Summit K12 Dynamic Science Grade 3

Summit K12 Dynamic Science Grade 3 Executive Summary

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

Grade	TEKS Student %	TEKS Teacher %	ELPS Student %	ELPS Teacher %
Grade 3	100%	100%	100%	100%
Grade 4	100%	100%	100%	100%
Grade 5	100%	100%	100%	100%

Section 2. Instructional Anchor

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

Section 3. Knowledge Coherence

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

Section 4. Productive Struggle

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

Section 5. Evidence-Based Reasoning and Communicating

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

Section 6. Progress Monitoring

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

- The assessments are somewhat clear and easy to understand.

Section 7. Supports for All Learners

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

Section 8. Implementation Supports

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

Section 9. Design Features

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

Partial Meets | Score 2/4

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

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

Evidence includes but is not limited to:

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

- The materials provide multiple opportunities to develop grade-level appropriate scientific and engineering practices, as outlined in the TEKS. For example, in the Apply/Extend section, students engage in hands-on activities that provide students with opportunities to practice, design and conduct grade-appropriate experiments. They collect and analyze data and develop and test hypotheses. The Scope and Sequence and Pacing Guide states, "Summit K12 suggests introducing the fundamental concepts and principles of science before the beginning of instruction." The materials include a Scientific and Engineering Practices link from the landing page supporting a lesson describing the SEPs and SEPs academic vocabulary introduction.
- In grade 3, materials include opportunities for students to analyze and interpret data in the Student Lab: Push and Pull. Under category 1 science videos, the video talks about the State of

Matter. The video allows students to develop and demonstrate mastery of grade-level appropriate scientific practices. Under Category 3, 3.9B, The Planets lesson, this lab allows the students to develop and demonstrate the order of the planets by allowing students to construct a real-life model.

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

- The materials provide opportunities for students to use recurring themes in making connections between and within overarching concepts and show how they connect within the materials. For example, at the beginning of the 3.9A Lesson Guide, a graphic shows how activities incorporate recurring themes and concepts across lessons. The materials include a Scientific and Engineering Practices link from the landing page supporting recurring themes and concepts in academic vocabulary introduction. Student lab materials use recurring themes, such as structure and function, systems, models, and patterns, to make connections within the overarching concepts. Students analyze a concept in terms of its components and how these components relate to each other, to the whole, and to the external environment.
- Multiple opportunities are throughout the lesson to practice TEKS 3.5B, which states, "Identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems." For example, the teacher directions include examples for class discussion in a section titled “Changes in a Food Chain.” These discussion points include moving one living thing from a food change, over-grazing implications, and bee removal, which embed RTC 3.5B. For example, in category 4, the Lesson Guide for the Lesson Environmental Changes in the Teacher Edition contains a section titled Apply/Extend, where opportunities are made to make connections between natural causes and human-caused environmental changes. Within a lesson on models of the Sun, Earth, and Moon, students make observations about the phenomena of the orbits in space.

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

- The materials strategically develop students’ content knowledge and skills appropriate for the concept and grade level as outlined in the TEKS. Grade-level content knowledge and skills are taught using Science and Engineering Practices and recurring themes so students can build and connect knowledge and apply it to new contexts. For example, as students plan and conduct investigations across the year, materials provide support for increasing complexity in student-led inquiry and investigations. The grade 3 Pacing Document includes an overview document that explains how the program is structured and gives a rationale for the sequence of units, showing how the program systematically presents content and concepts for students to make connections across units throughout the program.
- Materials for grades 3-5 integrate SEPs through the classroom with limited outdoor investigations for at least 80% of instructional time to support instruction in the science content standards and support increasing complexity in student-led inquiry and investigation. The materials include guidance for teachers to revisit topics with students in order to review previous learning; however, it is limited on revision and thinking on topics. For example, in the Lesson Guide under category 4, the Texas Fossils lesson provides teacher guidance on the content knowledge for the teacher to use when teaching the lesson. As outlined in the lesson, the teacher is able to refer to this outline to strategically develop student understanding of

concepts. An example of systematic design within the materials is how the Lesson Guides shift the discussion from 3.8AB to 4.8A to 5.8A. Each guide strategically develops student understanding as outlined in the specific TEKS for each grade level.

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

- The materials include limited opportunities for students to ask questions and plan and conduct investigations. While the Lesson Guide includes questions and activities that allow students to ask questions, the materials present experiments that are mostly teacher-led. This includes asking preplanned questions, planning and conducting investigations, and explaining phenomena using appropriate tools and models. For example, in the Student Lab, *Landslides*, for TEKS 3.10C, the question "How does water cause weathering that leads to a landslide?" is provided to students, not generated by them. Next, they write their hypothesis and then follow the procedures with predefined steps.
- For example, the teacher discussion section provides the teacher with a set of possible student questions, including guiding questions the teacher can ask to help students figure out how to create a test to see if sound affects other objects the same way. Category 2 in the Teacher Edition includes Student Labs alongside Teacher Labs that provide a question, procedure, and lab outline for students to conduct lab investigations. Still, students do not plan their own investigation around their own questions.
- The materials include limited opportunities for students to identify problems and use engineering practices to design solutions using appropriate tools and models. Most opportunities for investigations support the development of scientific practices, with fewer opportunities for students to develop engineering practices.
- While materials provide a Phenomenon Inquiry Guide, this document guides student thinking about a phenomenon to create a model. While the guide, in Step 3 of the teacher notes, does indicate teachers should elicit student ideas for investigations, this document does not include any opportunity for students to plan procedures to conduct classroom, laboratory, or field investigations.

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Indicator 2.2

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

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

Partial Meets | Score 2/4

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

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

Evidence includes but is not limited to:

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

- The materials partially provide opportunities for students to develop, evaluate, and revise their thinking as they engage in phenomena and define/solve problems. For example, in grade 3, materials embed opportunities for students to make scientific investigations; however, phenomena-based activities that allow students to construct, build, and develop their knowledge of the grade-level content is minimal and infrequently anchors instruction.
- The materials provide minimal student support in using and understanding science and engineering practices and recurring themes. Most experiences are teacher-driven or provide step-by-step directions that are not authentic applications of science concepts. For example, in the Teacher Edition, Category 1, 3.6D Lesson, a section called *Engineering Design Process* facilitator directions state, "Discuss how to create structure (bridge), the purpose of the structure, and how materials change the strength of the structure." The teacher in this example is providing the majority of the information to students rather than guiding students in the engineering practices.

- The materials do not consistently ask the students to make connections or provide opportunities to ask student-led questions.. For example, in the teacher edition for the *Rapid Changes* lesson for 3.10C, the materials state, in bold blue type, “The teacher will provide instruction on the TEKS content with relevant examples and explanations. The teacher will also ask discussion questions about the content.” There is no instruction to make connections or for students to ask their own questions.
- Throughout the lessons, there is minimal evidence of opportunities for students to generate their own questions and provide authentic applications of SEP, RTC, and grade-level content. For example, in the teacher edition for the *Rapid Changes* lesson for 3.10C, the materials state, “The teacher will discuss the items below. Teacher, please, allow students to demonstrate their understanding of the content and time to ask questions as needed.” The phrase “as needed” does not require teachers to allow students to generate their own questions.

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

- The materials provide opportunities to leverage students’ background knowledge and experiences related to the phenomena or an engineering problem and adequately address potential areas of misunderstanding For example, in a grade 3 Engage portion in the Lesson Guide, students are prompted to activate prior knowledge using guiding questions. Materials in the 3.6A Lesson Guide provide a teacher Common Misconceptions guidance section to help teachers gauge where some students may have inaccurate or inadequate prior knowledge.
- The materials provide teachers with opportunities to leverage students’ prior knowledge in the following examples. In the Teacher Edition, Category 1, 3.6D Lesson Guide, the Engage section asks students to connect their prior knowledge to probing questions about bridges. For example, the facilitation guide states, “How do innovations (such as bridges), created by engineers help others?” In addition, the guidance prompts students to identify important things that engineers consider when planning a structure. This discussion leverages students’ prior knowledge related to engineering problems. In the Teacher Edition, Category 2, 3.8A Lesson Guide, the Engage section prompts students to identify items at home or school that help them see more clearly, items that heat things, and items that can move. This discussion allows leveraging students’ prior knowledge and experiences related to phenomena during the remainder of the lesson sequence.

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

- The materials identify student learning goal(s) behind each phenomenon or engineering problem. Materials include a Lesson Guide that begins with a section titled Students will: where the materials clearly outline for the teacher the scientific concept covered in that lesson and the goals behind each phenomenon and engineering problem. Throughout the Teacher Edition in the Lesson Guide, the Teach and Discuss section describes each specificity within the TEKS and the goals behind each phenomenon and engineering problem.
- Materials identify student learning goals behind each phenomenon or engineering problem. For example, in grade 3, a lesson on the properties of matter presents students with the problem of sorting rocks. Materials clearly outline the lesson goal: "[Student will] Classify matter by observable physical properties, including texture, flexibility, and relative temperature, and

identify whether a material is solid or liquid." Another example in the first part of the lesson *Changes in the Food Chain* states, "Identify and describe the flow of energy in a food chain and predict how changes in a food chain such as the removal of frogs from a pond or bees from a field affect the ecosystem."

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Indicator 3.1

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

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

Meets | Score 6/6

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

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

Evidence includes but is not limited to:

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

- Materials are vertically aligned and designed for students to build and connect their knowledge and skills within and across units and grade levels. For example, Lesson Guide 3.9B includes an explicit and systematic method that allows students to connect to prior knowledge during the *Engage* section of the Lesson Guide. The directions state, “Activate students’ prior knowledge, experiences, wonderings, and initial explanations about an anchoring phenomenon. Introduce the Phenomenon Sensemaking Guide and leverage student wonderings to collectively develop the Guiding Question for this unit: HOW CAN YOU CHANGE THE POSITION AND MOTION OF AN OBJECT?” The anchoring phenomenon is a Rube Goldberg Machine that connects to the students’ prior knowledge from second grade, “2.7A explains how objects push on each other and may change shape when they touch or collide.” This demonstrates that the materials are designed for students to connect their knowledge across grade levels.
- Materials include a vertical alignment table that supports fostering connections between students' prior knowledge and skills to current grade-level knowledge and skills. Placing this vertical alignment table within the Lesson Guide and following it with activities that directly provoke prior knowledge and are student-centered exemplify how the materials allow students to build and connect to prior knowledge.

- There are also grade-level concept connections that allow teachers to spiral through prior learning or anticipate future learning. For example, Lesson Guide 3.7B has a section titled Grade Level Concept Connections which states, “Students have an opportunity to extend and enhance their understanding of this concept through: 3.7A demonstrate and describe forces acting on an object in contact or at a distance, including magnetism, gravity, and pushes and pulls. 3.8B Plan and conduct investigations that demonstrate how the speed of an object is related to its mechanical energy.” This earmarks the learning for the teacher so that students can make connections across units within the grade level. Providing this information in the Lesson Guide supports the educator in building a coherent story of science with their students.

