Summit K12 Dynamic Science Grade 7

Summit K12 Dynamic Science Grade 7 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 6	100%	100%	100%	100%
Grade 7	100%	100%	100%	100%
Grade 8	100%	100%	100%	100%

Section 2. Instructional Anchor

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

Section 3. Knowledge Coherence

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

Section 4. Productive Struggle

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

Section 5. Evidence-Based Reasoning and Communicating

- The materials promote students' use of evidence to develop, communicate, and evaluate explanations and solutions.
- The materials provide 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 some guidance that explains how to analyze and respond to data from assessment tools.

- The assessments are somewhat clear and easy to understand.

Section 7. Supports for All Learners

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

Section 8. Implementation Supports

- The materials include year-long plans with 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 somewhat designed to engage and support student learning with the integration of digital technology.
- The digital technology or online components are developmentally and grade-level appropriate and provide support for learning.

Section 10. Additional Information

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

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Indicator 2.1

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- 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. For example, there is a section dedicated to science and engineering practices. Skills companions and vocabulary practice are available for every SEP, including, but not limited to, conducting investigation and designing solutions, developing and using models, and investigating STEAM careers. Materials prompt students to engage in hands-on activities that provide students with opportunities to practice and demonstrate scientific and engineering practices. In a 7.10B Effects of Plate Tectonics lesson, students use graham crackers and frosting to model plate boundaries. The SEPs applied in this investigation are 7.1G, Develop and use models to represent phenomena, systems, processes, or solutions to engineering problems, and

7.3A, Develop explanations and propose solutions supported by data and models consistent with scientific ideas, principles, and theories. For example, the Lesson Guide for 7.12A, Flow of Energy in Trophic Levels, indicates 7.1G utilization. There are six activities: the engage, think-pair-share, ecosystem energy loss game, food chains: give one, take one, "Where's The Energy?" exercise, the Flow of Energy Project, and Exploring Energy in Ecosystems, where students will develop and use models to represent phenomena, systems, processes, or solutions to engineering problems.

- The materials provide multiple opportunities to practice grade-level appropriate scientific and engineering practices as outlined in the TEKS. For example, materials include opportunities for students to refine a model or explanations using models. In a 7.6A Elements and Compounds lesson, students create a model of compound molecules using chemical formulas. Students explain how models of compounds compare or contrast based on their chemical formulas. Each compound model may form using two or more different types of elements chemically connected in a fixed ratio. Each compound model represents a different chemical formula unique to that compound. The SEPs applied in this investigation are 7.1G, Develop and use models to describe phenomena; 7.2A, Identify advantages and limitations of models such as their size, scale, properties, and materials; and 7.3B, Communicate explanations and solutions individually and collaboratively in a variety of settings and formats.

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

- Materials provide multiple opportunities to connect between and within overarching concepts using recurring themes. Materials explain how students engage in Scientific Conversation. For example, materials give teachers an at-a-glance view of the recurring themes on the 7th Grade TEKS-SEPs-RTCs Crosswalk on the Dynamic Science Teacher's Guide page. Teachers can see the placements of RTC 7.5A-G and their corresponding lessons. There are skills companions and vocabulary practice for recurring themes and concepts. For example, in lesson 7.13D, Natural and Artificial Selection, students investigate how a rabbit population is affected by the introduction of a predator in summer compared to a winter environment. Afterward, students discuss how natural selection changes the occurrences of traits in a population over time. The RTCs linked to this activity are 7.5BFG.

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

- Materials strategically and systematically develop students' content knowledge and skills as appropriate for the concept and grade level outlined in the TEKS. Each Lesson Guide begins with an Engage and Establish Relevance section introducing the topic. Next, teachers use the Teach and Discuss team to introduce fundamental concepts and help students build understanding through hands-on experiences, literacy activities, discussions, and other instructional tools. Finally, teachers use the Apply and Extend activities to allow students to synthesize and extend their understanding of the concepts. The 7.6E Factors Affecting Rates of Dissolving Lesson Guide provides one example of the intentional sequencing of materials. The Concept Mastery student learning resource intends to scaffold learning and support the conceptual understanding of each TEKS. Teachers may assign a formative assessment, review video, vocabulary activity, and a second formative assessment within each TEKS lesson. Scaffolds from previous grade levels are

included in these learning resources to assist students requiring differentiated support. For example, 6.9B, Ocean Tides, is a scaffold formed with 7.9B, Gravity and Our Solar System.

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.

- Summit K12 design lessons with engaging activities that allow students to ask questions and plan and conduct investigations. These investigations, whether using physical classroom tools or digital simulations, are included throughout the course. Materials include sufficient opportunities, as outlined in the TEKS, for students to ask questions, plan and conduct classroom investigations, and engage in problem-solving to make connections across disciplines and develop an understanding of science concepts. Materials provide the teacher with a set of possible student questions, including guiding questions the teacher can ask to help students connect prior learning and retain new information. In lesson 7.9B, Gravity and our Solar System, the teacher shows students images of roller coasters. The materials provide teachers with probing questions to consider, and partners discuss the following questions: "Why do roller coasters speed up and, at other times, slow down?" "Why don't they fly off into the air?" "What keeps them stuck in the tracks?" "Why do you not float into space when you ride a roller coaster or swing in a swing?" After students discuss their thinking with three partners, the teacher connects their discussions to the key concept that gravity affects more than just roller coasters here on Earth; gravity also governs the motion of objects in the solar system.
- Materials give students opportunities to plan and conduct classroom and field investigations. Students use scientific practices to plan and conduct simple descriptive investigations. For example, in lesson 7.13A, Functions of the Human Organism, student pairs investigate how the nervous system responds and reacts to stimuli by observing and measuring their reaction times for movements. For example, one partner drops the ruler, and the other catches the ruler, then the same person drops and catches the ruler. Students document their observations and measurements and discuss and answer questions: "What is the nervous system's main function? How is the nervous system involved in this investigation? What differences in the reaction times did you observe with every attempt to catch the ruler? What might be happening in your brain that is different when you dropped the ruler as compared to another person dropping the ruler?"

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Indicator 2.2

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- Materials embed phenomena and problems across lessons to support students in building and developing knowledge through authentic application and performance of scientific and engineering practices and grade-level content as outlined in the TEKS. Materials embed phenom in the Lesson Guide for 7.13C, Asexual and Sexual Reproduction. The lesson begins with students studying a class lottery where some students could only make copies of existing tickets while others could rearrange the numbers on the ticket. The lesson then asks students to think of any real-life situations where it would only be beneficial to make a copy or where rearranging the sequence would be more helpful. Students then move through a series of activities where they learn about the pros and cons of both asexual and sexual reproduction, working with real examples of organisms that use both types along the way. Finally, the students get to design an experiment to study sexual and asexual reproduction in plants. At each stage, the students worked with phenomena to connect their learning.
- Lesson creation intentionally includes phenomena and problem-solving as students construct and build knowledge. Lesson Guides have phenomena or engineering challenges to kick-start a lesson and engage students in asking questions and seeking evidence-based answers through

investigations, research, and scientific argumentation. Lesson Guide TEKS 7.10B, Effects of Plate Tectonics, includes examples of embedded phenomena and engineering challenges used to engage students in scientific reasoning and precise application and performance of SEPs, Recurring Themes and Concepts, and content TEKS. In the Engage section of the lesson, teachers can provide images of the aftermath of an earthquake. The teacher uses these guiding questions: "What do you notice about the pictures? What is this phenomenon called? What do you wonder about earthquakes? When you hear the word earthquake, is there a place that comes to mind?" To establish relevance, the teacher showed students pictures of landforms and asked them to predict their causes.

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

- The materials provide opportunities to leverage students' prior knowledge and experiences related to phenomena and engineering problems, ensuring connections can happen to previous science TEKS. For example, scaffolded lessons are provided in reporting category 2, Force, Motion, and Energy. Lesson 7.7C, Newton's First Law of Motion, is accompanied by Lesson 6.7B, Balanced and Unbalanced Forces. In the 6th-grade lesson, students calculate the net force on an object in a horizontal or vertical direction using diagrams and determine if the forces are balanced or unbalanced. This background knowledge is imperative for the seventh-grade lesson, where they analyze the effect of balanced and unbalanced forces on the state of motion of an object using Newton's First Law of Motion.
- Each Lesson Guide includes phenomena and engineering problems to provide engaging and thought-provoking experiences. The materials allow different entry points into the learning of the phenomena. For example, in 7.8B, Patterns of Thermal Energy, students conduct investigations, write about an example from their daily lives where thermal energy transformation occurs, complete a virtual simulation using PHET, and participate in an engineering design challenge designing a cooler for communities without electricity. Students have many opportunities to interact with the content and concepts.

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

- Materials clearly outline the scientific concepts and goals behind each phenomenon and engineering problem for the teacher. The materials clearly outline the scientific concepts and learning goals behind each phenomenon and engineering problem corresponding to content concepts across the grade level. For example, in lesson 7.12A, Flow of Energy in Trophic Levels, students construct an energy pyramid to show energy flow through an ecosystem and calculate how much energy transforms from one trophic level to the next. Students discuss their observations and engage in a debate regarding whether or not vegans can get enough energy from food.
- Materials clearly outline for the teacher the scientific concepts behind each phenomenon. For example, the Teach and Discuss section in the Lesson Guide for 7.14A, Taxonomy, thoroughly describes each science concept the students need to know. It includes labeled diagrams, supporting information from primary grades, and definitions for vocabulary words. In the Lesson Guides for every TEKS, there are gray boxes containing the goals for each lab, investigation, or engineering problem having the plans for that lab. For example, there is a gray box for Speed or Velocity in the 7.7B, Speed vs. Velocity, investigation Lesson Guide. This gray box indicates that

the goal is to "distinguish between speed or velocity." In lesson 7.9A, Components in Our Solar System, there are phenomenon images of our solar system in the engage section. There are guided questions with the pictures. The critical concept section in the lesson clearly outlines phenomenon details for the teacher to go over with students.

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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 an 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 an increasingly deeper conceptual understanding. Materials clearly and accurately present grade-level-specific core concepts, recurring themes and concepts, and science and engineering practices. Mastery requirements of the materials are within the boundaries of the main concepts of the grade level.

Evidence includes but is not limited to:

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

- The materials connect new learning to previous and future knowledge within and across grade levels. For example, the teacher resources for Category 2, Force, Motion, and Energy, provide lessons on sixth-grade TEKS that support the seventh-grade TEKS. They are listed directly under the seventh-grade TEKS and have a unique colored staircase icon to indicate they will support current grade-level TEKS. In the Teacher's Guide, reporting Category 2, Lesson 7.7B, students distinguish between speed and velocity in linear motion regarding distance, displacement, and direction. The lesson materials state previous learning from sixth grade; students identify and explain how forces act on objects and calculate the net force on an object in a horizontal or vertical direction using diagrams to determine whether the forces were balanced or unbalanced. Fifth-grade learning connections are also stated; students investigate and explain how equal and unequal forces acting on an object cause patterns of motion and energy transfer and design a simple experimental investigation that tests the effect of force on an object in a system, such as a car on a ramp. The lesson materials also state future learning. For example, in eighth grade, students calculate and analyze how the acceleration of an object depends on the net force acting on the object and the object's mass using Newton's second law of motion. For example, in Lesson 7.10A, Changes in Earth Over Time, connections are made with the current concept where students describe the evidence that supports that the Earth has changed over time,

including fossil evidence, plate tectonics, and superposition, to previous learning in sixth grade where students identify components of the geosphere, model and describe the layers of Earth, and describe how rocks form and change through geological processes. Connections to future learning are also stated in the lesson materials. In high school Earth Systems Science, students will continue the study of Earth's systems, including geological processes.

- For example, in reporting Category 4, Lesson 7.13D, Natural and Artificial Selection, students describe and give examples of how natural and artificial selection change the occurrence of traits in a population over generations. The teacher can see the prior knowledge; in sixth grade, students describe how variations within a population can be an advantage or disadvantage to the survival of a population as environments change with seventh-grade level concepts and how they correspond to future learning. In eighth grade, students describe how variations of traits within a population lead to structural, behavioral, and physiological adaptations that influence the likelihood of survival and reproductive success of a species over generations (8.13C).

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

- Materials are intentionally sequenced to scaffold learning, allowing for deeper conceptual understanding. For example, materials ensure students experience a phenomenon or problem before utilizing models as a tool for reasoning. Materials give students opportunities to use models to depict relationships and form explanations. Each Lesson Guide starts with an Engage and Establish Relevance section where students first experience phenomena related to the topic in some way and begin building their knowledge base. Then the lesson progresses to Teach and Discuss, where vocabulary and essential concepts are learned. Labs and investigations also happen during this section. The last section is Apply and Extend, where students create models, design their experiments, research further, and complete engineering challenges. For example, in the Lesson Guide for 7.11A, students start with two class discussions in the Engage and Establish Relevance section, move to a reading article on watersheds in the Teach and Discuss section, and finalize their learning with the creation of a digital public service announcement over a proposed solution to the negative impacts of humans on watersheds in the Apply and Extend section.
- Materials are intentionally sequenced to scaffold learning, allowing for deeper conceptual understanding. Before participating in labs or investigations, students gather basic information, including necessary vocabulary. For example, in Lesson 7.10 B, Effects of Plate Tectonics, students observe a demonstration and complete several data tables on plate boundaries and landforms to gain basic knowledge and vocabulary before working through a graham cracker lab where they model each type of plate movement. The Concept Mastery student learning resources scaffold students learning and support the conceptual understanding of each TEKS. Teachers may assign a formative assessment, review video, vocabulary activity, and a second formative assessment within each TEKS lesson. Scaffolds from previous grade levels are included in these learning resources to assist students requiring differentiated support. For example, in Category 4 of Concept Mastery, TEK 8.12A Disruption of Energy Transfer in Food Webs, the teacher can assign Formative Assessment 1, TEKS Video, Vocabulary, and Formative Assessment 2 to scaffold the learning.

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

- The materials present grade-specific core concepts. Within each lesson, the core concepts broaden into several key concepts, bolded for ease of view. For example, in Lesson 7.9C, Characteristics that Enable Life on Earth, five bolded key concepts are provided with an expanded explanation. Some key concepts with their expanded explanations are: “As far as we know, all life requires water. If there were no water on Earth, there would be no life. Because of Earth’s proximity to the Sun and its existence in the habitable zone, water is in its liquid state. The water might turn into steam or solid ice if we were closer to or farther from the Sun. Earth’s atmosphere consists of all the gasses surrounding Earth. Its specific composition contains just the right components to help support life: 78% nitrogen, 21% oxygen, and 1% other gasses, including carbon dioxide, methane, argon, water vapor, and neon, to name a few. In addition to providing gasses that most life forms need, the atmosphere also acts as a blanket that keeps the planet warm and helps protect it from the Sun’s radiation.” This section has a slide deck to use with students, including diagrams of core concepts and vocabulary students need to understand and activities to help students master the concepts. This information aligns with the wording of the TEKS. For example, 7.6A says students will compare and contrast elements and compounds in terms of atoms and molecules, chemical symbols, and chemical formulas. The Lesson Guide for 7.6A Key Concepts section has definitions and diagrams of those specific terms and concepts.
- The materials present recurring themes and concepts (RTC). For example, the materials include a section in the Teacher’s Guide to assist with understanding recurring themes and ideas. The slideshow defines each RTC and gives relevant examples of each. The teacher can view which lessons correspond with a specific RTC by viewing the seventh-grade TEKS-SEPs-RTCs Crosswalk in the Teacher’s Guide. For example, RTC 7.5F: Analyze and explain the complementary relationship between the structure of objects and systems, is found in Lessons 7.6A, 7.7A, 7.9BC, 7.11A, and 7.13ABD.
- The materials present science and engineering practices. For example, the materials include a Scientific and Engineering Practices (SEP) section where teachers can find and gain knowledge on each specific goal. For example, for SEP 7.1E, 7.1F Collect, and Organize Data, teachers can view a skills companion slideshow that explains Two Types of Data, Quantitative Data, Qualitative Data, and Organizing Data, as well as student activities to learn how to collect and organize data. The course's Scientific and Engineering Practices section includes Skills Companions that teachers can use to provide instruction on these process standards. Each presentation and built design support each of the SEP and RTC TEKS, leading to more fulfilling and in-depth conversations when discussing connections within core concepts instruction. For example, the skills companion for Collect and Organize Date covers SEPs 6.1E and 6.1F.

