Savvas Learning Texas Experience Science Grade 2

Savvas Learning Texas Experience Science Grade 2 Executive Summary

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

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

Section 2. Instructional Anchor

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

Section 3. Knowledge Coherence

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

Section 4. Productive Struggle

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

Section 5. Evidence-Based Reasoning and Communicating

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

Section 6. Progress Monitoring

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

- The materials include guidance that explains how to analyze and respond to data from assessment tools.
- The assessments are clear and easy to understand.

Section 7. Supports for All Learners

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

Section 8. Implementation Supports

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

Section 9. Design Features

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

Savvas Learning Texas Experience Science Grade 2

Indicator 2.1

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- The materials are organized in units that use TEKS-based anchoring phenomena to connect content standards to scientific and engineering standards. Materials provide multiple opportunities for students to develop, practice, and demonstrate scientific skills through hands-on stations that are grade-level appropriate. The STEAM activities are used to integrate engineering standards further.
- For example, in grade 2, a lesson on changes in matter builds upon prior learning about changes to materials and heat, causing a change covered in grade 1. A lesson on force and motion exploring how objects can change shape when they push on each other in Topic 2 in Grade 2 builds upon prior learning in Grade 1 regarding how pushes and pulls can move objects.

Students identify plant and animal similarities and differences. In Topic 7, students discover how seeds move and how living things depend on each other.

- Materials provide opportunities for students to provide multiple opportunities to develop and practice grade-level appropriate scientific and engineering practices, as outlined in the TEKS.
- For example, topic 3, *Sound and Volume,* includes a STEAM activity for students to design an instrument. This activity integrates 2.1C safe practices, 2.1D using tools, and 2.5E identifying forms of energy. In Topic 4, *Patterns in the Sky*, the students will build a weather station with a windsock and rain gauge. In addition to the content TEKS, students use Science and Engineering Practices 2.1F as they record and organize data.
- Additionally, in Topic 5, *Earth Resources*. During the Explore hands-on station, students investigate and model how water moves sand by designing an investigation using sand, pebbles, water, and a stream table. The students record their observations as they pour water quickly on the stream table.
- Teachers can reference sidebars to guide them in achieving mastery of scientific and engineering practices. For example, in Topic 1, *Matter*, the teacher has guidance to help students attain mastery in recording and organizing data in a table as they discover which objects bend. In Topic 2, *Forces and Motion*, the recurring theme and concept of cause and effect supports the idea that forces cause changes in motion and position in everyday life. For example, students may explore what happens to clay as marble is dropped on it from different heights. Another sidebar in Topic 3, *Sound and Volume*, supports the scientific practice of collecting observations as evidence as students record the sounds made on a cup covered with plastic wrap and the impact of those sounds on sand sprinkled on the plastic wrap.
- Grade 2 materials include a SEPs and Themes Preview Presentation designed for front-of-classroom instruction to explain and review the scientific and engineering practices and themes of the TEKS. Each grade level provides 5 activities that introduce students to the SEPs and recurring themes and concepts in science.

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

- Materials provide multiple opportunities to use recurring themes in making connections between concepts and within overarching concepts. The recurring themes and concepts are introduced in the SEPs and Themes preview.
- Topic 4, *Patterns in the Sky*, and Topic 5, *Earth's Resources,* address this theme. Within these topics, students observe and record patterns in systems of the natural world. They also investigate and describe how processes can move Earth's materials and the importance of protecting resources.
- The K-5 scope and sequence includes specific information about when recurring themes are introduced and when they are spiraled back into the program. Grade 2 materials utilize Earth and space as a recurring theme.
- Topic 6, *Plants and Animals,* and Topic 7, *Organisms and Environments,* address this theme. Within these topics, students describe that living organisms have basic needs that must be met through interactions within their environment. They also investigate and identify that organisms have structures and undergo processes that help them survive within their environment.

- Materials suggest sidebars that guide the teacher in supporting recurring themes and concepts. For example, in Topic 1, materials suggest that the teacher asks,"What patterns did you notice about the objects that bent and the objects that did not bend?" about patterns observed in the

objects bent and those that did not bend after students completed a station in which they attempt to bend a variety of objects. The recurring theme of cause and effect is supported through sidebars in the materials. In Topic 2, students drop a marble from varying heights to observe the effect on clay while exploring how pushes change objects. In Topic 4, the teacher has students create a cause-and-effect graphic organizer that shows the relationship between the sun and Earth's temperature. The teacher is directed to tell the students that understanding cause and effect relationships is important in understanding why things happen in the natural world. In Topic 5, the teacher is guided to demonstrate cause and effect by popping a balloon. The teacher asks what is the cause and effect in the demonstration.

- Topic 6 covers recurring themes and concepts regarding plants and animals. Students identify the parts of a plan and compare how those structures help different plants meet their basic needs for survival. Students learn about comparing how the structures and behaviors of animals help them survive.

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

- Grade-level content knowledge and skills are taught using SEPs and recurring themes so students can build and connect knowledge and apply it to new contexts. Each topic includes two to four hands-on stations. In topic 1, *Matter*, the first hands-on station, students explore the properties of matter as they discover how much they can bend objects, such as dry pasta, a pencil, a rubber band, and a pipe cleaner. The students explore changes in matter as they explore the changes to materials, such as wax paper, wood, and aluminum foil, as they choose a tool, such as sandpaper or scissors, to change the materials. Students explore combining matter in the last experience in the unit as they plan and build a house for a pet. In each experience, students plan and conduct investigations across the year.
- Materials systematically build student skills and content knowledge using the 5E Model of Instruction (Engage, Explore, Explain/Elaborate, Evaluate). The activities in each section are designed to deepen students' understanding.
- In Topic 7, Experience 3, *Food Chains*, students engage with the Everyday Phenomenon Photo, "How does this plant help the hummingbird?" Students explore with the hands-on station, "How do living things depend on each other?" and the literacy station, "How do organisms get food?" Students further gain knowledge in the Explain and Elaborate sections with the key ideas presentation and key ideas video, both titled *Food Chains* and the *Legends of Learning Game,* "Food Chain Story." Finally, the experience wraps up with the Evaluate Exit Ticket *Food Chains*.
- Materials for grades K-2 integrate science and engineering practices through classroom investigations to support instruction in the science content standards. Each topic centers on two or three experiences that include at least one hands-on experiment. In the topic overview, the teachers can view a video to prepare to teach the content, as well as read teacher background information and common misconceptions.

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.

- In grade 2, materials provide ample opportunities for students to plan and conduct investigations. Each experience starts with an Engage activity where students can ask questions.

Students conduct investigations during the Explore section. In the hands-on station, students are given the opportunity to ask questions or identify problems based on observations or information from text, phenomena, models, or investigations to make connections across disciplines and develop an understanding of science concepts. In Topic 6, Experience 3, “How do butterflies grow and change?” students make detailed observations of a caterpillar as it changes into an adult butterfly over three weeks.

- Grade 2, Topic 4 has an anchoring phenomenon question: "How is the weather changing?" The Topic contains 5E lessons on the sun and moon, weather, and severe weather. Hands-on lab stations help students discover how the sun affects temperature, how to show weather data, and how floods affect the land. This Topic also includes an online game to identify objects in the sky and a STEAM activity guiding students to design their weather station to measure rain, wind direction, and relative strength of the wind. The students collect and record data from their weather station on a table.

Savvas Learning Texas Experience Science Grade 2

Indicator 2.2

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- The materials use anchoring phenomena that drive student learning across grade-level content in each discipline.
- Topic 1 guides the students through lessons on the properties of matter, changes in matter, and combining matter to answer the anchoring phenomenon: "How do the properties of this chocolate change?"
- Topic 3, *Sound and Volume,* explores why the siren is the loudest sound as its anchoring phenomenon. Students first learn how sand on top of a drum vibrates to connect how vibrations cause a sound in a siren. Students then learn about how different objects make different levels of sound. Materials suggest students explore the various uses by observing how sound can travel from a tuning fork through the string, allowing students to make the connection of how sirens are used to communicate.
- Materials embed phenomena across topics by beginning every topic with an anchoring phenomenon or problem to activate student thinking. Students observe the phenomenon or problem by watching a video and engaging in a class discussion, laying the foundation for students to construct knowledge of grade-level content. Throughout each experience, students

revisit the anchoring phenomenon and build knowledge through authentic application and performance of scientific and engineering practices, recurring themes and concepts, and grade-level content. At the end of each topic, students revisit the anchoring phenomenon to apply what they have learned throughout the topic. Topic 4 begins with the Anchoring Phenomenon Video showing a change in the sky over time. The teacher asks, “How is the sky changing?" At the end of the topic, the students rewatch the video, and the teacher asks, "What change do you see in the video?" This leads the teacher to start a class discussion.

- Materials embed phenomena within experiences with an Everyday Phenomenon Photo or Demo to activate student thinking and prior knowledge. Students observe the Everyday Phenomenon Photo or Demo and engage in a class discussion that builds upon the foundation created by the anchoring phenomenon. In Topic 4, Experience 3, the Everyday Phenomena Photo explores "What caused this severe weather?" to activate students thinking about the causes of severe weather. Materials provide opportunities for students to develop, evaluate, and revise their thinking as they engage in phenomena and solve problems.

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

- Materials provide several opportunities for students to communicate their experiences outside of school. Several topic overviews include a home connection that helps students connect what they are learning at school to what they know at home. For example, in a home connection in Topic 3, *Sound and Volume*, students draw pictures of loud and quiet items on a T-chart in their science notebooks. Also, Topic 5, *Earth's Resources*, includes a scavenger hunt at home where students find objects made from one type of resource and either take photos or create a list of the items.
- The materials allow for different points of entry to the learning phenomena. The students experience the phenomena in several ways, such as videos, images, hands-on lab stations, Literacy Stations, topic readers, sidebars to guide related phenomena, STEAM activities, and sidebars to guide the student learning to their local community. Grade 2, Topic 4's anchoring phenomenon leverages students’ experiences with the phenomenon of weather. Before viewing an Anchoring Phenomenon Video of the sky changing over time, the teacher asks, “Why is it important to know about changes in the weather? How do you discover what the weather will be each day and how it might change?”
- Materials contain a variety of resources, such as background videos, Anchoring Phenomenon Videos, vocabulary cards, topic readers, hands-on stations, literacy stations, key ideas videos, and exit videos. Additional unit activities may include STEAM activities, video games that apply their learning, and STEMwalks.
- Materials provide guidance for the teacher to address common misconceptions at the beginning of each topic, including common misconceptions to help students succeed in the unit. The section helps teachers gauge where some students may have inaccurate or inadequate prior knowledge.
- Grade 2 materials state common misconceptions about patterns in the sky (e.g., the stars are much smaller than our sun, and severe weather events occur randomly).
- The preview of Topic 3, *Sound and Volume*, provides guidance on the misconceptions that sound only travels through air and only travels to the person that hears it. Sidebars within the topic address misconceptions such as sound travels through matter, sound is stored in objects, and communication is only verbal.

- Materials intentionally leverage students' prior knowledge and experiences related to phenomena and engineering problems. Students experience the phenomena through various means, such as teacher demonstrations, hands-on stations, literacy stations, experiences, videos, text, data, and images.
- For example, in Topic 3, the anchoring phenomenon asks, “Why is the siren the loudest sound?” After watching the video, students get a chance to ask questions, and then the teacher leads a class discussion which prepares the students for the investigations on the topic.

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

- Teacher guidance materials clearly outline the scientific concepts and learning goals behind anchoring phenomena that correspond to concepts across the grade level. Each topic provides a Teacher Background section that refreshes teacher knowledge or topic content and outlines key concepts to support instruction on the topic.
- For example, each topic contains two to three 5E lessons that work together to support the anchoring phenomena to guide students in gaining a deeper understanding of corresponding grade-level concepts. A teacher video is provided to assist the teacher in understanding the scientific concepts and goals of the topic. The preview of each topic also includes a section titled Teacher Background, which states key concepts to support instruction on the topic.
- In Topic 4, *Patterns in the Sky*, the Teacher Background includes: “The natural world has recognizable patterns that can be predicted.” “The sun is a star that provides light and heat, and the moon reflects that sun's light.” “Objects in the sky are more visible and can appear differently with a telescope than with an unaided eye.” “Weather information, such as temperature and precipitation, can be observed, measured, recorded, and graphed.” “Some types of severe weather events are more likely to occur in some regions than others.”
- The materials include a planner that includes a phenomenon tracker. The phenomenon tracker clearly outlines the lesson goals. For example, the anchoring phenomenon in Topic 3 is, "Why is the siren the loudest sound?" The topic includes three phenomenon trackers that identify the student goals to support the anchoring phenomena.
- Also, in grade 2, an experience lesson on Earth's resources in Topic 5 asks students, "How did the lighthouse rock get its shape?" Materials clearly outline the lesson goal: “Students will learn to distinguish between natural resources and resources made by people that are important to everyday life.”

Savvas Learning Texas Experience Science Grade 2

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

Evidence includes but is not limited to:

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

- Materials include a TEKS progression in the overview at the beginning of each topic, providing the primary TEKS that guides the topic which shows the relevant TEKS or guideline progression in the grade prior to and after the current grade. The vocabulary at each grade level and how it builds upon the previous year's vocabulary is also shown.
    - Topic 6 in grade 2 builds and extends the knowledge around plants and animals students learned in grade 1. In grade 1, students learned about living and nonliving things, environments, and food chains. Grade 2 extends that knowledge as students learn how the structure of a bee's body helps it to gather food, air, and water. The TEKS progression indicates how this will be applied to how the external structures of animals help them to survive in their environment in grade 3.
    - A TEKS progression chart in the Topic Overview includes the standards addressed in each topic as well as the topic that connects to what students learned in the prior grade and will learn in the next grade. Topic 4: *Patterns in the Sky* lists four TEKS and thirteen key vocabulary words. The progression then names the two kindergarten standards and three vocabulary words and three grade 2 standards and seven vocabulary words that connect to the topic.
- The materials connect new learning to future learning across grade levels.

  - In the Teacher's Guide, materials include a scope and sequence that addresses what is being taught within each unit and explain how it connects to previous and future learning goals. The grade 2 Topic 1: *Matter* vertically aligns with grade 3's Topic 1: *Matter*. It is also vertically aligned with kindergarten and grade 1's Topic 1: *Objects*. They all fall within the theme of *Matter and Its Properties*.
  - In second grade, Topic 4, the students describe the sun as a star that provides light and heat and explain that the moon reflects the sun's light. In first grade, the students describe and predict the patterns of seasons of the year, such as order of occurrence and changes in nature. In third grade, students construct models and explain the orbits of the sun, Earth, and moon in relation to each other.
- Materials are vertically aligned and designed for students to build and connect their knowledge and skills within and across units and grade levels. The materials provide a scope and sequence that shows the topics across grade levels.
  - Materials in Topic 1 in grades K-5 are *Matter and Its Properties*. In grade K, the lessons focus on *Properties of Objects* and *Classifying Objects*. In grade 1, students will continue to build on the concepts with lessons on *Building with Parts, Properties of Objects,* and *Changes to Materials.* In grade 2, the lessons progress to *Properties of Matter, Changes in Matter,* and *Combining Matter*.
  - In Topic 7 of the *Organisms and Environments* unit in kindergarten, the materials provide lessons on animals. The lessons include *Animal Parts* and *Needs of Animals*. In grade 1, the topic continues with lessons on *Animal Structures, Parents and Young,* and *Animal Life Cycles.* The topic vertically continues in grade 2 to include lessons on *Environments, Living Things in Environments,* and *Food Chains.*

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

- Materials are intentionally sequenced to scaffold learning in a way that allows for increasingly deeper conceptual understanding.
  - In Topic 6, Experience 2, they first engage with the content by looking at an Everyday Phenomenon Photo to answer the question, "How do legs and feet of each Texas bird help it find and take in food?" Students explore the content by completing the Literacy Station Activity: "How do behaviors help animals survive?" and Hands-On Station Activity: "How does color help groups of fish?" Students interact with explanations of the content as the teacher presents the Key Ideas presentation to the class, and the students then complete the corresponding Key Ideas Activity: *Animals*. Students elaborate on the content as they complete the WalkSTEM Activity: "How does this help?" Finally, students' conceptual understanding can be evaluated through formative and summative assessments with exit tickets and Revisit the Phenomenon prompt.
  - The students build background knowledge through either an Everyday Phenomenon Demo or an Everyday Phenomenon Photo in the Engage portion of the lesson. Students then progress to hands-on and literacy stations to Explore the concepts introduced previously during the Engage portion of the lesson. There is an opportunity for students to apply their learning in the Elaborate section of the lesson, such as a STEAM activity before the lesson moves on to the Evaluate portion of the lesson in which the teacher revisits the anchoring phenomenon question.
  - *Force and Motion* in second grade includes a 5E experience *Pushes*. The lesson begins to build background knowledge with an Everyday Phenomenon Demo. The teacher leads

the students through a demonstration of using their hands as a tool to turn the ball of clay into a bowl. The teacher leads the students through a discussion of how the pushes and pulls are causing the clay to change shape. The students build on this knowledge by engaging in a hands-on station observing the changes to a piece of clay after a toy marble is dropped onto a piece of clay. The students continue to build knowledge in a literacy station where they read about pushes and explain how they use pushes every day. The students move on to a Key Ideas discussion of their findings and watch a video on pushes and pulls in gardening. The lesson finishes with partners creating a list of objects that can be shaped by pushes.