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

- The vertical alignment framework shows how concepts build on one another by being organized by category and vertically aligned concepts. This supports the teacher's understanding of the ways concepts increase in depth over time. The listed lessons demonstrate a coherence of science concepts as well as an allowance for deeper conceptual understanding. For example, the table outlines that the lessons progress from Everyday Energy in 3rd grade to Transfer of Energy in fourth grade. The table also shows that in second grade students study The Sun, The Earth, The Moon, and Objects in the Sky followed by Models of The Sun, Earth, and Moon and Planets in third grade.
- The materials provide a 3rd *Grade Pacing Document* that includes a 3rd *Grade Pacing Guide* that intentionally sequences the lessons based on the reporting categories set forth by the TEKS. Teachers are able to access the pacing document to view the vertical alignment of TEKS across grade levels.
- The materials provide a Lesson Launch Pad with lessons covered in grade 3, along with lessons vertically aligned to that same concept in grade 2. The lessons linked in the Lesson Launch Pad are stand-alone lessons that are TEKS-based and vertically aligned. This is one way the materials suggest teachers scaffold learning for students to develop mastery in grade-level knowledge and skills and build understanding.

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

- The materials include different strategies to clearly and accurately present grade-level-specific core concepts. For example, in category 4, in the Lesson Guide for TEKS 3.12B, under the Apply/Extend portion of the lesson, teachers are guided to use a graphic organizer regarding the food chain and its components. The graphic organizer is pre-populated with possible answers.
- Materials include guidance for teachers on how to accurately present grade-level-specific content. For example, the teachers can view the video located under each category to show students grade-specific core concepts. For example, in 3rd grade under Category 2, lesson video 3.7A, the video helps students understand the core grade-level concepts.
- Materials include clear and accurate presentations of the RTCs and SEPs. This is noted within each learning activity box in Lesson Guide 3.7B. For example, at the bottom of the box that describes the “Investigate Phenomena: Rube Goldberg Machine,” there is a list of connected RTCs and SEPs. These include [SEP 3.1A, 3.5G, 3.2B, 3.3A] [RTC 3.5C, 3.5D] for this particular activity.

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

- The materials include a *3rd Grade Vertical Alignment* which demonstrates the grade level TEKS and their expected outcomes for student mastery of that specific grade level and evidence of guidance around the boundaries of each TEKS.
- The materials include a Lesson Guide that states the learning objective. For example, lesson 3.6B states, "Students will plan and conduct investigations that demonstrate how the speed of an object is related to its mechanical energy," which demonstrates the mastery goal of the lesson.
- Materials provide two assessments per TEKS which include: formative and vocabulary. Materials include mastery requirements within the boundaries of the main concepts of the grade level.

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Indicator 3.2

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

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

Meets | Score 6/6

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

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

Evidence includes but is not limited to:

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

- In the grade 3 sample provided, the Changes Position and Motion lesson offers a Vertical Alignment table, which serves to support teachers in comprehending students' prerequisite knowledge as per the TEKS standards. Additionally, it aids in preparing for future grade-level focus. The materials provide support by including a vertical alignment document for grades 3-5 in the *Scope and Sequence and Pacing Guide* for grades 3-5. While easy for teachers to view the TEKS side by side, the resource supports teachers in their understanding of vertical alignment.
- The materials provide information on the horizontal alignment across the grade levels, the recurring themes and concepts, and the science and engineering practices by listing these as they occur in lessons. The suggested evidence supports teachers' understanding of the horizontal alignment and how the RTC and SEP are integrated into the materials to support student mastery of grade-level content. For example, in the Lesson Guide for Category 1, *Combining Materials*, the TEKS including SEP and RTC are listed, and, while evident in the lesson activities, there are labeled support for teachers to understand the horizontal alignment, such as the targeted skills developed and conception understanding is built during students' grade 3 instructional year.

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- The materials include a TEKS-SEPs-RTCs Crosswalk that shows where each TEKS, SEPs, and RTC is covered in the materials. It uses a color coding system to indicate which TEKS-based lessons include SEPs and/or RTCs. One color illustrates for the teacher that the SEPs/RTCs are embedded in the lab investigation, another color indicators they are embedded within an inquiry or explore activity. This document supports teachers in understanding the horizontal alignment of the TEKS, SEPs, and RTCs within the materials.

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.

- In the grade 3 sample provided, the Changing Position and Motion lesson offers an *Investigative Phenomenon* section where students observe the Chain Reaction video demonstrating changes in movement and position to objects from a push or a pull. A teacher note is provided to "not explain the phenomena to the students." Students watch the video and record their observations and wonderings.
- In the grade 3 sample provided, the Classify by Physical Properties lesson offers a Misconception section that offers guidance for teachers of the misconceptions students may have and helps them address these through questioning and targeted learning activities throughout the unit. Examples include*:* Objects set into motion and eventually come to a stop on their own. Instead, objects do not stop on their own. An external force acts on them to stop.
- The materials contain explanations and examples of science concepts that support the teacher's subject knowledge. Misconceptions documents support the teacher in recognizing barriers to student conceptual development and do provide support for how teachers can address the misconceptions and reduce barriers for students.

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

- The materials include Philosophy which outlines the overall reasoning behind the structure they use. The materials name the differentiated support that is embedded in the program design. For example, teacher philosophy provides a rationale for using Claim, Evidence, and Reasoning models for learning. It is student-centered instead of teacher-centered. Resource philosophy claims to allow "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."
- The materials provide a Dynamic Science Overview reasoning guide for teachers and provide a framework explaining the main intent or goals of the program. The intent is to advocate for scientific exploration and discovery every day along with an encouragement for new inventions.
- Materials provide a rationale for the instructional design of the program. For example, materials provide a rationale for using the 5E model for learning. The material cites that their instructional model is "designed for students to productively struggle" and "build knowledge through exploration, collaboration, and teacher guidance."

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

Evidence includes but is not limited to:

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

- Materials consistently support students' meaningful sensemaking through reading, writing, thinking, and acting as scientists and engineers. The materials include a section titled Science Literacy where teachers are able to access books based on the reporting category. For example, under category 1, TEKS 3.6A, the teacher is able to use the book titled *What is Matter?* to support students' learning in making sense of content. The book includes guiding questions, such as "What is matter?" to elicit understanding of the content.
- Materials provide opportunities for students to engage in meaningful sensemaking through writing and thinking. Some of the materials include a section titled Mini Lab where students are provided additional tasks to ensure mastery of the content. For example, in Category 1, lesson 3.6B asks students to work in groups to demonstrate how solids have a definite shape while liquids and gasses take the shape of their containers. The section asks students to work in groups and write their plans in their science journals. Additionally, under category 4, lesson

3.13B, students are asked to identify the similarities and differences between the animal and plant life cycles. In this lesson, the students work in groups to label the cycle of each being and compare the similarities and differences between the plant and animal cycles with models. The students are asked to write their findings in the record and present their findings to the class.

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. The materials include a section titled Science Literacy where students have access to grade-level appropriate text that allows them to gather evidence of science concepts. For example, in the book titled *Our Ocean*, students learn about the oceans around the world and their size compared to other landforms. The materials include a teacher guide for each of the books included.
- The materials provide a Differentiated Science Library that includes nearly 40 texts covering the majority of the TEKS for students to interact and engage with grade-level appropriate scientific texts. These are referred to in numerous lesson experiences for students to read and study in order to develop their understanding in the lesson cycle.
- The materials provide science videos that include grade-level appropriate scientific texts. These videos are engaging and provide students with an alternative way to consume traditional textbook information through an electronic medium.

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 Category 1, lesson plan 3.6A, the students are asked to use a graphic organizer to show the physical properties of objects. Later, the students are asked to present their findings to the class and answer any questions the students may have.
- The materials include graphic modes of communication for students to develop and display understanding. In Category 2, lesson plan 3.7B, students use a Venn diagram to compare pull and push factors. Then the students are asked to present to the class. In Category 4, student lab 3.12B, students learn about the food chain and use a graphic organizer of cause and effect to explain what is the effect when people remove organisms from their food chain. These activities help to support students' learning and understanding of scientific concepts.
- The materials provide engineering challenges that include opportunities for students to engage in written and graphic modes of communication. For example, in Lesson 3.7B, students are charged with creating a prototype for a new type of playground equipment. After they receive teacher approval and engage in some planning, students create a design sketch of their prototype and, in written form, provide a summary of how their design will work. They continue to engage in these written and graphical activities throughout this and other engineering challenges. These provide ample opportunities for students to develop and display their understanding of scientific concepts.

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

- Materials support students to act as scientists and engineers who can learn from engaging in phenomena and engineering design processes, make sense of concepts, and productively struggle. The materials allow students to act as scientists and engineers. For example, in Category 1, the lesson lab titled Do I Have a Shape? presents the lesson around the three states of matter and how solids have a definite shape while gasses take the shape of their container. The lessons provide productive struggle as the students are directed to conduct observations using the balloon to determine how matter interacts with shapes. The behavior of the students exploring and testing provides an opportunity to act like scientists, helping them to make sense of the concept.
- The materials provide numerous opportunities for authentic student engagement and perseverance of concepts through productive struggle while acting as scientists and engineers. Under Category 3, *Earth and Space* unit, the students are presented with a video that directs them to explore their home and determine what natural resources were used to construct it. This provides students with an authentic opportunity to engage with engineering, thinking about properties of matter, and productively struggle as they seek to find these answers at home. This experience allows students to later construct explanations of how and why these resources were chosen to construct it.
- The materials create multiple transfer opportunities for students to take what they have learned and use it flexibly in different situations as engineers and scientists. For example, in grade 3, under Category 4, the Student Lab: Thrive, Perish, or More, the students are presented with four natural changes and are asked to describe the change that would affect organisms. They are asked to use their electronic devices to research and the partner to discuss what they have learned and make sense of the concept together. This provides an opportunity for students to research like a scientist or engineer and engage in some productive struggle to find information to then share with a peer.

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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' content knowledge and skills development as appropriate for the concept and grade level. Materials provide opportunities for students to construct and present developmentally appropriate written and verbal arguments that justify explanations to phenomena and/or solutions to problems using evidence acquired from learning experiences.

Evidence includes but is not limited to:

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

- Materials provide opportunities for students to make claims while prompting students to support these with evidence. The Phenomenon Sensemaking Guide prompts students to use evidence multiple times. For example, in Part 2, Connecting Knowledge and Phenomenon, students record the evidence observed, then apply what they already know, and then use that to revise their model. In Part 3, Explaining the Phenomenon, students are prompted to gather evidence in order to plan for Part 4: Claim, Evidence, Reasoning. The Part 4 section has students record their claim, their evidence and their reasoning on the first page and then refine their ideas into a more formal written composition. This document focuses students on collecting observations and evidence in order to make a claim about phenomena.
- The materials prompt students to write a hypothesis and sometimes prompt students to use evidence to support their hypothesis. In Lesson Guide 3.6D, the Check for Understanding question task 4 poses the question, "Which material is the best for building the tallest tower?" This question is an opportunity for students to make a claim and support it with evidence based on what students know regarding physical properties of the materials. Also, the Student Lab, 3.10C, Category 3, includes an open-ended space for students to record a Hypothesis with the sentence stem, "I think." The Conclusion section includes a sentence stem, "My conclusion is."

In both activities, the teacher materials prompt the teacher to remind students to use evidence to support their hypothesis, conclusions, and claims. The materials also include documents such as the Planning Descriptive Investigations Tool and the Student Investigations Planning Tool to support students in recording their hypothesis and supporting that with evidence.