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

- Mastery requirements of the materials are within the boundaries of the main concepts of the grade level. Each Lesson Guide states the grade level TEKS at the top, which provides the core vocabulary, study guides, TEKS videos, and formative assessments. The Teach and Discuss section gives the vertical alignment below and above, providing teachers with the boundaries of their topics. The materials include specific learning targets for each grade level. For example, the materials provide teachers with a scope and sequence which they can use to see the grade-

specific standards of seventh-grade science and ensure the materials include all standards. The scope and sequence list all TEKS in the order of recommended pacing.

- The materials clearly define the boundaries of content that students must master for the grade level. For example, the materials include a concept mastery section in the Teaching and Learning section of the Teacher's Guide. The guide states, "The Concept Mastery Approach is a rigorous process teachers follow to help each student master both the concepts and the academic vocabulary. Vertically-aligned scaffolds are built into the Teacher's Guide and student tables to differentiate and accelerate student learning and mastery. All content is organized by category and TEKS, making it easy to follow any scope and sequence." Students must attain specific percentage points on assessments and can be assigned scaffolded lessons to fill in any knowledge gaps.

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

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

Evidence includes but is not limited to:

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

- Materials support teachers in understanding the horizontal and vertical alignment, guiding the development of grade-level content, recurring themes and concepts, and scientific and engineering practices. Teachers may reference supports in the Teacher's Guide page's Scope and Sequence/Pacing Guides section, which explains the design and purpose of the scope and sequence. The materials implement designs with an optional year-long scope and sequence that ensures all TEKS are covered within one school year. Scientific and Engineering Practices (SEP) and Recurring Themes and Concepts (RTC) standards are integrated into lessons and taught within science content standards. The materials include guiding documents that explain how content and concepts increase in depth and complexity across lessons and units within the grade level. A phenomenon sense-making guide is included for each TEK to help students gain an understanding of different phenomena. The materials are implemented as stand-alone units. The Pacing Materials states that the pacing guide "serves as an optional resource that teachers and administrators may use in addition to or in support of any district-provided pacing guidelines."
- The scope and sequence outlines the units of study and the order in which teachers can teach knowledge and skills. Grade 7 is divided into 11 units like Matter, Force and Motion, Our Solar

System, Impacts of Human Activity on the Hydrosphere, and Organization in Organisms. The units further break down into TEKS-based lessons. For example, Unit 9: Organization in Organisms contains two lessons, 7.13B Levels of Organization in Plants and Animals and 7.13A Functions of Human Body Systems. Each lesson within the materials includes a vertical alignment table and connections to recurring themes, concepts, and scientific and engineering practices. For example, in Lesson 7.10A, Changes in Earth Over Time, teachers can see the related knowledge from sixth grade; students will identify components of the geosphere, model and describe the layers of Earth, and explain how rocks form and change through geological processes (6.10ABC). Teachers can also preview the next level of knowledge gained in future grade levels. In high school Earth Systems Science, students will continue the study of Earth's systems, including geological processes. Each component of the lesson lists the coding for SEPs and RTCs; however, the full wording of each standard is at the end of the lesson. The related SEPs in this lesson include 7.1A, which defines problems based on observations or information from text, phenomena, models, or investigations, and 7.1H, which distinguishes between scientific hypotheses, theories, and laws. The RTCs in this lesson are 7.5A, Identify and apply patterns to understand and connect scientific phenomena, and 7.5G, Analyze and explain how factors or conditions impact system stability and change.

- Materials provide a vertical alignment to support teachers. In the Teach and Discuss section of each learning guide is a pair of boxes showing the vertical alignment to TEKS below and above the current grade level. For example, in the 7.13A Function of Human Body Systems Lesson Guide, the vertical alignment shows a TEKS for fifth grade, 5.13A, aligned with 6.10C, and one for eighth grade, 8.13C.

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 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. For example, in Lesson 7.8C, Temperature, and Kinetic Energy, teachers can view bolded science concepts with expanded explanations, such as "Kinetic energy is the energy of motion. Although we generally think of kinetic energy as only existing in objects, we can see moving atoms and molecules within substances also have kinetic energy." Teachers can also see misconceptions, such as students thinking that all melting/freezing points are freezing and all boiling points are boiling, or they may believe that all melting, freezing, and boiling points are the same for all substances because their experience is mostly with water. Each Lesson Guide contains a section called Teach and Discuss. This section gives explanations and examples of the science concepts taught in that unit. For example, the Lesson Guide for 7.13C Asexual and Sexual Reproduction includes a Teach and Discuss section. It explains key concepts such as the five methods of asexual reproduction and charts showing examples of asexual and sexual reproduction in the plant and animal kingdoms.
- Materials contain misconceptions of science concepts to support the teacher's subject knowledge and recognition of barriers to student conceptual development as outlined in the TEKS. For example, the Lesson Guide for Levels of Organization in Plants and Animals (7.13A) identifies a misconception in the section on key concepts: "(Teacher Note: Students may think that animals and plants have the same structures that make up each level. Although the arrangement is the same way, their structures differ greatly.)"

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

- Materials explain the intent and purpose of the instructional design of the program. Located within the Teacher's Guide section are resources to learn more about the intentional design of the materials. For example, in the Course, Design section is the program philosophy. Teachers may reference and view the program's tenets in a Claim, Evidence, and Reasoning (CER) framework. For example, students claim that scientific inquiry is the essence of learning science. The evidence and reasoning for this are that students learn science by observing phenomena, asking questions, conducting investigations, and using scientific practices to answer those questions. The best way to learn science is to do science.
- Materials explain the intent behind the instructional design of the program. The teacher's guide includes a section on why they chose to use the 5E model lesson plan. Using the 5E Instructional Model with the Dynamic Science Courses says, "Our instructional model incorporates all of the elements of 5E and more. Our curriculum is flexible, interactive, and hands-on. It implements productive designs for students to struggle and succeed in multiple learning pathways. We believe in building a community of learners through engaging activities that appeal to various learning modalities and diverse learners." Teachers can choose from various suggested activities for students to explore new concepts through concrete learning experiences, individually and collaboratively. These experiences include hands-on investigations, problem-solving, virtual labs, reading, writing, and acting as scientists and engineers. Students engage in critical thinking and scientific decision-making. Students use writing and structured peer interactions to explain their thinking and conceptual understanding. They build knowledge systematically and coherently. The teacher adds layering to the learning with content videos, new terms, and practice. Students elaborate on and extend their learning by applying it to a new situation or problem. Teachers can choose various activities to enhance students' more profound understanding of the concept and reinforce new skills.

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Indicator 4.1

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- Materials support students' meaningful sensemaking through reading, writing, thinking, and acting as scientists and engineers. In lesson 7.6E, Factors Affecting Rates of Dissolving, students conduct an inquiry activity to test the dissolution rate of a sugar cube in water. Students design experimental goals compared to a norm provided by the teacher. Before the investigation, students read their study guide to review concepts and think about what they know to help them design the investigation. Students write and draw in their student handouts as they progress through the experiment. Written tasks include setting a goal, creating a hypothesis, experiment design, procedural steps, creating a data table, drawing conclusions, and experimental design evaluation.
- Page 2 of the Summit K12 Philosophy document says, "Scientific Inquiry is the Essence or Learning Science," and states that students learn science "by observing phenomena, asking questions, conducting investigations, and using scientific practices to answer those questions."

The materials provide consistent learning opportunities that support meaningful sensemaking through reading, writing, thinking, and acting as scientists and engineers. Page 2 of the Summit K12 Philosophy document states that the course includes "600+ opportunities for students to investigate, explore, and experience science as scientists and engineers."

- There is a science and engineering practices section that goes through each SEPs. The skills companion explains the process in a PowerPoint with suggested activities and questions. There is also a vocabulary check over each skills companion that allows students to apply the skill. For example, in the 7.11A Watersheds and Human Activity Lesson Guide, students can read, write, and think like a scientist. Students read and complete the practice section in the Watershed Article by building a summary. Students work together for the Thinking Critically portion. Students get to practice both listening and speaking with academic vocabulary. This article makes a strong vocabulary foundation as students progress through the lesson. In the Cause and Effect Writing Activity: Human Impact Slides, the teacher shows students an image of human impact on groundwater or surface water. Students write a cause-and-effect sentence in response. Each slide has a picture and a cause-and-effect sentence stem. In Water, Water, Everywhere and Not a Drop to Drink, student groups carry out a lab and additional optional research activities to be able to explain how hazardous materials contaminate groundwater; they interview a professional working on problems of groundwater contamination, and they engage in the engineering design process to design a solution to one source of groundwater pollution.

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

- Materials provide multiple opportunities for students to engage with grade-level appropriate scientific texts to gather evidence and develop an understanding of concepts. For 7th grade, there are 33 leveled Non-literary/Non-fiction texts. Science reporting category and science TEKS organize the texts. Also available are teacher notes to guide student reading. At the end of each e-book, students apply SEPs process skills, such as predicting what will happen to the volcanoes on the Hawaiian Islands. For example, following the Science Literacy section of the main course page, students are provided with various e-books related to the multiple concepts studied in the reporting categories. For example, in reporting category three, Earth and Space, an e-book titled “Volcanoes Change the Land” provides opportunities for students to understand that volcanoes form when melted rock reaches the surface and that most volcanoes form at plate boundaries, but some form over hot spots. The book's first page shows students how they can be strategic learners by listing the key vocabulary terms and reminding the reader how they can determine the importance of what they read by looking for the main idea and supporting details. The book explains the concept and contains several text features such as subtitles, maps, bolded terms, captions, graphics, and call-out boxes.
- The materials provide multiple opportunities for students to engage with grade-level appropriate scientific texts. According to the Philosophy document, the course includes "Differentiated science literacy modules with over 200 e-books including relevant second language acquisition scaffolds and supports covering the Science TEKS, SEPs, ELPS, and RLA TEKS." The materials provide multiple opportunities to engage with scientific texts, including pre-reading and vocabulary to help them develop an understanding of concepts. In the 7th-grade Differentiated Literacy section, 33 e-books cover 7th-grade TEKS and a few 6th-grade TEKS. Inside the e-books are a list of science vocabulary words, before, during, and after reading questions, reading strategies, fully labeled diagrams, and the vocabulary words defined in the

text. For example, in the e-book Cells Work Together, 7.13B, the vocabulary words *tissue, organs,* and *organ system* are listed at the beginning and then defined on pages 2 and 3.

- Materials provide multiple opportunities for students to engage with grade-level appropriate scientific texts to gather evidence and develop understanding. For example, in the Differentiated Science Literacy section, there is a list of topics and TEKS with an e-book that goes along with each. In 7th grade, there are thirty-three e-books, some in each reporting category. Each vocabulary is defined separately from the text, graphics, and key ideas. In A World of Elements (7.6A), the vocabulary words are *atomic symbol, element, atomic number, atomic weight, compounds,* and *mixture*. At the end of the reading, students can communicate element symbols, atomic numbers, and atomic weight; make connections by identifying mixes in their daily lives; and make inferences about helium and neon's properties. Each text has a Reading and Study Guide with an answer key in the Science Teacher's Literacy Guide. Each topic includes four texts. Each text provides vocabulary boosters and a content test.

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 to support students in developing and displaying an understanding of scientific concepts. For example, in lesson 7.6A, Elements and Compounds, students create a plan to build a house for a pet. They write their ideas about the materials needed to build the house. They also consider how much of each material they need and whether the amounts will be equal or different. Students create an image of their plan. The developing understanding links the various roles each element and its combinations make in the world around us. For example, in reporting category two, Force, Motion, and Energy, students participate in the lesson by engaging with the interactive e-posters. Each lesson in the unit has a corresponding poster or poster that includes key concepts with interactive features, such as highlighting, a draw/write tool, and sticky notes. One interactive e-poster for lesson 7.8B, Patterns of Thermal Energy, contains information on how thermal energy transfers within or between substances. Images include cooking food in a pot on the stove, boiling water in a glass bowl, and drinking in a glass of ice. There is also a large graphic depiction of heat energy transferring in the direction of hot to cold.
- Materials provide students with opportunities to engage in graphic modes or communication. For example, after reading the e-book on Classifying Animals, students are asked on page 6 to communicate their knowledge of animal classification by completing a chart where they classify five different animals pictured in the book. The chart has columns for Animal, Vertebrate or Invertebrate, Group, and Group Traits. Materials provide students with opportunities to engage in written modes of communication. For example, in the Lesson Guide for Patterns or Thermal Energy, 7.8B, in the Apply and Extend section, students are asked to read "Bread-Making Hot Mess" and then explain, in terms of thermal energy transfer and thermal equilibrium, why different batches or dough rose by different amounts. Students can choose from multiple methods of communication, including a poster, a paragraph, and a slide show, just to name a few.
- In the lesson, Watersheds and Human Activity (7.11A), in the activity Litter, Litter, Everywhere, students have a chance to talk to a partner about which litter fact was most surprising and why they think the ad campaign Don't Mess with Texas was created. Partners discuss and list places they have seen, the type of litter, and how they think it affects land and water. Students then

have an opportunity to write a complete thought using a sentence stem: “One place I have seen litter is _____. The litter was _____, and I think this litter could impact land or water by _____.” In the Watershed Lab, students crumple up a sheet of paper to create many creases and folds, then uncrumple it enough to model the surface of Earth with some mountains and set it in a container. They use a water-soluble marker, draw lines down some of the creases, and then spray bottle and spritz water over the model. In science journals, students sketch the watershed model, including arrows for runoff and the “river” where the runoff collects. In Human Impact Slides, the teacher shows students an image of human impact on water, either groundwater or surface water. Students write a cause-and-effect sentence in response. Each slide has a picture and a cause-and-effect sentence stem. In the Digital Public Service Announcement activity, students create digital public service

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

- Materials 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. For example, in lesson 7.8A, Methods of Thermal Energy Transfer, students observe images of various phenomena that represent conduction (egg in frying pan, ice in hand), convection (lava lamp, boiling water), and radiation (animal lying in the Sun). Partners discuss what the pictures have in common and how they are different. The teacher then conducts a lab demonstration of various methods of popping corn. As students observe the processes, they hypothesize how the methods differ. For example, in lesson 7.10B, Effects of Plate Tectonics, students observe images of earthquake-related phenomena, such as fallen buildings and cracked roads. Students discuss what they notice about the images, the name of the phenomenon, what they wonder about earthquakes, and what place comes to mind when they think about earthquakes. Students then observe images of landforms such as mountains, volcanoes, hot spots, and ocean basins. Students predict what causes their formation. They write their responses in their student notebooks and share them with their partners. At the end of the unit, students review and revise their thinking on forming the landforms.
- Materials support students to act like scientists who can learn from engaging in phenomena, make sense of concepts, and productively struggle. In the Lesson Guide for Calculating Average Speed, 7.7A, students first engage with calculating speed by comparing the speed of a toy car and a wind-up toy. They then move through a series of activities, discussions, and labs where they investigate how to calculate speed. Each activity is progressively more challenging. Materials support students to act like an engineer and can learn from the engineering design process. For example, students design and make their working models of phenomena. In 7.8C, students design and make a model that shows how temperature relates to the kinetic energy of particles in a substance.
- 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. For example, in the lesson, Watersheds and Human Activity (7.11A), in the activity Water, Water, Everywhere; and Not a Drop to Drink, students carry out the lab and research activities to be able to explain how hazardous materials contaminate groundwater. They interview a professional working on groundwater contamination problems, and they engage in the engineering design process to design a solution to one source of groundwater pollution. In the Digital Public Service Announcement activity, students create a digital public service announcement for a proposed solution for reducing the negative human impact on watersheds

using a digital medium of their choice. They then team up with another group and perform their announcements to practice speaking and listening, then record their announcements. Students watch peer PSAs and provide feedback on the content, solution, and press. For example, in the lesson Ocean Systems and Human Activity (7.11B), in the activity Human Dependence and Impacts on Coral Reefs, half of the students read and considered the following USGS article on destroying coral reefs due to human activities. The other students read the EPA article excerpt on human dependence on coral reefs. Student pairs who have read different articles discuss the different human activities mentioned in the reading and consider what other human activities they can think of that could either be harming or helping the coral reefs.

