EduSmart Science Grade K

EduSmart Science Grade K 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.

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Indicator 2.1

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- Materials provide multiple opportunities for students to develop, practice, and demonstrate mastery of grade-level scientific and engineering practice (SEPs). For example, the following hands-on activities cover K.1.B (use scientific practices to plan and conduct simple descriptive investigations and use engineering practices to design solutions to problems): Activity K.6A Describing Objects under the Matter and Its Properties category, activity K.7A Attractions under the Force and Motion category, and activity K.10C Wind Socks and Wind Direction under the Earth and Space category.
- Materials provide multiple opportunities for students to develop, practice, and demonstrate mastery of SEPs. For example, materials address K.1A in activity K.7A Magnetic Toy under the

Engineering and Design category, and in the Interactivity K.1 to K.4 Scientific and Engineering Practices under the Scientific and Engineering Practices category.

- The Kindergarten materials provide multiple opportunities to develop grade-level appropriate SEPs. Students have multiple opportunities to participate in hands-on activities. For example, during Classifying Rocks, Field Study Student Investigation, students describe and classify rocks by their size, shape, color, and how they feel. The instructions state, "1. How can you be safe when doing science activities outside? Turn and talk with a classmate about how you stay safe outside. Listen to your classmate, too! 2. With your teacher and classmates, make a list of safety rules for collecting rocks outdoors. 3. Listen carefully to the rules your class and teacher create together. Then repeat the rules to make sure you understand. 4. Draw a picture of yourself being safe outside during science. Write the rule you are following. Use the chart in your classroom to help you. 5. Come up with a plan for collecting and observing rocks."

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

- Materials provide multiple opportunities to make connections between overarching concepts using recurring themes. The materials for each TEKS include a teacher resource guide with the anchoring phenomenon and guidance for how the anchoring phenomenon will be addressed throughout the content instruction. Vertical alignment documents provide side-by-side comparisons of recurring themes and concepts (RTCs) as they have been taught in previous grades and how they will be taught in future grades. For example, in the Kindergarten–2nd-grade band, students must identify forms of energy and properties of matter [TEKS K.5(E), 1.5(E), and 2.5(E)]. Then in the 3rd–5th-grade band, students must investigate the flow of energy and cycling of matter through systems [TEKS 3.5(E), 4.5(E), and 5.5(E)].
- The design challenges in the materials allow students to make connections between the overarching concepts using recurring themes. These engineering design challenges support SEPs, RTCs, and phenomena and are available in each reporting category. For example, in Kindergarten, students must use a metal can and magnets to design and create a character that meets specific success criteria. This specific Scientific Engineering Design Challenge, Magnetic Toy, addresses the content through TEKS K.7, supports the science and engineering practice through TEKS K.1(B), and supports recurring themes and concepts through TEKS K.5(D).
- The materials use recurring themes to make connections between concepts. For example, the Scope and Sequence Document linked under the Teacher Resources icon notes that when teaching content on Force, Motion, and Energy, teachers integrate recurring theme K.5BA (identify and use patterns). K.5A is also integrated when teaching the concept of Earth and Space. Additionally, the level Reader- K.5A Patterns, located under the Recurring Themes and Concepts category, integrates recurring theme K.5A (identify and use patterns to explain scientific phenomena or to design solutions) with a real-world scenario: patterns on clothing that people wear at the beach.
- Materials strategically and systematically develop students' content knowledge and skills as appropriate for the concept and the grade level as outlined in the TEKS. Each core content standard has an Instructional Module. For example, in the Instructional Module for TEKS K.10(B), Weather and Seasons, students observe and recognize that weather changes daily and over seasons. This addresses the core concept as outlined in TEKS K.10(B).
- The TEKS are grouped according to reporting category and standards. These reporting categories are broken down into smaller units that allow for a more specific and in-depth comprehension

of the TEKS. For example, within the reporting category for Force, Motion, and Energy, content is broken down into units for TEKS K.7(A) Attractions, K.8(A) Increasing and Decreasing Light Energy, and K.8(B) Light and Shadows. This specific content design allows students to build their content knowledge at appropriate pacing while allowing for an in-depth learning opportunity for each TEKS.

- Materials systematically develop students' content knowledge as shown in the Scope and Sequence Document under the Scientific and Engineering Practices Category. The Scope and Sequence divides the instructional year into three types: SEPs units, RTCs units, and Reporting Category units that integrate the three dimensions of science. The document also provides systematic content knowledge and the best order to introduce topics to build understanding. For example, in lesson K.6(A), Describing Objects, students are introduced to concepts for four to five days and then to RTCs in three to four days to create connections across skills.
- Content knowledge is systematically organized for students, as evidenced by the Anchoring Phenomena and Instruction Module resources in each concept unit. For example, the Matter and its Properties category, K.6A Describing Objects Concept unit, includes two student resources: an Anchoring Phenomena in the form of a picture (in this case, toys of different shapes, colors, and textures) and an Instruction Module in the form of an interactive video for students to practice identifying properties of objects.
- The materials develop students' content knowledge and skills appropriate for the concept and grade level as outlined in the TEKS. During the lesson "Soil Experiment 1: Do Plants Grow Better in Soil?" The teacher gives examples of ways rocks and soil are used. The objective is for students to "observe and describe plant growth when seeds are placed in a container with soil and a container without soil to determine which one is better for plant growth." The following TEKS are listed for this lesson: SEP/RTC TEKS: K.1A, K.1B, K.1C, K.1D, K.1E, K.1F, K.2B, K.2C, K.3A, K.5A, K.5B, K.5C, K.5G. Grade-level content knowledge and skills are taught using SEPs and recurring themes so students can build and connect knowledge and apply it to new contexts.
- The materials support teachers in developing students' content concepts and skills by giving them resources and cues at varying points in lessons and units throughout the grade level. During the lesson "Soil Experiment, 1: Do Plants Grow Better in Soil?," the teacher asks the following reflection questions: "1. Did bean plants grow better in the cup with soil or the cup without soil? Should grow better in a cup with soil. 2. What do you think bean plants need to grow tall? Sunlight, water, and air. They do not need soil, since some beans grow without soil."
- The materials contain teacher lesson notes that explain, describe, and make connections between the SEPs and the development of conceptual understanding. During the lesson "Soil Experiment, 1: Do Plants Grow Better in Soil?," the following background information is provided for the teacher and students, "Soil is the top layer of the Earth's surface, consisting of rock and mineral particles mixed with organic matter. The amount of each component affects a plant's growth, and the size of the particles controls how much water the soil can retain. In this investigation, students will compare how well a bean plant will grow in a cup with a wet paper towel and a cup with soil by measuring the growth height. You can set up each one for the class and let students make observations over time. You may need to make height measurements of each plant for them to compare; they will only be writing down observational data."

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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.

- 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 curriculum includes inquiry-based learning, which encourages students to ask questions, plan and conduct investigations, and engage in problem-solving to develop a deeper understanding of science concepts. Lessons provide opportunities for students to design and carry out investigations in the classroom, laboratory, and field. Through the Anchoring Phenomena activity, students are prompted to come up with their own questions related to a phenomenon that is presented to them or which can be used for future investigations. For example, in the Anchoring Phenomena for TEKS K.9(A)(B) Day and Night Patterns, students view a time-lapse video that shows the sun rising in the background. Students are expected to ask their own questions regarding the image, but teacher prompts are provided to scaffold student questioning. This Anchoring Phenomena activity supports TEKS K.9(A)(B). In addition, within the Matter and Its Properties category, Concept Unit K.6A Describing Objects, the Anchoring Phenomena resource is a picture of toys of different shapes, colors, and textures. The teacher can guide students to ask questions. Questions that students may have could include: How can I organize my toys? How can I make it easy to organize my toys?
- Every standard in every grade level includes hands-on activities that provide opportunities for students to work together to plan and conduct investigations and solve problems. A hands-on activity icon links an investigation or an engineering design challenge. Group projects and discussions allow students to share ideas and learn from one another. For example, in the hands-on activity in TEKS K.8(B) lesson, Direction of Light, students work collaboratively to conduct a classroom investigation to determine what will happen when light hits an object. Students observe, draw, and record their findings as well as discuss their observations and why they believe these phenomena happened. This activity supports TEKS K.8(B), K.1(A), K.1(E) and K.5(C). In addition, the hands-on Light and Sight Investigation that covers TEKS K.8(A) engages students in a collaborative inquiry that helps them understand that the amount of light determines how well we are able to see objects.

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Indicator 2.2

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- Materials embed phenomena and problems across lessons to support student learning. The materials include Instructional Modules for each core content standard and support students' content knowledge by presenting information directly aligned with grade-level TEKS. For example, the Instructional Module for TEKS K.8(B), Light and Shadows, introduces students to light energy. Students learn that light travels through some objects and is blocked by other objects, creating shadows. Additionally, phenomena are embedded within the Instructional Modules. Within the Instructional Module for TEKS K.8(B), students observe the phenomenon that the sun is our main source of light. The Instructional Modules include embedded strategic questioning to help support students as they construct and develop their knowledge of grade-level content TEKS.
- Materials use phenomena to drive student learning and mastery of science content and concepts. Each concept unit includes an icon called Instruction. Each Instruction icon has a link to Anchoring Phenomenon, where students view a picture or a video clip encouraging them to notice, think, and ask questions as they engage in new content. For example, in Matter and its Properties, concept Unit K.6A Describing Objects, the Anchoring Phenomenon link includes a

picture of toys of different shapes, colors, and textures. This anchor allows students to notice the properties of the toys and ask questions that are aligned with the student expectation.

- Materials support students in the authentic application of scientific and engineering practices (SEPs) at multiple entry points. One entry point is the landing page of the LMS; it provides a Scientific and Engineering Practices Icon that links to Hands-On activities, which includes four K.1 – K.4 Scientific and Engineering activities: Scientists and Engineers, Science and Innovation for a Better World, Science and Innovations – Outdated Technology, and Scientists and Engineers – What do They do? Another entry point is the Engineering Design Challenges. These design challenges are available for each reporting category. For example, Magnetic Toy, the engineering design challenge in K.7A Attractions, asks students to use what they know about magnets to make a toy using magnets properly. Students design a Mr. Potato Head using the practices in the engineering design process. This engineering design challenge supports scientific and engineering design TEKS K.1(B), K.7(A), and K.5(D).
- Phenomena activities are used as a central anchor to drive student learning across grade-level content in all disciplines. During the kindergarten lesson, Observing Earthworms, students participate and learn with a hands-on activity. The materials state, “Procedure 1. Have students observe earthworms in a clear plastic cup. They can pick up the cup to see underneath the worm. 2. Place wet paper towels onto trays and add the earthworm. Help students observe how the earthworm moves. Keep it moist with the spray bottle of water.” Students answer questions like, “Can you tell which end is the head and which end is the tail?” The students complete a class data chart that is provided. The teacher asks students to predict what will happen if they shine a light on the head and tail of the worm. The students record their predictions and then test them. The teacher monitors students when they shine a light on the tail. The teacher asks, “What is the effect?” and asks students to predict what will happen if they gently blow air through a straw on the head and tail of the worm. The students practice analysis by responding to the questions “1. Can worms see the light? No, because worms do not have eyes. 2. What happened when we shined a light on a worm’s head? It moved away 3. What happened when we shined a light on a worm’s tail? It had no reaction 4. How does a worm move if it has no legs? It creeps along by stretching and relaxing muscles. 5. How does moving away from light help a worm survive? If a worm is in the light, other animals like birds can see the worms and eat them. 6. What happened when we blew air on a worm’s head? It moved away. 7. What happened when we blew air on a worm’s tail? It moved away. 8. How does moving away from wind help a worm survive? Wind can dry out the moist skin of a worm. It breathes through its skin, so it needs to stay wet. This is why we put them on wet paper towels.” The lesson incorporates reading, math, writing, science, and art.
- Materials provide opportunities for kindergarten students to develop, evaluate, and revise their thinking as they engage in phenomena and define/solve problems. The extension activity for Observing Earthworms states, “The students find out more about scientists who study animals like worms during a trip to the school library. Scientists who study animals are called zoologists. Scientists who study worms like these earthworms are called helminthologists.”

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

- The hands-on activity for TEKS K.8(A), Light and Sight, leverages students’ prior knowledge of their five senses to explore different forms of energy, such as light. Students have the prior knowledge that they use their eyes to see. This activity builds on their understanding when it

introduces the phenomenon that light must shine on an object in order for us to see it with our eyes.

- Each core-content TEKS is supported by an Anchoring Phenomenon. For TEKS K.12(A)(B) the Anchoring Phenomenon, Thirsty Elephant, leverages students' prior knowledge that all animals need basic things in order to survive. This activity builds on their prior knowledge and deepens their understanding that all animals depend on air, water, food, space, and shelter in order to survive.
- Materials intentionally leverage students' experiences related to phenomena. For example, in the Earth and Space Category, K.9A/B The Day and Night Pattern, the scientific but kid-friendly anchoring phenomenon is a short clip of a city in the evening that shows the sun setting in a neighborhood.
- Materials intentionally leverage students' prior knowledge and experiences related to engineering design challenges. The challenges build on information and experiences relevant to students in kindergarten. For example, the engineering design challenge: K.11 Engineering Rocks! under the Engineering category, builds on students' own experiences on the playground as they use rocks, represented by candy, to design a new piece of playground equipment.
- The materials elicit and leverage students' background knowledge and experience to adequately address potential areas of misunderstanding. The lesson, Science and Innovation for a Better World, allows for a "Home Connection." The students ask their parents or caregivers about the first phone they can remember using. The materials state, "Have the students draw pictures of the phone with their parents and bring them to school. Compare the various phone drawings among students. Various generations and ages of caregivers will have very different experiences with telephone innovations."

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

- Materials outline for the teacher the scientific concepts and goals behind each phenomenon and engineering problem. The teacher exemplar for the Engineering Designs provides the appropriate information to support the concepts and goals for each of the engineering designs. For example, the Engineering Design for TEKS K.11(A), Engineering Rocks provides teachers with the appropriate core concept standard TEKS K.11(A): Observe and generate examples of practical uses for rocks, soil, and water. Additionally, the teacher document provides the recurring theme and science and engineering practices TEKS that align with the activity. The teacher document provides step-by-step instructions on how students will complete the design challenge as well as the success criteria for gauging student mastery of the goals.
- The hands-on activity for TEKS K.13(C), Modeling Life Cycles, asks students to create a 3D model that illustrates that a life cycle does not travel in a circle. The teacher guide for this activity outlines the scientific concept by explicitly stating the core concept for K.13(C). The teacher guide also provides background information on the phenomena of how plants are a system of parts that work together. Additionally, the teacher document provides the objective and goal that students should be able to master by the end of the activity.
- Teacher materials include a goal statement for each concept unit's phenomena. For example, in the category Organisms and Environments, K.12A/B Needs of Plants and Animals, Instruction, Anchoring Phenomena K.12A/B, the goal statement reads: "Anchoring phenomena are designed to help engage students with real-world challenges and situations." Additional materials that clearly outline the scientific concepts and goals behind each phenomenon for the teacher

include an Anchoring Phenomenon – Basic Needs Plants Teacher Version document. This document is also found in the introductory icon as a link that can be printed by the teacher.