- The materials provide prompts to students to encourage them to use evidence to support claims and hypotheses. For example, the student investigations prompt students to use evidence they have gathered to support their statements. In lesson 3.7B, the Student Investigation: Ping Pong Inquiry provides such a prompt for students. The document states, “write an explanation using evidence collected during your investigation and share your findings with peers.”

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

- Materials consistently embed opportunities to develop and utilize scientific vocabulary in context throughout the curriculum in grade 4. The materials include a section titled Vocabulary Mastery where students have access to scientific vocabulary words in context. The materials also embed a variety of representations to facilitate the learning of new vocabulary words. The materials include a Vocabulary section with direct opportunities to practice academic vocabulary. Guidance at the beginning of the section states, "Core Vocabulary should be emphasized and taught in context throughout the lesson." This provides guidance to the teacher to create opportunities for students to develop and utilize scientific vocabulary in context.
- The materials embed opportunities to develop and utilize scientific vocabulary in context**.** In the materials section titled, Vocabulary Mastery, students access context vocabulary words. The students select the scientific vocabulary word that fits the context of the sentence. For example, for TEKS 3.12D, students are presented with the sentence, "The fish ____ is very old." A drop-down menu presents a list of vocabulary words such as scales, fossils, shadow, and layers. The students look at the picture and read the sentence and determine the best-fit vocabulary word for the sentence in context. In Category 2, Lesson 3.8B, in the Vocabulary section of the lesson, students partake in a Word Association activity in which students are given opportunities to apply scientific vocabulary within context.
- The materials present scientific vocabulary using multiple representations to enhance students' learning and engagement. The materials include a tool where teachers select vocabulary words that are related to a category and create their own flashcards that students use to study the words. This tool also includes pictures and/or diagrams that support the development of scientific vocabulary. In Category 2, Lesson 3.8A, in the Vocabulary section of the lesson, students partake in the Word Routine activity in which they are given opportunities to engage in immediate practice using the words through turn-and-talk activities with a partner or group. In the 3.6C, Heating, and Cooling Matter Lab, students are provided with opportunities to enhance their vocabulary through hands-on experiences. First, students look at a picture to bridge the vocabulary. They use a vocabulary word next to each picture on the chart. Then, students write a reflection about something new they learned in their lab. Students are encouraged to use a wide range of vocabulary during the writing prompt. These activities help students understand new terms by relating them to concrete representations of the vocabulary words.

Summit K12 Dynamic Science Grade 3

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 partake in discourse= and opportunities to develop the skill of *how* to engage in the practice of argumentation and discourse. Materials provide guidance for argumentation to support students' development of knowledge in skills. For instance, in lesson 3.7B, the Teaching Note says "Consider using an argumentation structure for students to share their ideas because each group may have investigated a different question. With this structure, at least two students stay at their table to share their group's findings with other students who rotate to them. The other group members stray away from the table to be presented to by other student groups. Students provide feedback to each other, ask questions of each other, and share what they learned from the argumentation when the stray students return to their group. This provides explicit instructions on how argumentation can be structured to support students' development of content knowledge but also improve their skills in argumentation and discourse.
- Materials include opportunities for discourse as a way to support students' development of content knowledge and skills. In Category 3, the Lesson Guide 3.11B Teach and Discuss section includes an opportunity for students to work in groups in order to explain how a selected resource can be conserved and why it is important to conserve the resource. The lesson provides support for student argumentation and allows students the opportunity to learn the skill of how to engage in the practice of argumentation.
- The materials integrate argumentation throughout to support students' development of content knowledge and skills. For example, in the Student Investigation: Order of the Planets, students are working in groups to identify the order of the planets and analyze each planet's orbit. Students then create a model to demonstrate their understanding of the concept. The teacher guide states "students communicate their explanation to their peers in an argumentation circle and revise their models as needed with new learning. Students discuss the benefits and limitations of their models such as their size, scale, properties, and materials." This provides a productive opportunity for students to engage in argumentation in discourse as they acquire the knowledge and skills for this specific TEKS in grade 3.

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

- Materials provide opportunities for students to construct and present developmentally appropriate written and verbal arguments. The materials include a Teacher Resource page that includes teacher-facing material about science writing. This document explains the Claim, Evidence, and Reasoning framework for responses to a scientific question. The Science Writing support document also includes an example of a graphic organizer and rubric. In addition, the implementation guidance states, "This CER framework should be introduced at the beginning of the course, and reinforced by application and review throughout the school year." To support this, the materials provide a student-facing Claims, Evidence, and Reasoning document where students are able to record their observations, evidence, their claims, and the reasoning for those claims. This document aligns with the teacher materials. The Phenomenon Sensemaking Guide, also student facing, contains a similar structure to support students in constructing written arguments to justify their explanations using evidence. These two student-facing

documents are referenced in the teacher guide so that they can be employed at strategic points in the lesson to scaffold student understanding and formulation of their written arguments.

- Materials provide opportunities for written and verbal arguments to be constructed. For example, within the Engineering Challenge student document for lesson 3.7B, students engage in a thorough process of recording and formulating a written argument for their prototype of a piece of playground equipment for a park in Austin, TX. Students must construct written explanations of their solution and be able to articulate their argument to the teacher for approval to test their prototype. Later in the challenge, Step 6, “each team will present their prototype and explain how it operates.” Students also have this opportunity to give and receive feedback on their written and verbal arguments for the creation of their prototype.
- Materials provide opportunities for students to construct and present developmentally appropriate written arguments to justify explanations of phenomena. For example, in Lesson Lab 3.12A, students observe how the temperature affects plants' responses through dormancy. In this lesson, students are asked to measure plants and their temperature. At the end of the lesson, the students used their newly acquired content knowledge and wrote a conclusion based on the data they gathered.

Summit K12 Dynamic Science Grade 3

Indicator 5.2

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

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

Partial Meets | Score 2/4

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

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

Evidence includes but is not limited to:

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

- Materials provide some teacher guidance on anticipating student responses and the use of questioning to deepen student thinking. Materials provide some guiding questions in the Engage and Discuss sections, yet there are limited follow-up questions throughout the materials to deepen students' understanding.
- Materials provide limited guidance for the teacher on how to build on students' thinking or provide teacher responses to possible students' responses. The materials provide some teacher questions and potential student responses in the Teach and Discuss portion of the lesson, yet it is not consistent throughout the curriculum. For example, in grade 3, Category 2, Lesson 3.7A, include "What can force do? (Force is a push or a pull. It can stop, change direction or position, slow down, or speed up an object.)"
- Materials provide few opportunities for questioning to deepen student thinking. For example, in Category 3, Lesson 3.10B Lesson Guide, Check for Understanding section, Task 4 poses the question and anticipated response, "Relevance-Why is it important to know the formation of soil? It can help us determine the purpose of the soil. Such as planting, building, and making ceramic pieces." Materials do not provide follow up questions to deepen students' understanding.

- There is limited guidance for how to use questioning to deepen student thinking. For example, in Category 4, Lesson Guide 3.12A, teachers are presented with three questions to engage the students in the lesson. Included in these two questions are three possible answers the students might respond to. For example, the first question states, "What are some things that affect animals?" and right next to these questions are some possible responses such as "all animals are affected by weather, including precipitation and temperature." The second question states, "Why are the physical characteristics of an environment important?" and one possible answer is provided, such as "they support the living things in an ecosystem." Although the questions and answers are provided, there is limited guidance on how to probe with higher-level questions to deepen student thinking.

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

- The materials include partial 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 how to scaffold students' development of scientific vocabulary. The materials include the use of an e-poster and rely primarily on pointing to the pictures. The Study Guide includes a vocabulary prioritization section for application in helping students grasp the concepts covered in the unit. However, there is teacher guidance on how to scaffold vocabulary development.
- Materials do not explicitly name the opportunity or provide explicit guidance on how the teacher can support possible vocabulary pitfalls in the lessons. Materials provide some activities to enhance students' development of scientific vocabulary. In grade 3, Category 2, Lesson 3.8A, students make use of a Concept Map in the Vocabulary section of the lesson. Students are assigned a word and use the graphic to deepen their understanding of the vocabulary introduced by writing down phrases associated with the term. In Lesson 3.8B, students use vocabulary in context in the I Say, You Say! activity in the Vocabulary section of the lesson. Materials only prompt the teacher with short phrases to support development, but no clear instructions on how to use the experiences to scaffold and support vocabulary development.
- The materials include partial teacher guidance on how to scaffold and support students' development and use of scientific vocabulary in context. For example, in Category 3, Lesson 3.11A, the e-poster incorporates images and labels with keywords in bold to define scientific connections between natural resources and their use. The second poster offers a sentence frame and blanks for labels in order to facilitate and build vocabulary knowledge. Although this is a valuable instructional tool, the Lesson Guides rarely indicate optimal opportunities to reference this anchor of support throughout instruction. Instead, it is an isolated activity.
- The materials include partial guidance on how to scaffold and support students' development and use of scientific vocabulary in context. In Category 4, Lesson Guide 3.12B, teachers are directed to project the e-poster to the class and have the students point at the word and explain the vocabulary word to the class. In the same lesson, the teacher is guided to use a word web with the center of the web being the content vocabulary words, and the students are asked to write words that describe or are related to it. The Lesson Guide includes an example of the web but does not provide teacher guidance on scaffolding and supporting the students' development of the word. In Lesson Guide 3.13B, the materials include a section titled Vocabulary where teachers are presented with a list of "core vocabulary definitions" such as organisms - a living thing and life cycle - all the stages of the life of a living thing. The materials do not include

teacher guidance on how to scaffold the understanding of these vocabulary words within the lesson.

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

- The materials provide teacher guidance on preparing for student discourse and supporting students using evidence to construct written and verbal claims. The Teacher's Guide provides information in the section Science Writing about the process and rationale of the Claims, Evidence, and Reasoning framework with examples. This, when combined with the student sensemaking guide and prompts for teachers in the lessons to provide opportunities for students to engage in discussion with their peers using evidence to support their claims.
- Materials provide teacher support for student discourse by providing discussion questions. In the Lesson 3.8B Teach and Discuss section, the lesson asks, "How does pulling this object change its position and motion?" Questions like these, when used in conjunction with the student Sensemaking Guide and other questions in the Check for Understanding sections, provide structures and guidance for preparing students to discuss concepts and content. The student investigation guides teachers to expect students to "write an explanation using evidence collected during their investigation and then share their findings with their peers."
- The materials provide a Teacher Guide for each performance task that provides teacher guidance to support students in using evidence to construct written and verbal claims. These guides provide guidance in Part 2: Writing a Claim for students to support the claim with evidence from the investigation, the Sensemaking Guide, and other learning experiences.
- The materials provide general question stems for supporting student discourse. The materials often state, "To support student discussion, discourse, and argumentation of the concept, some suggested sentence frames might include: I observed the same thing as ... and want to add that I also noticed…, I agree with ... because…, I have a question about…, Can you tell me more about…, I understand your point, and I wonder…"

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

- The materials support and guide teachers in facilitating and sharing the students' thinking. Materials provide several exemplars of student-written responses as well as possible answers to questions in the Check for Understanding sections in the lessons. Materials state that teachers can use the exemplars as a guide to help them facilitate students showing their thinking in a written form.
- The materials provide student pages and teacher guides for engineering challenges and performance tasks. The student pages provide structures for students to develop and organize their thinking. The engineering challenge student pages contain specific sections for students to propose solutions and later evaluate and improve their solutions. In the section Present and Evaluate, students organize their thoughts in a chart to prepare for sharing their thinking. The Engineering Challenge for 3.7B states, "Each team will present their prototype and explain how it operates using the movement of soil and rock."
- The materials support and guide teachers in facilitating and sharing the students' thinking and finding solutions. In Category 4, Lesson Lab for TEKS 3.12B, teachers are guided to instruct students to use their electronic devices to research a food chain and create it on paper. The teachers tell the students that they will mark an X on an organism and predict what will happen

to the ecosystem. Then teachers allow the students to exchange their predictions and agree or disagree. In Lesson Guide 3.12C, teachers allow students to create a graphic organizer to identify the changes to the environment caused by people or nature. The students are tasked with presenting their graphic organizer to the class. The materials include two examples that teachers can refer to prior to students sharing their responses.