Summit K12 Dynamic Science Grade 7

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 to phenomena and solutions to problems using evidence/guidance acquired from learning experiences.

Evidence includes but is not limited to:

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

- The materials provide opportunities for students to develop how to use evidence to support their claims. Each unit begins with a phenomenon. Students will build their understanding of the phenomenon throughout the unit, using the Phenomenon Sensemaking Guide as a graphic organizer to document their learning. The lessons and investigations build in depth and complexity and include SEPs and RTCs as students progress in sensemaking and culminate in a final evidence-based explanation of the phenomenon with an accompanying model. In the Teacher Resources is a document called Science Writing/CER; this 20-page document explains the use of the CER writing prompts and grading rubrics with students. It also gives several different examples. Students are given a situation or asked to use the e-book. Then, they are given a prompt or question. Then, they form their claim, cite evidence, and share their reasoning.
- Middle school students gain extensive experience writing evidence-based explanations for their hypotheses and claims with CER opportunities. The Sensemaking Guide prompts students to collect evidence, collaborate, and revise their model.
- The materials specifically prompt students to use evidence when supporting their hypotheses and claims. For example, the Thermal Energy Transfer PhET Simulation student document asks

them to explain what they saw during a specific piece of the simulation. It says, "Explain your observations about the movement of thermal energy within the system, as described in question 6. Be sure to write a complete and well-structured paragraph, including your point, evidence from the investigation to support your point and your explanation. Use the following Core Vocabulary to help you: equilibrium, system, temperature, thermal energy, and thermal equilibrium." The materials allow students sufficient opportunities to write a hypothesis and then support it with evidence.

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

- Materials include embedded opportunities to develop and utilize scientific vocabulary in context. The materials present scientific language using multiple representations. For example, a Vocabulary Mastery section is located on the course homepage. The Vocabulary Mastery lessons match the content lessons for ease of use. Each lesson contains a visual representation and an interactive feature where students choose a correct word to help define the vocabulary term. For example, in 7.6C C Physical and Chemical Changes in Matter, an image of one substance in an ampoule poured into a test tube with another substance is presented above the sentence, "___is a process where one or more substances are altered into one or more new or different substances." Students choose which word (physical property, physical change, chemical symbol, chemical change) best completes the description.
- For example, all TEKS lesson videos include visual content vocabulary introduction and review. In lesson 7.7A, Calculating Average Speed, students see the lesson's vocabulary in action during the video. The vocabulary terms: *average speed, distance,* and *speed* are included in the lesson components as students participate in an engagement activity and a discussion to establish relevancy. Students also develop and use content vocabulary to investigate the distance, speed, and average speed of toy cars.
- The materials include opportunities to develop and use vocabulary after having a concrete or firsthand experience to which they can contextualize new terms. For example, in the Lesson Guide for 7.9B, Gravity and Our Solar System, students first look at images of people on rollercoasters and go through a series of questions to get them thinking about gravity. Then, they visit a NASA website that simulates the motion of the planets in "Our Solar System." Then, they read an article that uses critical vocabulary and ask the students to use it in guided questions.
- The materials present scientific vocabulary using multiple representations. For each TEKS, there are e-books that both define the vocabulary words and give examples in context. There are videos over each concept incorporating key vocabulary terms and study guides that go over core vocabulary. Additionally, an e-poster stresses essential language and Vocabulary Mastery activities for all grade-level TEKS and supports TEKS from previous grades.
- Materials include embedded opportunities to develop and utilize scientific vocabulary in context. For example, the Science Literacy section has a Vocabulary Mastery section that breaks down into categories. There is a lesson on each TEK within the classes, including scaffolded TEKS from previous years. The vocabulary lesson on the Flow of Energy in Trophic Levels (7.12A) includes a picture with a sentence description of a word that the student must select from a drop-down menu. They can click to turn over the flashcard to see the definition (10% rule, autotroph, carnivore, consumer, decomposer, ecosystem, energy flow, energy pyramid, food chain, food web, herbivore, heterotroph, omnivore, organism, photosynthesis, primary consumer, producers, secondary consumer, tertiary consumer, trophic level). For example, 15 e-books in grade 7 include graphics and words to describe vocabulary. At the beginning of each e-

book, there are vocabulary boosters (in English and Spanish) with a picture, a word, and a definition that students can read aloud. The e-books contain drop-down questions to help develop vocabulary within the context. There are also open-ended question types that include word banks.

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 within stages of the learning cycle. For example, the Lesson Guide for 7.12B, Energy and the Sustainability of Ecosystems, has a research project called What is a Biodome? In this project, students will research a biodome, create a model, and write a description explaining the energy flow through the biodome and how matter cycles. They will then complete a gallery walk to view other students' biomes. Lastly, they will evaluate the biodomes and, identify efficiencies, and offer solutions for the inefficiencies.
- The materials provide opportunities for students to develop how to engage in argumentation and discourse. The materials include a set of lessons on Science and Engineering Practices. There is a lesson on the Use of Evidence to Communicate Findings. The Skills Companion for this lesson explains argumentation, gives an example of how it works, and then asks the students to practice with two scenarios. Key elements of scientific arguments using evidence are listed, including a claim, evidence, reasoning, counter-argument, and conclusion. The presentation also includes activity examples to use with students, such as collaborating with classmates to find a solution to minimize the browning of sliced apples or determining the best use of a given set of materials in keeping a beverage warm. An accompanying vocabulary activity also reviews the key concepts involved in argumentation.
- In the lesson Physical and Chemical Changes in Matter (7.6C) in the activity Video Demonstration: Physical and Chemical Changes in Baking, students observe while viewing images of baking and complete a whole group and think-pair-share discussion. In the activity Physical and Chemical Properties Group Inquiry, students describe the trial and explain how the results produce evidence of the desired change. In the conclusion section, students respond to each question in complete sentences using their understanding of the key concepts, where they have to support their response with evidence from the lab.
- Materials integrate argumentation and discourse throughout to support students' development of content knowledge and skills as appropriate for the concepts and grade level. For example, in the lesson Ocean Systems and Human Activity (7.11B), in the activity Our Oceans Deliver, student groups use a rubric to create a product, such as a brochure, poster, video ad, animation, or slideshow, featuring an example of how humans rely on oceans for each of the following: food, tourism, entertainment, transportation, work, and oxygen. The six examples should include a title, an image, and a brief explanation of how humans rely on the ocean for that resource. In the activity, Human Dependence and Impacts on Coral Reefs, student pairs read different articles, discuss the various human activities mentioned in the reading, and consider what other human activities could be harming or helping the coral reefs. Groups consider ways humans could work to reduce the impacts of harmful human activities on coral reefs.

Summit K12 Dynamic Science Grade 7

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

- The materials provide opportunities for students to justify explanations of phenomena and solutions to problems using written and verbal arguments to problems using evidence acquired from learning experiences. Each unit begins with a phenomenon. Students will build their understanding of the phenomenon throughout the unit, using the Phenomenon Sensemaking Guide as a graphic organizer to document their learning. The lessons and investigations build in depth and complexity and include SEPs and RTCs as students progress in sensemaking and culminate in a final evidence-based explanation of the phenomenon with an accompanying model. For example, in Lesson Guide 7.6A, Elements, and Compounds, there is an activity called Compare and Contrast using Graphic Organizers in the Apply and Extend section. In this activity, students "create a graphic organizer to organize their answers. Students will then regroup and share their answers and graphic organizers. Student pairs will listen, formulate discussion questions, and then switch roles."
- Students are given multiple opportunities to create arguments to explain phenomena studied in class. The teacher and student resources provide guiding criteria for developing a scientific argument, such as rubrics or checklists. The document explains the CER model, including a graphic organizer and sample scoring rubric. Teachers and students may use this resource as appropriate. The CER documentation in the Teacher's Guide includes information about the CER model. This document explains the CER model, including a graphic organizer and sample scoring rubric.
- Materials prompt students to use evidence to support their hypotheses and claims. In the Teaching with Phenomena and 8.7A Phenomenon Sensemaking Guide, each unit begins with a phenomenon. Students will build their understanding of the phenomenon throughout the unit, using the Phenomenon Sensemaking Guide as a graphic organizer to document their learning. The lessons and investigations build in depth and complexity and include SEPs and RTCs as students progress in sensemaking and culminate in a final evidence-based explanation of the phenomenon with an accompanying model. For example, the Science and Engineering Practices section has a lesson called Use Evidence to Communicate Findings. The lesson includes a Skills Companion PowerPoint that goes through things such as the CER method, which is the same for grades 6-8. The activity at the end of the PowerPoint lesson is also the same for all grade levels. The lesson also includes a Vocabulary section where students use a drop-down to select the word to complete the sentence; then, students can flip the card to review the word's definition. Grade 6 reviews five words (*evidence, collaboratively, idea, principle, argumentation*), while grade 8 includes eight (*theory, model,* and *empirical evidence*). There is guidance for the teacher to explain how to construct verbal/written arguments. For example, in the lesson, Watersheds and Human Activity (7.11A), in the activity Water, Water, Everywhere, and not a Drop to Drink, students design a device or technique to prevent contamination. Then, students "evaluate the models' usefulness, cost-effectiveness, size, scale, properties, materials, etc. They must choose which model or technique would be the better alternative, supported with evidence.

Summit K12 Dynamic Science Grade 7

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

Evidence includes but is not limited to:

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

- The materials provide some support for teachers to deepen student thinking through questioning by including the Summit K12 Questioning Guide. Guidance is given to ask questions to clarify thoughts, hold class discussions, or ask questions to dig deeper during an activity, such as during a lab. While this support is helpful, the guidance is in isolation. Each unit begins with a phenomenon with the following documents: Teaching with Phenomena, Phenomenon Sensemaking Guide, and Phenomenon Teacher Guide. Students work through the guide as they build understanding through investigations, readings, and discussions. While these guides are helpful, they provide little teacher guidance for responses outside the norm or additional questioning to help students deepen their understanding.
- The materials sometimes provide teachers with possible student responses to questions and tasks. For example, in lesson 7.8C, Temperature and Kinetic Energy, students explain the relationship between temperature and the kinetic energy of the particles within a substance. In the lesson opener, students place one hand in cold water and the other in warm water. After 30 seconds, students place both hands in the room-temperature water and describe its temperature. Students may have a hard time answering because the room-temperature water will feel cool to the hand in the warm water and feel warm to the hand in the cool water. The

materials provide teachers with explanations that describing temperatures with descriptive words is not accurate or reliable. Measuring temperature with a thermometer is accurate, reliable, and reproducible. Materials provide teachers with question prompts to ask students, along with possible responses: “Have you ever seen water boiling on a stove? What happens to water when it starts getting warmer?” (Bubbles form. Bubbles start floating to the water’s surface.) “What happens when the water gets very hot?” (The bubbles move fast, and some of the water turns into gas. Particles start moving fast and go up into the air.) While these questions guide initial thinking, they do little to deepen student understanding.

- The materials sometimes provide teacher responses to possible students’ responses. For example, in lesson 7.9C, Characteristics that Enable Life on Earth, students analyze the characteristics of Earth that allow life to exist, such as the proximity of the Sun, the presence of water, and the atmosphere's composition. In the lesson opener, students view an image from NASA, and the teacher explains that about 4,000 previously unknown species of bacteria are living where the image took place. It is a place humans have never set foot in and had the opportunity to view for the first time in 2012. Students take a moment to consider where they think this place is. Some possible responses include the Moon, space, or the bottom of the ocean. The teacher responds that the image is from Lake Whillans, a lake under the ice in Antarctica, sealed off from air for millions of years. Students consider the picture’s origins, then think about the requirements for life to exist on Earth: what are some things all forms of life need, and does every kind of life need slightly different things? The second question is limited to a yes or no response which does little to deepen student thinking on the topic.
- The materials provide teachers with some possible student responses to questions and tasks. For example, the teacher page for The Well and the Lake lab asks questions for teachers during steps 4 and 5. Directly after the question, it states the correct answer to each question in parentheses. An example question and answer pair is, "What do you think will happen if we pump water out of the well? (the water level in the well will go down)." However, only fully correct responses are given. No guidance is given to teachers for incorrect responses or other anticipated responses.
- Materials provide some teacher guidance on anticipating student responses. For example, materials provide Study Guides for each TEK, including answer keys to provide possible student responses. However, they do not provide possible wrong answers or partial answers. In the lesson Characteristics of Kingdoms (7.14B), the teacher's guide provides multiple opportunities for questions in Engage and other activities. An example is provided for the Kingdom Research activity so teachers know what to expect and look for. The example for the Kingdoms Wanted Poster includes a detailed rubric of guidelines for full and partial credit. However, the questioning does not provide guidance to anticipate responses when students struggle.

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

- The materials provide limited embedded support for the teacher in introducing and scaffolding students’ development of scientific vocabulary. The Concept Mastery section on the program’s home page requires students to achieve vocabulary mastery. The first teach-lesson sequence requires students to get 80% or better on the vocabulary before completing Formative Assessment 2. The assessments include embedded supports such as a context sentence and image with audio support, a Spanish scaffold, the part of speech, and a grade-appropriate definition. If the student does not master the vocabulary on the first attempt, they can make a second attempt. Images dynamically change on the second attempt to prevent memorization

and focus on learning. While this could be a valuable intervention tool for vocabulary support, it does little to support the use of scientific vocabulary in context.

