or change?" to create discourse when developing evidence and reasoning around how water from a river forms a canyon.
- 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 "Energy Transformation" lesson, on Day 1, the section "I Notice/I Wonder" 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... They should use the evidence they gather through the hands-on activities and explorations to answer questions and generate new questions."
- The materials support the use of evidence in constructing written and verbal claims. For example, in the "Patterns in Space" lesson, the teacher guide provides sentence stems in the "Claims, Evidence, Reasoning" section of the lesson for students who might need extra support. These stems could also provide support for students to help structure conversations they have with peers when trying to explain their evidence and their reasoning.

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. Materials provide feedback tips and examples teachers can use to support students throughout

the learning cycle. For example, for grades 3-5, the "Teacher's Corner" includes a section on "Make Science Fun: Facilitating Collaboration," which covers embracing failure: "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." Materials included in this section are intended to be used as best practices across all units and lessons.

- The materials provide teacher support and guidance to engage students' thinking in various modes of communication throughout the year. For example, in the lesson "Energy Transformation," Day 2, in the section "Support for Student Answers," the materials include exemplar student responses: "Sample answer: My claim is that the battery touching the bulb allows the energy to transform. My evidence is that the pieces of the flashlight must be connected and touching to make it turn on. My reasoning is that the particles in the battery release their energy when the metal parts are touching."
- Materials consistently provide teacher supports and guidance for facilitating the sharing of solutions. An example of this can be found in the "Earth's Processes" lesson, in the "Model and Explain Content" section. It suggests teachers model and explain the content using sentence frames within the "Claims, Evidence, Reasoning" section—modeling a simple claim, supporting it with evidence, and explaining how the evidence supports the claim. The guide also gives suggested sentence frames, which is another layer of support for students. 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 consistently support and guide teachers in facilitating the sharing of students' thinking and finding solutions. For example, for TEKS 5.8C, "Cross-Curricular Connections" guides the teacher to support the students in writing their claims and understanding. On Day 5, "Students will imagine they are explaining to a younger student the differences between transparent, translucent, and opaque objects." On Day 6, "Students will imagine they are on the rim of a deep canyon, holding a telescope and a camera. They will write an email to a pen pal explaining what they observe through each device."

HMH Into Science Texas Grade 5

Indicator 6.1

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- Materials include formative assessments in a variety of formats to measure student learning and determine the next steps for instruction. For example, in the grade 5 Teacher's Guide, "Energy Transformation Day 3" lesson, the materials include an Exit Ticket/Formative Assessment. The materials state, "Provide feedback by drawing attention to ways in which they behaved scientifically in the redesign exercise, such as in their consideration of the functions of materials. Name one scientific practice you used to redesign your flashlight."
- The materials include summative assessments in a variety of formats. In the grade 5 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 Processes of Organisms" unit test report. The Reports for this assessment provide 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."

- Materials consistently include formative assessments in a variety of formats to measure student learning and determine the next steps for instruction. For example, at the beginning of the grade 5 lesson on "Changes in Ecosystems" in the "Ecosystems" unit, students activate prior knowledge by sharing what they already know about biotic and abiotic factors in an ecosystem. The teacher guide gives guidance for the teacher to guide student thinking around prior grade knowledge, such as the roles of producers, consumers, and decomposers and about matter and energy flow in food webs. Materials then guide teachers to lead a group discussion so students can discuss what ecosystems include, what they need, and how they change. The teacher guide directs the teacher to have students use words like producer, consumer, decomposer, and food web.

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

- The materials indicate which student expectations are assessed. In the grade 5 Assessments section, there are Tests found for each TEKS taught in the curriculum. The teacher can also access the class/student report for each test in the Reports sections. Teachers can pull reports by item to see the progress of each student by item and note which TEKS are tested by item. An example of this is found in the grade 5 Assessment Guide Table of Contents. The Table of Contents shows the TEKS covered by each test. Each test covers several student expectations that were taught within the entire unit.
- The materials assess all student expectations and indicate which student expectations are assessed. For example, in grade 5, 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 "Formation of Sedimentary Rocks and Fossil Fuels," the correct answers say, "This is correct because both fossil fuels and sedimentary rocks are formed by the deposition of materials such as weathered rock or organic remains." An incorrect answer states, "This is incorrect because sedimentary rocks are not formed only from the remains of organisms."
- The materials assess all student expectations, as outlined in the TEKS, by 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 consistently indicate which student expectations are assessed. For example, the materials provide the TEKS correlation for each assessment and the answer keys. For example, in the grade 5 Teacher's Guide, "Electrical Energy in Circuits" lesson, Planning for Assessment section, the materials list the daily formative assessments for days 2-5, as well as formative assessments or TEKS quizzes for 5.8B and answer keys.

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 5, TEKS 5.6C, "Conservation of Matter," the teachers are provided with Performance Indicators. In the activity, the students investigate the

components of mixtures, and at the end, they complete the Claims, Evidence, and Reasoning (CER) section. The teachers look for the student indicators to assess the work. They are looking for the students to "investigate how matter is conserved in mixtures and solutions, collect data through observations, and develop a claim based on collected evidence."

- Materials include assessments that integrate scientific concepts and science and engineering practices with recurring themes and concepts. For example, the grade 5 TEKS assessment materials ask students to review lab material and make observations from the three trials of the given lab. Students then take the observations to make a conclusion on what the data shows in the lab.
- 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 5 Teacher's Guide, "Electrical Energy in Circuits Day 4" lesson, students complete a performance task. The materials state, "Construct a data table like the one below in your notebook to identify the role of each part of the circuit. Include any energy transformations associated with that part."
- The materials consistently include assessments that integrate scientific concepts and science and engineering practices with recurring themes and concepts. An example is from the grade 5, "Force," Test A. Students have to apply their knowledge of circuits and electrical energy by explaining what energy is being converted to make a flashlight work and how the structure of the flashlight helps it perform its function as a light source that can be carried around.

