#### HMH Into Science Texas Grade 1 Executive Summary

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

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

#### **Section 2. Instructional Anchor**

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

#### Section 3. Knowledge Coherence

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

#### **Section 4. Productive Struggle**

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

#### Section 5. Evidence-Based Reasoning and Communicating

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

#### **Section 6. Progress Monitoring**

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

• The assessments are clear and easy to understand.

#### Section 7. Supports for All Learners

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

#### **Section 8. Implementation Supports**

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

#### **Section 9. Design Features**

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

#### Section 10. Additional Information

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

### **Indicator 2.1**

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

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

#### Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- The materials engage students in hands-on activities with opportunities to practice and demonstrate scientific and engineering practices (SEPs). For example, in the "Find Out What is in Soil" lesson, students investigate and document the components of different types of soils, such as topsoil, clay, and sand. The "Preparation Tip" for the lesson states, "Soil samples can be made by combining different amounts of soil parts: sandy soil, clay soil, loam soil, and humus-rich soil."
- Materials include opportunities for students to design and conduct grade-appropriate experiments, collect and analyze data, and develop and test hypotheses, as shown in "Hands-On Activity, Living or Nonliving?, TEKS 1.12.A, Scientific and Engineering Practices, 1.1.F record data

using pictures and symbols, Explain and Model Content to help children be successful during this activity, use the sentence frames in the Claims, Evidence and Reasoning (CER) section."

- The materials provide multiple opportunities to develop grade-level appropriate scientific and engineering practices as outlined in the TEKS. For example, in the lesson "Pushes and Pull," students engage in a hands-on activity to plan and conduct a descriptive investigation that predicts how pushes and pulls can change the speed or direction of an object's motion
- The materials provide multiple opportunities to practice grade-level appropriate scientific and engineering practices as outlined in the TEKS. In the "Changes in Matter" lesson, students ask questions that can be answered using evidence from their hands-on activities over cooling ice and heating crayons investigation. The teacher leads a group discussion where students review and share their questions on the change. Students practice sharing their claims and evidence to support the 1.6B TEKS.
- The materials provide hands-on activities that allow students to practice and demonstrate scientific and engineering practices. For example, the "Earth Seasons" lesson begins by having students draw pictures of the seasons, and after doing so, they switch with a partner and put the cards in order of the seasons. Students discuss the patterns found with the cards and then make a claim, share reasoning, and show evidence. Students can experiment with patterns of daylight during the "Earth Seasons" lesson. Students choose a date and observe and record the sunrise and sunset times on a chart provided. After their observations, students use their data to create a bar graph, analyze the data, identify and describe the patterns found, and make predictions for the next year. Students end the lesson by making a claim and presenting their evidence.
- The materials provide multiple opportunities to develop SEPs, as seen in the "Scope and Sequence." For example, SEPs 1, 3, and 4 are found throughout the year, as seen in TEKS 1.6, 1.7, 1.8, 1.9, 1.10, 1.11, 1.12, and 1.13. The assessment items include SEPs to give students multiple opportunities to prove mastery of the SEPs throughout the year. For example, one question listed for 1.2 asks the students to analyze data in a chart to answer a question on the weather.

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

- The materials use recurring themes, such as "Matter," "Forces and Motion," "Environments," "Structures," and "Behavior," to make connections within the overarching concepts, as shown in the Table of Contents of the Teacher's Guide. For example, one "Recurring Theme and Concept" includes students identifying the external structures of different animals and comparing how those structures help different animals live, move, and meet basic survival needs, utilizing TEKS 1.5.F to describe the relationship between structure and function of the organism (TEKS 1.13.A).
- The materials identify overarching concepts using recurring themes and show how they connect within the materials. The "Living Things Use Earth Materials" lesson uses a recurring theme that asks students to identify and use patterns to describe phenomena or design solutions. This lesson uses a pattern concept to make connections between how people use plants and how animals use rock, soil, and water. Some patterns are the same, and some are different.
- The materials provide multiple opportunities to use recurring themes in making connections between and within overarching concepts. The "Force and Motion" unit utilizes cause and effect as a recurring theme throughout the lessons when students observe phenomena to help them make sense of objects in motion as well as speed and direction.

- The materials use the recurring theme of finding patterns throughout all the lessons' activities. Throughout the materials, students consider such questions as "What do you notice?" and "What are the patterns?" The "Soil" lesson has students look for patterns in how soils drain water. Students use patterns to decide which soil drains best.
- The materials identify overarching concepts using recurring themes and show how they connect with the materials. For example, materials use recurring themes, including structure and function, systems, models, and patterns, as seen in 1.6, 1.7, and 1.13, where students investigate and predict cause-and-effect relationships in science.

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 integrate SEPs through classroom and outdoor investigations for at least 80% of
  instructional time to support instruction in the science content standards. For example, a lesson
  on "Force" explains how pushes and pulls can start, stop, or change the speed or direction of an
  object's motion. The "Can You Explain It?" section of the lesson includes a "Phenomenon Video"
  and the "Guiding Question" "How do pushes and pulls cause motion?" These help develop
  students' content knowledge.
- The materials are systematically designed to develop and build student skills and content knowledge by including "Scientific and Engineering Practices" and "Recurring Themes" and concepts throughout all units and lessons. Within the "Scope and Sequence," SEPs and RTCs are listed for grades K-2 for every unit.
- The "Activate Prior Knowledge" section of each lesson provides guidance for teachers to elicit students' previous learning experiences. 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. The "Claims, Evidence, and Reasoning" section of the lesson notes makes connections between the SEPs and the development of conceptual understanding.
- The materials intertwine the content with the SEPs and RTCs to ensure students are achieving proficiency in the concepts within the content and in the context of the SEPs and RTCs.
- The materials support teachers in developing student content concepts and skills by giving them resources and cues at varying points in lessons and units. The material contains a Teacher's Guide and lesson notes that explain, describe, and make connections between the SEPs and the development of conceptual understanding. The Teacher's Guide provides guidance throughout every lesson, such as on how to activate prior knowledge, how to best lead discussions, how to support student answers, and how to encourage students to think like a scientist.

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

- The materials include opportunities for students to ask questions and plan and conduct investigations by providing regular opportunities for students to raise questions about phenomena. Within a lesson on "Heat," students design a model house to determine the effects of sunlight heat. Students ask questions about the phenomenon during discussions, which helps determine how the teacher will facilitate the process of moving an investigation forward.
- The materials provide students with multiple opportunities to engage with scientific and engineering practices multiple times and in multiple contexts with hands-on activities,

"FUNomenal Readers," "Connection to Community" activities, "Read Write and Share" activities, "I Wonder" discussions, "Phenomenon" videos, and visual aide anchor charts. These materials and activities provide students with multiple opportunities to ask questions, plan and conduct investigations to answer questions and explain phenomena using appropriate tools and models.

- The materials provide the teacher with a guiding question presented at the beginning of each lesson to encourage student discussion. The materials provide the teacher guidance on how to support students' answers. The materials allow students to create end products for engineering tasks, such as physical devices, prototypes, models, drawings, or processes.
- Each lesson includes hands-on activities that engage students in problem-solving and allow for discussions and questions about science concepts. Each lesson provides a cross-curricular opportunity. The lesson on "Weather begins" with the guiding question, "How can you describe different types of weather?" The lesson provides cross-curricular connections where students apply math skills. Students study weather patterns over two months. The students use symbols to differentiate between sunny and non-sunny days. After the study, students use math to determine which month had more clear, sunny days.

#### **Indicator 2.2**

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

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

#### Meets | Score 4/4

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

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 each discipline (earth/space, life, physical science). Students examine phenomena using science and engineering practices through the lens of recurring themes. Students develop content knowledge as they work to construct explanations of the phenomena and/or solve engineering problems. Hands-on activities and group discussions throughout the units provide opportunities for students to develop, evaluate, and revise their thinking as they figure out phenomena and solve problems.
- The lessons are structured around phenomena and direct experiences that lead students through the productive struggle necessary for sense-making. The materials use science theme organizers that scaffold student use of the recurring themes and concepts of the TEKS to support sense-making about phenomena within and across lessons.
- The materials use phenomena to create higher thinking with students as they solve problems and answer questions related to the lesson. For example, during the lesson on magnets, students have opportunities to ask questions based on observations or information from the text, phenomena, models, or investigations.

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

- The materials provide opportunities to leverage students' prior knowledge and experiences
  related to phenomena and engineering problems, ensuring that connections are made to
  previous science TEKS while allowing students to communicate their experiences outside of
  school. For example, in the "Soil" lesson, students activate prior knowledge by describing and
  classifying rocks based on properties. Students examine the different properties of soil, which is
  made of minerals from a mixture of broken-down rock.
- The materials provide guidance for teachers and students to adequately address potential areas of misunderstanding. In the "Plants Use Soil and Water" lesson, the section labeled "Exit Ticket/Formative Assessment: Provide Feedback" states that if students choose the incorrect answer, the teacher should have them explain their reasoning and dispel the misconception that seeds can not be blocked by sunlight.
- The materials allow for different entry points to the learning phenomena and/or solving problems. Students experience the phenomena through various means, such as teacher modeling, hands-on experiences, videos, recollecting data, and visuals. For example, in the lesson "All About Heat," TEKS 1.8.A, students investigate and describe applications of heat in everyday life, such as cooking food or using a clothes dryer. The teacher materials for Day 1, "Engage to Activate Prior Knowledge," establishes that in an earlier lesson, children learned that heat can be used to change an object's physical properties when they explored heating and melting an ice pop and a crayon.

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

- The "Engage," Day 1, "What Do You Already Know?" section of the materials outlines the overarching learning goals for each phenomenon or engineering problem addressed. The section provides a causal explanation of the phenomena or engineering problem by activating prior knowledge and having students discuss the lesson.
- The materials outline for the teacher the scientific concepts and goals behind each phenomenon and engineering problem. For example, the "Earth and Space" unit introduces the phenomenon that erosion is any natural process that removes soil, rock, or dissolved material from one location on Earth's surface and moves it to another. Throughout the lessons, students model erosion and explain their observations. Students use the data they collect to explain observable characteristics of water causing erosion.
- The materials provide outlines for the teacher based on the scientific concepts and goals related to the phenomena and engineering problem. For example, the lesson on heat provides the teacher with the phenomenon that heat is a source of energy that increases a source's temperature. Students conduct investigations pertaining to the phenomena to collect evidence to support the goal.
- Each lesson in the materials includes a lesson objective describing what students will learn based on the phenomena presented and engineering problems. For example, the objective for the lesson "Structures and Behaviors of Living Things" states that students will be able to identify the external structures of different animals and compare how those structures help different animals live, move, and meet basic needs for survival. The lesson provides the teacher with the phenomena that support the lesson objective as well.

### **Indicator 3.1**

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

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

#### Meets | Score 6/6

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

The 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 across grade levels. The materials include the section "Recurring Themes and Concepts" in the Teacher's Guide, which addresses what lessons are covered in the unit and explains how it connects to previous and future learning goals. For example, in the kindergarten lesson "Plants and Animals TEKS K.13," students learn to identify the structures of plants and animals. The grade 1 lesson "Structures and Behaviors of Living Things TEKS 1.13" connects and extends the kindergarten lesson by having students identify the external structures of animals and compare those structures. In the grade 2 lesson "Structures and Behaviors of Living Things TEKS 2.13," students identify the parts of plants and compare how those structures help different plants meet their survival needs.
- The materials connect new learning to previous and future learning across grade levels. For example, in the "TEKS 2.13 Structures and Behaviors of Living Things" lesson, materials include an overview that explains how students have engaged with life science concepts in grades K-1. In grades K-1, students identify the structures of plants, including roots, stems, leaves, flowers, and fruits. Then, in grade 2, students' awareness must be supported by knowledge of how the parts of plants help them survive.
- The materials are vertically aligned and designed for students to build and connect their knowledge and skills across grade levels. For example, in grade 1 lessons on "Forces, Motion,

and Energy," students learn about pushes and pulls. They scaffold what they learned in kindergarten about how magnets can push and pull objects to understand how pushes and pulls are forces that can cause a change in motion. Then in grade 2, students transfer these concepts to expand their knowledge in a lesson on how force and motion can change not only the position of an object but also its shape as objects collide.

- The materials present content in a way that builds in complexity within and across units. For example, the materials are aligned and designed for students to build and connect their knowledge and skills across units. For example, in the "1.10A" lesson on "Soil," students apply their knowledge of the matter to identify and describe soil by its physical properties (size, color, shape, texture) and how these properties can help identify purposes of different types of soil, such as for gardening, based on drainage. Then, in a later lesson on "Erosion," students learn how water can move soil and rocks.
- The materials provide unit objectives for each unit and student learning objectives for each lesson. The Teacher's Guide provides daily "Objectives" or "Learning Targets" for students. For example, in a grade K lesson, "K.13A Plant Parts," the Day 2 Learning Objective is "Children will observe a plant and identify its leaves, stems, roots, and flowers." The Day 3 objective is "Children will identify the function of plant leaves, stems, roots, and flowers." The objectives within the lesson progress in depth and complexity to ensure students continue to build on their knowledge of plant parts. For example, on Day 1, "What Do You Already Know: Activate Prior Knowledge" states that students learned in a previous lesson how plants need nutrients, sunlight, air, and water to grow.