- The materials provide some supports but limited teacher guidance to support student vocabulary development. In addition to an e-poster, each TEKS lesson includes a detailed TEKS video explaining and defining each vocabulary word. These vocabulary words are reviewed at the end of each video to reinforce these scientific concepts. For example, in lesson 7.6B, Chemical Formulas, the content vocabulary consists of: atom, chemical formula, chemical symbol, molecule, and represents subscript by simple, clear illustrations or a visual representation. While these videos are helpful, there is limited teacher guidance for how to scaffold and support vocabulary development in the context of the lesson if students are unable to grasp the word meanings from the ePoster or video.
- The materials provide some vocabulary support, however, it is not in context. The Science Literacy-Vocabulary Mastery section includes all content and instructional vocabulary. Students may access the vocabulary mastery section at any time to practice and master their vocabulary. Teachers can view the number of attempts to reach mastery in the teacher reports. This section is outside the context of the lesson experience, so students leave the instructional flow to address vocabulary and then later come back to the lesson. This is an example of vocabulary support being provided out of context.
- The materials provide limited embedded support for the teacher in how to introduce and scaffold students' development of scientific vocabulary. At the beginning of a teacher Lesson Guide is a list of Core Vocabulary students will work with during the lessons. For example, for 7.9C, the core vocabulary consists of: *atmosphere, Goldilocks zone, habitable zone, proximity,* and *photosynthesis*. Later, in the Teach and Discuss section, definitions, explanations, and examples for these terms are given to the teacher. While these lists and explanations are beneficial, it provides minimal teacher guidance for how to scaffold and support students' vocabulary development within the context of the lesson.
- The materials provide limited guidance to the teacher on how to support students' use of scientific vocabulary in context. The materials provide limited guidance or support for teachers with any methods for noting targeted opportunities within activities for students to use scientific vocabulary in context, such as alerts, symbols, or sidebar supports.
- Materials include some teacher guidance on how to scaffold and support students' development and use of scientific vocabulary. For example, the Lesson Guide provided for each TEK provides key concepts with bolded vocabulary. They provide a sequence that prioritizes words and identifies misconceptions. A key concept PowerPoint is sometimes provided. In the lesson Elements and Compounds (7.6A), the teacher's Lesson Guide provides scaffolding opportunities to use scientific vocabulary. In Key Concepts, the teacher differentiates between elements and atoms and then performs a teacher demonstration. Then, more key concepts and vocabulary are added, followed by activities to support the key ideas and vocabulary. Students have an opportunity to demonstrate their understanding of key concepts and vocabulary using a graphic organizer. There is little guidance on how teachers can support vocabulary development during the teacher demonstrations or how the graphic organizer could be embedded in the context of the lesson rather than a separate activity.

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 supports to prepare for student discourse. For example, in the program's supplemental resources, Introduction to Science slides are available for teachers to

use with students. The Scientific Conversations section's learning objectives are: to communicate scientific ideas clearly and express thoughts effectively. The following slide goes further into the scientific conversation by listing the following components: making observations, asking questions, and communicating with others by sharing, recording, responding, and drawing conclusions. Another slide in this set discusses the importance of sharing information in science and mentions, “Science is never based on the ideas or experimentation of a single person. Scientists work together and must be able to communicate clearly and respectfully.” The slide gives tips for sharing, such as: being brief, transparent, providing an example, and speaking clearly. The materials provide general question stems for supporting student discourse and using evidence in constructing written and verbal claims. The question sentence stems include: “Can you explain to me__? What do you think__? What evidence do you have__? Are you saying__? I agree with__ because__. I respectfully disagree with__ because__.”

- The materials provide guidance that teachers can use to give feedback to students while engaging in discourse. Materials include guiding questions for teacher use during the grip portion of lesson 7.10A, Changes in Earth Over Time. Students explore how Earth’s crust pushes and buckles under pressure by applying pressure to the shells of hard-boiled eggs. Then, students create a KWL chart about the Earth’s surface. As students complete their KWL charts, the teacher circulates among them, asking questions to prompt their thinking and provide possible responses. The questions include: “Is Earth’s crust one large solid surface? (No) Do Earth’s plates stay in one place? (No, they are in continuous motion.) What happens when tectonic plates come together? (Plates collide or slide under another plate.)” The teacher then asks deeper questions where students provide the evidence for their claim. These questions are: “What happens to the shell when one part of the shell collides with another part? What happens to other parts of the shell after a collision has occurred? How do you think this reflects how giant moving plates change Earth’s surface?”
- The materials provide teacher support to prepare for student discourse. Inside the Introduction to Science resource is a PowerPoint called Scientific Conversations. This PowerPoint explains how scientists communicate. For example, gives tips for making observations, such as being specific and precise, page 6 provides sentence stems for asking questions, and page 8 offers tips for verbally sharing ideas. Teachers should note that this PowerPoint is the same for all three grades. The materials provide guidance that teachers can use to provide feedback to students while engaged in discourse.
- Materials provide teacher guidance on preparing for student discourse and supporting students in using evidence to construct written and verbal claims. For example, the Science and Engineering Practices section has a PowerPoint called Use Evidence to Communicate Findings, which gives an overview. In the lesson, Watersheds and Human Activity (7.11A), in the activity Water, Water, Everywhere, and not a Drop to Drink, students design a device or technique to prevent contamination. Then, students evaluate the models in terms of usefulness, cost-effectiveness, size, scale, properties, materials, etc. They must choose which model or technique would be the better alternative, supported with evidence.

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

- Materials support and guide teachers in facilitating the sharing of students' thinking and finding solutions. The materials provide teacher support and guidance to engage students' thinking in various modes of communication throughout the year. Materials provide examples of exemplars

of student-written responses. Teachers can use the exemplars as a guide to help them facilitate students showing their thinking in a written form. In lesson 7.6E Dissolution, students complete a Think, Pair, Share analyzing various pictures, which allows students to identify dissolution rates. The teacher leads a discussion to gather students' thoughts after each image. The students use the teacher's exemplar answers and their analysis of the pictures to make a connection to dissolution rates. Then, they join an assigned partner and share their analysis.

- The materials provide teacher support for facilitating the sharing of students' finding solutions. Materials provide feedback tips and examples teachers can use to support students throughout the learning cycle. In lesson 7.13D, Natural and Artificial Selection, students investigate how natural selection affects a population of rabbits using the Natural Selection PhET Simulation Investigation. The Teacher's Guide for this investigation shows several examples of good responses to questions asked of students. Brief teacher feedback guidance directs teachers to facilitate and guide students as needed.
- The materials provide exemplars of students' written responses to assist the teacher. Numerous labs and activities include Teacher's Guides to activities. The Teacher's Guides give correct student answers to questions, discussion prompts, diagrams, and summaries. For example, in the Teacher's Guide for Speed or Velocity in 7.7B, students are asked to write a summary stating the difference between Speed and velocity. The guide provides a sample answer: "Speed shows how fast an object travels by measuring the total distance and dividing it by the total time, regardless of directional changes. Velocity describes an object's Speed in a specific direction along a straight line. When the object changes direction, students must calculate a new velocity." The materials provide exemplars of students' written responses to assist the teacher. Numerous labs and activities include Teacher's Guides to activities. The Teacher's Guides give correct student answers to questions, discussion prompts, diagrams, and summaries. For example, in the Teacher's Guide for Speed or Velocity in 7.7B, students are asked to write a summary stating the difference between speed and velocity. The guide provides a sample answer: "Speed shows how fast an object travels by measuring the total distance and dividing it by the total time, regardless of directional changes. Velocity describes an object's Speed in a specific direction along a straight line. When the object changes direction, students must calculate a new velocity."
- The materials provide exemplars of students' verbal responses to assist the teacher. For example, during the Engage activity for 7.9B, the teacher is prompted to ask the students a series of verbal questions—the correct or expected student responses demonstrated in parentheses following the questions for students. One question is, "What do you notice about the solar system?" Then it says, "(Answers may include: the Sun is the center of our solar system, elliptical paths, and that there are objects other than planets in the simulation.)."

Summit K12 Dynamic Science Grade 7

Indicator 6.1

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- In the 5E Model slide presentation located within the Teacher's Guide on slide 59, the materials state that students are evaluated in a variety of formats as follows: a Formative Assessment by TEKS, Vocabulary Mastery Digital Flashcard Step, Study Guides - Print and Interactive, Science Literacy Assessments and Self Assessments, Assessment Bank and Lab Investigation write-ups. Materials include formative assessments to measure student learning. During a unit of study, students are assigned online practice. Students begin with Formative Assessment 1 and then watch a TEKS video lesson before moving on to the TEKS vocabulary section; the materials provide multiple attempts to achieve at least 80%. This score is required to unlock the second formative assessment. Formative Assessment 2 is an entirely different set of items from Formative Assessment 1. Teachers can choose to assign lower grade level vertically aligned scaffolds as needed to differentiate instruction.
- The materials include formative assessments to measure student learning and determine the next steps for instruction. Inside the Concept Mastery module are several formative assessments for each grade level TEKS and supporting TEKS from lower grades. According to the Concept Mastery explanation page in the Teacher Resources, students are assigned Formative Assessment 1 once learning has begun on a particular TEKS. Further into the learning process,

students watch a TEKS Video and take a Vocabulary Assessment. Scoring at least 80% on the Vocabulary Assessment unlocks Formative Assessment 2. Materials provide students with multiple attempts to reach the 80% minimum score required. Formative Assessment 2 contains a different set of questions than Formative Assessment 1.

- The Teacher Resources contain an eight-page document about the Assessment Bank. This document shows how teachers can create their custom assessments using a variety of question types found in the Assessment Bank. Teachers access the Assessment Bank by going to the Concept Mastery module and clicking the Assessment Bank icon. Materials include formal and informal assessment opportunities to assess student learning in various formats. For example, in Concept Mastery, there are Formative Assessment 1, Vocabulary, and Formative Assessment 2. Teachers may reference these assessments in the Evaluate section of the 5E lesson model. These assessments could be used as diagnostic, formative, or summative; however, they are called “Formative” in the material. Materials include assessments that include formal and informal opportunities to assess student learning in various formats. For example, with the 5E model lesson guides, numerous informal and formal opportunities exist to evaluate students. Assessment opportunities include but are not limited to hands-on investigations, virtual simulations, science literacy guided readings, and study guides.
- Within the materials, Summit provides examples across grade levels to enhance student understanding. The summative assessment provided will assess student knowledge and assist teachers in evaluating student mastery of scientific concepts.

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

- As the TEKS outlines, the materials assess all student expectations by grade level. The materials contain a cohesive scope and sequence that maps out and outlines what teachers will teach in a specific course or grade level. For example, each TEK outlines the lesson components of the 5E Model: Engage and establish Relevance, Key Concepts, Apply/ Extend, and Evaluate. Within each component are the relevant activities of that component and the approximate time each activity will take to complete.
- The materials indicate which student expectations are assessed. For example, activities are listed by TEK for study guides, lesson guides, and formative assessments.Lessons and their related activities and assessments are available for each TEK. These lessons contain information within four reporting categories: Matter and Energy, Force, Motion and Energy, Earth and Space, and Organisms and Environments. Teachers may assess the student expectations within the introduction of each lesson as well as in the scope and sequence of the materials.
- The materials assess all student expectations, as outlined by the TEKS, by grade level. The teacher resources contain a cohesive scope and sequence that maps out and outlines what instruction teachers will deliver in the 6th grade. The scope and sequence are organized by reporting category and TEKS to ensure all TEKS are covered over the year. The correlating teacher lesson guides are written for one specific TEKS at a time and include an Evaluate section that consists of the four components used to assess student mastery of the TEKS covered in that unit - Formative Assessment 1, TEKS Video, Vocabulary Review, and Formative Assessment 2.
- The materials indicate which student expectations are assessed. The Concept Mastery module breaks down by reporting category and TEKS. There are multiple assessments for each TEK, both on grade level and from supporting grade levels. For example, teacher lesson guides are grouped by reporting category and then by TEK. Each TEK has a lesson guide following the 5E model to teach and assess student knowledge.

Summit K12 Dynamic Science Grade 7

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

- The materials include assessments requiring students to integrate scientific knowledge and science and engineering practices with recurrent themes appropriate to the student's assessment expectation. For example, in lesson 7.8A, students understand how thermal energy transfers by conduction through investigation and evaluation. In the “Melting Chocolate Lab,” students create a foil tray supported by two tripods, one on each end. Students then place chocolate chips in the tray and position the middle over a candle. As the teacher lights the candle, students predict what will happen to the three chocolate chips. Students consider the conductivity of the foil in making their predictions. Students also consider other forms of thermal energy; this lab contains, such as the radiant heat from the candle’s flame.
- Another example from lesson 7.13A student pairs research information on their assigned body system, including function, organs, and pictures or diagrams. Groups use a jigsaw research form to help guide their research. Students create a poster or digital presentation of their body system information for the jigsaw/gallery walk activity. For the jigsaw portion of the activity, students gallery walk to five presentations and complete the jigsaw/gallery walk information sheet. Students return to their desks and share their findings with their partners to complete the rest of their information sheets.
- The materials include assessments that integrate scientific concepts and science and engineering practices. For example, the Apply and Extend section of the lesson guide for 7.8B consists of an activity called Bread-Making Hot Mess. The explanation for this activity states, "Students will use their knowledge of thermal equilibrium and thermal energy transfer into and out of systems to help a baker understand what went wrong with her bread dough. Students will choose how to present their response to the case study from a choice board of options." The materials indicate that teachers may utilize SEPS 7.3A and B in this activity.
- Materials include assessments that integrate scientific concepts and science and engineering practices (SEPs). For example, in the lesson Functions of the Human Organism (TEKS 7.13A) in the Teach and Discuss section, there is an activity titled Building a Functional Model of an Arm. Students use school supplies and everyday household items to build a functioning arm in the activity. The constructed model will have an arm, wrist, and fingers that can be bent/extended. Students then participate in a challenging activity to grasp objects with their models. The lesson guide identifies the SEPs assessed as 7.1A, 7.1B, 7.1C, 7.1D, 7.1E, 7.1G, 7.2A, 7.2D, 7.3A, and7.3B.

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

- Materials include assessments that require students to apply knowledge and skills to a new phenomenon or problem. For example, in lesson 7.6D, students observe and taste three different concentrations of drink mix in water: diluted, regular, and concentrated. They observe each drink’s properties, such as color and smell, before tasting, taste it, then write observations about the flavor and give it a rating. Students create a table in their science notebooks to record their data. The favorite drink recipe from each student is tallied to find the class favorite. The class discusses the following questions: “What properties did the three recipes have in common? How were they different? What do you think caused the difference in flavor from recipe to recipe? What properties did your favorite recipe have? How might we improve the recipe you rated lowest? How much powder is too much, to where the flavor becomes

overpowering? How can we enhance the taste of a drink that's too strong? Is it possible to remove the powder from the drink?" Students design their drink-mix recipes.

- Another example is in lesson 7.12A, Flow of Energy in Trophic Levels. Students construct an energy pyramid to show energy flow through an ecosystem. They will calculate the energy transformation from one trophic level to the next trophic level. Students will discuss their observations and engage in a debate regarding whether or not vegans can get enough energy from food.
- The materials include assessments that require students to apply knowledge and skills to novel contexts. For example, the Engage activity for 7.9C over Characteristics that Enable Life on Earth has students looking at a picture of bacteria taken in a place humans have never set foot in and wasn't discovered until 2012. Then, students predict the location of the photograph. It was from Lake Whillans under Antarctica. Finally, students answer a series of questions considering what is necessary for life to exist. Later, the Apply and Extend section contains an activity called "Artemis Missions Travel Brochure." In this activity, students complete additional research on the Artemis Missions and create a travel brochure proving that it is safe to colonize the Moon.
- The materials include assessments that require students to apply knowledge and skills to novel contexts. The Concept Mastery module contains two formative assessments that each have ten questions. The questions need students to use their knowledge and skills in contexts different from the ones used in the regular lesson materials. Additionally, the question contexts for Formative Assessment 1 are different from those for Formative Assessment 2, providing a wide variety of new ways for students to apply their knowledge and skills.

Summit K12 Dynamic Science Grade 7

Indicator 6.2

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

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

Partial Meets | Score 1/2

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

Materials include information or resources that provide guidance for evaluating student responses. Materials support teachers' analysis of assessment data with guidance and direction to respond to individual students' needs, in all areas of science, based on measures of student progress appropriate for the developmental level. Assessment tools yield relevant information for teachers to use when planning instruction, intervention, and extension. Materials provide some variety of resources without teacher guidance on how to leverage different activities to respond to student data.