- Materials clearly outline the scientific concepts and goals behind each engineering problem for the teacher. For example, in the Engineering Design Challenge: K.7A Magnetic Toy found in the Engineering Design category, the scientific goals are stated in the Teacher Directions section, "Goal: Make a toy that is similar to Mr. Potato Head but uses magnets to work properly." It also includes a rubric at the end of the document with performance-level descriptors for recommended success criteria: Construction, Communicating Results, and Redesign.
- The Materials outline the scientific concepts and goals behind each phenomenon and engineering problem for the teacher. During the lesson, Objects in the Sky – Field Study, the students observe, describe, and illustrate the sun, moon, stars, and objects in the sky, such as clouds. The TEKS covered are K.1C, K.1D, K.1E, K.1F, K.2A, K.3B, K.3C, and K.4. The materials identify student learning goal(s) behind each phenomenon or engineering problem. The lesson, Objects in the Sky – Field Study, lists the goal of the investigation as "observe, describe, and draw the sun, moon, stars, and clouds." The students create safety rules for outdoor investigations and talk to a partner to share ideas and promote the student's voices. Students record their answers on chart paper to be displayed in a common area to use as a reference when writing.

EduSmart Science Grade K

Indicator 3.1

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

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

Meets | Score 6/6

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

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

Evidence includes but is not limited to:

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

- Materials are vertically designed for students to build and connect their knowledge and skills within and across units and grade levels. For example, in TEKS K.12A/B, Needs of Plants and Animals, students learn to recognize the difference between living things and nonliving things based on their basic needs or lack of needs. This will create and build foundational knowledge for students to progress to the next Instructional Module for TEKS K.12A/B, Plants and Animals, in which students learn that plants and animals have structures that help them survive in their environment.
- Teachers can use the vertical alignment document to see the learning and knowledge from previous grade levels that prepared students for learning current grade-level content. For example, each grade level includes an Instruction Module for K.6A, 1.6A, and 2.6A. The modules are mini interactive lessons that use pictures and voice and drag-and-drop features to introduce topics and have students practice what they learned. Vertical alignment is evidenced by the content. For example, the kindergarten K.6A Instruction Module teaches students to identify and record observable physical properties of objects, including shape, color, texture, and material. The first grade 1.6A Instruction Module allows students to classify objects by observable physical properties, including shape, color, and texture. Second grade has three Instructional Modules, two 2.6A modules on the classification of matter by properties and one

2.6A module on the classification of matter by solids and liquids. Teachers can find the instructional modules for their grade level by following this path: select the grade level, select the Matter and Its Properties Category, select the icon called Instruction, then select the Instruction Module.

- The materials connect new learning goals to previous and future learning across grade levels. The vertical alignment document shows how students build and connect their knowledge across grade levels. For example, the vertical alignment document shows that in kindergarten, students will observe and generate examples of practical uses for rocks, soil, and water (K.11), then in first grade, students build on that learning when they identify and describe how plants, animals, and humans use rocks, soil, and water (1.11A). In second grade, students continue to connect to and build on the learning from previous grades when they distinguish between natural and manmade resources (2.11A).
- The materials connect new learning goals to previous and future learning within grade levels. The scope and sequence document presents TEKS that show within-grade-level knowledge connections. For example, the scope and sequence for kindergarten lists the SEPs that are addressed throughout the lessons of the Earth and Space K.10 lessons. The SEPs include K.1A (ask questions based on observation), K.1B (plan descriptive investigations), K.1C (safe practices), K.1D (use tools), K.1E (observation as evidence), K.1F (record and organize data), K.2B (analyze for features and patterns), K.2C (math to compare objects), and K.3A (develop explanation supported by data and models). Additionally, the materials further help students to build and connect their knowledge and skills related to all grade-level content by allowing them to apply the RTCs and SEPs from one concept to the next. In this way, materials present and address the SEPs and RTCs in such a way that supports students building and connecting knowledge and skills within and across units throughout the year.

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

- Materials include lessons that are intentionally sequenced to scaffold learning in a way that allows for increasingly deeper conceptual understanding. The lessons begin with the anchoring phenomenon: a real-world scenario that students relate to, that allows them to anchor their learning in something that is familiar to them. Then the materials guide the teacher and the students through learning via visual literacy and real-world examples. The instructional module is designed to allow for student discussion facilitated by the teacher. For example, in K.9A/B, The Day and Night Pattern, students watch the video of the sun and moon to activate their prior knowledge and serve as anchoring phenomena with discussion prompts.
- The lesson cycle is set up for the gradual release of students to scaffold support for student mastery. After the anchoring phenomena, students work on several activities. For example, in TEKS K.7A, One Magnet, Different Objects, students work collaboratively to explore and identify objects that are attracted to magnets and analyze data by identifying any significant patterns found in the objects attracted to the magnet. Without the knowledge gained from the direct-teach through the Instructional Modules, students would lack the necessary foundational knowledge to put their learning into practice.
- 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. Teachers can view Concept Units in two ways: by Resource Type or by 5E Model. When viewed by the 5E model, materials are sequenced to scaffold learning. For

example, learning begins with the anchoring phenomenon in Engage, then students explore the concept through Engineering Design Process (EDP) challenges of investigations in Explore. Next students and teachers solidify concept knowledge through an Instructional Module in Explain, then students continue forming their understanding of the concepts through an interactive glossary in Elaborate. Finally, teachers check for understanding using a quiz in Evaluate. For example, in Concept Unit K.7A, Attractions, students engage in the lesson as they anchor their learning by noticing and asking questions as they view a short clip of magnets sticking together. Then, students explore the Engineering Design Challenge, K.7A, Attractions, where they use magnetic and non-magnetic items to create a magnetic toy. Students explain their thinking as they view and interact with virtual magnets via the K.7A Attractions Instruction. Students elaborate on their understanding of the words *attract*, *magnet*, and *repel* through the glossary named Attractions, and finally, evaluation is in the form of an online 4-question quiz.

- The materials provide students with opportunities for increasingly deeper conceptual understanding. For example, in the descriptive investigation, K.6A, Describing and Comparing Objects, student groups sort objects based on characteristics such as color, size, and texture. They compare how they sorted with other groups, and then the teacher guides the class using questions at the analysis level such as, “Is the largest object always the heaviest? Did any objects have the same color? Did any objects have the same texture?”
- The materials sequence instruction in a way that activates or builds prior knowledge before explicit teaching occurs. For example, the lesson, Scientists and Engineers – Discovery, states, “Show students a short video about Mae Jemison, Isaac Newton, or another important scientist or engineer” and guides teachers to ask, “How do scientists and engineers create new ideas, discoveries, or inventions?” Students brainstorm how scientists and engineers might generate ideas or discoveries. The materials provide discussion prompts including “...seeing something in the natural world that makes them curious, having an experience they can’t explain, or needing a tool or object that doesn’t yet exist.” Students create an illustrated story about making or discovering something new. Students also draw or write a story that includes a scientific discovery or engineering creation. The story can be real or imaginary. The students also reflect on the following questions: “What questions do you have about nature that you want science to answer? How do scientists and engineers work together to make the world a better place?” After students’ prior knowledge is activated and noted by the teacher, the materials guide teachers to scaffold students’ learning in a concrete way. The lesson also provides an extension where the teacher shows a picture of Henry Ford and a Model T production line. The teacher asks the students how they think Henry Ford was able to envision making so many cars at once. The students then design an assembly line for their favorite food and think about how it would look and how it would work. The teacher can show videos of other food assembly lines to give students ideas.

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

- Materials incorporate all grade-level scientific and engineering practices as outlined in the TEKS. For example, in TEKS K.10A, Classifying Rocks, the core concept is for students to describe and classify rocks by their size, shape, color, and texture. Students engage in a rock-sorting activity where they classify rocks by size, then they discuss other ways to classify rocks (For example, smooth rocks vs. rough rocks, light-colored rocks vs. dark-colored rocks, rocks with layers vs. solid rocks, etc.). This activity includes the following scientific and engineering practices: TEKS

K.1E (observation as evidence), K.1F (record and organize data), K.2C (math to compare objects), K.3B (communicate explanations individually or collaboratively), and K.3C (listen actively, engage respectfully), and Suggested RTC connection - K.5A (identify and use patterns). This activity also presents the core concept TEKS K.10A. Recurring themes and concepts are also accurately presented, for example, K.5C (describe properties in scale).

- The materials clearly present grade-level-specific core concepts, recurring themes and concepts, and science and engineering practices. For example, in the activity for TEKS K.10A, Rocks In a Bag, the core concept is to describe and classify rocks by the observable properties of size, shape, color, and texture. In this activity, students verbally describe the physical properties of rocks using correct scientific vocabulary including "smooth, rough, round, color words, etc." This activity accurately presents recurring themes and concepts as the students describe and compare the characteristics of the rocks they observe. This aligns with the recurring themes and concepts TEKS K.5C (describe properties in scale). Students also use a balance to compare the relative mass of rocks, then discuss the different ways their rocks have been described, an activity that aligns with the science and engineering practices TEKS K.1D (use tools), K.1E (observation as evidence), and K.3A (develop explanation supported by data and models).
- The materials provide opportunities for students to generate scientifically accurate ideas based on data they have collected or observed during a demonstration. For example, in the lesson, Windsocks and Wind Direction, students experiment with and create a windsock through a hands-on activity. Students follow these steps: "Step One: Cut the bottom from an empty plastic cup. Step Two: Place masking tape or duct tape over the cut edges of the cup. Step Three: Use a hole punch to make holes around the edge of the cup with duct tape. Step Five: Thread the plastic strips through the holes and tie them to keep them in place. Step Six: Punch 2 holes in the larger opening of the cup. Use yarn or string to make a hanger. Step Seven: Hang outside a classroom window." After constructing their windsocks, students will complete a wind observation book where they will "draw observations and describe the strength of the wind". Once students have constructed their own explanations of the phenomenon, they answer the question, "Can you tell what direction the wind is moving?" Next, the materials guide teachers to introduce new terms and concepts.
- The teacher materials provide accurate scientific content that is current and reflects the most current and widely accepted explanations. For example, in the lesson, Windsocks and Wind Direction, teacher materials provide accurate content and explanations when they state, "A windsock is an instrument used to detect wind direction. It is a tapered tube of brightly colored cloth that is held open at one end by a metal ring. When the wind is blowing, it moves down the tube, causing the narrow end to point in the same direction the wind is blowing." The lesson also mentions that "Windsocks are used at airports to help pilots determine the wind direction along the ground. Meteorologists use wind direction to help predict the weather. Windsocks can also help give a rough estimate of wind speed."

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

- The materials define the boundaries of the main concepts that students must master for the grade level or course. During the lesson, What is Moving Air and What Can It Do? students identify evidence that supports the idea that air is all around us and demonstrate that wind is moving air, using items such as a windsock, pinwheel, or ribbon. The TEKS for the lesson include K.1A, K.1B, K.1D, K.1G, K.5B, and K.5E. The materials state, "Students will understand that

although you cannot see air, you can capture it and it will fill up space. They will also understand that moving air has energy. This energy can make other things move." The materials include learning targets for grade-level concepts.

- 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. The materials also include a vertical alignment document that specifies the TEKS for each objective.
- The materials define the boundaries of content that students must master for the grade level. For example, the materials include quizzes to assess student mastery of the core concepts of each grade level. Each quiz includes questions and the TEKS each question is assessing. For example, the quiz for TEKS K.6A, Describing Objects, assesses a student's mastery of understanding that our five senses help us describe the objects in our world. Including the TEKS for each question within the assessment ensures that student mastery is being assessed within the boundaries of their appropriate grade-level main concepts.
- The materials clearly define the boundaries of content that students must master for the grade level. The scope and sequence document presents the TEKS and objectives that need to be mastered in kindergarten. Target lessons also provide guidance on the learning objectives that must be accomplished for grade-level mastery. For example, Engineering Design Challenges are available for each reporting category. In the lesson, TEKS K.11A, Engineering Rocks, students act as engineers working on the problem of designing a new piece of playground equipment using colored rocks that scientists just made. Students use what they know about classifying rocks and their shapes. This design challenge addresses the core concept of TEKS K.11A: Observe and generate examples of practical uses for rocks, soil, and water. The Teacher's Guide includes success rubrics that outline student mastery requirements for each challenge using the following categories to score students' design and presentation: advanced, proficient, developing, or beginning.

EduSmart Science Grade K

Indicator 3.2

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

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

Meets | Score 6/6

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

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

Evidence includes but is not limited to:

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

- Materials support teachers in understanding the vertical alignment guiding the development of grade-level content, recurring themes and concepts, and scientific and engineering practices. The Teacher Resource Guide provides a vertical alignment of the standards by providing teachers with the prerequisite knowledge that their students have. The Teacher Guide also provides the teacher with the background knowledge that their students may have regarding the standard. For example, for TEKS 1.6A (Classify objects by observable physical properties including, shape, color, and texture, and attributes such as larger and smaller and heavier and lighter,) the vertical alignment document shows that K.6A (Identify and record observable physical properties of objects, including shape, color, texture, and material, and generate ways to classify objects) is the prerequisite TEKS for 1.6A (Classify objects by observable physical properties). The vertical alignment document shows that second-grade students will connect to previous learning when they meet the upcoming grade level expectations for 2.6A (classify matter by observable physical properties, including texture, flexibility, and relative temperature, and identify whether a material is a solid or liquid).

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- The scope and sequence provides horizontal alignment and explains the order in which units are suggested to be taught so that student knowledge and skill build upon one another to attain master of science concepts. The scope and sequence includes reporting categories that are broken down into TEKS-specific units. The core-content TEKS that are addressed in the unit are listed as well as suggested connections to recurring themes and concepts (RTC) TEKS and scientific and engineering practices (SEPs) TEKS. For example, with the TEKS K.5C (describe the properties of objects in terms of relative size [scale] and relative quantity), students learn how to use description and observation (K.1A and K.1C TEKS), and then in the next unit, K.5D (examine the parts of a whole to define or model a system), students will be able to use their prior knowledge to build a model/system. While the scope and sequence supports teachers in understanding the horizontal alignment guiding development of grade-level content, not all materials show evidence of horizontal alignment.
- Unit Teacher Guides are printable documents that provide background information, prerequisite knowledge, essential questions, and common misconceptions. For example, the Teacher Guide for K.9A/B provides information about what students should already know prior to beginning the lesson. Materials state that "Students should have some knowledge of day and night. They should be able to tell some things they do at night and some things they do during the day." The vertical alignment document also links standards and concepts progressively. For example, in the reporting category, Earth and Space, TEKS K.9B, the student is required to observe, describe and illustrate the sun, moon, stars, and objects in the sky, such as clouds. Progressively, in TEKS 2.9B, the student is required to observe objects in the sky using tools such as a telescope and compare how the objects in the sky are more visible and can appear different with a tool vs. an unaided eye.
- The instructional materials include guiding documents that support teachers in understanding how new learning connects to previous and future learning across grade levels. The vertical alignment document explains how student learning in kindergarten (Identifying Earth Resources) connects to and extends learning in subsequent grade levels as student expectations change from grade one to grade two. For example, the materials for K.11 state that students will observe and generate examples of practical uses for rocks, soil, and water. The document states that in first grade, students will identify and describe how plants, animals, and humans use rocks, soil, and water (1.11A), and in second grade, students will distinguish between natural and manmade resources (2.11A).
- The materials connect new learning goals to previous and future learning within grade levels. The scope and sequence document presents TEKS that show horizontal alignment and within-grade-level knowledge connections. For example, the scope and sequence for kindergarten lists the SEPs that are addressed throughout the lessons for Earth and Space, K.10. The SEPs include, K.1A (ask questions based on observation), K.1B (plan descriptive investigations), K.1C (safe practices), K.1D (use tools), K.1E (observation as evidence), K.1F (record and organize data), K.2B (analyze for features and patterns), K.2C (math to compare objects), and K.3A (develop explanation supported by data and models).