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

- The materials include a progression of concrete to representational before abstract reasoning
  when presenting concepts. For example, in a grade 1 lesson on "Erosion," the guiding question is
  "How can rocks and soil move from one place to another?" Students begin the lesson by
  activating their prior knowledge about rocks and soil and then create a model of erosion while
  creating concrete experiences of seeing how rocks and soil could be moved. Then, they analyze
  images of a canyon to gain a deeper understanding of how erosion changes land. Finally,
  students answer the guiding question using claims, evidence, and reasoning.
- The materials sequence instruction in a way that activates or builds prior knowledge before explicit teaching occurs that allows for increasingly deeper conceptual understanding. The materials utilize visual aids and hands-on learning experiences as scaffolds to build an understanding of abstract concepts. In the "Conserve Water" lesson, students make a poster with pictures and words to describe ways to conserve water. Students discuss their posters with a partner and post them in the hallways to share ideas with other children.
- The materials also utilize a lesson flow in which students explore concepts before learning about them. In the "Living vs. Nonliving" lesson, students collect data and classify items as living or nonliving. Students use their prior experiences and data gathered in the exploration phase to formulate scientific ideas during this phase of the lesson. Materials then direct teachers to introduce students to what living things need to survive.
- The materials ensure students experience a phenomenon or problem before utilizing models as a tool for reasoning. Materials give students opportunities to use models to depict relationships and form explanations. For example, in the "Forces" lesson "TEKS 1.7.A-B," students explain how pushes and pulls can start, stop, or change the speed or direction of an object's motion and plan and conduct a descriptive investigation that predicts how pushes and pulls can start, stop,

or change the speed or direction of an object's motion. Students use materials to explore pushes and pulls by developing a plan to help them learn about objects' movement. Then, students use the "Cause and Effect Science Themes Organizer" to help understand the cause-and-effect relationship between pushes and pulls. Children work as scientists by making a plan, making predictions, and discovering whether or not their predictions are correct.

• The materials sequence instruction in a way that activates or builds prior knowledge before explicit teaching occurs that allows for increasingly deeper conceptual understanding. For example, materials ensure students experience a phenomenon or problem before utilizing models as a tool for reasoning. In "Unit TEKS 1.12," students classify living and non-living things. Students draw living and nonliving things observed outside the classroom. In groups, students record their observations on the "Patterns Science Theme Graphic Organizer." After recording their observations, students return to their classroom and discuss the patterns they noticed with their partners.

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

- Materials use the "5E (Engage, Explore, Explain, Elaborate, Evaluate)" instructional model for sequencing science instruction. During the "Engage" phase, materials provide a "What Do You Already Know?" section to activate prior knowledge and group discussion. The "Vocabulary" section indicates key vocabulary for the lesson. The "Can You Explain It?" section has a video and a guiding question. And the "I wonder" section provides an opportunity to elicit children's questions, record them, and explain to them that questions will be answered as they move through the lesson. During the "Explore" phase, students conduct two or three days of hands-on activities to explore, experiment, gather data, and discuss observations. In the following "Elaborate" phase, students connect the previous three phases to test their new knowledge and vocabulary of the lesson, answering the guiding question of the section, "Can You Explain It?" During the "Evaluate" phase, materials allow teachers to evaluate children's proficiency across the curriculum and provide resource tips.
- The materials provide teachers with a clear lesson map, structured as 5 to 6 days, 30 minutes per day, that leads students to learn via science instruction. Within this map are important course-specific concepts and recurring SEPs. The materials also include a "Planning for Differentiation" section with resources like "FUNomenal Readers" and "Emergent Bilinguals Support Strategy." The materials include student-driven conceptual learning strategies, concrete mathematical applications, and hands-on practice.
- The materials clearly present grade-specific core concepts, recurring themes and concepts, and science and engineering practices. The grade 1 materials use the 5E (Engage, Explore, Explain, Elaborate, Evaluate) instructional model for sequencing science instruction. In the "Animal Parts Lesson," the teacher engages students by asking, "How do some body parts help animals?" The students explore animal parts and compare how they pick up food. Students create a "Nature Notebook," explaining how animal body parts help them eat and move. The teacher elaborates by leading a group discussion on how giraffes and elephants get food. The lesson ends with a quiz to evaluate learning.
- The materials accurately present current scientific content that reflects the most current and widely accepted explanations. The "Changes in Matter" lesson introduces students to how materials change by heating or cooling. The lesson includes accurate information on how cooling and heating do not cause the same changes in all objects.

• The materials accurately provide instruction in grade-specific core concepts, RTCs, and SEPs. For example, materials use the 5E instructional model for sequencing science instruction. In a grade 1 lesson, students Engage in a lesson on changes caused by heating and cooling by first scaffolding prior knowledge of changes caused in the properties of objects. The lesson moves into two hands-on Explore/Explain activities to help students develop the concept that materials can be changed by cooling and heating. The Elaborate phase incorporates Evangelina Villegas, a chemist, and her experiments with corn, allowing students to make connections between their explorations and an understanding of the impact the scientist has had on our world. The lesson is then concluded with the Evaluate phase, where students prove their concept mastery through a review and quiz.

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

- The materials include specific learning targets for each grade level. The materials provide a scope and sequence document that outlines when learning targets are introduced, developed, and mastered within the program. The materials are written so that the TEKS is found at the beginning of each unit; the learning goal and objective are stated throughout.
- The materials include specific learning targets for each grade level that are within the boundaries of the main concepts of the grade level. Unit objectives are provided for each unit; student learning objectives are provided for each lesson. The "Heat" unit is labeled with "TEKS 1.8A" with a description. The "All About Heat" lesson starts with the lesson objective that "children will be able to investigate and describe applications of heat in everyday life."
- The materials provide unit objectives for each unit and student learning objectives for each lesson. The Teacher's Guide provides daily "Objectives" or "Learning Targets" for students. For example, in the grade 1 lesson "1.13C," the Day 2 Learning Objective is "Children will be able to observe how animal parents and their young are alike." The Day 3 objective is "Children will be able to match animals of the same kind and describe how animals of the same kind can be alike and different."

#### **Indicator 3.2**

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

	Materials support teachers in understanding the horizontal and vertical alignment guiding	Μ
1	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	Μ
2	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.	М
3		

#### Meets | Score 6/6

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

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

Evidence includes but is not limited to:

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

- The materials include guiding documents that support teachers in understanding how new learning connects to previous and future learning across grade levels. The grade K-2 materials contain a scope and sequence that supports teachers in understanding how new learning in a "Matter" unit connects to previous learning about physical science, earth and space science, and life science. For example, in grades K-2, students identify "Objects and Patterns in the Sky," "Patterns on Earth," and "Objects in The Sky," as shown in the Table of Contents of each Teacher's Guide K-2.
- The teacher materials include guiding documents that explain how content and concepts increase in depth and complexity across lessons and units within the grade level. The "Patterns on Earth" teacher materials guide teachers to understand that students will begin learning about the four seasons, then progress to the patterns of these seasons. The materials explain that lesson complexity will increase as students learn the patterns of daylight and how these patterns change with each season.

- The materials include guiding documents that support teachers in understanding how new learning connects to previous and future learning across grade levels. The materials support teachers in understanding how new learning in "1.13A Animals and their Parents," connects to prior knowledge from grade K in "K.13B Animal Parts." In the section "Activate Prior Knowledge" for "1.13A," the materials explain, "In the previous grade, children learned that animals have structures that help them see, hear, move, and grasp objects."
- The teacher materials explain how content and concepts increase in depth and complexity across lessons and units within the grade level. For example, in lesson "1.8A All About Heat," the Teacher's Guide explains to teachers under "Activate Prior Knowledge" that students previously learned that heat can cause changes to the physical properties of objects when exploring heating and melting. In "1.8B Heat Causes Changes," the Activate Prior Knowledge section explains to the teacher, "In the previous lesson, children learned about the everyday uses of heat including for cooking food and drying clothes." The guide further explains the connection to previous lessons under "Can You Explain It? Elicit Children's Thinking" by stating: "Children should have grown in their depth of knowledge about how heat causes different kinds of changes."

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 include background information for teachers that provides explanations and examples of science concepts. For example, in a grades K-2 "Matter" unit, students conduct descriptive investigations to explain how physical properties can be changed. Materials provide teachers with the "Science Themes Organizer" for grades K-2 on "Properties of Matter"; content support also provides context for the investigation and identifies key concepts using academic language. The goal of this organizer is to have children observe and identify the properties of matter. This Recurring Theme and Concept (RTC) is important because it scaffolds children's understanding of the conservation of matter and energy.
- The materials identify common grade-level misconceptions students may have about science concepts. For example, the teacher materials for the "TEKS 1.10.D" unit on "Weather" include an "Extra Support" section under "Differentiation" that suggests that if children need extra support understanding the difference between wind direction and wind speed, teachers should provide wind words such as *north, south, east, west, wind speed, calm, fierce, strong*. There is no evidence of identification of common misconceptions students may have about weather.
- The materials include background information for teachers that provides explanations and examples of science concepts. For example, the grade 1 materials include background information for teachers that provides explanations and examples of science concepts. In the "Water on Earth" lesson, the "Teacher Background" section states 71 percent of Earth is covered with water, and the ocean holds 96.5 percent of that water. This section names the Earth's oceans and defines different types of water.
- The materials identify common grade-level misconceptions students may have about science concepts. The "Living or Non-living" lesson identifies a misconception: students may assume that because a skunk is pictured without its young, this might mean a skunk does not have/make young.
- The materials provide a section titled "Lesson Wrap Up," which provides the teacher with strategies to help students struggling with the guiding question and lesson. The materials provide a differentiation option for teachers to further explain the concepts to students who are

struggling or are below grade level. For example, the lesson on "Living Things and Environments," Day 2, provides differentiated instruction for teachers. It offers guidance for the teacher to have students conduct research to learn more about one of the living things they observed. The materials state the teacher should work with students in small groups to come up with a list of questions they could ask.

- The materials include background information for teachers that provides explanations and examples of science concepts. Materials provide background knowledge to help students gain an understanding of the concept(s) being taught. For example, in a grade 1 lesson ("1.11A"), "Teacher Background Knowledge" states: "People use natural resources to meet both their needs and wants. Earth materials can be used in both their natural state or can be changed by people to make new things."
- The materials provide possible student misconceptions about the grade-level concept. For example, in lesson "1.11B," under "Differentiation: Extra Support," the materials state: "If children have difficulty understanding how plants use soil, use a pencil to model how easy it is to remove the seed that did not receive water." (NOTE: not every lesson includes misconceptions).

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

- The materials provide a purpose or rationale for the instructional design of the program. Materials provide an explanation for why materials are designed the way they are. Materials highlight key features of the instructional design. For example, materials provide a rationale for using the "5E" model for learning. As explained in the Teacher's Guide, teachers wanted lessons to have a clear structure, and thus the materials follow the 5E structure for each lesson ("Engage, Explore/Explain, Elaborate, Evaluate"). Materials are also built for students; lessons are structured around phenomena and direct experiences that lead students through the productive struggle necessary for sense-making. A "Claim-Evidence-Reasoning (CER)" approach allows students to take ownership of each learning experience and build those experiences into scientific explanations that become progressively more refined.
- The grade 1 materials provide a Teacher's Guide that thoroughly describes the program's instructional approaches and references the researched-based strategies present in each unit. Specific supports for each unit can be found in the "Unit Overview" for each unit.
- The materials provide a "How To Use This Program" portion in the Teacher's Guide. This section details the components of the program and explains how goals are met through the program. The materials provide an explanation of the background, TEKS, structure, extensions, assessments, and extra resources.
- "How To Use This Program" provides an explanation of the use of the 5E structure and the TEKSbased organization. The materials detail the planning tools available for teachers, such as English Language Proficiency options, hands-on activities, digital student interactive lessons, and formal assessments. The materials provide explanations on additional supports such as language development worksheets and vocabulary anchor charts, writing graphic organizers, science theme organizers, and materials kits.
- The materials include a "K-5 Orientation Video" that explains the design and how to utilize the program materials.
- The materials provide a "Program Overview" that outlines the intent and rationale for the materials. For example, the materials state what is included, how it is designed for Texas, the planning tools designed for the 21st century, how they are built with students in mind (student-centered with hands-on activities), and how they are built for the teacher (provide guidance and background information, "Lesson Overview," "Scope and Sequence," and "Pacing Guide").

#### **Indicator 4.1**

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

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

#### Meets | Score 4/4

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

The 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, the "Patterns Science Theme Organizer" scaffolds students' use of the Recurring Themes and Concepts of the TEKS to support sensemaking within and across "Earth and Space" lessons.
- The lesson on "Heat" includes the guiding question "What are some ways people use heat?" and an image of a pan with vegetables cooking on the stove. Students participate in a hands-on exploration activity where they act like scientists and engineers while designing a house heated by sunlight. On Day 4, the students read a short passage, "Heat is all around," and respond to a "Read, Write, Share" prompt: "What do you know about hot and cold things? Choose pictures that show something hot."

- The Day 3 lesson on "Patterns on Earth" provides an explanation of sense-making. The materials explain that students will understand that the number of daylight hours changes with the seasons and forms a predictable annual pattern. Students participate in a "Model and Explain" activity where they use the information they collect to make a bar graph. The teacher reviews the features of a bar graph as needed. The teacher can model a simple claim about the pattern made by the order of the seasons, support it with evidence, and explain how the evidence supports the claim. Students create a five-by-five chart to record information about the date, season, sunrise times, sunset times, and number of hours of daylight. Students calculate the number of hours of daylight for each date in their chart.
- The Day 2 lesson on "Earth's Surface" states that students will understand that the bodies of water on Earth's surface have properties and features that make them alike and different. Students explore images of various bodies of water to observe properties and features. The "Model and Explain Content" section of the teacher materials supports the teacher in previewing the names of the bodies of water covered in the activity. The teacher lists the terms *puddle, pond, lake, stream, river,* and *ocean*. The teacher encourages volunteers to choose one word and discuss what they know about it or tell a story about a time they visited and experienced it.

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 "FUNomenal Readers," which are listed as point-of-use extension
  resources that provide opportunities for students to engage with fiction and nonfiction texts to
  explore sensemaking with science concepts. The materials provide three leveled versions of the
  readers to support differentiation for students and teacher guidance on incorporating and
  utilizing the readers with graphic organizers and vocabulary activities. For example, the
  "Patterns of Daylight" lesson uses the "FUNomenal Reader: Sunrise, Sunset, and Seasons" to
  engage students in seasonal changes. Additionally, the "Structures and Behaviors of Living
  Things" lesson uses the FUNomenal Reader "Puppy Parents" to reteach, reinforce, and
  supplement the exploration of objects in the sky through nonfiction text.
- The materials support pre-reading with visual vocabulary slides on Day 1 of all TEKS lessons. For example, in the "TEKS K.8.A" lesson, students investigate and describe heat applications in everyday life. On Day 1, in the section "What Do You Already Know?" students watch a video about how people use heat. On Days 2 and 3, students build a model of a house that is heated by the sunlight; they place a thermometer in and on the house, record the temperature of the house inside and outside, and then compare and discuss the results. On Day 4, in the section "Read, Write, Share," students think about how heat changes objects, then look at pictures of a snow structure and turn and talk about what caused the snow fort to change.