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 5 lesson, "Human Impact on Ecosystems," students are given the phenomena that state, "How might human activities affect a healthy wetlands ecosystem in a negative or positive way?" At the end of the unit, students are asked to create a claim, evidence, and reasoning (CER) using knowledge and vocabulary obtained from the unit.
- Assessments that require students to apply knowledge and skills to a new phenomenon or problem are provided by the materials. For example, in the grade 5 Teacher's Guide, lesson "Effects of Forces on Objects," students conduct investigations to demonstrate, model, and explain how pushes and pulls can cause changes in the position and motion of objects. After the hands-on investigations, students connect their knowledge to daily life activities. The materials state, "Creative Thinking: Have students think about one outing in the community (i.e. park visit, playground, etc) that requires the use of forces like push and pull. Have students draw the actual activity and use that drawing to explain why this is an example of a force. Explain to students that scientists create similar drawings, called force diagrams, to show how forces act on each other or an object."
- The materials consistently include assessments that require students to apply knowledge and skills to a new phenomenon or problem. In grade 5, "Weather and the Water Cycle," students studied the phenomenon of the effect that ocean currents have on air temperatures. In this lesson, students will build a model using a pan of water, then use a thermometer to observe, measure, and identify cause-and-effect relationships to explain the phenomenon. With the model, students will determine that the temperature of the air blowing across the surface of the pan of water is affected by the temperature of the water, in a manner similar to the ways the ocean currents affect weather and climate. After this investigation, students will answer a

Claims, Evidence, and Reasoning (CER) prompt about how the sun and ocean currents affect the weather of nearby coastal areas.

- The materials consistently include assessments that require students to apply knowledge and skills to novel contexts. For example, in grade 5, in the "Forces and Patterns of Motion" lesson, students apply their knowledge and skills to write about energy transfer. They are reminded about what they did in the investigation, "When you pull back the balloon on the ball launcher, you stretch the elastic material of the balloon. When you release the balloon, the energy from the stretch of the balloon transfers to the ball." Students are then required to answer, "If you pull back the balloon farther, does more or less energy transfer to the ball? How do you know?"

HMH Into Science Texas Grade 5

Indicator 6.2

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

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

Meets | Score 2/2

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

Materials include information and/or resources that provide guidance for evaluating student responses. Materials support teachers' analysis of assessment data with guidance and direction to respond to individual students' needs, in all areas of science, based on measures of student progress appropriate for the developmental level. 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 resources that guide teachers in evaluating student responses. For example, in the grade 5 Teacher's Guide, lesson "Electrical Energy in Circuits Day 4," the materials include a chart with *Performance Indicators* for teachers to evaluate the hands-on activity. The materials state in the chart, "Demonstrate an initial simple circuit with a switch and light bulb following a diagram; experiment with the circuit by adding, removing, and changing the order of different components; analyze the circuit to determine how electrical energy is transforming into different forms of energy."
- The materials include information and/or resources that provide guidance for evaluating student responses. In grade 5, after each Exit Ticket, there is teacher guidance for providing feedback and support based on student answers and understanding. An example from grade 5 is in the 5.13A "Structures and Functions of Organisms" lesson, where the exit ticket includes feedback that states, "Provide feedback to students after discussing how plant structures are similar to animal structures. Address any misunderstandings."
- The materials consistently provide guidance for evaluating students' responses. Throughout the Teacher's Guide, the text provides *Support for Student Answers.* For example, in grade 5, TEKS 5.7B, "Effects of Force on Objects," the students are investigating force. The teacher is

instructed to lead a group discussion after viewing a video. In the *Support for Student Answers* the teachers are given an *I Notice* and *I Wonder* question. Both questions have a sample answer such as, "What do you notice about the balloon in the video? Students should write their responses in the interactive. Sample answer: I noticed that the balloon went flying when it was released."

- Materials include information and/or resources that provide guidance for evaluating student responses. Materials include resources that guide teachers in evaluating student responses. Materials provided in the teacher edition for grades 3-5 include an Assessment Guide Answer Key for all quizzes and tests. Materials include the rationale for why each answer is incorrect and teacher suggestions for reteaching support.

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

- The materials include assessment tools that yield data teachers can easily analyze and interpret. In the Reports section, teachers can access a Standards-Based Report to gather data information on assessments they've given. The Standards Report shows how many students are below level, on level, and above level. This information helps guide the teacher's instruction so the teacher will know when to intervene or accelerate instruction.
- The materials support teachers' analysis of assessment data with guidance and direction to respond to individual students' needs. For example, the grade 5 *Standards Report for All Students* shows the class average along with individual students. A colored line is used to represent the students and where they are, red for below-level, orange for on-level, and green for above-level.
- Materials provide guidance documents and resources to support teachers' analysis of assessment data. Materials for grades 3-5 are included in the Teacher Edition, report tab, and an Assessment Report includes a data analysis section. The data analysis section includes assessment proficiency for all students' reports, individual student reports which are broken down by Science and Engineering Practices (SEP), Recurring Themes and Concepts (RTC), and content objectives. In addition, the data analysis section includes a customizable option for teachers to utilize data to support student growth.
- Materials consistently include assessment tools that yield data teachers can easily analyze and interpret. For example, the grade 5 Teacher's Guide lesson, "Forces and Motion," includes an Analysis Chart that shows the standards covered by assessment questions for the quiz and the test.

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 5 the teachers have access to reports that break down the students' performance from assessment. 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 focus on specific concepts to fill gaps for intervention 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 core science instruction. For example, in the grade 5 Reports section of the landing page, the materials include the Assessment Report for assessment proficiency, which groups students by performance.

