Summit K12 Dynamic Science Grade 2

Summit K12 Dynamic Science Grade 2 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 somewhat 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 somewhat 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 some teacher guidance to support student reasoning and communication skills.

Section 6. Progress Monitoring

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

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- The assessments are somewhat clear and easy to understand.

Section 7. Supports for All Learners

- The materials include guidance, scaffolds, supports, and extensions that maximize student learning potential.
- The materials include research-based instructional methods that appeal to various learning interests and needs.
- The materials partially include listening, speaking, reading, and writing supports to assist emergent bilingual students in meeting grade-level science content expectations.
- The materials provide guidance on fostering connections between home and school.

Section 8. Implementation Supports

- The materials include year-long plans with some practice and review opportunities that support instruction.
- The materials include some 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 mostly intentionally designed to engage and support student learning with the integration of digital technology.
- The digital technology or online components are developmentally and grade-level appropriate and provide support for learning.

Section 10. Additional Information

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

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Indicator 2.1

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

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

Partial Meets | Score 2/4

The materials partially meet the criteria for this indicator. Materials are partially 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 some 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.

- Each Lesson Guide provides opportunities for students to develop mastery through an Engage activity, an E-Book to teach and discuss new concepts, core vocabulary, an Apply/Extend activity, a connection to a different content area, a Home Connection, a lab, and a review. Teachers first use the E-Book to introduce important vocabulary and concepts to the students. Once teachers finish instruction, students use their knowledge of the content to complete the Apply/Extend activities and lab. The Apply/Extend section provides students opportunities to engage in hands-on activities that provide students with opportunities to practice, design, and conduct grade-appropriate experiments. For example, in the Category 2 Lesson, Sound, students demonstrate and explain that sound is made by vibrating matter and that vibrations can be caused by various means. Using the E-Book, the teacher introduces students to the concepts of

energy, sound energy, vibrations, and volume. After listening to the E-Book, students complete a lab where they apply their knowledge of sound energy. In this lab, students explain how different levels of sound are used in everyday life, such as a whisper in a classroom or a fire alarm.

- The Teacher Lab Guide of each lesson includes the SEPs evident for the lab. The materials also address the Key Concept of the lab that ties back to the SEPs. For example, in the Sound lab, Dancing Sugar, one SEPs TEKS is listed, 2.2B "Analyze data by identifying significant features and patterns." The Key Concept of the lab is "Demonstrate sound is made by vibrating matter." The lab activity asks students to "predict what trees look like for each season. Speak at different volumes (whisper, inside voice, yell) near the cup with the sugar crystals and observe the sugar crystals." Students then record the movement of the sugar crystals with a whisper, inside voice, yelling, and radio/computer speaker.
- The 2nd Grade TEKS-SEPs-RTCs Crosswalk document provides guidance on which scientific and engineering practice (SEPS) opportunity is matched with content Texas Essential Knowledge and Skills (TEKS) and how often throughout the year. For example, SEPs TEKS 2.3C is paired with content TEKS lessons for TEKS 2.6A and 2.8B-C. The same SEPs TEKS is also paired with content TEKS 2.6B, 2.7A-B, 2.10A, 2.11A, 2.12A, and 2.12C for Labs.

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

- The materials list relevant recurring themes and concepts at the beginning of each Lesson Guide and Teacher Lab, allowing teachers to make connections between and within overarching concepts during their delivery of instruction.
    - For example, in Category 4, all of the lessons list 2.5F, "describe the relationship between structure and function of objects, organisms, and systems," as a recurring theme.
    - For example, the Lesson Guide for Push and Pull includes 2.5B, “Investigate and predict cause-and-effect relationships in science.”
    - For example, the Push and Pull lab correlates with the recurring theme of cause and effect. Students construct a swing using the materials provided and then observe the effects when applying push and pull.
- The 2nd Grade TEKS-SEPs-RTCs Crosswalk document shows teachers where and how often each recurring themes and concepts TEKS is matched with each content TEKS in Lab Investigations across the year. For example, RTCs practices TEKS 2.1B is paired with content lessons and labs for TEKS 2.6A-C, 2.7A-B, 2.8A and C, and 2.11B for a total of 8 lessons and labs across the year.

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

- Each Lesson Guide uses an E-Book to strategically develop students' content knowledge. There are also Apply/Extend activities and labs with each lesson. For example, in the Category 3 Lesson, The Movement of Rocks and Soil, students investigate and describe how wind and water move soil and rock particles across the Earth's surface. Teachers engage students by discussing what students already know about rocks and presenting the E-Poster as an overview of what students will learn. Next, teachers use the E-Book to teach new content, including but not limited to rocks, soil, particles, wind, soil, water, and weathering. The Lesson Guide provides teachers with important vocabulary and ideas to introduce as they read. After the E-Book,

students apply their knowledge to various Apply/Extend activities, including but not limited to creating a flow map to show the process of the movement of rocks.

- Each lesson systematically follows the 5E model of Engage, Explore, Explain, Elaborate/Extend, and Evaluate. For example, in the Physical Characteristics of Environments Lesson, students' prior knowledge is engaged by an image of a cactus and a series of questions from the teacher, including, "How does a cactus survive in its environment?" An E-book is used to teach and discuss the concepts of environments, what environments provide, physical characteristics of environments, living/nonliving things, grasslands, deserts, oceans, ponds, and the Arctic. Teachers check for student understanding and introduce and work with core vocabulary within the concept. Students apply their understanding by creating a graphic to describe the physical characteristics of environments and a Venn Diagram to compare and contrast the physical characteristics. There are options to engage students in a geography project around the concept. Students participate in a lab and an evaluation through a vocabulary review or study guide and a formative assessment.

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

- The materials include a general guide for teachers when planning a unit. “This is a general guide for teachers to use as they begin a unit. This guide allows students to see phenomena and explore the wonders of it. Then, as a class or group, we will ask questions to establish the guiding question. As they complete the related TEKS, they will add to the class anchor chart. This document will serve as a guide for teachers to lead students through this exploration process of asking and planning the investigation.”
- There is little evidence of opportunities for students to ask questions in lab investigations. Instead, teachers prompt students with questions throughout the lab. For example, in the Category 1 Lab, Combining to Build: Let's Build (Bridge), students demonstrate that small units can be combined and reassembled to form new objects for different purposes. Students use craft sticks, paper clips, rounded toothpicks, straws, and notecards to design a bridge that will hold the weight of a glue bottle. While students plan and design their own investigation, there are no opportunities for them to ask questions before or while planning their investigation.
- There is little evidence of sufficient opportunities for students to plan investigations; however, the materials include sufficient opportunities for students to conduct classroom, laboratory, and field investigations to develop an understanding of science concepts. For example, in the lab, Combining to Build: Let's Build (Bridge), the procedures are "The teacher shows different models of bridges and describes how the materials are used to support the weight of the bridge and the traffic. The teacher says, 'We will be making a model of a bridge and testing to see if it is strong enough to hold something.' Students draw a model of the design for the bridge they will build and then select the materials they will need. After building the model, students will demonstrate or test it to see if it will hold a glue bottle." Students then explain any changes they would make to their bridge design to help strengthen it and write about the changes.

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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.	PM
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

Partial Meets | Score 2/4

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

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

Evidence includes but is not limited to:

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

- The materials partially embed phenomena and problems by providing opportunities for students to participate in scientific investigations that begin with student-led inquiry. Materials provide an Anchoring Phenomena Inquiry Guide within the Science Lab Investigations section of the *Teacher's Guide* for use when planning a unit. The document states, "This is a general guide for teachers to use as they begin a unit. This guide allows students to see phenomena and explore the wonders of it. Then as a class or group will ask questions to establish the guiding question. As they complete the related TEKS, they will add to the class anchor chart. This document will serve as a guide for teachers to lead students through this exploration process of asking and planning the investigation." As such, the embedding of phenomena and problems to support students in constructing, building, and developing knowledge is limited to the unit and investigation level in materials, with limited inquiry-based instruction evidence across lessons. At the lesson level, most student learning experiences are teacher-driven or provide step-by-step directions that are not authentic applications of science concepts.

- While the materials do not embed phenomena and problems as the central anchor driving student learning across lessons, materials do provide lab investigations that support students in constructing, building, and developing knowledge through scientific and engineering practices (SEPs), recurring themes and concepts (RTCs), and Texas Essential Knowledge and Skills (TEKS)-aligned grade level content.
    - For example, in the lab, Using Sound to Communicate: Designing a Sound Device, students are expected to "design and build a device using tools and materials that use sound to solve the problem of communicating over a distance." This task is aligned with the SEPs TEKS 2.2D to "evaluate a design or object using criteria to determine if it works as intended" and the RTCs 2.5D "examine the parts of a whole to define or model a system." Students are given a choice of a variety of materials and asked to design a device that uses vibrations that can be used to communicate over a distance. Students build, test, and redesign their devices until they meet the criteria.

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

- Each Lesson Guide begins with an Engage activity, where teachers activate students' prior knowledge. For example, in the Category 2 Lesson, Sound Levels, the teacher activates prior knowledge by asking, "What sounds do you hear at the park? Are all the sounds the same?" Then, the teacher presents the E-poster as an overview of what students will learn in the lesson.
- The materials follow the 5E model, which begins with an Engage activity. In this portion of the lesson, the materials describe how to "activate students' prior knowledge" related to phenomena and/or engineering problems. For example, in the lesson Reduce, Reuse, Recycle, teachers are guided to activate students' prior knowledge by asking a series of questions such as, "What else could you use an empty bottle for?" and "What can you do to make the school playground a better and cleaner place?" The teacher facilitates a Quick Demo/Mini Lab. "The teacher will show the students an empty tin can. Ask students how it can be used. The teacher can then show pictures from the internet of decorated tin cans that can be reused as a pencil holder, jewelry holder, or other uses. Students can then create their own decorated tin can."

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

- Lesson Guides outline the scientific concepts and learning goals behind the content introduced in the lesson. At the beginning of each lesson, teachers are provided with a student learning objective, SEPs, and RTCs. While Lesson Guides provide this for each individual lesson, it is important to note that there is no evidence of unit overviews that provide teachers with information on unit goals and standards covered throughout the entire unit. The materials provide students with opportunities to build an understanding of the content presented in the lesson through readings, activities, and labs.
- In each Lesson Guide, the materials provide a "Students will..." statement that outlines the goal behind each phenomenon and engineering problem. For example, in the lesson Animal Life Cycles, the first statement in the guide is, "Students will: investigate and describe some of the unique life cycles of animals where young animals do not resemble their parents, including butterflies and frogs." In addition, each Lesson Guide outlines the specific SEPs that the lesson covers in TEKS number and description. For example, in this lesson, there are five SEPs listed; 2.1F Record and organize data using pictures, numbers, words, symbols, and simple graphs, 2.2B

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Analyze data by identifying significant features and patterns, 2.3A Develop explanations and propose solutions supported by data and models, 2.3B Communicate explanations and solutions individually and collaboratively in a variety of settings and formats, and 2.3C Listen actively to others' explanations to identify important evidence and engage respectfully in scientific discussion.

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Indicator 3.1

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

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

Meets | Score 6/6

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

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

Evidence includes but is not limited to:

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

- The materials include TEKS for past and future learning within a Vertical Alignment Table in the Lesson Guide. The materials include a document titled “2nd Grade Vertical Alignment.” This document claims to "help close the gap between grades. This alignment document will show how parts fit together from grade level to grade level." The document shows how the 1st, 2nd, and 3rd grade Texas Essential Knowledge and Skills (TEKS) align in each reporting category.
- The materials provide a Vertical Alignment section in the Lesson Guides that provides the TEKS for past and future learning to explain how the content builds in future grade levels or what students learned in previous grade levels.
- The materials include TEKS Scaffold lessons, which are lessons from previous grade levels. The TEKS Scaffold lessons, lessons from the same Category in 1st grade, are connected to the new content students are learning in 2nd grade.
- Materials include a vertical alignment table that supports fostering connections between students' prior knowledge and skills to current grade-level knowledge and skills. Placing this vertical alignment table within the Lesson Guide and following it with activities that directly provoke prior knowledge and are student-centered exemplify how the materials allow students

to build and connect to prior knowledge. There are also grade-level concept connections that allow teachers to spiral through prior learning or anticipate future learning.

- The materials provide Grades K-2 Scope and Sequences that focus on the Reporting Categories of the TEKS: Reporting Category 1, Matter and Its Properties; Reporting Category 2, Force, Motion, and Energy; Reporting Category 3, Earth and Space; and Reporting Category 4, Organisms and Environments. For example, within the grade 2 Scope and Sequence and Pacing Guide, there is a Second Grade Vertical Alignment document that states, "This alignment document will show how parts fit together from grade level to grade level."