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 "Writing Graphic Organizers" and "Science Themes Organizers." The Writing Graphic Organizer helps students understand how to start the writing process, manage information effectively, communicate scientific findings clearly, and express new understanding in an accessible format. The Science Themes Organizers scaffold the student use of Recurring

Themes and Concepts of the TEKS to support sensemaking about phenomena within and across lessons. For example, the "Energy Science Theme Organizer" introduces students to the recurring theme of energy. Students use the energy graphic organizer in the "Make a Model of a Food Chain" lesson to make sense of the phenomenon that energy moves from one living thing to another when one living thing eats the other within a food chain.

- 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. For example, in the lesson "TEKS 1.13.A," students learn about human teeth and make a tally chart. Students then compare their ears to animal ears and record their answers. Using interactive slides, students explore, practice, and label animal parts and their functions. On Day 2 of "Explore/Explain" during the lesson "Weather," students are instructed to use the "Bar Graph TEKS 1.9 F Organizer" to record their temperature data. Students discuss what each bar shows and how to label the bars on their graph. In the lesson on "Weather," students measure temperature. The materials provide a "Patterns Science Theme Organizer" and a worksheet for students to document and observe patterns that occur with the weather. Then they record weather observations using symbols, pictures, and numbers.
- The materials provide opportunities for students to communicate thinking on scientific concepts in written modes. In the "Food Chain" lesson, under the "Read, Write, Share" section, students research an animal of their choosing and write facts about what it eats and where it lives. Students then share their writing with the class.
- The materials provide opportunities for students to communicate thinking about scientific concepts in graphic modes. During the "Elaborate" portion of lesson "TEKS 1.7.A-B," students watch a video about Katherine Johnson and how she worked to help a spacecraft land on the moon. Then, they draw a picture to explain other ways science helps people and share their ideas with a partner. In the lesson "Plants Need Soil 1.12B," Day 5, in the "Read, Write, Share" section, the teacher models and explains the writing task by identifying one way that animals use Earth's materials. Students then write about other animals drinking water and draw and label a picture of the animal drinking or using water.

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

- The materials support students as scientists and engineers as they develop their understanding of the concepts and phenomena through productive struggle. For example, in a lesson on "Water 1.10C," materials guide teachers to explain how scientists sometimes gather information from different sources, such as experts in the field. The students explore the saltiness of water through images. Because they cannot confirm the level of saltiness, the guidance suggests that teachers ask students familiar with a body of water and use their experiences as a source of scientific data. Additionally, in the "Design a House" lesson, students design and build a model of a house that is heated by sunlight and understand that building a model can help them develop a problem and solution. Students record their ideas and solutions and discuss similarities and differences.
- The materials create transfer opportunities for students to take what they have learned and use it flexibly in new situations. For example, after investigating how pushes and pulls can start the motion of an object, students plan and conduct an investigation that predicts how pushes and pulls can change the speed or direction of an object's motion. Students use a tennis ball, straws, and cardboard tubes to create a curved track. Students record the ball's motion, speed, and

direction on the track. This activity reinforces the concept that pushes and pulls can change speed and direction.

- The materials provide a program that allows "Student Scientists" to take ownership of their learning through activity-based learning. The materials provide "Hands-On Activities" followed by reflection and student discourse that drives each exploration as student scientists make and revise claims supported by evidence-based reasoning. The materials provide embedded "Student as Scientists" features that provide asset-minded strategies for addressing past STEM learning trauma and fostering student academic identity.
- The lesson on "Matter" provides a section titled "Claims, Evidence, and Reasoning," which explains "Children as Scientists." The materials instruct the teacher to tell students that scientists should gather evidence and analyze it or think carefully about it to determine what it means or shows. The students turn to their partners and discuss how they gathered and analyzed evidence as scientists while they completed the activity.
- Materials prioritize students making evidence-based claims to construct explanations of how and why the phenomena or problem occurs. For example, in the lesson on how "Living Things Use Earth Materials 1.11A," the materials guide students in sensemaking through an "Explore" activity; students explore how people use water while working with a partner. Students observe animals to discover their needs and connect their experiences to the "Guiding Question": "How do living things use Earth Materials?" The students then use "Claim Evidence Reasoning" while claiming how people use water and supporting their claim with evidence.

### **Indicator 5.1**

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

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

#### Meets | Score 4/4

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

The 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 prompt students to use evidence when supporting their hypotheses and claims. For example, in lesson "TEKS 1.10.A," after the investigations, the materials provide students with the following sentence starters in the "Claims, Evidence, and Reasoning" section: "My claim is... The... of soil is used to... My evidence is... My reasoning is... The evidence connects with the claim because...." Materials direct teachers to prompt students to use evidence from the investigation to explain the properties of materials that make up soil.
- The materials provide opportunities for students to develop how to use evidence to support their hypotheses and claims. In the "Heat it Up" lesson, students use the "Properties of Matter Science Theme" graphic organizer to support their claims on changes in materials by heating.
- The materials prompt students to use evidence when supporting their hypotheses and claims. For example, in the "Claims, Evidence, and Reasoning" section of the "Parts of a System" lesson, students make a claim and support it with evidence and reasoning. Students use the following sentence frames: "My claim is that a pen..., My evidence is..., and My evidence shows that...." Students make a claim about how a pen that clicks works, support their claim with evidence, and talk with a partner about their reasoning.

• The materials provide opportunities for students to develop how to use evidence to support their claims. For example, in the "Conserve Water" lesson, the materials guide students to revisit the "Guiding Question" from the beginning of the lesson and apply what they have experienced through the exploration to answer: "Why is it important to conserve water?"

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

- The materials include opportunities to develop and use vocabulary after having a concrete or firsthand experience in which students can contextualize new terms. For example, in lesson "TEKS 1.7.A," students explain how pushes and pulls can start, stop, or change the speed or direction of an object's motion. Over a four-day period, students view a video clip and interactive photos about things that move and words related to them, such as *motion*, *speed*, and *direction*. Students predict how a block will move when pushed or pulled. Then, they record a claim supported with evidence and reasoning. Students build a track and push and pull a ball through the track, making it change speed and direction. They then record a claim supported with evidence is I was able to push and pull the ball to make it change speed and direction."
- The materials present scientific vocabulary using multiple representations; for example, material in lesson "TEKS 1.12.A" has interactive pictures of vocabulary that flip to read the concept of *living things* and *nonliving things*. In the section "Can You Explain It?" the "Guiding Question" is "How is a living thing different from a nonliving thing?" There are two pictures two choose from—an alive dog and a stuffed dog—with a description of what each dog does.
- The materials include opportunities to develop and use vocabulary after having a concrete or firsthand experience in which students can contextualize new terms. In the "Pushes and Pull" lesson, students use the "Language Development Worksheet" during a hands-on activity when students come to a highlighted vocabulary word in the lesson. The worksheet provides a chart asking for the word, the meaning, an example or picture, and synonyms.
- Each lesson includes opportunities to preview scientific vocabulary in context. Day 1 of "Water on Earth" introduces the vocabulary words *pond*, *lake*, *stream*, *river*, and *ocean*. The words are also provided with an image of the word to relate to. Day 2 continues using the words and their definition in the "Hands-On Activity." The "Student Interactive Edition" incorporates flashcards and a picture glossary of scientific terms.

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 how to practice argumentation and discourse. For example, materials introduce students to constructing an argument for their own interpretation of the observed phenomena. Teachers remind children that they are scientists when they ask questions and figure out ways to answer them through observations, conducting experiments, and gathering evidence. They should use evidence gathered through the hands-on activity and explorations to answer the questions and generate new ones.
- The materials integrate argumentation and discourse within stages of the learning cycle. For example, in lesson "TEKS 1.8.A," students design a house heated by sunlight, define the problem, look at their materials, and think of a solution. Students may use the "Stability and Change Models Science Themes Organizer" to draw and label the parts of their houses. Then,

they use their model to build a house, test it by recording its temperature before and after sunlight exposure, and talk to a partner about their evidence and reasoning.

- The materials integrate argumentation and discourse within stages of the learning cycle. In the "Conserve Water" lesson, students locate wasteful water usage around the school and then discuss whether the usage is water conservation. Students share and compare their ideas with a partner and class.
- The materials provide opportunities for students to develop how to practice argumentation and discourse. The lesson on "Changes in Matter" instructs the teacher to lead a group discussion, with the prompt being about the properties students chose to describe the rubber duck. The teacher asks the students what they could do besides observing the object to gather information about its physical properties.
- The materials provide opportunities for students to develop how to practice argumentation and discourse. For example, in lesson "1.7AB Pushes and Pulls," the Teacher's Guide for Day 2 under the "Model and Explain Content" section states: "Model causing the wooden block to move by pushing it and then pulling it with your finger. Model a simple claim about how you moved the block, support it with evidence, and explain how your evidence supports your claim."

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

- The materials provide instruction for constructing and presenting a verbal or written argument that justifies an explanation of solutions to problems using evidence acquired from learning experiences. For example, in "TEKS 1.8. A," students design and build a model of a house heated by sunlight. Students design a house heated by sunlight, use their model to build it, and test it by recording its temperature before and after sunlight exposure. Students then verbally record a claim about how they can design a house heated by sunlight. Materials direct students to use evidence, describe how they can design a house heated by sunlight, and talk to a partner about their reasoning.
- The materials provide criteria for developmentally appropriate arguments to explain a
  phenomenon or defend a solution to problems using evidence acquired from learning
  experiences. For example, materials in lesson "TEKS 1.7.A" include a rubric students can use to
  evaluate an argument. Criteria include whether the claim is supported by evidence and includes
  scientific ideas as shown: investigate the force of pushing and pulling on a block to start and
  stop its motion, make predictions about the movement of a block, and demonstrate safe
  practices while handling materials during a scientific investigation.
- The materials provide opportunities for students to justify explanations of phenomena and solutions to problems using written and verbal arguments to problems as well as evidence acquired from learning experiences. In the "Living and Nonliving Things" lesson, students observe an image of a park, record what they wonder about it, and participate in group discussions about the phenomenon that living things have basic needs such as air, food, water, and space. Students record questions, reflect on them, and discuss them during the hands-on activity.
- The materials provide instruction for constructing and presenting a verbal and written argument using evidence acquired from learning experiences. The teacher materials include prompts to support talk moves that will spark discussion and elicit student thinking through discourse. In the "Force and Motion: Pushes and Pulls" lesson, students investigate and predict cause-and-effect relationships in science. The teacher instructs students to use the "Cause-And-Effect

Science Theme Organizer" to help them understand the cause-and-effect relationship between pushes and pulls and the motion of objects.

- The materials provide opportunities for students to justify explaining phenomena using written and verbal arguments as well as evidence acquired from learning experiences. Each lesson closes with a "Can You Explain It" section, in which students answer the "Guiding Question" about the phenomena or problem from the start of the lesson; they do so by writing a claim, supporting it with evidence, and reasoning from their experiences. The "Matter: Properties of Matter" Can You Explain It section provides the Guiding Question "Why do we use a basketball in one sport and a baseball in a different sport?"
- The materials provide instruction for constructing and presenting a verbal and written argument using evidence acquired from learning experiences. For example, students investigate the temperature and describe what the weather is like that day. Students record their data in a table over a period of three days and then create a bar graph using that data. Students then make a claim about how cloudy or clear weather affected the temperature. The materials guide students to use their data as evidence to support their claim; share with a partner; and write their claim, evidence, and reasoning in their journals.
- The materials provide opportunities for students to justify explaining phenomena using written and verbal arguments as well as evidence acquired from learning experiences. For example, in the "Living and Nonliving" lesson, students answer the Guiding Question "How is a living thing different from a nonliving thing?" using the pictures and what they have explored in the activities during lesson "1.12A." Students write their answers in their journals and verbally share them with a partner or the class.

#### **Indicator 5.2**

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

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

#### Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- The materials provide teacher responses to possible students' responses, including how to build on students' thinking. In the lesson "Water Moves Rocks and Soils," the teacher materials guide the teacher to lead a group discussion; have students revisit images of a river flowing through the canyon; and make note of their wonderings about how land changes. The materials include the following question and sample student answers for the teacher: "What do you wonder about how land changes? Sample answers include, I wonder how rivers change the land. I wonder how valleys are formed. I wonder if rivers move rocks and soil."
- Additionally, in lesson "1.9A Seasons," on Day 1, "Engage," under "Can You Explain It," the materials provide a subsection titled "Support for Children's Answers." In this section, the teacher asks, "Why can you predict patterns in the seasons?" The material provides a possible student answer: "I can predict patterns in seasons because they follow the same order year after year."
- The materials provide support for teachers to deepen student thinking through questioning. For example, in the lesson on "Seasons 1.9A," Day 3, "Explore/Explain," students explore recording the number of hours during the day for each season. The materials then guide the teacher to ask questions to scaffold their learning and deepen their thinking. The materials state: "If children

cannot identify a pattern of daylight based on their data, pose questions such as: Which season has the most daylight hours? Which season has the least hours of daylight?" The materials then guide the teacher to discuss how to act and think like a scientist by gathering information and analyzing the data.