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 5, the "Formation of Sedimentary Rock and Fossil Fuel" lesson, Planning for Differentiation, has a reteaching support section that includes a supplemental lesson on, "What are processes that shape earth's surface?"
- Materials provide a variety of teacher guidance for responding to student data. For example, in the grade 5 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 5 Differentiation Challenge example for "Life Processes of Organisms" states: "Challenge students to research a different animal's nesting behaviors and compare the nests and behaviors (learned and instinctual) of this animal to a bird. Have students explain how each type of nest and behavior is better suited to each animal's environment and lifestyle."
- 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 5 *Differentiation: Extra Support* is provided throughout the text. In lesson TEKS 5.6B, "Properties of Mixtures" the students are demonstrating that electrical energy works in complete circuits. The students are required to write paragraphs and the teachers are guided in supporting those students. The text guides, "For paragraph writing, provide students with a simple graphic organizer and a word bank. Provide a bank of informational transition words, such as first, next, then, and last."

HMH Into Science Texas Grade 5

Indicator 6.3

Assessments are clear and easy to understand.

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

Meets | Score 2/2

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

Assessments contain items that are scientifically accurate, avoid bias, and are free from errors. Assessment tools use clear pictures and graphics that are developmentally appropriate. Materials provide guidance to ensure consistent and accurate administration of assessment tools. Materials include guidance to offer accommodations for assessment tools that allow students to demonstrate mastery of knowledge and skills aligned to learning goals 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 or course that are free from errors. For example, the grade 5 "Compare and Contrast Properties of Matter" Quiz A presents a scale showing grams as a measuring tool for the mass of a liquid.
- The assessments contain items that are scientifically accurate, avoid bias, and are free from errors. In a grade 5 Exit Ticket on the "Earth's Processes," the items avoid bias by focusing on factual and accurate information about the water cycle without using names or other potentially biased language.
- The assessments consistently contain items that are scientifically accurate, avoid bias, and are free from errors. For example, in grade 5, "Energy Transformation" (TEKS 5.8A), Quiz B, the students are provided with the question, "Which of these are examples of a transformation of mechanical to sound energy?" They are asked to choose two correct answers from the five provided.
- 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 5th grade, a formative assessment builds student background knowledge on the process of coal formation and oil formation.

HMH Into Science Texas Grade 5

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, the grade 5 Exit Ticket on 5.10, "Earth's Processes," uses a clear and developmentally appropriate diagram of the water cycle.
- In grade 4, in "The Role of Producers" (TEKS 4.12.A) Quiz, an illustration is provided of a flowering plant and a sun with arrows pointing from it to the plant. There are numbers pointing to different plant structures and the students are provided with plant functions to assign to the numbered labels correctly. The illustration provides a visual that is clear and easy to read to aid in the student's completion.
- In grade 5, "Earth Processes," the assessment includes the development of an appropriate picture of the water cycle with clear arrows to represent the flow of the water cycle.
- Materials include assessment tools that use clear pictures and graphics. For example, in the grade 5 "Electrical Energy in Circuits" Quiz A, the materials present clear pictures of simple circuits with labels and a line connecting items to show the order.

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 5, materials 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. Materials include 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.
- The materials offer alternate-form reliability to maintain consistency of test results between two different but equivalent forms of tests. For example, in the grade 5 Teacher's Guide, "Energy Transformation" lesson, in the section Planning for Assessment, the materials include two quizzes, A and B, for the learning objective of the lesson TEKS 5.8B.
- The materials include detailed information that supports the teacher's understanding of assessment tools and scoring (answer key guidance and scoring rubrics). The grade 5 *Frontmatter* guide states that HMH Science Texas Assessments can be administered, scored, and printed on Ed. Teachers can use the Standards Report on Ed to check in on students' cumulative proficiency and get helpful resource recommendations. There are two versions of the answer key available: one in a filterable spreadsheet containing important info such as DOK, item type, and rationales, and one in annotated, printable PDF to use for easy grading. The guide also includes information about scoring rubrics for open-ended assessment items that allow teachers to evaluate student responses for all TEKS aligned to the question. There are 2-point scoring rubrics included along with exemplar student responses to show how students could respond to each portion of the prompt to receive full credit.

HMH Into Science Texas Grade 5

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

- 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 for 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.
- Materials offer accommodations for assessment tools so that students of all abilities can demonstrate mastery of learning goals. For example, in the grade 5 Teacher's Guide, "Light" lesson, in the Planning for Assessment section, the materials state, "The TEKS Test 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."
- In grade 5, 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 5, "Forces," 5.7A Exit Ticket.
- In grade 5, materials provide an *Assessment Frontmatter* that includes an Additional Resources section. One section is for Modified Quizzes/Tats & Audio. It states, "All *HMH Into Science Texas* assessments in Grade 5 offer both on-level and modified versions as well as audio support (digital versions only)."

HMH Into Science Texas Grade 5

Indicator 7.1

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

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

Meets | Score 2/2

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

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

- The materials include teacher guidance for scaffolding instruction and differentiation activities for students who have not yet achieved mastery by providing sentence stems for using scientific vocabulary for the Claim, Evidence, and Reasoning (CER) Method. An example from the grade 5 "Force" unit provides sentence stems such as, "My claim is…. I think that…. I notice that…. My evidence is…. I know this because…. My evidence shows…because…."
- The materials provide recommended targeted instruction and activities to scaffold throughout the Teacher's Guide. Teachers are provided with links to EdOline with differentiation/reteaching support that scaffolds to their current lesson. In lesson 5.9A, the teacher is provided differentiation/reteaching support by way of links to *ScienceSaurus Earth Science: Earth and Its Moon* and *How Do the Sun, Earth, and Moon Differ?*
- Materials ensure that teachers can target instruction to develop precursor skills necessary to access grade-level content. The materials include recommendations that direct the teacher to additional lessons designed to scaffold student understanding toward mastery of the skills. For example, the grade 5 ELPS Mini-Lessons provide additional lessons to scaffold using sentence stems, graphic organizers, and other linguistic supports.
- Materials provide additional resources for targeted instruction and differentiation to support students who have not yet achieved mastery. Materials contain additional lessons for small group instruction that are based on student's areas of need. For example the grade 5, unit on "Life Processes of Organisms," the lesson focusing on "Behavioral Traits of Organisms," there is a section titled Differentiation/Reteaching in the Teacher Guide, which provides supplemental lessons on how traits are passed from parents to offspring.