- The materials provide sentence frames that allow teachers to support students in sharing their thinking. For example, in the lesson for 3.11C, students observe an image of a mountain of man-made waste at a landfill. Students then draw a model of what they believe caused this much waste to accumulate. Students then share and compare their models with a partner to share their thinking. The teacher's lesson guide provides "sentence frames to communicate their explanation: I think this landfill was caused by . . . and I think this because . . ." These sentence frames guide teachers in supporting students with initiating conversations to share their initial thinking before moving into the lesson focused on reducing, reusing, and recycling.

Summit K12 Dynamic Science Grade 3

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 as well as the science and engineering practices and recurring themes and concepts. Materials include assessments that require students to apply knowledge and skills to novel contexts.

Evidence includes but is not limited to:

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

- Materials include access to a *Dynamic Science Assessment Bank* to support the creation of diagnostic assessments to assess learning gains. The Assessment Bank is located within the *Content Mastery* section of the landing page. Educators can create custom assessments for students across different parameters such as the number of questions, item types such as text entry or multiple choice, and dual-coded questions. This customization tool allows educators to predetermine the percent of questions to be dual-coded, with specific TEKS and STAAR 2.0 item types aligned.
- Materials include examples of formative assessments to assess students in a variety of ways. In grade 3, Category 2 in the *Concept Mastery* dashboard, the *Describing Forces* lesson, the Formal Assessment 1 acts as a diagnostic quiz as its completion unlocks subsequent opportunities for practice such as a TEKS video, Vocabulary practice, and a final summative assessment Formative Assessment. In grade 3, Category 3 provides several examples of formative assessments by including a variety of response types, including discussion and written responses to the prompts. Prompt number 3 states, "The students write their responses in their science journals and explain them to the class." Another opportunity for formative assessment is within the *Concept Mastery* section from the landing page. For example, Category 3, *Earth and Space,* includes

Formative Assessment 1 and Formative Assessment 2 for each TEKS within the category (3.9A, 3.9B, 3.10A, 3.10B, 3.10C, 3.11A, 3.11B, 3.11C).

- Materials also include informal assessments to assess students in a variety of formats. In grade 3, Category 2, Lesson 3.8A, in the Engage section, *Everyday Energy* lesson, materials prompt the teacher to pre-assess students using an informal assessment and gauge understanding by asking them to do the following: "1. Identify items from your house or school that help you see things more clearly. (lamp, glasses, light in the house, flashlight, telescope). 2. Identify items that help heat things. (stove, oven, microwave, heater, barbeque pit, candle, campfire) 3. Identify items that can move. (people, electric toys, clothes in a dryer, the turntable in a microwave, the hands on a clock)."
- The materials allow teachers to turn assessments on or off for student viewing and participation. In Category 4, Lesson 3.12A, *Animals Growth and Behavior*, educators are provided with a list of TEKS along with lessons with an option for formative assessment questions.

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

- The materials assess all student expectations and indicate which student expectations are assessed for grade 3. For example, materials include an Assessment Bank of questions for each reporting category, different item types, are organized by TEKS, and lesson names. It includes access to all the STAAR 2.0 item types and options to customize the length, TEKS, number of items, % of dual-coded items, and item types. Each lesson includes two formative assessments that are aligned to a specific TEKS along with vertically aligned TEKS from the grade level above and below. Materials provide a Pacing Document that includes a cohesive scope and sequence that maps out and outlines what will be taught in the third grade and how it will be assessed.
- The materials include TEKS-aligned assessments that align the curriculum standards and student expectations and are designed to measure student understanding and mastery of the concepts and skills taught in the materials. For example, formative assessments within the Concept Mastery section from the landing page are listed by TEKS. For example, Category 3, *Earth and Space,* includes Formative Assessment 1 and Formative Assessment 2 for each TEKS within the category (3.9A, 3.9B, 3.10A, 3.10B, 3.10C, 3.11A, 3.11B, 3.11C).

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

- Materials include assessments that integrate Scientific Concepts and Engineering practices with recurring Themes and Concepts through the performance tasks found at the end of each lesson. In Lesson 3.7B, *Changing Position and Motion*, the materials include a performance task where students are given the task of designing a playground where the students change motion and position. The students are asked to use the engineering design process to conduct this performance task. The materials include a *Student Performance Tasks* and *Teacher Guide and Rubric* that teachers can use to both measure student outcomes and provide guidance around the performance tasks.
- Materials include assessments that integrate Scientific Concepts and Science and Engineering practices with Recurring Themes and concepts through the performance tasks found at the end of each lesson. In Lesson 3.11C, *The 3 R's,* students assess the amount of waste at school and collect data on water usage. Then, they work in groups and use the engineering design process

to identify ways natural resources at school can be reduced, reused, or recycled. Students work in small groups to complete an Engineering Task. After analyzing the amount of waste at school and describing the natural sources being wasted, students work in small groups and use the engineering process to define the problem related to waste and create a solution to increase conservation efforts at school. Students use the engineering design process to design a prototype that helps students better reduce, reuse, and recycle their trash and conserve natural resources. In addition, students use a rubric to evaluate their action plans.

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

- The materials include assessments that require students to apply knowledge and skills to novel contexts. In grade 3, Category 2, Lesson 3.8A, *Everyday Energy*, materials provide opportunities for students to apply knowledge to novel concepts in Formative Assessment 1. The assessment asks, "Which is the best example of thermal energy in your house?" and "Which of the following is an example of thermal energy?" In Lesson 3.8B, *Speed and Mechanical Energy,* Formative Assessment 1 asks, "How does the speed of an object relate to its mechanical energy?" and "How does a propeller increase the speed of an airplane?" These questions provide opportunities for students to apply knowledge to novel concepts.
- Materials include opportunities that require students to apply knowledge and skills to a novel context. In Category 3, Lesson 3.11A Study Guide includes a *Wrap Up* section that asks the students to “Write two to three sentences explaining why it is important to conserve natural resources.” This open-ended task allows students to generate new ideas beyond what’s been learned during instruction. In Lesson 3.10A, Formative Assessment 1, question 3 presents a table with weather information on four different cities that students may not have been exposed to in prior instruction. The question allows the students to evaluate statements about the comparative weather for the four cities and determine which statement is not true. These opportunities allow students to apply knowledge to novel contexts.
- The materials include assessments that require students to apply knowledge and skills to novel contexts. In the Category 4 lesson *Texas Fossils*, students create models of the different fossils, such as ammonites, trilobites, and leaf fossils. The same scientific concepts are assessed in novel contexts under the assessment tool. The assessment provides questions such as "What does the fossil tell us about the environment in this area millions of years ago?" These questions allow students to apply their knowledge and skills to novel contexts.

Summit K12 Dynamic Science Grade 3

Indicator 6.2

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- Materials include information and/or resources that provide guidance for evaluating student responses. The Teacher's Guide includes a link to a document for Science Writing/CER. The document shows a scoring rubric for a Short Constructed Response. The Science Writing/CER module also includes a rubric and short constructed responses.
- The materials include rubrics that provide guidance for evaluating student responses. In the Teacher Edition of the lesson for TEKS 3.7B, in the *Performance Task* section, students have an engineering design challenge to create playground equipment that changes the motion and position of kids playing on it. This challenge includes a Teacher Guide and Rubric link to guide the activity and provide guidance for scoring student products using the provided rubric.
- The materials provide sections within the lesson with guidance for evaluating student responses and checking for student understanding during the lesson. For example, Lesson 3.7B includes a Check for Understanding section in the lesson guide that provides questions for the teachers to ask students to determine progress. Each of these questions provides a sample response; this guidance helps teachers evaluate student responses to the questions, and the nearby Teaching Note asks teachers to "use student responses to identify misconceptions, instructional needs…and to make instructional decisions that meet individual student needs."

Summit K12 Dynamic Science Grade 3

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

- The materials provide assessment tools that result in data reports teachers can use to track student progress and respond to individual needs. Teachers can generate reports for Concept Boosters and Vocabulary Boosters. The downloadable reports can be generated for individual students or entire classes. Under reports in Content Mastery, a teacher can see first-attempt, vocabulary, and second-attempt scores by TEKS, individually or by class. Teachers can export the report into a spreadsheet and manipulate the data with colors or groupings.
- Teachers can use the "Teacher Reports Dashboard" to view students' scores on the Concept Mastery and Vocabulary Mastery activities. The reports are divided by Reporting Category and broken down by each lesson guide and standard. Teachers can download reports for each Reporting Category onto an Excel spreadsheet. The reports show student names and scores on each standard assessed in the Reporting Category. For example, In grade 3, Category 2, the *Concept Mastery* dashboard for Lesson 3.7A, *Describing Forces,* shows the Vocabulary before Formative Assessment 2. The students must earn 80% or higher in their Vocabulary assessment before accessing Formative Assessment 2.
- The materials include a document titled *Differentiation and Acceleration,* where teachers have access to lessons and formative assessments they can toggle on and off to assess students' understanding of the scientific concepts in grade 2 or 3. This vertical access provides teachers with data on how the students may be doing and a resource that may be used in response to student progress.

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

- Materials include tools that yield relevant information for teachers when planning instruction, intervention, and extension. The *Assessment Bank Guide* linked in the Teacher's Guide indicates that class and student-level reports are automatically created when an assessment is generated from the Assessment Bank. The bank allows teachers to create assessments based on TEKS and by reporting categories. In addition, this tool generates information that teachers can use when planning interventions for on-grade-level and below-grade-level TEKS, where students can be pulled based on their scores.
- Materials include a Concept Mastery management tool that allows teachers to review and organize student data to differentiate science instruction according to assessment results. In grade 3, materials allow teachers to download a *Concept Mastery s*tudent report based on the reporting category from the Teacher Reports Dashboard. For reporting category 2, this report generates student data for the following student expectations: 3.6A, 2.6A, 3.6B, 3.6C, 2.6B, 3.6D, 2.6C. The report also includes three data points for each expectation per student, titling them 1st, VB, and 2nd. In addition, materials allow teachers to download a *Vocabulary Mastery* student report based on the reporting category from the Teacher Reports Dashboard. For reporting category 2, this report generates student data for the following student expectations: 3.6A, 2.6A, 3.6B, 3.6C, 2.6B, 3.6D, 2.6C. The computer-generated report color codes based on their performance and can aid teachers in organizing student data and planning differentiated instruction. These tools and reports can be used by teachers to effectively plan instruction, intervention, and extension activities for all learners.