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

- The materials align to the 5E model, which allows scaffolding when learning a new concept in each lesson. Each lesson is sequenced and increases in rigor. The Lesson Guides follow the same pattern for each lesson: Engage, Teach, and Discuss with an E-Book, Misconceptions, Core Vocabulary, Apply/Extend, Connections, Lab, Review, and Evaluate. With this sequence, students are first introduced to new concepts through pictures and explanations using the E-Book. Students apply knowledge of new content and vocabulary through class discussions and handouts. After all of these activities, students then complete a hands-on lab.
- According to the 5E Model section of the Teacher's Guide, "Teachers can choose from a variety of suggested activities for students to explore new concepts through concrete learning experiences, both individually or collaboratively." Experiences include hands-on investigations, problem-solving, virtual labs, reading, writing, and acting as scientists and engineers. For example, in Category 3 Lesson Resources, students distinguish between natural and manmade resources. To engage students, the teacher does a Quick Demo where they show students a water bottle, a small bag of soil, and a living plant and ask how each is a useful item. Then, students learn about different resources through the teacher-led E-Book. Students then apply their knowledge through class discussions and different Apply/Extend activities. In one of the activities, students work in groups or partners to create a collage to distinguish between natural and manmade resources by cutting images out of magazines. There is a lab at the end of the Lesson Guide where students investigate what types of resources are on their campus. In this lab, students walk around the school with a partner to observe natural and manmade resources.
- The materials provide a 2nd *Grade Pacing Document* that includes a *2nd Grade Pacing Guide* that intentionally sequences the lessons based on the reporting categories set forth by the TEKS. Teachers can access the pacing document to view the vertical alignment of TEKS across grade levels. The materials provide a *Lesson Launch Pad* with lessons in grade 5, along with lessons vertically aligned to that same concept in grade 3 and grade 4. The lessons linked in the *Lesson Launch Pad* are stand-alone lessons that are TEKS-based and vertically aligned. This is one way the materials suggest teachers scaffold learning for students to develop mastery in grade-level knowledge and skills and build understanding.

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

- Materials include a presentation of science and engineering practices. On the grade 2 landing page, a link to scientific and engineering practices includes a slideshow with accessible text-to-speech. An explanation of scientific and engineering practices is linked in the Teacher’s Guide.

- The materials use E-Books to present core concepts in a student-friendly way. The information in the E-Books is accurate and current. The E-Books use a variety of photographs and illustrations to explain new vocabulary. For example, in the Category 3 Lesson, Weather, students are introduced to the words *measure, record, graph, weather, rain, temperature, precipitation, cloud,* and *meteorologist*. The E-Book prompts students to make predictions or answer questions throughout the reading as they learn new content.
- The materials use the 5E instructional model for sequencing science instruction. Each Lesson Guide has an Engage, Explore, Explain, Elaborate, Extend, and Evaluate section. According to the 5E section in the Teacher's Guide, each lesson begins with an Engage activity where teachers activate students' prior knowledge. Each Lesson Guide includes one lab as the Explore activity. Science and Engineering Practices (SEPs) are included in all lesson plans. Teachers use the E-Book for the lesson and core vocabulary activities to explain new content. Elaborate activities include the Apply/Extend discussions or handouts, connections to other subject areas, and home connections. To evaluate student learning, the materials list the Vocabulary Mastery Digital Flashcard Step, Study Guides, Formative Assessment by TEKS, and Lab Investigations as measures.
- Materials include clear and accurate presentations of the RTCs and SEPs. This is noted within each learning activity box in the lesson guides. For example, in the Lesson Guide for 2.10A, in the section “Exploring the Phenomenon: Water In a Pond,” The SEPs and RTCs are shown and referred to in multiple activities throughout the lesson. These are also listed at the beginning of each lesson guide.

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

- The materials provide multiple opportunities for students to develop, practice, and demonstrate mastery of grade-level appropriate scientific and engineering practices as outlined by the TEKS. Each lesson contains a corresponding lab opportunity. Within the Teacher Lab guide provided with each lesson, the Scientific and Engineering Practices evident in the lab are provided. The materials also address the Key Concept of the lab that ties back to the scientific and engineering practices. For example, the “Dancing Sugar” lab for Sound lists the SEPs TEKS 2.2B, “analyze data by identifying significant features and patterns," and tie it in with the Key Concept for the lab, which is "demonstrate sound is made by vibrating matter." The student lab activity involves speaking at different volumes while observing sugar crystals in a nearby cup and then recording the movement of the sugar crystals relative to the sound.
- The Scope and Sequence gives teachers a unit name, standards taught in each category, and lesson titles. Teachers can use this information to understand the main concepts taught within the unit.
- For each lesson, the material provides a mastery or goal statement within the boundaries of the grade-level concepts. Most of the student learning objectives align with the activities in the Lesson Guide. For example, for the Food Chain lesson, the materials state, "Students will: create and describe food chains identifying producers and consumers to demonstrate how animals depend on other living things." Another example is in the Plant Structures lesson: "Students will: identify the roots, stems, leaves, flowers, fruits, and seeds of plants and compare how those structures help different plants meet their basic needs for survival."
- The Vertical Alignment pages in the Scope and Sequence document define the boundaries of content that students must master for the grade level. This document shows the TEKS required for the current grade level and the TEKS from the previous and next grade levels. For example,

in the Category 4, 1st grade lesson, Food Chains, students identify and illustrate how living organisms depend on each other through food chains (1.12.C). In 2nd grade, students create and describe food chains, identifying producers and consumers to demonstrate how animals depend on other living things (2.12.B). In 3rd grade, students identify and describe the flow of energy in a food chain and predict how changes in a food chain, such as the removal of frogs from a pond or bees from a field, affect the ecosystem (3.12.B).

- Materials provide a Concept Mastery Document that explains, "Student Master Science Concepts by using all of their senses read, observe, do, learn and experience all aspects of science," and "The Concept Mastery section of the course offers a multitude of resources created specifically for the 2024 TEKS, SEPS, and English Language Proficiency Standards (ELPS) including Vocabulary Boosters Interactive Flashcards and Image Banks, Hands-on Labs and Explorations, Engaging Interactive E-Book, Interactive Study Guides, Vivid and Engaging E-Posters."

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Indicator 3.2

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

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

Meets | Score 6/6

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

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

Evidence includes but is not limited to:

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

- The materials include a Vertical Alignment section in the Lesson Guide that provides the TEKS for past and future learning to show how the content builds in future grade levels or what students learned in previous grade levels. The materials also include a Grade-Level Concept Connections section that states, "Students have an opportunity to extend and enhance their understanding of this concept through:" and lists one or more TEKS for the current grade level to show horizontal alignment within the grade level. The Vertical Alignment document states, this resource "will help support teachers and administrators in guiding the connections between grade levels." It also states that "vertical alignment helps in setting up long-term goals at the campus or district levels."
- The materials include a Grade 2 TEKS-SEPs-RTCs Crosswalk that shows where each TEKS, SEPs, and RTC is covered in the materials. It uses a color-coding system to indicate which TEKS-based lessons include SEPs and/or RTCs. One color illustrates for the teacher that the SEPs/RTCs are embedded in the lab investigation, another color indicates they are embedded within an inquiry or exploration activity. This document supports teachers in understanding the horizontal alignment of the TEKS, SEPs, and RTCs within the materials.

- The materials provide a teacher resource that explains how the SEPs are embedded within each lesson. "These include areas such as: Demonstrate Safe Practices, SEPs and Science Tools Academic Vocabulary Mastery, Contributions of Scientists and Research and Explore Resources for STEM Careers, Science Process Skills Development, Analyze and Interpret Data and Developing Evidence-based Explanations, RTCs, and Lab Investigation Videos and Virtual Field Investigations."

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 Lesson Guides provide teachers with background information with explanations and examples of science concepts and also provides teachers with teaching points that go along with the E-Book for the lesson. These teaching points provide teachers with information on the concepts to present as they read the E-Book to the class. For example, in the Category 4 lesson, Food Chains, the Lesson Guide provides teachers with information on living/nonliving things, sun, plants, animals, environments, and food chains. Under the word *environments*, teachers read, "An environment is the area where organisms live. An ecosystem is the interaction between the environment and the organisms living in it. There is interdependence between organisms in an ecosystem. Organisms depend on each other and the resources from the land."
- The Lesson Guides provide teachers with background information and explanations and examples of science concepts to support teachers in developing their own understanding of more advanced, grade-level concepts. For example, in the Investigate and Learn section of lesson 2.10A, background information is provided to teachers to support their own subject knowledge and thereby help them recognize barriers to learning. To support knowledge of the effects of wind and water on earth materials, the teacher guide states, “Running, or flowing, water pushes or pulls soil and rock particles to new locations. Rivers can move soil and rock particles as the water flows downstream. This movement of soil and rock from one location to a new location changes Earth’s surface and the river’s shape over time.” The materials go on with more details to provide teachers with a stronger understanding of the concepts and support their subject matter knowledge.
- The materials provide a Misconceptions section in the Teacher's Guide that contains examples of student misconceptions to support the teacher's subject knowledge and recognition of barriers to students' conceptual development. For example, in the Sound Levels lesson, after the Check for Understanding, teacher guidance states, "review the misconceptions with the class and allow time for them to ask questions as needed." The materials then bullet a list of possible misconceptions and explanations. These include: "Sound travels through a solid slower than through a gas. Actually, sound travels more slowly through a gas. Sound travels through the air only. Actually, sound travels through solids, liquids, and gases (air). Objects make the sound. Actually, sound is created when objects vibrate."

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

- The materials provide a purpose for the instructional design of the program. Under the Course Design section in the Teacher's Guide, users find a document titled Philosophy. This document provides users with seven claims, which explain the reasons behind the structure of the materials. For example, claim number two reads, "Teachers are the key to success in science education." The materials state that teachers are at the center of their teaching and learning

model. Resources in the program provide teachers with "engaging and high-quality materials for teachers' instructional decisions for their unique populations." Some examples include but are not limited to high-quality Texas Essential Knowledge and Skills (TEKS) Lesson Guides supporting new and experienced teachers, science literacy E-Books, and activities that support student mastery of concepts through hands-on experiences.

- The materials provide a rationale for the instructional design of the program. Materials highlight key features of the instructional design. Under the Course Design section of the Teacher's Guide, users find a document titled 5E. In this document, users find information on how the program aligns with the 5E model and how to utilize the different materials to meet each step in the 5E model. The program states that its instructional model includes 5E and more, and provides teachers with a flexible, interactive, and hands-on approach. Students are encouraged to "productively struggle and succeed with multiple pathways of learning." For example, students have "multiple opportunities for self-reflection and peer review throughout the learning. Evaluation is done in many ways including presentations, science journal writing, study guides, and formative assessments."
- The materials provide a purpose or rationale for the instructional design of the program. Under the Course Design section of the Teacher's Guide, users find a document titled Scientific and Engineering Practices. According to the document, "The SEPs are embedded within every Dynamic Science Lesson and articulated in the TEKS Lesson Guides." The course also has a designated area where teachers can access SEPs specific lessons, practice, and activities. The rest of the document explains where teachers can access instruction on the SEPs throughout the program. For example, the SEPs section "also provides students with another opportunity to learn and master Scientific Process and Grade appropriate Science Tools Vocabulary."

Summit K12 Dynamic Science Grade 2

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 support students' meaningful sensemaking through reading, writing, thinking, and acting as scientists and engineers. Materials provide 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 provide teachers with a Phenomenon Sensemaking Guide, which is used throughout the entire lesson. This sensemaking guide provides ample opportunities to act like scientists as they gather evidence and make sense of the phenomenon and science concept. The guide is used throughout the lesson and requires students to use different sensemaking behaviors, such as reading, writing, and thinking as engineers and scientists. For example, the guide includes an initial section where students explore the phenomenon. This consists of three subsections, "Observations: What do you notice about the phenomenon? Questions: What do you wonder about the phenomenon? Initial Model: Create a model to show what you think is happening." Early in the year, students will likely draw and gradually add more written text to this, and it provides an opportunity to act like scientists. This is used consistently throughout the lessons as an essential component to guide and formulate student thinking.

- The materials provide learning activities in reading and writing and allow students to think independently and act as scientists and engineers. For example, in Category 4 Lesson, Physical Characteristics of Environments, the teacher engages students with a Quick Demo/Mini Lab. In this activity, the teacher shows the class a cactus and a plant with large leaves and asks the class to compare the two. Students discuss how the two plants survive in different environments. Next, the teacher uses the E-Book to introduce concepts, including environments, living/nonliving things, and physical characteristics of grasslands, deserts, oceans, ponds, and the Arctic. After students learn new concepts through the E-Book, the Lesson Guide offers various apply/extend activities. In one activity, students work in groups or with a partner to create a Venn diagram to compare and contrast the physical characteristics of two environments. In the lab activity, students work in groups and research an environment. Students research how plants and animals survive in their assigned environment on an electronic device and record their findings. Once students complete their research, the group works together to illustrate the environment on a piece of chart paper, including all of the plants, animals, and their needs. When groups complete their posters, they participate in a gallery walk and use a sticky note to name an animal that can survive in each ecosystem.
- Materials provide evidence of opportunities for students to act like scientists. For every lesson, there is a corresponding lab that allows students to act like scientists. For example, in the Reduce, Reuse, Recycle lab, students answer the question, "What are some ways we can conserve resources because some have a limited amount?" Students attach a sticky note to something made of wood, plastic, metal, and paper in their classroom and then discuss and record how each can be reused or recycled. Students also discuss how to reduce the use of each of the items.