HMH Into Science Texas Grade 5

Materials provide enrichment activities for all levels of learners.

- The materials provide enrichment activities that account for learner variability. For example, the grade 5 Teacher's Guide embeds suggestions for engaging enrichment activities. In the lesson "Electrical Energy in Circuits Day 2," students ask the custodian at their school to allow them to visit the circuit breaker or electrical room. Students discuss the different switches controlled in the building and how the system works.
- 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. The grade 5 Teacher Edition provides an opportunity for students to participate in an extension resource project on "my environmental impact" and performance tasks in the "Natural Resource" unit, with the lesson covering "Environmental Impact Solutions." The extension resource project has a guiding question the student must answer: "How do green roofs on buildings minimize environmental impact?" After previewing the question, students are then prompted to watch a video and answer questions about what they notice and wonder about the roof's impact on the environment.
- The materials include activities for all levels of learners, including the beginning of each Lesson at a Glance page, where the Teacher's Guide gives an overview of extension activities. An example of this is in the grade 5 "Energy" unit. The lesson suggested is in the Elaborate section and suggests the FUNomental Reader: "Let's Explore How Energy Changes Form."
- 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 5.8A on the Planning for Differentiation page, there is a section called FUNomenal 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 "Let's Explore How Energy Changes Form," which focuses on the transformation of energy. It also includes links to ELPS Mini-Lessons.

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. The materials include sections called PocketLab. These are enhanced, collaborative versions of the TEKS they are currently studying. For example, in grade 5, lesson 5.8A, "Energy," the teachers are provided with links to an Interactive Student Lesson, a printable Student Edition, and a Hands-On Activity.
- 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 5 Teacher's Guide, lesson "Electrical Energy in Circuits Day 6," the materials include a section titled Differentiation: Challenge. The materials state, "Challenge students to research a favorite product that uses electrical energy (e.g., a game console or electronic device). Students should research how it was invented and tested prior to manufacture."

HMH Into Science Texas Grade 5

- 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. This can be found in the "Structures and Functions" lesson in the "Life Processes of Organisms" unit. For example, the grade 5 teacher resources material provides guidance for when students need extra support in group presentations of their CER on how structures of organisms in the same environment support their survival. The materials guide teachers to encourage groups to split up speaking parts of the presentation and provide time for students to practice before presenting to the whole class.
- There is evidence that the lessons provide support and resources for students who are ready to accelerate their learning. For example, materials include resources for teachers to create a content plan to deliver content at the moment of need. An example of this can be found in the grade 5 "Energy" unit in the Explore and Explain sections. There are support sections for teachers titled, Differentiation: Extra Support or Challenge. These sections give ideas to teachers in real time depending on if students need extra support with the concept or need to be challenged at that time. This can be found in each lesson in every unit.

HMH Into Science Texas Grade 5

Indicator 7.2

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

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

Meets | Score 2/2

The 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.

- The 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 5 Teacher's Guide lesson, "Weather and the Water Cycle Day 2," students use a thermometer to observe, measure, and identify cause-and-effect relationships to explain scientific phenomena.
- 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 grade 5 lesson on the "Water Cycle" in the Differentiation and Support section. The guide suggests if students struggle with following the multi-step instructions, help them break the work down into four separate trials to make it easier to complete.
- Materials include a variety of developmentally appropriate approaches to engage students. The use of sentence stems for the Claim, Evidence, and Reasoning section is one example. In grade 5, lesson 5.13A, "Life Processes of Organisms," the teachers are guided to provide the students with the following sentence stems: "My claim is…. I think that…. I noticed that…. My evidence is …. I know this because…. My evidence shows that…because…. " 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.

- The materials engage students in the mastery of the content through a variety of developmentally appropriate instructional approaches. Lessons include authentic tasks in which students use tools to measure and collect data. For example, in the grade 5, "Life Process of Organisms" unit, the students are collecting data to explain how to develop a model of a bird nest that would increase the chances of survival for the bird living in the nest. Another example can be found in the grade 5 Teacher's Guide lesson, "Weather and the Water Cycle Day 2." Students use a thermometer to observe, measure, and identify cause-and-effect relationships to explain scientific phenomena.

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

- The materials consistently support flexible grouping by promoting whole group discussions, as noted in the Teacher's Guide in the grade 5 "Patterns in Space" lesson in the Notice and Wonder section of the lesson. The guide suggests the teacher lead a whole group discussion.
- There is consistent support for flexible groupings included in the materials. The student text guides students to work in either small groups, whole groups, partners, or one-on-one. In grade 5, lesson 5.6C, the text guides the students, "With a partner, place a piece of weighing paper on a digital scale."
- The materials support a variety of instructional groupings (e.g., whole group, small group, partners, one-on-one). For example, in the grade 5 unit on "Natural Resources," the lesson on "Environmental Impact Solutions" has students work together through a Hands-on Lab to investigate local effects on the environment caused by people's use of natural resources and then define a problem in school related to the use of natural resources to then draw a model to describe a solution they can build.
- The materials provide support for instructional groupings in a variety of ways. For example, materials include opportunities for students to engage in collaborative or cooperative learning activities. In the grade 5 Teacher's Guide lesson, "Conservation of Matter Day 3," materials state, "With a partner, students take turns explaining how all solutions are mixtures, but not all mixtures are solutions."