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

- The materials provide embedded support for the teacher in introducing and scaffolding students' development of scientific vocabulary. For example, "Lesson Planning" provides an overview of the lesson flow and always begins with a preview of the TEKS vocabulary. Additionally, the materials offer a "Language Development" section that guides the teacher to have students use the "Language Development Worksheet." For example, in lesson "1.9 Seasons," the materials provide the vocabulary word *season* with the definition. Then, under the "Planning for Differentiation" section for "Emergent Bilinguals Support," under Day 1, the materials guide the teacher to clarify the meanings of the term, model using sentence frames, and have children model to practice using language.
- The materials provide embedded support for the teacher in introducing and scaffolding students' development of scientific vocabulary. In the "Support for Vocabulary" section of the "Weather" lesson, the teacher introduces the words *temperature* and *precipitation* and reminds students that people learn and remember some words better if they write down the word and show examples. The material guides teachers to follow the "I say/You say" routine to review the vocabulary words two to three times. The teacher encourages students to use the language development worksheet and vocabulary anchor chart throughout the five-day lesson.
- The materials provide embedded support for the teacher in introducing and scaffolding students' development of scientific vocabulary. In the lesson "Living Things Use Earth's Materials," under "Apply," the materials state: "As students answer the Can You Explain It? question or close out the lesson, encourage them to use the vocabulary they learned in Days 1 to 6. Students can use the phrase *natural resource* to refer to water, soil, and rocks and discuss how living things use Earth's materials."
- The materials provide teacher guidance on supporting students' use of scientific vocabulary in the context under the "Vocabulary Apply Section" found in the "Science in Careers" for all TEKS lessons. For example, in lesson "1.12A Living and Nonliving Things," the vocabulary words *living* and *nonliving* things are listed. The materials guide the teacher to have students apply the vocabulary word when they answer the "Can You Explain It?" question. The materials state: "As children answer the Can You Explain It? or close out the lesson, encourage them to use the vocabulary they learned in days 1 to 3. They can use the words living and nonliving when discussing the activities in this lesson."

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

• The materials provide teacher questions for supporting student discourse and using evidence in constructing written and verbal claims. The teacher uses questions to push students to use evidence to support their claims in both written and spoken discourse. In the "Food Chains" lesson, the teacher leads a group discussion about how living things depend on each other and asks, "What do you wonder about how animals depend on other living things?" to support student discourse. In the "Connection to Community" section, teachers support students in

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continuing the discourse by asking students to make a poster of an animal that lives in their community, including a short explanation of how the animal survives, and share it with the class.

- The materials provide teacher supports to prepare for student discourse. In the "Living and Nonliving Things" lesson, students view the "Phenomena" video about how living things differ from nonliving things, and then the teacher leads a class discussion. The material supports teachers by guiding them to remind students that they are scientists when they ask questions and figure out ways to answer them through observations, experiments, and gathering evidence.
- The materials provide guidance that teachers can use to give feedback to students while engaging in discourse. The lesson "Animals and Their Parents" provides support for student answers. The materials guide the teacher to say the following to students when answering the "Guiding Question": "Remember your ideas about the Guiding Question from the beginning of the lesson. Use what you have explored to answer the question: How do young animals resemble, or look like, their parents?" The materials include the following sample student answer: "Young animals usually have the same shape and parts as their parents. They typically have a similar body covering."
- The materials provide teacher questions for supporting evidence in constructing written and verbal claims. For example, in lesson "1.7AB, Pushes and Pulls," Day 4, "Elaborate," under "Can You Explain It?" the "Elicit Children's Thinking" section guides the teacher to have children use evidence from the videos and the hands-on activities to answer the question "How do pushes and pulls cause motion?" The materials suggest: "If children struggle to answer the question, pose questions like these: 'How does a push affect an object's motion? How can you stop an object's motion? How can you change the speed or direction of an object?"

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

- Materials provide exemplars of students' verbal responses for sharing their thinking. Materials state that teachers can use the exemplars as a guide to help them facilitate students showing their thinking in an oral form. For example, in the "Claims, Evidence, and Reasoning" section, lesson "TEKS 1.9.A" provides exemplars for students' verbal responses for sharing their thinking. The sample student response is "My claim is that the seasons follow the same order year after year and make a pattern. Each year, the seasons follow the same order. The order is winter, spring, summer, and fall. After fall, it is winter again."
- The materials provide teacher support and guidance to engage students' thinking in various modes of communication throughout the year. In the Claims, Evidence, and Reasoning section, the "Animal Parts" lesson provides exemplars of students' verbal responses for sharing their thinking. An example of a student response is "My claim is that animals use their body parts to move, stay safe, and get the food they need. My evidence is how animals used their body parts in the picture cards."
- The materials provide teacher support and guidance to engage students' thinking in various modes of communication throughout the year. The "Heat" lesson guides teachers: "Lead a Group Discussion by having students identify the problem they tried to solve. Then have them discuss the solutions they came up with. Prompt students to discuss similarities and differences in their design solutions. Ask students how they could determine if their house is getting warmer because of sunlight." The materials provide sample student answers: "How will you know your solution works? Record your ideas. Share them." Sample answer: "I will know my solution works if the temperature inside the house is warmer than outside the house."

• 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, in lesson "1.10A Soil," Day 4 "Explore," students are given the problem: find the best soil for planting a tree that requires soil to drain well. They then work with a partner/group to test different soil samples to determine which drains the best. The "Provide Feedback" section guides the teacher to have children discuss ways they can organize their data to analyze it best visually. Then, under "Elicit Children's Thinking," it guides the teacher to have children reflect on and discuss ways they did or could address difficulties when making their filter for the investigation and connecting that to using problem-solving strategies: "How are these ideas good problem-solving strategies for any kind of challenge you face during an activity?"

### **Indicator 6.1**

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

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

#### Meets | Score 2/2

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

Materials include a range of diagnostic, formative, and summative assessments to assess student learning in a variety of formats. Materials assess all student expectations over the breadth of the course and indicate which student expectations are being assessed in each assessment. Materials include assessments integrating 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.

- The materials include diagnostic assessments to provide the teacher with information to measure students' mastery and growth using a variety of formats. For example, the materials include online pre-assessments to evaluate mastery of prerequisite knowledge and address gaps before instruction. Additionally, materials provide "Unit Readiness Checks" that may be assigned online and the "Building on Prior Knowledge" found at the beginning of every lesson in the Teacher's Guide. Materials include discussion prompts to provide the teacher with information to measure students' mastery and growth.
- The materials include formative assessments in various formats to measure student learning and determine the next steps for instruction. For example, materials in each lesson include an "Exit Ticket" section, used as a daily formative assessment. It comes in different formats, as shown in the lesson "TEKS 1.10.A," Day 2, Exit Ticket: "Match the words that describe each soil material." Day 3, Exit Ticket: "Why are soils different colors? Choose the correct answer: A They get different amounts of light, B They are made of different materials, C They hold different amounts of water." Day 4, Exit Ticket: "You need soil that holds water well. What material should the soil be mostly made of? A clay, B sand, C silt."

• The materials include summative assessments in a variety of formats. For example, the Summative Assessment: TEKS Test for the "TEKS 1.7.A-B" lesson is available in Word, PDF, and Interactive Assessment formats. Teachers can print or assign the Summative assessments electronically. When assigned to Ed, the teacher will receive student proficiency reports. The assessment contains a cumulative review that assesses TEKS taught throughout the units to determine mastery of course content.

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

- The online resources provide the teacher with an "Assessment Guide" detailing the assessments and the TEKS on the quiz or test. The materials state: "The program's formative and summative assessment categories provide opportunities for students to demonstrate proficiency with all 13 TEKS and to prepare for what they will learn in science classes in subsequent grades."
- The materials indicate which student expectations are assessed. The materials provide a detailed "Scope and Sequence" section with the expected TEKS for first-grade science. Each lesson begins with "Lesson Planning," which outlines the TEKS taught. The lesson introduces the concepts as well as new vocabulary. Each lesson contains a student objective, hands-on activities, discussions, community connections, and assessments that assess the student expectations covered in the lesson.
- The materials indicate the assessed student expectations. Materials provide the TEKS correlation for each assessment item and the answer keys for every assessment. An "Items Analysis Chart" shows the specific standards covered in each assessment. "Ed Online" contains the answer keys for all assessments. The materials include an "Assessment Table of Contents" in the "Assessment Materials" that lists the TEKS for each quiz and test.
- The materials assess all student expectations by the grade level, as outlined in the TEKS. The Teacher's Guide includes detailed TEKS-based lesson plans that outline how the materials can help teach specific concepts and skills, address specific students' expectations, and provide guidance on assessing student learning. The lesson plan for "TEKS 1.6A, Properties of Matter" in the Teacher's Guide provides a detailed outline of how the teacher introduces new vocabulary, conducts a hands-on activity, leads group discussions, addresses student expectations, and provides guidance through an assessment.

# Materials include assessments integrating scientific concepts and science and engineering practices with recurring themes and concepts.

- The materials include assessments that require students to integrate scientific knowledge and science and engineering practices with recurrent themes appropriate to the student expectation assessed. As established in the section "Build for Outcomes" at the beginning of the Teacher's Guide, "Because the SEPs and RTCs are new to the TEKS, an additional "Skills and Themes Bank" provides more options for assessing TEKS 1-5. You can customize to either craft assessments using only these Skills Bank items or adjust the other assessments to include the Skills Bank items you select".
- The materials include assessments integrating scientific knowledge, science, and engineering practices with recurring themes. The materials state that assessments often intertwine the content of TEKS (TEKS 6–13) with Science and Engineering Practices (SEPs; TEKS 1–4) and Recurring Themes and Concepts (RTCs; TEKS 5) to ensure that students are achieving proficiency in the concepts not only within the content but also within the context of the SEPs and RTCs.

- The materials include assessments requiring students to integrate scientific knowledge and science and engineering practices with recurrent themes appropriate to the student expectations assessed. For example, the lesson "TEKS 1.10.A" has students investigate and document particle size, shape, texture, and color properties and the components of different types of soils, such as topsoil, clay, and sand. On Day 2, the "Explore/Explain" section and Exit Ticket/Formative Assessment assess the following SEPs: 1.1.D, 1.1.F, 1.2.B, 1.3.B, stating: "Check your learning. Match the words that describe each soil material: smooth texture, brown color, lumpy texture, orange color, gritty texture, tan color."
- The materials include assessments that integrate scientific knowledge and SEPs with RTCs. For example, in the Test for "1.10ABCD, Earth's Surface", question number 6, students are asked, "Zaid tested and measured how quickly the water would move through each type of soil. He learned that the size of the soil particles caused the water to move at different speeds. Show causes and effects." Using the images and descriptions below the images, students identify which soil (Topsoil, Clay, Sand) drains slowly or quickly and has large or small particles. This question tests TEKS 1.10 "Soil" and TEKS 1.5B "Cause and Effect." SEPs/RTCs in TEKS 1.1D use tools to observe, measure, test, and compare.

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

- The materials include assessments that require students to apply knowledge and skills to a new phenomenon or problem. For example, in the lesson "TEKS 1.10.B," students investigate and describe how water can move rock and soil particles from one place to another. On Day 2, students make an erosion model in a stream table, add different amounts of water, compare the results, and explain how water causes erosion. Use the model to explain. Students apply their knowledge of how water can move rock and soil particles within an assessment by explaining how water changed a scenario shown in the picture.
- The materials include assessments that require students to apply knowledge and skills to a new phenomenon or problem. In the "Living and Nonliving Environments" unit, students classify and observe if something is living or nonliving and learn about different environments. To apply this knowledge, students build a terrarium. Students create a terrarium for plants or pill bugs. Students discuss the location of their terrarium and how they will care for their living items. In the "Living Things and Nonliving Things" TEKS Quiz, students view an image of a sheep. Students look at the picture and classify the sheep as a living thing. "What does this picture show about why sheep are living things?" Students select from three answer options.
- The materials include assessments that require students to apply what they have learned to a new problem. For example, students explore how heat causes changes. Students observe how heat changes objects' physical properties, such as melting butter or popping popcorn. They discuss and explore how some changes can be reversed while others cannot. On Day 3, they explore how freezing and warming a liquid is reversible. On Day 4, they explore how cooking, burning, or baking creates changes that are not reversible. On Day 6, students complete an assessment. Question 1 for the TEKS 1.8B Quiz shows three items heated in a skillet. The students identify which one of these cannot be reversed.

### **Indicator 6.2**

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

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

#### Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The materials include sample student responses and checklists that provide teacher guidance for evaluating student responses. For example, "TEKS 1.10.A," Day 3, "Explore/Explain" materials include a formative assessment in the section "Exit Ticket," evaluating students with the question, "Why are soils different colors?" The "Support for Children's Answers" section provides a sample answer: "They are made of different materials."
- The materials provide resources to guide teachers in evaluating student responses, such as rubrics, to evaluate whether students are developing, progressing, and gaining proficiency in each component of the learning objectives. The materials include "Performance Tasks" with rubrics such as "Match Animals and Their Young." The materials state, "These indicate what to look for and how to address any issues in completing the activity. They function as point-of-use rubrics for the immediate remediation of any perceived anomalies in performance."
- The materials include information that guides teachers in evaluating student responses. In the lesson "Make a Terrarium," Part 2, under the "Support for Children's Answers" section, the teacher asks, "Why is it important to listen to your partner's evidence and reasoning?" The guide gives an example response, "It's important because I can learn from my partner's evidence and reasoning." The exit ticket provides an acceptable student response and differentiated extra support if needed.

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 K-2 materials provide guidance documents and resources to support the teacher's interpretation of the data. For example, the "Teacher's Corner" tab on the website includes a video of a pre-recorded session that explains how to interpret the data to "consider which assessments to select depending upon the instructional purpose. Learn how to edit the online assessments to align with your instruction and assign them to students directly on HMH Ed<sup>®</sup>. You'll also review data, reporting, and options for differentiated instruction. Recorded session coming soon."
- The materials include assessment tools that yield data teachers can quickly analyze and interpret. The materials provide teachers access to assessment reports. The assessment reports are very detailed based on the class and per student. The report offers a color-coded assessment proficiency wheel detailed by red representing Below-Level, orange, On-Level, and green, Above-Level. The same color coding provides a bar graph illustrating the assessment average based on all grade-level TEKS. The report then breaks down per student their average score with the same color coding as well as for the TEKS per student.
- The materials support teachers' analysis of assessment data. The assessment reports provided to teachers are customizable. Teachers can customize the type of report to run and the date ranges to cover. The customizable reports cover whole classes or individual students, general averages, and individual TEKS. The reports provide a range of opportunities for teachers to analyze assessment data.