- Materials are intentionally sequenced to scaffold learning in a way that allows for an increasingly deeper conceptual understanding.
    - Materials ensure students experience a phenomenon on each topic before working on the experiences. Each experience includes visual aides and hands-on stations during the Explore section.
    - In Topic 4, *Patterns in the Sky*, the students observe that water placed in sunlight will become warmer, to connect that the sun gives off heat. Then students collect, record, and graph weather information to connect how weather patterns can be used to predict the weather. In the end, students investigate types of severe weather to connect to why weather changes.
    - In Topic 6, *Plants and Animals*, the materials provide an Anchoring Phenomenon Video: “How does being part of a hive help a bee survive?” and vocabulary picture cards to introduce students to the vocabulary found in the upcoming lessons. Experience 1: *Plants* and Experience 2: *Animals* both go through the entire 5E model. For example, in Experience 1, the Engage portion is a demo that is focused on the question "How do the different plant parts help the plants survive?" The Explore section allows students to explore plant parts and how plants live, focusing on questions such as "How do plant parts help plants live?" and "How are plants alike and different?" The Explain and Elaborate portions of the lesson are combined and take students through a Key Ideas presentation and video. Also in this section is a STEAM Activity where students design and build a model plant using the knowledge and understanding built throughout the experience.
- Materials allow students to build their knowledge and skills within topics by beginning each topic with an anchoring phenomenon.
    - In Topic 6, students watch an Anchoring Phenomenon Video to answer the question, "How does being part of a hive help a bee survive?" In Experience 1, students draw and label two parts of two plants to compare the plants, answering the question, "How are plants alike and different?" In Experience 2, students describe how the structures and behaviors of animals help them survive, answering the question, “How does color help groups of fish?”

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

- Materials provide teachers with a clear and concise scope and sequence that leads students to learn via science instruction.
    - Within the scope and sequence are recurring themes and concepts and the science and engineering practices as outlined in the front matter. By clearly identifying where

content is covered, teachers can access assets and provide practice for students in achieving mastery of the TEKS and ELPS.

- Materials provide access to a Topic Overview at the beginning of each topic that lists the grade-level-specific core concepts, the scientific and engineering practices TEKS, recurring themes and concepts TEKS, English Language Proficiency Standards, and cross-curricular TEKS. Topic 2 focuses on the grade-level-specific core concepts. Materials explain how objects push on each other and may change shape when they touch or collide and plan and conduct a descriptive investigation to demonstrate how the strength of a push and pull changes an object's motion.
- Materials include two experiences covering these grade-level-specific core concepts while embedding several scientific and engineering practices TEKS, recurring themes and concepts TEKS, and English Language Arts and Reading TEKS.
    - Teacher materials include a planner within each topic that outlines the anchoring phenomenon which is based on grade-level-specific core concepts.
- Materials scaffold learning and allow for increasingly deeper conceptual understanding by following the 5E model.
    - In Topic 2, Experience 2, in the Engage phase, students see a photo of a soapbox derby race and are asked, “How can car 5 win the race?” In the Explore phase, students ask, "How can you move the ball?” and “How can you investigate the strength of a push?” In the Explain/Elaborate phase, the teacher presents key ideas about plant needs. In the Evaluate phase, students revise their thinking on their original exit ticket about changing motion.
    - During the Engage phase, in an everyday phenomenon, students discuss a demo on how sound is made when a rubber band is plucked. During the Explore phase, students make a model of a drum and place sand on it to see how sound from the drum affects the sand. During the Explain/Elaborate phase, students explain and record different sounds from a slide presentation. During the Evaluate phase, students display their learning by drawing used to make sounds.
- Materials accurately present science and engineering practices (SEPs)
    - "This editable presentation is designed for front-of-classroom instruction to explain and review the scientific and engineering practices and themes of the Texas TEKS." The presentation is designed to focus on the key ideas of investigating or designing, analyzing data or using models, sharing ideas, scientists' help, and themes and concepts. It continues with strategies such as asking questions, using tools, math, planning and conducting investigations, designing solutions, and collecting and recording data.
    - Within the same section of the SEPs and Themes presentation, the materials also provide SEPs and Themes Activities that "can be used to introduce students to Scientific and Engineering Practices, as well as Recurring Themes and Concepts in science."
        - For example, in “How can you make the ground cooler?” students are tasked with solving a problem: "Imagine you want to make a cool place to sit on a sunny day." Students then define the problem, use resources, brainstorm, design a solution, build a model of their structure, test their structure, collect data, and then evaluate one way they can improve their structure.

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

- The materials include specific learning targets for each experience to gauge student mastery of concepts for the grade level.

- Topic 4, Experience 2 states the learning objective is for students to record and graph weather information, including temperature and precipitation.
- Topic 2 contains two experiences to support the grade-level main concepts. Experience 1, *Pushes*, has a phenomenon tracker where students investigate how objects change shape and connect it to how pushing on land can change it. Experience 2, *Motion*, has a phenomenon tracker where students explore how the strength of a push or pull changes an object's motion.
- Each experience includes an exit ticket to support the teacher in assessing students' level of mastery. Each topic includes a topic test for a summative assessment of the topic which can be taken online or in a printable format. A short constructed response is available.
- Topic 2, *Forces and Motion*, contains two experiences, each of which contains an exit ticket designed to gauge student understanding of the concept. The topic also includes two choices for an end-of-topic test. A multiple choice test and a short answer constructed response test. Both tests are available in online and printable versions.
- Topic 3, *Sound and Motion,* supports the evaluation of student mastery with multiple embedded formative assessments and summative assessments throughout each experience. In the Key Ideas presentations for Experience 1 and Experience 2, there are student-facing slides and teacher notes. The slides have direct instruction and formative assessment to help students synthesize a comprehensive and accurate understanding of key concepts and to engage with scientific practices and recurring themes and concepts. After the presentation, each experience's Key Ideas Activity allows students to apply concepts they have learned.

- The materials clearly define the boundaries of content that students must master for the grade level. The materials include specific objectives and evaluate the objectives for the grade level.
  - Teacher materials provide an exit ticket after each experience to assess mastery of key grade-level science concepts.
  - In Topic 3, Experience 1, the objective is "Students will demonstrate and explain that sound is made when matter vibrates." At the end of the experience, students complete an exit ticket assessing how sound is created.
  - In Topic 5, *Earth's Resources*, the Topic Overview provides guidance about what students learned the previous year, and where concept learning will progress to the following year. In grade 1, students investigate and document the properties of Earth materials. In grade 2, students investigate and describe how wind and water move soil and rock particles across the Earth's surface. In grade 3, students investigate and explain how soils such as sand and clay are formed by weathering of rock and by the decomposition of plant and animal remains.
  - For each topic, the materials include a Topic Wrap-Up that includes many ways to assess student learning and mastery. At the conclusion of Topic 4: *Patterns in the Sky*, the materials provide an online test. The assessment contains 6 questions that are graded automatically. An editable and printable version of this assessment is also provided to "assess mastery of the concepts presented in the investigation." A short constructed response assessment is available online or as an editable printed version.
  - Within each experience, the materials provide a Wrap-Up Exit Ticket as part of the Evaluate section of the 5E model. For example, at the conclusion of Topic 5: *Earth's Resources*, Experience 1: *Movement of Earth Materials*, the Wrap-Up Exit Ticket is a discussion prompt: "Use this discussion prompt as the short, formative evaluation of the

content for *Movement of Earth Materials*." The discussion prompt is, "What are some ways that Earth materials can be moved?"

Savvas Learning Texas Experience Science Grade 2

Indicator 3.2

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

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

Meets | Score 6/6

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

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

Evidence includes but is not limited to:

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

- Materials provide a TEKS Progression to support teachers in understanding the horizontal and vertical alignment of grade-level content. Each topic includes a TEKS progression that highlights the standards that are mastered within that topic, the standards students should have mastered in previous grades, and how learning will progress in the subsequent grade.
    - The TEKS Progression provides a "Look Back" which answers the question "How does this topic connect to what students learned earlier?", an "In This Topic" which lists the "big ideas" TEKS that will be studied throughout the topic lessons, and a "Look Ahead" section that addresses "How does this topic connect to what students will learn later?"
    - Topic 4: *Patterns in the Sky* lists four TEKS and thirteen key vocabulary words. The progression then names two kindergarten standards and three vocabulary words and three grade 2 standards and seven vocabulary words that connect to the topic.
    - The materials contain a K-5 scope and sequence that showcases which skills and standards students should have mastered in previous grades and how learning will progress in the subsequent grades for the entire six-grade-level span. Under the theme of *Force, Motion, and Energy,* students learn about how heat causes change as well as force and motion in grade 1. Then in grade 2, the same theme progresses into force and

motion as well as sound and volume. In grade 3, students study force and motion as well as energy.

- In Topic 3 Overview: *Sound and Volume*, the Look Back section lists the grade 1 TEKS (1.8A investigate and describe applications of hearing in everyday life such as cooking food or using a clothes dryer, and 1.8B describe how some changes caused by heat may be reversed such as melting butter and other changes cannot be reversed such as cooking an egg or baking a cake) and vocabulary (heat, irreversible, melt, reverse) that students learned in first grade. The In This Topic section lists the current TEKS (2.8A-C) and the vocabulary that will be covered (communicate, device, distance, matter, sound, vibrate, volume). Lastly, in the Look Ahead section, the grade 3 TEKS that align with the current topic are listed (3.8A-B). The future vocabulary is also listed (energy, height, light energy, mechanical energy, sound energy, speed, system, thermal energy). The Teacher Background Video for each topic also addresses the key ideas of the grade-level topic and explains the future learning that students will get on this topic.
- In the Teacher Background Video for Sound and Volume, the video explains that this topic focuses on "what makes sound and how we use levels of sound in everyday life." The video continues to explain that students can connect to a previous topic of matter because sound is a form of energy that can travel through all kinds of matter. Future learning is also addressed. The video explains how this topic and group of lessons will help students in the future, "in grade 3 as they build a deeper understanding of the forms of energy, including light, sound, thermal, and mechanical energy."
- The materials contain a scope and sequence that lists the core concepts taught across grades K-5.
  - The scope and sequence lists that the scientific and engineering practices along with the recurring themes and concepts are covered in the SEPs and Themes Preview, and they are embedded throughout the course. Four main concepts are covered across each grade level. The main concepts are each subdivided into units called topics which contain two to four 5E lessons called experiences. The scope and sequence outlines the topics taught at each grade level within a concept.
  - In kindergarten, students learn about magnets and the concept of push and pull. This supports the first-grade force and motion topics of push and pull along with speed and direction. The scope and sequence then shows how in second grade, students learn about pushes and motion.
- The materials provide a Course Planner and Pacing Guide detailing how the topics increase in depth and complexity across topics. In Topic 2, *Force and Motion*, pushes are taught before motion. This helps to support the later topic on the movement of Earth's materials. Within each experience, the 5E instructional model is used so students are first engaged with an introduction to the topic. which builds to a hands-on exploration and literacy station, then moves on to a discussion as students explain the concept. There is an opportunity for students to elaborate on the concept before an exit ticket checks for understanding.

- The materials also support teachers in understanding the horizontal and vertical alignment guiding the development of grade-level recurring themes and concepts as well as scientific and engineering practices.
  - In each Topic Overview, the Scientific and Engineering Practices TEKS and the Recurring Themes and Concepts TEKS are listed that will occur within the topic lesson. The materials also provide a SEPs and Themes Preview that provides a presentation that is

"broken down into five Key Ideas that correspond to Texas Essential Knowledge and Skills for Science 1–5. These Key Ideas include Investigate or Design, Use Models, Share Ideas, Scientists Help, and Themes and Concepts." The guide explains how to use the presentation to guide students through the SEPs and themes. For example, in the Investigate or Design portion, the guide advises teachers to "Use Slides 2-6 to help students explore the processes of conducting investigations and designing solutions. Explain that the investigation and design processes are similar." The presentation then shows six steps to investigate or design, including asking questions and defining problems, planning and conducting investigations, designing solutions, using tools, collecting and recording data, and safety." An activity to apply the learning is then suggested. For example, the Investigate and Design Activity is to "design a solution to keep the ground under a structure cooler than the ground around it."

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 provide background information via video to aid in providing explanations and examples of science concepts. The materials include support for teachers to develop their own understanding of more advanced, grade-level concepts via the Teacher Background section in the Teacher's Guide and the Teacher Background video.
    - In Topic 2, a video explains how the TEK is addressed, its connections to the previous unit, and how the topic builds across grade levels. The video also gives information about the topic, including how the topic is explored within the unit. It also addresses common misconceptions, such as when an object is at rest, there is no pushing or pulling force on an object. Background knowledge on gravity is provided to support the teacher but it is suggested not to introduce this topic to the students yet.
    - In Topic 3, the Teacher's Background provides this information: "Sound is made when matter vibrates. The sound makes matter vibrate, and sound waves move through matter. Volume is how loud or how quiet a sound is. Sound is used to communicate over a distance." The Teacher Background Video is four minutes long and reviews what students may and may not already know about sound. The video reflects on what students should have learned in prior grades and outlines what they will learn in this topic. It also shows how this topic connects to future topics and the next grade level.
    - In Topic 4, *Patterns in the Sky*, it states, “Watch the Teacher Background Video, Patterns in the Sky, to refresh your knowledge of topic content. Teachers have access to the Teacher Background Video (5:34) and view the explanation of the key concepts of this topic, what the students will learn throughout the topic progression, and what students should be able to connect this new learning to and what this new learning will help them understand in future grade levels. Key concepts to support instruction on this topic: The natural world has recognizable patterns that can be predicted. The sun is a star that provides light and heat, and the moon reflects the sun's light. Objects in the sky are more visible and can appear different with a telescope than with an unaided eye.”
    - The Topic 5, *Earth’s Resources,* background video explains how the subject has spiraled from observing and describing rocks in kindergarten to how grade 1 students investigate how water can move rocks and soil particles. In grade 1, they also learn about why water is important as a resource and why we should conserve water. In grade 2, students learn key concepts such as how landforms are shaped by moving water and

wind and how to conserve resources and dispose of things properly. The background video explains that students may not understand the difference between natural resources and man-made resources and discusses how they will participate in a hands-on station to learn to identify these differences. The video provides information about the misconception that landforms have always looked the way they do now. This is addressed through a hands-on station where students observe the effects of water on sand. The video gives the teacher guidance to have students apply their learning in the station to a large rock formation.

- The Teacher's Guide contains sidebars throughout the topics to support teachers on common misconceptions.
    - Topic 1, Experience 1, addresses the misconception that students may think that air is not matter.
    - In Topic 2, a sidebar addresses the misconception that all push results in a change. Another sidebar addresses the misconception that an object's force is used up when it stops moving.
    - Topic 4, *Patterns in the Sky*, identifies these misconceptions: "The stars in the night sky are much smaller than the sun. Severe weather events occur randomly."
    - Topic 4, *Patterns in the Sky,* states, "The stars in the night sky are much smaller than our sun." The explanation for this misconception is "In Experience 1, reinforce that distance is a factor when comparing the way objects in space appear to us on Earth." The explanation continues to detail the size of the sun and the importance of keeping in mind our vantage point on Earth.

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

- Materials explain the intent and purpose of the instructional design of the program at the beginning of the Teacher's Guide.
    - The program was designed by Texas authors and consultants with the help of contributors of science experts to reinforce science content and make learning fun. Partners and reviewers also contributed to the design of the program with video games, simulations, and hands-on activities that engaged students in connection to content in meaningful ways. Materials use the 5E model for learning during each Experience.
    - Materials provide a rationale for using the 5E model for learning in the paper titled "Experience Science; Instructional Research." The paper states that the benefits of the 5E model are that it increases student engagement, develops critical thinking skills, and fosters a deeper understanding of science.
    - Materials contain a program guide in front of the Teacher's Guide to explain how the materials were designed for Texas. The program guide explains how the materials were designed around anchoring phenomena from many areas in Texas including Big Bend, the Hill Country, the Panhandle, and the Gulf Coast. The materials use everyday phenomena to explore science within their local area and apply that understanding to broader global issues in the anchoring phenomena.
- The program guide explains that the 5E instructional method is the foundation of the instructional plan. Materials use the 5E model for scaffold inquiry instruction for students to build understanding. "Students learn by exploring, collaborating, and communicating their ideas. In Texas Experience Science, the 5E model is used to scaffold inquiry instruction for students to build understanding."