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

- The materials provide teacher guidance and structures for the effective implementation of multiple types of practices. A clear purpose and learning goals are stated for groups contained in units and lessons. Every lesson states a learning objective. For example, in the grade 5 unit on "Life Process of Organisms," the lesson titled "Structures and Functions of Organisms" has Hands-on Labs that start with stating the learning objective of students will be able to collect observations and measurements of plant structures to explain the relationship between the structure and function of plants.
- The materials show evidence that 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. For example, in grade 5, Lesson 5.8B, the text provides sections for Emergent Bilinguals Support and Differentiation/Reteaching Support.
- The materials provide teacher guidance and structures for effective implementation of multiple types of practices. For example, the materials include a section titled Planning for Differentiation with every lesson that lists the resources available to support the lesson. In the grade 5

Teacher's Guide lesson, "Energy Transformation," the materials state, "Use the reader, 'Let's Explore How Energy Changes Form' and its Teacher Support as a science Mini-Lesson to reteach, reinforce, and supplement energy transformation... You can use the reader after Day 5 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 5 "Force and Motion" unit, where there is evidence that the materials recommend frequent and varied assessment of learning to ensure that multiple types of practices lead to student mastery. This can be found in the Claims, Evidence, Reasoning section and in the Exit Ticket/Formative Assessment section. In these sections, the guide gives ways to frequently assess student learning as well as feedback teachers can give students to help clarify learning and promote student mastery. There is also a section titled, Check for Student Understanding, which provides guidance for teachers to check for understanding and gives suggested questions teachers can ask students.

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. For example, in the grade 5 "Earth Processes" unit, there are pictures featuring a female meteorologist. Another example can be found in the grade 5 Teacher's Guide lesson "Energy Transformation Day 6," where students discuss the contributions to society of the scientist Dr. Steven Chu.
- Materials represent a diversity of communities in the images and information about people and places by the scientist they include and their research. The photos of other students working show a diverse picture of all nationalities. For example, in grade 5, lesson 5.6C, in the People in Engineering section, there is an article about Kang Hu, who "is an engineer who works in making ways to improve water processing. Kang Hu began his training at Tianjin University in China."

HMH Into Science Texas Grade 5

Indicator 7.3

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

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

Meets | Score 2/2

The materials meet the criteria for 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 EB students, with the goal of creating comprehensible input. For example, in the grade 5 Teacher's Guide, in the lesson "Energy Transformation" in the Emergent Bilinguals Support section, the materials state, "Reinforce vocabulary and language structures including signal words and sentence frames to give students additional practice using oral, written, or non-verbal language to demonstrate their understanding and interact with peers."
- 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 EB students, with the goal of creating comprehensible input. In the teacher resources, there are ELPS Mini-Lessons to support each unit. An example is the grade 5, "What is a Mixture?" ELPS Mini-Lesson, which 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 say, "Review the image" and "What do you notice?" The teacher should then encourage students to use nonverbal cues, circumlocution, or other strategies to communicate if needed. Point to the cereal bowl and ask: "What ingredients does it have?" Ask: "Does it have different things mixed together? How do you know?" Then invite partners to discuss their preferences for oatmeal and what else could be added. Explain that students will learn more about mixtures with different parts, or substances.
- 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 5,

TEKS 5.8A, "Energy," the teachers are provided Emergent Bilingual Support that includes Language Objective, "Use adjectives, verbs, and transitional phrases (eg., as a result, resulting in) to give an oral and written explanation of how energy changes from one form to another. ELPS: 3H."

- 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, the grade 5 lesson on "Organisms Surviving in Their Habitat," a Teacher Edition ELPS Mini-Lesson provides scaffolding for intermediate, advanced, and advanced high learners when the teacher is working with students to preview comprehension questions. Teacher Edition materials guide teachers to provide students with a word and phrase bank for students to use when responding to questions.

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

- The materials provide evidence 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 5 "Structures and Functions of Organisms" unit, there is a section for Emergent Bilingual Support that 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.
- In grade 5, TEKS 5.8 "Energy," the teachers are provided with a Support for Vocabulary section. It instructs them 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." The second helpful ELP support in that section is, "It is helpful for all students to hear and speak the vocabulary words. Review the vocabulary words starting with an 'I say'/'You say' routine. Go through the list two or three times until everyone can say them."
- Materials include textbooks or audio/video clips that explain concepts in languages other than English. All materials for 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.
- Materials consistently encourage strategic use of students' first language as a means to linguistic, affective, cognitive, and academic development in English. For example, in the grade 5 Teacher's Guide, in the lesson "Effects of Forces on Objects" in the Emergent Bilinguals Support section, 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."

HMH Into Science Texas Grade 5

Indicator 7.4

Materials provide guidance on fostering connections between home and school.

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

Meets| Score 2/2

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

Materials provide information to be shared with students and caregivers about the design of the program. Materials provide information to be shared with caregivers for how they can help reinforce student learning and development. Materials include information to guide teacher 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, the materials include the grade 5 Pacing Guide that explains the recurring themes and concepts to connect learning throughout the program.
- The materials provide information to share with students and caregivers about the design of the program. An example of this includes the Family Room, a digital online component that families can access to get a general overview of the program and tips on how to navigate the Ed program.
- The materials consistently provide information to be shared with caregivers about the design of the program. For example, the Teacher's Corner under Program Support the teachers are provided with "Step Inside the Family Room." It contains a video that outlines the ways 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. For example, in grades 3-5, teacher resource materials, Teacher's Corner Tab, include translations of resources into multiple languages, or at a minimum, easily accessed in a format that can be translated (e.g., Word document).

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

- There is evidence that the materials provide resources and strategies for caregivers to help reinforce learning and development. Examples include the "Engineering Design Take Home Letter" or other Take Home Letter templates. In these letters, teachers can share information such as at-home activities and other helpful resources such as downloadable PDFs of the lessons, digital lessons, and FUNdamental Readers students can use to help them supplement their learning of that particular unit.
- The materials consistently provide information to be shared with caregivers to help reinforce student learning and development for all grade levels. For example, in the Teacher's Corner, there is a Breakroom section that provides teacher tips, reflections, and more. In this example, there is a post about "3 At-Home Activities to Build Math-Positive Mindsets," which guides teachers to "Share these three proven, fun, and hands-on activities with your K-5 students' families. Each of them encourages building a math-positive mindset at home." This is important to support math skills as they are continuously used in science.
- 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, virtual classroom schedule. materials include access to 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 resources and strategies for caregivers to help reinforce student learning and development. For example, the materials in the grade 5 Teacher's Corner section of the landing page include letters to families explaining the objectives of the program. The materials state, "Home Letters are one of the resources on your Discover page. There's a set of letters for each grade, with details about the learning going on in class and age-appropriate suggestions that families can use to learn more about science and support their child."