Summit K12 Dynamic Science Grade 3

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

- Materials provide teacher guidance on leveraging different activities to respond to data. In grade 3, Category 2, Lesson 3.7B, *Changing Position and Motion,* materials provide direct instruction of science concepts in the Investigate and Learn section. Materials provide potential student misconceptions and a guide on responding by having educators “Consider addressing and correcting these misconceptions during the activity *Pushes and Pulls* Cause Change or with the Apply and Extend activity Venn Diagram: Pushes and Pulls.” Materials provide brief explanations of these activities and provide teacher guidance explaining how resources can be used to support and integrate to address gaps in learning.
- Materials provide teacher guidance on how to leverage different activities to respond to data. In Lesson 3.11C, *The 3 R’s,* materials provide direct instruction of science concepts in the Investigate and Learn section. Materials provide potential student misconceptions and a guide on responding by having educators “Consider addressing and correcting these misconceptions with the Apply and Extend activity Graphic Organizer: Ways to Conserve Natural Resources and Writing in Science: What Would You Do?” Materials provide brief explanations of these activities and provide teacher guidance explaining how resources can be used to support and integrate to address gaps in learning.
- Materials provide teacher guidance on leveraging activities to respond to student data. When the student data indicates that there is a deficit in understanding vocabulary terms, teachers can access the *Science Literacy Link,* the educator can access a cognate list, and a digital component is included for students.

Summit K12 Dynamic Science Grade 3

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 partially clear and easy to understand.

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

Evidence includes but is not limited to:

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

- The materials include assessments that are designed to accurately evaluate students' understanding of grade-level concepts in a scientifically precise manner that are accurate, avoid bias, and are free from errors. In grade 3, Category 1, Lesson 3.6D, "Combining Materials," includes assessment items that provide an accurate depiction of the properties of bricks and combining other building materials, including the effectiveness of holding a building together. In Lesson 3.6C, "Heating and Cooling Matter" includes assessment items that provide an accurate depiction of condensation and its relation to the water cycle and state of matter.
- The formative and summative assessments include assessment items that align with taught objectives and present grade-level content and concepts in a scientifically accurate way. For example, in Category 3, Lesson 3.9A, Formative Assessment 1, in the *Content Mastery* section, the landing page depicts the Sun, Earth, and Moon in appropriate ratios relative to their sizes. This is a scientifically accurate stimulus for students to use when answering the assessment question. Another example in Lesson 3.11B, Lesson Guide *Check for Understanding,* prompt 2 states, “Which natural resources can easily be replaced? (freshwater, plants, trees, animals, and oxygen).” The student responses offered to this formative assessment question within the Lesson Guide are scientifically accurate and align with the taught objectives listed in the Teach and Discuss section.
- The assessments contain items for the grade level that are scientifically accurate. In Category 4, the lesson titled *Changes in the Food Chain,* the assessment tool states, "A food chain shows

how…moves from one living thing to another in an ecosystem" and "Which part of the food chain is considered the producer?" which are two questions that are scientifically grade level accurate. The assessments are consistently free from bias and errors and are scientifically accurate.

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

- Assessment tools utilize visual aids such as clear pictures and graphics that are developmentally appropriate for 3rd grade throughout the curriculum. In Category 1, Lesson 3.6D, vocabulary assessment includes items that incorporate images depicting mixtures that effectively present the constituent parts of the mixtures and indicate whether they have maintained their physical properties. Another example in Lesson 3.6C, vocabulary assessment includes items incorporating images depicting condensation that effectively demonstrate the concept of heating and cooling. These visuals in both lessons provide a visual context and enhance the clarity of the assessment process.
- Assessment tools use clear pictures and graphics that are developmentally appropriate. In Category 2, Formative Assessment 1 over 3.7B, *Speed and Mechanical Energy*, the materials use an image of a bike and ask students to identify what parts of the bicycle can have mechanical energy applied to increase the speed of the bike. Another example is Formative Assessment 1 over 3.8A, *Everyday Energy.* This lesson uses a drag-and-drop menu to include five images that each show examples of mechanical, light, sound, thermal, and mechanical energy. In both of these lessons, materials include pictures and graphics that are clear and developmentally appropriate.
- Assessments contain clear pictures and graphics. In Category 3, the tables presented in Lesson 3.10A, Formative Assessment 2, are clear and easy to read. Sometimes, the title row is highlighted in a different color to support the reader. The spacing between columns and print within the table and font used is developmentally appropriate and accessible to third graders. The Images in Vocabulary Assessment 3.10C depict rapid changes with actual images of natural disasters. Any computer-generated graphics within the vocabulary assessment depict vocabulary terms in a way that is developmentally appropriate for third graders.

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

- The materials provide partial guidance for teachers to consistently and accurately administer assessment tools. The *Dynamic Teacher Resource Guide* includes a document titled *Concept Mastery,* where educators access a guide on how to administer the assessment tool, along with a picture and description of where to find it and how to turn it on. The materials include a step-by-step with arrows and a description guide that shows educators how to start the assessment tool. Even though the materials include general guidance on how to activate the assessment, the materials do not provide specific guidance to ensure consistent and accurate administration of the assessment tools. They lack support for the most effective methods of administering the assessments and do not offer guidance on how to collect consistent and purposeful data. Materials lack guidance about how to score the new item types included in the curriculum. Materials do not consistently include rubrics throughout the curriculum and are only found in the *Science Literacy* section.

- Materials provide partial guidance to ensure consistent and accurate administration of assessment tools. In grade 3, Category 2, teachers can access online asynchronous teacher

training courses, available in the Training tab. These courses provide an overview of the assessment, scoring procedures, answer key, and acronym key if needed. However, the training does not provide information on the most effective methods of administering the assessments or how to collect consistent and purposeful data.

- Materials include partial guidance to administering assessment tools and lack information about when assessments occur during the unit and how they are scored. For example, the grade 3 Scope and Sequence provides an overview of days per unit and breaks down the minutes per activity for each TEKS within a Scheduling Lessons Guide. A time duration for proctoring the Formative Assessments is indicated within the guide, yet it lacks guidance on a timeline of when to give the assessment to students.

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 assessment tools so that students of all abilities can demonstrate mastery of learning goals. The materials include a guide for Accommodations, Accessibility, and Designated Supports within the Teacher's Guide. This guide supports educators by providing a list of accessibility features and designated supports, as well as an annotated student interface that shows how students would access these tools. An annotated teacher screen shows how teachers enable designated supports for students. A summary details when teachers may use these supports, such as aligning with 504, SPED, and EB state guidelines.
- The materials include both accessibility features and designated supports such as Bilingual Dictionaries, Reading Assistance for Short Constructed, Response Items, Notepad, Highlighter, Calculation Aids - Digital Calculation, Content, and Language Support, and individualized Structured Reminders. In Grade 3, Category 1, the formative assessments incorporate a text-to-speech feature within the web-based assessment platform. By utilizing a play symbol cursor, students access a digital text that is read aloud to them, enabling a more accessible and inclusive assessment experience. Materials offer a speech-to-text software feature students use to orally dictate responses on an assessment. Highlighting, bookmarking, note-taking, and zoom tool features are available to help all students plan a response for each question.

Summit K12 Dynamic Science Grade 3

Indicator 7.1

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The materials include teacher guidance for scaffolding instruction and differentiating activities for students who have not yet achieved mastery throughout the curriculum. In grade 3, Lesson Guide 3.7B, *Changing Position in Motion,* in the “Apply/Extend” section, teacher notes provide targeted instruction and tailored support. For example, in the context of this lesson, consider the following scenario: “If students encounter challenges progressing through a demonstration, you can engage them with the following probing questions: What defines a push and pull? How might you apply force to the pencil? Describe the alteration in the pencil's position by reflecting on its starting point and its final location subsequent to the finger's push. Leverage the responses provided by students to not only identify any misconceptions, but also pinpoint instructional needs, persistent misconceptions, and subsequently make well-informed instructional decisions that cater to each student's unique requirements."
- The materials include teacher guidance for scaffolding instruction and differentiating activities for students who have not yet achieved mastery throughout the curriculum. In the Lesson Guide 3.11C, *The 3 Rs,* in the section labeled "Writing In Science: Out With The Old, In With The New," the teacher's notes provide guidance and customized assistance. Teacher's instruction is geared towards enhancing comprehension and engagement among Emergent Bilingual Students. Teachers provide students with sentence frames and pertinent academic vocabulary to serve as foundations for their writing. Additionally, forming groups that encompass both emerging bilingual students and those who have attained a higher degree of language proficiency can foster collaborative learning.

- The materials include teacher guidance for scaffolding instruction and differentiating activities for students who have not yet achieved mastery throughout the curriculum. Teachers have the ability to access the previously covered TEKS in order to scaffold learning for students who have not yet mastered it, yet it is not targeted or specific to the lesson. Materials provide a lesson guide that includes a *Concept Mastery* table that allows teachers to approach the lessons in a guided manner from one grade level to the next, yet scaffolds are included on grade level to target misconceptions in a clear and specific manner. These resources assist teachers in scaffolding instruction and differentiating activities to ensure all students can progress toward mastery.

Materials provide enrichment activities for all levels of learners.

- The materials include a section titled Apply/Extend within each Lesson Guide. Some activities in this section enrich student understanding through exploration beyond the key concept. The materials provide enrichment activities for all levels of learners that account for learner variability. For example, in grade 3, Category 1, lesson guide titled *Physical Properties*, the teachers are directed to connect their lesson around art by having the students create a collage of measurable physical properties and testable physical properties, which allows for enrichment activities for all learners.
- Materials provide enrichment activities for all levels of learners. Materials include a *Connection to Writing* section in the lesson titled *Combining Materials.* The students write a paragraph about how the temperature or weather might affect the materials an engineer would use when creating a structure that allows for critical thinking and enrichment for all learners. The materials provide enrichment through a Supplemental Resource titled *Science Around You.* These colorful, short one-page reads include a question to think and respond about a topic. For example, in grade 3, after reading *A Brush Away,* students are asked questions, including "How does brushing help protect your teeth from cavities?" This informative passage connects to real life and allows the student to enrich their learning beyond what was learned through the lesson sequence.

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

- The materials include guidance for scaffolds and just-in-time learning acceleration for all students. In grade 3, Lesson Guide 3.7B, *Changing Position in Motion,* in the section labeled "Check for Understanding," materials include suggested immediate and specific feedback to help learners identify their strengths and weaknesses. For example, in the context of this lesson, the sample includes questions with answers like “How is the motion of the pencil caused by a push similar and different from its motion when it is pulled? Student answers will vary. A possible answer may be: The pencil rolls when I push it, and when I pull the pencil, it drags across the table. The pencil’s position was farther from where it started after I pushed it because it rolled all the way off the table, but I stopped pulling it before the edge of the table.”
- The materials include guidance for scaffolds and just-in-time learning acceleration for all students. In Lesson Guide 3.9B, *The Planets*, in the Apply and Extend section, materials include suggested immediate and specific feedback to help learners identify their strengths and weaknesses. For example, in the context of this lesson, the sample includes teacher notes with

prompts: “Provide sentence frames and appropriate academic vocabulary to anchor writing.” “Consider using a structure like inside and outside circles for students to communicate their explanations. Encourage students to use their models and additional evidence from their Sensemaking Guide as they present their ideas to their peers.”