    - The 5E model is used to scaffold inquiry instruction for students to build understanding. The students engage with phenomena, make a claim and explore while they gather evidence, and test hypotheses. The students then come together as a group to explain and watch a video to verify or redirect. There are opportunities to elaborate and extend their learning. Finally, the students evaluate and demonstrate their learning.
- Materials provide several resources that explain the intent and purpose of the instructional design of the program.
    - For example, the Program Overview explains the "hands-on station-based curriculum engages all levels of learners to provide meaningful learning opportunities." The same resource explains the phenomena explorations within the materials. “Texas Experience Science uses phenomena from its vast regions including Big Bend, the Hill Country, the Panhandle, the Gulf Coast, and the Piney Woods for students to experience and investigate. Encourage active exploration of real phenomena with your students." The materials provide several digital resources to "support the application of science and engineering practices, connect concepts, and deepen understanding of core ideas."

Savvas Learning Texas Experience Science Grade 2

Indicator 4.1

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- The materials provide a definition of sensemaking and identify specific sensemaking behaviors of students. Materials include supporting students' sensemaking through reading and writing on each topic.
    - Each topic contains three leveled reader texts to support student learning within a topic. The students have opportunities to participate in shared and independent writing as they participate in discussions throughout the topic and record their observations in station activities. The materials' sidebars guide the teachers in supporting students' thinking and acting as scientists and engineers. Topic 2, *Force and Motion,* includes the leveled topic readers, *Magnetism and Gravity* (Lexile: 520L), *Energy, Force, and Motion* (Lexile: 460L), and *Exploring Motion and Force* (Lexile: 530L). Students engage in sensemaking as they participate in writing activities such as recording in a notebook how pushes could be used to make an animal out of clay, students drawing an activity that requires a push, writing a plan, and generating questions about how pushes and

pulls affect the way a toy car moves, and writing a response to the exit ticket question, "Why are machines used in construction?"

- For example, in Topic 5, *Earth's Resources,* as students learn about protecting Earth's resources, they view a video about whether items should be thrown out or if they can be used again. The teacher engages students in a discussion by asking if many of the objects that are normally thrown away could be saved and used again. The students then participate in a hands-on station creating art from materials such as magazines, empty boxes, and plastic containers.
- Every topic has an Anchoring Phenomenon Video that supports student sensemaking through thinking and acting like a scientist to develop an explanation. Students watch and respond to a short Anchoring Phenomenon Video that shows a phenomenon or engineering problem related to the topic's scientific concepts. Students are prompted to consider the phenomenon or engineering problem and then encouraged to think and act as a scientist or an engineer to solve the problem. As students progress through the experiences, they will use related sensemaking activities to help them answer the Anchoring Phenomenon question. In Topic 4, students use the Anchoring Phenomena Video to explain how the weather is changing. The teacher materials state, "Lead a discussion about what is happening in the video. Accept all ideas at this time. As students compare the sensemaking activities in this topic, they will return to the Anchoring Phenomenon with greater clarity. Remind students that learning, like science, is an iterative process. It's okay to start with one idea and revise your ideas as you get more information."
- Materials provide a hands-on station for each experience to encourage student sensemaking through thinking and acting like scientists and engineers. The hands-on station includes a hands-on station card and companion activity that support sensemaking through reading, writing, and thinking activities. The hands-on station card and companion activity have embedded discussion and writing prompts related to the Scientific and Engineering Practices that allow students opportunities to make predictions; collect observations and measurements as evidence; record and organize data; or communicate explanations and solutions which provide students opportunities to think and act as scientists and engineers. In Topic 6, Experience 1, the hands-on station asks, "How does the sun affect temperature?" Students conduct an experiment to determine how the sunlight shining on water affects the temperature.
- Each Topic Overview includes a Connect to Literacy section that provides a list of topic readers and a list of suggested trade books for students to interact with scientific vocabulary and informational text to build reading and writing skills. For example, the reading connection in Topic 1, Experience 1, takes place in the literacy station where students use information from the text as they list physical properties that can be used to describe objects. Students use this information to draw a classroom object with certain properties. The writing practice, in the key ideas activity allows students to use information from the text about physical properties to assist them as they label and sort objects with certain physical properties.
- Teacher materials for each topic include an Anchoring Phenomenon Video, Photo, or Demo Activity and a Thinking Like a Scientist activity to support students' sensemaking through thinking and acting like a scientist when experiencing and investigating the topic. Using the 5E model students have opportunities to explore the topic and make connections with personal experiences by asking questions and having discussions during the hands-on stations. For example, Topic 2, Experience 1, includes a hands-on

station where students observe what happens to clay when a marble is placed on it compared to when a marble is dropped on it.

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

- The materials include 3 grade-level topic readers for each topic to provide opportunities to gather evidence and develop an understanding of concepts covered within the topic.
    - In Topic 3, materials suggest the teacher introduce students to the vocabulary words communicate, device, distance, matter, sound, vibrate, and volume. These vocabulary words are introduced, and the students add sticky notes to the cards as they learn more information through the topic to create a concept map. After learning the vocabulary words, the students gather evidence from included topic readers *Sounds Around Us, What Are Forces and Energy*, and *Musical Instruments* to gather evidence supporting the anchoring phenomenon, "Why is the siren the loudest sound?" and add to their concept map.
- The materials include literacy stations for each experience that provide opportunities for students to engage in purposeful and targeted activities with grade-level appropriate scientific texts.
    - In Topic 3, students read *Sound* and then draw an illustration of how a drum makes a sound. They will also read a passage titled “Volume” and then tell a partner how they use loud and quiet sounds. The teachers guide students to discuss with a partner how a drum makes sounds including their new vocabulary words sound and vibrate.
    - In Topic 3, a literacy station includes the text titled “Volume,” and the teacher guides the student thinking to make connections by asking questions such as, "When do people use loud sounds?" and "Would quiet sounds work as well as loud sounds in those places? Why or why not?"
- Each Topic Overview includes a Connect to Literacy section that provides opportunities for students to engage with grade-level appropriate scientific texts to gather evidence and develop an understanding of the concept taught. It includes a list of topic readers and a list of recommended trade books to be used at any time during the lesson. It also includes an activity to go with each Topic Reader at the end of the topic. For example, in Topic 3, Experience 1, students use newly acquired vocabulary to write about their model using the vocabulary activity cards.
- The materials consistently support students' understanding of concepts through reading by including topic readers and topic reader activities students can utilize to think about and make further sense of the topic.
    - For example, Topic 4 contains *Patterns in the Sky* Readers, including texts about *Weather* which "covers the ways that weather patterns differ depending on the season," *The Sun's Energy and Earth*, which "covers how the sun affects Earth through the heat and light energy it emits," and *Your Garden and Weather,* which "covers different methods that can be used to protect plants from pests in the garden" The topic reader activity: *Patterns in the Sky* contains several graphic organizers students can use. For example, one is a Create a New Idea chart where students determine a Topic Reader Detail and a Read About It Detail and synthesize the two "details together to draw a new idea." Another example is the Draw About Text chart. Students are encouraged to "draw a picture and write a sentence to show what you learned."

Savvas Learning Texas Experience Science Grade 2

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.

- In Topic 1, *Matter,* students write about how they can describe objects and then draw and label an object with one of the properties they described. Students also complete a chart while exploring which objects can bend. Students also write a plan about how to make a physical change to juice. They also write about a problem an engineer is trying to solve and then draw a design that would solve the problem.
- In Topic 2, students engage in a variety of written and graphic modes of communication as they learn about force and motion. Students write in their notebooks how pushes and pulls could be used to make an animal out of clay. Students also record their observations as they drop a marble onto a piece of clay, draw an activity that requires a push, and record their observations as they move a ball by blowing through a straw.
- Each topic provides literacy station cards that include an activity for students to develop and display their understanding. In Topic 4, *Patterns in the Sky,* the literacy station card is titled, "How can you measure weather?" The card has a visual of several tools used to measure weather. There is a numbered sequence to guide the students on what they are to do. For example, "1 Think How do the tools you read about help collect weather data?; 2 Measure Tell the amount shown on each tool and what each tool measures; 3 Share Turn and Talk Ask a partner about their data." Also on the literacy station card is a What You Need box that shows students and teachers what they will need to complete the station. In this example, it is a Read About It booklet and the literacy station activity sheet.
- In Topic 7, Experience 1, students work in pairs to create a habitat for an earthworm or a deer. Students write to list the needs of the animal, describe the habitat in words, and draw a design for the habitat.
- Every experience provides a Key Ideas Presentation and companion activity including dynamic images or illustrations with narrative text to support students in developing an understanding of scientific concepts. Activity slides provide students opportunities to interact with images, illustrations, graphic organizers, and text boxes to support students in developing and displaying an understanding of scientific concepts. The Key Ideas companion activity has illustrations, graphic organizers, drawing space, or write-on lines to support students in developing explanations 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.

- Materials provide authentic student engagement and perseverance of concepts through productive struggle while acting as scientists and engineers as they engage in lessons guiding them to construct explanations of how and why phenomena occur.
    - In Experience 1 of Topic 2, *Forces and Motion,* students explore the effect of pushes from a ball of clay. The students are first engaged by a demonstration where the teacher uses pushes and pulls to make a bowl using clay. The students then conduct an experiment where they observe the effect of dropping a marble on clay to see how pushes impact the clay. The students apply this learning to answer the question, “How do you make a bowl out of a ball of clay?”

  - Materials create transfer opportunities for students as they take what they've learned in other lessons and use it flexibly in new situations. For example, students apply their learning about plant parts and animal behaviors and life cycles in Topic 6 to their learning in Topic 7 about which environment a plant or animal is best suited for. In Topic 7, *Environments*, students apply their previous learning about plants and animals in a hands-on station in which students decide whether an organism is best suited for a wet or dry environment. The teacher guides their thinking with questions such as, "What information do you need to be able to decide where a plant or animal can live?" and "What do you know about those environments?"

- Every topic has an Anchoring Phenomenon Video that allows 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. Students watch and respond to a short Anchoring Phenomenon Video that shows a phenomenon or engineering problem related to the topic's scientific concepts. Students are prompted to consider the phenomenon or engineering problem and then encouraged to think and act as a scientist or an engineer to solve the problem. As students progress through the three experiences, they will use related sensemaking activities to help them answer the Anchoring Phenomenon question. In Topic 7, students use the Anchoring Phenomena Video to explain how the prickly pear cactus helps the Texas desert ecosystem. The teacher materials state, "Lead a discussion about what is happening in the video. Accept all ideas at this time. As students compare the sensemaking activities in this topic, they will return to the Anchoring Phenomenon with greater clarity. Remind students that learning, like science, is an iterative process. It's okay to start with one idea and revise your ideas as you get more information."
- Materials are designed around the 5E model and inquiry-based science. This supports students to act as scientists. Inquiry-based science requires students to think critically to solve problems and develop analytical thinking as well as problem-solving skills. Topic 7, students watch and respond to a short Anchoring Phenomenon Video about how the prickly pear cactus helps the Texas desert ecosystem. The teacher leads a discussion and accepts students' comments and ideas. After discussing, the teacher refers back to the video to make reference to the discussion.
- Teachers have access to exit tickets for each experience that 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 through quick assessment prompts after students interact with experience assets. Exit tickets are designed to be assigned, completed, and collected in a short amount of time. Teachers can gauge and guide student mastery of concepts by reading and referring back to students' exit ticket responses throughout a topic. In Topic 6, Experience 3, students answer the question, "What is a lifecycle?" Students receive cards with the names of the stages of a butterfly and frog on them. The students sort the cards by animal and put them in order of the life cycle.
- The materials' pedagogical framework is designed around the 5E model, phenomena, stations, and inquiry-based science. In the Explore portion of the lessons, students "may conduct experiments, gather data, or work in groups to solve a problem." In the Elaborate portion, "students apply their new knowledge to real-world situations. This stage can involve projects, case studies, or simulations." The materials are also focused on phenomena. "Phenomena are an effective tool for engaging students in the science classroom and promoting scientific literacy. By providing a real-world context for scientific concepts, phenomena can help students develop critical thinking skills, improve their ability to collaborate and communicate, and foster a deeper understanding of scientific concepts."

Savvas Learning Texas Experience Science Grade 2

- Within each topic, the materials integrate stations. "Stations promote active learning by engaging students in hands-on activities and experiments. This can help students develop critical thinking and problem-solving skills." Finally, the materials support students to act as scientists through the inquiry-based science approach. "Inquiry-based science requires students to think critically and solve problems. This can help them develop problem-solving skills and analytical thinking."

Savvas Learning Texas Experience Science Grade 2

Indicator 5.1

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- Materials provide opportunities for students to develop how to use evidence to support their claims during the lessons by using the 5E model on each topic. Topic 3, *Sound and Volume,* includes 3 experiences, *Sound, Volume,* and *Uses of Sound,* which lead students through collecting evidence in hands-on and literacy stations to support their hypotheses of why the siren is the loudest sound. Students observe the effects of sound on sand that is placed in a thin layer of plastic wrap covering the opening of a cup. Students gather evidence to explain how to make louder sounds as they explore sound-making with a spoon, eraser, pencil, and ruler. Students use a tuning fork, string, and cup to explore how sound can travel as they determine how to use sound to communicate across a park. Students use evidence gathered to explain that loud sounds are used to communicate warnings.
- Student activity sheets are included with most hands-on stations. The activity sheets prompt students to use evidence to support their hypotheses and claims. An activity sheet in Topic 3, *Sound and Volume*, prompts students to record and explain their observations in an experiment using a cup, string, and tuning fork to explore how sound travels.
- In Topic 5, students watch and respond to a short video on the Lighthouse rock formation at Texas Palo Duro Canyon. As the students progress through the four experiences, they answer

the question, “How did the Lighthouse rock get its shape?” Students learn about Earth's resources as they go through the experiences. At the end of the topic, the students revisit the video, and the teacher leads a class discussion and asks, “How did the Lighthouse rock get its shape?” Students explain that the natural forces of wind and water changed the shape of the rock over many years.

- In Topic 5, Experience 1, the students investigate and describe the effects of wind and water on sand particles in a hands-on station. Students predict the results and draw pictures to record the outcome. Students revisit the anchoring phenomenon at the end of the activity and apply new knowledge as they discuss with a partner any new understandings about the phenomenon.
- In Topic 6, Experience 1, students record observations about different plants. Students use observations as evidence to compare the parts of the plants. The students use this evidence to discuss, "How do different plant parts help the plant survive?” when they revisit the everyday phenomenon and to support their anchoring phenomenon claim.
- In Topic 6, Experience 1, students observe how sunlight shining on a cup of water can affect the water’s temperature. Students record and analyze the data to discuss how the sun affects temperature. Students gather additional evidence in a literacy station as they read the *Sun and Moon* text. The students use evidence collected in the stations to explain the everyday phenomenon, “Why doesn’t the moon always shine at night?”
- In Topic 6, Experience 2, students color a fish model and form groups based on their fish color to observe how color can help groups of fish. Students gather evidence about how behaviors help animals survive as they read *Animals* in a literacy station. The students use evidence collected in stations to explain, ”How do the legs and feet of each Texas bird help it find and take in food?”

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

- Materials include embedded opportunities to develop and utilize scientific vocabulary in context. Topics include illustrated vocabulary cards for students to see, read, and define science and academic vocabulary terms. Teachers use the cards for word walls and small group vocabulary-building activities. In each experience, vocabulary terms are introduced to students in context as bold and highlighted terms in the Read About Its.
- Student materials provide students with opportunities to build their vocabulary with vocabulary cards that include the word and simple definitions. Topic 1, Experience 3’s words and definitions are “combine-put objects together, engineer-person who plans and builds things to solve a problem, reassemble-put something together again or in a different way.” These words and definitions are revisited in context in the Read About It, *Combining Matter*. It says, “Engineers solve problems by designing solutions.” Students also apply the words in context in the Explore part of the experience when students design a house for a pet.
- Topic 1, Experience 1, Read About It, *Properties of Matter*, introduces the terms *matter* and *property* in the context of the text. The text says, “Matter is anything that takes up space and has mass,” and “A property is something you can observe with your senses.” The students interact with the Read About It text after having firsthand experience in the hands-on station: “How much can you bend it?”
- In Topic 3, Experience 1, includes *sound* and *vibrate* as vocabulary words. The teacher introduces the vocabulary cards and adds them to the vocabulary wall. Students explore the Read About It passages about sound. Students illustrate how a drum makes a sound and use newly acquired vocabulary words to explain their illustration. Students discuss with a partner how a drum makes sound as the teacher encourages the use of the vocabulary words *sounds* and *vibrate* in their discussion.

- In Topic 5, Experience 3, students work on the student book page titled “Vocabulary Protect Resources” as they cut vocabulary words and definitions of *conserve, dispose, impact, recycle,* and *responsible*. Students use this activity to reinforce the vocabulary for Protect Resources after the teacher's introduction of the word.