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

- The information gathered from the "Reports" tab found in Ed Online can help teachers make decisions on instruction, such as structuring student groups based on assessment performance, which TEKS or Standards may need whole class versus small group reteach (reports identify the bottom two standards), as well as a growth report to reflect individual student performances. Materials provide guidance for formative assessments during the lessons, such as exit tickets and sample student responses to questions.
- The materials include data-management tools that allow teachers to color-code student data, orange for On-Level, red for Below-level, and green for Above-level, to differentiate science instruction and easily group students according to assessment results, providing a report that suggests grouping students in clusters based on skill mastery of TEKS.
- The information gathered from the assessment tools helps teachers when planning core instruction. The "Heat: Heat Causes Changes" lesson provides intervention under "Can You Explain It?" The materials guide the teacher to ask the question, "What changes caused by heating are reversible and irreversible?" The materials suggest that if students struggle, the teacher is to pose more thought-provoking questions. The lesson supports student answers and has the students close the lesson by revisiting the vocabulary learned on days 1-4.

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

- The materials include a variety of teacher guidance for responding to student data. For example, materials provide possible misconceptions and how to respond to them, how to utilize the reader (FUNomenal Reader) as a mini-lesson to reteach, reinforce, and supplement the lesson or to utilize the reader for independent reading or small group/whole group lesson, leading group discussions about activating prior knowledge, "Phenomenon Teacher Background,"
   "Support for Children's Answers," how to Model and Explain multiple activities including "Claim, Evidence, and Reasoning," and providing feedback for exit tickets (found in every unit and lesson K-2). The guidance provided briefly suggests activities or ways the teacher may respond to the content, misconceptions, and students struggling to make sense of the concept.
- The materials provide a variety of student resources for teachers to use in responding to performance data. The materials provide direct instruction of science concepts, followed by reviews that include skills practice activities for students. The "Living or Nonliving" lesson under the "Ed Online Pocket Lab" for students consists of an interactive student lesson, printable student editions, downloadable worksheets for the hands-on activities, hands-on activity picture cards, and science theme organizers for review and skill practice.
- The materials include a variety of resources such as "FUNomenal Readers," ELPS Mini-Lessons, a variety of graphic organizers, "Vocabulary Anchor Chart," "Language Development Worksheet," "ScienceSaurus," "Supplemental Lessons," "Connection to Community," "Pocket Labs," "You Solve It!" Interactive Activity, "Differentiation of Extra Support and Challenge", and "Possible Extensions" found in every unit/lesson.

### **Indicator 6.3**

Assessments are clear and easy to understand.

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

#### Meets | Score 2/2

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

Assessments contain scientifically accurate items, avoid bias, and are 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 with learning goals.

Evidence includes but is not limited to:

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

- The assessments include items for the grade level that are mostly scientifically accurate. For example, in the lesson "1.6A, Properties of Matter" materials, the formative assessment (exit tickets and discussion questions) utilizes the grade-appropriate vocabulary physical properties when describing matter. In the lesson "1.7AB, Pushes and Pulls", the formative assessments (exit tickets, discussion questions) use the terms *pushes, pulls, changes in motion, stops*, and *starts*.
- The assessments contain items for the grade level that are scientifically accurate with exit tickets/formative assessments. The assessment "TEKS 1.12.C" over food chains is scientifically accurate, avoids bias, and is error-free. The TEKS requires students to identify and illustrate how organisms depend on each other through food chains. The multiple choice questions ask students to identify what animals depend on a particular animal in a food chain. The assessment also asks students to complete a model food chain with a missing element and a question illustrating the dependent living thing missing from this food chain.
- The assessments contain items for the grade level that are scientifically accurate with exit tickets/formative assessments. The assessment "TEKS 1.13.A" over animal structures is scientifically accurate, avoids bias, and is error-free. The TEKS requires students to identify the external structures of different animals and compare how those structures help different animals live, move, and meet basic survival needs. The multiple-choice questions ask students to identify parts of the animal structure. The assessment also asks students to circle the part of a fish that helps it move based on an image provided of a fish.

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

- The assessment tools use clear pictures. For example, in lesson, "TEKS 1.8.A," the section "Daily Formative Assessment", Day 4, Exit Ticket assessment items include photos of an electric stove and a hair dryer.
- The assessment tools use clear pictures and graphics. The "TEK 1.11, Resources on Earth" quiz asks students to select a picture showing how an animal uses water. The graphics are clear images of a fish in a fish bowl, ants on a mound, and a kitten playing with yarn and are easily comparable.
- The assessments contain pictures and graphics that are developmentally appropriate. In the assessment of weather, the question asks what item would be taken to school on a rainy day, and the images are developmentally appropriate, including an image of an umbrella, sunglasses, and gloves.
- The pictures and graphics utilized in the assessments are developmentally appropriate. For example, Grade 1 assessment items contain simple, familiar pictures such as shapes, popsicles, bicycles, wagons, soccer balls, etc.

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

- The K-2 materials provide clear guidance for teachers to consistently and accurately administer assessment tools. The assessments are supported by an "Online guide" on the materials website, "Teacher's Corner" tab, "Program Support," which gives an overview of the assessment, outlines the time to administer each task, provides step-by-step guidance for administering each measure, as established on the guide "By balancing the formative and summative assessment options in HMH Into Science™, you can create a complete picture of every student that helps you predict, monitor, and accelerate their growth and ensure they have the knowledge and skills necessary to achieve mastery of the Next Generation Science Standards (NGSS) and Performance Expectations. In this topic, you'll explore the different types of assessments available in the "Into Science" product.
- The materials include an assessment guide that supports the teacher in understanding the types of informal assessment tools included in the curriculum, such as "Exit Tickets" and "TEKS Quizzes." The materials describe the different tests and offer guidance on their formats, such as editable, printable formats, or online administration with digital auto-grading.
- The materials provide clear guidance for teachers to consistently and accurately administer assessment tools. The materials provide a detailed assessment guide in the "Assessment" tab. The "Assessment Guide" supports the teacher in several ways and is easily accessible. The materials provide teacher guidance in understanding what types of assessments are included. The materials list the assessments as exit tickets, TEKS quizzes, and TEKS tests that align with the lessons. The material provides a general overview and assistance addressing prior knowledge, common misconceptions, and ways to help struggling learners.
- The materials include detailed information that supports the teacher's understanding of the
  assessment tools. The materials include a section titled "Assessment Front Matter" found in the
  "Assessment Guide" that explains the different assessments and how they are designed based
  on their "Depth of Knowledge" and "Rigor" and provides a deeper look into the different types
  of assessment such as Formative (Exit Tickets and TEKS Quizzes) and Summative (TEKS Tests).

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

- The K-2 materials offer accommodations for assessment tools so that students of all abilities can demonstrate mastery of learning goals. For example, materials provide a text-to-speech feature on the web-based assessment platform, allowing students using the Interactive Assessment to click play on the icon at the bottom left corner of the screen and adjust the volume of it at the speaker icon beside it. Using the online speech-to-text feature, students can also record their responses to formative assessments within their interactive materials.
- The materials offer accommodations for assessment tools so that students of all abilities can demonstrate mastery of learning goals. Within the digital interactive assessment settings, the background and foreground colors can be set to five to accommodate those with visual impairments and attention difficulties. The font size options range from small to huge to assist with visual impairment accommodations, and students can use a text-to-speech software feature to read the assessment questions for hearing impairment, comprehension, and fluency accommodations.
- The materials provide editable assessments that allow for accommodations and enable students to demonstrate mastery of knowledge and skills aligned with learning goals. The materials provide assessments in an editable format. For example, the teacher can edit the number of questions and can edit the questions based on the materials. The materials provide the teacher with guidance regarding offering accommodations.

#### **Indicator 7.1**

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

1	Materials provide recommended targeted instruction and activities to scaffold learning for	Μ
1	students who have yet to achieve grade-level mastery.	
2	Materials provide enrichment activities for all levels of learners.	Μ
3	Materials provide scaffolds and guidance for just-in-time learning acceleration for all students.	М

#### Meets | Score 2/2

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

Materials provide recommended targeted instruction and activities to scaffold learning for students who have not yet achieved grade-level mastery. Materials provide enrichment activities for all levels of learners. Materials 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 differentiating activities for students who still need to achieve mastery. Lessons include recommendations for downward scaffolds to support students in successful science learning and knowledge building.
  - For example, The "Design a House" lesson provides sentence stems for using scientific vocabulary in the discussion, such as "My claim is ... I noticed that ... I know this because... "
  - For example, Day 2 of the "Pushes and Pulls" lesson includes an "Explore/Explain" Activity that guides teachers to have students utilize the "Cause-and-Effect Science Themes Organizer" to understand the relationship between pushes and pulls and the motion of objects.
- The "Emergent Bilingual Support" section of the "Pushes and Pulls" lesson includes
   "Differentiation/Reteaching Support" through additional materials. For example, the teacher
   guidance suggests using a page from a ScienceSaurus to show grade-level vivid images and
   detailed explanations for students. It includes three "Supplemental Lessons" ("How Do Objects
   Move?", "How Can We Move a Ball?" and "How Can We Change the Way Objects Move?").
- The materials provide additional resources for targeted instruction and differentiation to support students who still need to achieve mastery. The "Patterns in the Sky" lessons include various student activities the teacher can assign to reteach, review, and practice skills for students who need additional support for mastering course-level science concepts and skills. The teacher guidance for the "Living Things and Environments" lesson provides "Differentiation/Reteaching Support" that includes additional support for reteaching the concept, online resources Ed Online, and links to the supporting materials for differentiation and

reteaching. For example, the guidance suggests using a ScienceSaurus "Life Science: Living Things" page and offers a supplemental lesson titled "What Are Living and Nonliving Things?"

#### Materials provide enrichment activities for all levels of learners.

- The material provides enrichment activities that encourage the exploration and application of grade-level science knowledge and skills, including applying new learning in different ways.
  - For example, materials provide sentence stems for using scientific vocabulary in the discussion, as shown in the lesson "TEKS 1.12.A," Day 3, "Claims, Evidence, and Reasoning," "My claim is living things... and nonliving things..., My evidence is... I know this because..."
  - For example, the "Soil" lesson provides a phenomenon video for extending learning for students at all levels. It includes the guiding question, "What are the properties of different soil materials?"
  - For example, on Day 4 of the "Earth's Surface" lesson, students participate in a "Read, Write, Share" activity where they respond to a prompt to write a letter to a farmer about erosion. The materials suggest the letters should include an introduction about themselves, questions about erosion and how to slow it down, and any other information they would like to have about what they are learning.
  - For example, the teacher materials provide additional opportunities for students to enrich their learning through the "You Solve It!" activities. For example, the "Properties of Matter" lesson includes an "Engineering" activity where students apply science content knowledge and engineering practices to design and test a marshmallow launcher.
- The materials provide enrichment activities that account for learner variability by including guidance to engage in tasks with a writing prompt for responding so students can apply their science knowledge in writing. In the "Plants Use Soil and Water" lesson, under the "Read, Write, Share" section, students reflect on new content knowledge to write about why we should protect natural resources.
- The "Lesson At a Glance" in the teacher guide provides extension options. The extension options suggest that the teacher can use none, some, or all of the possibilities. The "Living Things Use Earth Materials" lesson provides one day of ELP mini-lessons and two days of extensions for "Elaborate." The Elaborate extensions use the FUNomenal Reader "Let's Explore Using Earth's Materials."

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

- The materials guide just-in-time learning acceleration for all students. The lessons include scaffolds, supports, and resources for learners struggling with content or tasks.
  - For example, in lesson "1.8, All About Heat", the Teacher's Guide provides a "Differentiation: Extra-Support" section to guide teachers in providing additional support for students struggling with designing a home heated by sunlight. The materials suggest teachers use a flashlight to show how light can enter the "home" the students designed and built to help students see where to add materials or alter the box. The materials guide the teacher to ask, "How could you change your design to let more sunlight get inside your home?"
  - For example, on Day 2 of the "Explore/Explain" section of the "Living Things Use Earth Materials" lesson, the "Teacher Guide" offers guidance for the "Differentiation

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Challenge" which states, "Ask children to work with partners to think of ways in which people use water for fun. Have children draw and write about their ideas to create a class book to share with others."

- The "Matter" lesson includes a "Differentiation: Extra Support" section that suggests that the teacher works with a small group of students to assemble the parts of a flashlight and share what each part is and how it is used. The materials provide sentence frames to prompt the students, such as, "This is the .... These are the ...."
- The lessons include recommendations for just-in-time scaffolds to develop productive learning
  perseverance in the moment. The lessons have questions for the teacher to support students
  when they struggle to engage in a self-engaged, demanding task. For example, in the "Conserve
  Water" lesson, the "Support for Children" section guides the teacher to ask, "What do you
  wonder about using less water?" and includes the possible student answer, "I wonder if there
  are other ways to conserve water and why it is important to conserve water."
- The lessons provide support and resources for students ready to accelerate their learning. The lessons include resources for teachers to create a content plan to deliver content at the moment of need.
  - For example, in the "People Use Water" lesson, the "Differentiation Challenge" section guides the teacher to extend the lesson by asking students to work with partners to think of ways people use water to have fun and then draw and write a class book of their ideas.
  - For example, the lesson on "Matter" provides a "Differentiation Challenge" that guides the teacher to give a small group of students a picture of a bicycle and instruct them to cut the bike into individual parts and then reassemble it by naming the parts. The teacher then asks the students how the parts work to make the bike move.