- The materials include guidance for scaffolds and just-in-time learning acceleration for all students. Lesson plans, written in a procedural format, include suggestions beyond the activities in the plan. Lesson Guides include prompts for teachers to use as students work independently and examples of immediate and specific feedback to help learners identify their strengths and weaknesses. An answer key provides guidance for the teacher to support students while working through labs and tasks.

Summit K12 Dynamic Science Grade 3

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

Evidence includes but is not limited to:

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

- The materials engage students in the mastery of the content through a variety of developmentally appropriate instructional approaches and provide various opportunities for students to participate in inquiry-based learning activities. For example, lessons include video clips to introduce and reinforce specific science concepts. In grade 3, teachers have access to videos that are organized by TEKS that explain the science concepts covered in that grade.
- The student engages in authentic activities that relate to the mastery of content. For example, in 3rd grade, students demonstrate and describe what happens when they drop a pencil. Materials contain scientific concept maps to help students understand relationships between different scientific concepts. Under category 3, *Earth and Space*, students work in groups to construct models with clay to explain the orbits of the Sun, Earth, and Moon in relation to each other, which allows students to engage in the mastery of the content.

Summit K12 Dynamic Science Grade 3

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

- Materials consistently support flexible grouping opportunities throughout the curriculum to support student learning and engagement. The Lesson Guides include options for partners, small groups, and whole group instruction. For example, in 3.6A *Lesson Guide* under the "Apply/Extend" section, the teacher is presented with the option to allow students to work in groups to demonstrate their understanding of physical properties as a review at the end of the lesson. Additionally, teachers allow students to work in partners or groups to present how they used their scientific tools to measure temperature, mass, magnetism, sink, and float.
- For example, in 3.7A *Lesson Guide* under the Review section, teachers can have the students work independently, with partners, in triads, groups, or whole class on the Study Guide. For example, in 3.12A *Lesson Guide,* under the Apply/Extend section, teachers divide the students into partners or groups to create and explain how temperature and precipitation affect animal growth.

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

- The materials support multiple types of practices since there is a lack of guidance for teachers for effective implementation. In the Grade 3 Lesson 3.7B titled "Changing Position in Motion," each activity within the 5E model arrangement employs icons to facilitate appropriate grouping for the intended learning outcomes. For instance, in the "Engage" section of the lesson, we can examine the activity titled "INVESTIGATIVE PHENOMENON: RUBE GOLDBERG MACHINE." Here, an icon is utilized to visually represent an independent student's observation of the "Chain Reaction" video. This video showcases various instances of changes in the movement and position of objects resulting from either a push or a pull.
- The materials provide multiple types of practices since there is a lack of guidance for teachers for effective implementation. In Lesson 3.11C, titled "The 3 Rs," in the "Establish Relevance Section" of the 5E model arrangement. In this section, you will notice a distinctive icon representing a whole group setting. This icon has been placed to support the formation of suitable groups for achieving the desired learning outcome. In this context, the whole group icon serves as a visual representation of a collaborative investigation aimed at understanding methods to minimize waste and protect our precious natural resources.
- Materials support multiple types of practices with guidance for teachers for effective implementation. In lab 3.12A, Animal Growth and Behavior, the teacher is directed with the best strategy for putting students into groups to complete the activity. This guidance allows for teachers to effectively implement the practice and maximize student learning.

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

- The materials represent a diversity of communities using images and information that are respectful and inclusive. Materials contain images and real-world examples, and connections throughout the materials represent a diversity of communities and places, including rural, urban, and suburban communities, cities and states across the U.S., and countries around the world. Depictions of places are respectful and inclusive, with an emphasis on community strengths, resources, and unique characteristics.

Summit K12 Dynamic Science Grade 3

- The materials include grade 3 Science Literacy books containing images of individuals with diverse backgrounds and experiences. Materials include a section titled S*cience Cross Curricular Passages,* which contains reading text with non-gendered roles such as "the teacher" and "students." In the video titled "*Animal and Plant Life Cycle,*" the viewers are exposed to various locations of real-world examples and connections that represent the diversity of locations.

Summit K12 Dynamic Science Grade 3

Indicator 7.3

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The materials include an ELPS document for each TEKS. This document provides opportunities for teachers to support students with consideration of their language proficiency. For example, TEKS 3.6A ELPS supporting document includes ways for students to engage with the academic vocabulary in a variety of ways. Students in the Beginning stage of acquisition complete a sentence stem that states, "I know that…has a high temperature." For students in the Intermediate stage, there are stems that are comparative and increase in complexity. For the Advanced stage, students move to comparison statements but rewrite the statement and also read aloud to the class. Students who are Advanced High are posed a question that states, "What are some physical properties that you can use to describe an object?"
- Materials embed scaffolds for students, such as visuals, graphic organizers, and anchor charts. The *Concept Teacher Edition* for all categories includes a mini-lesson navigation with key content vocabulary words with definitions and illustrations. In these slides are the key elements of each concept, such as the energy in a food web example with words such as consumer, decomposer, and ecosystem. These activities can be used as accommodations for EB students and varying levels of language proficiency.
- The materials include the opportunity for reading commensurate with various levels of language proficiency in the *Science Literacy/Vocabulary Mastery* accessed through the landing page. Vocabulary practice 3.7B provides images and sentence frames with the opportunity for students to pick the correct vocabulary term from a drop-down menu to complete the sentence.

- The materials include the opportunity for written communication commensurate with various levels of English language proficiency in Differentiated Science Writing accessed from the landing page. The differentiated writing opportunities include an Engage Video and different access points based on the English language proficiency (beginner, intermediate, advanced, and advanced high) of the writer. For example, provided with the same image, four different questions are posed based on English language proficiency. The four questions scaffolded for Matter are: Beginner- "What foods do you see in the photos? Describe what each of the foods is like." Intermediate- "Why do the balloons have strings? The strings help…" Advanced- "Compare the drips of liquid ice cream to the solid scoop of ice cream. The drips of liquid ice cream are…" Advanced High- "Describe what you would see, hear, and feel if you were at the Fair. If I were at the Fair, I would see…" These activities provide guidance to support the various levels of English Language Learners.

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

- Materials include Multilingual Newcomer Lessons within the Science Literacy/Vocabulary Mastery component to support the strategic use of students' first language as a means to development in English. This resource provides lesson plans, word lists, study guides, and home practice in the following languages: English, Spanish, Arabic, Burmese, Simplified Chinese, Traditional Chinese, Hmong, Korean, Nepali, Persian-Farsi, Portuguese, Somali, and Vietnamese. The Foundational Skills Lesson Plans direct teachers to: "Allow students to respond to the Worksheets initially in their home language. Then help them respond in English."
- The *Science Foundations* E-Book for Volcanoes and Earthquakes allows for active engagement with first-language Spanish resources from page 1, Vocabulary Boosters Español. There is also an opportunity for students to learn English pronunciation of vocabulary in Step 2, Listening-Speaking Practice, after the bridge in Step 1. From the landing page, Science Literacy includes Science Cognates for English and Spanish to support the strategic use of students' first language as a means of academic development in English. For example, in set 1 of Matter and Energy, students practice the word activo on question 1. On question 2, students connect *activo* with the English cognate *active*.
- The "Dual Language Connections" section in the *Summit K12 Teacher's Guide* outlines the research foundations and ways the program fits a dual-language framework by designing materials in both English and Spanish rather than translating or transadapting materials. The Science Writing component includes a Science Cognates section with "context images and sentences, professionally recorded audio in both English and Spanish, and the ability for students to speak and record themselves repeating the context sentences." Students view an image, listen to the context sentence first in Spanish and then in English, and record themselves reading it.

Summit K12 Dynamic Science Grade 3

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. This table showcases the scores received for this indicator.	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.

- The materials provide information to be shared with students and caregivers about the design of the program. For example, in grade 3, under the *Dynamic Science Teacher Guide*, a link titled *Home to School Connection* outlines several key program tools caregivers can use when working around science concepts covered in class. This document contains all the core vocabulary words the students need to understand and is organized by reporting categories such as Force, Motion, and Energy for third grade. Also included in *the Home to School Connections*, materials provide a Vocabulary section, a Field Investigations at Home section, a Science Literacy at Home section, and a Studying the TEKS at Home section, which provides a few quick activities that can be used to support their child at home as they learn science.
- The materials provide an overview of the design of the program available through the *Teachers Guide* called the Online Course Site Map. This document provides a summative overview of the program design and its features, among other things. This resource provides a way for students and caregivers to gain more information about the design of the program.
- Materials provide guidance for students and caregivers on how to access the program at home and show students' progress. In the *Teacher's Guide,* a *Student Road Map* supports introducing the basics of accessing the program features and what is available with the program. The slides support navigation of the links on the landing page: Science Videos, Concept Mastery, Science Literacy/Vocabulary Mastery, and Scientific and Engineering Practices. The materials include Parent/Guardian Letters Examples that can be accessed from the *Teacher's Guide*. A sample letter includes a general introduction to the Summit K12 materials for caregivers. It also includes more in-depth navigation support for logging into the program from home. The letters are

provided in both English and Spanish. These resources reinforce student learning and allow parents/guardians to stay connected with their student's learning and curriculum.

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

- Materials encompass comprehensive guidelines for teachers to effectively communicate with caregivers regarding the use of Summit K12 to reinforce how they can help student learning and development. In grade 3, materials include teacher guidance for communicating with caregivers about the importance of the educational support provided by the student's caregivers. The *Teacher's Guide* provides a Home to School Connection link to support linking learning between school and home.
- Materials provide at-home practice activities for caregivers to help reinforce student learning and development. In grade 3, Category 2, Lesson 3.8A materials provide a *Home Connection* activity where students create a table to show how energy is all around us with the help of an adult. Materials prompt the student to identify the different cycles that use energy, identify patterns that are formed with energy, and identify how home systems use energy. In Lesson 3.8B, materials provide a Home Connection activity where students, with the help of an adult, plan and investigate how the speed of an object is related to its mechanical energy. Materials prompt the student to use five investigative steps and complete one activity that requires mechanical energy.
- The materials provide information to be shared with caregivers for how they can reinforce student learning and development. For example, when students work on organisms and environments, the materials under the *HomeSchool Connection* denote examples caregivers can use at home to connect literacy with the current TEKS the child is learning at school. One example uses a Venn diagram to compare and contrast the life cycle of a plant and an animal. Another example is Lesson Guide 3.12C, where caregivers work with their children to draw a picture and describe to their parents how floods and droughts impact environments. These activities actively reinforce what they are learning at school and provide at-home activities to continue to enhance student learning and development.

Materials include information to guide teacher communications with caregivers.