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. For example, in grade 4, a report has guide bands, such as "Scientific and engineering practices. The students ask questions, identify problems, and plan and safely conduct classroom, laboratory, and field investigations to answer questions, explain phenomena, or design solutions using appropriate tools and models."
- Materials include teacher guidance for communicating with caregivers. Materials include templates for sharing updates on student progress toward benchmark goals for science knowledge and skills and recommendations for sending updates at certain intervals. For example, grades 3-5, Teacher Edition, Reports tab, includes assessment reports and standards reports. These standards-based reports can be sent home after a unit or benchmark assessments to an individual student's caregiver. Reports show mastery percent for Science and Engineering Practices (SEP), Recurring Themes and Concepts (RTC), and content standards.
- Materials include teacher guidance for communicating with caregivers. For example, in the grade 5 Discover section of the landing page, the materials include letters to families providing

the objectives of the unit in a family-friendly format for parents so they can guide students at home. The letter for matter and energy states, "What We're Doing: ...By the end, your child will be able to compare and contrast matter based on observable properties; demonstrate and explain some mixtures maintain physical properties of their substances and compare the properties of substances before and after they are combined; illustrate how matter is made up of particles that are too small to be seen."

- Materials include information to guide teacher communications with caregivers. An example of this is the Reports section in the Ed online program. Teachers can access assessment reports by students by the assessment that include information they can share with caregivers, such as how well they performed overall on each item and what concepts/standards each item covered.

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Indicator 8.1

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

1	Materials are accompanied by a TEKS-aligned scope and sequence outlining the order in which knowledge and skills are taught and built in the course materials.	M
2	Materials provide clear teacher guidance for facilitating student-made connections across core concepts, scientific and engineering practices, and recurring themes and concepts.	M
3	Materials provide review and practice of knowledge and skills spiraled throughout the year to support mastery and retention.	M

Meets | Score 2/2

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

Materials are accompanied by a TEKS-aligned scope and sequence outlining the order in which knowledge and skills are taught and built in the course materials. Materials provide clear teacher guidance for facilitating student-made connections across core concepts, scientific and engineering practices, and recurring themes and concepts. Materials provide review and practice of knowledge and skills spiraled throughout the year to support mastery and retention.

Evidence includes but is not limited to:

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

- The materials include a cohesive scope and sequence that shows how the science knowledge and skills TEKS are addressed over the course of the entire year. In the grade 5 “Teacher’s Guide,” the materials include a year-long scope and sequence for instruction. The scope and sequence shows clear alignment to the TEKS and identifies them.
- The materials show the vertical alignment per theme of the essential knowledge and skills taught in the program throughout the school year. For example, the materials include a chart organized by theme; it explains how the units align throughout different grade levels and to the TEKS.
- The materials contain a TEKS-aligned pacing guide that outlines units, lessons, review activities, investigations, and assessments for the year. It also notes where the RTCs and SEPs are integrated.
- The Table of Contents contains a TEKS-aligned scope and sequence that outlines the order in which knowledge and skills are taught. It showcases the flow of knowledge and skills and gives a clear breakdown to help guide the teacher.

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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. For example, the materials include a science progression in the module titled "Supporting Materials: Grade 5," which illustrates how activities align to core concepts, SEPs, and the RTCs across lessons.
- The materials provide teacher guidance to help students make connections between units over the course of the year. For example, the materials contain two different year-long plans. The "TEKS Correlations" module displays the progression of skill development by listing the TEKS and units/lessons in which the TEKS are addressed. In addition, the "Student Edition Module" includes notes for students and teachers to make connections in the section "Recurring Themes and Concepts."
- The Teacher's Guide provides clear teacher guidance that helps make connections across core concepts, scientific and engineering practices, and recurring themes and concepts. For example, in the grade 3 lesson on "Properties of Matter: Measuring Mass," there is a section noting how the SEPs and RTCs connect with these concepts.
- The hands-on activities found in the "Interactive Lessons" and in the "Student Guide" 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. The grade 5 lessons also follow the engineering design process.
- The materials provide teacher clarity in understanding how activities and experiences connect concepts and SEPs. The materials include a lesson planning page that shows how activities align to core concepts, the SEPs, and RTCs across lessons.

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

- 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 grade 5 Teacher's Guide, in the section titled "Recurring Themes and Concepts," the materials provide a note for teachers about the concept and associated TEKS that connect with the lesson objective.
- The materials provide practice opportunities that build on previously taught science knowledge and skills. For example, a grade 5 lesson includes an activity for students to apply the vocabulary learned on Days 1-5 after reviewing concepts about "People in Engineering."
- 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 up across the disciplines of science and between grades. For example, the "Behavioral Traits of Organisms" lesson in the "Life Processes of Organisms" unit prompts teachers to activate students' knowledge from prior grades on differentiating between inherited and acquired traits.
- The materials include intentional practice and spiraling of previously taught knowledge and skills from earlier grade levels and the current lesson's science knowledge and skills. For example, in the "Interactive Student Lesson" on "Forces and Patterns of Motion," Day 1, in the section

"What Do You Already Know?" students revisit what they know about motion and how energy transfers by looking at some cards with visuals.