Evidence includes but is not limited to:

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

- Materials include information and/or resources that provide guidance for evaluating student responses. For example, answer keys and rubrics are provided in the 7.9B Moon Park Rubric. The Teacher's Guide includes a link to a document for Science Writing/CER. Inside this document, on page 12, it shows a scoring rubric for a Short Constructed Response. Formative assessments are available for each lesson. Materials include resources for evaluating student responses. Student activities only include answer documents that give the correct answers. Assignments contain a rubric to guide the teacher in evaluating a student's response. For example, the Apply and Extend section of 7.8C on Temperature and Kinetic Energy contains the "Make a Model" activity. Page 2 of the Teacher's Guide includes a rubric for scoring the students' models. The scoring options are Masters, Meets, and Almost. Materials include information and/or resources that provide guidance for evaluating student responses. For example, in the lesson Gravity and our Solar System (TEKS 7.9B), there is an activity titled Moon Park. Students imagine going to an amusement park or a carnival on the Moon. Students draw a comic strip or create a slideshow showing which rides would be more fun, about the same, or less fun if they were on the Moon. A detailed teacher rubric gives students various points for each ride, with clarifications to help the teacher determine the number of points earned.

- Materials include information and/or resources that provide guidance for evaluating student responses. For example, the lesson Gravity and our Solar System (TEKS 7.9B) has an activity titled Writing in Science. Students write a description of how gravity governs motion within the solar system using core vocabulary. Students may include diagrams to help illustrate the key points.

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

- Materials provide guidance documents and resources to support teachers' analysis of assessment data. Examples found in the materials include a data analysis overview section that supports the teacher's analysis of assessment data, videos or recorded webinars that explain scoring and analysis in detail, suggestions for how to examine patterns or trends in the data that help teachers better understand student performance or a supplementary Q&A guidance document on data-driven instruction in science. Materials may include assessment tools that yield data teachers can quickly analyze and interpret. Teachers may access these tools in the "Reports and Dashboard" section of the Teacher's Guide. The materials provide guidance documents and resources to support the teacher's analysis of assessment data. The materials include two formative assessments and vocabulary assessments. The Teacher's Guide has a space titled "Reports and Dashboards;" this should be linked to a resource for teachers to assist teachers with creating reports and using dashboards.
- The materials provide assessment tools that result in data reports that teachers can use to track student progress. Teachers can generate reports for Concept Boosters and Vocabulary Boosters. These reports show the score the student earned on their assessments. Each assessment covers only one TEKS, which allows the teacher to see how a student is doing on each specific TEKS. The 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. This report can be seen individually or by class. A teacher can download the report into an Excel spreadsheet that they can manipulate with colors or groupings.
- Additionally, materials include an "Assessment Bank" document that provides support to teachers' analysis of assessment data to respond to students' individual needs. For example, the "Assessment Bank" shows a screenshot of a Concept Mastery assessment screen, showing that student scores are color-coded to show levels of mastery by skill (TEKS). A student that "masters" the assessment would have a green score, "meets" would have a blue score, and "approaches" would have a purple score, making data viewing easier for the teacher. The "Assessment Bank" document also provides information about how teachers can respond to the individual needs of their students by creating custom "assessments on demand using content and items students have never seen before."
- Materials include assessment tools that yield data teachers can easily analyze and interpret through "Personalized Learning" plans in the "K12 Dynamic Science Design" under the Differentiation and Acceleration section. The "Personalized Learning" plans consider vertically aligned scaffolded content 1-2 grade levels below and create a comprehensive on grade level course by embedding the appropriate lower grade scaffolds and extension activities to support differentiation and acceleration.

Summit K12 Dynamic Science Grade 7

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

- Materials provide teachers with the ability to use assessment reports to analyze data. The color coding in the reports allows teachers to easily group students based on need. Based on this assessment data and best teaching practices, the teacher can group students within the LMS to reflect the teacher's in-class grouping. This allows teachers to differentiate student learning, Materials may be accessed in the “Reports and Dashboard” section of the Teacher's Guide. Teachers can generate reports on students' Concept Boosters and Vocabulary Boosters scores.
- The materials provide ways to use the information gathered from the assessment tools to help teachers when planning differentiated instruction. Formative assessments and vocabulary assessments are available for supporting standards from lower grades. The reports generated allow teachers to see how students scored on these assessments. The materials provide lesson guides for teachers to use with students who did not show mastery of the lower grade level TEKS.
- Assessment tools yield information for teachers to use when planning instruction, intervention, and extension. For example, there are reports on Concept and Vocabulary Mastery. Within the lesson guides for each TEKS, there is an Apply & Extend section that teachers could allow high achievers to use. Teachers may utilize scaffolded TEKS from previous grade levels for student intervention.
- Assessment tools yield 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.

- Materials provide student resources for teachers to respond to performance data. The program includes scaffolded lessons embedded with the relevant on-level TEKS. The materials include study guides, videos, eBooks, vocabulary practices, etc. These materials are available for all TEKS on the current grade level and for lower grade supporting TEKS. Students are assigned these materials by the teacher as needed. For example, in reporting category four, Organisms and Environments, teachers can use a 5th-grade level lesson, two 6th-grade level lessons, and three 7th-grade level lessons to help fill in any gaps students may have with the 8th-grade content to prepare them for the 8th grade Science STAAR.
- Materials do not provide teacher guidance for responding to student data. For example, no teacher guidance documents explain how teachers can use the data from a diagnostic assessment to plan small-group instruction to address gaps in learning. Also not found are supplemental teacher guidance documents to support teachers in developing action plans. While there are activities in the program to assign students when they have difficulty answering assessment questions, there is no guidance for the teacher on when students should complete them.
- The materials do not provide teacher guidance for responding to student data. For example, they do not provide guidance documents that explain how to use data to plan for small group instruction to address learning gaps or provide tables, markers, or icons to specify which activities teachers should assign to students who did not perform as expected on assessments.
- Materials provide a variety of resources and some teacher guidance on how to leverage different activities to respond to student data. For example, within the lesson guides for each

TEKS, there are a variety of activities teachers can use with students. The lesson guide for Components of Our Solar System (TEKS 7.9A) has sixteen activities before you get to the evaluation step, including labs, study guides, gallery walks, card sorting, and career investigation.

- Materials provide a variety of resources and some teacher guidance on how to leverage different activities to respond to student data. For example, there is no teacher guidance for responding to data. There are no suggestions for grouping, action plans for filling in the gaps, or suggested activities for when students are having difficulty.

Summit K12 Dynamic Science Grade 7

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

Partial Meets | Score 1/2

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

Assessments contain scientifically accurate items, avoid bias, and are free from errors. Assessment tools use clear pictures and graphics that are developmentally appropriate. Materials provide some 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.

- Assessments contain items for the grade level that are scientifically accurate and error-free. For example, Formative Assessment 2 for 7.6A, Formative Assessment Teacher's Guide for 7.9C, and Formative Assessment 2 for 7.13A all include ten questions each that are scientifically accurate and error-free. Assessments contain items for the grade level that are scientifically accurate. Formative Assessments 1 and 2 include items that align with the objectives taught and present grade-level content and concepts for each unit. For example, the third unit in the Matter and Energy module is Physical and Chemical Changes in Matter, 7.6C. The assessment questions in Formative Assessment 2 cover physical and chemical changes in matter and closely related items, such as types of evidence and vocabulary terms connected to both types of change. For example, in question 2 in Formative Assessment 1, four data tables contain the same list of observations and X's to indicate if that observation indicates a physical or chemical change. Test takers are to select the data table that is correctly marked. Dissolving and boiling are vocabulary terms that indicate physical changes, and baking and rusting indicate chemical changes. These are marked correctly in the right answer, B.
- Assessments contain scientifically accurate items, avoid bias, and are error-free. For example, there are two formative assessments for each TEKS. Formative Assessment Teacher's Guide for 7.11A is aligned to the content and uses various question types (multi-select, drag-and-drop, and multiple choice. The assessment is scientifically accurate, avoids bias, and is error-free. All new STAAR-aligned question types are used throughout the assessments.

Summit K12 Dynamic Science Grade 7

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

- Assessment tools use clear pictures and graphics. An example includes an illustration of a human skeleton. The illustration has only 12 major bTeacher's Guides labeled to ensure students focus on the function of the skeletal system as a whole and not be distracted or overwhelmed by every bTeacher's Guide labeled.
- Assessments contain pictures and graphics that are developmentally appropriate. For example, an assessment item on physical and chemical changes in matter includes illustrations of a rotting avocado, a campfire, a person cutting paper, two beakers of lemon juice, and a Teacher's Guide with baking soda added. The illustrations do not contain unnecessary clutter and are realistically drawn so students can focus on science when determining the best answer.
- Assessments use clear pictures and graphics. For example, question 5 in Formative Assessment 2 for 7.9B contains a picture of a satellite above the Earth. The picture is in color, making the metallic satellite easy to find. The photograph does not contain other objects, and the satellite is in the center of the image, making the focus of the image obvious to the test taker.
- Assessments contain pictures and graphics that are developmentally appropriate. For example, question 7 in Formative Assessment 1 for 7.13C contains graphics representing asexual and sexual reproduction. The graphics for asexual reproduction are of a hydra budding, a single planarian becoming three planarians, and meiosis. The image for sexual reproduction is of a family tree where black and white circles and squares represent family members and their offspring. Though the topic is reproduction methods, the images are appropriate for a 7th grader.
- Assessment tools use clear pictures and graphics that are developmentally appropriate. For example, Formative Assessment 1 for 7.13A (Functions of Human Body Systems) used developmentally appropriate pictures and graphics that do not provide any unnecessary details that would confuse or be too much for a 7th grader.
- Assessment tools use clear pictures and graphics that are developmentally appropriate. For example, Formative Assessment 1 for 7.12A (Flow of Energy in Trophic Levels) used developmentally appropriate pictures and graphics that do not provide any unnecessary details that would confuse or be too much for a 7th grader.

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

- Materials guide teachers somewhat to consistently and accurately administer assessment tools. Materials include a distinct section in the teacher’s guide that informs the teacher in understanding the assessment items students will encounter. The lesson guides do not guide teachers on when to administer the formative assessments of the program. For example, the Lesson Guides list under Evaluation: Formative Assessment 1, TEKS Video, Vocabulary Review, and Formative Assessment 2.
    - The materials offer some guidance to teachers on when to administer assessments. The teacher guidance document for the Content Mastery module contains 32 slides. Slides 3 through 10 demonstrate how a teacher can access the lesson guides for TEKS and show what the lesson guides look like. The example lesson guide on slide 9 shows that the teacher will utilize Formative Assessments 1 and 2, the TEKS Video, and Vocabulary Review during the Evaluate portion of the lesson. Slides 11 through 19 show how to navigate to the study guides and E-Posters and contain examples of both. Slides 20-30 explain how to navigate to the Concept Mastery section and find Formative Assessments 1 and 2 and the TEKS Video and Vocabulary assessment. They contain

examples of each type of assessment and the steps for the order in which they are to be given to students. For example, slide 23 says, “Step 1: Begin with Formative Assessment 1,” and slide 27 states that students must score at least 80% on the vocabulary section for Formative Assessment 2 to be unlocked. Slide 29 indicates that Formative Assessment 2 is Step 4 in the Concept Mastery process.

- Materials include a Summit K12 Pacing Materials resource that outlines a section on assessments with suggestions for administration. The Assessments section states, “...Each district, school, and classroom has different assessment requirements, so our materials are built to provide flexibility to meet these needs. Each TEKS includes two online assessments, which may be given at any time during the unit.” Materials are designed to be flexible and easily incorporated into a district's scope and sequence and do not explicitly dictate when and how an assessment should be administered.
- The materials provide some guidance for teachers to consistently and accurately administer assessment tools. The Assessment Bank information on item types to support teacher understanding of scoring procedures within the program. The document includes slides with step-by-step arrows and images that show educators how to start the assessment tool. Even though the materials include general guidance on activating the assessment, the materials do not provide specific guidance to ensure consistent and accurate administration of the assessment tools. They lack support for the methods of administering the assessments and do not offer guidance on how to collect consistent and purposeful data.
- Materials include information about reports. For example, the materials state the types of reports in the program: Concept Boosters, Vocabulary boosters, Process Vocabulary, Usage Reports, etc. Reports are available by grade level in the top right of each course in which students are enrolled. While these reports provide data after students have completed an assessment, they do not provide guidance for consistent and accurate administration of the assessment tools.
- In addition to online assessments, each student activity is accompanied by a teacher guide, rubric, or answer key that helps teachers understand how to administer and grade the activity. These provide opportunities for assessment of student learning and concept mastery outside of traditional tests. Another example is the Phenomenon Sensemaking Guide. Students make sense of the phenomenon as they build an understanding of the science concepts, then create a final model and defend their explanations using a CER. Teachers use the CER rubric to score their writing.
- The materials include some information that supports the teacher's understanding of assessment tools and scoring procedures. The materials include information supporting the teacher’s understanding of assessment tools and scoring procedures. In the Dynamic Teacher’s Guide, under Concept Mastery, teachers can find a slide presentation on locating the assessments for each lesson. For example, at the end of each quiz, an answer key is provided on the review page. Teachers can click on question 10 of an assessment and click "Finish Attempt...," then "Submit all and finish" to view the answers. Students see this screen once they have completed a quiz. Additionally, teachers can view a student's performance, along with the correct answers, on any online assessment. However, the materials do not provide detailed information to support the teacher’s understanding of scoring procedures within the program.

Summit K12 Dynamic Science Grade 7

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

- The materials offer accommodations for assessments so that students with disabilities can demonstrate mastery of learning goals. The teacher guidance document for Accommodations, Accessibility, and Designated supports, found in the Teacher's Guide, explains the types of accommodations found on assessments. Slide 3 lists the Accessibility features as bilingual dictionaries, reading assistance for Short-Constructed Response Items, notepad, highlighter, zoom feature, bookmark questions, and answer eliminator for MC/MS items. Slides 4 - 9 show how students would access features on an assessment. A guiding document may be utilized by teachers to accommodate students. Teachers may choose to reference provided materials and download and print the reference chart and/or any of the graphic organizers provided within the course materials for use as supplemental aids during assessments.
- Materials include guidance to offer accommodations for assessment tools that allow students to demonstrate mastery of knowledge and skills aligned with learning goals. For example, the Teacher's Guide section, Teaching and Learning, has a PowerPoint titled Differentiation and Acceleration; this shows the teacher how to assign available accommodations (digital calculator, content and language support, and text-to-speech).

Summit K12 Dynamic Science Grade 7

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

Evidence includes but is not limited to:

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

- Materials provide recommended targeted instruction and activities to scaffold learning for students who have not yet achieved mastery. For example, in reporting category two, Force, Motion and Energy, a 6th-grade lesson, 6.7B Balanced and Unbalanced Net Forces, focuses on calculating the net force on an object in a horizontal or vertical direction using diagrams and determining if the forces are balanced or unbalanced. This lesson is paired with 7th-grade lesson 7.7D, Newton's First Law of Motion, to help students better analyze the effect of balanced and unbalanced forces on the state of motion of an object using Newton's First Law of Motion. For example, 6th-grade lessons help students strengthen foundational knowledge in reporting category four, Organisms and Environments. Lesson 6.13C Variations within a Population focuses on describing how variations within a population can be an advantage or disadvantage to the survival of a population as environments change. In 7th-grade lesson 7.13D, Natural and Artificial Selection, students describe and give examples of how natural and artificial selection change the occurrence of traits in a population over generations.
- The Concept Mastery section has two formative assessments for every TEKS in a unit. The teacher should provide the first formative assessment after the completion of the initial instruction. If students do not show mastery, teachers may assign videos and vocabulary lessons to target instruction for students who need additional help. This allows the teacher to check for mastery and then target instructional activities for students who did not master the topic.
- Materials ensure teachers can target instruction to develop precursor skills in two ways. First, the Content Mastery section has two formative assessments, a TEKS video, and a vocabulary activity for the supporting standards from a primary grade. For example, 6.6C, 6.6E, and 6.6B are present in Matter and Energy. Secondly, if students need even further instruction, completion

guides for these supporting TEKS are present within each unit. These lessons provide complete instructional activities that a teacher may use for whole groups, small groups, tutorials, etc., for students at any level.