### **Indicator 7.2**

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

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

#### 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.

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

Evidence includes but is not limited to:

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

- The materials include a variety of developmentally appropriate instructional approaches to engage students in the mastery of the content. The materials suggest small group or partner discussions as shown in "TEKS 1.8.A," Day 4, "Read, Write, Share": "Think about how heat changes objects. Look at the pictures. Turn to a partner. Talk about what caused the snow fort to change." Additionally, the materials include a section named "Be An Engineer!" for teachers that identifies ways teachers can model needed scientific practices, such as introducing concepts, practices, and vocabulary early in the school year, preparing children for "Engineer It" Hands-On-Activity, a reteaching resource for children who need extra support after an "Engineer It" Hands-On-Activity.
- The lessons include authentic tasks in which students use tools to measure and collect data. In the "Cool it Down" lesson, students use ice, a cup of water, a flower, and a wooden block to place in a freezer and collect data on the effects caused by cooling. For example, the "You Solve It!" Simulations include exploration with concrete and hands-on materials at the course's rigor level. In the "Eyes on the Sky: You Solve It!" activity, students manipulate a lightbulb model of

the sun and a foam ball model of the moon and Earth system to observe the pattern of the moon's phases.

The materials utilize a variety of developmentally appropriate instruction to keep students engaged while building their mastery of the content. Each lesson begins with a "What Do You Already Know?" to activate prior knowledge and engage students in "I Notice/I Wonder" activities. Then, students apply their prior knowledge to explore the new concepts through hands-on activities and discussions. The lesson then moves to the application where "People in Science" have had an impact on the world and elicit students' thinking in the "Can You Explain It?" section before finally being tested to see if the students have mastered the concept(s). The materials include various opportunities for students to explore and express their thinking and understanding. For example, every lesson includes opportunities for students to record their observations, respond to questions including "Claim, Evidence, and Reasoning" questions, a "Read, Write, Share" section, and multiple opportunities to discuss with a partner, team, or class.

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

- The materials consistently support flexible grouping (e.g., whole group, small group, partners, one-on-one). For example, in the lesson "TEKS 1.7.A-B," in the section "Can You Explain it?" students must answer a question using evidence from the videos and the hands-on activities. "Children should have grown in their depth of knowledge about how pushes and pulls can start, stop, or change the speed or direction of an object's motion. If children struggle to answer the question, pose questions such as: "How does a push affect an object's motion? How can you stop an object's motion? How can you change the speed or direction of an object?"
- The materials provide suggestions for extra support and challenging instruction. In the "Objects in Motion" lesson, students model pushing and pulling objects in the classroom under the additional support section. As they do the action, they say the word push or pull to identify the action. Under the challenge section, students discuss how the hands-on activity might be different with bigger or heavier objects, and small groups brainstorm how they would have to change the investigation into how pushes and pulls affect an object's motion.
- The materials guide teachers on when to use specific grouping structures based on the needs of students. The lessons note that if students struggle with the exit ticket, the teacher should address the student's misconceptions. For example, the "Plants Use Soil and Water" lesson under the "Exit Ticket" advises teachers to provide feedback to students who have chosen the wrong answer on the exit ticket. The teacher guides students with misconceptions to understand that soil blocks sunlight.
- The materials provide suggestions for grouping depending on the activity. In the "Forces and Motion" lesson, students work with a partner during the "Claims, Evidence, and Reasoning" portion. Students make a claim about how pushes and pulls can change the speed and direction of an object. Students share their evidence with a partner, listen to each other's claims, and discuss further. In addition, the digital "Student Interactive Lessons" can be completed independently, in small groups, or as part of whole-group instruction. Teachers can teach lessons directly from the presentations in all settings and support hybrid and remote learning.
- The materials encourage flexible grouping throughout all lessons. For example, in the lesson "1.13A, Animal Parts," the materials begin with a class discussion on activating their prior knowledge by responding to "I Notice/I Wonder" questions about a picture and text about a tiger on Day 1. On Day 3, "Explore/Explain," under the" Support for Children's Answers," the materials suggest students talk with a partner. "Tell why it is important to communicate in

different ways." Day 4, under the "Differentiation: Challenge," the materials suggest children work individually to learn more about an animal and then share with a partner.

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

- Early in the year, materials guide teachers in establishing classroom routines, leading to effective small group and independent work. For example, the "Teacher's Guide" includes a section named "Be An Engineer!" for teachers that identifies ways teachers can include some modeling of needed scientific practices, such as introducing concepts, practices, and vocabulary early in the school year, preparing children for the "Be An Engineer" Hands-On-Activity, a reteaching resource for children who need extra support after an "Engineer It" Hands-On-Activity.
- The materials consistently support multiple types of practices (e.g., modeled, guided, collaborative, independent) and provide guidance and structures to achieve effective implementation. Lessons include explicit teaching, then opportunities for students to practice a routine for how to work independently in lab investigations, as shown in the section "Built for Students" at the beginning of the Teacher's Guide. Familiar and predictable classroom routines scaffold students and empower them to build on previous learning as they think deeply about each science concept.
- The lessons include opportunities for students to engage in collaborative learning structures, such as think-pair-share, while learning a new concept. For example, in the lesson "1.8B, Heat Causes Changes," Day 2, "Explore Explain," students complete a "Claims, Evidence, and Reasoning" section completing the "Explore Day 2" activities. The materials guide the students to make a claim, state their evidence, and then discuss their reasoning with a partner ("Think-Pair-Share").
- Each lesson provides a "Key Learning Activity" encouraging student participation. The "Key Learning Activity" supports guided, independent, and collaborative approaches to learning. For example, in the lesson "Earth's Surface," the materials state the "Key Learning Activity" that clearly states the "Learning Objective and Sense-making". The materials identify the "Learning Objective" as students will be able to investigate and describe how water can move rock and soil particles from one place to another. The "Sense-Making" states that students will understand that water can cause erosion or the movement of soil and rocks.
- The materials provide suggestions for grouping depending on the activity. For example, in the lesson "1.10B, Water Moves Rocks and Soils," Day 3, "Explore," the materials explain how to adjust a lesson using groups. The materials suggest that the teacher assign students to one of five groups and give each group one picture to research. Each group will then share what they learned about the image they saw and what they found interesting from the image and the caption.

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

The materials represent diverse communities using images and information that are respectful
and inclusive. The names of individuals presented in the lessons equally include male and female
names and represent individuals of diverse backgrounds, including races, ethnicities, and
national origins. In the "Use Magnets to Observe" lesson, students read about and click images
of Eugene Tssui, an American-born and Chinese-descent male architect, to learn about the
homes and buildings he designs and builds. In the "Heat It Up" lessons, students view images

and read about chemist Evangelina Villegas, a Mexican biochemist, to learn about her work with maize.

- The materials represent diverse communities using images and information that are respectful and inclusive. The images in the material reflect the diversity of school communities and match the content. Characteristics vary in images to include race and ethnicity, skin tone, gender identity and expression, age, disability status, body size and shape, and hair texture. The "Air" lesson, Day 4: "Science in Careers," shows students an image of a woman of Asian descent wearing a hard hat and yellow vest in front of a windmill. Students read workers to make sure the wind machines are running correctly.
- The materials presented provide diversity in the images of individuals by representing many cultures of the communities. The images and names of individuals are real-world and real-life representations. The authors use both male and female names and images and various ethnicities. In the "Living Things and Environments" lesson, students study the female ecologist Julia Carabias Lillo, who worked to protect the environment.
- The materials represent a diversity of students throughout the year. The pictures showing students doing science include images representing children from across the world, many ethnicities, nationalities, genders, and children with disabilities. For example, in a Grade 1 lesson, "1.10B, Water Moves Rocks and Soils," under "Engineering in Careers," students explore three images of different farmlands to discover more about erosion. The lesson also includes additional images throughout the lesson of mountains, rivers, beaches, deserts, and the Grand Canyon.
- The information in teacher guidance documents, student materials, and scientific texts positively portrays a diverse group of scientists and engineers and sometimes includes specific terms and descriptions. For example, in a Grade 1 lesson, "1.11BC, Conserve Water," Day 4, "People in Engineering," students read about Norma Alcantar, an Engineer from Mexico.

### **Indicator 7.3**

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

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

#### Meets | Score 2/2

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

The 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.

- The materials include linguistic accommodations commensurate with various levels of English language proficiency as defined by the ELPS. Materials include sideboard references demonstrating ELPS connections as shown in the lesson "TEKS 1.11.A," section "Extensions": "1 DAY ELPS English Language Development Mini-Lesson,"
  - BEGINNING: Guide children using sentence frames. Echo-read the completed frames. Have children monitor their understanding, seeking clarification as needed.
  - INTERMEDIATE: Have partners work with the sentence frames. Have them monitor their understanding, seeking clarification as needed.
  - ADVANCED: Have partners respond to questions with or without using sentence frames. Have children monitor their understanding, seeking clarification as needed.
  - ADVANCED HIGH: Have partners take turns asking and answering the questions. Have children monitor their understanding, seeking clarification as needed."
- The teacher guide embeds scaffolds for emergent bilingual (EB) students into lessons, such as visuals and gestures, as shown in the lesson "TEKS 1.13.A, Emergent Bilinguals Support," Day 1, "Have children express their knowledge in ways that are accessible to them, such as using visuals, gestures, and other nonverbal cues to reinforce or express understanding.
- The materials include linguistic accommodations commensurate with various levels of English language proficiency as defined by the ELPS. The ELPS mini-lessons provide sentence stems to support speaking and writing with multiple complexity levels to reflect four levels of English language proficiency. The "Energy's Effects" ELPS mini-lesson includes scaffolds for beginning,

intermediate, advanced, and advanced high language proficiencies. The teacher guidance for each section includes:

- Beginning: Work closely with students as they fill out the "Synthesize" graphic organizer. Students may choose to write words or sketch images directly in the organizer, or they may choose instead to use gestures and oral language to convey their thoughts.
- Intermediate: Instruct partners to help each other complete the "Synthesize" graphic organizer and monitor the partners' progress, providing input as needed.
- Advanced: Instruct students to complete the "Synthesize" graphic organizer and review the text with them if needed.
- Advanced High: Ask students to complete the "Synthesize" graphic organizer and then have partners share and discuss their work in small groups.
- The materials include linguistic accommodations commensurate with various levels of English language proficiency as defined by the ELPS. The materials include teacher guidance for communication with emergent bilingual students to create comprehensible input. The lessons provide routines and support for comprehensible input of scientific concepts and vocabulary when delivering instruction. In the "All About Heat" lesson, the teacher reinforces vocabulary and language structure using signal words and sentence stems to support students' additional practice using oral, written, and nonverbal language to demonstrate understanding. The guide advises the teacher to give students additional practice time and confirm their understanding of the applications of heat in everyday life.
- The "ELPS Mini Lessons" provide differentiated strategies for each level of language proficiency
  as defined by the ELPS. The ELPS mini-lesson, "Energy Effects," begins with a connection to prior
  knowledge. The lesson breaks down the "Clarify Ideas" portion with strategy/responding to
  questions and scaffolding/responding to questions. The materials provide a scripted lesson for
  the teacher to use while working with students with scaffolding for the following levels:
  beginning, intermediate, advanced, and advanced high. Strategy and scaffolding continue
  through the "Collaborate" and "Explain/Elaborate" sections. The lesson ends with a writing
  opportunity that guides beginning/intermediate and advanced/advanced high.
- The materials guide linguistic accommodations for all levels of learners. For example, in the "Lesson at a Glance" for "1.8B, Heat Causes Changes" under the "Language Support" section, the materials guide the teacher to utilize extension activities such as an ELPS mini-lesson (1.2.1). In the mini-lesson, the materials provide teacher guidance to differentiate the lesson, including scaffolding, "Sentence Stems for Beginner, Intermediate, High, and Advanced High Emergent Bilinguals." Additionally, the lesson guides provide multiple reading strategies such as "Clarify," "Collaborate," and "Explain/Elaborate." The materials ensure all levels of students can access and master the concepts in the lesson.

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

- The materials include tips for teachers about the importance of allowing students to express their understanding in their first language and practical suggestions for teachers who do not speak the student's first language, as shown in the lesson "TEKS 1.11.A,": "Have children 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 meaning."
- The materials encourage strategic use of students' first language to enhance English's linguistic, affective, cognitive, and academic development. In the "Heat Causes Change" lesson under "Emergent Bilingual Support," Day 1, the students express their knowledge in ways accessible by

writing a term in their language and then looking it up in a bilingual dictionary to confirm the meaning.

- The materials encourage strategic use of students' first language for linguistic, affective, cognitive, and academic development in English. The materials include resources for translation or support in first languages. In the "Weather Changes" ELPS lesson, the teacher provides students with the "Compare and Contrast" graphic organizer to compare weather and season and has children fill out the organizer with the help of differentiated supports.
- Each lesson's "Planning Page" in the "Teacher's Guide" includes guidance on implementing best practices, consistent routines, and support for emergent bilinguals. The materials suggest that teachers use their first language as a scaffold to develop scientific discourse in English before any instruction.
- The materials include a glossary with cognates or second-language definitions that the teacher can assign to the students through their online access. Some multilingual glossary languages include Spanish, Chinese, Arabic, Haitian, Punjabi, etc. The materials include family letters explaining the instructional objectives and homework in languages other than English.

### **Indicator 7.4**

Materials guide fostering connections between home and school.

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

#### Meets | Score -2/2

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

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

Evidence includes but is not limited to:

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

- The materials provide information to share with students and caregivers about the program design. For example, the materials include a "Beginning-of-Year Home Letter" that provides an overview of the TEKS lessons in an easy-to-read format with graphics. The document offers caregivers an overview of the program: "Children will explore topics such as matter, forces and motion, light, objects and patterns in the sky, Earth's materials and systems, natural resources, environments, and plants and animals." The letter provides an editable section for teacher notes and technology login information.
- The materials provide information to share with students and caregivers about the program design. The "Family Room" is a resource for families and caregivers. It is a collection of quick, easy-to-follow tips and explanations that help families and caregivers reinforce their child's learning. The materials state the resource contains "Getting Started," which includes general information on how to navigate Ed, "Program Support," which has resources and strategies that are used in class as well as suggestions for how you can support your child at home; plus "Shareables" for quick tips about the challenges that many parents experience, like getting their children to talk about their learning.
- The materials provide information to share with students and caregivers about the program design. For example, the materials include a "Beginning of the Year Home Letter." It is a one-page (double-sided) overview of reading and understanding the "Home Letter" for each Unit/Module utilizing easy-to-ready language. Additionally, this document provides a section titled "Notes from the Teacher" and "Login Information for the Student." The teacher can share information such as suggestions for at-home activities, links to online resources, and additional information the teacher feels will benefit the caregiver and family.