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

- The materials provide opportunities for students to engage in scientific texts by reading E-Books in each Lesson Guide. E-books contain photographs, diagrams, and student-friendly definitions and explanations of new concepts. After students listen to the E-Book, the materials provide Core Vocabulary activities where students apply their knowledge of new vocabulary words. The Core Vocabulary activities are repetitive and can be repetitive throughout lessons. The only thing that changes is the vocabulary words used in the lesson. For example, in Category 3 Lesson, Severe Weather, teachers use the E-Book to introduce new concepts to students. The book describes and provides examples of hurricanes, floods, tornadoes, winter storms, droughts, dust and hail storms, and heat waves. After the book, teachers pick one of the Literacy Strategy Options under the Core Vocabulary section of the Lesson Guide. In one activity, students write a sentence and draw a picture with the vocabulary words.
- The materials provide multiple opportunities to engage with grade-level appropriate scientific texts. The materials also provide multiple types of text. Before reading each E-Book, teachers present the e-poster as an overview of what students will learn. E-posters include images and labels of important vocabulary words students will hear in the E-Book. After listening to the E-Book, teachers choose from five Core Vocabulary activities to practice using the new vocabulary words. These vocabulary activities are available for each lesson. For example, in Category 4 Lesson, Plants' Need, teachers present the e-poster during the Engage section of the lesson. The e-poster includes images of sunlight, water, air, space, nutrients, animals, wind, water, and people. An example of a Core Vocabulary activity is Charades. In this activity, the class "plays charades with the vocabulary words."

- The materials provide multiple opportunities for students to engage with scientific texts to gather evidence and develop an understanding of concepts. In most lessons, the materials provide a study guide where students can evaluate their understanding of key concepts and then apply their understanding through a series of review tasks. These guides and activities allow students to engage with grade-level appropriate scientific texts as they develop conceptual understanding.

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 multiple opportunities for students to engage in various written and graphic modes of communication. For example, the materials include a Science Writing and Vocabulary Mastery section. In the Science Writing Skills section, students choose from differentiated science writing prompts. The prompts are based on themes and include Matter, Light and Sound, Earth, The Night Sky, Weather, Animals, Ecosystems, Ocean Ecosystems, and Plants. Students first watch an Engage video about the theme and then choose from Beginning, Intermediate, Advanced, or High prompts. The prompts include sentence stems for students to use as they write their answers. For example, the Beginner prompts for The Night Sky are, “Describe the moon and the sun” and “What does a telescope do?” The Intermediate prompts are, “How are the stars in the Big Dipper alike? How are they different?” and “Describe the spiral galaxy.” The Advanced prompts are, “Does the sun or the moon have a higher temperature? Explain why.” and “What are some things you notice about the Milky Way Galaxy?” The High prompts are, “What makes some stars brighter than other stars?” and “Put the following items in order from the closest to Earth to the farthest from Earth: the sun, Mercury, and the moon.”
- The materials include a variety of graphic organizers to use under the Supplemental Resources section of the website. Students write about their learning using graphic organizers as Apply/Extend activities. Graphic organizers include but are not limited to idea webs, sequence charts, Venn diagrams, and flowcharts.
- Each Lesson Guide provides at least one opportunity for students to write about new concepts. Some writing prompts are included in the Apply/Extend activities and many Lesson Guides include a Connect to Writing activity. Many times, this activity is a fill-in-the-blank worksheet but can also be presented as optional science journal prompts. For example, in Category 4 Lesson, Plants’ Needs, teachers choose from a variety of science writing activities. In the Core Vocabulary section, students complete a 4 Corners graphic organizer using one of the vocabulary words. Students write the word, a definition, and a sentence, and draw a picture. In the Apply/Extend section, students look at an image of a dying plant and discuss what the plant needs. In their science journals, students write their solutions for saving the plant. In the Connect to Writing section, students write a short paragraph explaining how a seed is moved to a new location.
- In several of the labs for each unit, students can display their understanding in graphic form. For example, in the Resources lab, Our Campus Walk, students walk around campus with a partner and observe the natural and manmade resources. Students then fill out a chart to observe the area where the resource was found and whether it was a natural resource or a manmade resource.

Summit K12 Dynamic Science Grade 2

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

- The grade 2 materials provide opportunities for authentic student engagement and perseverance of concepts through productive struggle while acting as scientists and engineers. The materials include student-centered lab activities with the teacher acting as facilitator. Students participate in a variety of lab activities throughout the unit, including both hands-on experiments and research projects. For example, in Category 2 Lab, Designing a Sound Device, students use their knowledge of sound to design a device to communicate over a distance. Students create two designs and test them with a partner. Students record their observations on the Student Lab Sheet. After conducting the experiment, students write about their conclusions. In the Extension activity, students create a system for communication with their devices. Examples include using patterns to represent a word or phrase or using loud or soft sounds to communicate.
- The materials include a Phenomenon Sensemaking Guide and provide opportunities for students to observe phenomena or take part in investigations to make sense of concepts. In the labs, students are encouraged to act as scientists in activities aligned with the Scientific and Engineering Practices (SEPs). For example, in the Severe Weather lab, students record research about the characteristics, location, and potential damage of floods, tornados, and hurricanes. Students then work in pairs to complete and share the information.
- An opportunity for students to be able to make sense of concepts is in the labs provided for each topic. For example, in the Food Chains lab, students go on a nature walk to identify an animal and describe its food chain. Students record their observations in a chart that identifies the animal, the animal's diet, and a description of how that animal depends on other organisms. An alternative method of providing students with pictures of animals or stuffed animals is also suggested if a nature walk is not possible.

Summit K12 Dynamic Science Grade 2

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/or verbal arguments that justify explanations of phenomena and solutions to problems using evidence acquired from learning experiences.

Evidence includes but is not limited to:

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

- Materials provide some opportunities for students to make claims and some hypotheses. The materials provide a Sensemaking Guide and lesson activities that prompt students to use evidence to support their hypotheses and claims throughout the materials. For example, Part IV: Claims, Evidence, and Reasoning - Writing asks students to articulate their claim, their evidence for it, and their reasoning. It also provides an optional section where students can combine this into a written response as appropriate for students.
- The materials prompt students to use evidence to support their claims. For example, in Category 1 Lab, Combining to Build, students use materials to design and build a bridge that will hold the mass of a glue bottle. The teacher shows different models of bridges and describes how the materials used support the weight of the bridge and traffic. After viewing the examples, students draw a model of the design for the bridge they will build and the materials they need on their Student Lab Sheet. Then, students write to explain what physical properties of the materials they selected will help the bridge be strong enough, predict some problems they could encounter with the model, and what solutions they have if a problem arises. Students build the first model of the bridge and test it. Then, redesign their bridge to make it stronger. before

writing to explain what changes helped them strengthen the bridge, how their new design is more helpful, and draw conclusions about the experiment.

- The materials provide a Sensemaking Guide that prompts students to use evidence to support their claim and walks students through the steps to gather evidence to make a claim at the end of the lesson. For example, in Category 1, 2.6C Combining to Build, the students participate in the Lab, Let's Build (Bridge). The Lab Handout begins with the "Purpose: What is the best design and materials to build a bridge that will hold the mass of a glue bottle?" The teacher begins by showing different models of bridges and describes how the materials are used to support the weight of the bridge and traffic. The materials script for the teacher, "We will be making a model of a bridge and testing to see if it is strong enough to hold something." The students use a Student Lab Handout to draw a design for their bridge and then build the model with the provided materials. Students then test their bridge to see if it will hold a glue bottle. After, students answer the following questions: "Which physical properties of the materials selected will help you build your bridge strong enough to hold the glue bottle? What problems could you encounter with your model? What solutions could you have to this problem?" the teacher asks, "What could you do to make your model better?" Then, students draw their bridges, make changes to their models, and answer the questions, "What changes did you make in the design of your bridge that helped you strengthen it? How is your new design more helpful?" The handout has lines for students to write their conclusion.
- Materials provide a Sensemaking Guide that supports students in using evidence to support their hypotheses and claims. The materials do provide opportunities for students to share what they have learned. For example, in This Week's Weather lab, the students create a rain gauge from a plastic cup and use a thermometer to measure the outside temperature and precipitation over a 5-day period. Students then "Analyze the data identifying any patterns or features there may be." The teacher says, “What patterns or features can you identify based on the data you analyzed.” In the Extend section of the Weather lab, the teacher is given guidance to have a class discussion about what can happen if it is raining. The teacher asks, “What problems could you encounter?” Write in complete sentences in your science journal what problems you can encounter. The teacher asks, “What solutions could you have to this weather problem?” Write in your science journal what solution you may have. Communicate your solutions in a class discussion or with your shoulder partner."

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

- The materials present scientific vocabulary using multiple representations. During the Engage portion of the lesson, teachers use the e-poster to introduce vocabulary before reading the E-Book. Then, students listen to the E-Book, which includes graphics and photographs of vocabulary words. The materials also include illustrated vocabulary flashcards for each lesson guide. For example, in Category 4 Lesson, Plants’ Needs, teachers use the e-poster to introduce the words *sunlight, water, air, space, nutrients, animals, wind, water,* and *people* using images of examples. Then, students learn more about these words in the E-Book. On the sunlight page, students view two photographs of plants in sunlight. The teacher reads, “Plants are living things that grow and use the light from the Sun to make their food through photosynthesis. Plants need sunlight, a nonliving thing, to grow.”
- The materials provide students with multiple opportunities to use new vocabulary words. Each Lesson Guide includes multiple Core Vocabulary activities. Student materials include vocabulary practice, where students select statements to match pictures of vocabulary words. The iStudy Guides provide opportunities for students to use vocabulary words in different contexts. For

example, in the iStudy Guide for Category 2 Lesson, Physical Changes of Matter, students drag and drop vocabulary words next to the correct statement. An example of a statement is, "____: a change from a solid to a liquid." Students also "identify the properties for each object in the table by selecting the correct answer from the drop-down menu." Objects include wrapping paper, juice, and candles. Students select the word yes or no to answer if the object can be changed by cutting, folding, melting, sanding, or freezing.

- The materials include opportunities to develop and utilize scientific vocabulary in isolation. For example, the materials include a Core Vocabulary section. In second grade Category 1, 2.6B Physical Changes of Matter, the materials state, "Core Vocabulary should be emphasized and taught in context throughout the lesson." The materials provide four "Literacy Strategy Options" to learn vocabulary: first, 4 Corners where teachers assign one or two words for students to complete with graphics, and students present their word/s to the class; second, Core Vocabulary Flashcards where teachers can print Flashcards for students so they can read the word and definition, color the pictures, cut out the flashcards, draw a picture, and write a sentence using the vocabulary word on the back of each card; third, the Boost Your Vocabulary Handout where the teacher reads the handout as needed for students, or they can choral read it together; and fourth, I'm Thinking Of… where a student chooses a word and writes a sentence of what it makes them THINK of. For example, Classify - Classify makes me think of a time when I grouped my building blocks into different colors.
- The materials include opportunities to develop and utilize scientific vocabulary in context. For example, in Category 1, 2.6B Lab, Changing Physical Properties, students explore three different types of physical changes: changed through freezing, changed through melting, and changed through folding, cutting, and sanding. The Student Lab Handout uses the vocabulary learned in the Lesson Guide. These vocabulary words are *physical property, folding, sanding, melting, cutting, change, freezing,* and *observe*.

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

- The materials integrate argumentation and discourse throughout to support students' development of content knowledge and skills as appropriate for the concept and grade level. For example, in the 2nd Grade 2.6A Properties of Matter Lesson Guide, the Engage section guides the teacher to activate students' prior knowledge by asking: "What words can you use to describe toy blocks? (hard, solid, smooth, heavy, light, green, blue, small, large…) The teacher asks, "How would you group or classify a bag of rocks? (size, color, shape, texture, hardness, ability to float, magnetic, shiny, dull…)"
- The materials integrate discourse to support students' content knowledge. For example, in the Resources lesson, content and grade-level appropriate discourse occur in the Check for Understanding section of the lesson. The teacher is guided to "discuss the following, allowing students an opportunity to demonstrate their understanding of the content." Questions include, "What is the difference between a natural resource and a manmade resource? Describe three things you use in school that are useful and explain if they are natural resources or manmade" and "Why do we need natural resources?"
- The materials provide opportunities for students to develop how to engage in the practice of argumentation and discourse. In lab investigations, students either observe their teacher complete a demonstration or a hands-on activity, record their observations in their lab sheet or sensemaking guide, and draw conclusions based on the demonstration or experiment. The majority of these experiences provide opportunities to develop in the practice of argumentation

and discourse. For example, in lesson 2.10A, students engage in an engineering design challenge to create a solution to changing land in the barrier islands on the Texas coast. Students discuss and work in groups to “design, build, test, and improve their design” using the criteria in the task rubric. Students engage in this activity while actively participating in discourse and argumentation as they sort out individual solutions for the best group option.

- The materials integrate argumentation and discourse within the stages of the learning cycle. For example, in Category 3 Lesson, Resources, students demonstrate their knowledge in a variety of Apply/Extend activities. One example of an activity is a Gallery Walk. Students create a collage to distinguish natural and manmade resources by cutting images from magazines. Students have the opportunity to ask their peers questions about their collages during the gallery walk.