Materials provide enrichment activities for all levels of learners.

- Materials provide enrichment activities for all levels of learners. Materials provide extension opportunities within lessons. For example, in lesson 7.8B, Patterns of Thermal Energy, students can extend their understanding of how thermal energy moves in a predictable pattern from warmer to cooler until all substances within the system reach thermal equilibrium by designing a cooler for remote communities that have limited access to electricity and electrical appliances to cool and preserve their perishable foods. Students engage in the engineering-design process to design a cooler that will reduce and delay thermal energy transfer into the cooler from the warmer exterior environment, thus slowing the melting of a block of ice inside the cooler.
- The materials include science videos and simulations broken down by TEKS. There are videos for grade-level TEKS, such as 7.13B, and supporting TEKS, such as 6.13A and B. The materials also include multiple simulations that can also be used for enrichment. For example, there are simulations for 7.12A and 3 for 7.13D. The Teacher's Guide embeds suggestions for engaging enrichment activities in each lesson.
- The Lesson Guide for every TEKS is an Apply and Extend section. In this section, teachers can use it for gifted and talented students or for those students who have already mastered the content. This section contains additional activities ranging from projects and lab design challenges to engineering projects that all further explore the science concepts covered in that lesson. For example, in the Lesson Guide for Taxonomy, 7.14A, teachers have four choices of Apply and Extend activities - the Study Guide, Anchor Charts, a Mule Analysis investigation, and a Taxonomy Practice.

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

- Materials provide scaffolds and guidance for just-in-time learning acceleration for all students. The lessons include recommendations for just-in-time scaffolds to develop productive perseverance in learning. For example, in the teacher discussion guide for the engagement portion of lesson 7.9A, Components of Our Solar System, teachers can use the question prompts provided to keep students focused and thinking about the concepts demonstrated. For example, while displaying an image of our solar system, the teacher asks, “What is accurate and inaccurate in the image? Is anything missing from the image? Are objects shown that are not really in space? Is this really how the solar system looks? If information is missing or incorrect?”
- Lessons provide support and resources for students ready to accelerate their learning. The materials contain several components called science Student Engagement. The components include TEKS videos and animations, interactive digital flashcards, digital avatars to track student progress, and student top 10 tables to compare their learning with the class, school, district, or state. Interactive learning activities, science labs, and engaging STEM career explorations exist. There is a document called "Summit K12 Questioning Guide" that includes question stems for four different levels.
- The materials provide general discussion questions to be used during an activity with all students. They prompt the teacher to monitor and ask students questions as the activity progresses. The materials provide support and resources for students ready to accelerate their learning. The materials offer a variety of student activities that can be assigned based on the

student's mastery of scientific knowledge and skills. For example, videos, simulations, eBooks, study guides, virtual field trips, and career exploration opportunities can all be assigned to any student as needed.

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Indicator 7.2

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- Materials include a variety of developmentally appropriate instructional approaches to engage students in the mastery of the content. Materials engage students in the mastery of the content through various developmentally appropriate instructional approaches. For example, lessons include classroom demonstrations. In lesson 7.10B, Effects of Plate Tectonics, students observe a convection demonstration and write their observations in their student notebooks. For example, materials include opportunities for students to engage in collaborative or cooperative learning activities. In lesson 7.6D, Solutions, students work in groups to investigate whether six different substances are soluble or insoluble in water.
- The materials include various developmentally appropriate instructional approaches to engage students. For example, most lessons include e-books, videos, and simulations to engage students. For 7.9B, Gravity and our Solar System, there's a video that is 10:05 minutes long and two PhET Simulations called Gravity and Orbits and My Solar System. The materials include various instructional approaches, including demonstrations, lab investigations, independent, partner, group work, summarization, and graphic organizers. For example, the Science Lab Explorations document contains a list of 45 activities that include demonstrations, labs, models,

discussions, And stations. The Graphic Organizers supplemental material includes the utilization of 20 different graphic organizers.
- There is a variety of instructional approaches within the 5E lesson model. In the lesson, Dissolution (7.6E), there is a Think, Pair, Share activity in the Engage section for students to collaborate. The lesson also includes an opportunity to research How to Make Coffee, for journaling in Rates of Dissolution, and for a student-led inquiry lab in Dissolving the Cube.

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

- Materials support flexible grouping (e.g., whole group, small group, partners, one-on-one). The activities in any given lesson state whether they are whole groups, student groups for investigations, partner groupings, or independent work. For example, in lesson 7.14A, Taxonomy, the engagement piece opens the lesson with a whole group activity of observing an image and having a class discussion. Then, the lesson moves on with more whole-group learning, with students taking notes on a foldable. Next, students move on to independent work, such as creating a taxonomy table for their favorite animal. An extension activity has students working cooperatively to create an anchor chart on taxonomy and presenting their chart to the class.
- The materials guide teachers on when to use specific grouping structures based on the needs of students. For example, the materials mention when lesson activities are whole groups, student groups, or partner work. The materials imply when students should work in groups, such as for a station lab or with partners for a reading activity. Activities and worksheets are provided that could be done independently, but they could also be done in partners or groups.
- In the lesson Natural and Artificial Selection (7.13D), there are a variety of grouping activities, such as small groups when completing Hiding in Plainview, whole groups in Establishing Relevance, partners in a Think Pair Share activity, and individual and partners in a Natural Selection Simulation.

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

- Materials consistently support multiple types of practices such as model, collaborative, and independent. Several lessons contain teacher demonstrations where the teacher models appropriate laboratory practices. Lessons also contain opportunities for students to collaborate with their peers through discussions, conducting research, or investigations. Students have the opportunity for independent practice with the evaluations at the end of each lesson when they partake in formative assessments and vocabulary practice.
- Another example of multiple practices, the Lesson Guide for 7.7A, Calculating Average Speed, indicates that students will work collaboratively during the Engage, work through several guided activities, such as a Speed Calculation Practice, and potentially independently on the Study Guide. The materials provide teacher guidance and structures for effectively implementing multiple types of practice. A clear purpose or goal is given for each activity within a lesson guide. For example, the Thermal Energy Transfer PhET Simulation states, "Students will use a simulation to investigate and discover how thermal energy moves in a predictable pattern from warmer to cooler. This pattern will continue until all substances within the system have reached equilibrium."
- Each e-book has a study guide and a reading guide. In the e-book Breaking Bonds and Building Molecules, the comprehension strategy focuses on synthesizing. Materials consistently support

multiple types of practices and provide guidance and structures to achieve effective implementation. For example, in the lesson Calculating Average Speed (7.7A), the teacher models in the Speed Calculation Practice, collaborative in Partner Discussion and a Lab Investigation, and independent Toy Car Investigation and Calculating Average Speed Using a Graph.

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

- Materials represent a variety of communities in the images and information about people and places. For example, in the program website's Scientific and Engineering Practices Section, under the Investigate STEM careers category, real-life images of people in STEM careers represent people of various ethnicities, ages, and genders. For example, e-books in the differentiated science literacy section appropriately feature images primarily concerning scientific concepts. When an image contains a person or a place, a variety of each is displayed throughout the set of e-books to represent diverse communities.
- Images reflect the diversity of school communities and match the content. Characteristics vary in images to include race and ethnicity, skin tone, gender identity and expression, age, disability status, body size and shape, and hair texture. For example, the e-book for Everything Changes shows two students talking on page 6. One is an African-American female, and the other is a Caucasian male. The e-book “A World of Elements” shows a teacher with students on page 6. The teacher and students represent an ethnically diverse group and both genders.
- Materials include the video about Variation in a Population (6.13C), diversity includes but is not limited to organisms (mice, penguins, grasshoppers, lizards, beetles, dogs, fish, rabbits, hogs, snakes, frogs, alligators, cats, bacteria, horses, chickens, walruses), environments (coral reef, ocean, forest, volcano, desert, rainforest, wetland), and people (male, female, Caucasian, Asian, African-American). For example, in e-books, a diversity of images is used. In A World of Elements (7.6A)e-book, the diversity of images includes but is not limited to images (gold, silver, clouds, water, salt, periodic table) and people (male, female, African-American, Caucasian, Hispanic, old, young).

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

Partial Meets | Score 1/2

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

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

Evidence includes but is not limited to:

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

- Materials include guidance for linguistic accommodations (communicated, sequenced, and scaffolded) commensurate with various levels of English language proficiency as defined by the ELPS. The materials provide linguistic accommodations for beginner Emergent Bilingual (EB) students. Inside the Science Literacy and Vocabulary Mastery section is a link to Multilingual Newcomer Lessons on 13 different topics covering all four reporting categories. The Lesson Plan document for each lesson provides detailed instructions for using the Newcomer lesson. They include an Activity Overview that explains whether the activity should be done individually, with partners, or in small groups. They have Word-Learning strategies, pronunciation practice, instructions for using the worksheets, and how to use the blue-level e-book. The e-books are supposed to come in color-coded reading levels. While the materials provide separate lessons for beginner or newcomer students, they do not offer this support for intermediate, advanced, or advanced high students.
- The materials reference the administrative code for the ELPS used in a specific activity. For example, in the lesson guide for 7.8A, Methods of Thermal Energy Transfer, there is a set of activities called "Who Has More Energy." ELPS 1. A.i, 1.A.ii, 2.C.iii, 2.C.iv, 2.D.ii, 2. I.i, 5. B.i, and 5. Bii provides support. However, the guidance provided to the teacher does not consistently assist with accommodating activities for the various levels of learners. For example, there is a document called "ELPS Implementation Guide;" however, it does not provide information for all levels. Specifically, in Expressing Ideas, ELPS 3.G.ii, the Suggested Activity section states, "For beginning students, brainstorming ideas for their teacher would be the final step. Advance

students will discuss each idea to come up with one final solution." In Expressing Opinions, ELPS 3.G.i, the Suggested Activity section states, "Beginners can use simple responses to many different subjects, while advance students can dialogue only a few subjects." Consistent support for the various levels of English language proficiency are not included.

- Materials include some guidance for linguistic accommodations (communicated, sequenced, and scaffolded) commensurate with various levels of English language proficiency as defined by the ELPS. For example, there is a lesson guide in the Multilingual Newcomer Lesson section for Category 4 Ecosystems. The teacher lesson plan provides a scaffolded lesson for ELLs with suggestions for activities, grouping, time, and ELPS alignment. There is an option to print multilingual versions of the worksheets and Vocabulary Boosters in 20 different languages. The teacher's lesson plan says, "Use the Word-Learning Strategies to introduce words from the Blue Level Student Book or e-book." E-books for all levels of learners are not provided in the materials.
- In the Teacher Resource, materials include a Science Cognates list under the Science Literacy-Vocabulary Mastery section. For example, in the section Science Cognates, there is a category for SEPs: Matter and Energy; Force, Motion, and Energy; Earth and Space; Organisms and Environments. Each category includes three sets that review pictures and language familiar to the category. The student can see and listen in Spanish, then see, hear, and speak (a record) in English. Materials state, "Spanish-English Science Cognates enable Emergent Bilingual Students and in particular 1st and 2nd Year Beginning level students to build confidence quickly."

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

- Materials encourage strategic use of students' first language as a means to linguistic, affective, cognitive, and academic development in English. For example, the Science Literacy/Vocabulary Mastery section contains a resource called Science Cognates/English-Espanol. Within this resource are sets of cognates practice grouped in the reporting categories of SEPs, Matter and Energy, Force, Motion, Energy, Earth and Space, and Organisms and Environments. Students practice saying the cognate in a Spanish phrase and then again in an English phrase. For example, there is a lesson plan in the Multilingual Newcomer Lesson section for category 4, Ecosystems. The teacher lesson plan says, "For home language support of the Basic Vocabulary, refer to the Foundations eBook table of contents to print multilingual versions of the worksheets and to the Vocabulary Boosters Multilingual Edition for Newcomer vocabulary practice in 20 different languages." There are links to the word list, flashcards, and study guides with an answer key.
- In the Science Literacy/Vocabulary Mastery section is a resource called Multilingual Newcomer Lessons. Here, teachers can follow the ConceptLinks® Science Foundations lessons. These lessons support newcomer students, beginning-level English learners, and students with limited English proficiency. The program helps students develop reading, writing, speaking, listening, and thinking skills. The foundation skill lessons introduce and teach basic vocabulary and word-learning strategies and focus on building literacy, language, and concept comprehension. The pacing guide outlines an example of how the foundation lessons for each topic are organized into five or ten days of instruction at a recommended 20 minutes per day.
- The materials include homework in languages other than English. In the Teacher's Guide for any of the Multilingual Newcomer Lessons, there is a word list and study guide available in Spanish, Arabic, Burmese, Simplified Chinese, Traditional Chinese, Hmong, Korean, Nepali, Persian-Farsi, Portuguese, Somali, and Vietnamese. The Teacher's Resources includes a document that

explains how to use the Science Cognates activity with students. This document describes the purpose, examples, and how using cognates will benefit students on page 2. Pages 3-5 explain how to access the Science Cognates within the Science Literacy Vocabulary Mastery Materials. Page 6 lists the cognates for all four reporting categories for 6th-8th grade. The remaining pages show how the cognates activity looks for students.

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Indicator 7.4

Materials provide guidance on fostering connections between home and school.

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

Meets | Score 2/2

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

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

- Materials provide information to share with students and caregivers about the design of the program. For example, information is available to help students use the online course components in the “Student-Getting Started” tab under “Additional Resources” in the Teacher's Guide. This 32-page slide deck walks students through the design of the online program, critical features of the program, where to find specific features, and how to access all program components. The information may also be provided to caregivers to help them learn how to log in from home.
- The materials provide information to share with caregivers about the design of the program. The materials offer a 3-page letter for parents and caregivers that is available in both English and Spanish. Page 1 of the letter is a general explanation of the course. Page 2 explains how to access the materials from home. Page 3 demonstrates what students will see upon logging in and explains the four major modules students will likely work in from home.
- The course materials include information about the lessons' instructional design and course components. These documents provide insight into the program's design and may be shared with students and caregivers. Teachers can access and share the documents describing the 5E model under the “Course Design” section of the Teacher's Guide. Materials provide information to be shared with students and caregivers about the design of the program. For example, overviews of the Science and Engineering Process skills, Recurring Themes, and Concepts, including Phenomena, can be shared with students and caregivers.

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

- Materials provide resources and strategies for caregivers to help reinforce student learning and development. The program includes an English/Spanish program overview letter that can be sent home via print or online through e-mail or LMS. The letter briefly explains how to access the program and how to navigate to key features. Extension activities that involve caregivers include suggestions on how the caregiver can support the student's needs. The materials include Home-School Connection letters for each lesson. Each letter contains critical points of the lesson, conversation starters, at-home activities to reinforce or extend knowledge, essential vocabulary, and a picture talk.
- The materials provide website access with activities for reinforcing students' learning of scientific vocabulary. The online accessible materials contain a module called Concept Mastery. This module has a vocabulary activity for every 6th-grade TEKS and 5th-grade supporting TEKS. Additionally, inside the Science Literacy/Vocabulary Mastery module are Vocabulary Mastery practice lessons. The materials provide at-home activities for caregivers to help reinforce student learning and development. Inside the teacher resources is a "Home to School Connection" document. This resource contains one-page information sheets for each TEKS that can be sent to caregivers. These sheets help caregivers understand what their child is learning in the classroom. Each sheet contains the following sections - Key Points, Conversations (questions to start conversations with students at home), Activities (at-home activities to reinforce concepts), Vocabulary, and Picture Talk (a picture with a question). It should be noted that these Home to School Connection sheets are only available in English.
- There is a "Home-School Connection" for each TEKS. This one-pager includes vocabulary, a graphic, key points, activities, and questions to guide caregivers. Materials provide information to be shared with caregivers for how they can help reinforce student learning and development. For example, the program is web-based, so students and parents can access it at home or anywhere with a connection. Students and caregivers (as co-viewers) have access to vocabulary flashcards and all resources available online.