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

- The materials identify common grade-level misconceptions students may have about the science concepts and provide guidance for teachers about concepts that may be difficult for students. The Teacher Guide, found in the teacher resources section, contains explanations and examples of science concepts including common grade-level misconceptions to support teacher's subject knowledge and recognition of barriers to student conceptual development as outlined in the TEKS. The expanded Teacher Resource Guide states the target TEKS and provides the teacher with background information on the standard as well as the prerequisite knowledge. The Unit Teacher Guide also includes common misconceptions students may have. For example, the Unit Teacher guide for the lesson, K.11A, Uses of Water, Soil, and Rocks, explains that students may have the misconception that rocks can be broken down into very tiny pieces to make soil.
- The materials identify common grade-level misconceptions students may have about the science concepts. The hands-on activity for TEKS K.9B, Observe the Moon During the Day, provides the teacher with insight and clarity on common misconceptions that students may have regarding the grade-level content for TEKS K.9B. The document explains that a common misconception students may have is that the moon is only visible at night time.
- The materials include background information for teachers that provides explanations and examples of science concepts. For example, the lesson, Light and Sight, provides background information for teachers regarding student objectives. The materials provide the following objectives: “To use the five senses to explore different forms of energy such as light. To understand that light must shine on an object in order for us to see it with our eyes. To understand that the amount of light determines how well we are able to see objects.” The following TEKS are included: “K.8A: communicate the idea that objects can only be seen when a light source is present and compare the effects of different amounts of light on the appearance of objects.”

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

- The materials provide a rationale for the instructional design of the program. Materials provide an explanation for why the materials are designed as they are. The Implementation Strategies Early Elementary (K-2) Guide highlights key features of the instructional design. It states, “Each grade band is designed to align with student ability and content level. Unit Teacher Guides are found in the teacher resources for each of the TEKS. These guides were written to help teachers facilitate learning in their classrooms and provide them with the essential knowledge to teach the concepts.”
- The Implementation Strategies document, which is found in the teacher resource section for every standard, provides teachers with the intent and purpose of the instructional design of the program. The implementation strategy document states that the anchoring phenomenon is designed to help students with real-world challenges and situations. This activity also allows students to generate questions about the phenomenon to captivate their curiosity and activate prior knowledge. For example, the K.11A, Uses of Water, Soil, and Rocks, Implementation Strategy Document states that students are to explore what rocks are used for in real-life situations.

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- The vertical alignment document provides information about the intent and purpose of the instructional design. The document states, “progression of the content and skills across K-5 and 6-Biology provides a cohesive overview of the science curriculum vertically from one grade level to the next, ensuring a seamless and logical progression of learning.” The purpose of the vertical alignment is to “provide teachers with an understanding of how the TEKS build upon each other and what the student should have learned in previous grade levels and what they will be expected to learn in the next grade levels.” This allows teachers to plan lessons and discuss best practices. The vertical alignment document is designed to allow teachers to see the progression of standards and content across grade levels and covers grades kindergarten through fifth. “This can be used as a reference or planning document when creating intervention or remediation groups.”

EduSmart Science Grade K

Indicator 4.1

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- The materials include Hands-on Activities that support students' meaningful sensemaking through thinking and acting as scientists and engineers. These activities allow students to actively participate in science and engineering by performing a hands-on experiment activity in their classrooms or outside. For example, for TEKS K.7A, One Magnet, Different Objects, students explore and identify objects that are attracted to magnets. Like scientists, students analyze data by identifying any significant patterns found in objects attracted to a magnet.
- Materials provide opportunities for students to think and act like scientists and engineers. Lessons are structured using an optional 5E model that includes Engage, Explore, Explain, Elaborate, and Evaluate. In Unit K.7A, Attractions, within the Engage section of the 5E model, students ask questions after watching a short video of a boy making a tower with magnets. In the Explore section, students make a toy that is similar to Mr. Potato Head® but uses magnets to

work properly. Students act as engineers as they pretend to be a member of a toy design team and convince an audience that their product is better for the environment than similar toys made out of plastic. In Unit K.8A, Increasing and Decreasing Light Energy, students watch a short video of someone pointing a flashlight on a shelf. As the flashlight moves through a dark room, one can see what the objects on the shelf are. As the light moves away, one can see less of the color and shape of the objects on the shelf. Students share what they notice and ask questions as the light moves to and from the objects. In Unit K.8A, Light and Sound, students record the physical properties of objects that are visible when the lights are off and compare them to the physical properties that are visible when the lights are on. The activity leads students to understand that without light we cannot see. A virtual interactive Glossary for reading content vocabulary is available.

- In Unit K.8B, Light and Shadows, students think as scientists through the Anchoring Phenomena video. Students watch a short video of two shadows of two tennis players then share and ask questions about what they notice about the shadows as the players move. Students write down their predictions on a data chart, then test what happens to shadows when the position of the light source (flashlight) is changed in relation to the toy. Students write to collect data and answer an open-ended question at the end of the investigation: “What did you learn about shadows?” This lesson includes a virtual Glossary for reading content vocabulary and a reader where students read about how a tree, a ball, and people make shadows, then write answers to questions about what they read.
- The materials provide opportunities for students to engage in meaningful sense-making. In the lesson, K.6A, Describing Objects, students sort objects based on characteristics such as color, texture, bigger or smaller, heavier or lighter. There are three readers students can use to support their learning and an interactive Glossary that guides students in describing and understanding science concepts such as classification, evaporation, and melting. The Hands-on Activity provides inquiry-based investigations as students engage in sorting objects by their attributes, then they discuss with others how they sorted their objects. Finally, they compare their sorting with others’ and then analyze their observations.
- The materials provide learning activities that support students’ meaningful sensemaking through thinking, and acting as scientists and engineers. For example, the lesson, What is Moving Air and What Can It Do? provides opportunities for the students to think and act as scientists and engineers. Students participate in a Cotton Ball Race, blowing a cotton ball with a straw down a taped path. Students measure the distance the cotton ball traveled with a piece of yarn or paper strips, then compare their measurements with others to determine whose cotton ball traveled the farthest, shortest, etc. The students have access to the interactive glossary where they read and listen to the definition of the words air, wind, and wind sock. Materials also include a reader titled, “The Wind,” that can be assigned to students.

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 with grade-level appropriate scientific texts to gather evidence and develop an understanding of the topic. The materials include leveled readers for each of the TEKS for the grade levels. These leveled readers have options for students who are below, at, or above grade level, and include a five-question probe. For example, TEKS K.10B, Our Changing Weather, provides students with information on what

defines weather and some differences between hot, cold, and windy weather. Then, students gather evidence from the text to answer questions related to the weather.

- The materials include research projects where students gather information and complete a presentation. For example, in TEKS K.4B, Scientists and Engineers Discovery, students begin to explore what a scientist and engineer are and make connections between examples of science and engineering in their own lives. Students can also read the text, "Isaac Newton" to gather information and evidence to support how scientists make discoveries.
- Materials include grade-level texts to support a greater understanding of concepts. Unit K.12A/B, Needs of Plants and Animals, includes multiple opportunities for students to engage with grade-level appropriate scientific texts. For example, "Expository - Entomologists - Scientists Who Study Insects," is a reading passage that introduces students to entomologists and the tools they use to study insects. This unit also includes five leveled readers and a virtual interactive Glossary for practicing content vocabulary.
- The materials provide opportunities for students to engage with scientific texts to help develop an understanding of concepts. In the lesson, Scientists and Engineers-Discovery, students watch a short video about Mae Jemison, Isaac Newton, or another important scientist or engineer before answering the question, "How do scientists and engineers create new ideas, discoveries, or inventions?" The materials also provide three readers to help students 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 provide opportunities for students to engage in various written and graphic modes of communication to support students in developing, displaying, and understanding scientific concepts. For example, in TEKS K.9B, Objects in the Sky - Field Study, students investigate, observe, describe, and draw the Sun, Moon, stars, and clouds. This Hands-on Activity also provides an opportunity for students to review field safety rules and then draw themselves following a science safety rule.
- In lesson K.9A/B, Objects in the Sky - Field Study, students draw themselves following a science safety rule and then make observations by drawing and labeling what they see in the sky during the day and what they see in the sky at night. In lesson K.9B, Observe the Moon During the Day, students use graphic communication when they explore a day and night card sort and learn about the appearance of the moon through visual representations of four phases of the moon. In the K.10A Classifying Rocks activity, students collect data on a rock they select by drawing detailed pictures. Students also document their learning on a chart as they describe, classify, and compare rocks by size, shape, color, and texture.
- The materials provide opportunities for students to communicate their thinking on scientific concepts in written and graphic modes. The lesson, Reading a Thermometer, allows students to create a model of a thermometer. Students create their thermometers based on the model the teacher created. The students use the model of a thermometer to complete a class data chart showing daily temperatures. The teacher guides students to use concept-specific words like hot, warm, cool, and cold to complete their data sheets. The materials recommend a repeat of this activity once a week throughout the year.
- The Engineering Design Challenges provide students with multiple opportunities to engage in various written and graphic modes of communication. In TEKS K.11A, Engineering Rocks,

students create a drawing of a design that shows the best way to use colored rocks and then explain their design and its use. This helps the student in developing an understanding of practical uses for rocks, soil, and 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.

- Materials include Hands-on Activities to support students in acting as scientists and engineers who can learn from engaging in phenomena and engineering design processes, making sense of concepts, and productively struggling. For example, TEKS K.4A, Science and Innovations-Outdated Technology, provides students with the opportunity to explore innovations in technology and make connections to explain how the phenomenon of technology innovation by inventors and engineers makes life better for people. Students think of a way to innovate a pencil that is better and easier to use and to draw and explain how their improved pencil makes life better. Students view pictures of old cameras, telephones, television, old medical equipment, or other outdated technology, but are not given information on how each piece of technology works. Students proactively wonder about each and their purpose which allows the student to actively engage with inquiry about the concept.
- Materials provide real-world examples of science and engineering problems. This helps students see the practical applications of what they are learning and how it relates to their own lives, making them more engaged and invested in the learning process. For example, K.13A/B, Monkey Business, shows a brief video of two monkeys in a tree. There is no audio or hints for the students, so they are able to proactively wonder what the phenomenon is and anything they may notice.
- Materials support students to act as scientists and engineers who can learn from engaging in phenomena. All lessons begin with a phenomenon-based video or picture. Students act as scientists and engineers in all unit lessons during the Hands-on Activity that links to either an investigation or an engineering design challenge. This gives students opportunities to make sense of concepts through hands-on design processes. For example, in Activity K.12A/B, Do Plants Grow Better in Soil?-Part 1, students engage in a descriptive investigation where they have to observe, describe, and record observations on plant growth when seeds are either placed in a container with soil or a container with a paper towel to determine which one is better for plant growth.
- Materials support students acting as scientists and engineers in the category, Force Motion, and Energy, Unit K.8B, Light and Shadows, Investigation Activity K.8B, Distance Between Light Source and Object Investigation. In this investigation, students demonstrate and explain that light travels through some objects and is blocked by others. Students fill out a data chart to make predictions, and then test what happens to shadows when they change the distance of the light source (flashlight) in relation to a toy.
- The materials provide authentic student engagement and perseverance of concepts through productive struggle while acting as scientists and engineers. For example, the lesson, Classifying Rocks - Field Study, provides an extension activity that encourages students to find out more about scientists who study the Earth. The materials state, “Scientists who study rocks are called geologists. What do they do? Would you like to be a geologist? Why or why not? Talk about it with your classmates or a family member. Go on a rock hunt with a family member. How will you classify the rocks you collect?” Students go on a rock hunt to collect rocks for this activity. The students turn and talk to a partner to share ideas and promote student voice. The teacher

records their answers on chart paper to display in a common area for students to use as a reference when writing and creates an anchor chart for students to help them with their rock descriptions. The materials state, “After collecting their rocks, each student will pick one rock to describe in the data chart” The teacher asks, “How many of you have a gray rock?” The students work cooperatively to classify rocks by size. In their small group, they add their rock as data on the data sheet. The students stack rocks in a vertical line over each size description. This will serve as a bar graph for each group. The materials state, “As an extension, you can do a whole class bar graph by combining rock samples in one graph. The Differentiation activity for students that are struggling includes “Students may use the displayed rule chart to copy the rule or may verbally explain their drawing to the teacher. Students may write their descriptions. The students can also verbally share their description.”

EduSmart Science Grade K

Indicator 5.1

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- Materials prompt students to use evidence to support their hypotheses and claims. For example, in the Hands-on Activity, TEKS K.6, Comparing and Describing Objects, students sort objects based on characteristics such as color, texture, bigger or smaller, heavier or lighter. Students make predictions on which objects are heavier or lighter in their groups and discuss why. Students then test their predictions and share them with other groups to compare their outcomes.
- The Engineering Design Challenges prompt students to use evidence to support their claims. The Engineering Design Challenge guides students through the process of working together to solve a problem. Students collect data and discuss options to find the best possible solution. For example, TEKS K.7, Magnetic Toy, requires students to make a toy that is similar to Mr. Potato Head® but uses magnets to work properly, and is better for the environment than other similar toys. Students must convince others that their product is the best by answering design analysis questions, including "Which parts of your toy are magnetic? Not magnetic?"
- Materials prompt students to use evidence to support their hypotheses and claims. Activity K.11, Do Plants Grow Better in Soil? is an investigation where students compare how well a bean plant will grow in a cup with a wet paper towel and a cup with soil by measuring the height of

growth. Step five of the procedure states, “Ask them to predict which bean will grow taller.” Students support their predictions by drawing a picture of how the plants look over a period of 11 days.

- Instruction modules provide opportunities for students to ask scientific questions based on observations and hypotheses from investigations. Students collect observations as evidence, and record data using pictures, numbers, and words. In this unit, Making Observations, the students observe a snail in the classroom terrarium to determine if it has teeth. The students record their observations and use their evidence to create a claim.
- The materials provide opportunities for students to develop the skill of using evidence to support their hypotheses and claims. During lesson K.7A, One Magnet, Different Objects, the students predict how a magnet will interact with various materials and how magnets can be used to push or pull. Students explore and identify objects that are attracted to magnets. Students predict which items a magnet will attract and which items a magnet will not attract. Students test a magnet on different objects to discover what happens. The teacher asks, “Do you see a pattern in the objects that are attracted to a magnet?” Students respond using the following sentence stems: “My magnet can attract a….” and “My magnet does not attract a….” The teacher reminds students to listen to others' explanations to identify important evidence and engage in discussion.

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

- The materials provide opportunities for students to apply scientific vocabulary within context. During lesson K.9A/B, Observe the Moon During the Day, students “observe, describe, and illustrate the Sun, **Moon**, stars, and objects in the sky such as clouds.” The vocabulary word *moon* is used in discussions by students. Students study the moon phases and draw the phases of the moon. They answer the question, “Why can you not see the Moon every day during the day?” Students illustrate the moon and describe their drawings to the teacher.
- Materials include embedded opportunities for students to develop and utilize scientific vocabulary in context. For example, the reader for K.9A/B, “The Moon,” provides students the opportunity to use scientific vocabulary as it relates to the Sun, Moon, and their patterns. Lesson vocabulary includes *cloud*, *day*, *night*, *moon*, and *star*. Additionally, the objective for lesson K.10A includes having students “verbally describe the physical properties of rocks by using correct scientific vocabulary.” During the lesson, the teacher introduces “rock” vocabulary words like *smooth*, *rough*, *round*, *“color” words*, etc. Materials suggest writing the words on the board or on a bulletin board for constant student access. Students explore rock properties and engage in conversations using the “rock” vocabulary introduced earlier.
- Materials include embedded opportunities to develop and utilize scientific vocabulary in context. For example, the Glossary for K.11A, Uses of Water, Soil, and Rocks, provides students the opportunity to learn the target vocabulary words *clay* and *nutrients* in context. Each vocabulary word is supported by a visual aid (a picture) with an attached definition and a read-aloud option. Within the same unit, Activity K.11A, Do Plants Grow Better in Soil? is an investigation that prompts student discussions with the embedded target vocabulary. For example, the procedure section instructs the teacher to, “Ask them to predict which bean will grow taller.” Also, the end of the activity provides reflection questions that include, “Did bean plants grow better in the cup with soil or the cup without soil?” and “What do you think bean plants need to grow tall?” The Instruction Module also presents opportunities to develop scientific vocabulary in context. The Instruction Module, K.11A, Uses of Water, Soil, and Rocks, is

a video with sound and pictures that use scientific vocabulary in context. Examples of vocabulary include uses of the soil, uses of water, and uses of rocks.