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 developmentally appropriate written and/or verbal arguments that justify explanations of phenomena and solutions to problems using evidence acquired from learning experiences. For example, in Category 1, 2.6B Physical Properties of Matter, Changing Physical Properties Lab, students complete the Student Lab Handout and record observations of physical properties before and after freezing. Students then analyze the data and identify any patterns or features. The teacher asks, "What patterns or features can you identify based on the data you analyzed?" Students record their answers in their journals. Materials provide opportunities for students to construct written and verbal explanations from learning experiences and opportunities for students to construct and present arguments that justify explanations of phenomena or solutions to problems.
- The materials provide instructions for how to construct and present a verbal or written argument using the Sensemaking Guide. Each lab begins with a question that students answer throughout the investigation. At the end of the investigation, students write their conclusion. For example, in Category 4 Lab, Food Chains, the hypothesis students answer is, “Investigate and describe how animals depend on other living things.” Students take a nature walk to identify an animal and describe its food chain. At the end of the lab, students draw a conclusion. The suggested conclusion provided in the lab guide is, “All food chains have (producers) plants and consumers. The consumers eat plants or other animals to get the energy they need to survive. All organisms in a food chain are interdependent or depend on each other. Systems in nature have parts that work together.”
- Investigations provide students with opportunities to justify their choices throughout a lab. For example, in Category 2 Lab, Push, students answer the following questions, “Does dropping the ball from different heights cause the clay to change shape? Does the indentation in the clay get deeper when the ball is dropped from a higher position?” Students drop a ball into the clay from three different heights, measure the indentation in the clay, and record their observations about the change in clay shape. At the end of the experiment, students draw a conclusion. The sample conclusion provided by the lesson guide states, “When I dropped a ball from a higher height, it made a bigger indentation on the clay.” In the Extend section, students are encouraged to use evidence from the experiment to answer, “How did dropping a ball from different heights change the shape of the clay? What caused the change in the shape of the clay? Explain and discuss your answers with the class.”

Summit K12 Dynamic Science Grade 2

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

Partial Meets | Score 2/4

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

Materials provide some teacher guidance on anticipating student responses and the use of questioning to deepen student thinking. Materials include little 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 provide support and guidance for 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.

- Lesson Guides include some prompts with questions for teachers to ask after reading the E-Book and in different Apply/Extend activities. Some Lesson Guides provide teachers with possible student responses. For example, in Category 2 Lesson, Using Sound to Communicate, the Lesson Guide provides teachers with four questions to ask after reading the E-Book. The first question, "Who needs to communicate over long distances and why?" has the possible student response, "People call to check on family or to talk to friends." The second question, "How can students communicate over long distances?" has the possible student response of "They can use the telephone, computer, megaphone, microphone, intercom, a homemade device like a string telephone, paper megaphone." The third question, "What sounds can you hear from far away, and what do they mean?" has the possible student response of "fire truck siren- get out of the way, police siren- to stop or move out of the way." The fourth question, "What sound devices have been invented to solve the problem of communicating with others over a distance?" has the possible student answers, "telephone, sirens, alarms, whistles, radios, loudspeakers, microphones."
- The materials provide few teacher responses to possible students' responses or how to build on students' thinking. The materials sometimes provide teachers with possible student answers to

questions provided in the Lesson Guides. For example, in Category 2 Lesson, Sound Levels, the Lesson Guide provides teachers with three prompts to ask after reading the E-Book and possible student answers for each question. Question one states, “How are loud sounds helpful in our everyday life?” The possible student answer is, “The siren of an ambulance or fire truck warns us to get out of the way, a fire alarm tells you that a fire is nearby, and a dog barking means someone, or something is close by.” Question two says, “How are soft sounds helpful in our everyday life?” The possible student answers, “Someone whispering tells you that person doesn’t want anyone else to hear what is happening, a soft sound helps you relax and calm down, soft music helps you go to sleep, soft tap lets you call someone without being noticed.” The third question says, “Why are different sound levels used in our daily lives?” and provides teachers with the possible answer, “You must learn the appropriate sound levels in different settings or situations.” There is no evidence of providing teachers with information on how to build on these possible student responses.

- The materials provide teachers with some questions to prompt discussions, and some questions provided in the lesson plans guide teachers to deepen student thinking. For example, in Category 2 Lesson, Sound, teachers check for understanding with three questions. In the first question, the teacher asks students, “What causes the sound a baby makes when he or she is crying?” In the second question, teachers ask, “What is the difference between the vibrations of a quiet inside voice and an outside yelling voice?” In the third question, teachers ask, “How does the sound of someone playing a guitar reach your ears?” In the fourth question, teachers ask, “Why do you need to know how sound is produced?” The materials provide teachers with questions, and some questions provided in the lesson plans guide teachers to deepen student thinking.

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

- Although there is limited guidance on scaffolding and student use of vocabulary in context, the materials do provide teacher guidance on how to support students' development of scientific vocabulary. For example, each Lesson contains an Interactive E-Poster that provides the vocabulary for the lesson as well as visuals and connections between vocabulary words. In the Reduce, Reuse, and Recycle E-Poster, the poster clearly shows the connection between the concept of conserving and that reducing, reusing, and recycling are ways to conserve or use resources wisely. Teachers are guided to "present the E-Poster as an overview of what students will learn. Optional: Print the E-Poster so students can annotate additional notes as needed."
- Each Lesson Guide has a Vocabulary Boosters section. In this section, teachers read the vocabulary words that are introduced in the E-Book. The Lesson Guide also stars the Core Vocabulary words for the lesson. For example, in Category 2 Lesson, Push and Pull, the Core Vocabulary words are *push, pull, motion, force, strength, investigation, pattern,* and *magnet.* Additional vocabulary words are o*bject, position, movement, attract, repel,* and *gravity*. Students first see these vocabulary words in the E-Book, where teachers define the words and provide examples of the vocabulary words to students.
- The materials provide some embedded support for the teacher in how to introduce and scaffold students' development of scientific vocabulary. The materials tell teachers, "After initial teaching and introducing all words, the core vocabulary should be emphasized in context throughout the lesson. The teacher will model the use of the vocabulary words when discussing the content." However, little guidance is given or scripted to support teachers in using vocabulary in context. This section also provides teachers with a variety of activities to choose

from to reinforce new vocabulary words. For example, there are four vocabulary activities in Category 2: Lesson, Push. In one activity titled “Synonyms,” students work with partners to think of synonyms for each core vocabulary word. In Charades, students “play a game of charades with vocabulary words.”

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

- The materials provide teacher guidance on preparing for student discourse and supporting students using evidence to construct written and verbal claims. The Teacher’s Guide provides information in the section Science Writing about the process and rationale of the Claims, Evidence, and Reasoning framework with examples. This, when combined with the student sensemaking guide and prompts for teachers in the lessons, provides opportunities for students to engage in discussion with their peers using evidence to support their claims.
- The materials provide possible sentence frames to support discourse. For example, in Category 2 Lesson, Sound Levels, students have a discussion about what can happen if an ambulance has a soft siren. The teacher asks, “What problems could you encounter? Write in complete sentences in your science journal what problems you can encounter. What solutions could you have to this problem? Write in your science journal of what solution you may have.” Then, students communicate their solutions in a class discussion. While students are sharing, teachers should “make sure students are listening actively to others' explanations.” The teacher says, “Please be respectful and listen as others are sharing their solutions.” These questions do provide opportunities for student discussion, encourage evidence to support their claims and provide guidance teachers may use to provide feedback to students while engaging in discourse.
- The materials provide a Teacher Guide for each performance task that provides teacher guidance to support students in using evidence to construct written and verbal claims. These guides provide guidance in Part 2: Writing a Claim for students to support the claim with evidence from the investigation, the Sensemaking Guide, and other learning experiences.
- The materials provide general sentence stems for supporting student discourse. The materials often state, “To support student discussion, discourse, and argumentation of the concept, some suggested sentence frames might include: I observed the same thing as ... and want to add that I also noticed…, I agree with ... because…, I have a question about…, Can you tell me more about…, I understand your point, and I wonder…”

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

- The materials support and guide teachers in facilitating and sharing the students' thinking. Materials provide several exemplars of student-written responses as well as possible answers to questions in the Check for Understanding sections in the lessons. Materials state that teachers can use the exemplars as a guide to help them facilitate students showing their thinking in a written form.
- The materials provide support and guidance for teachers to facilitate the sharing of students' thinking and finding solutions. The materials support students' thinking and sharing their thinking. For example, in the Reduce, Reuse, Recycle lab, the students are given an item made of paper, plastic, and metal. They then discuss with a group how each item's use can be reduced. The groups then share their ideas with the class. The process is repeated with reusing and recycling the items.

- The materials provide support in guiding teachers in facilitating the sharing of students' thinking and finding solutions. The materials provide example sentence frames that assist teachers in facilitating the sharing of students' thinking and finding solutions. The materials support student thought and sharing. For example, the Category 4, Organisms and Environments Plants' Needs Lesson Guide includes a Seed Lab where students will bring different kinds of seeds from home or a class nature walk. They will then make a class collection of seeds. Students will describe the seeds in a class discussion and compare the weight and shape of the seeds. The teacher asks students how a particular seed is moved from the parent plant. Students will then discuss if it is moved by animals, people, wind, or water.
- The materials provide student pages and teacher guides for engineering challenges and performance tasks. The student pages provide structures for students to develop and organize their thinking. The engineering challenge student pages contain specific sections for students to propose solutions and later evaluate and improve their solutions. In the section Present and Evaluate, students organize their thoughts in a chart to prepare for sharing their thinking. The performance task for 2.12C has students work together using the engineering design process to “create a gardening tool that will move seeds and pollinate a fruit tree.” These performance tasks and engineering design challenges provide opportunities for students to share their thinking and find solutions.

Summit K12 Dynamic Science Grade 2

Indicator 6.1

Indicator 6.1, Grade 2

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The materials include diagnostic assessments. For example, the diagnostic assessment for 2.8B has four questions. Questions include, “Give an example of a loud sound that is used in everyday life. Give an example of a soft sound that is used in everyday life. Give an example of when a whisper would be used. Give an example of when it would be appropriate to yell.”
- Each Lesson Guide includes an Evaluate section. For example, in 2.10A Movement of Rock and Soil the guide states, “The following assessment tools can be used to assess and monitor student mastery and understanding of key science concepts, Scientific and Engineering Practices, Recurring Themes and Processes, and academic vocabulary: Assessment 1 (Summit K12 Online), Assessment 2 (Summit K12 Online), Student Phenomenon Sensemaking Guide, Engineering Challenge Performance Task.”
- In the Formative Assessment, students answer multiple-choice questions about the content learned throughout the lesson. For example, students answer two interactive questions in the Interactive Study Guide for the Category 2 lesson: Push. In the first question, students drag the core vocabulary word and place it in the correct blank. An example of a sentence is, “When two objects bump into each other, they ____.” In the second question, students view a photograph

and select the change that happened from a drop-down menu. For example, one photograph shows a car that collided with a pole. Students choose from “the shape changed,” “the position changed,” or “motion was started.” Students submit their answers after completion for the teacher to review. The items listed in the Evaluate section are labeled as Formative Assessments, but they fit the definition of summative assessments. They evaluate student learning, skill acquisition, and academic achievement after a defined instructional period.

- The materials provide a Study Guide and Key to assess student learning. The Weather Study Guide includes a Core Vocabulary word bank with six fill-in-the-blank sentences that students complete. The next section of the Study Guide provided five boxes with weather words in them. Students are guided to "draw the type of weather labeled in each box." The final component of the Study Guide is a Wrap-Up that asks students, "In two or more sentences, describe your favorite type of weather and why you like it."
- The materials include performance tasks. For example, in 2.12C, students create a tool that will move seeds and pollinate a fruit tree. The task guides students through the Design Process, and the teacher guide includes a rubric called Part 2: Reflection that indicates what mastery looks like and gives a glow and a grow for students to evaluate their work.

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

- Each Lesson Guide lists the standards and Science and Engineering Practices (SEPs) addressed in the activities. Lesson Guides provide teachers with a variety of activities they can use to teach new content to students. The Pacing Guide and Scope and Sequence, located in the Teacher Resources, list which standards are covered in each lesson.
- The assessments are labeled with what TEKS are assessed. Each assessment is labeled with the TEKS that the lesson materials it is associated with cover. Both the TEKS Check-Ups and the Study Guide Review have the TEKS assessed in the top right corner of the assessment.
- The assessments available at review included both formative and summative assessments for all of the grade-level student expectations.

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

- The materials include assessments that integrate scientific knowledge and science and engineering practices (SEPs) with recurring themes. The only evidence of assessments included in the materials are the formative assessments at the end of each Lesson Guide. The Formative Assessments are multiple choice questions that are aligned with the standard that is covered in the lesson. The formative assessments are multiple-choice questions based on the content learned throughout the lesson. There is no evidence of questions that integrate the SEPs. For example, in Category 2’s Formative Assessment for Sound, answer six multiple-choice questions about the content learned throughout the lesson. Question types include multiple-choice questions with four answer choices. For example, in question 2, students answer, “Which of the following sounds would make the smallest vibrations?” Answer choices include “the cheers of a crowd, a drummer playing the drums, the tapping of your fingers, or the clapping of your hands.” Question five reads, “My dad likes to listen to the radio in the car. Today, as we drove to Austin, my mom got upset because the ___ on his radio was too loud.” Answer choices include “hear, volume, speed, or matter.”

- The assessments effectively integrate the SEPs and RTCs within the content-based questions to seamlessly gather evidence for student learning across all of these TEKS. For example, in the Reduce, Reuse, Recycle lab, the RTC is "Investigate and predict cause and effect relationships." Throughout the lab, students discuss and describe how different materials' uses could be reduced, reused, or recycled. In the Extend portion of the lab, students are asked to respond to the prompt, "In two or three sentences, explain what will happen if everyone makes the choice to reduce, reuse, and recycle."
- The Performance Task for 2.12C, called “Design a Tool to Move Seeds and Pollinate a Fruit Tree,” has students create a gardening tool that will move seeds and pollinate a fruit tree. In part 1, students go through the design process and follow a checklist to create their tool. The items on the checklist include “Decide what materials you are going to use to make your tool. Create your tool. Test how your tool moves seeds and pollinates a plant. Make improvements based on your test. Share your tool.”