Materials include information to guide teacher communications with caregivers.

- For example, teacher guidance includes information on engaging caregivers as partners in learning and offers suggestions for establishing a relationship or inviting ongoing communication and partnership. Materials include guidance for engaging caregivers as partners; for example, Summit K12 provides Home-School Connection letters for each TEKS that can be shared with caregivers to help them reinforce learning and serve as partners. These letters include key points, conversation starters, activities, vocabulary, and a "picture talk" discussion.
- 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." In addition, the "Parent/Guardian Letter" provides information for teachers to share with caregivers, like "This online program is accessible from home and includes lesson videos, digital flashcards, study guides, animations, and assessments." Furthermore, the letter explains to caregivers how "students will most likely be assigned work in one of the following modules:

    - Science Videos and Simulations – Lesson videos for all of the TEKS
    - Concept Mastery – Lessons, assessments, vocabulary, and practice to help students master each TEKS during the year
    - Science Literacy and Vocabulary Mastery – A TEKS-based nonfiction literacy and vocabulary resource to help students master Science vocabulary and concepts
    - Scientific and Engineering Practices – Includes Science labs, field investigation videos, more advanced vocabulary flashcards, Science process skill lessons, and other inquiry-focused resources."
- The materials provide progress monitoring and reports based on student achievement within the Concept Mastery section of the course. Teachers can use these reports during parent conferences or send them home to inform families of their student's progress. Information about these reports is found in the Teacher's Guide. For example, teachers can download and print individual student reports for Concept Boosters and Vocabulary Boosters. To access individual student reports, the teacher must click on the student's name from the drop-down list on the main report page. The Concept Mastery report gives the score the student made for each activity per TEKS. The Vocabulary Mastery report shows the student's score on the vocabulary mastery activity and its organization design by TEKS. The materials guide the teacher on how to access the "Reports and Dashboards." There is also a link to a help center if teachers are struggling to locate the information. The materials guide the teacher on how to access the "Reports and Dashboards." Materials include information to guide teacher communications with caregivers. The materials include reports that can be sent home.

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Indicator 8.1

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

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

Partial Meets | Score 1/2

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

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

Evidence includes but is not limited to:

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

- The materials include year-long plans aligned with grade-level TEKS. For example, a year-long scope and sequence in the Teacher Resources section of the Teacher's Guide. The scope and sequence shows clear English Language Proficiency Standards (ELPS) alignment within the unit and lesson progression. There are dual language resources in the units.
- There are "Scope and Sequence and Pacing Guides within the Teacher Resources." These guides provide a Year at a Glance document indicating the number of days allotted for each Reporting Category and the number of Texas Essential Knowledge and Skills covered in that time frame. Page 6 then gives the scope and sequence for the entire year. This further breaks the reporting categories into units, then TEKS covered within a unit, and the time allotted for each TEKS and the entire unit. Page 8 contains a Pacing Guide that breaks the reporting categories down into the TEKS, provides a brief description of the concepts within the TEKS, and provides an estimated amount of time needed to cover the TEKS adequately.
- The Scope and Sequence and Pacing Guides provide an alignment or correlation to the English Language Proficiency Standards. The Teacher Resources page has a document titled TEKS/SEP Alignment. In the lesson plans for TEKS, the ELPS are given for different activities and the entire lesson.
- Inside the unit for each reporting category, on page 3, there is a TEKS scaffold document that shows the vertical alignment that offers alignment from 6th to 7th grade. Lessons are provided for each supporting TEKS to allow for reteaching and review. Inside the Lesson Guide for a

specific TEKS, the vertical alignment from the 7th-grade TEKS to related 6th- or 8th-grade TEKS is shown in the Teach and Discuss section.

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

- The materials provide teacher guidance for the concepts, RTCs, and SEPs. The Phenomenon Teacher Guide has specific questions in the Facilitating Sensemaking section that make the connections to RTCs and are clearly labeled as such. For example, in 7.12A Phenomenon Teacher Guide, Exploring Northeast Oceans, the Facilitating Sensemaking tells the teacher to instruct students to record their initial observations and questions in part 1 of their Phenomena Sensemaking Guide. Students refer to the Scientific Thinking Guide to help them extend their observations and thinking and make broader connections. To drive student thinking, the teacher questions include, RTC 7.5E - Do the organisms in the graphs make up a system? Is there a relationship between the population sizes? What correlation could you make between the population sizes and the transfer of energy?
- The materials guide teachers in understanding how activities and experiences connect concepts and SEPs. For example, the materials include a 7th-grade TEKS-SEPs-RTCs Crosswalk, providing teachers with a glance at the connections between the TEKS, Science and Engineering Practices, and Recurring Themes and Concepts. For example, in Category 1, in the Physical and Chemical Changes Lesson Guide, teachers connect student experiences by facilitating a peer discussion of the chemical changes during cooking and linking those concepts to past scientific knowledge. For example, each lesson's SEPs and RTCs are notated for teacher reference. The lesson intentionally plans for specific Texas Essential Knowledge and Skill sections for Science and Engineering Practices and Recurring Themes and Concepts. While Science and Engineering Practices and Recurring Themes and Concepts are embedded within each lesson, no specific resources could be found to guide teachers to make connections across the SEPs or RTCs throughout the year.

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

- Materials include some intentional practice and spiraling of previously taught knowledge and skills from earlier lessons in the same reporting category. Materials connect vertically to the previous grade and next grade alignment. Materials do not include regular review lessons where no new science skills are explicitly taught, but previously taught science skills are reviewed and practiced.
- This scope and sequence is designed to be flexible, with extra time for concept and spiral review, in-depth discussions and investigations, and extension activities to support learners of all abilities. Lesson plans with Study Guides are included for scaffolded concepts from 6th grade. These lessons provide review and practice with those supporting TEKS to ensure student success with foundational concepts and skills, such as by working with a card sort or creating a diagram of key concepts/information. In 5th grade, students predicted how changes in the ecosystem affect the cycling of matter and flow of energy in a food web (5.12B). In 8th grade, students will explain how disruptions such as population changes, natural disasters, and human intervention impact the transfer of energy in food webs in ecosystems (8.12A). The Lesson Guides and Instructional Resources include scaffolded lessons that offer related concepts from previous grade levels. For example, in Reporting Category 2, Force, Motion, and Energy, between grade-

level TEKS, a 6th-grade TEKS lesson on balanced and unbalanced net forces is inserted to allow students to connect a previously taught concept with the current concepts. However, no materials are provided to review or spiral content over the year. Each activity and Study Guide focused solely on the new concepts taught within that lesson.

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Indicator 8.2

Materials include classroom implementation support for teachers and administrators.

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

Partial Meets| Score 1/2

The materials partially meet the criteria for this indicator. 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 some standard correlations, including cross-content standards, that explain the standards within the context of the grade level. Materials include a comprehensive list of all equipment and supplies needed to support instructional activities. Materials include guidance for safety practices, including the grade-appropriate use of safety equipment during investigations.

Evidence includes but is not limited to:

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

- Materials provide embedded technology to support and enhance student learning and classroom implementation support for teachers and administrators. For example, a Support tab is provided on the home page for teachers and administrators to use for technical issues with the program, such as student enrollment and administrator access to reports. For example, in the Teacher Resources section, a Teacher is Getting Started Guide shows teachers how to get familiar with the program setup through visuals that show the teacher exactly where to go on the site to find what they need. The Getting Started Guide includes where to find the Scope and Sequence and Pacing Guides, Concept Mastery, Online Course Site Map, Course Philosophy, and TEKS Content Mastery Lesson Guides.
- Inside the Science Literacy/Vocabulary Mastery section are three areas: Multilingual Newcomer Lessons, Differentiated Science Literacy, and Science Cognates English/Spanish. Inside the Multilingual Newcomer Lesson area is a Science Foundations Newcomer Lesson Guide. Inside are Lesson Guides for each curriculum unit, such as Energy, Animals, and Plants. The Lesson Guides contain Pacing Guides, Lesson Materials, and resources in multiple languages. The

Differentiated Science Literacy area has a Science Literacy Teacher's Guide. Inside the guide is a list table containing the science TEKS, a comprehension strategy, guided reading, a study guide, and an answer key. The Science Cognates area may be accessed in the Teacher's Guide through the Dynamic Science Teacher's Guide by clicking on the Science Cognates link.

- The Dynamic Science Teacher's Guide contains links explaining each curriculum product. The guide includes notes on structures and functions for each category. In addition, there is a list of scaffolded questions and answers. It also provides lab and research activities. For example, clicking on the link for Videos opens a new tab containing all the information on the Videos and Simulations in the curriculum. Information is included on how to access the videos and simulations in multiple ways, a sample data table from a reporting category listing the videos by TEKS and topic, and screenshots of how the videos look. Additionally, resources include helpful hints such as using closed captioning or adjusting the playing speed of the video. The same level of detailed information is then presented for the simulations.

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

- Grade 7 materials provide standard correlations within the content area of Science. Specific TEKS can be found in the Scope and Sequence and Pacing Guides as well as in each lesson. The standard statement is at the top of each lesson. For example, in Category 2, Force, Motion and Energy, a lesson titled “Methods of Thermal Energy Transfer,” the lesson header notes the lesson correlates with 7.8A and relates to the student's expectation of investigating how thermal energy moves in a predictable pattern from warmer to cooler until all substances within the system reach thermal equilibrium. Teachers can access the specific TEKS wording in an additional document under the TEA Resources located in the Teacher’s Guide.
- Each Lesson Guide contains the TEKS for vertical alignment as well as a list of all English Language Proficiency Standards, Science and Engineering Practices, and Recurring Themes and Concepts. For example, in the Lesson Guide for 7.8A Patterns of Thermal Energy, page 2 shows the vertical alignment to 6th-grade and 8th-grade TEKS. Pages 4-5 list each of the ELPS, SEPs, and RTCs for the 7.8A lesson. Materials for grade 7 do not include a “Connect to…” reference to engage students in cross-content standards; however, materials sometimes reference a literacy activity to support cross-content standards. Specifically, in the Lesson Guide for 7.11A, Watersheds and Human Activity includes a gear icon that lists a “Cause and Effect Writing Activity.” The teacher progresses through picture slides to show students an image of human impact on water (groundwater or surface water), and students write a cause-and-effect sentence in response. Students have 20 seconds to respond to each image. The slides include a sentence stem to support student responses, i.e., “This is ____. Humans may have caused this by ____, and it may affect the water by ____. Lesson guides do not consistently include literary connections or other content connections.
- In the Differentiated Science Literacy section of the Science Literacy Vocabulary Master, the Science Literacy Teacher’s Guides include guided reading passages with objects for language, literacy, and content. For example, the resource lists the title of the passages, the comprehension strategy, and the eBook. In the eBook, A World of Elements, the comprehension strategy is to Make Inferences. The Science Literacy Teacher’s Guide states the literacy connection as, “Read and analyze nonfiction texts. Interpret charts and diagrams. Make inferences to deepen understanding.” The science content objective states, “Understand that an element is made up of only one kind of atom and is organized into the Periodic Table of Elements. Understand that a compound is a molecule made of two or more elements.

Understand that a mixture contains molecules of two or more different substances. While there are reading passages within the curriculum. There is no explicit correlation between cross-curricular concepts and other content subjects listed. For example, there is no direct mention of other content connections or concepts, i.e., math or history, within the curriculum.

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

- Materials include a comprehensive list of all equipment and supplies, including perishables, needed to support instructional activities. The materials contain a list of equipment and supplies necessary for a particular lesson, such as a lesson on 7.6D, Solutions, for teachers to conduct the Soluble vs. Insoluble Investigation.
- The Teacher's Guide page contains a comprehensive list of all equipment and supplies needed for the entire program. Inside each Lesson Guide is a comprehensive materials list that contains all the materials needed for each activity within the lesson. For example, in the 7.9B Gravity and Our Solar System Lesson Guide, the Materials List is linked on the first page in the Resource section. Clicking on the link opens a two-page document that lists the materials needed for an engagement, four Teach and Discuss, and two Apply and Extend activities.
- On the Dynamic Science Teacher Resources page in the Science and Engineering Practices section, Material Lists and Inquiry Kits can be accessible on the materials list within each Lesson Guide. For example, the Science Lab Investigations list shows an investigation lab over 7.13A, Nervous System. The Lesson Guide for 7.13A, the Materials List, offers all the supplies needed for Nervous System Investigation.

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

- Materials include guidance for safety practices, including the grade-appropriate use of safety equipment during investigations. In the section on Scientific and Engineering Practices, there is a PowerPoint and vocabulary on science safety. Inside the Science and Engineering is a Skills Companion for 7.1C, D Science Safety, and Tools. Clicking on the link to the Skills Companion opens sixteen PowerPoint slides that comprehensively review science lab equipment, the proper usage of certain items like fire extinguishers and showers (slides 3 and 4), as well as safety practices for a wide variety of lab situations (slides 9 -12) and field investigations (slide 14).
  The Lesson Guides contain links to Teacher’s Guides for lab investigations and student inquiry activities. These Teacher’s Guides have the safety information needed for a move. For example, in the Dissolving the Cube: A Student-led Inquiry into Dissolution Rates Teacher's Guide, in the Description box, it says, "The facilitator will ensure materials are available and approve student inquiry experimentation while monitoring safety." The Supplies section lists safety equipment such as goggles, aprons, and gloves.

Summit K12 Dynamic Science Grade 7

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.

- Summit K12 has developed an optional year-long scope and sequence for schools and districts who wish to follow a set lesson progression that ensures covering all TEKS within one school year. Within this framework, all grade-level TEKS organize into units of study with suggested time allotments for each TEKS. Teachers and administrators should adjust the instructional timeline according to student data and classroom needs. Materials provide a comprehensive timeline and framework based on state standards and serve as an optional resource that teachers and administrators may use in addition to or in support of instruction. Materials support scheduling considerations and include guidance and recommendations on required time for lessons and activities. The materials contain a Pacing Guide with suggested days needed to teach the content in each reporting category and each TEKS. For example, on page 6, the scope and sequence recommend spending eight days on 7.9A, Components of Our Solar System. Another example is the suggested time frame for the components of a lesson. For example, on page 40 of the scope and sequence, for TEKS 7.14A, Taxonomy, the time allotment is given for the opening of the concept: Engage (15 minutes) and Establish Relevance (30 minutes).

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 leaving flex time for testing and remediation/extension. The instructional materials provided to the teacher indicate ways that the lessons show adjustment to meet the needs of the students without disrupting the developmental progression. The Pacing Guide provided 160 days of

instruction instead of 180 days. Within a unit, the teacher will find scaffolded lessons from previously taught TEKS in lower grades and extension activities. Previously taught TEKS are accessible to review within the natural progression.