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

- The materials provide resources and strategies for caregivers to help reinforce student learning
  and development. For example, in the letters to families, the materials suggest how families can
  prepare students for the TEKS lesson by providing an At-Home Activity and engaging them by
  asking questions about it, as shown in materials online, "Discover" tab, "Extra Resources," "TEKS
  1.6, Matters and its Properties": Home Letter, stating: "Dear Parent or Guardian, Your child is
  now beginning "TEKS 1.6, Matter and Its Properties." Read more to find out what your child is
  exploring!" and offering At-Home Activity: "To prepare your child for this lesson, try this short
  activity: together, list all the types of sports people use balls to play with. Then, create a table
  that lists each ball and its properties. Discuss that the properties listed are what people use to
  group objects or their uses. Engage your child by asking these questions: "How can objects be
  classified differently? What parts of a shoe make a system?"
- The materials provide information to share with students and caregivers about the program design. The Home Letter describes the unit's focus, including the TEKS covered in the unit, the "Performance Expectations" for students, and additional activities that families can do at home to reinforce their child's learning. These can be sent home to kick off each unit and are in a translatable Word document.
- The materials provide at-home practice activities for caregivers to help reinforce student learning and development. For example, in the Teacher's Guide, there is a section for each TEKS, "Connections to Community," sharing activities caregivers can do to help reinforce their child's learning as seen in the lesson "1.9A, Seasons," the materials suggest: "Ask families to help children gather examples of community events and activities that occur throughout the year." Caregivers and students can access online resources such as the "FUNomenal Readers" and "Solve It!" activities.

#### Materials include information to guide teacher communications with caregivers.

- The teacher guidance materials include information on engaging caregivers as partners in learning and offer suggestions for establishing a relationship, inviting ongoing communication and partnership, as suggested on the product website, "Teacher's Corner" tab, "Program Support," "Into Science," "Grade K-12, Reaching Out With Home Letters," stating: "You know how vital it is to keep parents and caregivers informed about what their child is learning in school since it helps them enforce it at home. Stay connected with your student's families virtually when you can't meet in person. Use the Home Letters in HMH Into Science™ to share important details about what they're learning and how students are learning it."
- The teacher guidance materials include information on engaging caregivers as partners in learning and invite ongoing communication and partnership. Teacher guidance materials templates for sharing and explaining how to support student learning, as shown on the product website, "Teacher's Corner" tab, "Program Support," "Into Science," "Grade K-12, Reaching Out With Home Letters." This article reinforces the importance of connecting with caregivers through the Home Letters. The article guides the teacher through the different sections and how to make the letter their own.
- The materials include teacher guidance for communicating with caregivers. To help families and caregivers become active partners in teaching, the teacher shares the "Family Room" video with caregivers in an email. The email reads: "Hello, Families! This year, we have an exciting new resource called the "Family Room" to help you understand what your child may be working on

in school. The "Family Room" has three sections: 1. "Getting Started" includes general tips on navigating Ed. 2. "Program Support" includes resources and strategies that I'll be introducing to your child during class and suggestions for how you can support your child at home. 3. "Shareables" for quick tips about the challenges many parents experience, like getting their children to talk about their learning. View this quick video to learn more, and remember: You're always welcome in the Family Room!

• The materials include teacher guidance for communicating with caregivers. The "Teacher's Corner" provides a less than 2-minute video for families and caregivers about the "Family Room" and how to use it. The video is informative on what to expect, how to work with the student, and how to navigate materials. This video guides the teacher: "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."

#### **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	Μ
	which knowledge and skills are taught and built in the course materials.	
2	Materials provide clear teacher guidance for facilitating student-made connections across	Μ
2	core concepts, scientific and engineering practices, and recurring themes and concepts.	
2	Materials provide review and practice of knowledge and skills spiraled throughout the year	Μ
3	to support mastery and retention.	

#### Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The materials include a cohesive scope and sequence that thoroughly outlines the lessons in the Teacher's Guide. The "Scope and Sequence" guidance includes the aligned Texas Essential Knowledge and Skills (TEKS) for the appropriate grade and divides each section by the content. Content sections include "Physical Science," "Earth and Space Science," and "Life Science."
- The first-grade pacing guide includes a side-by-side document showing the TEKS, a concise skill
  description, the number of days and minutes requirements for each lesson, and three different
  pathways to teaching the TEKS. The pacing guide contains the following categories: "TEKS
  Streamlined Path," "TEKS Emergent Bilinguals Path," and "TEKS Extended Path," which allows
  for flexibility based on the number of days science is taught within the district. This resource
  plans the year at a glance.
- The "Lesson at a Glance" and the "Lesson Planning" pages before each lesson in the Teacher's Guide detail pacing within a lesson. For example, each Lesson at a Glance has the TEKS at the top of the page of the Teacher's Guide.
- The teacher materials provide a detailed scope and sequence for K-8, showing the vertical and horizontal alignment of the TEKS throughout the school year.

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

- The materials include teacher guidance for providing students with opportunities to make connections, often intertwining the core concepts with the Science and Engineering Practices (SEPs) and Recurring Themes and Concepts (RTCs) over the course of the year.
- The materials guide teachers to support students in using "Science Theme Organizers" to scaffold the use of RTCs of the TEKS to support sensemaking about phenomena within and across lessons. Each lesson begins with a listed "Purpose": "Through the Scientific and Engineering Practices and Recurring Themes and Concepts, students will engage with engineering within multiple lessons."
- The materials provide teacher guidance within each lesson assessment to help students make connections between units over the course of the year. The assessment items intertwine the content TEKS with the science and engineering practices and recurring themes and concepts to ensure that students are achieving proficiency in the concepts not only within the content but also within the context of SEPs and RTCs.

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

- The materials provide review and practice of knowledge and skills with the TEKS, practiced and spiraled throughout the year to support mastery. The TEKS often intertwine with Science and Engineering Practices (SEPs) and Recurring Themes and Concepts (RTCs)
- In each Day 1 lesson, there is a "What Do You Already Know?" section. This part of the lesson instructs the teacher to activate prior knowledge with the students. The guidance states:

   "Activate Prior Knowledge by having children classify a ball and a sponge." In prior grades, children learned that objects have physical properties that can be used to describe and classify them. The Teacher Guide instructs the teacher to have the students describe the rubber duck's color, size, texture, and weight. The materials state that in prior grades, students learned that physical properties can be changed through processes such as cutting, folding, melting, and freezing.

#### **Indicator 8.2**

Materials include classroom implementation support for teachers and administrators.

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

#### Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The materials include overview documents to support teachers in understanding how to use all materials and resources, as seen in the "Overview Video" found in the "Online Dashboard."
- The materials provide overview documents to support teachers in understanding how to navigate and utilize the online resources, as seen in the "Walkthrough Guide" found in the "Teacher's Dashboard."
- The materials are organized in a way that facilitates ease of implementation and use. The Teacher Guide contains detailed recommendations for the use of all materials and components and strategies at the start of every lesson, labeled "Planning for Hands-on Activities." The recommendations are organized into days and time estimates. For example, teacher guidance for the "Explore Soil Material" lesson includes detailed learning objectives, materials needed, and preparation tips per day.
- The Teacher Guide includes a list of features the teacher can find throughout the curriculum, an explanation of the pacing of lessons, and a list of the key components for each lesson. The materials include a "Key Learning Activity" section that can be used in planning. Teacher

guidance is provided for supporting or enhancing student learning in the following sections: "Cross-Curricular Connections," "Connections to Community," "Assessments and Claims," "Evidence," and "Reasoning."

- The materials state they focus on one content TEKS per lesson, which is found in the "Lesson At a Glance" with included point-of-use details. The materials allow the teacher to have flexibility due to a TEKS-based organization. The materials indicate that they allow "Student Scientists" to take ownership of their learning through activity-based learning. The materials explain to the teacher they are built with formative and ongoing assessments through student interaction and daily exit tickets. The materials offer digital "Student Interactive Lessons," "English Language Proficiency" options, hands-on science activities, student collaboration in activities and discourse, and formative assessment options.
- The materials offer teacher guidance for each lesson. For example, in the lesson "Living Things Use Earth," the material provides the TEKS used and the Recurring Themes and Concepts and breaks down the "Lesson Objective." The lesson guides the teacher by providing a guiding question, vocabulary, and language development.

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

- The materials include science standards correlations for lessons units, lessons, or activities within the context of the grade level or course in teacher guidance documents and online resources. The Teacher's Guide includes grade 1 standards that correlate with learning within the unit and the standards from kindergarten that provide a foundation for the unit. The "Activate Prior Knowledge" section of the lesson guide on "Force of Motions" states that in prior grades, "children learned that they can use a magnet to push and pull other objects."
- The materials include cross-content standards for ELA, Math, and Social Studies in sidebar supports within the teacher's guide to lessons. In the "All About Heat" lesson, the "Do the Math" section indicates students will compare temperatures, and teachers should review the greater than and less than symbols for success in the lesson.
- The materials provide cross-content standards for ELA, Math, and Social Studies, found in the Teacher's Guide under "Cross-Curricular Connections" in the "Lesson Guides." For example, one lesson recommends the students "Do Math" by comparing the temperatures to see which is greater. Then, on Day 4, students should read, write, and share what they think caused the changes to occur within the images provided (giving them an opportunity to discuss using cause and effect relationships).
- The materials provide a "TEKS Correlation" section that includes a list of grade-level TEKS with the narrative and activities for each TEKS. Each lesson has an "Item Analysis Chart" that shows the standards covered in each assessment question to assist in monitoring student progress.
- Each lesson begins with a "Lesson At a Glance" portion that outlines the TEKS that will be covered in the lesson. The lesson further shows the TEKS used under Scientific and Engineering Practices as well as Recurring Themes and Concepts.
- The "TEKS Correlation" found on the "Teacher's Dashboard" details where each of the Processing Standards or TEKS can be found within the materials. For example, 1.1Ai (ask questions based on observations or information from text, phenomena, models, or investigations) can be found in the narrative for TEKS Lesson 1.9.A, Day 2, and again in Activity G1 "Skills Bank," Item 8.
- The Teacher's Guide includes a "Language X-Ray" section with teacher guidance to support vocabulary and language acquisition for Emergent Bilinguals and all learners. "Language

Development Worksheets" and "Vocabulary Anchor Charts" help students internalize each lesson's new words by organizing academic vocabulary and connecting it to prior learning.

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

- Materials include an appendix with a comprehensive list of all equipment and supplies needed to support students and teachers during investigations. The HMH home page includes a comprehensive material list for grade 1. Materials include hand lenses for TEKS Lessons 1.6.A, 1.10.A, and 1.12.B, goggles for TEKS Lesson 1.10.A, trays for TEKS Lessons 1.10.A, 1.13.B, and 1.11, heat-resistant gloves for TEKS Lessons 1.6.B and 1.8.B, hot plates for TEKS Lesson 1.6.B, primary balances for TEKS Lesson 1.6.A, straws for TEKS Lessons 1.7.A and 1.7.B, ribbons for TEKS Lesson 1.12.C, magnets for TEKS Lesson 1.6.A, blocks for TEKS Lessons 1.6.A, 1.7.A, and 1.7.B, and flashlights for TEKS Lesson 1.6.C.
- The grade 1 materials include an appendix with a comprehensive list of all equipment and supplies needed to support students and teachers during investigations.
- The "Hands-On Lab Materials List" is a separate component within the materials. The list is broken down by the item, how many are needed, the activity, and the TEKS. The lessons list the materials needed that cover the lesson and the activity. The lesson "Living and Nonliving Things" lists that the lesson will need a clipboard, paper, and a pencil. In addition to the list, the lesson provides preparation tips.
- Each lesson includes a list of the materials needed to facilitate the lesson and activity. For the lesson "Living and Nonliving Things," the teacher will need a clipboard, paper, and a pencil. In addition to the list, the lesson provides preparation tips.

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

- The Teacher's Guide includes a section on "Safety in Science Grades K-5," which contains a list of four aspects to review before any activity in the classroom, laboratory, or field. The four aspects are "Identify the Risks, Evaluate the Risks, Select Controls to Address Risks, Select Controls to Address Risks, and Implement and Review Selected Controls." For example, materials provide checklists of grade-appropriate protective personal equipment (PPE) for lab investigations.
- Materials provide teacher guidance for safety practices and appropriate use of safety equipment during investigations, in accordance with Texas Education Agency Science Safety Standards.
- "Science and Engineering Safety 101" contains information that covers the classroom, laboratory, and field. The materials state that concern for safety must begin before any activity in the classroom, laboratory, field, or engineering site and before students enter these areas. The information provided is for the teacher to use to ensure safety in all aspects. For example, in the lesson on "Heat Energy," Day 2, the guidance states: "Point out that the thermometer can be made of glass. Remind children to notify you if it breaks."
- The materials provide guidance for the student on safety practices during their investigations, as seen in the "Student Print Edition." Each lesson provides a "Safety" section for the students. For example, in the Student Edition for 1.8A "Heat," the "Safety" section states, "Tell your teacher if you break a thermometer."
- Materials provide teacher guidance for safety practices and grade 1 appropriate use of safety equipment during investigations, in accordance with Texas Education Agency Science Safety Standards. Materials provide student guidance for safety practices and grade 1 appropriate use

of safety equipment during investigations. Under the "Discover" tab of "HMH Resources" of "Light and Materials," Day 3, the "Hands-on Activities Safety" slide states to keep the craft sticks and chenille sticks away from your face and eyes.