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

- Materials integrate argumentation and discourse to support students' development of content knowledge and skills. For example, the activity, Anchoring Phenomenon, K.6, Shape, Color, Texture, includes a picture of toys with different physical properties. Materials suggest that students should ask their own questions and provide the following prompts teachers can use to get a conversation started: "What do you see? Do all the toys have the same shape? Are all the toys the same color? How would you separate these toys into groups? Who do you think these toys belong to?" Additionally, Activity, Anchoring Phenomenon, K.7A, Attractions, includes a short video clip of a boy using round magnets to create a tower of magnets. The materials suggest that students should ask their own questions and provide the following prompts that can be used to get a conversation started: "Can you describe what is happening in the video? How does a magnet work? Do magnets stick to anything? What is a magnet made out of? What questions do you have?"
- The materials provide opportunities for students to develop how to engage in the practice of argumentation and discourse. During lesson K.7A, Magnets on the Move, the students see and test objects to determine if they are magnetic. They make objects move without touching them to determine that not all objects have the same degree of magnetism. The materials state, "Some objects will move a greater distance (or 'jump' farther) to reach the magnetic wand." After the experiment, the students ask questions that include, "Which objects are magnetic?" "Which objects moved the greatest distance?" and " Which objects did not move?" Students are encouraged to listen actively to others' explanations to identify important evidence and engage respectfully in scientific discussion.
- Anchoring phenomena integrate discourse to support students' development of content knowledge. The anchoring phenomenon is intentionally designed to have no text or audio so that there is no front-loading of information and allows the students to discuss what they are seeing freely. The teacher version of the anchoring phenomenon provides questions that teachers can ask to facilitate discourse. For example, for K.9A/B, Day and Night Patterns, there is a brief video of a cityscape going through a day and night pattern. The teacher displays this in the classroom and allows students to discuss what they see, notice, and wonder about the image. The teacher version includes questions such as "What time of day is at the beginning of the video? What time of day is at the end of the video? How do you know? Can you describe what a sunrise or a sunset looks like?" This allows the students to openly discuss with one another about their thoughts.
- The Engineering Design Challenges integrate argumentation and discourse to support students' development of content knowledge and skills as appropriate for the concept and grade level. The Engineering Design Challenges are intentionally designed to allow students to discuss and work together in groups. By working together to solve a problem in groups, students practice argumentation by discussing their ideas and solutions. For example, for TEKS K.11A, Engineering Rocks, students are told that scientists have created new colored rocks and they need to design a solution for the best use of these colored rocks. Students then have to convince the "companies" that their design is the best, and to buy the colored rocks to build their design. Students must discuss their ideas and reach a consensus on one specific design with their group.

Then, the materials provide the opportunity for argumentation in the Discussion Section of the challenge which states, “Have each group explain how their new equipment would be used and how it would be built. They need to convince the principal and other teachers that their design is safe, fun, and worth adding to the playground!”

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

- Materials provide opportunities for students to construct and present verbal arguments that justify solutions to problems using evidence acquired from learning experiences. For example, in the Engineering Design Challenge, K.7A, Magnetic Toy, students act as engineers to design and construct a toy similar to Mr. Potato Head but use magnets to work properly. Each group explains to their toy-buying audience if their toy met the success criteria and what they would do differently if it did not. The success criteria are stated in a rubric that grades construction, communicating results, and redesign as advanced, proficient, developing, or beginning.
- The materials provide criteria for developmentally appropriate arguments to explain a phenomenon or defend a solution. During lesson K.8B, Light and Shadows, Activity 1: Direction of Light, students learn that light travels in straight lines and creates shadows when blocked. Students complete a data chart to make predictions and then test what happens to shadows when the position of the light source (flashlight) changes in relation to the toy. Students record their results in the “My Shadow Data Sheet: Direction of Light,” then answer the following analysis questions: “Where does the flashlight have to be to make the biggest shadow? (On its side shining on the base of the toy) Where does the flashlight have to be in order to make the smallest shadow? (Shining directly on top of the toy). When does the shadow look most like the toy? (When shining down at an angle on the toy).” Materials include teacher guidance on asking students to identify evidence and guiding them to engage in respectful, scientific discussion.
- Hands-on Activities provide opportunities for students to construct and present written and verbal arguments that justify explanations of phenomena. For example, TEKS K.11A/B, Do Plants Grow Better in Soil, allows students to investigate and compare how well a bean plant will grow in a cup with a wet paper towel versus a cup with soil. Students predict which bean will grow taller and collect evidence by measuring the plant once a week for several weeks. Students will record their measurements in their “My Plant Data Sheet” as evidence to support and help justify their hypothesis.

EduSmart Science Grade K

Indicator 5.2

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- The Unit Teacher Guide provides the teacher with common misconceptions that students may have about the content. This allows teachers to anticipate student responses and address them effectively. The guide also provides essential questions and possible answers to them so that the teacher can guide the students toward conceptual understanding. For example, the Unit Teacher Guide for TEKS K.6, Matter and its Properties, Describing Objects, provides background information that objects are to be described "in terms of the materials they are made as well as their physical properties. Students should be able to describe properties verbally as well as with drawings." The Unit Teacher Guide also provides common misconceptions that students "may not understand that an object can be sorted in more than one way." Additionally, the Common Misconceptions section of the Unit Teacher Guide K.12A/B, Needs of Plants and Animals, includes, "Students may think that plants are not alive since they do not move." The essential questions include, "What are the basic needs of plants?" with the explanation: "air, sunlight, water, nutrients in the soil, and space to grow" and "What are the basic needs of animals?" with its corresponding explanation: "air, water, food, space, and shelter."
- The materials provide teacher guidance on the use of questioning to deepen student thinking. The Anchoring Phenomenon is designed to engage students. For example, lesson K.6, Shape,

Color, Texture, engages students in classifying the physical properties of objects, including shape, color, texture, and material through questioning. The teacher document for this phenomenon provides background information for the teacher to share with students as well as background information to support the teacher in deepening students' thinking through questions such as, "Do all the toys have the same shape? Are all the toys the same color? How would you separate these toys into groups? Who do you think these toys belong to?"

- Additionally, in the activity, Distance Between Light Source and Object, in Unit K.8B, Light and Shadows, students demonstrate and explain that light travels through some objects and is blocked by other objects, creating shadows. The teacher guides the activity by asking questions like, "How can you make the shadow less blurry?" and "What is the best distance for the flashlight to make the best shadow of the rabbit?"

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

- The materials include embedded opportunities for the teacher to scaffold students' development of scientific vocabulary. For example, in TEKS K.11, Earth and Space, Uses of Water, Soil, and Rocks, the Teacher document provides background information that states, "There are many different uses of water, from drinking to keeping us clean." The teacher reminds students that plants and animals need and use water for survival. The vocabulary words: *nutrients* and *clay*, can be practiced using the Reader, "What on Earth?" as well as in suggested Station Activities from the Implementation Guide. One of these activities states, "Students can create an interactive word wall to demonstrate words from the unit. OR Have students create visual flashcards for the vocabulary with pictures and definitions."
- The Scope and Sequence provides teachers with new unit vocabulary and vocabulary from prior content. This allows the teacher to scaffold vocabulary based on student needs. The vocabulary listed within the scope and sequence document allows the teacher to support student development of vocabulary in context. For example, in K.6, Describing Objects, words listed under the category, "New grade level words," include *physical property, classify*, and *texture*. The teacher uses the Vocabulary Essential Questions to prompt the use of vocabulary in context through conversation. These questions include, "What words can we use to describe change? What words can we use to describe color? What words can we use to describe the texture? What words can we use to describe types of materials?"
- The materials provide some teacher guidance on supporting students' development and use of scientific vocabulary in context. Instead of scaffolds, the materials include ideas for how to practice vocabulary. The Implementation Guide, K-2, includes Suggested Station Activities for Small Groups or Partners. This section guides the teacher to use the words in the Glossary at the end of each unit in three different ways: First, "Vocabulary practice using Glossary to practice all vocabulary associated with a unit." (note, the document doesn't guide the teacher on how to conduct the practice). Second, "Students can create an interactive word wall to demonstrate words from the unit." Third, "Have students create visual flashcards for the vocabulary with pictures and definitions."

EduSmart Science Grade K

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

- The Anchoring Phenomenon materials provide teacher guidance on preparing for student discourse. By previewing the teacher document ahead of time, teachers prepare themselves to scaffold student questioning and discourse. For example, in the Anchoring Phenomenon for K.13C, Growing Up Green, students see little green plants in the soil. By previewing the teacher document ahead of time, teachers access background information suggesting that when fielding questions, they should not explain the life cycle of a plant or provide answers for any of the questions students ask. This guidance allows students to develop their own discourse through questioning. The materials provide teachers with prompts to start verbal claims/conversations if needed: “Have you ever planted a seed and watched it grow? Where is the seed in the video? What is happening under the ground? Do you think these plants will grow any other parts?”
- The Engineering Design Challenges (EDC) include background information to prepare teachers for supporting students in using evidence to construct written and verbal claims. For example, the teacher document for the EDC for TEKS K.7, Magnetic Toy, provides teachers with guidance on design analysis questions that students should be able to answer once their design is complete: “What parts are needed to make your toy have a face like a human? What parts are NOT needed to make your toy have a face like a human? Which parts of your toy are magnetic? not magnetic?" The teacher document also includes a rubric and guides teachers to have students use the rubric to determine if their design met the success criteria.
- Evidence of materials that provide teacher guidance on preparing for student discourse is found in the Scope and Sequence that is organized by Reporting Categories. Each Reporting Category includes an Essential Questions column with two to five questions. These questions guide teachers as they prepare for student discourse. In the Reporting Category, K.9, Earth and Space, the Essential Questions Column reads, “Here is a pattern. Night, day, night, day, night... What comes next? What are some objects we can see in the sky?”
- Materials provide teacher guidance on preparing for supporting students in using evidence to construct written and verbal claims. Activity K.11, Do Plants Grow Better in Soil? is an investigation where students compare how well a bean plant will grow in a cup with a wet paper towel and a cup with soil by measuring the height of growth. Step five of the procedure guides the teacher to “Ask them to predict which bean will grow taller.” Students must support their predictions by drawing a picture of how the plants look over a period of 11 days.

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

- Unit Teacher Guides support teachers in facilitating the sharing of students' thinking and finding solutions. By providing common misconceptions, the Unit Teacher Guide allows the teacher to facilitate dispelling misconceptions that students may share. For example, the Unit Teacher Guide for K.10A, Describing Rocks, provides the misconception that students may think that descriptions like soft and smooth are the same. By addressing this shared misconception, teachers support and facilitate students in learning to identify, describe, and classify rocks by their physical properties. Essential Questions that students should be able to answer independently are: “What are ways that we can describe rocks?” and “How can rocks be sorted and classified?”

- The EDCs include information to support and guide teachers in facilitating students' finding solutions. The EDC for K.11A, Engineering Rocks!, includes the performance task that guides the teacher in supporting students through their design process (the task is to create a drawing of a design that shows the best way to use colored rocks to build a new piece of playground equipment for the school.) The materials include additional analysis questions so the teacher can facilitate students' thinking and solution-finding: “Which design worked best to use colored rocks? What would make your design better? Which playground equipment would you like to have?”
- The materials support and guide teachers in facilitating the sharing of students’ thinking. The Anchoring Phenomenon at the beginning of each unit is a picture or a short video that engages students in what they are about to learn. The print feature of the Anchoring Phenomena guides teachers in facilitating the sharing of students’ thinking. For example, in Unit K.6A, Describing Objects, Anchoring Phenomenon, Picture K.6A, Shape, Color and Texture, the Background section guides the teacher as follows: “When fielding questions, do not explain physical properties of matter or provide answers for any of the questions. The Anchoring Phenomenon should be used as a learning foundation to create a shared experience in the material. Teachers can refer back to the phenomenon periodically to revisit and reinforce core concepts and ideas throughout the unit, connecting new information and skills to previously learned material to strengthen understanding and promote long-term retention.”
- The materials provide teacher support and guidance for facilitating the sharing of students’ finding solutions. For example, during the lesson, Engineering Design Challenge, K.7A, Magnetic Toy, the teacher begins the design discussion before the model is made in a group. The materials guide the teacher to have each group explain their design and tell others why they think their material(s) will work best. The teacher asks Design Analysis questions such as “What parts are needed to make your toy have a face like a human? What parts are NOT needed to make your toy have a face like a human? Which parts of your toy are magnetic? not magnetic?” The teacher guides the Product Discussion and each group explains to their toy-buying audience if their toy met the success criteria and what they would do differently if it did not meet the criteria. The materials include an Assessment Rubric, “Mr. Potato Head Challenge and Performance Task Self-Assessment for Group Work: K-2.”

EduSmart Science Grade K

Indicator 6.1

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

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

Meets | Score 2/2

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

Materials include diagnostic, formative, and summative assessments that include formal and informal opportunities to assess student learning in a variety of formats. Materials assess student expectations and indicate which student expectations are assessed. Materials include assessments that integrate scientific concepts and science and engineering practices with recurring themes and concepts. Materials include assessments that require students to apply knowledge and skills to novel contexts.

Evidence includes but is not limited to:

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

- EduSmart materials allow for diagnostic assessments for students in kindergarten that are appropriate for the grade. For example, quizzes can be used as a diagnostic assessment when assigned as a pre-assessment and then again as a post-assessment. By reassigning the quiz and giving it a unique name, teachers can compare both sets of data and use that data as a form of diagnostic assessment.
- EduSmart provides materials for student assessment, such as an EduSmart Quiz. This quiz can be located in the assessment tile, and the navigation guides below show how to access the assessment tile on the EduSmart platform. Kindergarten Tx Science > Matter and its Properties > K.6A Describing Objects > Assessments.
- Quizzes are developmentally appropriate and standards-based and provide an opportunity to summatively assess student learning. Teachers can use quizzes to formally assess student learning at the end of a unit or use them as a progress monitor during the unit. For example, in TEKS K.7A, Attractions, a four-question quiz assesses students' knowledge about magnets and what they are attracted to. The quizzes provide teachers with data on their students' learning.
- Hands-on activities can be used to informally assess student learning and mastery of content. The hands-on activity for K.8A, Light and Sight, allows teachers to informally assess students by asking them "To use the five senses to explore different forms of energy such as light. To

understand that light must shine on an object in order for us to see it with our eyes. To understand that the amount of light determines how well we are able to see objects." This supports the core content "K.8A: communicate the idea that objects can only be seen when a light source is present and compare the effects of different amounts of light on the appearance of objects." Teacher questions for the assessment can be informal in a group discussion or more formal, such as questions on a worksheet or lab book.

- Formative assessments are present at the end of each reader. For example, the Reader, "A Melting Scavenger Hunt" in K.5E, Energy and Matter, formatively assesses the students through a quiz after the reading. Some of the questions include, "Why did the author write this story? How does matter change in the story? Which of these objects from the story change matter when heat is added? What state of matter is an ice cube?"
- The materials suggest using student portfolios, which could be a summative assessment to assess student growth in scientific knowledge and skills over time. The Teacher Communication Letter provides overview information about Student Portfolios, stating that they can include "work samples from the Engineering Design Challenges, data sheets from hands-on activities, or student answers from the five-question probe at the end of the readers."