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

- Materials include opportunities for argumentation and discourse that support students' development of content knowledge and skills for the concept taught. Each topic includes an Anchoring Phenomenon Video and questions that introduces students to the concept of scientific arguments. Students are encouraged to make a verbal argument about the concept as they go through the experiences and, at the end of the topic, use the evidence they collected to make a final argument as they revisit the Anchoring Phenomenon Video.
- Students are introduced to scientific arguments through the Anchoring Phenomenon Videos and questions in a classroom discussion to engage them and develop content knowledge. The teacher guides the students to make a verbal claim or argument. The students use the evidence collected through their experiences within the topic to revise their claims and to support their final claims as the topic wraps up. In Topic 3, students engage in a class discussion of why a siren is so loud after viewing the Everyday Phenomenon Video with a firetruck using its siren. After participating in stations on sound, volume, and how we use sound, the students revisit the anchoring phenomenon and discuss why the siren is so loud using the knowledge they have gained through the experiences.
- In Topic 5, students watch and respond to a short video on the Lighthouse rock formation at Texas Palo Duro Canyon. The teacher leads a class discussion by asking, “How did the Lighthouse rock get its shape?” During the experiences, students collect evidence about the way the movement of water and wind can change Earth's surface. Students learn how to distinguish between natural resources and resources made by people. They recognize that people affect resources and that resources can be conserved by reuse and recycling. Students use their evidence at the end of the topic as they discuss, “How did the Lighthouse rock get its shape?”
- The Teacher’s Guide includes a Mastering Scientific and Engineering Practices that provides teachers with strategies to help students make the connection that observations they make can be used as evidence to support an argument. For example, Topic 5, Experience 2, includes the following strategy. "Develop Explanations Supported by Data: Students will encounter both natural resources and resources made by people in the stations. Have partners discuss what they learned from the Read About It about natural resources and resources made by people. For both stations, ask students how they will find evidence of whether an object is natural or made by people. Asking these questions helps students develop explanations that are supported by data.”
- Materials integrate discourse to develop content knowledge in the Topic Launch. In Topic 6, *Plants and Animals Launch*, the teacher asks, “How does being part of a hive help a bee to survive?” The students watch the Anchoring Phenomenon Video and then participate in a discussion "about why students think the bee shares information about where it found food."
- After completing the stations, teachers are guided to have students participate in the Revisit Everyday Phenomenon and apply what they have learned. In Topic 6, Experience 1, students participate in a hands-on station, “How are plants alike and different?”, and the literacy station, “How do plant parts help plants live?” Students use evidence from stations to discuss with partners, "How do the different plant parts help the plants survive?"

Savvas Learning Texas Experience Science Grade 2

- 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.

- Materials provide developmentally appropriate instruction on how to construct and present a verbal or written argument to solve problems using evidence acquired from learning experiences. Topic 2, *Force and Motion*, engages students with the problem, "How does construction change the land?" As students progress through the experiences, they have opportunities to collect evidence at hands-on stations where they collect evidence about how pushes can change or move objects. At the end of this topic, the students use this evidence to present an argument for how construction changes the land.
- Students write in the student activity guide about the effect of a snowball colliding with a tree and a woman pushing on bread dough using the evidence acquired in the Topic 2 stations. Students draw a picture to illustrate how a push changes the shape of an object and label the cause and effect. Students use their evidence from the experiences to write about how the strength of a push affects how it moves.
- In the Topic 5, Experience 3, hands-on station, students use items such as glue, tape, string, paper, and scissors to make an art piece. Students discuss ideas with a partner. Draw a design for their art, label the materials, show the design to a partner, and ask for suggestions. Students write three ways to conserve resources as an exit ticket as they use the evidence acquired in the experience.
- In Topic 6, students view the video, “How does being part of a hive help a bee survive?” and participate in a class discussion. Students complete the hands-on and literacy stations in Experience 1 and use the evidence they collected to justify verbal explanations for how different plant parts help plants survive.
- In Topic 6, Experience 1, students use what they learned in stations to write in their activity guide about why cactus leaves are different from the leaves of plants that live in water. The students participate in a literacy station in Topic 6, Experience 2, as they read the text *Animals* and apply their learning to write about how a chimpanzee using a tool helps it to live.
- Topics include STEAM activities that provide students with opportunities to develop and evaluate solutions to problems using evidence acquired from their learning. For example, Topic 7, Experience 1, includes a STEAM activity where students work in pairs to design and create a habitat for either an earthworm or a deer using the STEAM Activity sheet as a guide. Students consider the physical characteristics of the environment of their chosen animal, using information from the Key Ideas Activity worksheet. Students list the needs of the animal, describe the habitat in words, and draw a design for their habitat.

Savvas Learning Texas Experience Science Grade 2

Indicator 5.2

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- The Key Ideas presentation in the Explain section of each experience provides teacher guidance on anticipating student responses and the use of questioning to deepen student understanding.
- In Topic 1, *Matter*, the materials provide questions with possible student responses. In a unit on combining matter, the materials list questions, such as, "How was the child like an engineer when they made this bird feeder?" with the possible responses, "The child was like an engineer when they chose materials that would work best." The Teacher Support notes include suggestions to support and guide students by discussing some practices engineers use, such as asking questions and solving problems.
- While presenting the Experience 1 PowerPoint in Topic 2, *Force and Motion*, the teacher asks, "What happened when the clay and marble came together with different forces?" while displaying a slide of students dropping marbles on modeling clay. A possible answer provided is, "The marble did not change the clay when it rested on or pushed the clay with little force. The marble dented the clay when it collided with or pushed the clay with a harder force." The teacher displays a slide with a photo of a child pushing another child on a sled and asks, "Who is being pushed in the photo? (the child on the sled) Who is doing the pushing? (the person behind the sled) What will happen if the person behind the sled lets go of the sled? (The sled and the child on the sled will move away from the person behind it who is doing the pushing) How do

you know that the sled is being pushed and not pulled? (It is being pushed because the sled will move away from the person behind it, who is doing the pushing)."

- Teacher guidance on anticipating student responses and the use of questioning to deepen student thinking are provided throughout the experiences. In the Evaluate section of Topic 2, *Force and Motion*, Experience 1, *Pushes*, the teacher revisits the anchoring phenomenon as they ask, "How does construction use pushes to change the land?" The sample answer provided is, "Machines used in construction must have a lot of power, a lot of strength is needed to push and pull the soil and dirt to change the land."
- Each topic begins with an Anchoring Phenomenon Launch, which guides teachers on the use of questioning and provides teacher guidance on anticipating student responses and the use of questioning to deepen student thinking. For example, in Topic 4, *Patterns in the Sky*, Launch, the lessons begin with guidance for teachers, "students will have different levels of experience with weather, so begin with some open-ended classroom prompts." The materials then guide teachers to "Ask: Why is it important to know about changes in the weather? How do you find out what the weather will be each day and how it might change?"
- Materials provide teacher guidance on anticipating student responses and the use of questioning to deepen student thinking. Sample answers are provided throughout the Teacher's Guide for teachers to use. For example, in the exit ticket for Topic 5, *Earth's Resources*, Experience 2, the teacher asks, "What do you think changed these rocks?" "Sample answer: Wind or rain changed the shape of the rocks."
- In the Engage section of Topic 6, *Plants and Animals*, Experience 3, the materials provide teacher responses to possible students' responses, including how to build on students' thinking. The students view photos of an egg changing into a frog. The materials prompt the teacher to ask, "What animal do you see? What do you think this tiny ball is?" when pointing to the egg. The teacher explains that it is the egg from which the frog grows and asks, "How do you think the egg changes as it changes into an adult frog?"
- The materials provide an Anchoring Phenomenon Video that students watch and respond to in a class discussion. "Lead a class discussion about what students think is happening in the video." Guidance is provided about how students may answer, and teachers are guided to, "Accept all ideas at this time. As students compare the sense-making activities in Topic 4, *Patterns in the Sky*, they will return to the anchoring phenomenon with greater clarity." Guidance is also given in the form of which questions to lead the discussion. "Ask: How is the sky changing?"

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

- In Topic 1, *Matter*, the materials provide teachers with a topic launch to preview vocabulary used in the unit. The materials direct the teacher to present and read through the vocabulary card as a class and suggest adding them to a vocabulary word wall for students to reference. The materials also provide suggestions to guide students in making connections between vocabulary words or vocabulary words and other words.
- The launch section of each topic includes a vocabulary section with vocabulary words to be introduced in the topic. Topic 3, *Sound and Volume*, includes vocabulary cards for *communicate*, *device*, *distance*, *matter*, *sound*, *vibrate*, and *volume*. The teacher works with the class to decide how to add the vocabulary cards to a vocabulary word wall. The teacher creates a concept map by writing the vocabulary words on sticky notes and putting them on the board. Students write new information they learn on sticky notes and add it to the board. The class reviews the

vocabulary words and notes at the end of the topic. The teacher places the notes in a final arrangement and draws lines to connect ideas.

- Teacher guidance to support the student's development and use of vocabulary in context is provided in the literacy stations. Topic 3, *Sound and Volume*, Experience 1, includes guidance to have students use their vocabulary words *sound* and *vibrate* included in their text *Sound* to explain an illustration they made of how a drum makes a sound. The teacher directs partners to discuss how a drum makes a sound while encouraging them to use their vocabulary words (*sound* and *vibrate*).
- Each experience has a Connect to Literacy with a vocabulary component. The vocabulary of the topic is highlighted in the Key Ideas Presentation, and teachers are given guidance on ways to support student vocabulary development. For example, in Topic 4, *Patterns in the Sky*, Experience 2, *Weather*, the materials guide teachers to "have students play a game of Three Questions. Each student silently chooses a vocabulary word and gives a partner the chance to ask three questions to determine what the word is."
- The Teacher's Guide includes a Vocabulary Support box for each experience that includes teacher guidance on how to scaffold and support students' development and use of scientific vocabulary in context. Topic 5, *Earth's Resources*, Experience 1, includes an activity called Related Words. Teachers discuss the meaning of the word *surface* as used in the topic: "Earth's outer layer of rock and soil." The teacher points out that in this use, the word is a noun because it names something and it can also be used as a verb when it describes an action as she gives samples and asks the students to identify it.
- Materials include teacher guidance on how to scaffold and support students' development and use of scientific vocabulary in context throughout the 5E activities. The Key Ideas Presentation includes the following: "emphasize how vocabulary words are defined and used throughout the presentation. Encourage students to use vocabulary on the Key Ideas Activity and allow them to use their own, less formal English to best demonstrate their understanding." For example, in Topic 5, *Earth's Resources*, Experience 3, students practice the use of the vocabulary word recycle in context when completing the Key Idea Activity, *Reduce, Reuse Recycle*. Students write ideas on a graphic organizer to show how to reduce, reuse and recycle.
- The materials provide a Vocabulary Support sidebar support throughout modules in the Teacher's Guide to make the teacher aware of opportunities for students to use scientific vocabulary in context. In Topic 6, *Plants and Animals*, as students study how plant parts help plants live, the teacher helps students generate related words. The sidebar support helps the teacher point out the word *protect* within the context of the reader and say, "Look closely at the photograph of the prickly pear cactus. What synonym of protect could you use to describe the fruit and the seeds." Possible answers listed include *keep safe, guard,* and *cover*.
- Materials provide Vocabulary Support boxes that guide teachers on how to scaffold instruction to develop students' vocabulary. "Students will encounter the word *data* in this experience." The guidance continues by instructing teachers to write a variety of data on the board, such as 10 years, shiny insect, or 5 meters, and ask students, "Which of these is data?" Teachers are then told to "point out that data is information or facts that can be used to make a decision or inform an opinion. Tell students that they record data when they complete the activities in this experience."

Savvas Learning Texas Experience Science Grade 2

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

- The Scientific and Engineering Practices Preview PowerPoint includes a slide on communication that provides teacher guidance in the notes section to introduce how students should communicate. The teacher explains that scientists and engineers explain their solutions and results to their teams to help make their investigation a success. The teacher tells the students that it is important to listen actively and be respectful when they are having a discussion.
- The Key Ideas Presentation in the Explain section of each experience provides teacher questions for supporting student discourse and the use of evidence in constructing written and verbal claims. Topic 2, *Force and Motion*, Experience 1, includes key idea questions, "What is a push?", "What happens when objects collide?" and "What happens when objects touch?" The teacher asks students to discuss what happened when the marble and clay came together with different forces in their hands-on station. As an exit ticket, the students are shown a slide with an illustration of an egg rolling off a kitchen counter and breaking on the floor. Students discuss items they see touching or colliding.
- In the literacy station for Topic 1, *Matter*, Experience 1, the materials provide teacher guidance for student discourse and support students in using evidence to construct a verbal claim in "How can you describe objects?" In the Guide Student Thinking section, it states, "Tell students as they read, they should look for evidence from the text that supports their understanding. Examples of text evidence include details, lists, and descriptions." The materials direct the teacher to have students apply their new knowledge from the station to the everyday phenomenon, "How would you sort these fossils?" Students discuss with a partner any new understandings to revise their ideas and thinking.
- In Topic 4, *Patterns in the Sky*, Experience 3, *Severe Weather Events*, teachers are guided to "Have volunteers share what they learned in the stations, citing evidence and observations." Teachers are also guided to "facilitate student connections between the science content that they explored and the science practices they used."
- The Teacher's Guide provides teacher guidance on preparing for student discourse and supporting students in using evidence to construct written and verbal claims at the literacy station. For example, in Topic 5, *Earth's Resources*, Experience 1, guides the teacher on how to set up the station, what to expect from the students, and how to guide students' thinking. Students explore the Read About It text, talk about what they know about rocks and soil on Earth, and write information about Earth's surface changes explaining the effects of water and wind.
- Materials provide teacher guidance on preparing student discourse and supporting students in using evidence in written and verbal responses. The Teacher's Guide includes directions for the exit ticket activities on how to support students' responses. For example, the exit ticket activity on the Explain section in Topic 5, *Earth's Resources*, Experience 1, asks for the teacher to "project the last slide of the presentation. Have students explain how wind and water move the sand on a beach over time. Collect exit tickets and refer to them throughout the experience."
- In Topic 6, *Plants and Animals*, Experience 1, the Teacher's Guide provides support and guidance to teachers to encourage student verbal discourse and apply what they learned in stations to the Everyday Phenomenon Demo. Students complete the hands-on station, "How are plants alike and different?" by drawing and labeling two different plants' parts, and the literacy station, "How do plant parts help plants survive?" in which students explore the Read About It *Plants*. The Revisit the Everyday Phenomenon section suggests, "Have students apply what they learned

in the stations to the everyday phenomenon," and "Students may want to discuss with a partner any new understandings they have about the phenomenon."

- Within the Scientific and Engineering Practices presentation, there are slides that prepare students for discourse and using evidence to construct claims. The presentation includes how to investigate and design, analyze data, use tools, develop and use models, use math, and test their design. It also focuses on how sciences explain phenomena and how they design solutions to problems. "Scientists communicate. They share what they know with others. They listen to each other." Students are prompted to "communicate with a partner" to share what they know about elephants and eagles.

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

- Materials support and guide teachers in facilitating and sharing students' thinking and finding solutions in each experience. The materials support and guide teachers in facilitating the students' thinking and finding solutions in the Teacher's Guide. Within the Explore phase of each module, materials provide feedback strategies teachers can use to help students share their learning.
- In the Explore section of Topic 1, *Matter*, Experience 1, students observe the flexibility of a variety of objects. When students work on the activity, the materials direct the teacher to ask probing questions, such as, "Do you think you should use the same or different strength when you try to bend the objects? Why?" to help students make sense of how to complete the task.
- Materials support and guide teachers in facilitating the sharing of students' thinking and finding solutions. The Teacher's Guides provides notes through the 5E model activities. The Revisit Anchor Phenomenon notes provide questions, sample answers, and notes on what to expect to facilitate students' thinking. The Evaluate section questions in Topic 1, *Matter*, Experience 1, are: "How did the Lighthouse rock get its shape? What do you think changed these rocks?" The sample answers are that wind or rain changed the shape. The section What to Expect states: "Students' thinking should reflect that wind and water move Earth's materials and that the movement can change the shape of the land."
- Topic 2, *Force and Motion*, Experience 2, engages students in thinking and sharing as they view a photo of children pushing other children in soap box derby-style cars. The teacher asks students to write down how Car 5 can win the race. An exemplar response provided as a guide to elicit student thinking is, "Car 5 needs more speed than the other car to win the race. This means the boy must push harder." The teacher asks students to work individually or in pairs during the Evaluate section of the experience to explain how they could change the distance a ball rolls after they kick it. The teacher revisits the anchoring phenomenon for the topic and has students share their thinking as the teacher asks, "Why do construction machines have so much power?" The guidance provided for the teacher includes that student thinking should reflect that construction machines are big and powerful because it takes a lot of strength to move dirt and soil to change the land.
- Topic 3, *Sound and Volume*, Experience 2, supports and guides teachers in facilitating and sharing student thinking and finding solutions throughout the lesson. The teacher engages students in thinking and sharing as they view a photo of a girl whispering into another girl's ear. The teacher asks the students to write down when and why people yell or whisper. The teacher asks students to share how they could change the volume of a sound in the Explain portion of the experience. Teacher notes include an example of hitting a drum softly for a quiet sound and harder for a loud sound. The students share their thinking as they mimic how they would use

cymbals to make a loud or quiet sound. As an exit ticket, the teacher shows a photo of an ambulance and asks students what kind of sound it makes and how that helps it to do its job. Exemplar responses are provided to guide student thinking.