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

- The materials include formative assessments that focus on assessing knowledge and memorized content, not skills. For example, in Category 1 2.6A Properties of Matter, question 2 says, “Joe is touching an object in a brown box. He says the texture is soft and fluffy. What could the object be?” Answer choices include “toy car, golf ball, teddy bear, and cell phone.”
- The materials include engineering challenges that require students to apply knowledge and skills to a new problem and instruct them to develop a solution using what they know about the concept. These engineering challenges allow students to use the engineering design process to new and novel situations, and these challenges act as an important assessment tool for teachers. For example, in the Engineering Challenge in Lesson 2.10A, students explore an image and text about Galveston Island as a barrier island. Students are tasked with defining a problem with regard to the changing land and then “design a solution to prevent or reduce the amount of sand that is moved by wind and water.” The teachers use the Student Performance Task Rubric to assess their understanding of the concept and their solution to the problem.
- The Performance Task for 2.12C, called “Design a Tool to Move Seeds and Pollinate a Fruit Tree,” has students create a gardening tool that will move seeds and pollinate a fruit tree. In part 1, students go through the design process and follow a checklist to create their tool. The items on the checklist include “Decide what materials you are going to use to make your tool. Create your tool. Test how your tool moves seeds and pollinates a plant. Make improvements based on your test. Share your tool.” This task provides an open-ended assessment opportunity that allows students to demonstrate understanding of the concepts in a new and novel context.

Summit K12 Dynamic Science Grade 2

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 student's needs, in all areas of science, based on measures of student progress appropriate for the developmental level.	M
3	Assessment tools yield relevant information for teachers to use when planning instruction, intervention, and extension.	M
4	Materials provide a variety of resources and teacher guidance on how to leverage different activities to respond to student data.	M

Meets | Score 2/2

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

Materials include information and/or resources that provide guidance for evaluating student responses. Materials support teachers' analysis of assessment data with guidance and direction to respond to individual student's 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 provide answer keys that give the correct answers to the assessments and worksheets. In the Student Learning Resources, the Objects in the Sky Formative Assessment is automatically graded and provides the correct answer for the students and teachers. For example, one question asks students, "The closer a planet is to the Sun, the _____ its orbit around the Sun." Students have four choices to choose from. When students complete all questions, the correct answers are revealed. If the incorrect answer is chosen, such as B. longer, the answer B is highlighted in pink with a red "x," and the caption reads. "Your answer is incorrect. The correct answer is: shorter."
- The materials provide an answer key to the Study Guide in each lesson. The Movement of Rocks and Soil Study Guide's Key shows the worksheet and has the correct answers filled in the blanks in blue. For example, one question states, "The_____ of clay soil and sand are of different sizes." The Key shows the answer particles in the blank.
- The materials provide teachers with possible student answers to discussion questions and state, "Accept all student answers and ask clarifying questions when needed. Encourage a

- discussion reflecting students' application of prior knowledge and critical thinking." For example, in Category 2 Lesson, Push and Pull, teachers use three questions to check for

understanding after reading the E-Book. One question states, “You are dragging your backpack behind you when you get home from school. Are you using a pushing or pulling force? Explain.” With the possible student answer, “I am using a pulling force because I am bringing the backpack closer.”

- Performance tasks include a reflection rubric for students to self-assess and a teacher rubric to grade student answers. For example, in the performance task for 2.12C, students create a gardening tool that will move seeds and pollinate a fruit tree. Students are assessed on their ability to explain how some plants depend on other living things for pollination, explain how some plants depend on other living things to move their seeds around, demonstrate how some plants depend on other living things for pollination, and demonstrate how some plants depend on other living things to move their seeds around. The rubric is separated into Beginning, Developing, and Mastery. For explaining how some plants depend on other living things for pollination, a Beginning student “is not able to explain how some plants depend on other living things for pollination,” a Developing student “somewhat describes how some plants depend on other living things for pollination,” and a student demonstrating Mastery “describes how some plants depend on other living things for pollination.”

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

- The materials provide assessment tools that result in data reports teachers can use to track student progress and respond to individual needs. Teachers can generate reports for Concept Boosters and Vocabulary Boosters. The downloadable reports can be generated for individual students or entire classes. Under reports in Content Mastery, a teacher can see first-attempt, vocabulary, and second-attempt scores by TEKS, individually or by class. Teachers can export the report into a spreadsheet and manipulate the data with colors or groupings.
- Teachers can use the “Teacher Reports Dashboard” to view students’ scores on the Concept Mastery and Vocabulary Mastery activities. The reports are divided by Reporting Category and broken down by each lesson guide and standard. Teachers can download reports for each Reporting Category onto an Excel spreadsheet. The reports show student names and scores on each standard assessed in the Reporting Category.
- Lesson Guides provide guidance and direction to respond to individual students’ needs in the Check for Understanding questions and green highlighted Teacher Notes. For example, in lesson 2.12C, Pollination and Moving Seeds, the Teaching Notes states: “Use students' responses to identify misconceptions, instructional needs, lingering misconceptions, and to make instructional decisions that meet individual student needs.”

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

- Materials include a Dynamic Science Teacher Reports Dashboard that provides teachers with multiple reports, including E-Books Read, Concept Mastery, Vocabulary Mastery, Usage Reports, Science and Engineering Practices Reports, and Science Literacy Reports. For example, in the E-Books Read report, a checkmark denotes a TEKS-correlated book ready by each student in the class, and the SEPs Vocabulary report shows teachers the percent mastery of vocabulary terms in each lesson by individual students.

- Materials include a Concept Mastery management tool that allows teachers to review and organize student data to differentiate science instruction according to assessment results. In grade 2, materials allow teachers to download a *Concept Mastery s*tudent report based on the reporting category from the Teacher Reports Dashboard. In addition, materials allow teachers to download a *Vocabulary Mastery* student report based on the reporting category from the Teacher Reports Dashboard. The computer-generated report color codes based on their performance and can aid teachers in organizing student data and planning differentiated instruction. These tools and reports can be used by teachers to effectively plan instruction, intervention, and extension activities for all learners.

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

- The materials include a variety of resources for responding to student data: Lesson Guides, E-Books, E-Posters, Vocabulary Activities, Science Lab Investigations, and Science Writing activities. For example, when student data indicates that there is a deficit in understanding vocabulary terms, teachers can access the *Science Literacy Link,* the educator can access a cognate list, and a digital component is included for students.
- Lesson Guides include Teaching Notes that guide teachers in responding to student data after instruction and activities. For example, in 2.12C, “Pollination and Moving Seeds,” students respond to the prompt, “How do different seeds move?” The Teaching Note states, “Provide students with time to turn and talk with a partner about their answer to the question. Walk around and monitor student conversations, provide feedback, and probe with appropriate questions to help students make sense of their evidence before writing an explanation. Consider providing a CER graphic organizer to students who show a need for additional support organizing their ideas and framing their written response.”

Summit K12 Dynamic Science Grade 2

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.	PM
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

Partially Meets | Score 1/2

The materials partially meet the criteria for this indicator. Assessments are somewhat 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 minimal 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 Formative Assessments for each grade level are scientifically accurate. For example, the Formative Assessment for Category 2 Lesson, Push, includes a question that says, "What is the name of the push or pull that gets an object to move?" The answer choices are "motion, touch, force, or collide."
- Assessments for each grade level contain items that avoid bias. Questions are presented in a fair and impartial manner with no impact on student performance. For example, the Formative Assessment for Category 2 Lesson, Push and Pull, uses examples that include both men and women in the questions.
- The assessment tools are free from content errors. For example, the Vocabulary Assessment for Weather contains nine questions that accurately describe vocabulary words used in the unit. Question 1 shows a picture of a man and woman measuring the height of a girl against a wall. The question states, "The parents are going to ____ their daughter's height." Students select from “temperature, add, and measure”.

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

- The Formative Assessments use clear pictures and graphics. For example, question 6 on the Formative Assessment for "Using Sound to Communicate" shows a picture of a woman holding a finger to her mouth. The question states, "What is your teacher communicating with the sound "shhh?" The image is clear and easy for 2nd-grade students to understand.

- The pictures and graphics used in the Formative Assessments are developmentally appropriate. For example, the Formative Assessment for "Sound Levels" question one shows a photograph of a young boy whispering something into a young girl's ear. The question says, "If you don't want anyone to hear the secret you are telling your friend, you will need to ___."

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

- Each Lesson Guide has an Evaluate section at the end, which lists assessment tools for each lesson. However, this doesn't provide guidance on how to consistently and accurately administer the assessment. For example, in 2.12C, the Evaluate section states, "The following assessment tools can be used to assess and monitor student mastery and understanding of key science concepts, Scientific and Engineering Practices(SEPs), Recurring Themes and Processes, and Academic Vocabulary." Assessments listed include Assessment 1, Assessment 2, Student Phenomenon Sensemaking Guide, and the 2.12C performance task. This doesn't provide information to ensure consistent and accurate administration, rather, this is what to do with the results after the assessment. Words like "can" do not ensure consistency since they give the user of the materials the option not to do that with the assessment.
- Each Lesson Guide has an Evaluate section at the end which lists assessment tools for each lesson. There is minimal guidance for how to administer the assessment and, again, the word "can" is used which displays the opportunity for inconsistent or inaccurate administration of the assessment tool. For example, in 2.10A, the Evaluate section states, "The following assessment tools can be used to assess and monitor student mastery and understanding of key science concepts, Scientific and Engineering Practices (SEPs), Recurring Themes and Processes, and academic vocabulary." Assessments listed include Assessment 1, Assessment 2, Student Phenomenon Sensemaking Guide, and Engineering Challenge Performance Task.
- Diagnostic Assessments include an Administration section explaining instructions for test administration. There is no discussion of length of time for the assessment, when the assessment should occur, or reminders to consistently apply administration protocols across grade levels and/or campuses. For example, the Diagnostic Assessment for 2.8B states students should complete questions 1-4 independently before the learning experiences. Additionally, "teachers should use the data collected to plan the student learning experience with Lesson Guide 2.8B." The instructions also provide the "can" statement which provides options for how to administer the assessments, which may lead to inconsistent administration. The instructions also say that the "assessment can also be used as a post-assessment to show student growth after engaging in the Lesson Guide Learning experiences."

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

- Within the Dynamic Science Teacher's Guide, under Course Design, there is guidance for teachers on the accommodation assessment tools titled Accommodations, Accessibility, and Designated Supports. The guide is a presentation that lists the accessibility features and designated supports and then provides screenshots of where these supports are located and which ones can be turned on and off. Some of the accessibility features include bilingual dictionaries, reading assistance for short-constructed response items, a highlighter, a zoom feature, bookmark questions, and an Answer Eliminator for Multiple Choice Items. The designated supports list includes, but is not limited to, a digital calculator, content and language supports, a notepad, and spelling assistance. For example, for the content and language

supports, it shows an assessment question with the word *decomposers*. The word *decomposers* is in a box which indicates there is a text-based pop-up with a definition that will serve as a language support. The guide shows the pop-up box that decomposers relate to "to break down into smaller pieces. Nature's way of recycling."

- The materials include accessibility features such as a notepad, highlighter, zoom feature, bookmark questions, and answer eliminator for MC/MS items. The materials also include designated supports such as calculation aids, content and language supports, individualized structured reminders, spelling assistance, and supplemental aids.
- The formative assessments provide a text-to-speech feature that reads the question and answer choices to students. There is a play button next to each line of text that students can click on to have it read aloud.

Summit K12 Dynamic Science Grade 2

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 enrichment activities for all levels of learners. Materials provide scaffolds and guidance for just-in-time learning acceleration for all students.

Evidence includes but is not limited to:

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

- The materials provide scaffolded instruction in the daily lessons and several options of activities in the Apply/Extend section that will guide students toward mastery. For example, in the Resources lesson, the Engage section offers activities to "activate students' prior knowledge." In this lesson, the activities include discussion questions, a teacher-led demonstration, and the presentation of the topic's E-Poster and learning objective. The teacher uses the E-Book to directly teach students the concepts of resources, natural resources, and manmade resources. The teacher checks for understanding with several questions and reviews the core vocabulary. The teacher reviews any misconceptions the students may have and then has a series of Apply/Extend activities, such as creating a T-chart, a Collage/Gallery Walk, and a graphic describing natural resources. The materials provide several options to connect students' learning to reading and home. For example, the materials give students the following instructions for the connection to home: "Earth materials and the products we get from them are important in our everyday life. What makes materials natural resources, and what makes them manmade resources? Look around your home and list objects, such as a wooden table or plastic cup, and distinguish these objects as manmade or natural resources."
- Lesson guides provide Teaching Notes, which include suggestions on how to scaffold activities. For example, in lesson 2.12C, “Pollination and Moving Seeds,” the teacher leads a discussion in the Check for Understanding section. The Teaching Note states, “Use student responses to identify misconceptions and to make instructional decisions that meet individual student needs. Utilize appropriate activities to respond to individual student needs and provide just-in-time learning acceleration for all.”

- The teacher materials provide access to the lessons from the previous grade levels that connect to the current grade-level curriculum. Teachers have the ability to assign these lessons to students who have not achieved mastery or need additional support.
- Lesson Guides provide teachers with some information on scaffolding instruction for students who have yet to achieve mastery. The lesson guides provide sentence stems to use during various activities to guide student thinking. For example, in Category 4, Lesson "Animal Parts," students demonstrate their learning through a writing activity. The lesson guide provides teachers with sentence stems, including, "Today, I learned____. In my opinion____. What I know about ____ is ____. I can explain____."
- According to the Differentiation section in the Teacher's Guide, the content teams consider vertically aligned scaffolded content "1-2 grade levels below" when designing new courses. The materials have "a comprehensive on grade level course, but embed the appropriate lower grade scaffolds and extension activities to support differentiation and acceleration."