Materials assess all student expectations and indicate which student expectations are being assessed in each assessment.

- The materials assess student expectations and indicate which student expectations are assessed. The Assessment Reports document states, "By identifying which standards have been successfully grasped and which require further attention, teachers can tailor their instructional strategies, design targeted interventions, and adjust lesson plans to align with student needs." This assessment report allows teachers to see which student expectations have been assessed through the EduSmart materials, not just specifically through quizzes. The quizzes assess content that directly aligns with a grade-level TEKS. For example, the quiz for K.13A/B, Plants and Animals, displays the assessed TEKS under each question. The available quizzes assess the following Student Expectations (SEs): K.7A, K.10A, K.13A/B, K.8A, K.10B, K.10C, K.6A, K.8B, K.12A/B, K.13C/D, K.9A/B, and K.11A.
- Readers are a method to assess student expectations and indicate which expectation is being assessed. The reader for K.9A/B, The Moon, provides an explanation about the objects found in the sky (Moon, Sun). At the end of the reader, there is a five-question quiz that can be used to assess student understanding as it relates to identifying objects in the sky. Some of the questions include "What is a pattern? What is the Moon made of? Which of the following statements will the author agree with?"
- The Teacher Guide provides the student expectations for the lesson at hand. The Teacher Guide for Kindergarten: The Day and Night Pattern, TEKS K.9, Earth and Space, states, "The student knows that there are recognizable patterns in the natural world and among objects in the sky." The student is expected to identify, describe, and predict the patterns of day and night and their observable characteristics. They are also expected to observe, describe, and illustrate the Sun, Moon, stars, and objects in the sky, such as clouds, as a part of the assessments. The students are assessed with the EduSmart Quiz, which includes the following questions: "Which object is never in the sky at night? The moon appears to change its shape in a pattern. This pattern repeats every…. Which of these animals or birds do you see during the night? The Moon can sometimes be seen during the day. True or False?"

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

- The Engineering Design Challenges integrate and assess scientific concepts, Science and Engineering Practices (SEPs), and Recurring Themes and Concepts (RTCs). There are only two opportunities for Engineering Design challenges available in the materials: K.11A, Engineering Rocks, and K.7A, Magnetic Toy. Both of these challenges ask students to use everyday materials to design and construct something. This provides the learner an opportunity to integrate the learning content, SEPs, and RTCs. Each Engineering Design Challenge includes a teacher document and rubric to determine student proficiency. For example, the Engineering Design Challenge for TEKS K.13A, Magnetic Toy, assesses TEKS K.7A, in which students must explore how magnetic and non-magnetic materials interact with one another. This challenge also integrates the SEPs TEKS K.1A, K.1B, K.1G, K.2A, K.3B, and K.3C, and RTC TEKS K.5D.
- The materials include quizzes to assess science concepts. Although SEPs and RTCs may be assessed on quizzes, this is not consistently identified. For example, the quiz for K.13B, Plants and Animals, integrates recurring themes and concepts, but this is not clearly identified.
- The materials include formative assessments that integrate scientific knowledge and SEPs and RTCs. For example, the lesson, Objects in the Sky - Field Study Teacher, covers SEPs/RTCs TEKS: K.1C, K.1D, K.1E, K.1F, K.2A, K.3B, K.3C, and K.4A. The materials state, "Students will fill out the chart on the student response sheet with data from their observations." Students draw and label their observations of objects in the sky, then use the provided word bank to support and guide their writing. The students can also verbally and orally share their descriptions. The teacher instructs the students to turn and talk to a neighbor about what they observed and placed in their data chart, then they discuss the data. As an extension of learning, the Home Connection resource states, "Students will complete the 'What I observed at Night' portion at home with help from an adult."

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

- The Readers contain assessments that require students to apply knowledge and skills to novel contexts. The Readers are designed to connect a standard to the real world and end with a five-question quiz that requires the student to apply their knowledge to a novel context. For example, the Reader for K.5A, Patterns at the Beach, explains some of the patterns found in nature using objects and organisms found near the beach. The quiz at the end requires students to apply their knowledge of patterns found in nature.
- The materials provide Enhanced Engineering Design Challenges, which allow students to apply knowledge and skills to novel contexts. Teachers can use the provided Assessment Rubric to assess the challenges as formative assessments. The Engineering Design Challenge, Mystery Box, asks students to design a mystery box for 6th graders. Kindergartners are to use a small box, craft materials, textured fabrics, and smooth and rough materials to "design a mystery box that will engage and challenge classmates to guess the object inside based on its observable physical property descriptions." The other Engineering Design Challenge is called Life's Essentials: Building a Habitat. The students "create a special home for a plant and an animal. This home should have everything the plant and animal need to live and grow." In this challenge, students apply what they know about the needs of plants and animals to create a model.
- The materials include assessments that require students to apply knowledge and skills to a new phenomenon or problem. The materials for the extension activity, One Magnet, Different

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Objects, in K.7A, Attractions, states, "Students identify ways magnets are used at school and around the house." The teacher discusses where magnets can be found and used. The students search the classroom for magnets and talk about how they are used. They also search other parts of the school for magnets and discuss how they are used. The students take a field trip to the school cafeteria to look at the can opener, cabinet doors, and refrigerator door to see if they have magnets.

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Indicator 6.2

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The materials include information that guides teachers in evaluating student responses. For example, during the lesson "Light and Shadows" Activity 1: "Direction of Light," the teacher asks the following Analysis questions: "Where does the flashlight have to be to make the biggest shadow? Where does the flashlight have to be in order to make the smallest shadow? When does the shadow look most like the toy?"
- The materials provide guidance for the teacher in evaluating student responses that are appropriate for the grade level. Each Engineering Design Challenge includes an assessment rubric for the teacher to use for evaluation, as well as a self-scoring rubric for students to evaluate their own mastery. The Unit Teacher Guides provide common misconceptions as well as essential questions with explanations that are appropriate for the grade level. Through the Unit Teacher Guide, teachers can use the essential questions to evaluate student mastery. The EduSmart quiz also provides a teacher answer key to allow the teacher to gauge student mastery of the content that was assessed.
- The materials also include an Anchoring Phenomenon for each of the TEKS with a document designed to provide guidance to teachers while evaluating student responses. This document provides background information on the topic to assist in evaluating students' discussion and

responses. For example, K.12B, "Thirsty Elephant," provides the following background information to guide the teacher, "Let students continue to ask questions and then come back and refer to this video when discussing that all animals have needs that must be met for them to survive. There are three basic, necessary needs. Those are air, water, and food. Take away any of these three basic needs and the animal will not thrive and could die. Two other important needs are space to move and grow, shelter for protection from predators, weather elements, and raising their young."

- Each grade K Engineering Design Challenge also includes a rubric that provides guidance for evaluating teams' responses as advanced, proficient, developing, or beginning. For example, the rubric for the Engineering Rocks challenge (K.11A) evaluates design, presentation, and redesign, the rubric for the Magnetic Toy challenge (K.7A) evaluates design, presentation, and reflection, and the rubric for the Mystery Box challenge (K.6A) evaluates construction, communication, and reflection. Additionally, the Engineering Rocks challenge includes the following questions to evaluate student thinking about design: "Which design worked best to use colored rocks? What would make your design better? Which playground equipment would you like to have?"

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 video titled "How to With EduSmart: Reports" provides an overview of how to access student data and reports. The materials also reference customizable assessment reports detailing questions missed, student answers, minutes of taking the test, and progress-tracking tools that enable teachers to identify areas where students may be struggling and provide targeted support. It should be noted that teacher guidance for utilizing these reports to respond to individual students' needs, in all areas of science, based on measures of student progress appropriate for the developmental level, is present. Teachers can utilize the reports to determine how to intervene or accelerate based on student needs for specific concepts.
- The implementation strategies guide provides guidance and direction to teachers on how to effectively use their resources to support individual student needs. For example, the guide states, "differentiated instruction enables teachers to respond to individual student needs in all areas of science, based on measures of student progress."
- The "My Groups" section of the website contains Assignment Reports, Quiz Reports, and StaarSmart Reports. The data included in these reports are presented in ways teachers can easily analyze and interpret. For example, in the Student Quiz section, teachers find reports on student performance on any quiz. These reports show the student's name, how many quizzes they were assigned/completed, their average score, and the median score. Teachers can also click on individual student names to observe their score on their first attempt of the quiz, the last attempt, and their growth from first to last.
- The materials provide resources for teachers to assess learning, such as the rubrics in the four engineering design challenges and four essential questions per unit with a quiz for each unit.
- The EduSmart data report (a PDF available off the platform for reviewers) provides an overview of available data analysis systems, including progress monitoring, activity reports, and assessment data reports. The document states that it "...supports analysis of a student's performance, progress, and strengths and weaknesses on every TEKS." The document also states that "this data provides an expedited way to reteach students as a group, going over the

answers that were distractors or they can address students individually for more one-on-one support."

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

- The assessment tools embedded in instruction, challenges, and activities yield information that teachers can use when planning instruction, intervention, and extension. Quiz responses, interactivities, and quick reteach and test features can help teachers respond to individual student needs and ensure that all students are making progress toward their academic goals.
- The EduSmart Data Reporting document states, "EduSmart also provides progress monitoring tools that enable teachers to track student progress over time. This can include tracking student performance on specific skills or concepts, as well as tracking overall growth and development. By monitoring student progress, teachers can identify areas where students may be falling behind and provide targeted support to help them catch up." The materials include teacher guidance that provides instructions on how to access these reports.
- Materials include a computer-generated report that groups students and generates group reports, student reports, progress monitoring reports, and item analysis reports. Students can be placed in groups based on their content proficiency. The Student Report references reports on student performance on any assessment. The Progress Monitoring Report references reports on students' performance on different standards in an assessment. The Item Analysis Report references reports on group performance on different standards in an assessment. The Quiz Reports and Student Quiz reference group and student performance on any quiz. The Quiz Progress Monitoring references reports on student performance on different standards in the quizzes.
- The data included in the computer-generated reports is presented in ways teachers can easily analyze and interpret. For example, in the Student Quiz section, teachers find reports on student performance on any quiz. These reports show the student's name, how many quizzes they were assigned/completed, their average score, and the median score. Teachers can also click on individual student names to observe their score on their first attempt of the quiz, the last attempt, and their growth from first to last. Additionally, The Quiz Progress Monitoring report shows student performance on different standards in the quizzes. Results are separated into Performance Bands labeled Masters, Meets, Approaches, or Did Not Meet Grade Level. Each Performance Band is labeled with a percentage. For example, Masters Grade Level is 85%-100%.

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

- The Implementation Strategies Guide provides teachers with guidance on how to use the resources to support student learning and respond to individual student needs based on data. The guide includes differentiated instruction strategies, small group instruction strategies, and targeted interventions that can be used to meet the needs of all students. For example, for accelerated learners: "Leveled readers- leveled readers feature an above grade level reading level. This allows accelerated learners to read at a level that is appropriate for them. Readers can be used for an extension activity for early finishers as well. Students can complete the reader and the formative probe. They can then also write a summary, such as a 3-2-1 summary,

in their notebook or complete a mini-research project based on the reader's topic." Additionally, there is teacher guidance on additional support, including "Additional Support: Built-in text-to-speech accommodations for all written components. There is a speaker icon on all components that feature text-to-speech that students can use. This provides support for students who may need reading support."

- The Implementation Strategies Guide suggests strategies for Station Activities for small groups or partners. Teachers can use data from assessments to plan small-group instruction to address gaps in learning. The materials state, "Station 1: Vocabulary practice using Glossary to practice all vocabulary associated with a unit. Students can create an interactive word wall to demonstrate words from the unit. The students create visual flashcards for the vocabulary with pictures and definitions. Station 2: Interactivities Station 3: Reader Workshop with 5 questions formative probe Station 4: Maker Space to create a 3D model of concept Station 5: Small Group Intervention with teacher."
- Materials provide suggestions on how to use Instruction Modules, Quizzes, and Leveled Readers for students with different needs. The Instruction Modules "can be used whole group or assigned virtually for small group or individuals." The presentation feature on the quizzes "allows the teacher to discuss the questions of the whole group for review or re-teach." The Leveled Readers feature an above-grade reading level, allowing accelerated learners to "read at a level that is appropriate for them." It should be noted that materials include resources intended for intervention or enrichment along with those for general instruction, rather than designating additional resources for closing learning gaps

EduSmart Science Grade K

Indicator 6.3

Assessments are clear and easy to understand.

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The quizzes contain items that are scientifically accurate, avoid bias, and are free from errors. Quizzes provide teachers with scientifically correct questions that address the standard that is being assessed. For example, the quiz for K.12A/B, Needs of Plants and Animals, includes four questions pertaining to living things and their needs. The questions are based on students' content knowledge and provide straightforward questions that avoid bias and are free from errors. The answer choices provide an option that is scientifically accurate and helps students build their knowledge base. For example, the following questions have an answer option that is scientifically accurate: "What is something all living things need to live? (toys, pencil, water, with pictures and words included), Which object needs air to stay alive? (flag, kite, tree, with pictures and words included) The birdhouse in this picture meets which need of the bird? (air, food, shelter) This puppy is the offspring of a dog. True or false?"
- The assessments contain items for the grade level that are scientifically accurate. For example, the K.13C/D, Fruit from a Seed quiz, includes items that align with taught objectives and present grade-level content and concepts in a scientifically accurate way. The answer choices provide an option that is scientifically accurate and helps students build their knowledge base. For example, the following questions have an answer option that is scientifically accurate: "The picture shows a…that resembles the parent plant. (seed, seedling, fruit) Which of these do bees carry from one flower to another? (seeds, leaves, pollen) Which of these does a seed need to grow into a seedling? (picture of a person watering soil, picture of a dog, and a picture of a bowl of popcorn)

A ripe pumpkin has only one seed. True or False?" These questions avoid bias and are free from errors.

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

- Assessment tools use clear pictures and graphics that are developmentally appropriate. Quizzes feature pictures that are large enough to be seen clearly. The images are also developmentally and course-appropriate. For example, the quiz for K.10C, Air Is All Around, provides visual answer choices for students for questions 2, 3, and 4 of the quiz. These images are clear, easy to recognize, and appropriate for the course. Additionally, in the quiz for K.12 A/B, Needs of Plants and Animals, question #1 states, "What is something all living things need to live?" The answers include pictures of toys, a pencil, and a glass with water. Also, in the quiz for kindergarten K.7A Attractions, question #1 states, "Which object will a magnet stick to?" The answer includes pictures of papers, wooden boxes, and a spoon.
- Readers include high-interest images that are clear and appropriate for the course and grade level. For example, the Reader for K.10C, "The Wind," includes bright-colored photographs that are low in complexity and easy to understand. Pictures include a dog in front of a fan, pennants blowing in the breeze, a child on the beach, a yellow raincoat, and a flying kite.
- The assessments use developmentally appropriate pictures and graphics. For example, the Reader "Ground Changes" by Jennifer Roach contains clear pictures of various changes to the ground. For example, the hot sun shining on the ground and the rain puddle with leaves on the ground. The last image is a dry tree and a tree filled with leaves. This helps the student answer the assessment questions. The assessment questions include, "How does the concrete change when it rains?"