- In Topic 4, *Patterns in the Sky*, Experience 1, *Sun and Moon*, the Related Phenomenon sidebar in the Engage section facilitates the sharing of students' thinking. Teachers are guided to show students images of different phases of the moon. "Ask students to think about why the moon looks different in these images." Students then discuss whether they see the moon every night.
- In Topic 4, *Patterns in the Sky*, Experience 2, *Weather*, the Elaborate section of the lesson contains a STEAM activity, *Build a Weather Station*. Students make a rain gauge and wind sock and "collect weather data from their weather stations for several days at the same time each day." Students record their data in a table and draw conclusions based on the patterns of data they observe. Students then share their observations with the class.
- The Teacher's Guide notes provide support and guidance for teachers to facilitate the sharing of students' thinking. The ELPS Targeted Support notes are one example; they guide and support teachers on how to ask questions and provide suggestions on what to do for all levels of bilingual students. For example, Topic 5, *Earth's Resources*, Experience 2, encourages teachers to have students practice speaking using a variety of grammatical structures, sentence length, sentence types, and connection words during their class discussion of the anchoring phenomenon. Suggested activities for students are the following: For beginners, the teacher provides a sentence frame, "Water changed the shape of this _____," that students use in the discussion. For intermediate, the teacher encourages students to use short sentences to describe the rock. For advanced, students get a partner and write and say simple sentences about the rock. For advance high, students use connecting words such as and, or, but to tell how water shapes rocks.
- The materials support and guide teachers in facilitating the sharing of students' thinking in various modes of communication in the Elaborate sections. In Topic 7, *Organisms and Environments*, Experience 2, students complete a Talk STEM activity in which they use photos and information to create an illustrated botanical guide about a native Texas wildflower and its main pollinators.

Savvas Learning Texas Experience Science Grade 2

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

Evidence includes but is not limited to:

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

- The materials include formative assessments in a variety of formats to assess student learning. The Topic 1 Key Ideas Presentation includes presentation notes that provide teachers with question prompts to elicit student discussion about the key ideas and includes a student-facing activity that allows teachers to formally assess student understanding. Questions include, “What Are solids and liquids?” and “How do melting and freezing change matter?” The student-facing activity has students explain a physical change they can make to an object in the room and draw a picture of how they would change the object. An exit ticket is provided after the Explore activities in Topic 3, Sound and Volume, Experience 1, Sound, to assess student learning. Students answer the question, "What happens on a drum when it makes a sound?" The teacher is directed to "Collect the tickets and refer to them throughout the experience."
- In each Evaluate section, the materials provide a formative assessment in the form of a Check for Understanding by revisiting the Anchoring Phenomenon, an Experience Quiz, or an exit ticket. For example, in Topic 4, Experience 3, Severe Weather Events, the Evaluate section includes an exit ticket that asks students to list the most likely characteristics of each type of severe weather. "Ask students to explain why it is important to know these characteristics and how they differ." The additional formative assessment is in the Revisit Anchoring Phenomenon, How is the weather changing? After completing the experience activities, students' responses should "reflect that severe weather, including floods, hurricanes, and tornadoes, is a type of

weather that brings extreme conditions. They should be able to recognize that rainfall can lead to flooding if enough rain falls."

- Materials use exit tickets throughout the 5E model lessons as formative evaluation opportunities to assess students' learning. In Topic 5, Earth's Resources, Experience 1, Movement of Earth Materials, an exit ticket after the Literacy Station prompts the teacher to ask, "How can the movement of Earth materials change Earth's surface?" Students apply what they learn and write their answers. An exit ticket at the end of the Experience has the students work individually or as partners to make a list of some ways that Earth's materials can be moved.
- The materials include opportunities for summative assessments at the end of each topic. Each topic includes a multiple-choice and short constructed response test at the end of the topic that may be utilized online or printed and copied for student use. Topic 3, Sound and Volume, includes a short constructed response test with an illustration of two cans with a hole in the bottom and a string. Students write their response to the prompt, "How can you use these materials to design and build a tool to communicate using sound over a long distance?" The materials include a topic test with 5 multiple-choice questions and a short constructed response question about sound.
- Summative assessments that are provided in the materials are Topic-level assessments and Standards-based Practice Assessments. In the Topic Wrap-Up of each unit, there is an online Test that "assesses mastery of concepts presented in the topic." For example, the Test: Patterns in the Sky, in Topic 4, contains six questions that require students to complete, close, multiple-choice, drag and drop, and multiple-answer questions focusing on the main ideas in the topic experiences, the sun, weather information, and severe weather.
- Materials include a summative assessment at the end of each topic. Each topic includes an Auto-Graded Test that assesses the mastery of concepts presented in the topic. Tests include multiple-choice and technology-enhanced questions. The Open-Response Topic Test allows students to practice STAAR-type questions and their test-taking writing skills. Both tests are available as digital versions and editable documents. Topic 5 test, Earth's Resources, includes 6 questions that cover the concepts learned in the topic: Movement of Earth Materials, Resources, and Protect Resources.
- At the conclusion of every Topic, there are Topic Tests and Open Response Tests that provide formal, summative opportunities to assess student learning. The printable Topic 6 Plants Test includes six multiple-choice questions that include, “How does water move through a plant?” and when shown a picture of a frog's life cycle, “Which sentence about a frog is true?”
- The materials utilize a variety of exit tickets as a diagnostic assessment tool to assess prior knowledge and learning gained in each experience. After participating in a demonstration of making sounds by plucking a rubber band stretched over a shoebox in Topic 3, Sound and Volume, Experience 1, Sound, students work together to find items in the classroom that make a sound. The students list the items and how the item makes a sound. The teacher collects the lists and reviews them to identify prior knowledge about sound.
- Materials state that it includes a Diagnostic assessment during a teacher-led discussion presented during the Anchoring Phenomenon and Everyday Phenomenon. During this discussion, the students get an opportunity to explain their knowledge of the topic to be presented by responding to questions presented by the teacher. The Topic 5 question is "How did the Lighthouse rock get its shape?" Exit tickets only measure a small snapshot of information and are not a progress-over-time assessment that would effectively monitor student growth/gains over time. Additionally, the front matter of the teacher materials lists "Entry-level and Readiness Assessments" as available diagnostic tools.

Savvas Learning Texas Experience Science Grade 2

- The materials include opportunities to assess student learning in a variety of formats. Each topic contains an Editable Short Constructed Response Test, which is "an editable and printable version of the short constructed response topic assessment, which assesses mastery of concepts presented in the investigation." For example, for Topic 4, Patterns in the Sky, the assessment, which can be taken online or printed, gives students an image of the weather collected over a five-day period. The question asks, "Describe the type of weather recorded Monday through Friday. Which tools did the class use to measure the temperature and amount of rain each day?"

Materials assess all student expectations and indicate which student expectations are assessed.

- The materials contain a correlation indicating where each of the TEKS is addressed in the Teacher's Guide. The TEKS correlation lists the pages in the Student Activity Guide and Teacher's Guide where the individual TEKS is addressed. The guide also states, "Corresponding Digital Resources and Assessments" after the list of pages that address the TEKS.
- The materials include end-of-topic assessments covered over the duration of the course. The online materials that include the assessments clearly state the TEKS being assessed and include a hyperlink to a description of those TEKS. Topic 2, Force and Motion, includes a multiple-choice and a short-answer topic test to gauge student learning about how objects may change shape when they touch or collide as described in. Topic 3, Sound and Volume, includes two assessments to determine student learning about sound and its use in communication.
- The Teacher's Guide includes a Texas Essential Knowledge and Skills Grade 2 Correlation that provides a resource where teachers can identify where each TEKS is taught and assessed. The correlation shows that each student's expectation is assessed through multiple activities in both the Student and Teacher's Guide Material, including Hands-On Activities, Key Ideas Presentations, STEAM activities, Literacy Stations, and assessments.
- The Topic Wrap-Up page of the teacher online platform lists the standards for the topic. In Topic 6, Plants and Animals, the Topic Wrap-Up lists these standards as hyperlinked to open a pop-up that shows the student's expectations.
- Materials assess all students' expectations as outlined in the TEKS for each grade level. Materials include a cohesive scope and sequence that maps out and outlines what will be taught in a specific grade and topic. The Teacher's Guide includes TEKS-aligned assessments designed to measure student understanding and mastery of the concepts and skills taught during the topic. Topic 5, Earth's Resources, teaches and assesses the following:
- Materials assess all students' expectations addressed in the topic. Each topic Overview includes a TEKS Progression chart that indicates students' expectations and TEKS to be addressed in the topic. Throughout Topic 5, Earth's Resources, students connect the big ideas to the Topic Test, including 6 questions that address the same TEKS covered in the topic. For example, one of the multiple-choice questions is, “What resources are human-made?”
- Each Topic Wrap-Up has a "folder (that) contains the topic assessment and wrap-up materials." The TEKS are listed in the folder containing all wrap-up materials, including the assessments. Additionally, the online test has a kebab menu that provides an Information tab that includes a description of the assessment, the standards it covers, and the keywords. For example, in the Test: Organisms and Environments, the standards address TEKS 2.12A-C. These standards are directly aligned with the 6 assessment questions on the test.
- All content TEKS are assessed through the Topic Wrap-Up Assessments. For example, the Organisms and Environments are addressed in Topic 6, Plants and Animals, and Topic 7, Organisms and Environments. Each Topic has a Topic Assessment to be given at the conclusion

of the lessons that focus on all TEKS covered and a customizable short-answer response assessment that addresses one or more of the TEKS in the topic.
- Accommodations provided/suggested are reading testing materials aloud and accepting verbal responses.

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

- Each topic includes assessments that require students to integrate scientific knowledge and science and engineering practices with each theme that is appropriate to the student expectation being taught. In Topic 1, Matter, the students are shown a black-and-white drawing of art materials. Students are to write a response to “Decide how to make a rocket using the materials shown in the image. What material has the best properties to make the main part of the rocket? What physical changes will you make to the material to build the rocket? How will the material become the rocket?” Topic 2, Force and Motion, includes a short constructed response topic test that integrates students planning a simple investigation as they plan an investigation to discover how the strength of a push could change the motion of a ball. The Topic 5, Earth's Resources, Open Response test asks students to look at a picture of a girl's kitchen and make a poster with three ways to reduce, reuse, or recycle materials in the kitchen.
- Materials provide an informal, formative assessment opportunity that integrates scientific concepts. Within the Topic Wrap-Up, there is a Revisit Anchoring Phenomenon to circle back to the original unit question after students have completed all of the experiences within the unit. For example, the Topic 7, Organisms and Environments, phenomenon question is, "How does the prickly pear cactus help the Texas desert ecosystem?" At the end of the unit, teachers ask students, "What do plants and animals need from their environment?" At this point, the students should be able to "explain how organisms in a food chain are connected." Students also watch a video and have a class discussion of what is happening in the video. "Now that students have completed a topic's worth of experiences and activities, they should be able to explain the scenes in the video using more detail and vocabulary than they could when they first watched it."
- At the conclusion of each experience, the materials provide an exit ticket that relates back to the Phenomenon question. For example, Topic 7, Organisms and Environments, contains three experiences to assist students in answering, "How does a prickly pear cactus help the Texas desert ecosystem?" Experience 1, Environments, allows students to "describe how the physical characteristics of environments support plants in an ecosystem." Experience 2, Living Things in Environments, lets "students explain how some plants depend on wind or water to move seeds around." In Experience 3, Food Chains, "Students identify parts of a food chain and use a food chain to demonstrate how animals depend on other living things." The exit ticket question for Experience 1 is, "Why can some organisms live only in certain environments?" The exit ticket question for Experience 2 is, "How can wind help plants?" The exit ticket for Experience 3 asks, "What are different ways plants help animals?"
- STEAM activities included in the materials provide project-based assessments that integrate scientific concepts and science and engineering practices with recurring themes and concepts. Students use the knowledge acquired in Topic 2, Force and Motion, Experience 2, Motion, to design, build, and test a catapult. The materials recommend using goggles as a safety practice as they plan and carry out their investigation. Topics contain STEAM activities that integrate science and engineering practices as students apply their knowledge of scientific concepts to real-world problems and phenomena. In the Topic 6, Plants and Animals, STEAM activity: Design

a Model Plant, students apply their understanding of plant parts by designing a plant that is appropriate to the environment they choose and explaining how their model differs from a real plant.

- STEAM Extension Activities assess and integrate scientific concepts and science engineering practices of themes and concepts presented. For example, in Topic 5, Experience 1, the STEAM activity asks students to design a way to use plants to minimize the ability of the wind to move sand or any other type of soil.

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

- Each topic includes assessments that require students to apply knowledge and skills to novel contexts. WalkSTEM activities require students to apply knowledge and skills to novel contexts. In Topic 1 Matter, Experience 1 Property of Matter, WalkSTEM Activity: Drawing the Properties of Matter, students apply their knowledge and skills related to matter by going on a nature walk and writing about the properties of the matter that they see. In Topic 2, Force and Motion, Experience 2, Pushes, students apply their knowledge as they play the Legends of Learning online game, push appliance store. Students plan and conduct simple investigations by using a blow dryer and hand-held vacuum in the online game to test the effect of pushes and pulls on a balloon. The students develop explanations and propose solutions supported by data and models as they manipulate the blow dryer and vacuum in the game to collect stars without popping the balloon.
- Students apply the knowledge and skills gained in Topic 3, Sound and Volume, Experience, Sound, as they participate in a STEAM activity designing an instrument. Guidance is provided to use safe practices, including wearing goggles as indicated, and students use science and engineering practices as described to design and build the instruments.
- Each Experience provides students with opportunities to apply TEKS and SEPs to novel contexts through activities within the Hands-On Lab. For example, in Topic 4, Experience 2, Weather, students collect temperature data for five days and then graph it.
- The materials provide STEAM activities that require students to apply knowledge to novel contexts. In Topic 4, Experience 2, STEAM activity, students apply their knowledge of weather to make a rain gauge and build a weather station. Students then collect information for several days in a row and record their data in a table.
- Each Experience gives students the opportunity to apply TEKS and SEPs to novel contexts through activities that include a Hands-On Station. In Topic 6, Plants and Animals, Experience 3, Animals Life Cycles, Hands-On Activity: How do butterflies grow? students observe a butterfly caterpillar as it goes through the stages of its life cycle to become an adult butterfly.
- Materials include assessments throughout each topic that require students to apply knowledge and skills to novel contexts. For example, in Topic 5, Earth's Resources, Experience 2 Resources, Hands-on-Station: How can wind and water affect sand? students make predictions by telling a partner how wind and water will change the sand. Students fan the sand and then drip water on the sand. Students talk about the effect of the wind and water on the sand based on what they observed. An example is the Open Response test included at the end of each topic that integrates scientific concepts and SEPS within the theme. The Topic 5, Earth's Resources, Open Response test asks students to look at a picture of a girl's kitchen and make a poster with three ways to reduce, reuse, or recycle materials in the kitchen.

Savvas Learning Texas Experience Science Grade 2

Indicator 6.2

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

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

Evidence includes but is not limited to:

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

- The materials include an online multiple-choice summative assessment after each topic that is automatically graded when submitted and provides areas the student needs more practice. The Topic 2, Force and Motion, score summary sheet provided after the student submits the test indicates which questions the student successfully answered. Skills the student needs practice with that may be included are "Objects may change shapes," "Investigate the effect of applying forces of pushes and pulls on different objects," and "Pushes and pulls have different strengths and directions." Topic 3, Sound and Volume, provides a score summary after the student has submitted their answers to an end-of-topic online test. The summary indicates which questions the student missed and may need more practice. Potential areas students may need practice with are, "Describe sounds in everyday life. The vibration of matter makes sound. Sound waves cause matter to vibrate" and "Use tools and materials to design and build a device that uses light or sound to communicate over a distance."
- The Topic Test Short Constructed Response Answer Key guides teachers to look for specific components when evaluating student responses. The Topic 6 Assessment shows a drawing of a butterfly's life cycle and asks students to describe the life cycle. The sample answer says, "A butterfly lays an egg on a leaf. The egg grows into a larva, which is a caterpillar. The caterpillar eats leaves until it becomes a chrysalis. The chrysalis becomes a butterfly. The new butterfly lays

more eggs." The key includes a scoring rubric that explains that students can earn a point for describing that the life cycle begins with the egg, one point for explaining that the egg grows into a larva, one point for describing the caterpillar becomes a chrysalis, and one point for describing that the chrysalis becomes a butterfly that lays more eggs.