Materials provide enrichment activities for all levels of learners.

- Materials provide enrichment activities for all levels of learners. Each lesson guide includes various Apply/Extend activities for teachers to choose from. Each lab also contains an Extend activity for students to complete once they finish their lab work. For example, students classify matter by observable properties in Category 1, Lesson: Properties of Matter. After using the E-Book to teach new concepts, the teacher has three Apply/Extend activities to assign to students. In the first activity, students complete a web graphic organizer with the words "Properties of Matter" in the center. Students fill in the rest of the circles on the graphic organizer with words describing the properties of matter. In the second activity, students are split into groups and assigned a physical property to create a word wall. Students illustrate, label, and add fact statements about the physical property. In the third activity, students create a main idea and detail ladder to explain the properties of matter.
- The materials include extend activities to provide enrichment for all levels of learners. In Category 3, Lab: Severe Weather, students research different types of severe weather, including floods, tornadoes, and hurricanes. Students record the characteristics of each, where they happen most, and what kind of damage each causes. In the Extend activity, students research a hurricane that occurred in Texas in recent years. Students record what they learn about the hurricane on their lab sheets.
- The materials provide a variety of enrichment activities for each lesson. For example, the Severe Weather lesson has three core vocabulary enrichment activities. The materials suggest that "core vocabulary should be emphasized and taught in context throughout the lesson." In addition to this, there is a sentence activity, where students write a sentence and draw a picture with the vocabulary words; core vocabulary flashcards, where students cut out and color provided flashcards; and the Boost Your Vocabulary Handout, where the students complete a graphic organizer for each vocabulary word.
- The Sensemaking Guide "support(s) students in figuring out the phenomena" presented in the lesson guides. All students complete the Sensemaking Guide throughout the duration of the lesson. In Part 1 of the guide, students observe and ask questions about the phenomenon they are studying. In Part 2, students connect knowledge and phenomenon to describe evidence observed. In Part 3, students explain the phenomenon by drawing a final model of their learning. In Part 4, students make a claim, describe the evidence they observed, and explain their reasoning.

Summit K12 Dynamic Science Grade 2

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

- The teacher materials provide access to the lessons from the previous grade levels that connect to the current grade-level curriculum. Teachers can assign these lessons to students who have not achieved mastery or need additional support. This can provide valuable just-in-time learning acceleration as these lessons can be presented electronically to students by simply turning them on for those who need the support.
- The materials guide teachers for just-in-time learning acceleration for all students. The lesson guides provide teachers with what TEKS students addressed before the grade level and then those that come later in a student's instructional journey. This provides teachers with the vertical alignment that can scaffold teachers' understanding of where students' strengths and weaknesses are to provide appropriate learning acceleration.
- The teacher materials provide scaffolds and guidance for just-in-time learning acceleration for all students. These teacher materials provide access to Vocabulary Boosters, Study Guides, and TEKS Videos to provide just-in-time learning experiences to support all students. These resources can fill gaps and provide even greater understanding for all students.
- The materials provide a scaffold for just-in-time learning for all students. Lesson 1.6A, Classify by Physical Properties, includes a Teaching Note that states, "Use student responses to identify misconceptions, instructional needs, lingering misconceptions and to make instructional decisions that meet individual student needs. Utilize appropriate Apply and Extend learning activities to respond to individual student needs and provide just-in-time learning acceleration for all."
- The lesson materials include an Apply and Extend section that provides activities that are "designed to be just-in-time learning that is flexible and can be used during small group instruction, in science centers, as part of a station rotation, or during whole group science time."

Summit K12 Dynamic Science Grade 2

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 research-based instructional methods that appeal to various learning interests and needs.

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

Evidence includes but is not limited to:

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

- The materials include a variety of developmentally appropriate instructional approaches, including but not limited to classroom demonstrations, multimodal texts, collaborative learning activities, and hands-on exploration. The materials provide opportunities for students to share, write, and draw what they have learned. For example, in Category 1, Lesson: Physical Changes in Matter, the teacher conducts a Mini-Demo in the Engage section of the Lesson Guide. In this activity, the teacher gives “students a half sheet of paper and lets them change it into something else.”
- Materials include hands-on explorations. For example, in Category 3, Lab: Objects in the Sky, students use tools to observe objects in the sky. First, students make a telescope with empty paper towel rolls. Then, they use it to observe objects in the sky. Students record their observations on their Student Lab sheet and draw conclusions about how tools make seeing objects in the sky easier.
- Materials provide collaborative learning activities. For example, in Category 4, Lesson: Plants’ Needs, students work in an Apply/Extend activity with a group. Teachers assign each group one section from the Teach and Discuss section of the Lesson Guide. Students will “illustrate and label their statements, then explain their drawings to the class.”

- The materials include a variety of appropriate instructional strategies to engage students. Each lesson begins with the Engage section, where teachers ask questions and lead a demonstration to "activate students' prior knowledge." Then, the teacher explains what they will be learning. For example, in The Sun, the Earth, and the Moon lesson, the teacher asks the students, "Describe what you can see in the sky during the night" and then demonstrates the Sun, the Earth, and the Moon by using a basketball, a golf ball, and a ping pong ball. The teacher then presents students with the E-Poster and overviews of what they will learn.
- Materials include checks for understanding in each Lesson Guide. The materials in The Sun, the Earth, and the Moon lesson state, "The teacher will discuss the following, allowing students an opportunity to demonstrate their understanding of the content as needed." The materials then give the teacher several questions to ask students.

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

- The materials provide opportunities for students to work in whole group, collaborative groups, with partners, and individually in various activities. While students have opportunities to work in different settings, the materials need to provide teacher guidance on using specific grouping structures based on student needs. There needs to be evidence of differentiated activities based on student needs within the Lesson Guides. The authors wrote the materials for students who meet grade-level expectations. For example, in Category 2, Lesson: Sound, students can work in multiple settings. The teacher uses the E-Book to present new concepts to the class in a whole group setting. The Apply/Extend section includes activities students complete in partners or independently. In one Graphic activity, students work with a partner to create a table to include different objects that make sounds. In another Graphic activity, students work in groups or partners to develop a graphic to describe vibrations. In the Connect to Reading activity, students write synonyms and antonyms for the vocabulary words independently. In the Review section of the Lesson Guide, students can “complete Study Guide independently, in partners, triads, groups, or whole class.”
- In Category 4, Lesson: Food Chains, the teacher uses the Lesson Guide to present information and activities to all students. There is no evidence of how to use specific grouping structures based on students’ needs. The Apply/Extend section includes various activities for teachers to assign students. Activities include a Food Chain activity where students work in partners to create a food chain. In this Table activity, students work in partners to create a table that describes the flow of energy of the given organism, and in two Graphic activities where students work in partners or groups to develop graphics that describe the parts of a food chain.
- The materials support flexible grouping. Each lesson contains opportunities for whole group, partners, small group, and independent work. In every lesson, the Engage section is completed whole group, with many partner opportunities that follow. For example, in the Severe Weather lesson, the teacher engages the entire class in a discussion about a time when students experienced severe weather. Students then participate in a partner or group activity to complete a Severe Storms main idea ladder. Later in the lesson, in the Review section, "Students complete Study Guide independently, in partners, triads, groups, or whole class."

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

- All Lesson Guides include explicit teaching, then opportunities for students to practice applying their knowledge with partners, groups, or independently. For example, in Category 1, Lesson:

Combining to Build, the teacher uses the E-Book to teach new content explicitly. Then, students apply their new knowledge using various practices in the Apply/Extend activities. First, students independently design a structure on a piece of paper that they could build with popsicle sticks, tape, blocks, and other materials found on a student's desk. Then, students build the structure and determine if it worked as intended. In the Think-Pair-Share activity, the teacher "asks a question and allows students to walk around the classroom, allowing them time to think. Then, the teacher announces to pair up and share their thoughts about the question." In the What's Missing activity, students look at an image of a car with no wheels and participate in a whole-group discussion about what the car needs.

- The materials include a variety of practices. For example, in Category 3, Lesson: The Movement of Rocks and Soil, teachers are given a variety of Core Vocabulary activities to assign to the class. For example, the Boost Your Vocabulary Handout instructions state, "The teacher will read the handout as needed for students, or they can choral read it together." In the Quick Draw activity, "Students will illustrate core vocabulary words in their science journals."
- The materials support opportunities for multiple types of practice. For example, in the Reduce, Reuse, and Recycle lesson, the teacher models for students by showing them pictures of a tin can reused as a pencil holder or jewelry holder. Students then independently create uses for a tin can. Later in the lesson, in the Apply/Extend portion, the students work with partners to collaboratively answer the "Who? What? When? Where?" for the word conserve. At the end of the lesson, the materials suggest that students "complete Study Guide independently, in partners, triads, groups or before the whole class."
- Lesson activities provide teachers with a clear purpose and goal for independent and group work, as well as instructions for students to follow. For example, in 2.12C, Pollination and Moving Seeds, the teacher facilitates "a student discussion about why we need to study how plants depend on animals, wind, and water to make new plants." The lesson guide states, "Have students turn and talk with their neighbor" about a series of questions.
- The materials include various types of instructional practices. Lesson activities provide teachers with a clear purpose and goal for independent and group work, as well as instructions for students to follow. For example, in 2.10A, The Movement of Rock and Soil, the teacher facilitates "a student discussion about why we need to study the movement of soil and rock particles." The lesson guide states, "Have students turn and talk with their neighbor about the following questions."

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

- While most pictures show concepts or images of the natural world, the photos that include people are ethnically or otherwise diverse.
- The materials use cartoon images and photographs to represent information in E-Books and other materials. There is a diversity of communities represented.
- The materials represent various places. There are several pictures of urban, rural, and suburban areas and pictures of plains, mountains, rivers, lakes, and other geographic diversity.
- The materials contain an image bank within the Vocabulary Mastery section. A variety of racial/ethnic groups, urban and rural scenes, and individuals of various ages are represented in the images. Most images are of science concepts, science materials, or scenes in the natural world.

Summit K12 Dynamic Science Grade 2

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.	PM

Partial Meets | Score 1/2

The materials partially meet the criteria for this indicator. Materials partially 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 partially encourage strategic use of students' first language as a means to linguistic, affective, cognitive, and academic development in English.

Evidence includes but is not limited to:

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

- The materials provide the English Language Proficiency Standards (ELPS) that correlate with each lesson activity. The ELPS document provides teachers with guidance on linguistic accommodations for each grade level TEKS. The document includes suggestions for Beginning, Intermediate, Advanced, and Advanced High. For example, the ELPS guide for 2.6A should be used "with Apply/Extend Activity #2 Properties of Matter Word Wall." Beginning students share what they know about the properties of matter and "write one science word they heard during their share time" on a sticky note. Intermediate students write "a word or phrase about what they know about the physical properties of matter" and explain what they wrote. Advanced students discuss physical properties of matter, describe an object in the class, read their notes to the group, and have the group members try and guess what they are describing. Advanced High students "use the following words to write a cloze-style sentence on a sticky note" and read their sentence to their group. Other students in the group write the word they think completes the sentence.
- Materials embed scaffolds for students, such as visuals, graphic organizers, and anchor charts. The *Concept Teacher Edition* for all categories includes a mini-lesson navigation with key content vocabulary words with definitions and illustrations. In these slides are the key elements of each concept, such as the energy in a food web example with words such as consumer, decomposer, and ecosystem. These activities can be used as accommodations for EB students and varying levels of language proficiency.

- The materials provide linguistic support. In 2.10A, The Movement of Rock and Soil, the Lesson Guide includes a Teaching Note to support sensemaking with Emergent Bilingual students. Prompting teachers to: provide sentence frames and appropriate academic vocabulary to anchor writing, group emerging bilingual with students at a higher level of language acquisition, pull a small group of students and use a shared pen strategy as they write, and provide access to a bilingual dictionary.
- The materials include a Differentiated Science Writing section. These activities are separated by theme, include an Engage video, and are differentiated by Beginner, Intermediate, Advanced, and High. Students type their answers to the prompts using the provided sentence stems. For example, in the "Earth" theme, students first watch a video that introduces them to the concepts discussed in the writing prompts. Then, students select a differentiated writing prompt. The Beginner writing prompts are, "How does the land change near the ocean? Do you think the ocean water changes the land and the rocks? Why or why not?" The Intermediate prompts are, "How do volcanoes form new rock? Describe lava and where it comes from." The Advanced writing prompts are, "Describe the layers of rock in the photo. What natural forces can change rocks?" The High prompts are, "Do you think the fossil is of a fish that died recently or a long time ago? Explain. How can rocks help us learn what Earth was like a long time ago?"
- The online platform offers designated Content and Language Supports that can be activated by the teacher for specific students. The E-Book has the option to be read aloud (text to speech). The online platform also includes a bilingual dictionary. These can be found in the Differentiation section of the Teacher's Guide.