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

#### Meets | Score 2/2

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

Evidence includes but is not limited to:

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

- The material offers a "Guide to Recommended Pacings." The pacing guide provides a "Streamlined Path," an "Emergent Bilinguals Path," and an "Extended Path." Each of the paths listed in the pacing guide provides a total of days and a total number of minutes. The days and minutes are listed in total and broken down per set of TEKS.
- Each lesson provides pacing information by day. For example, the "Force, Motion, and Energy" lesson is covered in 19 days for 570 minutes for the "TEKS Streamlined Path," 22 days for 660 minutes for the "TEKS Emergent Bilinguals Path," and 23 days for 690 minutes for the "TEKS Extended Path." The days and minutes are broken down into an optional mini-lesson, the actual lesson, a review and quiz, and extensions for the "TEKS Extended Path."
- At the beginning of each lesson, the number of days is noted, followed by a lesson plan pacing summary. The lesson plan pacing summary details each part of the lesson by minute and day.
- The material within each lesson or unit includes appropriate pacing suggestions for the grade 1 level. In the Teacher's Guide, page 129 uses a color-coded chart to divide the lesson over weather into six days: Day 1 for an "Engage," Days 2-4 for "Explore and Explain," Day 5 for "Elaborate," and Day 6 for "Evaluate."
- The grade 1 materials include guidance and recommendations on required time for lessons and activities, with options for various scheduling considerations. In the Teacher's Guide, the lesson on "What a Plant Needs" divides the lesson into five days, with 30 minutes for each day.

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

• The materials provide a TEKS-based organization that explains the teacher is not trapped in a rigid structure of units-chapters-lessons. The material provides guidance on the sequence of the content. The material provides a detailed scope and sequence that is TEKS based and outlines

the TEKS in the strategic sequence to be taught. The TEKS are taught through lessons that follow a developmental progression for the appropriate grades.

- Each lesson purposely groups modules with similar recurring themes and ideas, making it easier for students to connect scientific knowledge. The color-coded guide shows the matter and energy unit, TEKS 1.6, grouped with the unit on force and motion, TEKS 1.7 and 1.8. The material provides guidance for implementation that ensures the sequence of grade 1 content is taught in an order consistent with the developmental progression of science.
- The skills tracking section supports teachers in identifying the developmental progression of content and skills. For example, on Day 6, "Evaluate," "TEKS Quiz," the "Item Analysis Chart" shows the specific standards covered in each assessment question to assist in monitoring children's progress.

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

- The scope and sequence indicates a majority of the lessons support the development of the TEKS and SEPs. This is shown in the Teacher's Guide, which displays the scope and sequence along with the SEPs and RTCs beside it.
- The materials provide teacher guidance on how to make adjustments to extend units and lessons within the Teacher's Guide in the event that scheduling allows for additional instruction. For example: "TEKS 1.9.A, Planning, Lesson at a Glance, Time: 6 days, (30 minutes per day), EXTENSIONS: Choose none, some or all of the following, 1 DAY: ELPS English Language Development Minilesson 1.4.1, 2 DAYS: Elaborate, FUNomenal Reader: Sunrise, Sunset and Seasons, 1 DAY: Evaluate, Summative Assessment: Patterns on Earth (TEKS 1.9) Test."
- The materials include units, lessons, and activities for a full year of instruction. The pacing guide maps out the school year into three possible paths, including a "Streamlined" path, an "Emergent Bilingual" path, and an "Extended" path.
- The materials provide guidance for adjusting to local time and scheduling constraints. The pacing guide for grade 1 is divided into three pathway options; each is color-coded and divided into days and minutes for a year-long plan.
- The materials provide information for the teacher that allows for time adjustments based on the path students follow. The materials are designed to cover the grade-level science TEKS based on the district schedule for science instruction. The materials provide flexibility that can be covered in a school year.

#### **Indicator 9.1**

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

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

#### **Not Scored**

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

The 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 K-2 teacher guidance materials are appropriately designed with precise, designated places for important information. For example, materials use color-coded callout boxes to identify important information easily. In "Lesson at a Glance," the "Engage" section is green, the "Explore and Explain" section is blue, "Elaborate" is violet, and "Evaluate" is yellow.
- In digital student interactive lessons, the pictures and graphics support student learning and engagement without being visually distracting by having clear headings, subheadings, and images. The margins, edges, and empty spaces around the edges of the content and font used are consistent throughout the content and do not cause distraction. There is adequate white space around text in both digital and print formats. All images in both have enough color contrast to distinguish the focus of the image from the background in both the student material and the Teacher's guide.
- Materials include an appropriate amount of white space and a design that supports and does
  not distract from student learning. The materials include appropriate white space and balance
  well with the lessons' information. The lessons do not distract the learner and provide detailed
  images related to the lesson. The materials include animation-type images as well as real-life
  images. The real-life images offer enough variety and diversity to include all students.
- Materials include an appropriate amount of white space and a design that supports and does
  not distract from student learning. The materials and lessons provide very clear explanations of
  the lesson with clear titles, instructions, and sidebar information. The materials flow well, with
  clear subheadings and images throughout the lesson.
- The digital teacher guidance materials are designed for easy access. The materials include links to ancillary materials teachers can access to support differentiated learning within units and

make access to important information easy for planning and implementation, as seen in all of the TEKS under "Differentiated" sections, "Pocket Labs," "Ed online," and "Planning for Assessment" to list a few locations within each lesson).

# 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 without being distracting. For example, in the lesson "K.7A, Magnets," the images for the Explore activities provide visuals for students who may require additional support or guidance. The students in the images are real students from various backgrounds, ethnicities, nationalities, and genders.
- The materials incorporate age-appropriate pictures and graphics to support student learning and engagement. Grades K-2 materials utilize real-life photos of various students to provide visual support for vocabulary, activities, and content application, as seen in both student and teacher materials (online and print).
- The materials embed age-appropriate pictures that support student learning and engagement without being visually distracting. For example, the materials include vocabulary cards with clear and authentic images to define and support the new words students are learning, as shown on flip-over pictures of *living things* and *non-living things* (Day 1: "Engage" (TEKS 1.12.A)).
- The materials include age-appropriate pictures that support student learning and engagement, materials use both photos and pictures with simple labels to help students see important features, such as a picture of *sand* with pointing parts to respond to the question "Choose each letter to explore the properties of the sand." (Day 1: "Engage" (TEKS 1.10.A)).
- The materials embed age-appropriate pictures and graphics that support student learning and engagement without being visually distracting. In the student interactive lesson over changes in matter, flip vocabulary cards for *melt* and *freeze* with real and colorful images of a melting chocolate ice cream on a cone and ice on a mountain. The age-appropriate robot character within the interactive student lessons asks questions to support student learning and engage students.

#### Materials include digital components that are free of technical errors.

- The grade 1 materials include digital components that are free of technical errors. The digital Teacher's Guide, Student Interactive Lessons, Reports, Teachers' Corner Tabs, videos, and HMH website are free of technical errors, including spelling and grammar errors, inaccurate content materials, and wrong answer sheets.
- The materials are free of technical errors within the digital components. The materials are free of spelling, grammar, and punctuation errors. The materials are free from inaccurate content materials or information.

### **Indicator 9.2**

Materials are intentionally designed to engage and support student learning by integrating digital technology.

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

#### **Not Scored**

Materials are intentionally designed to engage and support student learning by integrating digital technology.

Materials integrate digital technology and tools that support student learning and engagement. Materials integrate digital technology to 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, Digital technology and tools enhance student learning through such features as interactive slides in the "Vocabulary" section of each TEKS lesson and online "Daily, Formative and Summative Assessments."
- The materials integrate digital technology and tools that support student learning and engagement. The materials provide digital student interactive lessons from which the teacher can directly teach. The materials provide tools such as note-taking, text-to-speech, speech-to-text, highlighting, bookmarking, and editing abilities. The lessons provide links to additional digital resources for teachers. The Ed Online portion provides speech-to-text support and an audio option in the lesson "Earth's Surface: Soil." The materials state that the speech-to-text allows emerging writers the ability to record their oral responses. The materials state the audio feature allows additional support for emerging readers who need to hear the text aloud.
- The materials provide teacher guidance for using online-related activities to support student learning. For example, in the lesson "1.6A, Matter," Day 1, under the "Can You Explain It?" section, the materials guide the teacher to utilize an online resource (2 videos) before introducing the "Guiding Question" to the students. This activity helps students create connections to what they may already know and what they wonder about. This material can also be found in the student's interactive lessons.

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

- The materials integrate digital technology to support student engagement with the science and engineering practices, recurring themes and concepts, and grade-level content. The lessons extend through digital interactive lessons offered through the program. Each lesson includes links to interactive lessons reinforcing science and engineering practices, recurring themes and concepts, and grade-level content. The interactive lessons provide access to a Google Classroom for students.
- The materials integrate digital technology to support student engagement with the science and engineering practices, recurring themes and concepts, and grade-level content. The materials offer interactive opportunities for students within the lessons. During the activity, students can utilize and practice vocabulary words and concepts directly related to the TEKS. Many lessons have students drag and drop images to match their description or the vocabulary words.
- The Interactive Student materials allow students to obtain, evaluate, and communicate information using digital tools. For example, materials include images students can interact with by clicking on them to gain additional information, activate prior knowledge, and interact with vocabulary words, as seen in the lesson "1.6A, Properties of Matter." The "interactive Student Lessons" incorporate videos and opportunities to record their responses to questions.
- The materials provide digital tools for students to engage with recurring themes and concepts. For example, in the "Interactive Student Lesson" materials, "Exit Ticket" Day 2, students identify the cause and effect by dragging the words to the correct image.

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

- The materials integrate digital technology that supports teacher-to-student collaboration. The digital interactive student lessons allow students to select a text and then highlight or take notes about it. Students can share notes under the "Review" with a teacher. The digital interactive lessons can also be shared with Google Classroom, which provides a collaborative space to post assignments and provide feedback.
- The materials integrate digital technology, allowing teachers and students to collaborate. Each lesson extends through an online interactive lesson. The teacher can assign the interactive lesson to the whole class or assign particular students to group them for more detailed collaboration.
- The digital materials provide opportunities for students to collaborate with other students. The teacher can assign Interactive Lessons to preset groups of students so they may collaborate on the activity(ies). For example, in the lesson "1.6C, Parts of a Whole," the teacher guide under "Pocket Lab" states the teacher may assign an activity to the students for online collaboration through the "Ed Online" resources (under discover and then assign).
- The materials integrate digital technology that supports teacher-to-student collaboration. The materials in Online Ed, under the "My Classes" tab, provide a Virtual Classroom connected to Google Classroom so that the teacher and student may collaborate with other students.

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

• The K-2 materials are accessible and compatible with Chromebooks, iPads, PCs, Apple computers, and smartphones.

- The materials integrate digital technology that is compatible with a variety of learning management systems. The materials state that the following operating systems can provide accessibility: ChromeOS / Chrome / ChromeVox, Windows 10 / Chrome / JAWS, Windows 10 / Firefox / NVDA, Mac 10.15 & 11 / Safari or Chrome / VoiceOver, and iOS 13&14 / Safari / VoiceOver. The materials state the following applications can be used for magnification tools: Windows & Chrome OS: Magnifier and Mac: Zoom. The materials offer support for the teacher on accessibility.
- The materials integrate digital technology that is compatible with a variety of learning management systems. The materials are compatible with Canvas, Schoology, and Google Classroom to enhance student learning.

### **Indicator 9.3**

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

1	Digital technology and online components are developmentally appropriate for the grade	Yes
-	level and align with the scope and approach to science knowledge and skills progression.	
2	Materials guide teachers in using embedded technology to support and enhance student	Yes
2	learning.	
2	Materials are available to parents and caregivers to support student engagement with	Yes
5	digital technology and online components.	

#### Not Scored

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

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 guide teachers in using 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.

- Materials provide information identifying how online and digital components align with gradelevel science knowledge and skills. The materials provide related TEKS and ELPS for online and digital components within the Teacher's Guide.
- 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 materials provide components to support accessibility of the TEKS provided in the scope and sequence to ensure skills progression. Examples include speech-to-text, text-to-speech, note-taking, highlighting, and more. The assessments allow for editable color schemes and font size and provide zoom features.
- The digital technology and online components align with the progression of the grade-level scope and approach to science knowledge and skills. For example, the online materials follow the same scope and sequence as the printed materials, as listed in the Teacher's Guide and materials.
- The digital technology and online components are developmentally appropriate for the grade level. For example, the digital and online components provide accessibility tools such as text-to-speech, speech-to-text, drag and drop, highlighting, note-taking, and many other tools to make the materials easily accessible for the students.

#### Materials guide teachers in using embedded technology to support and enhance student learning.

- The materials guide teachers in using embedded technology to support and enhance student learning. The "Teacher's Corner" offers a "Teacher Success Pathway" that provides videos and professional development training to assist the teacher in appropriately using the materials. The materials offer "Getting Started with Ed and Schoology." The materials state, "Explore an interactive classroom to become acquainted with key instructional resources to organize your classroom better. Then, you'll watch a short model lesson to see how the resources you'll need in your first week come together in a lesson."
- Materials guide teachers in using embedded technology to support and enhance student learning. The sidebars of each lesson provide the teacher with additional resources to use. The lesson offers guidance on accessing interactive lessons and digital opportunities for differentiation, reteaching, and emergent learners.
- The materials provide teacher guidance for using the embedded technology to support and enhance learning. For example, in the Teacher's Guide, each lesson and each day, the materials incorporate side notes titled "Ed Online" that share online resources. The "Ed Online" guides teachers to use the speech-to-text interaction online for "emerging writers to record their oral responses, allowing students to complete work independently, allowing you to review their responses later."

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

- Materials are available to parents and caregivers to support student engagement with digital technology and online components. The materials provide a letter teachers can send home to parents that assist them with accessing materials to help their students. The letter includes information on logging in to Ed, downloading lessons, how to interact with the lessons, and exploring "FUNomenal Readers."
- Materials are available to parents and caregivers to support student engagement with digital technology and online components. Materials provide templates for the beginning-of-the-year letters, middle-of-the-year, and end-of-the-year letters. Teachers can provide parents with information regarding the lessons' technological and online components.
- The materials provide families with tips on supporting appropriate student engagement with digital and online components, as seen in the "Family Room" in the online resources, including topics: "Getting Started," "Family Support," and "Shareables."