- Each activity worksheet is accompanied by a Teacher Support document containing answers to help score and evaluate student responses. The Topic 1, Experience 2, Key Ideas Activity provides an answer key that provides sample answers. The first question asks what physical change can you make to an object in the classroom. The sample answer states, "I can change the shape of paper by cutting it or folding it." The key also describes what the student drawing should include when prompted, "Draw a picture to show how you would change the object."
- The Teacher's Guide on the digital platform includes answer keys to Topic Tests and Short Constructed Response Tests. Short Constructed Response Test Answers include a scoring rubric as additional support for teachers. In Topic 5, Earth's Natural Resources, the Topic test answer key provides the correct answer, the DOK, and TEK assessed. The Short Constructed Response Test answer key provides an example of what the student is expected to answer and a scoring rubric that guides the teacher on how to evaluate the answers. The question is asking the students to make a poster that provides three ways to reduce, reuse, or recycle materials in the kitchen. The Sample Answer is "One way to reduce waste is to use reusable bags for groceries. Some food comes in plastic containers with lids. Reusing these containers for leftover food would save plastic wrap or aluminum foil. Paper bags and cardboard boxes should be recycled. " The scoring rubric suggests giving 1 point if the student describes one way, 1 point if the student describes a second way, and 1 point if the student describes a third way to reduce, reuse, or recycle something in the kitchen.
- Each topic includes a Key Ideas Presentation that provides information that guides teachers in evaluating students' responses. The PowerPoint presentations include teachers' support on the notes section of each screen, such as how to guide students' discussion and suggestions on how to address misconceptions about students' responses. The Teacher's Guide provides notes on how to check for students' sensemaking. The teacher asks for volunteers to share what they learned and cites evidence and observations. The teacher uses the text, images, and questions in the presentation to teach and assess Key Ideas as well as emphasizes the vocabulary words through the presentations allowing students to define them in their own words to evaluate their responses.
- The materials provide What to Expect guidance within the Evaluate section of each experience. This section under the Revisit Anchoring Phenomenon gives guidance to teachers about what students should focus on with their responses. For example, in Topic 4, Experience 3, teachers are guided that "students' thinking should reflect that severe weather, including floods, hurricanes, and tornadoes, is a type of weather that brings extreme conditions. They should be able to recognize that rainfall can lead to flooding if enough rain falls."
- The materials provide an Answer Key for the Topic Tests. The Answer Key provides a sample answer and a scoring rubric for key points that should be included in the answer. For example, the Topic Test for Patterns in the Sky asks students to describe weather data recorded Monday through Friday and asks them to identify the tools that were used to measure the temperature and amount of rain each day. A sample answer is given that describes each day's weather and compares the temperature to the day before. The sample answer also states that a thermometer and rain gauge were used to collect temperature and rainfall. The Scoring Rubric advises giving 1 point if the "Student identifies the weather each day," 1 point if the "Student explains why a thermometer would be used," and 1 point if the "Student explains why a rain

gauge would be used." The Key also provides the Depth of Knowledge Level and the TEKS addressed.

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 support teachers' analysis of assessment data through their online platform, Savvas Realize. The dashboard provided will allow the teacher to access class results by assignment or standard, provided the assignment was completed online. When viewing the data by standard, the teacher may click on the standard for a pop-up that states the TEKS and provides a link to resources provided for the TEKS. The teacher can view individual student data by assignment. There is an option for the teacher to choose to auto-assign remediation and enrichment activities to the student upon completion of the online assignments. There was no access to these activities.
- The materials provide a one-page document with hyperlinks to videos designed to support the teacher in using the assessments and data online. Videos included for assessments are "How to Build a Test," and "How to Use a Test Bank." The videos to support the teacher in the analysis of data include "Data Overview Video, Score Data Overview Video, Class Results by Assignment video, and Class Mastery by Standard Video."
- The materials provide resources to support teachers' analysis of assessment data in the online assessment system. The Class Mastery by Standard help video shows teachers how to analyze an individual student's overall mastery percentage based on the assignments to date as well as how many questions they have answered correctly for each assessed standard in the online assessment system. The online assessment system provides guidance and tools to support teachers in responding to data to inform instruction. When one clicks on the standard at the top, there is another hyperlink for additional resources.
- Materials provide guidance documents and resources to support teachers' analysis of assessment data on the Savvas Realize site. The Realize Assessment and Data Support include videos on Data Overview, Score Data Overview, Class Results by Assignment, and Class Mastery by Standard. Data can be analyzed by assignment or by standard, as a class or as an individual. The site includes help for the teacher to interpret data and suggests resources to assist in remediation.
- Materials provide guidance and tools to support teachers in responding to data to inform instruction. The assessment tools result in data reports that inform instruction and facilitate tracking of students' progress toward skill mastery. Teachers can view customized reports by skill and by students or by class.
- In the Getting Started section of the materials under Navigational Support, there is a Realize Assessment and Data Support tab that provides teachers with Data Reporting Support videos. One of the videos is Class Mastery by Standard. This shows teachers how to use the online platform to view student progress and achievement in any of the standards where online assessments through the platform have been given. The video explains that within the data tab of the online platform, teachers can click Class Mastery by Standard and view the percentage of students who mastered each standard as well as individual student standard mastery. When teachers click on an individual standard, an option is available to "Help me interpret this data."
- There are several tools within the online assessment platform in the Class Results by Assignment section. In this section, teachers have quick-view options that graph class and individual student data. Within this tab, teachers can view Standard Analysis, which breaks up each standard on an

assessment or across assessments, Question Analysis, which shows a quick view of correct responses by question, Student Analysis which shows "student performance on the assignment and its questions," and Performance Analysis which "automatically groups students based on their performance on the assignment." Once students are grouped, there is the option for teachers to "Assign Resources" to assist in remediation.

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

- The online platform includes assessment tools that provide teachers with information to use when planning interventions and extensions. A color-coded graph displaying the average scores on the assignment enables the teacher to see at a glance the percentage of students that have achieved mastery of the TEKS. The teacher can view individual student performance by viewing the assignments by student section, pulling up an individual student, and selecting the assignment they wish to view. The teacher can see the student score and provide comments for feedback to the students. When viewing the assessments by standards, the teacher can quickly identify which students need intervention with scores below 70% listed in red and which students are ready for extensions with scores above 70% listed in green.
- The Savvas Digital User Guide and the Realize Help video Data Overview provide an overview for teachers on how to use data reports to plan for instruction and differentiation. Student data can be viewed by assignment or by standard. When reviewing score data for assignments, teachers will see a color-coded report that shows average scores on completed tests. From this view, teachers can drill down to each completed test to analyze individual student responses. The information in these reports helps teachers readily monitor class progress and make the necessary adjustments for intervention and/or extension.
- The Class Results by Assignment provides a tab for Performance Analysis that automatically groups students based on their performance. Once the students are grouped, the teacher can select resources for remediation or enrichment.
- Exit tickets provided throughout the experiences provide information for teachers to use to plan instruction, intervention, and extensions as the students progress through the experiences. In Topic 2, Force and Motion, Experience 1, Pushes, teachers utilize exit tickets to gauge and guide instruction in the Engage, Explore, Explain, and Evaluate sections of the experience. In the Engage section, students write about how pushes could be used to make an animal out of clay as an exit ticket to identify prior knowledge about pushes. Exit tickets in the Explore and Explain sections assist the teacher in planning instruction, intervention, and extensions. The students create a list of other objects that can be shaped by pushes as an exit ticket in the Evaluate section.
- The Teacher's Guide contains informal exit tickets at the end of the Engage, Explore, and Explain phases of the 5E instructional model. The exit tickets provide a variety of prompts and question types that help teachers to gather observational data. The data can be used to plan interventions or for future core instruction. Topic 1’s exit tickets include students answering the question, “What are some properties of matter?”, listing three processes by which a physical property could be changed, and describing the properties of some of the materials that they would use to build a chair.
- At the end of each topic, after students take the Topic Test, the Teacher's Guide includes a Topic Test Remediation suggestion. Topic 5, Earth's Natural Resources, includes "For students who struggle on the Earth's Resources Topic Test, consult the corresponding Topic Test Remediation Document. The remediation document lists certain assets for topic content review and contains

simple and foundational questions about topic content." Materials also include test bank questions that can be used by teachers when planning interventions or extensions.

- Each Topic Test has an ellipse (or 3 dots) that allows the teacher to access Information about the assessment, including a description of the assessment and the statement that "Students who perform at a low level will be automatically assigned a document to help them understand the content," the standards addressed in the test, and keywords that appear in the test or the answers within the test. Another option from the kebab menu is Remediation. This link gives the teacher access to Test Reviews for each major concept in the Topic. For example, for the Organisms and Environments "skill and remediation" activities, a Test Review is available for ten topic concepts, including but not limited to "Explain that plants depend on animals for pollution, Identify consumers within an ecosystem, Plant seeds may be dispersed by animals, and The physical characteristics of environments help support populations and communities within an ecosystem." These Test Reviews list the major concepts and serve as an intervention or review for students who did not master the concepts on the test.
- There are several tools within the online assessment platform in the Class Results by Assignment section. In this section, teachers have quick-view options that graph class and individual student data. Within this tab, teachers can view Standard Analysis, which breaks up each standard on an assessment or across assessments, Question Analysis, which shows a quick view of correct responses by question, Student Analysis, which shows "student performance on the assignment and its questions," and Performance Analysis, which "automatically groups students based on their performance on the assignment." Once students are grouped, there is the option for teachers to "Assign Resources" to assist in remediation.

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

- Teachers can utilize the Digital Learning Platform to identify areas students need additional intervention. Activities to address intervention or enrichment needs can be accessed through the standards tab on the digital dashboard. The activities can be assigned to students based on their needs. The activities available are the same activities included in the experiences.
- Each Explain section includes a Key Ideas Video to help illustrate and reinforce concepts that students may struggle to understand. Topic 2, Forces and Motion, Experience 1, Pushes, includes a video with additional examples of pushes and pulls that are used in gardening.
- The Teacher's Guide provides Differentiate Instruction as a resource for teachers to use in responding to performance data. Teachers can integrate these activities at the point of use or return to these suggestions if data suggest students are having difficulty or need a challenge. These notes provide suggestions for ways teachers can help students who are struggling, as well as students who might benefit from a challenge. The Topic 1, Experience 3, Differentiated Instruction suggests asking targeted questions to help students that are having difficulty comparing their model house to a classmate’s.
- The Digital Learning Platform provides teacher guidance for responding to student data. After teachers view the student data reports in the Data tab on the Digital Learning Platform to identify standards or questions with low student performance, they can utilize the Search function on the platform to find and filter activities that may help students with the identified deficiencies. The search features are described in the Savvas Digital User Guide.
- Materials provide a variety of student resources for the teacher to use in responding to performance data. Materials provide direct instruction for science concepts using the 5E model. The following resources teachers are included in every Experience: Everyday Phenomenon

Photo/Video/Demonstration, Hands-on Station, Literacy Station, Key Ideas Presentations/Activities, STEAM Activities, and exit tickets. These resources include teacher guidance; for example, Topic 5, Earth's Natural Resources, Experience 3 Protect Resources, Everyday Phenomenon Demonstration, Should this be thrown out? provides instructions for the teacher on how to do the demonstration by displaying the objects and telling students that each object has already been used. The teacher classifies the objects by asking the students whether they can be thrown out or used again. It also provides a question for the teacher to use during a class discussion "Based on what we discussed, do you think that many objects we usually throw away could be saved and used again."

- Materials provide PowerPoint presentations as a resource for teachers to use in responding to performance data. Each experience provides ready-to-use PowerPoint presentations that include teacher support notes, discussion questions/ideas, suggestions on how to address misconceptions, and a try-it-out! section that includes ideas that students can do to learn more about the topic.
- Materials provide a variety of student resources for teachers to use in responding to performance data. The materials provide vocabulary cards, topic readers on three different Lexile levels, Anchoring Phenomenon videos, and experience activities that take students through a progression of understanding of the phenomenon for the topic. Within each Experience, the 5E model is followed, and there are a variety of resources for each portion of the experience. The materials include teacher demonstrations, hands-on station activities and guidance cards, literacy station activities, and guidance cards, a Key Ideas presentation, a Key Ideas video, and either a STEAM activity or Legends of Learning Game.
- A Topic Test Review (remediation) document is provided as guidance for responding to student data for the Topic Tests. The resource explains in detail the answers to the Topic Test questions and supporting concepts for each test item. For example, for the Test: Patterns in the Sky, four "skill and remediation" activities provide concepts for "Distinguishing between the sun as a source of light and the moon as a reflection of that light, identify the Sun as a star that emits energy some of it in the form of light, severe weather conditions include thunderstorms, tornados, and hurricanes, and weather changes are measured by differences in temperature, air pressure, wind and water in the atmosphere, and type of precipitation."

Savvas Learning Texas Experience Science Grade 2

Indicator 6.3

Assessments are clear and easy to understand.

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- Formative assessments contain items that are scientifically accurate, avoid bias, and are free from errors. An exit ticket in Topic 3, Sound and Volume, Experience 2, asks students to explain how the loud volume of a siren is helpful after revisiting the Anchoring Phenomenon video showing a fire truck using its siren. The question uses the scientific term volume instead of the word sound, is free from errors, and is presented in a fair and impartial manner, as all students had the opportunity to view the video and hear the siren.
- The summative assessments contain items that are scientifically accurate, avoid bias, and are free from errors. A summative assessment for Topic 3, Sound and Volume, accurately states that sound causes plastic wrap stretched over a bowl to vibrate and avoids using terms such as *jiggle*. The question provides adequate background knowledge and an illustration for students that may have limited experiences with speakers and their vibrations.
- The Topic 1 Matter Test includes assessment items that align with taught objectives and present grade-level content and concepts in a scientifically accurate way. This question states, “Which of these are solid? Pick two answers.” The materials correctly identify the answers as ice and clay.
- The Topic 6 Plants and Animals Test contains items for the grade level or course that avoid bias and includes diverse locations in questions. This question uses an example of a pond. Another question uses an example of a desert cactus.
- Material includes assessment items that are aligned with taught objectives, concepts, and recurring themes in a scientifically accurate way. In Topic 5, Earth's Resources, the topic test includes asking the students to make a poster that shows three ways they can reduce, reuse, or

recycle materials in the kitchen. Students use the information they learned during the topic to complete the poster.

- Assessments contain items for the grade level that avoid bias and are free from errors. Topic 6, Plants and Animals, includes pictures in their hands-on and literacy stations that present students of diverse backgrounds as student scientists. The hands-on station in Experience 2, How does color help groups of fish? includes a picture of a group of three students representing diversity.
- Assessments included in the materials contain items that are scientifically accurate. For example, in Topic 7, Organisms and Environments, a question states, "Look at this picture of an ecosystem." The question then asks students to drag and drop the words rain, lake, tree, and grass into the sentences to correctly complete each sentence. One sentence is, "The bear depends on the _____ and its fish for food to survive."
- The short-constructed response items are scientifically accurate. In Topic 7, the Short Constructed Response Test: Organisms and Environments shows a picture of a fox, rabbit, carrot, and lion. The question asks students to "describe the food chain made up of these four organisms. Which organisms are producers, and which are consumers?"

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

- The Topic 1 Objects Test contains pictures and graphics that are developmentally appropriate. The question includes a black-and-white drawing of a variety of toys. This image helps students answer the question, ”What is one property you could use to sort the toys into groups?”
- The formative assessments included in the Key Ideas Presentation in Topic 2, Force and Motion, Experience 2, Motion, include an exit ticket with a photo of a bowling ball as it is striking bowling pins to support the students as they explain what is happening using the words *direction, position, motion,* and *strength*. The photo clearly shows the ball colliding with the pins and the pins moving in different directions.
- The Topic 3 Sound and Volume multiple-choice test includes a clearly labeled black-line drawing of a bowl with plastic wrap stretched over the top held in place by a rubber band. The drawing shows small balls at various levels above the plastic wrap with some balls including lines to indicate movement. The test includes a picture of a guitar with movement indicated in the guitar strings. A third drawing shows a student in a wheelchair blowing in a bottle and another student wearing glasses sitting in a chair blowing in a bottle in a question asking how the bottles make a sound when the students blow into them. All the drawings are clear, simple, and free of distractions.
- The End of Topic Tests use developmentally appropriate, clear graphics. The Topic 4 Patterns in the Sky Test contains clear and grade-appropriate black-and-white pictures and graphs in five out of the six questions. The remaining question does not contain a graphic. For example, one question contains a weather chart for Monday through Friday. The symbols in the chart are simple and clear graphics of a sun, a cloud with raindrops, and a cloud with partial sun and raindrops. The question asks the students to choose which day Ali's family should go to the zoo.
- Materials include clear pictures and graphics that are developmentally appropriate. For example, in Topic 5, Earth's Resources, the short constructed test asks the students to describe two ways to conserve water at home, and it provides a drawing of a kitchen with big, clear drawings and some labeling as needed.
- Assessment tools use clear graphics that are developmentally appropriate. The topic test in Topic 5, Earth's Resources, includes graphics that are clearly labeled for students'

understanding. This question includes a picture of rain falling on a hillside that students use to complete a sentence stem.

- The Topic 6 Plants Test contains pictures and graphics that are developmentally appropriate. A question includes a labeled black-and-white drawing of frogs in a variety of life cycle stages in a pond that the student needs to use to answer, “Which sentence about the life cycle of a frog is true.”
- The End of Topic Tests use developmentally appropriate, clear graphics. The Topic 7 Organisms and Environments Test contains clear and grade-appropriate black-and-white pictures and graphs in five out of the six questions. For example, this question contains pictures of the sun, a mouse, grass, an owl, and a grasshopper. The pictures are clear, developmentally appropriate, and scientifically correct. The students are asked to "Look at the pictures of plants and animals. Arrange the plants and animals in the correct order in the food chain starting with the sun."