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

- The materials provide guidance to ensure consistent and accurate administration of assessment tools. The Implementation Strategies Early Elementary (K-2) document provides the following guidance: "Teachers have the autonomy to determine the use of the quizzes and the mode they are assigned. The quizzes can be printed, shown in the present mode, or assigned online." This autonomy allows for individual school districts to determine and implement their own assessment norms to ensure consistent administration across their district and campuses.
- The Implementation Strategies Guide provides information on administering student quizzes and Readers and gives examples of how to use their activities as formal and informal assessments and how to use each activity along with suggestions and time lengths. The document states, "These quizzes can be used as a formal assessment, small group activity, or whole group activity. Can be assigned virtually, conducted whole group, or printed. Presentation features allow the teacher to discuss the questions of the whole group for review or re-teach."
- Additionally, the Implementation Strategies Guide also mentions that the quizzes are STAAR-formatted, and the multiple-choice questions can be assigned virtually. There are also presentation features that allow the teacher to discuss the questions of the whole group for review or re-teach, and five-question multiple-choice quizzes are provided for the students. The materials include an expected time of 10 minutes for the whole group or 15-20 minutes for individuals.
- Materials provide a rubric for the Engineering and Design Challenges that helps the teacher ensure consistent and accurate administration of the challenge to students and how to grade each challenge.

- Materials provide guidance on assessment administration. Materials include guidance to offer accommodations for assessment tools that allow students to demonstrate mastery of knowledge and skills aligned to learning goals.
- Materials include guidance to offer accommodations for assessment tools that allow students to demonstrate mastery of knowledge and skills aligned to learning goals. The only accommodation for assessment tools is the text-to-speech option in all quizzes. This feature can be utilized by students at the guidance of teachers to meet accommodation needs allowing all students to demonstrate mastery of knowledge and skills aligned with learning goals. For example, in the K.13C/D Fruit from a Seed quiz, all four questions have text-to-speech accessibility. Additionally, the quiz for K.7A, Attractions, includes a text-to-speech feature on the web-based assessment platform, allowing students to hover over the text using a speech symbol cursor and converting it into a digital text read aloud.
- The Implementation Strategies Early Elementary (K-2) document states: "The quizzes feature text-to-speech accommodation when assigned online. For each question, there is a speaker icon at the top left below the question number. Students may press this icon for text-to-speech of the question and there is a speaker icon for the answer choices. For each of the questions, the correlating standard is listed below the question number for teacher reference."

EduSmart Science Grade K

Indicator 7.1

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- Materials provide recommended targeted instruction and activities to scaffold learning for students who have yet to achieve grade-level mastery. For example, in the hands-on activity for TEKS K.9B, "Objects in the Sky," students investigate, observe, describe, draw, and label the Sun, Moon, stars, and clouds. The lesson includes a word bank to support students as they write. For differentiation, students may verbally share or write their description, for example, "The Sun is yellow. The Moon is round."
- The Implementation Strategies guide lists the instructional tools, differentiation suggestions, and station ideas available for teacher use when providing small group intervention. For example, in the K.7 "One Magnet Different Objects" lesson, students explore and identify objects attracted to magnets. They analyze data by identifying significant patterns in objects attracted to a magnet. Then, as an extension, students identify ways magnets are used at school and around the house. The Implementation Strategies document mentions some "Differentiation" that includes students discussing the phenomenon in small groups or pairs before facilitating whole-group discussion to support ELL students and students requiring extra processing time or student talk.
- Each video has multiple breaks in the Instruction Modules to facilitate student discussion. The quizzes include features that allow the teacher to discuss the questions of the whole group for review or re-teach. Additionally, the Glossary provides simple, straightforward definitions with visual examples and text-to-speech accommodation.
- At the beginning of each unit, the materials provide recommended targeted instruction and activities for students who have yet to achieve mastery in different areas. The Teacher Unit

Guide includes a Common Misconceptions section that provides teachers with information on what students may struggle with so the teachers can plan for misconceptions. One example is the Earth and Space Category, Unit K.9A/B, The Day and Night Pattern, where the Unit Teacher Guide lists the common misconception that students may "think that you cannot see the moon during the day. The moon is easy to see during some parts of the day only when the sun is low in the sky, such as in the morning. Ask them to look for the moon on the way to school."

- The Implementation Strategies document provides a section called "Differentiation," which lists suggestions for additional support for struggling learners. For example, the Earth and Space Category, Unit K.9A/B, The Day and Night Pattern, includes differentiation strategies for students who need additional support. One strategy is the use of a glossary. The document states, "The glossary features visuals paired with the vocabulary word and definition. The glossary includes the option for text-to-speech that, when accessed, will read the word with its definition." Teachers can use this in small groups to reinforce vocabulary or to assist them in making a word wall. Teachers can have students create their own picture examples of the vocabulary or identify them in their classroom.
- The materials provide sequenced instruction to support students in science learning. In Unit K.13A/B, Plants and Animals, students start by identifying the structures of plants, including roots, stems, leaves, flowers, and fruits. Then, students identify animals' different structures that allow them to interact with their environment, such as seeing, hearing, moving, and grasping objects.
- The materials include Instruction Module Companions (IMC) for use as digital or printed interactive journal components. The materials contain continually spiraled standards covering recurring themes and concepts, science and engineering practices, and content throughout the year on each IMC. Students can complete the IMC as an end-of-year review for maximum retention or as a review before an assessment.

Materials provide enrichment activities for all levels of learners.

- The materials include hands-on activities that provide enrichment opportunities for all levels of students. For example, in the hands-on activity for TEKS K.9B, "Objects in the Sky," students investigate, observe, describe, and draw the Sun, Moon, stars, and clouds. Students draw and label their observations of objects in the sky and use a word bank to support their writing. The materials include differentiation, such as allowing students to write or verbally share their descriptions. As an extension, students research any astronaut using the media of choice to explain/report what an astronaut is and what astronauts learn about/jobs.
- Materials contain enrichment activities for all levels of learners. For example, TEKS K.4B, "Scientists and Engineers- What Do They Do?" has students explore what a scientist and engineer are and make connections between examples of science and engineering in their own lives. As an extension activity, students view an image of George Washington Carver and share how many things they think he can invent to do with a peanut. Then students work to see how many alternate uses they can create for a pencil or similar object.
- Within the Force, Motion, and Energy concept Category, Concept Unit K.7A, Attractions, the Implementation Strategies document states that "...EduSmart's hands-on activities can be used as extension activities for accelerated learners. The teacher may choose an activity that will be used for extension from the LMS."

EduSmart Science Grade K

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

- Materials provide opportunities for students to adjust their own learning pace independently. The lessons include embedded text-to-speech on all activities for all students. The leveled readers include embedded text-to-speech and allow students to adjust the speed and tone of the reading. Students also have the option to change the colors to grayscale, color overlays, and font size. For example, in TEKS K.12A/B, "Life on the Farm," students can change the colors to grayscale, add color overlays, and change the font size.
- The Implementation Strategies document provides a section called "Differentiation," which lists suggestions for accelerated learners. Unit K.12A/B Needs of Plants and Animals includes using leveled readers as a differentiation strategy. The materials state, "EduSmart's leveled readers feature an above-grade-level reading level. This allows for accelerated learners to read at a level that is appropriate for them. EduSmart’s readers can be used as an extension activity for early finishers as well. Students can complete the reader and the formative probe. They can then also write a summary, such as a 3-2-1 summary, in their notebook or complete a mini-research project based on the reader topic."
- The lessons provide support and resources for students ready to accelerate their learning. For example, the materials include challenging activities and assignments that extend beyond the regular curriculum and stimulate critical thinking, problem-solving, and creativity. For example, in Lesson K.9A/B, "Day or Night?" teachers work with students using a card set about day and night to identify which objects go under each word. The materials suggest that once students understand what to do, the teacher allows students to "complete the card sorting on their own or in small groups." Additionally, the Extension activity for K.9A/B, "Objects in the Sky-Field Study," guides the teacher to allow students to research to learn more about scientists who study space. The materials state, "Scientists who study space are called astronauts. What do they do? What do they learn about?"

EduSmart Science Grade K

Indicator 7.2

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- Materials include developmentally appropriate instructional approaches to engage students in content mastery. The Implementation Strategies Guide includes suggested ideas for students, including station activities, vocabulary activities, and leveled readers. For example, the Leveled Reader for K.9A/B, "Day and Night," describes the apparent journey of the Sun across the sky in a day, its effect on shadows, and how we plan our activities based on the position of the Sun. The materials include readers for three different reading levels: approaching, grade level, and above.
- The Hands-on Activities section provides a variety of activities for students to practice and apply content learned until mastery. Teachers choose activities to work on content with children individually or in small or large groups. Through the hands-on activities, students actively engage in the process of exploring, discovering, and constructing knowledge through hands-on learning opportunities. For example, in TEKS K.4A, Science and Innovation for a Better World, students create a model of innovation and explain how the improved object can help others. Additionally, in Unit K.7A, Attractions, "Magnets on the Move," students describe and predict how a magnet interacts with various materials and how they can be used to push or pull. Students investigate

using paper clips, magnetic marbles, and jingle bells to see if the object jumps to the magnet. The teacher guides asking questions at the end of the lesson, such as "Which objects are magnetic? Which objects jumped faster? Which objects didn't move?"

- To engage students in the mastery of content, every lesson within the 5E model of instructional units includes a glossary. The glossary activity provides students with high-quality visuals for key vocabulary in the TEKS that is developmentally appropriate. A visual and formal definition pops up when the student selects a vocabulary word. The speaker icon next to the vocabulary word provides text-to-speech accommodation, allowing students to have visual and auditory support as they work on mastering scientific vocabulary development. For example, in the category Organisms and Environments, Unit K.13C/D, Elaborate Glossary K.13B/C, students clarify their own definitions of *fruit, root, seed, seedling, and shoot* through observation, exploration, and inference opportunities within the digital, interactive glossary.
- The materials engage students in the mastery of the content through various developmentally appropriate instructional approaches. For example, during the lesson "Observing Earthworms," students engage in hands-on inquiry activities to engage with content. Students use flashlights and straws to test earthworm responses to light and being "touched" by air. The students document the information in their data charts, including Stimulus, Prediction, and Result. After the lesson, students summarize information in their own words and answer analysis questions to help them process the information and reinforce their understanding.
- Instruction Modules provide developmentally appropriate engagement in the mastery of the content. The Instruction Modules are digital, self-paced videos with features students control, such as closed captioning, an annotated feature, a repeat button, questions with wait time, and answers to questions that include multiple visuals. For example, in the Instruction Module for Unit K.13C/D, Fruit from a Seed, students understand the changes a plant undergoes in its life cycle. Students use the repeat button to replay information as needed to learn to identify a seed, a seedling, a flower, the fruit, the leaf, the stem, and the root of a plant. Students use the closed caption feature to read and follow along with the video to understand that a plant needs sunlight, food, soil, and air to survive and grow. Using the wait time feature, students can also take their time when responding to questions.

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

- The Implementation Strategies guide supports flexible grouping. The guide provides the teacher with different grouping options when explaining different content. The guide also includes suggested station activities for small groups or partners. For example, in the on-level-reader K.5F, "Functions on a Farm," students can use text-to-speech accommodation to listen to a fluent reading of the reader to gain information from the reader independently. Teachers can pair students to practice partner reading with a classmate. Additionally, teachers can use the K.12A/B Needs of Plants and Animals Quiz with a small group or individual students who need more support and discuss the question-and-answer choices.
- Materials consistently support flexible grouping (e.g., whole group, small group, partners, one-on-one). For example, the Implementation Strategies document lists recommendations on how materials can support flexible grouping in the Earth and Space Category, Unit K.11A, Uses of Water, Soil, and Rocks. Examples include the following:
    - The materials suggest teachers "have students discuss the phenomenon in small groups or pairs before facilitating whole group discussion to support ELL students as well as students requiring extra processing time or student talk."

    - The Instruction modules "can be used whole group or assigned virtually for small groups or individuals." For example, in the category Earth and Space, Unit K.11A, Uses of Water, the Instructional Module can be used as whole group instruction or assigned to small groups or individuals to help students recognize that people use water for a variety of purposes such as drinking, washing, cooking, cleaning, and farming.
    - Quizzes "can be used as a formal assessment, small group activity, or a whole group activity."
    - The interactivities "can be used as a review activity before an assessment, as a formal assessment, or as a small group activity. [They] can be assigned individually or whole group as well."
    - Lastly, teachers can use the readers in small groups, allowing students to practice reading while reinforcing the addressed science skills.
- The materials support flexible instructional groupings (e.g., whole group, small group, one-on-one). During the lesson, Describing and Comparing Objects, the students sit in groups of three to observe, draw, and verbally describe each object's color, shape, and texture in a set of four to five objects. Students sort the objects from smaller to bigger (or bigger to smaller) and from lighter to heavier or vice versa using a double pan balance. During the class discussion, the teacher asks each group to share how they classified objects and asks them to compare their results with others. The students "listen actively to others' explanations to identify important evidence and engage respectfully in scientific discussion."

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

- Materials support multiple types of practices (e.g., guided, independent, group-work) and provide guidance and structures to achieve effective implementation. For example, in the K.11A "Growing Plants in Different Soils" activity, students observe and describe three soil types and compare each soil's ability to grow plants. They make observations to determine which soil can better support plant growth. They also record data and compare data over an extended length of time. Students can complete this activity in groups, partners, or individually.
- The lesson design allows for a gradual release of responsibility structure. Lesson units start with an anchoring phenomenon. The anchoring phenomenon has a teacher version that guides the teacher in facilitating student-centered discussion. Next, the authors designed the Instructional Module as the direct-teach or whole-group component. Lastly, teachers can assign the word explorer, readers, simulations, and hands-on activities to students to complete collaboratively or independently, following the gradual release. For example, in K.13C/D, Fruit from a Seed, students start with the anchoring phenomenon video and continue with direct teach/whole group questions to discuss the life cycle of a seed. Students then complete the hands-on activity of constructing a 3D life cycle model independently or in groups.
- Materials consistently support multiple types of practices (e.g., modeled, guided, collaborative, independent) using the 5E Model for lessons. For example, in the Explore section of the lesson, Matter and Its Properties Category, Unit K.6A, Describing Objects, the activity involves the teacher guiding students in an investigation where they sort objects based on characteristics such as color, texture, bigger or smaller, heavier or lighter. In the Explain section of the lesson, the Instructional Module provides models for identifying objects based on their characteristics. Additionally, Engineering Design Challenges or Investigations support collaborative practices. For example, in the Matter and Its Properties Category, Unit K.6A, Describing Objects, Explore

Investigation Activity 6.6A, "Describing and Comparing Objects," students work in groups of three to sort objects based on observable physical properties.

- Under the 5E Model, Explore section, lessons include activities in which the teacher guides the activity to achieve effective implementation. In the activity for Unit K.8B, Light and Shadows, "Shadows on Different Surfaces," the teacher demonstrates and explains that light travels through some objects and other objects block light to create shadows. The students work collaboratively to complete the related datasheet.
- The materials provide multiple types of practices (e.g., modeled, guided, collaborative, independent). The materials include lessons in which the teacher models or demonstrates a new skill or concept and provides opportunities to practice the skill or concept in various ways. For example, during the lesson "What is a Habitat?" the teacher demonstrates the concept and explains that "some animals have specific needs and live in special habitats that give them what they need." The teacher makes a tree from stacked cardboard boxes and cuts holes for nesting sites. The teacher adds branches made of cardboard tubes and asks questions such as, "Have you ever seen a tree with a big hole?" and "How do you think big holes in a tree are made? The materials state, "For practice, have students work in pairs to place animal images into the correct locations on page 4."