- 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. In the section titled "Recurring Themes and Concepts (RTC)," the materials provide a note for teachers about the concept and the associated TEKS that connect with the lesson objective. For example, in "Modeling Matter Moving within an Ecosystem," Part 1 focuses on RTC 5.5E (investigate how energy flows and matter cycles through systems).

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Indicator 8.2

Materials include classroom implementation support for teachers and administrators.

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

Meets | Score 2/2

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

Materials provide teacher guidance and recommendations for 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.

- The materials have a “Walkthrough Guide, Grades K-5” to support teachers in the first steps of using the materials. This guide includes a list of the included materials, recommendations for navigating through the online features and learning platform, as well as tips to prepare for instruction.
- Modules are organized in a way that facilitates ease of implementation and use, including the assessing and storing of materials. Grade 4 includes teacher resource materials explaining each week, including a “Lesson at a Glance,” which provides a comprehensive materials list for preparation, resources to support instruction, and a lesson map.

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

- Teacher videos on cross-curricular connections are in the “Teacher’s Corner” “Program Support” section. The video showcases how the science materials embed math and ELA throughout the resource.
- The materials include cross-content standards for ELA and math, providing connections within the lesson materials in the Teacher’s Guide.
- The materials include science standards correlations for lessons units, lessons, and activities within the context of the grade level or course in teacher guidance documents and online resources. The science standards correlations are located in each lesson within the units.

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

- The materials include 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. For grades 3-5, materials include hand lenses, metric rulers, Celsius thermometers, graduated cylinders, beakers, digital scales, hot plates, meter sticks, magnets, notebooks, timing devices, models, and habitats such as terrariums, computers, tablets, and cameras. The Teacher’s Guide, under “Lesson Planning” “Planning for Hands-On Activities,” includes materials needed for unit labs.

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

- The Teacher’s Guide contains a safety overview and a guide to assist teachers with safety in the science classroom and lab. It includes the purpose of safety in science, what the risks are, and how to avoid risks. There is also a guide on safety with chemicals and personal protective equipment (PPE).
- There is evidence of safety reminders and tips at the beginning of each lesson in the Teacher’s Guide.
- There is evidence of safety reminders for students at the beginning of each hands-on investigation in the student-facing materials.

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Indicator 8.3

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- Evidence shows that the materials within each lesson and unit include appropriate pacing suggestions for the grade level. For example, the units or lessons allow for depth and focus. The materials contain suggestions and guidance for time considerations to support students in spending sustained time developing content and skills in grade-appropriate areas. Materials embed differentiation, acceleration, and extension options within units and lessons, allowing students to learn at an accelerated pace (e.g., in the section “Emergent Bilingual Support” in the “Planning for Differentiation” section of each lesson).
- The materials support specific scheduling considerations in the “Pacing Guide,” with guidance for covering required science content for the grade level/course within various schedules. The examples listed in the “Pacing Guide” include three different paths: “TEKS Streamlined,” “TEKS Emergent,” and “TEKS Extended.” Each path gives suggested days/minutes for science instruction.
- There is a guide for days and minutes allotted for each unit and lesson for each TEKS. The “Lesson at a Glance” suggests the number of days to spend on a unit and the number of minutes per day to spend on a lesson.
- The materials include guidance and recommendations on the required time for lessons and activities, with options for various scheduling considerations. In grade 5, materials include the “Lesson at a Glance.” For example, the “Lesson at a Glance” for 5.12A contains guidance for the amount of time needed for the lesson pieces, considering the number of days and minutes per day of science instruction.

- Materials embed acceleration and extension options within units and lessons, allowing students to learn at an accelerated pace. In grade 5, Lesson 5.7A contains extension lessons for all levels of learners.

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.
- The materials include units, lessons, and activities for a full year of instruction. This includes 152 days of instruction for the streamlined path, 171 days for the bilingual path, and 178 days for the extended path. The recommended pacing for grade 4 also includes eight days for summative assessments.
- Each unit can be reasonably implemented within the time constraints of a school year. The activities and routines within each lesson can reasonably be completed within the time suggested for the 152 30-minute days for streamlined paths.
- The materials provide guidance for adjusting to scheduling constraints and differentiation. Multiple pathways are provided for teachers to take in a variety of situations, including extension or differentiation for emergent bilingual classrooms.

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

- The materials include units, lessons, and activities for a full year of instruction. For example, materials outline a full year's worth of instruction. This includes 152 days of instruction for the streamlined path, 171 days for the bilingual path, and 178 days for the extended path.
- The materials include units, lessons, and activities for a full year of instruction. For example, the grade 5 "Pacing Guide" and yearly plans include lessons and activities for a full year of instruction. The units can be reasonably implemented within the time constraints of a school year, and the activities and routines within each lesson can reasonably be completed within the time suggested for the 152 30-minute days for streamlined paths.
- The materials provide guidance for adjusting to scheduling constraints and differentiation. For example, teachers can take different pathways if they would like to extend or differentiate emergent bilingual classrooms.
- The materials include units, lessons, and activities for a full year of instruction. The scope and sequence indicates a majority of the lessons support the development of the TEKS, SEPs, and recurring themes and ideas among all areas of the grade level. The sequence outlines the lessons so that they fit within the entirety of the school year. The scope and sequence recommends three different paths to choose from, all fitting within the days and minutes of the school year.