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

- The formative assessments in the key ideas PowerPoint presentations include clear guidance for the teachers to administer them. The Topic 3, Sound and Volume, Experience 1, Key Ideas Presentations include an exit ticket teacher support: "As a class, make a list of things that make a sound. Tell students that they can choose an item from the list to draw, or they can choose a different object." Differentiation included is, "This slide can be printed and distributed to students. Students can draw their object and then write the labels, or they can draw lines from the words to the correct part of their drawing." An alternate exit ticket is provided for the teachers to ask a multiple-choice question for students to describe what happens when a musician plays drums.
- The materials include guidance for teachers to administer the summative multiple-choice topic tests. The Teacher's Guide indicates that five minutes should be allotted for this assessment and states, "Both tests are available as digital versions and editable documents."
- The Topic Wrap-Up page provides guidance on administering the Topic Test. Additional information is provided for using the Auto-Graded Test or the Open-Response Test and the formats in which they can be administered. Next to the titles of each of the assessments are icons that indicate the recommended time to allot, whether the tool is intended to be completed as an individual or group task, and whether the assessment tool is considered core (checkmark) or optional (plus sign). The Topic 1 Matter Test indicates it should take five minutes, it is designed for individual work, and it is considered core.
- The materials provide instructions for teachers when administering an online test. For example, the Topic 4 Test, Patterns in the Sky, and Topic 5, Earth's Resources, materials guide state that "This online test assesses the mastery of concepts presented in the topic through questions that are graded automatically. Students who perform at a low level will be automatically assigned a document to help them understand the content."
- The materials provide guidance for consistent administration. Guidance for teachers is given in the Course Planner and Pacing Guide for when the Topic tests are given. For example, for Topic 4, Patterns in the Sky, the pacing guide suggests two pathways: one called "Fast Track" and one called "Got More Time?" On the Fast Track guide, the materials guide that the Topic Test should be given for a half day on Day 10 of the topic, and on the Got More Time? pathway, the Topic Test is given a whole day on Day 14 of the topic.
- The Topic Test answer key provides information that supports the teacher’s understanding of assessment tools. The Topic 6 Plants Test indicates the correct answers, the depth of knowledge for each item, and the TEKS addressed in each item. This question asks students, “How does

water move through a plant?" The answer key indicates the correct answer is, "Water enters the plant through the roots and moves through the stem," that the depth of knowledge is 2, and the TEKS addressed are second-grade standards.

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

- Accommodations provided/suggested are reading testing materials aloud and accepting verbal responses. The materials offer the teacher options for modifying both the online and printable summative tests. The printable tests are Google Docs that the teacher can make a copy of in order to modify the test. The online assessments provide a kebab menu with an option to customize the test. The customization options include changing the title and description of the test, a yes or no option for the test to count towards mastery, rearranging the order of the questions, removing some of the questions, and replacing or adding to the questions with questions from a test bank. The items in the test bank are the same questions included for the topic tests but would allow teachers to customize the test if they wished the assessment to cover more than one topic.
- The online tests include a hyperlink on a speaker icon that reads the directions to the assessment to students. The directions are, "Answer each question carefully, After you submit the test, you won't be able to change your answers."
- The customizable assessments are available in Google Docs, which allows teachers to reduce the number of answer choices as an accommodation to help students of all abilities demonstrate mastery of learning goals. Google Docs is designed to work with screen readers as an accommodation to help students of all abilities demonstrate mastery of learning goals.
- The Editable assessments open as Google documents and allow teachers to adjust tests to accommodate student needs. For example, for the Topic 4, Patterns in the Sky, Topic Test, teachers could adjust the test to provide a word bank, lessen the number of answer choices, or adjust the font or size of the text.
- The materials include a Navigation Support link. This link includes Realize User Guide and Training Info and Realize Assessment and Data Support. Within the Assessment and Data Support link, the materials include how to build a test and how to use a test bank.

Savvas Learning Texas Experience Science Grade 2

Indicator 7.1

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

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

Meets | Score 2/2

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

Materials provide recommended targeted instruction and activities to scaffold learning for students who still need to achieve mastery. Materials provide enrichment activities for all levels of learners. Materials provide scaffolds and guidance for just-in-time learning acceleration for all students.

Evidence includes but is not limited to:

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

- Materials include teacher guidance with each hands-on station activity for scaffolding instruction and differentiating activities for students who have not mastered it.
    - Topic 3, *Sound and Volume,* includes the teacher modeling how to set up the investigations, demonstrating how to tap an object on a flat surface, and how to strike a tuning fork with enough force. Hence, it makes an audible sound. The teacher also demonstrates how to hold the string taut enough for the sound to travel easily.
    - In Topic 4, *Patterns in the Sky,* differentiated instruction for struggling learners includes assisting students struggling to read a thermometer with a mini-lesson on reading a thermometer and allowing students struggling with measuring in an exploration of how floods affect land to cut two pieces of yarn, one before and one after pouring water so that students can compare the lengths of yarn.
    - In Topic 6, Experience 1, the teacher models how to make and fill in a data table for recording observations. The teacher uses two columns labeled Part and What I See and begins by modeling what to record if looking at a leaf, such as: green, almost round, and thin.
    - Topic 6 includes these three activities: STEAM Activity, where students design a model plant using materials such as clay, paper clips, and paper to apply an understanding of how plant parts help a plant survive, a WalkSTEM activity, where students find examples of life cycles and record their findings in their notebooks, and Legends of Learning Game, where students learn about life cycles and play the game to survive as long as possible.

- Lessons include recommendations for downward scaffolds to support students in successful science learning and knowledge building under the heading “Differentiated Instruction.”
    - In Topic 3, Experience 3, students observe how sound travels. The Differentiated Instruction is titled “Support for Striving Students.” It states, “Some students may not hold the string tight enough for the sound to travel easily. Demonstrate how to hold the cup straight up so that the string is taut. Also, make sure that students are striking the tuning forks with enough force to make an audible sound."
- Lessons include recommendations for downward scaffolds to support students in successful science learning and knowledge building under the headings “Address Misconceptions” and “Vocabulary Support.”
    - In Topic 1, Experience 3, students use the science text to compare telephones of the past to the present. The Address Misconceptions box states, “Is communication only verbal? Students might think that communication is only verbal. Inform students that communication is sending or receiving information in any form, including texting and videoing.” The Vocabulary Support box describes how to teach students to identify devices at school and how they are used to help define them.
    - Topic 4, *Patterns in the Sky,* has targeted activities, including Literacy Station Card: How can you describe the moon? Read About It: Sun and Moon, Vocabulary Activity Cards: Sun and Moon, Hands-On Station Card, and Activity: How does the sun affect temperature?

Materials provide enrichment activities for all levels of learners.

- The materials provide several opportunities throughout the topics for enrichment activities that account for learner variability.
    - The Teacher's Guide embeds suggestions for enrichment activities such as STEAM activities, challenge activities, WalkSTEM activities, and science songs. Teacher guidance encourages exploring and applying grade-level science knowledge and skills in various ways, including new learning via STEAM activities. STEAM activities provide students with enrichment by having them apply knowledge of core content to act like engineers and scientists in imagined real-work scenarios. Throughout the 5E lesson cycle, there is guidance for the teacher to create WalkSTEM Tours. These are "fun, place-based experiences that highlight inquiry-based STEM connections to real-world objects and spaces." The materials provide the teacher with step-by-step directions and ideas to plan based on their current facilities and surroundings and several links to collaborative platforms to assist with delivering these to students.
    - In Topic 3, Experience 3, students walk to observe the sounds around them. They then write and illustrate a poem or short story about how the sounds in their neighborhood are used to communicate.
    - In Topic 4, *Patterns in the Sky,* are a Legends of Learning game, "The Tale of Curious Nale," in which students play and identify objects during the day and at night, a STEAM activity challenging students to create a weather station (using the materials such as masking tape, metric ruler, marker, plastic jar, etc.) and collect data, a WalkSTEM activity which engages students in researching the kinds of severe weather common in their area, and the hip-hop song, "Weather."

  - In Topic 4, Experience 2, students make a rain gauge and use it as part of a weather station. Students collect weather data for several days and record it in a table.
  - In Topic 4, *Patterns in the Sky,* Experience 3 in the Related Phenomenon section, the materials suggest "consider showing a different type of severe weather, such as a satellite image of a huge hurricane system with a well-developed eye over parts of Texas." Materials then instruct teachers to discuss the size of the system and the effects of the bands of clouds as the hurricane passes.
  - Topic 6, *Plants and Animals,* includes a STEAM activity designing a model plant, a WalkSTEM activity to go on a walk around the school to observe animals, identify their body parts and behavior that helps the animals, a Legends of Learning Game, "Circle of Life," that allows students to experience the life cycle of different animals, and the hip-hop song, "Animal Structures and Survival." Teacher materials provide three activities: STEAM Activity - Design a Model Plant, WalkSTEM - Find examples of life cycles, and STEAM activity - Legends of Learning game - Cycle of Life.
- The Teacher's Guide embeds opportunities for students to observe, connect, and explore science concepts in their community with activities in "Take it Local" sidebars. In Topic 1, *Matter*, the teacher takes students on a walk around the school to identify and list examples of materials changing, such as a cafeteria worker slicing fruit or students in art working with clay, paint, or other materials. In an activity in Topic 3, *Sound and Volume*, the teacher takes students on a walk outside the school to record the sounds they hear and the source of those sounds. The teacher also takes students on a walk around the school to observe the volume of speaking in various areas, such as the school office, gym, and playground.

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

- The Teacher's Guide includes recommendations within the experiences for just-in-time scaffolds to develop perseverance of learning in the moment. The materials embed a guided inquiry in each hands-on station activity, such as in Topic 3, *Sound and Volume,* in an investigation of how sound can cause motion. The teacher uses prompts such as, "Place the clear plastic over the opening of the cup and tie a string around the top of the cup to secure the plastic," and, "Place a thin layer of sand on the plastic wrap." To assist struggling learners, the teacher models how to set up the investigation and ensures the students know to observe the sand before, during, and after the sound is made. A second station in this topic provides teachers with questions to guide student planning, such as, "How will you make sounds with the objects?", "What observations will you use as evidence?", and "How will you decide how loud each sound is?' The teacher prompts the students with, "Decide how you will make a sound with each object," and" List the sounds from loudest to quietest." To support struggling students, the teacher models how to set up the investigation and how to tap an object on a flat surface. In Topic 6, Experience 1, the teacher models how to make and fill in a data table for recording observations. It uses two columns labeled Part and What I See. The teacher begins by modeling what you would record if you were looking at a leaf, such as: green, almost round, and thin.
- The teacher materials include challenge activities through options for stations where students accelerate their learning. After completing a station activity exploring how they can change materials using items such as scissors, wood, sandpaper, wax paper, and aluminum foil, students ready for a challenge can explore using additional materials and tools. While learning about force and motion in Topic 2, students explore what happens when a marble is dropped on a

piece of clay. Students ready to accelerate their learning are challenged to find ways to make a more significant change to the clay when dropping the marble on it.

- The Teacher's Guide embeds just-in-time acceleration suggestions under the heading "Differentiated Instruction" to develop productive perseverance of learning in the moment. In Topic 5, Experience 2, the Differentiated Instruction states, "Challenge: Have partners or groups make short lists of resources we use, both natural resources and resources made by people. Direct then to exchange the lists and identify on their partner's list which type each resource is. Tell them to explain how they made their decisions."
- The Teacher's Guide embeds just-in-time acceleration suggestions under the heading "Differentiated Instruction" to develop productive perseverance of learning in the moment. Topic 6, Experience 1, asks the teacher to explain to students that making careful observations and recording them in as much detail as possible is important. It also provides three questions that teachers can ask: "What parts of the plants will you observe?", "How will you record your observation -with pictures, words, or some other way?", and "What are some things you will look for as you observe the plants?" In Topic 7, Experience 3, the Differentiated Instruction states, "Challenge: Have interested students make a different food chain that might occur in the same environment, such as the sun, grass, grasshopper, robin, hawk, or in a different environment, such as a desert or pond."

Savvas Learning Texas Experience Science Grade 2

Indicator 7.2

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- Materials provide engagement opportunities in various developmentally appropriate instructional approaches such as video clips and images, classroom demonstrations, educational game-based learning opportunities where students apply scientific knowledge, and opportunities for connections to scientific concepts in the real-world or current events.
- Topic 2, *Force and Motion*, includes an anchoring phenomenon video that provides students with a visual see how construction changes the land. Materials have the suggestion, "Prompt students to consider how this phenomenon connects to engineering design practices." A demonstration of using pushes to form a bowl from clay engages students in thinking about how pushes and pulls can change the shape of objects. The teacher uses an image of two children in soapbox derby-style cars pushed by another child to engage students in a conversation about the strength of pushes. Students utilize the online learning game, Legends of Learning game, "Push Appliance Store," to apply and reinforce their learning about push and pull.
- Students engage in hands-on and literacy stations as one of the developmentally appropriate instructional approaches to engage students in the mastery of the content. Experiences include explorations with concrete and hands-on material at the course's rigor level.

- For example, in Topic 2, *Forces and Motion*, Experience 1, students explore how a marble dropped on a piece of clay pushes the clay. The students read the text Pushes in the literacy station and then use their previously introduced vocabulary words to explain how they use pushes daily.
- In Topic 2, *Force and Motion*, lessons include inquiry-based, authentic tasks where students use tools to measure and collect data, such as in Experience 2, when students measure and record how they moved a ball with a straw. Lessons include video clips to introduce and reinforce specific science concepts. Materials include educational game-based learning opportunities where students apply scientific knowledge via the Legends of Learning game in Experience 1.
- For example, in Topic 4, the teacher models using a thermometer and how students can correctly use data collected to graph and share data on the daily temperature.
- The lesson begins with discussion questions in Topic 4, *Patterns in the Sky*. Students discuss the overarching phenomenon question, "How is the weather changing?" and How is the sky changing?"
- In Topic 4, Experience 1, *Sun and Moon*, "Students learn that the sun provides heat and light and that the moon reflects the sun's light." In Experience 2, *Weather*, students "measure, record, and graph weather information." In Experience 3, *Severe Weather Events*, students "investigate tornadoes, hurricanes, and floods." Materials provide visual vocabulary cards to guide teachers by having "students choose two vocabulary words and draw a picture for each. Group the pictures for each word and post them around the classroom."
- In Topic 4, *Patterns in the Sky,* Experience 1, *Sun and Moon*, the Engage section includes an Everyday Phenomenon Demonstration to activate student thinking about the moon. The Explore section provides a hands-on station where students conduct a simple investigation and a literacy station activity where students read through a telescope to learn what the moon looks like. In the Explain/Elaborate sections, the materials provide a Key Ideas Presentation, a Key Ideas Video, and a Legends of Learning activity where "students play a game to identify objects in the sky during the day and at night." In the Evaluate section, the materials provide an exit ticket to measure student mastery.
- For example, Topic 5, Experience 1, starts by activating students thinking about the agents that change Earth's surface. Students investigate and model the way water and wind move sand. The Experience includes Read About It texts to explain the effects of water and wind on Earth's surface. Students watch a video to observe the movement of Earth's materials and their impact on natural landscapes.
- In Topic 1, Experience 3, *Combining Matter,* discussion questions are listed to engage students in deeper thinking and discussion about the science content presented in the Everyday Phenomenon. Questions include: "What other shape do you think I can make with this clay and these toothpicks? How can you use what you just learned to redesign a wooden playhouse?" This activity starts with direct instruction to facilitate instruction and experiential learning later in the Experience.

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

- The materials for each Topic consistently support flexible grouping by providing opportunities for students to work as a whole group, a small group, as partners, or individually. The teacher materials also support flexible student grouping to support language needs by suggesting groups and pairs when differentiating for emergent bilingual students.
- Experiences start with a group discussion, such as the Key Ideas Video. Every experience includes a hands-on investigation activity with students working in small groups. During

investigations, students collaborate to plan, design, and conduct an experiment or design and build a model to solve an engineering problem or answer a question. Teachers provide students with opportunities for individual work through Read About Its and associated literacy station activities, Make Meaning activities, and assessments. In the Explore stage of each Experience, students work through a Revisit Everyday Phenomenon prompt by working with a partner to discuss new understandings and revise questions about the phenomenon.