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

- The materials partially encourage strategic use of students' first language as a means to linguistic, affective, cognitive, and academic development in English by providing information on dual-language connections and Spanish cognates. Materials primarily focus on making Spanish-English connections in line with a dual-language framework. While some student-facing materials are provided in other languages, the Lesson Guides and other teacher-facing materials lack guidance for strategically using students' first language through such strategies as having students speak or write about science in their first language as a scaffold for their English language development.
- The "Dual Language Connections" section in the *Summit K12 Teacher's Guide* outlines the research foundations and ways the program fits a dual-language framework by designing materials in both English and Spanish rather than translating or transadapting materials.
- The Science Writing component includes a Science Cognates section with "context images and sentences, professionally recorded audio in both English and Spanish and the ability for students to speak and record themselves repeating the context sentences." Students view an image, listen to the context sentence first in Spanish and then in English, and record themselves reading it. For example, in Set 1 of "Earth and Space," students view a picture of people using a telescope, listen to the word *telescopio* in Spanish, and the sentence, *Tomas miro a través del telescopio a las estrellas*. Then, students record themselves reading the sentence in Spanish. On the next page, students view the same image, listen to the word "telescope" in English, and listen to the sentence, "Tom looked through the telescope at the stars." Then, students record themselves reading the sentence in English.

Summit K12 Dynamic Science Grade 2

Indicator 7.4

Materials provide guidance on fostering connections between home and school.

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

Meets | Score 2/2

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

Materials provide information to be shared with students and caregivers about the design of the program. Materials provide information to be shared with caregivers to help them 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 include a “Student Dynamic Science Orientation Guide.” The orientation guide is a scripted slideshow introducing students to the different components of the materials included in the program. Students learn to access E-Books, Vocabulary, I-Study Guides, and Formative Assessments. Students are also introduced to the Science Writing section, where they are introduced to the Vocabulary Mastery, Science Writing, and Science Literacy sections. Finally, students are shown the Scientific and Engineering Practices (SEPs) section. At the end of the presentation, students are prompted to practice logging into their individual accounts to practice using the materials.
- The materials include a Parent/Guardian letter as “an example of one that you may send home to the guardians or guardians of your students to introduce them to the Summit K12 Science resources.” The letter explains the online components that are available for use at home that include “lesson videos, digital flashcards, study guides, animations and assessments.” It includes a step-by-step directions guide to access the program and provides an overview of the program and information on how guardians can help their children log in at home. On the overview page, guardians learn detailed information about Science Animations, Concept Mastery, Science Literacy and Vocabulary Mastery, and the Scientific and Engineering Practices section. The same letter and overview are also translated into Spanish.

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

- The materials provide resources for caregivers to help reinforce student learning and development. For example, the materials include a family letter in English and Spanish explaining the materials with information on how to access the materials digitally. There is evidence of letters or other communication to send home at the beginning of each lesson explaining what students will be learning and/or how to support students at home with the new materials.
- Materials include a Home School Connection document that includes vocabulary strategies, field investigations, science literacy, and studying the TEKS at-home activities for guardians/caregivers to complete with students. E-Posters are also provided within the document with content and vocabulary for each of the reporting categories. For example, the Home School Document explains to caregivers that they can accelerate the learning of the Science content with their students by using activities listed in the document. The activities include Taking a picture walk with your child while allowing our child to tell you about the pictures on the page, reading the page together, looking around your home or outside to find things that are similar to the pictures on the page, writing sentences with the vocabulary words, and students can recreating the page with their own pictures.
- Each Lesson Guide has a Home Connection section, providing students with an activity to do at home with an adult relating to what they have learned in class. For example, in the Category 2 Lesson, Sound, the Home Connection section says students should, "Observe objects that create sound and demonstrate and explain to a family member how sound is created by vibrations."

Materials include information to guide teacher communications with caregivers.

- The *Dynamic Teacher Guide* includes a section for a generic letter format and information the school can use to communicate to caregivers the program's purpose and how to access its online features. This resource also includes a Parent/ Guardian letter detailing the benefits of the program and basic components of the program. The "Connections to Home" section provides suggestions on how to establish a relationship by incorporating "Field Investigations at Home." By providing these comprehensive resources, the materials aim to foster ongoing communication and partnership between teachers, caregivers, and students while facilitating the sharing of progress updates.
- The Teacher's Guide Home to School Connection link includes teacher guidance and support for clearly communicating the TEKS required for student mastery at grade level. The materials offer a letter with ideas of how to accelerate learning, a brief overview of the big ideas of the TEKS, and visuals of the TEKS with Vocabulary Boosters. The information to guide teacher communications with caregivers can be found in the Teacher- Getting Started link in the Teacher's Guide. This guide gives teachers a sequence of orientation to the material's resources.
- The materials include a "Parent/Guardian Letter" in the *Summit K12 Teacher's Guide* that provides information to guide teacher communications with caregivers. The instructions state, "The attached letter is an example of one that you may send home to the parents or caregivers of your students to introduce them to the [program] K12 Science resources. We suggest sending the letter below, as well as instructions for how to access the program from home, through the district's LMS or portal."

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Indicator 8.1

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

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

Partial Meets | Score 1/2

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

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

Evidence includes but is not limited to:

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

- The Dynamic Science Teacher's Guide includes a Year-at-a-Glance Pacing Guide, scope and sequence Pacing Guide, and Individual TEKS Pacing Guides. Materials are organized into four reporting categories: Matter and Its Properties; Force, Motion, and Energy; Earth and Space; and Organisms and Environments. The scope and sequence breaks the categories into lessons and provides teachers with the number of days each lesson will take. Each lesson on the scope and sequence is labeled with the corresponding TEKS. For example, Reporting Category 3, "Earth and Space," covers standards 2.9A, 2.9B, 2.10A, 2.10B, 2.10C, 2.11A, and 2.11B. The pacing guide suggests teaching these lessons over forty-five days.
- The Pacing Guide lists the order in which knowledge and skills are presented for the entire year. Teacher guidance in each lesson includes the TEKS addressed, the number of days, and suggested pacing. For example, Reporting Category 1 covers standard K.6A. The lesson title is Properties of Objects, which the program suggests completing over fifteen days.
- The materials include a Year-at-a-Glance Pacing Guide, which breaks the resource into four reporting categories, "Matter and Its Properties," "Force, Motion, and Energy," "Earth and Space," and "Organisms and Environments." It includes the number of Texas Essential Knowledge and Skills (TEKS) covered, the estimated time allotment for each category, and the order in which TEKS are presented for the entire year. The 2nd grade Pacing Guide breaks the lessons down into days to assist with planning instruction.

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- The Dynamic Science Teacher's Guide includes a TEKS-aligned scope and sequence. Each lesson on the scope and sequence is labeled with the corresponding TEKS. For example, Reporting Category 3, "Earth and Space," covers standards 2.9A, 2.9B, 2.10A, 2.10B, 2.10C, 2.11A, and 2.11B. The pacing guide suggests teaching these lessons over forty-five days.

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

- The Dynamic Science Teacher's Guide includes a document called the TEKS-SEPs-RTCs Crosswalk, showing the alignment of the scientific and engineering practices (SEPs), recurring themes and concepts (RTCs), and TEKS. This document shows which SEPs and RTCs are covered in each category but does not give clarity in understanding how activities and experiences connect.
- The lesson plans include an overview of the SEPs and RTCs covered in each lesson. While materials provide this and other teacher guidance for facilitating connections across core concepts in the grade level, materials lack such guidance for facilitating connections across SEPs and RTCs. Additionally, the teacher guidance provides engagement questions to facilitate students making connections within the lesson but not to lessons that have been or will be taught.
- The materials include a lesson guide for each lesson within each category. For example, Category 2 is Force, Motion, and Energy, and the first lesson is Push. Within the lesson guide, guidance is provided through the 5-E model. In the Engage section, guidance is given to "engage students" by asking questions such as "What happens when you bump into someone or something?" and "Why do objects change shape when they bump into each other?" In the Teach and Discuss section, guidance is provided in a bulleted, step-by-step format instructing how to present each concept. For example, to teach the concept of "Push," the bulleted list includes, "A push can change the speed or how fast or slow an object moves." After teaching and discussing portions of the lessons, teachers are given guidance in the Apply/Extend portion to facilitate an activity that is tied back to scientific and engineering practices. For example, this Push lesson states to "Give students marbles, coins, or other small objects to push on a flat surface. Have them write a sentence describing the motion of the object. Write a second sentence describing what happens when the student pushes harder."

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

- The materials provide spiraling, reviewing, and practicing the SEPs and RTCs. The materials provide a TEKS-SEPs-RTCs Crosswalk document that shows the spiraling of these TEKS. For example, the document shows that TEKS 2.2B is found in eleven labs and two lessons over the course of the year.
- Teachers can assign E-Book readings, vocabulary activities, and study guide activities to provide spiraling of previously taught content to support mastery and retention.
- Lesson plans spiral concepts taught in previous lessons by providing opportunities for students to activate prior knowledge during the Engage component and revisit concepts in the Evaluate component. For example, in Category 3, "Earth and Space," students learn about the Sun, Earth, and Moon. Students use their knowledge of these concepts in the next lesson titled "Objects in the Sky," where students observe and compare different objects in the sky.

- The materials include vertically aligned scaffolds in each category. These lesson plans review concepts taught in previous grade levels. For example, in Category 4, "Organisms and Environments," the materials include spiral lesson plans and review TEKS 1.12A, 1.12B, and 1.12C.

Summit K12 Dynamic Science Grade 2

Indicator 8.2

Materials include classroom implementation support for teachers and administrators.

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

Partial Meets | Score 1/2

The materials partially meet the criteria for this indicator. The materials include some 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, but they do not explain the standards within the grade level context. Materials partially 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.

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

- The materials include a Teacher's Guide that provides information about the different components of the program. Section titles include Course Design, Teaching and Learning, Scientific and Engineering Practices (SEPs), Science Literacy-Vocabulary Mastery, Additional Resources, and TEA Resources. Materials also indicate that teachers can access an online asynchronous training course.
- The Lesson Guide and Teacher Inquiry Lab materials provide teacher guidance and recommendations for the use of digital, print, and optional resources. Resources include E-Poster, E-Book, Study Guide, and Vocabulary Boosters, including Digital Flashcards, Flashcard Cut-outs, and Handouts. For example, the lesson "Classify Properties of Objects" lists the following digital resources: E-Poster, E-Book, Study Guide, TEKS Assessment, and Vocabulary Boosters Digital Flashcards. The Engage portion of the lesson instructs the teacher to present the E-Poster as an overview of what students will be learning in this lesson.
- The materials include a scope and sequence that breaks down each category into 2nd-grade TEKS Pacing Guides. These guides include a list of activities and the time allotted for each. The materials include limited guidance on how and when to use the activities to plan lessons. For example, in the Physical Characteristics of Environments lesson guide, the Connect to Social

Studies section states, “Students work in pairs and choose an animal from a certain region in the United States. Teacher shows a map and indicates the area where the students will research. Examples: Coastal Region, Western Gulf Coast, Texas Plains, New Mexico Mountains, Chihuahuan Deserts. They research information on the computer about what the animal eats, where it gets its water, and where its shelter is. Partners present to the class.”

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

- While the Lesson Guides and Teacher Inquiry Labs provide teachers with cross-curricular connections, the guides do not explain how these connections correlate within the context of the grade-level content. The scope and sequence in the Second Grade Pacing Document includes a list of standards taught throughout the school year and in which categories each standard is introduced. For example, the Physical Characteristics of Environments lesson is correlated to TEKS 2.12A. The Lesson Guide includes cross-curricular connections to social studies in the Connect to Social Studies section. The teacher instructions include two social studies standards, ”Social Studies 2.3A; 2.4B” and state, “Students work in pairs and choose an animal from a certain region in the United States. Teacher shows a map and indicates the area where the students will research. Examples: Coastal Region, Western Gulf Coast, Texas Plains, New Mexico Mountains, Chihuahuan Deserts. They research information on the computer about what the animal eats, where it gets its water, and where its shelter is. Partners present to the class.” There is limited guidance for teachers explaining how or where these activities correlate to science content standards. The materials do not include support for teachers in making the cross-content connections by guiding them to connect to the learning from other content areas.
- The 2nd Grade TEKS Pacing Guide divides lessons into sections and includes information on cross-curricular connections. For example, Reporting Category 3, Lesson: Weather Changes connects to a writing and math activity. For example, Reporting Category 4, Lesson: Animals connects to a 30-minute writing activity.
- The Lesson Guides provide teachers with cross-curricular connections and list specific standards for these connections. For example, the lesson guide for Combining to Build includes a Connect to Math section. The math connection lists two math standards, “Math TEKS 2.9A; 2.9B.” The lesson guidance states, "Students should use math when they design any structure made of blocks. They must decide how long and how tall they want their structure. Then they count how many blocks/units they would need to build their structure. Students can build their structure or first design on paper. Count how many units (blocks) will be needed to build the structure.” However, there is no guidance for teachers explaining how or where these activities correlate to other content standards. The materials do not support teachers in making cross-content connections by guiding them to connect to the learning from other content areas.

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

- The Teacher’s Guide includes a “Materials Lists and Lab Inquiry Kits” resource within the Scientific and Engineering Practices section, which lists materials for all lab investigations in the grade level. Teachers also can access guidance documents for lessons and lab investigations by reporting categories that include lists of necessary resources and materials. However, it should be noted that while materials include this chart of materials needed for lab investigations across

the year, materials do not include a comprehensive list of equipment and supplies commensurate with TEA recommendations for Grade 2.