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

- Unit readers represent a diversity of communities. For example, the Reader for TEKS K.12A/B, "A Trip to the Midwest," shows different communities and what makes them unique, such as the tall buildings of Miami, Florida, or the open fields of Central Illinois.
- Interactivities represent different genders, cultures, and communities throughout the program. For example, in the Interactivity for K.1 to K.4, Tools Used in Science, the opening graphic shows four students who are all different: boys/girls, glasses/no glasses, and culturally diverse.
- The materials represent diverse communities in the materials positively and respectfully. For example, Reader K.1 to K.4, "Ynes Mexia" is about a Mexican American Botanist who spoke about preserving landscapes and saving redwood trees. The reader also discusses how she helped many scientists learn more about plants and was known for being adventurous. Ynes Mexia inspired other women to be adventurous and discover.
- The Readers include a representation of diversity within the images of their texts. For example, in Unit K.10C, Air Is All Around, the text "The Wind" by Milt Huling, Ph.D. & Allison Smith includes images of several environmental disasters and the communities involved.

EduSmart Science Grade K

Indicator 7.3

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The ELPS Strategies document include guidance for linguistic accommodations (communicated, sequenced, and scaffolded) commensurate with various levels of English language proficiency as defined by the ELPS. This document lists five components of Edusmart (Anchoring Phenomena, Instruction Modules, Hands-on Activities, Readers) and lists strategies and techniques teachers can use to scaffold instruction. For example, in Unit K.11A, Uses of Water, Soil, and Rocks, the "Soil" lesson provides strategies to help teachers guide linguistic accommodations based on ELPS and grade level. In this lesson, the teacher uses visuals and linguistic supports, partner reading, text-to-speech, paired reading, and Read-aloud to model enunciation and use of English Language Structures. Additionally, The ELPS Strategies K-2 document offers suggestions for accommodating English Language Learners using the Anchoring Phenomenon, such as "Provide sentence stems and single words for peer conversation. Provide a word bank of key vocabulary for students to use when speaking with others."
- The ELPS Strategies Guide helps teachers provide effective instruction to emergent bilingual students and assists teachers in implementing the ELPS. This document lists five components of Edusmart (Anchoring Phenomena, Instruction Modules, Hands-on Activities, Readers) and lists strategies and techniques for scaffolding instruction. For example, accommodations for beginner language learners include the following: "allow the use of some language peer native language support, provide wait time, use gestures and movement, and provide clarification in their native language with assistance from peers."

- The materials include linguistic accommodations commensurate with various levels of English language proficiency as defined by the ELPS. The program provides a document, EduSmart's ELPS Strategies K-2 The ELPS, designed to help teachers effectively instruct English Language Learners. The materials also provide students with sentence stems and single words for conversation. The sentence stems provided include those for beginner students, such as "I wonder why…happened? What caused…to happen? What would happen if…?"
- The Implementation Strategies guidance document also offers guidance for linguistic accommodations. This document lists ELPS Skills (the TEKS calls these Language Domains) Speaking, Listening, Writing, and Reading. Each Language Domain includes a suggested activity for students to practice the domain.

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

- The Anchoring Phenomenon encourages strategic use of the student's first language. The Anchoring Phenomenon is a video that does not contain text or audio. The materials encourage teachers to let students discuss or ask questions in their native language and scaffold to English. Allowing students to engage in the activity in their first language will enable students to participate in science with a lower affective filter.
- The ELPS Strategies K-2 document encourages using students' first language for beginner students in Listening and Writing. In Listening strategies, guidance states, "Allow use of peer native language support and provide clarification in their native language including assistance from peers. In Writing strategies, guidance states, "Allow use of native language and drawing to express concepts."

EduSmart Science Grade K

Indicator 7.4

Materials guide fostering connections between home and school.

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The materials provide a Caregiver Letter that explains the program's design, how teachers use it in the classroom, and how caregivers can use it at home to reinforce student learning. For example, the Caregiver Letter states that "the program is designed to provide a wide range of tools to help your student track their progress, such as an interactive dashboard that displays their scores and allows them to re-try any tricky assignments and together you can go over any question they did not understand if you choose to do so. This will help them understand their strengths and weaknesses and provide an idea of which topics they should focus on."
- The Caregiver Letter includes information about accessing different pieces of the materials to support their student. It states, "Your child can also access additional support materials, such as vocabulary practice, online digital labs, and interactive games, to help them further explore the content. Additionally, there are helpful tips and tricks to help them maximize their learning potential."

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

- The materials provide information to be shared with caregivers for how they can help reinforce student learning and development. The Caregiver Letter includes, "To get started, your student will need access to a computer with an internet connection. Once they have logged in to EduSmart through their school digital login, they will find a comprehensive library of activities, videos, quizzes, and games to support their learning. Your child can work through the learning content at their own pace or at the direction of their teacher through assignments in their

dashboard, allowing them to practice and review content as needed. Your child can also access additional support materials, such as vocabulary practice, online digital labs, and interactive games, to help them further explore the content." There are also helpful tips and tricks to help maximize their student's learning potential.

- The Caregiver Letter also offers possible conversation starters to help reinforce what the student has learned at school while involving the caregiver in their learning. Example conversation starters include, "What was your favorite thing that you learned in science today? How is…related to…? How would you describe…? How would you compare…and…? What was something new that you learned today? Was there anything you learned that confused you? Can you explain…to me? What was something you learned that surprised you? I don't understand…. Can you explain it to me?"
- The Hands-On Activities feature an at-home connection to help caregivers reinforce what the student has learned at school. For example, the Hands-On Activity for 1.4B, "Scientists and Engineers - What Do They Do?" encourages caregivers to read the Reader, "Sally Ride," with their child and converse about their first memories of the space program. Students can share their stories. Memories will vary widely with the age of caregivers.

Materials include information to guide teacher communications with caregivers.

- The Teacher Communication Guide offers ways for teachers to communicate with caregivers. This document includes examples of how teachers can communicate with caregivers regarding their students' progress. The Guide lists suggested methods to help guide teacher communications with caregivers. The document includes four suggestions: download student reports from your dashboard to send home to caregivers, provide parents with access to their child's platform, keep student portfolios to showcase student work throughout the school year, and write classroom newsletters to keep caregivers informed about what is happening in the classroom.
- The materials include Progress Reports as an avenue for teachers to communicate with caregivers. The materials state, "Teachers can download student reports from the dashboard to send home to caregivers. This information will provide them with the student's academic progress and allow them to view which areas their students are progressing in or which areas they are still developing. "
- Parent Access is another avenue for teachers to communicate with caregivers. The materials state, "Providing parents with access to their child's platform is another great way to reinforce learning at home. Instruct parents that reviewing the Instructional Modules can help them understand concepts that are being taught as well as build communication between the caregiver and child about the learning that occurs. Caregivers can also use the Readers to engage in reading aloud to their child at home."
- The materials provide Student Portfolios, a method teachers can use to communicate with caregivers. The materials state, "Student portfolios can be used to showcase student work throughout the school year. These portfolios can include work samples from the Engineering Design Challenges, data sheets from hands-on activities, or student answers from the 5-question probe at the end of the readers. These portfolios can be used to guide conversations with caregivers and also to provide specific examples of the student's areas of strength and areas for improvement."
- Additionally, the Classroom Newsletter is a method of facilitating caregiver-teacher communication. The materials state, "Classroom newsletters can be used to keep caregivers

informed about what is happening in the classroom. Newsletters can include upcoming lab investigations, information from the lab safety posters, upcoming units of study from the scope and sequence, and important assessment dates."

EduSmart Science Grade K

Indicator 8.1

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

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

Meets | Score 2/2

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

Materials are accompanied by a TEKS-aligned Scope and Sequence outlining the order in which knowledge and skills are taught and built into 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.

- Materials include a TEKS-aligned Scope and Sequence document that outlines the order in which knowledge and skills are taught. It provides a suggested number of days, essential questions, vocabulary, and possible activities for teaching each concept.
- The Scope and Sequence outline how the knowledge and skills can be taught and built upon to allow for the gradual release of responsibility for students.
- In the Scope and Sequence document, there is a strategic order and connection between the TEKS addressing scientific and engineering practices (SEPs), recurring themes and concepts (RTC), and other reporting categories. For example, the Matter and Properties reporting category includes suggested TEKS (K.1D, K.1E, K.1F, K.2B, K.3B, K.5C, and K.5E) that can be revisited.

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

- Materials provide a Teacher Resources section with instructions for facilitating hands-on activities, vocabulary, and assessment within each reporting category.
- The Activities section of the Content Library includes an overview document that references inquiry-based hands-on labs, investigations, application practice, and research activities. These activities provide teacher guidance for reviewing, reteaching, and spiraling skills for mastery and retention of material. For example, the activity K.13C – Modeling Life Cycles, instructs teachers

to use the activity "as an opportunity to spiral back and review content in K.13A: identify the structures of plants, including roots, stems, leaves, flowers, and fruits." A station activity supports the engineering practice of making models.

- The materials provide teacher guidance to help students make connections between units over the course of the year. The Engineering Design Challenge: Engineering Rocks provides teacher directions, materials, discussion prompts, and clarifications. During this activity, students use what they know about rocks and the shapes of rocks to design a new piece of playground equipment with colored rocks. Additionally, the instructional module Uses of Water, Soil, and Rocks provides guidance for facilitating student-made connections across the core concepts.
- The Implementation Strategies describe the K–12 Anchoring Phenomenon, quizzes, instruction modules, glossary activities, and readers. Further, materials reference the recurring themes and SEPs.

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

- Materials include leveled readers that provide opportunities for students to review and practice knowledge and skills spiraled from previously learned content. For example, the reader for TEKS K.13(C)(D), Life Cycle of Plants and Animals, supports students in reviewing and applying previously learned content from TEKS K.12(A)(B) regarding what plants and animals need in order to survive.
- Materials include opportunities for review and practice of knowledge and skills spiraled throughout the year to support mastery and retention. For example, in the hands-on activity for TEKS K.13(C), Modeling Life Cycles, students must identify and record the changes from seed, seedling, plant, flower, and fruit in a simple life cycle. Teachers are prompted to use this activity as an opportunity to spiral and review content in TEKS K.13(A), which includes identifying the structures of plants, including roots, stems, leaves, flowers, and fruits.
- The materials include intentional practice and spiraling of previously taught TEKS. For example, the Modeling Life Cycles lesson states, "Modeling Life Cycles is an excellent example of the recurring theme and concept of conditions that can cause systems to either change or stay the same. Although the different stages of a plant's life cycle will vary, the entire cycle will remain the same. Plants are a system of parts that work together."
- The vertical alignment document allows teachers to see what standards spiral from previous grade levels. The Scope and Sequence documents are provided for each grade level. Within these documents, teachers can anticipate when standards will be taught as well as what SEP TEKS and RTC TEKS will be addressed in each unit. This document allows teachers to view when these standards will be spiraled and addressed again.

EduSmart Science Grade K

Indicator 8.2

Materials include classroom implementation support for teachers and administrators.

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The Implementation Strategies Guide, available for every standard, guides all activities, along with their design purposes and how to use them. It also provides teachers with ideas for enrichment and scaffolding support as well as station activities.
- Teacher guidance is provided through the grade-specific Scope and Sequence that is broken down by categories and TEKS. It has a list of accessible materials and content that can be used to support and enhance student learning in relation to grade-level-appropriate TEKS.
- Each concept unit includes a link to an Implementation Strategies icon that links to the Content Library Descriptions and Possible Implementation Strategies document. The document provides teacher guidance and recommendations for the use of the resources. For example, on page 2, it recommends that the inquiry-based hands-on labs, investigations, application practice, and research be "...completed whole group or small group or as part of a station rotation" with an expected time of 20–30 minutes per activity.
- Teacher guidance for each activity includes a materials list. For example, the activity Describing and Comparing Objects lists the following materials for the lesson that enhance student

learning: “Materials (per group): 4–5 small objects (a ping pong ball, a box of crayons, a sponge, a tennis ball, toy fruit, a piece of soft fuzzy material, a ball of yarn, etc., that can also fit into the pans of a double-pan balance), double-pan balance, journals, or paper to draw objects.”

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

- Standards and TEKS are listed in the Instructional Modules. For example, in the Instructional Module for TEKS K.13 (A)(B), Needs of Plants and Animals, students learn that plants and animals have structures that help them survive in their environment. They learn to identify different parts of a plant such as the roots, stem, and leaves. They learn that animals have structures such as eyes for seeing, ears for hearing, and limbs for moving and grasping objects.
- In the lesson Parts of a Plant Salad K.13A, materials include leveled readers that explain the scientific content embedded within English Language Arts and Reading (ELAR) standards. Students engage in reading about science and at the end there is a 5-question probe that asks both scientific questions and ELAR questions about the text.
- The reader for TEKS K.9(A)(B), Day and Night, provides students the opportunity to read about how the Sun journeys across the sky in a day, its effect on shadows, and how we plan our activities based on the position of the Sun. A five-question developmentally appropriate probe that addresses both science and ELAR standards is included.
- The materials use phenomena in several places within the instructional sequence. Phenomena can be placed within the instructional sequence in multiple locations. Lessons include TEKS and vocabulary that are learned across categories and standards. The categories that include Matter and its Properties, Force, Motion, and Energy, Earth and Space, and Organisms and Environments have TEKS that correlate with TEKS in Science and Engineering Practices (SEPs) and Recurring Themes and Concepts (RTC).

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

- Materials include a comprehensive list of all equipment and supplies needed to support instructional activities. This can be found in the teacher’s version of the hands-on activity, which lists all of the materials needed to complete the activity/lab with the students. For example, in the hands-on activity Direction of Light K.8(B), the teacher guide provides the teacher with the instructions and the materials list to complete the instructional activity. The Light and Shadows activity K.8(B) and the Engineering Design Challenge, Magnetic Toy, include a list of materials needed per small group. Additionally, the Supply List for Hands-on Activities document includes the consumables and non-consumable materials needed to support instructional activities across grade-level lessons.
- The Increasing and Decreasing Light Energy activity includes a list of all equipment and supplies required to support lab investigations. The materials include a desk lamp, a box, 4–5 objects that can be seen by students from their seats, and a timer.
- The materials include a list of all equipment and supplies required to support lab investigations. For example, the lesson Reading a Thermometer includes a copy of the thermometer mercury templates. The teacher can copy them on cardstock, laminate, and assemble them.

EduSmart Science Grade K

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

- Materials include guidance for safety practices, including the grade-appropriate use of safety equipment during investigations. For example, the Instructional Module for Scientific and Engineering Practices for standards in K.1 to K.4, titled Safety and Scientific Processes, guides students through learning how to conduct safe and appropriate science investigations using scientific processes successfully. Additionally, a lab safety poster is in the Hands-on Activities section for each of the TEKS. The poster can be used to guide safety practices.
- Activities provide a brief description of safety practices. For example: in the category K.5(B) Cause and Effect under Lab Safety Rule, instructions include: Always wear safety goggles in the lab, do not touch anything without permission; always wear closed-toe shoes in the lab; no sandals; no food or drink in the lab, never use lab equipment without a teacher in the room, wash your hands before and after using the lab, never touch electrical outlets, listen to the teacher's instructions, and in case of an accident: tell your teacher immediately.
- Each unit includes a chart for safety practices. For example, the Increasing and Decreasing Light Energy activity includes a Lab Safety Rules poster. Some of the requirements include the following: Always wear safety goggles in the lab, do not touch anything without permission, always wear closed-toe shoes in the lab, no sandals, no food or drink in the lab, never use lab equipment without a teacher in the room, wash your hands before and after using the lab, never touch electric outlets, and listen to the teacher's instructions.