- The *Dynamic Teacher Guide* includes a section for a generic letter format and information the school can use to communicate to caregivers the program's purpose and how to access its online features. This resource also includes a Parent/ Guardian letter detailing the benefits of the program and basic components of the program. The "Connections to Home" section provides suggestions on how to establish a relationship by incorporating "Field Investigations at Home." By providing these comprehensive resources, the materials aim to foster ongoing communication and partnership between teachers, caregivers, and students while facilitating the sharing of progress updates.
- The Teacher's Guide Home to School Connection link includes teacher guidance and support for clear communication of the TEKS required for student mastery at grade level. The materials offer a letter with ideas of how to accelerate learning, a brief overview of the big ideas of the TEKS, and visuals of the TEKS with Vocabulary Boosters. The information to guide teacher communications with caregivers can be found in the Teacher- Getting Started link located in the Teacher's Guide. This guide provides teachers with a sequence of orientation to the material's resources.

Summit K12 Dynamic Science Grade 3

- The materials include a "Parent/Guardian Letter" in the *Summit K12 Teacher's Guide* that provides information to guide teacher communications with caregivers. The instructions state, "The attached letter is an example of one that you may send home to the parents or caregivers of your students to introduce them to the [program] K12 Science resources. We suggest sending the letter below, as well as instructions for how to access the program from home, through the district's LMS or portal."

Summit K12 Dynamic Science Grade 3

Indicator 8.1

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

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

Partial Meets | Score 1/2

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

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

Evidence includes but is not limited to:

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

- The materials include a cohesive scope and sequence that show how the scientific knowledge and skills TEKS are addressed over the course of the entire year. For example, the Grade 3 Pacing document provides a programmatic scope and sequence or instructional map from grade 3 to grade 5, showing the vertical alignment of the essential knowledge and skills taught in the program throughout the school year.
- The scope and sequence shows an overview of the year and an outline of the lesson order with days needed for instruction. The scope and sequence details the order in which knowledge and skills are presented and revisited. For example, materials include information or an overview of the science objectives; the objectives are aligned to the grade-level TEKS and English Language Proficiency Standards (ELPS) that include unit and lesson progression. The Pacing Guide is organized by reporting category, TEKS, lesson title, and suggested time.

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 little clear teacher guidance for how activities and experiences connect concepts and SEP. The lessons draw no clear connections for teachers in any of the teacher guides. However, the materials include a 3rd Grade Texas Essential Knowledge and Skills, Science and Engineering Practices-Recurring Themes and Concepts Crosswalk, where a graph shows the SEP concepts covered all year long, which are aligned with the TEKS.

- Lesson guides do not provide detailed guidance for facilitating engineering practices. However, the specific TEKS for these are listed at the beginning of each lesson, and there is a one-page engineering practices sheet for students. This does not provide true guidance to teachers within each lesson. While no teacher guides provide guidance for facilitating engineering practices, many provide guidance for vocabulary development.
- The materials provide minimal teacher guidance to help students make connections over the course of the year. The connections, when they occur, do not appear purposeful. In the 3.7A lesson, in the Misconceptions section, the materials allude to properties of matter but don't purposefully illustrate this for the teacher or the student.

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

- The materials provide a review and practice of knowledge and skills spiraled throughout the year to support mastery and retention. For example, in Category 1, 3.6A Lesson Guide, the teacher is presented with teaching and discussion ideas. The practice opportunities build on previously taught science knowledge and skills. For example, grade 3 Engage activities provide opportunities for students to activate prior knowledge and revisit concepts in the review and evaluate sections.
- The materials review and practice knowledge and skills spiraled throughout the year. Within each Category, the lessons that build on each other will provide the same definitions for vocabulary words throughout. For example, Category 1 *Lesson Guides* 3.6A and 3.6B include the same definitions of *matter* within the *Teach/Discuss* section. In Category 2, *Lesson Guides* 3.7A and 3.7B provide the same definition for the vocabulary term *force*. Providing a repetitive and consistent review of terms supports student mastery of key concepts.

Summit K12 Dynamic Science Grade 3

Indicator 8.2

Materials include classroom implementation support for teachers and administrators.

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

Partial Meets | Score 1/2

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

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

Evidence includes but is not limited to:

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

- The materials are organized in a way that facilitates ease of implementation and use, including the accessing and storing materials. For example, under Category 2, lesson guides are provided for the implementation of the lessons present for the specific TEKS.
- Materials contain an implementation guide with a visual map of the recommended sequence of lesson implementation and a length of time for each section of the lessons. In the scope and sequence, a chart outlines a time allotment for 10 minutes to discuss misconceptions. The Teacher Lesson Guide also states, “The teacher will review the misconceptions with the class and allow time for them to ask questions as needed.” This is followed by 2 bullet points that list misconceptions. Materials include a Teacher Roadmap linked in the Teacher’s Guide and a table that includes a prioritized list of documents to review for instructional activities.

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

- Materials include TEKS correlations for lessons and activities within the grade level. Materials include cross-content standards for ELA, math, and social studies within the context of the grade level. For example, in a 3.6C lesson guide, a teacher tip includes a connection to reading standards.
- The materials include a section on science literacy. Within this section, there are cross-content connections to ELA standards. Cross-Curricular Passages include opportunities for practice with reading strategies. Science Writing Skills include opportunities for writing about specific science standards. The materials list science standards correlations for lessons within the context of the grade level. The materials also list scientific and engineering practices (SEP) that are connected to the lesson.

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

- The Teacher's Guide includes a "Materials Lists and Lab Inquiry Kits" resource within the Scientific and Engineering Practices section, which lists materials for all lab investigations in the grade level. Teachers also can access guidance documents for lessons and lab investigations by reporting categories that include lists of necessary resources and materials. However, it should be noted that while materials include this chart of materials needed for lab investigations across the year, materials do not include a comprehensive list of equipment and supplies commensurate with TEA recommendations for Grade 3.
- The materials contain a list of equipment and supplies necessary for a particular lesson, including the engagement piece, investigative lab, and extension. Inside each Lesson Guide is a comprehensive materials list that contains all the materials needed for each activity within the lesson. For example, in *Lesson Guide 3.9B*, there is a list of equipment and supplies needed to support instructional activities.
- Grade 3 materials include individual lists for lab investigations within the lesson guide. For example, the student materials in the 3.6C student lab support steps of using the materials that have a list of the included materials and recommendations for storage to access materials easily, as well as tips to prepare for instruction.

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

- Materials provide student guidance for safety practices and the grade-appropriate use of safety equipment during investigations. For example, the Student Lab guide includes safety information pages for student reference and recall of safety practices during experiments.
- The Teacher Edition, Category 2, Student Lab 3.8A and Teacher Lab include guidelines for student safety. The student lab guidelines state, "Use the safety procedures and standards. Be careful as you search your classroom for energies in use." The teacher guidelines state, "Use the safety procedures and standards. Follow the teacher's instructions for moving around the room." The Teacher's Guide includes a Safety Contract with a comprehensive list of safety statements. The form provides the opportunity for students and parents to sign in agreement with the safety statements.

- Materials include student guidance for safety practices and grade-appropriate use of safety equipment during investigations for grade 3. Materials include a Teacher Notes section detailing guidance on pre-laboratory procedures and safety precautions as routine for the lab when applicable. Student-facing materials include guidance for safety practices and the use of equipment during investigations in the Safety section of Lab Guides. For example, in grade 3, category 1, lesson 3.6D, the Safety section of the Lab states students should “Use the safety procedures and standards. Use care when handling the toothpicks and craft sticks.” For example, in grade 3, category 1, lesson 3.6C, the Teacher Notes section of the Lab states, “Students will work in groups.”

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Indicator 8.3

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The materials include a TEKS Pacing Guide and Scope and Sequence to support scheduling considerations for block and traditional scheduling. Materials also include guidance on suggested time for laboratory and field investigations.
- The scope and sequence is designed to be flexible and contain extra instructional timing for varied schedules. For example, TEKS 3.6A has a suggested 30-day cycle. Materials describe days of pacing per TEKS and include a minute-by-minute breakdown per activity for each TEKS.

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

- The materials include units, lessons, and activities for a full year of instruction and ensure that all TEKS are covered. For example, the Pacing Guide contains an overview document providing teachers with considerations for planning instruction at the unit and lesson levels. The document states that the total amount of days and minutes required may vary depending on the grade level and the complexity of the concept being studied. For example, the Scope and Sequence and Pacing Guide states, "Only 150 days have been planned out of the 180 school days, though this course includes more than enough material to cover the full 180 days of instruction." On average, units have a duration of 20-40 days.
- The materials strategically delineate the order of units to ensure students learn about precursor concepts first. In grade 3, the materials have students communicate what the physical states of matter are before students classify matter by its physical properties. The materials include

opportunities for students to communicate what natural resources are prior to discussing the conservation of natural resources.

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

- The materials provide units, lessons, and activities for a full year of instruction that ensures all grade-level TEKS are covered.
- Materials include a Year at a Glance which provides a pacing decision-making table. This table includes the estimated time allotment for the corresponding reporting categories. For example, the document states, "Only 150 days have been planned out of the 180 school days, though this course includes more than enough material to cover the full 180 days of instruction." The materials include a sufficient amount of lessons and activities to support a full academic year of learning.

Summit K12 Dynamic Science Grade 3

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.

- Materials include an appropriate amount of white space and an overall design that does not distract from student learning. For example, under the *Teacher edition Launchpad,* the lessons are organized by reporting categories, TEKS, and lesson titles. The student labs are organized by TEKS, lab titles, and subtitles that make it easy for students to follow along with the lesson. Titles such as questions, materials, procedures, and records support student learning. Color is used intentionally and consistently to guide the user through the Lesson Guides. For example, objectives, TEKS, ELPS, Vocabulary lists, and general resources at the top of each lesson guide are displayed in light blue or gray shaded boxes. Bright blue bars label the main sections of the Lesson Guides.
- Student study guide materials include an appropriate amount of white space and an overall design that does not distract from student learning. In Grade 3, Category 1, lesson 3.6A, the *Physical Properties s*tudent study guide is clear with titles and headings that are prominent and clear; sections are marked with subheadings. The content is organized in a logical progression.
- Formative Assessment materials are appropriately designed to support student learning. In grade 3, category 2, *Formative Assessment* 1 for Lesson 3.7A maintains one question per page not to distract the learners. The software provides tools students can use to annotate text (such as highlight, strikethrough, etc.) and pointers while reading digital text. When text is read aloud by the computer, diction is loud, clear, and easy to understand. The formative assessments bold the question and provide appropriate spacing between answer choices to separate them.
- Accessibility features included within the Formative Assessments are designed to be easily located but not a distraction from the primary task of taking the assessment. The Lesson Launchpad is designed in a way that teachers can locate important information easily for

planning and implementation. Digital materials include links to previous lessons and materials teachers can access to support differentiated learning within units.

- Materials are appropriately designed to support student learning. In Category 3, student materials include the following: -Clear buttons to navigate to the different sections with clearly defined labels such as “Science Videos and Animations.” Titles of different categories are clearly labeled once a student has navigated to a learning section such as “Category 1”. Rows for different concepts alternate with dark and light blue to support students in the navigation to the correct content.