- The materials contain a list of equipment and supplies necessary for a particular lesson, including the engagement piece, investigative lab, and extension. Inside each Lesson Guide is a materials list that contains all the materials needed for each activity within the lesson, including digital, print, and optional lab materials. For example, in Category 2: Force Motion and Energy, Lesson: Magnets, the materials list includes magnets (different types if possible) and various materials (magnetic and nonmagnetic). For example, Category 4, Lesson: Severe Weather lists the digital resources needed for the lesson, including E-Poster, E-Book, and TEKS Assessment. It also lists printable and consumable resources, including Boost Your Vocabulary Flashcard Cut-Outs, chart paper, crayons, markers, empty water bottles, and small items to put in the water bottle, such as erasers, leaves, and pebbles. For the corresponding lab, the materials list that a device with the internet is needed.
- Grade 2 materials also include individual lists of equipment and support for the inquiry lab investigation within each lesson guide. For example, in Category 3, Lesson: Using Rocks, Soil, and Water, teacher guidance includes a list of materials needed for the lab in the Teacher/Student Inquiry Lab section. The materials required for this lab include paper plates, small bags of sand, rocks, and goggles.

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

- The materials provide a Science Safety Contract that lists ten safety statements students are to read with a parent or guardian. This document provides safety statements that outline safety rules and appropriate student behaviors. For example, item five states, "I agree to keep my area clean during and after laboratory investigations." The safety contract is the same for grades Kindergarten-2. The Safety Contract also includes questions about students' medical conditions, allergies, and emergency contact information.
- In each Teacher Resource Category guide, Teacher and Student Inquiry Labs include safety statements and reminders related to student behaviors and material use. For example, in Category 3, Our Campus Walk Lab, the safety guidance states, "On the nature walk, do not touch anything unless told to by the teacher. Be sure you wash your hands after the lesson is complete."
- The Science and Engineering Practices E-Book provides students with visuals and readings that explain safe science practices during labs and investigations. For example, grade 2, Category 3: Earth and Space Student Lab: Resources lists safety precautions (On the nature walk, do not touch anything unless told to by the teacher). Be sure you wash your hands after the lesson is complete.

Summit K12 Dynamic Science Grade 2

Indicator 8.3

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The materials provide a grade 2 Pacing Guide located in the Teacher's Guide section of the website. This document provides teachers with the Year-at-a-Glance, Scope and Sequence, Pacing Guide, and individual Texas Essential Knowledge and Skills (TEKS) Pacing Guides. All guides are based on 160 days; however, it gives guidance for additional scheduling considerations. "Only 160 days have been planned out of the 180 school days, though this course includes more than enough material to cover the full 180 days of instruction. This was intended to account for beginning-of-year logistics, district and state testing, field trips, or any other interruptions to the daily cycle of instruction. Pacing should be adjusted according to student assessment data and district instructional priorities."
- Within the grade 2 Science Pacing Guide, the TEKS Pacing Guide lists each section of the lesson, based on the 5E Model, and the activities within each section. The guide gives guidance on the number of days and the time allotment per day for each activity. For example, in the Properties of Matter Lesson, the Teach and Discuss section has three components: Instruction and Classroom Discussion, Check for Understanding and Relevancy. Under the Instruction and Classroom Discussion, the materials list five options, such as Matter, Observable Properties, Measurable Properties, and Testable Properties. Matter and Testable Properties take one day, thirty minutes, and the other sections are suggested to take four days, thirty minutes a day. The Check for Understanding is suggested to take fifteen minutes, and the Relevancy section is ten minutes.

Summit K12 Dynamic Science Grade 2

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

- Materials guide strategic implementation without disrupting the sequence of content and allowing for flexibility to meet student needs and district priorities. The Summit K12 Pacing Document contains the following to guide implementation: Year-at-a-Glance Pacing Document, Scope and Sequence, Pacing Guide, and Individual TEKS Pacing Guides. The document overview states, “The Summit K12 pacing materials are intended to assist educators in planning and organizing science curriculum according to the Texas Essential Knowledge and Skills…This guide provides a comprehensive timeline and framework based on state standards and serves as an optional resource that teachers and administrators may use in addition to or in support of any district-provided pacing guidelines.”
- It should be noted that the Summit K12 Pacing Document also states that materials “can be adapted can be adapted for teaching the TEKS in any preferred order or according to a district-provided Scope and Sequence." Materials indicate that grade-level content is taught according to the reporting categories. For example, the Scope and Sequence gives a table outlining the TEKS and suggested days for each of the four reporting categories in Grade 2. Similarly, the Pacing Guide gives a table of content arranged by reporting category, with a suggested number of days for each TEKS within the category.
- The materials suggest "introducing the fundamental concepts and principles of science prior to beginning instruction." Teachers use the website's Scientific and Engineering Practices (SEPs) section to locate resources that can be used at the teacher's discretion. These resources are aligned to Grade 2 SEPs and include E-Book lessons and Vocabulary Boosters that will aid in teaching and practicing these skills. Some skills taught in this section include but are not limited to "develop evidence-based explanations" and "contributions of scientists."
- The materials strategically delineate the order of lessons to ensure students learn about precursor concepts first. In Grade 2 materials, students learn about weather in one lesson before learning about severe weather in the next lesson.

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

- The Scope and Sequence and Pacing Guide indicate that the materials are flexible and will be completed in 160 days. According to the introduction of the grade 2 Pacing Document, "the guide provides a comprehensive timeline and framework based on state standards and serves as an optional resource that teachers and administrators may use in addition to or in support of any district-provided pacing guidelines."
- The Year-at-a-Glance provides teachers with the estimated time allotment in days for each Reporting Category. In second grade, Category 1 is thirty days, Category 2 is thirty-five days, Category 3 is forty-five days, and Category 4 is forty-five days, for 160 days. The document states the materials were designed to cover 160 days "to account for beginning of year logistics, district and state testing, field trips, or any other interruptions to the daily cycle of instruction.” The materials also state that the course includes "more than enough materials to cover the full 180 days of instruction.”

Summit K12 Dynamic Science Grade 2

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 do not include digital components that are free of technical errors.

Evidence includes but is not limited to:

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

- The materials include an appropriate amount of white space and an overall design that does not distract from student learning. Students utilize both digital resources and handouts. Digital resources include but are not limited to E-Books, Vocabulary practice, I-Study Guides, and Formative Assessments. Handouts include activities in the lesson guides and student lab worksheets. For example, in Category 2, students complete a four-square chart titled "Types of Energy." The title is bolded and marked at the top of the page. The graphic organizer is split into four squares. The squares are labeled "Kind of energy," "Properties of this energy," "Why this energy is useful," and "How people use this energy." The handout has enough white space for students to record their answers and is not visibly distracting.
- The digital Vocabulary activities include an appropriate amount of white space and have an overall design that does not distract from student learning. For example, in Category 2, Lesson “Push and Pull,” question one has a photograph of a man pushing a truck. The question states, "The man had to ___ his truck because it didn't work." Students choose an answer from a dropdown menu to complete the sentence. The photographs are clear, easy to understand, and relate to the content. Answer choices are written in a clear font big enough for students to read. Students also have the option to click a play button to have the question read to them.
- Materials in the 2nd Grade student learning digital resources include an appropriate amount of white space and a design that supports and does not distract from student learning. For example, the Vocabulary activities, I-Study Guides, and Formative Assessments for each lesson include one question/prompt per page of the assignment.

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

- The materials embed age-appropriate pictures and graphics that support student learning and engagement without being visually distracting. Teachers can find pictures and age-appropriate graphics on student handouts, in E-Books and e-posters, in Vocabulary flashcards, and all digital student activities. For example, the E-Book for Category 2 Lesson, Sound, uses age-appropriate pictures and graphics that support student learning. The photographs and graphics are clear and easy to read. The text on each page is in a readable font and is big enough for teachers and students to read. On page two, titled “Sound,” students view the graphics of an ear and someone playing the piano. The graphics are clear and easy to understand. The text on the page describes the images and is clear.
- Materials use age-appropriate and content-appropriate visuals that support student learning. The E-Posters use real photographs or colorful drawings to convey concepts and provide visual support to topic vocabulary. For example, the Category 4, Living and Nonliving, E-Poster shows one photograph of two children washing a dog outside, with sentences about living things below. Next is a photograph of colorful toys and clothing items on a painted background, followed by statements about nonliving things,
- Materials in the 2nd Grade student learning digital resources embed age-appropriate pictures and graphics that support student learning and engagement without being visually distracting. For example, all Category Four: Organisms and Environments Formative Assessments include four multiple-choice answer choices for each question. Some of the questions pair an image related to the question, other questions include only a sentence or question without an image.

Materials include digital components that are free of technical errors.

- Materials are free of spelling, grammar, and punctuation errors. Materials are free of inaccurate content materials or information. Materials are free of wrong answer sheets to problems. Materials include digital components that are free of technical errors.

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Indicator 9.2

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

1	Materials integrate digital technology and tools that support student learning and engagement.	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.	No
4	Materials integrate digital technology that is compatible with a variety of learning management systems.	Yes

Not Scored

Materials are somewhat 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 do not integrate digital technology that provides opportunities for teachers and/or students to collaborate. Materials integrate digital technology that is compatible with a variety of learning management systems.

Evidence includes but is not limited to:

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

- The materials integrate digital technology and tools that support student learning and engagement. Each Lesson Guide includes an E-Book, Interactive Vocabulary Practice, an I-Study Guide, and an online Formative Assessment. The materials also include Differentiated Science Writing activities, which have an Engage Video and writing prompts. The digital components include embedded tools, such as variable font size, text-to-speech, note-taking, highlighting, and strikethroughs. For example, in the I-Study Guide for Push in Category 2, students push a play button to hear prompts read aloud to them. Students also have the option to use the highlighting tool to highlight important words or sentences, the note-taking tool to type notes, and a magnifying tool that makes text larger or smaller.
- The embedded technology within the student materials supports the print and does not replace it.

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

- The materials integrate digital technology that supports student engagement with grade-level content. For example, in the Animals Differentiated Science Writing activity, students view a video clip about the animals of Africa. Then, students answer two questions about the content

learned in the video by typing and submitting their answers. The Beginner questions are, “Describe the butterfly” and “What is the giraffe doing?”
- The materials provide digital tools for students to review and answer questions about Science and Engineering Practices (SEPs), Recurring Themes and Concepts (RTCs), and grade-level content through Differentiated Science Writing videos and written response prompts, Vocabulary Mastery Practice questions and answers, Science and Engineering Practice vocabulary image observation and statement activities which include written/typed response, complete the sentence with a drop-down option.

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

- The materials do not integrate digital technology that provides opportunities for teachers and/or students to collaborate. All of the digital activities are completed independently and submitted by students for teachers to view. Teachers have the ability to view student responses but are not able to provide feedback on the digital platform. Students do not have the ability to view their peers' responses.
- There is no evidence of a digital collaboration tool that provides teachers and/or students with opportunities to collaborate. There are face-to-face collaboration opportunities within the unit lessons. For example, in The Sun, the Earth, and the Moon Lesson Guide, the Vocabulary section describes a Graphic activity, "In groups, students will draw and fill in the graphic with the word Sun in the center. In the circles, include all the vocabulary words and how each word is related to the Sun. Groups will present their graphics to the class."

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

- Materials integrate digital technology that is compatible with a variety of learning management systems. For example, the 2nd Grade Dynamic Science Teacher's Guide links a sample Parent/Guardian letter that states, "Since the Summit K12 program is web-based, students can access it from any computer tablet with an internet connection." The support link for Onboarding and Integrations states, "Summit K12 provides an online supplemental curriculum that is 100% web-based (HTML5) and requires no special software installations" and cautions users that "while Android Tablets and Phones are able to access our LMS on a web browser, not all features are fully supported."
- The Dynamic Science Teacher's Guide links the Teacher- Getting Started document and states that Summit K12 supports all major SSO tools like Clever, Classlink, Rapid Identity, and others and supports access to all major district LMS and SIS platforms through one of the SSO solutions.

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Indicator 9.3

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

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

Not Scored

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

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

Evidence includes but is not limited to:

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

- The materials provide information that identifies how online and digital components align with grade-level science knowledge and skills. The Concept Mastery section lists the digital components and the standards they align with.
    - For example, in the Concept Mastery section for Category 2, teachers can see the Texas Essential Knowledge and Skills (TEKS) that are aligned with each lesson. Push covers 2.7A, Push and Pull covers 2.7B, Sound covers 2.8A, Sound Levels covers 2.8B, and Using Sound to Communicate covers 2.8C.
- Digital components align with the science knowledge and skills progression.
    - For example, in the Content Mastery Vocabulary assessment for The Sun, The Earth, and the Moon unit, question 4 shows a picture of a mountain reflected in the water. The question asks, "When the light bounces off the water, it ____ the mountain." Students choose between shows, hides, and reflects.
    - For example, in question 6, students are given a picture of a fire and asked, "Fire gives us ____." The choices are snow, heat, and rain..

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

- The materials provide teacher guidance for using embedded technology to support and enhance student learning.
    - For example, the Online Course Site Map guides teachers on using the online features and where and when to access them to facilitate student learning.
    - For example, the Teacher Getting Started Guide includes instructions on enrolling students, using single sign-on (SSO) for student access, and pushing the Summit K12 app onto iPads.
    - For example, the Student Getting Started Guide supports teachers in introducing the digital technology components of the Summit K12 program.

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

- The materials include a Parent/Guardian Letter explaining how to use Summit K12 at home. The letter includes embedded screenshots as visuals to help parents and caregivers support student engagement with digital technology and online components. It also briefly explains the work students will mostly do at home, including Science Animations, Concept Mastery, and Science Literacy and Vocabulary Mastery.