EduSmart Science Grade K

Indicator 8.3

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The Scope and Sequence timeline is divided by reporting category, unit, and standard. For example, these timelines allow teachers to cover the required TEKS in a reasonable time frame yet remain flexible to provide on-time instruction to learners who need additional time to reach mastery on a topic or who have mastered a topic quickly and are ready to progress to the next sequential lesson.
- The Implementation Strategies Document includes a short overview of how to use EduSmart resources. For example, the teacher guidance in the Instruction Module section of K.5(E) Energy and Matter includes direct instruction videos that average 8–12 minutes in length and can be used for whole group or assigned virtually for small group or individuals. Each video has multiple breaks to facilitate student discussion – whole class, Think-Pair-Share, or note-taking. When assigned virtually, the student must interact with the video after each break in order to continue it to reduce student inattention. The expected time for this activity is 10–15 minutes.
- The materials include guidance and recommendations on the required time for lessons. For example, the Kindergarten Scope and Sequence includes The Reporting Category, Scientific and Engineering Practices (SEPs), and the suggested length of days for the Introduction is 4–5 days. The rest of the Reporting categories also have a suggested length of days for each lesson.

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

- Teacher resource guides include strategic implementation instructions for teachers that provide suggested use for each component. The teacher Implementation Strategies documents give

specific guidance on using the components within the lesson cycle, as well as ideas for use as intervention, remediation, or accelerated learning tools. For example, within the Implementation Strategies document, the Instructional Modules are directed to be used as the instruct-teach component. Additionally, the guidance suggests the student quiz be used as an extension of the Instructional Module to gauge student mastery. The progression of the activities and content within the implementation strategies document reflects a progression from direct instruction, guided learning, collaborative learning, independent mastery, and then possible station activities for enrichment or intervention. The sequence of the suggested content allows for appropriate developmental progression through the TEKS and content that must be taught within one school year. Also included in the documents are details on component use for differentiation with multiple sub-populations of students, including special education, English language learners, dyslexia, ADHD, gifted and talented, and other necessary accommodations. These tools allow users to craft meaningful lesson plans within a flexible curriculum design to meet the needs of their learners.

- The Scope and Sequence document guides the implementation of content following a developmental progression of possible units of study based on Science and Engineering Practices (SEPs), Recurring Themes and Concepts (RTCs), or core content. The Learning Management System (LMS) landing page provides teachers with units on the three dimensions of science which are called Learning Categories. Teachers have the flexibility to use the content of each Learning Category as they are or as a menu of resources to fit locally developed Scope and Sequences without disrupting the sequence of the content. For example, the Learning Category, Scientific and Engineering Practices (K.1 to K.4) Strategic Implementation guidance includes a menu for teacher-facing resources. Student-facing resources are sequenced, beginning with an instructional module, an Interactivity, four hands-on investigations, and three articles about people in Science, Technology, Engineering, and Mathematics (STEM).
- The Scope and Sequence document provides teachers with an understanding of the content and the best order in which to cover topics to help students build understanding. For example, in lesson K.5(B) Cause and Effect, the student uses recurring themes and concepts to make connections across disciplines.
- The materials include guidance on strategic implementation that ensures the sequence of content is taught in order. For example, the materials include a guide that offers options for adjusting the time spent on particular units without disrupting the sequence of content. In the Scope and Sequence, the Reporting category is Recurring Themes and Concepts. The units begin with patterns, cause and effect, scale, quantity, and proportion, system and system models, structure and function, energy and matter, and stability and change. Each lists the suggested days, essential questions, TEKS, and possible activities.

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

- The Scope and Sequence includes timelines by reporting category, unit, and standard. For example, these timelines allow teachers to cover the required TEKS in a reasonable time frame yet remain flexible to provide on-time instruction to learners who need additional time to reach mastery on a topic or who have mastered a topic quickly and are ready to progress to the next sequential lesson.
- The materials allow flexibility for teacher use and implementation. Teachers can choose which activities they wish to implement for grade-level content. This flexibility provides teachers with the autonomy to make their teaching their own while still offering support and scaffolds for

student learning. For example, in lesson K.8A, Increasing and Decreasing Light Energy, the timeline is listed as 8–10 days.

- The materials provide lessons within Reporting Categories that incorporate specific TEKS, including RTC and SEPs, to be taught throughout the school year. For example, in the suggested time frame of 9–10 days for K.10(C) Air Is All Around, students identify evidence that supports the idea that air is all around us and demonstrate that wind is moving air using items such as a windsock, pinwheel, or ribbon. Suggested SEPs connections include: K.1A (ask questions based on observation), K.1B (plan descriptive investigations), K.1D (use tools), K.1E (observation as evidence), K.1F (record and organize data), K.1G (develop and use models to solve the problem), and K.3B (communicate explanations individually or collaboratively). Suggested RTC connections include: K.5A (identify and use patterns), K.5B (predict cause and effect relationships), K.5C (describe properties in scale), K.5E (identify forms of energy), and K.5F (relationship of structure & function).

EduSmart Science Grade K

Indicator 9.1

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

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

Not Scored

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

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

Evidence includes but is not limited to:

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

- The materials create a balance between providing enough information and allowing space for students to absorb and process the information being presented. By including an appropriate amount of white space, content can be broken up, making it easier for students to read and understand. For example, Reader K.12A/B, "Life on the Farm," has an appropriate amount of white space and a well-designed layout that makes it easier for students to focus on and learn from the content. Additionally, Quiz K.7A, Attractions, has an appropriate amount of white space and a well-designed layout that makes it easier for students to focus on and learn from the content.
- The materials include an appropriate amount of white space and a design that supports and does not distract from student learning. In Unit K.6A, Describing Objects, the Reader "Changing Shapes" provides an adequate amount of white space around the text. The content is easy to read and it isn't distracting with overwhelming images. There is consistency in the number of sentences on each page as well. There is a read-out-loud option on the text and it is highlighted in blue for easy tracking. Additionally, in Scientific and Engineering Practices K.1 to K.4, the color used in the reader, "A Melting Scavenger Hunt," is used intentionally and consistently to guide the user through the content.
- The materials include an appropriate amount of white space and an overall design that does not distract from student learning. The lesson, "Scientists and Engineers – Discovery," K.1 to K.4 Scientific and Engineering Practices, includes white space around the text that makes the content easy to read and comprehend. Also, the margins, edges, and empty spaces around the content are consistent throughout digital materials. Most of the digital materials are available to

download as PDFs. There is also equal line height in the body text and adequate spacing between paragraphs as the materials change into different sections.

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

- The materials use pictures and graphics to enhance student learning and engagement without being visually distracting. Pictures and graphics are carefully selected to support the content and engage students without overwhelming them. For younger students, simple and colorful images are used, while realistic photographs and diagrams are utilized for older students. For example, Reader K.12A/B, "Life on the Farm," has age-appropriate pictures and graphics that make it easier for students to focus on and learn from the content. Additionally, Quiz K.7A, Attractions, has age-appropriate pictures and graphics that make it easier for students to focus on and learn from the content.
- The materials include age-appropriate pictures and graphics that support student learning and engagement through digital materials. For example, in Unit K.10C, Air Is All Around, the Reader "The Wind" is a digital text in which students follow along with age-appropriate images and a clear understanding of the content. The text contains real-life pictures and graphics to enhance students' comprehension.
- The materials include age-appropriate pictures and graphics that support student learning and engagement. For example, in Unit K.5F, Structure and Function, the Reader, "Facial Functions," uses photos and pictures with simple labels to help students see important features. The photo shows a boy's head, eyes, ears, nose, and lips. The materials embed age-appropriate pictures and graphics that support student learning and engagement without being visually distracting.
- For the most part, materials embed age-appropriate pictures and graphics that support student learning and engagement. One piece that could distract student learning is a lack of consistency in fonts. All Instruction Modules use an inconsistent font for the letter 'a.' An example can be found on the first page and throughout the Instruction Module for K.5B, Cause and Effect. Another place where the letter 'a' is not consistent is Reader K.5B, "Cause and Effect." The first page uses different fonts for the letter 'a' in the title, "A Rainy Day," and for the name of the author, "Jennifer Roach"

Materials include digital components that are free of technical errors.

- The materials are free of technical errors which can limit student and teacher frustration. For example, Reader K.9A/B, "The Moon," and Quiz K.10C, Air Is All Around, are free of spelling, grammar, and punctuation errors, and free of wrong answers to problems.
- The materials include digital components that are free of technical errors. For example, the activity in Unit K.12A/B, Needs of Plants and Animals, "Soil Experiment 1: Do Plants Grow Better in Soil?" is free of spelling, grammar, and punctuation errors. It is free of inaccurate content materials or information and free of wrong answers to problems. Additionally, in Unit K.5F, Structure and Function, the Reader "Functions on a Farm" provides a digital text that uses correct use of uppercase and lowercase, commas, punctuation rules, correct spelling, and text alignment. The materials include digital components that are free of technical errors and misinformation, showing correct and age-appropriate grammar, spelling, and punctuation.

EduSmart Science Grade K

Indicator 9.2

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

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

Not Scored

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

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

Evidence includes but is not limited to:

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

- Materials integrate digital technology and tools into the educational design to support student learning and engagement. The interactivity components are purposefully designed and align with the learning objectives as outlined in the TEKS. For example, the interactivity for K.1 to K.4, "Tools Used in Science," and the Interactive Glossary for K.11A, Uses of Water, Soil, and Rocks, are easy to use and navigate while not distracting from the content or target learning objective of science tools and how they are used.
- Materials integrate digital technology and tools for students to engage and expand their knowledge. The Instructional Module for K.6A, Describing Objects, includes an interactive video lesson to help students identify and record observable physical properties of objects, including shape, color, texture, and material, and generate ways to classify objects.
- The materials integrate digital technology and tools that support student learning and engagement. Digital components include embedded tools, such as text-to-speech, an interactive glossary, annotations, Readers, and Anchoring Phenomenon videos. For example, the Glossary for Light and Shadows includes text-to-speech as the students click on the words *light*, *prism*, *shadow*, and *reflect,* and the words are read and defined out loud for them.

EduSmart Science Grade K

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

- Materials integrate digital technology in ways that support student engagement with science and engineering practices and help students apply the material they are learning. For example, the interactivity for K.1 to K.4, "Tools Used in Science," allows students to digitally match science tools with their use. Students access concepts in new ways, which can develop a deeper understanding of the material and its real-world applications, as well as allow students to make connections to recurring themes and concepts. Additionally, the Interactive Glossary for K.11A, Uses of Water, Soil, and Rocks, allows students to engage with the concepts in new ways.
- EduSmart is a digital science curriculum that students use to engage in science education through science and engineering practices, recurring themes and concepts, and grade-level content. For example, in the K.5A, Patterns (a recurring theme) instruction module, students learn to identify and use patterns to describe phenomena or design solutions.
- The materials provide opportunities for students to obtain, evaluate, and communicate information using digital tools. The Instruction Module for K.8B, Light and Shadows, is interactive. There are questions asked throughout the video, and the students use the provided marking tools to circle the correct answer. For example, the lesson asks the students, "What helps us to see things?" The lesson also includes an interactive whiteboard activity.

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

- Materials integrate digital technology that provides opportunities for teachers to collaborate with one another. Through the use of a digital platform, teachers are able to collaborate with other teachers regardless of their physical location. For example, in the Workspace area, through the use of live lessons, teachers can collaborate with one another in real-time. Additionally, the Workspace area has a shared assignment tab. There is no evidence of Teacher Guidance on how to access or use this feature. There is no evidence of opportunities for students to collaborate digitally.
- Through the use of their digital platform, EduSmart features a lesson-sharing option that allows teachers to collaborate with one another on designing lessons. To get to this feature, the teacher will click on the Workspace link located at the top of the platform. Then click on the Assignments Tab. Once a teacher selects assignments for their class, the teacher can share them by clicking on the Share with Teachers icon located to the right of the assignment. Teachers can share through the EduSmart platform, or they can copy assignment URLs.
- The materials integrate digital technology that provides opportunities for teachers and other teachers to collaborate. The section labeled "Workspace" includes sections to upload live lessons, create assignments, share live lessons, and share assignments. There is no evidence of Teacher Guidance on how to use this feature to collaborate with other teachers. At this time, our review team is not able to see any of these lessons.

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

- EduSmart's digital technology is compatible with a variety of learning management systems. The assignment URL can also be copied to assign to students through a different platform. Additionally, the student assignments can be shared to Google Classroom and LMSs like

Blackboard, Canva, and Schoology. When a teacher clicks on the Workspace link, Assignments Tab, and then the Assign Icon on the right, three options for sharing with students are available: Assign on EduSmart Platform, Copy Assignment URL, and Share to Google Classroom. Some of the materials are downloadable as PDFs and are accessible without access to the Internet.

EduSmart Science Grade K

Indicator 9.3

Indicator 9.3, Grade K

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

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

Not Scored

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

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

Evidence includes but is not limited to:

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

- The digital technology materials and online components align with the scope and approach to science knowledge and skills progression as outlined in the TEKS. For example, in K.1 to K.4, "Tools Used in Science," the content focuses on the scientific method and inquiry skills that are supported by online components like the Interactivities that provide students the opportunity to collect and analyze data or conduct virtual experiments.
- Digital technology and online components align with the scope and approach to science knowledge and skills progression. In the Scope and Sequence Document, the column "Possible Activities" lists all the digital and online activities per concept unit.
- Digital technology and online components are developmentally appropriate for the grade level. The Readers include a read-aloud feature that allows students to modulate their reading experience. For example, Reader K.13C/D, "Fruit from a Seed," includes a read-aloud feature that allows students to slow down or speed up the rate of speech.

EduSmart Science Grade K

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

- The Implementation Strategies document provides teacher guidance on the use of embedded technology to support and enhance student learning. Each technology component includes guidance for the teacher on how that specific component can be presented and used in their instruction to support and enhance student learning. For example, the document states, "Quizzes feature text-to-speech accommodation when assigned online. For each question, there is a speaker icon at the top left below the question number. Students may press this icon for text-to-speech of the question and there is a speaker icon for the answer choices. For each of the questions, the correlating standard is listed below the question number for teacher reference."
- The Implementation Strategies document provides teacher guidance on the use of embedded technology to support and enhance student learning. Each technology component includes guidance for the teacher on how that specific component can be presented and used in their instruction to support and enhance the learning of students. For example, the document states, "Interactivities are an engaging activity that features STAAR-like item types such as drag and drop, text-entry, hot spot, and multi-select. Each Interactivity is a gamified version of the standard that allows students to engage with content related to a real-world scenario. Students receive immediate feedback on their progress and can attempt the interactivity multiple times. The interactivity can be used as a review activity before an assessment, as a formal assessment, or as a small group activity. It can be assigned individually or whole group as well." Additionally, the Home tab on the top of the platform includes a video named "Teaching with Live Lessons," which guides teachers on how to create playlists that can be used during asynchronous learning.

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

- The materials are accessible regardless of physical location. This design allows students to access materials at home and provides parents and caregivers the opportunity to access the content to support student engagement. For example, the Caregiver Letter states, "To get started, your student will need access to a computer with an internet connection. Once they have logged in to EduSmart through their school digital login, they will find a comprehensive library of activities, videos, quizzes, and games to support their learning. Your child can work through the learning content at their own pace or at the direction of their teacher through assignments in their dashboard, allowing them to practice and review content as needed." The Caregiver Letter also states," We would love to invite you to be part of this learning process. Students can access their EduSmart dashboard from home by going to https://lms.edusmart.com/ and using their usernames and passwords to log in. Your students' login information is below. Username: _____ Password: _____."
- Materials are available to parents and caregivers through EduSmart's online learning platform. This design allows parents and caregivers the opportunity to access the content to support student engagement at home. A letter to parents/caregivers is found in the Help link on the top of the Home page of the platform. The letter guides parents on how to access student materials and possible questions that parents can ask to reinforce the content that students are learning. Sample questions include, "What was your favorite thing that you learned in science today? How is…related to…? How would you describe…?