- Materials guide strategic implementation without disrupting the sequence of content that must be taught in a specific order following a developmental progression. The materials were written specifically with the 7th-grade TEKS in mind. For example, the materials guide teachers to teach the concept in 7.7A, Calculating Average Speed, before leading students to study 7.7C, Distance-Time Graphs, where they would use what they've previously learned.
- The materials purposely group modules with similar recurring themes and ideas, making it easier for students to connect scientific knowledge. For example, page 8 of the Pacing Guide indicates that the units were created around the Reporting Categories; this places all of the TEKS with similar and connected concepts together. Reporting Category 1 has 7.6 A, B, C, D, and E, which are TEKS over matter and energy.

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

- Materials designated for the course are flexible and allow students to complete in one school year. For example, page 4 of the scope and sequence states that teachers and administrators should adjust the instructional timeline according to student data and classroom needs.
- On page 3 of the Pacing Materials, there is a Year at a Glance data table. This data shows that 160 days of instructional material have been allotted to complete all of the Texas Essential Knowledge and Skills for grade 7. This was intended to account for the beginning of year logistics, STAAR review, district and state testing, field trips, or any other interruptions to the daily cycle of instruction. Materials allow teachers to adjust according to student assessment data and district instructional priorities. Page 6 provides a complete scope and sequence, breaking the year into 11 units. The TEKS for all 11 units are listed to show that all required TEKS will be completed within the year.
- The materials design is to be flexible. Page 7 says that the Pacing Guide "can be adapted for teaching the Texas Essential Knowledge and Skills TEKS in any preferred order or according to a district-provided scope and sequence. The Pacing Guide is arranged by reporting category and includes suggested instructional time for each TEKS, but the actual order of instruction is flexible and should adjust according to student needs and district priorities." Thus the materials provide the flexibility needed by teachers and districts.

Summit K12 Dynamic Science Grade 7

Indicator 9.1

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

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

Not Scored

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

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

Evidence includes but is not limited to:

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

- The digital materials include appropriate white space and an overall design that does not distract from student learning. For example, student materials are appropriately designed to support student learning. For example, the student study guides that accompany each lesson are arranged in a structured layout that remains the same so students become familiar with and know what to expect as they work within them. Students can easily find the content vocabulary relevant to the current lesson at the beginning of the study guide. The middle of the study guide goes along with a hands-on activity of the corresponding lesson. Usually, this section features some sort of graphic. The graphics displayed are recognized and labeled. Also, the activity sections frequently feature a table where students record data from whatever investigation they are conducting. Plenty of space is given in the tables for students to write or draw their data. The study guides conclude with reflection questions. Students are given several lines to answer, which is beneficial when they need to use evidence to support their claims.
- Teacher guidance materials are appropriately designed with precise, designated places for important information. Teacher's guides are designed so that teachers can locate crucial information quickly for planning and implementation. Every lesson has a guide that follows the same format. First, the lesson header contains the title and the related TEKS code. Then, the student standard is written in an objective statement beginning with "students will." The core vocabulary is in a shaded box at the top of the first page. Under this, in another shaded box, is a list of the resources needed for the lesson. The following section, "Engage," is the lesson opener, where the teacher engages the students in the topic and establishes relevance. The "Teach and Discuss" section contains a vertical alignment statement, the key concepts with expanded explanations, activity explanations, links, and misconceptions. The following section, "Apply and Extend," contains teacher directions for activities such as completing the study guide

and more hands-on enrichment activities. The final section, “Evaluate,” reminds the teacher of the assessment process contained in the program for students to access online.

- The digital materials include appropriate white space and an overall design that does not distract from student learning. For example, e-books are well formatted with clear and prominent titles, headings, and subheadings. There is an appropriate amount of white space surrounding images in the e-books. The e-books contain tools students can use to annotate text, including a highlighter and sticky notes.
- The teacher guidance materials are appropriately designed with precise, designated places for important information. The lesson guide is designed so teachers can locate information quickly for planning and implementation. Each lesson guide begins with the TEKS written out, a list of core vocabulary covered within the TEKS, and a list of resources. Then, the lesson guide moves through the same four sections - Engage, Teach and Discuss, Apply and Extend, and Evaluate. Each section contains the activities and information the teacher needs, including the links to documents and a list of the SEPs, RTCs, and ELPS utilized in each activity. The lesson guides conclude with the SEPs, RTCs, and ELPS written out to assist with teacher understanding and planning.
- Materials include an appropriate amount of white space and a design that supports and does not distract from student learning. For example, each TEKS lesson guide provides a clear, organized, logical main subject title. When students use the read-aloud option, the word being said is highlighted so that students can read along with the voice.
- Materials include an appropriate amount of white space and a design that supports and does not distract from student learning. For example, Teacher's Guides provide links to ancillary material. There are color-coded callout boxes for activities and different colored fonts for important information.

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. For example, each lesson has a corresponding e-poster with illustrations of key concepts and simple, clear explanations that are grade-level appropriate and not overly wordy. The graphics stay focused on the scientific concepts and do not unnecessarily place pictures of possible distractions. The e-posters also contain the key vocabulary of the lesson. The e-posters are also available in an interactive version where the teacher can enlarge the graphics for a better view.
- Another example includes the e-books included in the program. The short books contain concise, focused information on the featured student standard. The graphics are large, colorful, and highly related to the concepts and ideas of the text. The e-books follow the same format. After the title page, the introductory page displays the key vocabulary in the book's text. Also, this page helps students with reading strategies and lists a purpose for reading. The body of the book is a few pages of information with graphics; the number of pages depends on the complexity of the concept. The penultimate page is where the student engages in a reinforcement of the material read as well as fundamental reading strategies.
- The materials embed age-appropriate pictures and graphics that support student learning and engagement without being visually distracting. The materials include vocabulary cards with clear and authentic images and graphics to define and support the new words students are learning. The vocabulary cards are located in the Science Literacy and Vocabulary Mastery module. The pictures on the cards are grade-appropriate and free of visual distractions.

- The materials include age-appropriate pictures and graphics to support student learning and engagement. For example, an image of the asexual reproduction of a unicellular organism in the vocabulary cards does not contain labels for the stages of meiosis, as students in 7th grade are not expected to know the phases of meiosis.
- Materials embed age-appropriate pictures and graphics that support student learning and engagement without being visually distracting. For example, the Concept Mastery section has a vocabulary section that provides graphics with accurate labels with an age-appropriate amount of detail.
- Materials embed age-appropriate pictures and graphics that support student learning and engagement without being visually distracting. For example, within the e-posters and e-books, numerous graphics contain accurate labels with age-appropriate detail.

Materials include digital components that are free of technical errors.

- The materials include digital components free of technical errors. For example, the vocabulary mastery cards are free from errors in the graphics and definitions of the terms. The cards are also free from spelling and grammatical errors.
- Another example of the materials being free from technical errors includes the Science Videos. The videos are relevant to their corresponding lessons and contain correct information in both visual and text displays.
- The materials include digital components free of technical errors. The materials contain science videos in the Science Videos and Simulations module. The videos for each TEKS are free of technical errors.
- The materials include digital components free of technical errors. The materials contain e-books for each TEKS. The e-books are located in the Science Literacy and Vocabulary Mastery module in the Differentiated Science Literacy section. The e-books are free of technical errors.
- Materials include digital components that are free of technical errors. For example, lesson guides for each TEKS are free of spelling, grammar, and punctuation errors. The teach and discuss sections are free of inaccurate content.
- Materials include digital components that are free of technical errors. For example, answer keys are free of spelling, grammar, and punctuation errors. They are free of wrong answers.

Summit K12 Dynamic Science Grade 7

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 integrate some digital technology that provides opportunities for teachers and/or students to collaborate. Materials integrate digital technology that is compatible with a variety of learning management systems.

Evidence includes but is not limited to:

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

- The materials integrate digital technology and tools that support student learning and engagement. For example, digital technology and tools enhance student learning through such features as learning games, interactives, simulations, and online assessments. The materials include TEKS videos and animations, interactive digital flashcards, digital avatars to track student progress, student top 10 tables to compete with class, school, district, or state, and engaging STEM career explorations. The embedded technology within materials supports the print and does not replace it. Students use the digital technology available and printed material, such as the study guide and e-books.
- The materials integrate digital technology and tools that support student learning and engagement. The materials include e-books. The e-books contain embedded tools such as a pen, sticky note, highlighter, and zoom function. These tools are accessed on the left side of the screen while an e-book is open.
- The materials integrate digital technology and tools that support student learning and engagement. The materials include science videos for each TEKS, both on and below grade levels, supporting TEKS. For example, the Science Videos module for Organisms and Environments contains eight videos for 7th-grade TEKS and three for 6th-grade TEKS.

- Materials integrate digital technology and tools that support student learning and engagement. For example, there are online Formative Assessments that allow students to highlight and take notes; it also offers Text-to-Speech that can be assigned by the teacher.
- Materials integrate digital technology and tools that support student learning and engagement. For example, a variety of Simulations are available by category, 7th grade has 12 simulations.

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

- The materials integrate digital technology in ways that support student engagement with science and engineering practices, recurring themes and concepts, and grade-level content. Materials provide interactive simulations and models for students to explore scientific and engineering practices in a virtual environment. Students have access to PhET Simulations in many lessons throughout the course.
- The materials allow students to obtain information using digital tools. The materials include virtual simulations where students obtain information on various topics. The Science Videos and Simulations module has a section specifically for simulations. This section contains simulations for all four reporting categories, a total of 12 simulations.
- The materials allow students to obtain information using digital tools. The Concept Mastery module includes a TEKS video for each TEKS on grade level and supporting TEKS from lower grades. For example, the Force, Motion, and Energy section contains seven videos for 7th-grade TEKS and one for 6th-grade TEKS.
- Materials integrate digital technology in ways that support student engagement with science and engineering practices, recurring themes and concepts, and grade-level content. For example, graphic organizer templates are available and suggested in different assignments. These can be opened with Kami, allowing highlighting, text boxes, drawings, and shapes to be added. These can be downloaded and saved to Google Drive or OneDrive. Graphic Organizers can be used with content, SEPs, and/or RTCs. Materials integrate digital technology in ways that support student engagement with science and engineering practices, recurring themes and concepts, and grade-level content.

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

- The materials do not integrate digital technology that provides opportunities for teachers and/or students to collaborate. For example, the materials do not integrate digital technology that supports student-to-student collaboration. The materials do not integrate digital technology that supports teacher-to-student collaboration.
- The materials do not integrate digital technology that supports student-to-student collaboration. The materials do not provide a forum to post class discussions or provide video conferencing, etc. While the Student Engagement documents indicate that students can compete for top placement in the school, district, or class, they compete as individuals as part of their progress monitoring and not collaboratively in teams or as partners.
- The materials do not integrate digital technology that supports teacher-to-student collaboration. The materials do not offer teachers a platform to virtually conference or collaborate with students.
- Materials do not integrate digital technology that provides opportunities for teachers and/or students to collaborate. For example, “Students at each grade level can strive to be on one of

several top 10 tables at the Class, School, District, and State levels." Four top 10 categories are based on points: Concept Mastery, Vocabulary Mastery, Science Process Skills, and Science Literacy Points. However, students compete individually and do not get to work in teams or pairs.

- Materials do not integrate digital technology that provides opportunities for teachers and/or students to collaborate. For example, in Science Cognates, students can listen to new science vocabulary in Spanish/English and then record themselves speaking in English. However, it is unclear if or how the teacher can provide feedback, and this is only available to ELL students and not all students.

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

- The program is fully web-based. The digital materials are accessible and compatible with multiple operating systems and devices. For example, within the support section, in a technical specifications article, a statement declares the materials work on all major platforms, such as iPads, laptops, PCs, MacBooks, and Chromebooks. Worksheets that go with specific labs and activities are downloadable and printable.
- The materials are accessible and compatible with all operating systems and devices. The Parent-Guardian Welcome Letter states that students should be able to access the program from any device with an internet connection. The materials could be accessed through a laptop and desktop computer. Accessing it from an iPhone allowed the user to view the modules.
- Materials integrate digital technology that is compatible with a variety of learning management systems. For example, the Teacher Getting Started document claims that We support access to all major district LMS and SIS platforms through one of the SSO solutions, allowing students to simply click on the Summit K12 icon to immediately access our course. It also says, "We support all major SSO tools like Clever, Classlink, Rapid Identity, and others."
- Materials integrate digital technology that is compatible with a variety of learning management systems. For example, the Teacher Getting Started document claims that Our support center also provides step-by-step guidance if you would like to download the iOS App from the App Store directly onto your iPads. SummitK12 can be accessed on the website on an Android phone.

Summit K12 Dynamic Science Grade 7

Indicator 9.3

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

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

Not Scored

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

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

Evidence includes but is not limited to:

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

- The digital technology and online components are aligned with the grade-level scope and approach to science knowledge and skills progression. For example, materials provide information that identifies how online and digital components align with grade-level science knowledge and skills in the materials' scope and sequence and each lesson's header. The materials provide related TEKS and ELPS for online and digital components within the Teacher's Guide. Teachers may find the codes within each lesson.
- Videos contained in the Science Videos section are of a length that is developmentally appropriate for 7th graders. In the Matter and Energy videos, the longest video was 12:46 minutes, and the shortest was 8:17 minutes, which is well within the attention span of a 7th-grade student.
- Each digital activity specifies the TEKS that it correlates to. TEKS and topic list the simulation. All videos are listed by reporting category and TEKS, and the teacher's e-book guides specify the science TEKS and the RLA TEKS.
- Digital technology and online components are developmentally appropriate for the grade level and align with the scope and approach to science knowledge and skills progression. For example, in the lesson guide for each TEKS, there is a list of applicable ELPS, RTCs, and SEPs under each activity.
- The Teacher's Guide 1-pager has a link to the 5E Lesson Model; this explains the 5E lesson model and its rationale, including digital technology such as Simulations. There is also a link to a scope

and sequence; this provides a timeframe for each year, unit, TEKS, and lesson. The TEKS lesson frame breaks down how much time to spend on different activities, including digital technology.

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 materials support teachers in integrating technology within the program. Materials provide clear instructions and tutorials on using the embedded technology within the teacher platform. Teachers can access directions on using the embedded technology using the Getting Started Guide in the Dynamic Teacher's Guide or the Support link at the top of the home page.
- The materials include a Help Center that includes links to information such as Online Tools on Summit K12, how to reset student passwords if there's a login error, troubleshooting audio recording quality issues, etc.
- The materials provide teacher guidance for digital and online assessment tools inside the guidance document for Concept Mastery. This document is located within the teacher resources and walks teachers through all types of assessments with guidance on finding them, examples of what they look like, and the order in which they should be given.
- Materials provide teacher guidance for using embedded technology to support and enhance student learning. For example, the Teacher's Guide 1-pager has a link to Teacher Getting Started. It claims that there are Teacher Training Courses available online. Another Teacher's Guide 1-pager has links to explanations, including Student Getting Started and Customer Support.

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

- The materials include resources for parents and caregivers supporting student engagement with digital technology and online components. A general letter is available that briefly describes how to access the program. Teachers and administrators are encouraged to add anything to the letter to enhance parent/caregiver knowledge of the materials.
- Clicking on the Support link opens the Help Center. Inside the Help Center is a section called "Using Summit K12-Students." Parents can access this section to find information to help students with online components. The information is available in both English and Spanish.
- Materials are available to parents and caregivers to support student engagement with digital technology and online components. For example, a letter is provided in the Teacher's Guide 1-pager under Additional Resources. The letter provides an overview of the program and how to log in; it is available in English and Spanish.
- Other examples include Home-to-School Connection letters for each TEKS. The letter identifies vital points, activities, conversations, vocabulary, and pictures. A reminder at the top of each letter says, "Remember to log in to Summit K12 to view TEKS videos, quizzes, vocabulary boosters, and more!"