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Indicator 9.1

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

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

Not Scored

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

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

Evidence includes but is not limited to:

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

- The materials include an appropriate amount of white space and an overall design that does not distract from student learning by providing a consistent format for students across the lessons. For example, in the grade 5 "Effects of Forces on Objects Day 1" interactive lesson, in the "I Notice" section, the materials have one instruction, a question, and a space for students to type.
- The print and digital materials include an appropriate amount of white space and an overall design that does not distract from student learning. For example, the grade 5 materials provide white space surrounding the lessons/text. There is a clear main subject or topic for each lesson, lab, and student open-ended prompts. There is enough space for students to write and respond to open-ended questions without distractions. The content is logically organized and arranged in a manner that is pleasing to the eyes and flows. There are also marking signals embedded within the materials that notify the student when to stop in the lesson or move forward. There is a minimal amount of content on a page which makes it easier to follow and read. There are visual images to support the learning but not too many visuals that make the content busy and overwhelming.
- 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 5 TEKS Lesson 5.7B, Day 3, Hands-On Activity, the students are given space and a table to answer the questions in the steps and record data.
- 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 5 "Weather and the Water Cycle" lesson, where an image is shown of a model of cloud formations that students can use to help them set up their own demonstration. The image is age-appropriate and not visually distracting.
- The page is always yellow to alert the students to the start of the next activity. The text includes a robot illustration and a photo that correlates with the section. It's informative but not distracting. Grade 5 TEKS 5.8B assesses what the students already know by using photos that show types of energy. An age-appropriate photo is included for all vocabulary words.
- The materials include age-appropriate pictures and graphics that support student learning and engagement. In the grade 5 lesson on "How Organisms Interact With Their Environments," materials include images of plants, and the plant parts are clearly labeled to interact with nonliving things in their environment.
- The grade 5 "Light Day 2" interactive lesson includes student-facing, concise, and clear steps for the Hands-on Activity.

Materials include digital components that are free of technical errors.

- Materials include digital components that are free of technical errors. An example of this is found in the grade 5 Student Interactive Edition for "Forces" 5.7A. In the Day 1 Engage section, students are able to click on a video to watch to get a better understanding of the concepts being taught in the lesson. The video is easy to click on and free of technical errors.
- Materials are free of spelling, grammar, and punctuation errors. For example, the grade 5 Teacher's Guide lesson, "Electrical Energy in Circuits," has accurate phenomenon teacher background information about electrical energy.

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Indicator 9.2

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

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

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 5 materials include digital technology and tools that enhance student learning through such features as online assessments. In the grade 5 Teacher's Guide "Light" 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."
- Students are able to use interactive flashcards to learn vocabulary for each lesson. A grade 5 interactive lesson from 5.6A, "Matter and Energy," shows 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 to 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 5, the vocabulary words are all in blue. When students click on the word, a definition appears in multiple languages.
- The grade 5 lesson on "Changes in the Ecosystem" materials include Exit Tickets for students to click on interactive pictures and use drop-down boxes to complete sentences to show their understanding of biotic and abiotic factors in an environment.

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

- The materials integrate digital technology in ways that support student engagement with the Science and Engineering Practices (SEP), Recurring Themes and Concepts (RTC), and grade-level content. A grade 5 "Matter and Energy" 5.6A lesson has students completing a hands-on investigation about how the relative density of various everyday objects compare, then students respond to their investigation by looking for patterns that address RTC 5.5A, identify and use patterns to explain scientific phenomena or to design solutions. Students are asked to sort their items from lowest mass to highest mass and look for patterns between the mass and density.
- Materials integrate digital technology in a way that supports student engagement. For example, in grade 5, the students engage in a "Solve It" where the students virtually research what cats like to scratch and then create their own scratching post and fill out a lab sheet online. They are also able to insert illustrations into their lab.
- Materials provide digital tools for students to engage with recurring themes and concepts through interactive online labs. For example, in grade 5, Student Interactive Textbook, Discovery tab, students are able to complete the "Measuring Shadows" lab online. During the lab, students are using SEP and making RTC connections to labs and data.
- In a grade 5 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 "Measuring Shadows," provide opportunities for students to execute an investigation digitally and enter their observations in 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 5 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 student 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.

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

- The materials integrate digital technology that is compatible with a variety of learning management systems. For example, 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.
- Materials include an HMH Ed: Teacher Help Accessibility support section stating 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 5 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.

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Indicator 9.3

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

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

Not Scored

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

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

Evidence includes but is not limited to:

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

- 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 5 Student Interactive Lessons are aligned to the lessons teachers follow in the grade 5 Teacher's Guide, i.e., lesson "Energy Transformation 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 5 "Force, Motion, and Energy" 5.8A 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 are developmentally appropriate for the grade level and align with the scope and approach to science knowledge and skills progression. For example, in grade 5, the students engage in a "Solve It," where they virtually research what cats like to scratch and line, create their own scratching post, and fill out a lab sheet online. They also can insert illustrations into their lab.
- 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.

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

- The materials provide teacher guidance for the use of embedded technology to support and enhance student learning. The Digital Learning Guide provides an overview of all the technology that teachers can use within the program. It includes guidance on how to manage teacher classes, view, and access assessment reports, how to navigate the dashboard, and how to access PD to help support the teacher with instruction that can enhance student learning. This Digital Learning Guide overview is available in grades 3-5.
- In grade 5, the teachers have access to the Teacher's Corner. This area has an "ever-evolving library of bite-size teaching, interactive Getting Started guides, and community Live Events." Examples of the content are "All About Ed and Canvas," "Reaching Out With Home Letters," and "Five Factors for Success with Into Science."
- Materials provide teacher guidance for using embedded technology to support and enhance student learning. 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."
- The materials provide teacher guidance for using the embedded technology to support and enhance student learning. For example, on the grade 5 digital landing page, the materials include a Walkthrough Guide that guides teachers to use the digital platform. The materials guide teachers to set up classes, create student groups, assign content, and create 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 have access to the student's assignments and grades. There is also access to the TEKS unit they are currently studying and a place for classroom support that has 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."
- Materials are available to parents and caregivers to support student engagement with digital technology and online components. The materials include resources for parents and caregivers on how to support student engagement with digital technology and online components. For example, the teacher's edition includes a Teacher's Corner tab that provides a program support section for parents to use which provides articles and videos about the class their child is taking with ideas for supporting them.
- The materials include resources for parents and caregivers on how to support student engagement with digital technology and online components. For example, on the grade 5 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 a "Getting Started" section where families can access tips and videos on how to navigate online tools to help support their child with digital and other instruction. This resource is available to grades 3-5.