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

- Yes, materials embed age-appropriate pictures and graphics that support student learning and engagement without being visually distracting. Each Category within the instructional resources provides E-Posters to aid in the instruction of scientific concepts. These posters incorporate age-appropriate pictures and graphics to support student learning. In Grade 3, Category 1, Lesson 3.6A, e-posters include vocabulary cards with clear and authentic images and graphics to define and support the new words students are learning. The practice for Vocabulary Mastery provides a variety of images that are magnified and clearly show an example of the targeted word. It includes an overview and detailed visuals of physical properties like mass, temperature, and sink or float with accurate labels. Visuals also make clear connections when understanding the properties of matter.
- Materials embed age-appropriate pictures and graphics to support student learning. In Category 2, lesson 3.7A, *Equal and Unequal Forces* E-Poster includes multiple images representing forces, such as a boy kicking a ball and apples falling from a tree. Lesson 3.7B *Changing Position and Motion* E-Poster includes multiple images representing forces, such as pulling and pushing a wagon and a woman walking a dog. Imagery is minimal and does not distract from the information on the poster.
- Materials embed age-appropriate pictures and graphics that support student learning and engagement without being visually distracting. In Category 4, materials include visuals in the study guide for the lesson *Animal Growth and Behavior,* where students can easily see animal behavior, such as the bear sleeping and the tree growing. Materials include posters the teacher can use that contain graphics, real-life pictures, and vocabulary words that students can easily understand, such as migration, hibernation, and dormancy.

Materials include digital components that are free of technical errors.

- Yes, materials include digital components that are free of technical errors consistently throughout the curriculum. In Grade 3, Category 1. lesson 3.6a, the interactive E-poster and Science Videos are free of spelling, grammar, and punctuation errors. Materials are free of inaccurate content materials or information. In Category 2, Lesson Guide 3.7A, *Exploring Forces* is free of spelling, grammar, and punctuation errors. In Category 3, *Lesson Guide Models of the Sun, Earth, and Moon* is free of grammatical, punctuation, and spelling errors. Yes, the materials include digital components that are free of technical errors. In Category 4, the lesson guide *Animal Growth and Behavior* is free of spelling, grammar, and punctuation errors.

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Indicator 9.2

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

1	Materials integrate digital technology and tools that support student learning and engagement.	Yes
2	Materials integrate digital technology in ways that support student engagement with the science and engineering practices, recurring themes and concepts, and grade-level content.	No
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 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 do not integrate digital technology in ways that support student engagement with the science and engineering practices, recurring themes and concepts, and grade-level content. Materials do not integrate digital technology that provides opportunities for teachers and/or students to collaborate. Materials integrate digital technology that is compatible with a variety of learning management systems.

Evidence includes but is not limited to:

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

- Yes, the materials incorporate digital technology and tools to support student learning and engagement throughout all categories in the curriculum. The Grade 3 *Science literacy* section provides differentiated writing activities that promote effective learning. They include engaging features such as learning videos, interactive writing exercises, reading guides, and online assessments. The Digital components incorporate embedded tools like notetaking, variable font size, text-to-speech functionality, bookmarking, a glossary, annotations, highlighting, and editable forms. In the *Scientific Video* section, there is a collection of videos organized by the TEKS that are covered and the lesson name, which helps to support student learning and engagement.
- The materials incorporate digital technology to support student learning and engagement. Students access science videos that incorporate animations, access texts, and provide additional explanations. For example, from the landing page, grade 3, *Science Videos* Category 3, 3.9A Video shows animated images of the sun as a burning star, sunlight shining through the leaves of the forest and animated models of the revolution of the Earth around the sun. These animations support student learning as they enhance engagement with the information and aids in the visualization of science concepts. Students can use accessibility features while taking assessments when appropriate. These online-specific features include highlighting, text-to-speech, calculators, and notepad. These digital components support learning and engagement

because students can interact with the online information. Students can also interact with online information through online-specific question types such as drag and drop and multi-select items.

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 offer vocabulary audio assistance but do not offer opportunities for students to utilize interactive simulations and models, which would allow them to explore scientific and engineering practices within a virtual environment. In Category 1, *Analyze the Data*, offers vocabulary selection drop box options for ease of selection but does not offer opportunities for students to utilize interactive simulations and models, which would allow them to explore scientific and engineering practices within a virtual environment.
- Materials do not integrate digital technology and tools that support student learning and engagement with science and engineering practices, recurring themes, and concepts. Student digital components in Formative Assessment 2 for TEKS lesson 3.7A include embedded tools, such as note-taking, variable font size, text-to-speech, a dictionary, a glossary, annotations, and highlighting, but they do not support student engagement with the SEP or RTC.
- Materials do not include digital technology in ways that support student engagement with science and engineering practices or recurring themes and concepts. The online digital component provided for the SEP is a 23-page guide with text-to-speech access. This guide introduces students to the processes but does not demand that students engage with them. When students are prompted to engage with the RTC, they are prompted to utilize a graphic organizer or generate a poster or written product. Evidence of engaging with the RTC digitally is not evident. In category 3, Lesson Guide lesson, 3.11A *Apply/Extend* section, students "illustrate and explain" and "create a graphic for Natural Resources on chart paper." The written tasks lack a digital interface to manipulate these ideas.
- No, the materials do not integrate digital technology in ways that support student engagement with science and engineering practices, recurring themes and concepts, and grade-level content. Throughout the lesson guides, teachers are asked to use electronic devices to facilitate student learning. However, the materials do not use digital technology to support student engagement with science and engineering practices. For example, in the lesson titled *Texas Fossils,* students use what they learned about fossils to create a fossil or use an electronic device to look for images of fossils; however, this activity only allows research about the topic and does not include a connection to a SEP or RTC.

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

- No, the grade 3 materials do not integrate digital technology that provides opportunities for teachers and/or students to collaborate. Although the materials provide a feedback section for teachers to provide feedback to students in the writing prompts for the short constructed responses, , this feature is only a one-way communication from the teacher to the student. The Science formative assessments incorporate digital technology to enhance aides for helping students, materials do not provide an online collaborative platform in which teachers and students can share educational materials, create collaborative spaces, post assignments, collaborate on projects, engage in discussions, or seek clarification regarding class material or allow the teacher to give immediate feedback to students.

- Materials do not integrate digital technology that provides opportunities for teachers and/or students to collaborate. Teachers can provide written feedback for students in the *Differentiated Science Writing* dashboard, but the software does not allow for students to reply and is not suited for collaboration.

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

- Yes, digital materials integrate technology compatible across various operating systems and devices. For instance, 3rd grade students' vocabulary resources and materials can be conveniently accessed and used on Chromebooks, iPads, PCs, and Apple computers. Additionally, these materials are available online, allowing access from any device with an internet connection. The Summit K12 Help Center states in a Technical Specifications article that their software "requires no special software installations" and "works on all major platforms."
- Materials integrate digital technology that is compatible with a variety of learning management systems. For example, the Parent/Guardian letters in the *Teacher's Guide* indicate that when using Summit K12 from home, students can "access it from any computer, tablet with an internet connection" because it is a web-based program. In addition, the Parent/Guardian letters include a message to school admins. It states, "Feel free to insert your own graphics and steps to log in to the School's LMS or portal to access the Summit K12 application via Single Sign On (SSO)." Examples of SSO portals include Classlink or Clever.

Summit K12 Dynamic Science Grade 3

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.

- Yes, digital technology and online components are aligned with the grade-level scope and approach to science knowledge and skills progression. The material includes a Scope and Sequence and Pacing Guide document that is grade-level appropriate and aligned with the science knowledge and skills progression. The materials include a suggested time and best use of digital technology, such as the formative assessments and TEKS video on the online platform.
- The digital technology and online components are developmentally appropriate for the grade level. Category 2 *Lesson Launchpad* includes a digital planning guide with live hyperlinks to the other online resources to facilitate planning and ease of use. In this reporting category, the resources for the following TEKS are provided: 3.7B, 3.8A, 3.8B. Lesson video 3.7A in the *Science Videos and Animations* provides developmentally appropriate vocabulary, language, graphics, images, and diagrams describing forces for Grade 3 students.
- The digital technology and online components are developmentally appropriate for the grade level. The landing page includes *Science Videos and Animations*. In category 3, TEKS lesson 3.9A, the video incorporates graphics, computer-generated simulations, and photographs that are developmentally appropriate for third graders. The digital technology and online components are aligned with the grade-level scope and approach to science knowledge and skills progression. The landing page *Science Videos and Animations* separates the content by category and then lists the videos in order of the TEKS. Within a video on TEKS, information is sequenced

in a way that is comprehensible to the student. Lesson Video 3.10A begins by stating the objective, defining weather and examples, and then describing the observable and measurable properties of weather that can describe what weather is occurring.

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

- Yes, the materials provide teacher guidance for using embedded technology to support and enhance student learning. The materials include a teacher guide titled "Online Course Site Map," where teachers are guided on how to best use the online features and where and when to access them to better facilitate student learning. The teacher's guide includes a section called *Teacher Getting Started Guide*. The guide includes instructions on how to access online asynchronous teacher training courses and how to enroll students into classes so that their experience can be monitored and enhanced by the educator. Materials also include a Student Getting Started guide in the teacher's guide. Educators can introduce the digital technology components of Summit K12 to students in order to support student learning. The materials provide teacher guidance for the use of the embedded technology to support and enhance student learning.
- The materials include teacher guidance on effectively utilizing embedded technology to enhance student learning. In the 3rd-grade teacher resource *Course Design section* it includes detailed instructions explaining how to effectively incorporate the embedded technology. The *Implementation guide* offers step-by-step instructions for the setup and utilization of the technology, accompanied by troubleshooting tips to assist teachers in resolving common issues they may encounter. The Teacher's Guide has a map with references to available technologies to enhance the lesson. Additionally, links and tabs are available for easier access by teachers.
- Materials provide teacher guidance for the use of the embedded technology to support and enhance student learning. The Teacher's Guide includes a *Teacher-Getting Started* guide, which provides clear instructions and tutorials within the teacher platform on how to use the embedded technology. The guide outlines the following:
    - Getting to Know the Dynamic Science Course
    - Course Level Teacher's Guide
    - Scope and Sequence and Pacing Guides
    - Concept Mastery
    - Online Course Site Map
    - Course Philosophy
    - Asynchronous Teacher Training
    - Enrolling students, Student Access and Single Sign On (SSO), iPad Access
    - TEKS Content Mastery Lesson Guides
    - Student Getting Started Presentation and Parent/Guardian Letters
    - Customer Support
- Materials provide teacher guidance for using the embedded technology to support and enhance student learning. The teacher Training tab includes step-by-step videos detailing the components of the curriculum and coursework and is followed by an assessment. Online asynchronous teacher training coursework includes the following:
    - Teacher's Guide Overview and Lesson Planning
    - Science Videos and Animations
    - Science Literacy
    - Concept and Vocabulary Mastery

- Assessment and Image Banks
- Scientific and Engineering Practices
- Science Labs and Inquiry
- STAAR Readiness Resources
- Reports and Dashboards

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

- Yes, the grade 3 materials include resources for parents and caregivers on how to support student engagement with digital technology and online components. The materials include a letter that can be sent to parents that shows them how to access the curriculum from home. Materials provide a Student Getting Started guide, available in the Teacher's Guide, with a walk-through of the basics of the program, lesson samples and components, and log-in information. Materials also include a section for families that includes links to information about science objectives, extensions, related inquiry projects, and websites for student research. This section is specifically designed to provide families with additional support and resources to further enrich their children's educational experience.