- In Topic 2, Experience 2, *Motion,* the experience begins with a whole group discussion as the students view an image of children in soap box derby-style cars, each pushed by another child. The students then work in small groups and partnerships as they engage in a hands-on station exploring how to move a ball by blowing air through a straw and a literacy station to learn about motion. Students discuss their learning and independently answer the question, "Why are machines used in construction?" as an exit ticket.
- In Topic 3, students begin with a group discussion of the Anchoring Phenomenon Video of a city scene and siren. In Experience 1, students work in groups to answer “How can sound cause motion?” Students read the Read About It text about sound individually and take the topic assessment. The authors designed the hands-on and literacy stations to ensure the implementation of collaborative or independent groups depending on the needs of the students in each unique classroom.
- Topic 2, *Forces and Motion,* has groupings for English Limited Proficiency Standards (ELPS). Advanced learners tell each other how pushes on the clay change its shape. In the literacy station, advanced high students work in pairs to find connections from their text about pushes to examples in the classroom. In the Evaluate section of the lesson, materials support ELPS for advanced students to work in pairs to "focus on an example of objects that push on each other." The pair completes a sentence frame aloud. Advanced high students work in pairs to explain how a jackhammer uses pushes to change the land.
- In Topic 4, Experience 1, students are working as a whole group to discuss “Why doesn't the moon always shine at night?” The ELPS targeted support suggests that beginning students complete a sentence frame to describe the light. Intermediate students work in pairs around the ball to sketch and describe their diagrams. Materials offer advanced emergent bilingual students work with partners by taking turns listening to each other describe how the moon reflects the sun’s light. For advanced high emergent bilingual students, material suggests having a volunteer explain the full moon and group members summarize what was said.
- In Topic 5, Experience 1, the teacher presents the everyday phenomenon photo and activates students thinking about the agents that change Earth's surface. The Experience continues with the hands-on station where students work in small groups or partners to investigate and model how water and wind move sand. Students work individually or with a partner to complete the Exit Ticket by writing ways the Earth's materials can be moved.
- Topic 5 materials suggest teachers present and read through the Vocabulary Cards. Together they create a word wall organized as a concept map for students to use throughout the topic. The teacher has students select the word that goes at the center of the map and how they would organize the other terms. The class can reorganize the concept map during the topic as they learn more about how the word is used in context.
- In Topic 4, Experience 1, students participate in a whole group observation of a teacher demonstration. As students observe, they make predictions, observe, record, and analyze questions as a group. Students participate in stations to answer the question, "How does the sun affect temperature?" Teachers ask students to collect data from one cup in the sunlight and one cup in the shade. Students share findings with a partner or group.

Savvas Learning Texas Experience Science Grade 2

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 (modeled, guided, independent, and collaborative).
- Modeled practice often happens in the Engage portion of the Experiences through Everyday Phenomenon Demo Videos. Materials support guided practice through provided Station Cards and Student Activity Companion sheets for each hands-on and literacy station activity with options of a collaborative or independent setting.
- In topic 3, *Sound and Volume*, the teacher models how to make a sound with a rubberband on a shoebox with a hole cut into it to engage students at the beginning of the lesson. The students explore sound energy independently in a hands-on station with guidance from the teacher as they stretch plastic wrap over a cup and secure it with a string. Students observe what happens when they make a sound and record their observations. Students collaborate by discussing with a partner how a drum makes sounds after reading Sound in the literacy station.
- In Topic 3, the teacher addresses the student's prior knowledge and describes the expectations for classroom structure specific to the stations within this experience. The teacher says, "We will work quietly in partners and groups to explore sound." The teacher gives the students instructions to be careful not to spread sand on the floor in the hands-on station and to help each other understand the key vocabulary in the literacy station.
- In Topic 4, *Patterns in the Sky*, teachers are prompted to remind students about the demonstration of what happens to the sunlight when it reaches the moon. During the Explore section, teachers ask students questions such as, "What do you want to learn from this investigation?" and "Why do you have two cups of water?" Students read the literacy station text independently and then discuss with a partner any new understandings.
- In Topic 5, Experience 3, modeled practice occurs in the Everyday Phenomenon Demo, in which the teacher leads a discussion on what can be reused and what should be thrown out. Guided and collaborative practice happens in the stations, “How can you reuse these objects?” and “How can you conserve resources?” Independent practice happens in the exit tickets, in which students explain ways to conserve resources.
- In Topic 5, Experience 2, the teacher activates students' thinking by asking them to compare two lakes while leading and modeling a discussion on an Everyday Phenomenon Photo. Materials include guided, collaborative, and independent practice opportunities during the hands-on and literacy station. In this Experience, the teacher guides the students on recording, comparing, and sharing. Students work independently during the literacy station by answering questions about how the wind and water can change Earth's surface.
- In Topic 6, Experience 3, modeled practice happens in the Everyday Phenomenon Demo, in which the teacher demos the different parts of plants and their uses. Guided and collaborative practice happens in the stations, “How are plants alike and different?” and “How do plant parts help plants live?” Independent practice happens in the exit tickets, where students explain how plant parts work together to help plants.
- The materials provide guidance and structures to achieve effective implementation. The Teacher Guide materials for the Explain stage of each Experience provide guidance and structures to effectively implement guided practice through teacher notes about how to present content.
- In Topic 6, Experience 2, Key Ideas presentation, *Plants*, bullets, step-by-step teacher instructions guide the teacher to check for sense-making by having students explain what each plant part does.

- In Topic 5, students learn about Earth's resources. Materials guide teachers on how students investigate the way the movement of water and wind can change the Earth's surface. Materials offer structure by following the 5E model and providing verbal and written feedback to students.

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

- Materials represent diverse communities using images that are respectful and inclusive.
- Images on the student materials portray diverse genders, races, and ethnicities. Materials present diversity in people and communities in the lessons. Students from all backgrounds are represented in the pictures of students for the station cards. Boys and girls seem to have equal representation. The vocabulary cards present diversity.
- The topic reader, *Energy, Force and Motions,* included in Topic 2 includes images of ways magnets are used, such as on a high-speed train in China, an MRI machine, the northern and southern lights, and a junkyard. The topic reader, *Exploring Motion and Force,* contains images reflecting different genders and races.
- The Hands-on Station Card for Topic 5, “How can wind and water affect sand?” includes a picture of a Caucasian girl and a Hispanic boy working together. The Hands-on Station Card for Topic 5, “How are resources important?” shows an African American boy using a hand lens.
- The Topic Readers represent diverse communities using images and information that are respectful and inclusive. Bees in Action shows a Caucasian girl, an African American boy, and an Asian girl on pages 14-15 spread. *Exploring Motion and Force* shows a Caucasian girl, an African American girl, and an Asian boy on pages 12-13. Station Cards represent diverse communities using images and information that are respectful and inclusive. Topic 1 shows an African American girl, a Hispanic boy, a girl, and an Asian girl. Topic 2, Experience 1, shows a Caucasian boy and an Asian girl with an African American boy. Topic 2, Experience 2, offers illustrations of an African American boy and a Caucasian girl. Another card in the set shows a Hispanic girl.
- The teachers pictured leading the teacher background videos reflect diversity in gender, race, and ethnicity. The materials portray different genders and ethnicities as the narrators of these videos. For example, the Teacher Background video for Topic 7, *Organisms and Environments,* is led by a Caucasian male instructor, and Topic 4, *Patterns in the Sky,* is led by an African-American woman.
- The station cards contain images of children of different genders and races. The videos include different genders and races for both adults and children present. The everyday phenomenon videos and images reflect various communities, from cities, to suburban and rural.
- Materials represent diverse communities using information and images that are respectful and inclusive. Materials use real-world examples and connections throughout represent diverse communities and places in Texas.
- Topic 1's Anchoring Phenomenon Video is of a wooded area. Topic 3's Anchoring Phenomenon Video is of an urban city. Topic 3, Experience 2's Key Ideas Presentation is of a boy in a wooded area. Topic 3, Experience 3's Everyday Phenomena Photo is of an urban city.
- Each topic includes an Every Day Phenomena Exploration that explores the wonders of Texas, such as Big Bend, the Hill Country, The Panhandle, The Gulf Coast, and The Piney Woods for students to experience and investigate. For example, Topic 5 includes a Phenomena video, “How did the Lighthouse rock formation get its shape?” This video shows the Lighthouse rock formation at Palo Duro Canyon State Park.

Savvas Learning Texas Experience Science Grade 2

Indicator 7.3

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

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

- Materials include linguistic accommodations commensurate with various levels of English language proficiency as defined by the English Language Proficiency Standards (ELPS). Each Topic Planner includes the ELPS to be addressed in the topic. Each Experience includes an ELPS Targeted Support during the Engage part of the lesson. The Teacher's Guide includes listening, reading, writing, and speaking support to help emergent bilingual students meet grade-level science content expectations. The guidance is included at point-of-use and is scaffolded for beginning, intermediate, advanced, and advanced-high students.
- Topic 5, Experience 1, the ELPS Targeted Support states, "Speaking 3F Have students discuss the photo of sand dunes in Monahans Sandhills State Park, using concrete vocabulary." It also includes scaffolded instructions on addressing it for beginners, intermediate, advanced, and advanced high. For example, for advanced, the students complete and read aloud this sentence frame: "_____ blew the _____into hills."
- In Topic 2, Experience 1 has the teacher communicates and models how to design the investigation. The Key Ideas Presentations have teacher notes for each slide to provide guidance on scaffolding activities for students. For example, the presentation in Topic 2, Experience 1, includes teacher's notes such as, "Guide students to review the literacy and hands-on stations. Ask students what they observed and learned in each station activity. Answer any questions the students may have about the activities and concepts taught." On another slide, "Review with students what a push is. Have students describe the picture. Ask: What is being pushed in the photo? "(The child on the sled.) Ask: Who is doing the pushing? (the person behind the sled)."

Savvas Learning Texas Experience Science Grade 2

- In Topic 2, Experience 1, in the Engage portion of the lesson, the ELPS focus is listening. The support for a beginning English language learner is, "Model pushing a piece of clay. Say push as you push into the piece of clay. Allow students to push into the clay as they repeat the word push." The Explore section focuses on reading, and guidance for the beginning English learner is, "Look at the photos in the text. Model reading and pointing to each object in each picture. Say the word *push*. Have students repeat after you. The ELPS focus in the Evaluate section is speaking, with guidance for the beginning English learner that states, "Have students draw a picture of two objects that touch or collide. Have them point to the object being pushed and say, *push*."
- In the Engage section of Topic 6, Experience 3, Evaluate, the ELPS Targeted Support states, "Beginning- Have students name the stages in the life cycle of the frog and of the butterfly. Intermediate-Name a stage in the life cycle of the frog or butterfly and have students use sentences to explain the changes that occur from that stage to the next. Advanced/Advanced High- Have students explain the life cycle of the frog or butterfly, using as much detail as possible."
- The ELPS correlations chart in the Teacher's Guide helps teachers identify where each ELPS is covered in the materials. For example, the chart states that ELPS 1A, "use prior knowledge and experiences to understand meanings in English," can be found in the Teacher's Guide.
- The Teacher's Guide embeds scaffold for emergent bilingual students into lessons, such as visuals, sentence stems, and manipulatives. For example, in Topic 5, Experience 1, during the Engage section, the teacher shows a visual (photo) of a sand dune and asks the students, "What do you think caused these hills of sand?" The ELPS Targeted SUpport includes a sentence stem for Advance students to complete and read. "_____blew the _____into hills." Students use sand and water during the Hands-on station to investigate and describe the effects of wind and water on sand particles.
- In Experience 1, *Sun and Moon*, the ELPS Targeted Support for the Engage section focuses on Listening 2E and guides teachers to "have students take part in discussion in which they share information about the demo in cooperative learning interactions." The materials contain additional guidance for each beginning, intermediate, and advanced/advanced high level. For example, for students at the beginning level, teachers are guided to "have students complete this frame: "The flashlight is the ____. The ball is the_____." Then model how the moon travels around the sun. Have students listen to each other as they complete the frames." For students in the intermediate level, the materials guide teachers to have students work in pairs to sketch how light on the moon changes shape when viewed from a different angle. Finally, teachers ask advanced/advanced high students to take turns listening to each other describe how the moon reflects the sun's light.
- Materials provide an ELPS Correlation for each grade level. The document identifies the ELPS and the Teacher's Edition page numbers where the ELP is a focus. For example, the Teacher's Guide contains guidance for ELPS 1B.

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

- Materials encourage strategic use of students' first language as a means to linguistic, affective, cognitive, and academic development in English. Materials using home language appear only three times for each grade and are not seen in every unit, falling short in consistency. Not all material provides adequate support to assist teachers in ensuring student content mastery.

Savvas Learning Texas Experience Science Grade 2

- The ELPS Targeted Support of Topic 5, Experience 3, Evaluate, for beginning emergent bilingual students, states, “Have small groups use vocabulary words and home language to explain how conserving resources can impact resources, including Palo Duro.”
- The student activity guide includes some materials translated into Spanish. The student activity guide includes all literacy and hands-on station cards in English and Spanish.
- The Key Ideas Presentations with each experience include keywords to know in English and Spanish and the definitions to support students whose first language is Spanish. The guidance provided for the teacher is, "Preview vocabulary to help students as they build background knowledge and connect with key ideas." The words included in the Key Ideas Presentation for Experience 1, *Sound*, Topic 3, and their definition in English and Spanish are sound/*sonido*, vibrate/*vibrar*, and system/*sistema*.
- Support Notes in Topic 1, Experience 1, Key Ideas Presentation: Properties of Matter lists key vocabulary words and their definitions in English and Spanish. It states, “Words to Know: Preview vocabulary to help students as they build background knowledge and connect with key ideas. property-something about an object you can observe with your senses, *propiedad -algo acerca de un objeto que puedes observar con tus sentidos*, temperature-how hot or cold something is, *temperatura-qué tan frío o caliente está algo*, matter-anything that takes up space and has mass, *materia-todo lo que ocupa espacio y tiene masa*. Academic Word: classify-put objects that share properties into groups, *clasificar-agrupar objetos que comparten propiedades*."
- In Topic 7, Experience 2, the ELPS Targeted Support includes an activity during the Literacy Center, the teacher reads slowly, Read About It, and points to the words as she reads while the students repeat them. Then students are asked to retell what they heard using their home language if needed.
- The School-to-Home Letter in each topic prompts caregivers to explain science concepts in their own words or first language to support students. Topic 6's letter states, "One of the best ways for students to check on their learning is to explain it to someone else. Ask your student about their class experiences, and ask them to explain the content that they are learning while at school in their own words or, if relevant, in their first language."
- The materials include a letter to send home with the institutional objectives for the topic to be covered. School-to-Home letter prompts caregivers to explain science concepts in their own words or first language to support students' linguistic, affective, cognitive, and academic development and mastery of science concepts and vocabulary.
- Materials provide School-to-Home Letter that includes cognates that would be helpful to Spanish speakers' academic development in English. For example, a series of slides to send home about Properties contains the following cognates and explanations to be used by students; first language if it is Spanish. "material what an object is made of (*material aquello de lo que está hecho un objeto*), property how an object looks, feels, or sounds (*propiedad manera de describer un objeto*), texture how an object feels, (*textura lo que se siente al tocar un objeto*)."
- Each topic contains literacy and hands-on station cards in the student activity guide. Each set of cards is available in English and Spanish.

Savvas Learning Texas Experience Science Grade 2

Indicator 7.4

Materials guide fostering connections between home and school.

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- Materials include information to be shared with students and caregivers about the design of the program. The online resources include a tab for parents under the Getting Started with Texas Experience Science/Navigational Support/Realize Parent Support. This tab contains the following links: Realize Parent Letter, Realize Parent Guide, Realize Learner Tips for Parents, and Realize Parents Corner. The materials provide a grade-level parent letter to be shared with students and caregivers about the design of the program. It describes the topics in the program and how the materials use phenomena and the 5E model to support learning.
- Materials provide a School-to-Home Letter that teachers can share with students and caregivers. The letter includes information about the topic and suggestions for how caregivers can help reinforce students' learning and development as well as keep students engaged in learning at home.
- The online resources include a one-page School-to-Home Letter to send home at the beginning of the course. The letter gives parents suggestions for supporting student learning in science, such as, "Look through recently completed assignments and be sure to ask lots of questions. One of the best ways for students to check on their learning is to explain it to someone else," and "Ask about homework assignments and be sure that your student has completed them." The letter also lists the topics covered.
- Topic 2's letter informs parents the topic is Force and Motion, and students will engage in the experiences *Pushes* and *Pulls*. The letter lists the main TEKS covered in this topic. The letter explains to parents how the topic begins with an anchoring phenomenon video, and students will use information gained in the experiences to explain the question posed in the video, "How does construction change the land?"

- The materials provide a one-page School-to-Home Communication Guide with suggestions for sharing the program design with students and parents. A suggestion provided is, "Use the information provided in the 'Engage in Dynamic Experiences,' in the Teacher's Guide, as well as the Scope and Sequence, the Topic Planner, and the Experience-At-A-Glance to explain to students and caregivers the design of the program at the beginning of the year."
- Each topic includes a School-to-Home Letter describing the topic's experiences, the TEKS addressed, and the main SEPs and recurring themes and concepts. Topic 5 includes information about Earth's Resources, including the movement of Earth's resources and how to protect resources. Topic 6's letter describes the three experiences: *Plant, Animal,* and *Animal Life Cycles*.
- In the Getting Started with Texas Experience Science portion of the materials, under Navigational Support, the Realize Parent Support page provides students and caregivers a Realize Parent Letter, Realize Parent Guide, Realize Learner Tips for Parents, and Realize Parents Corner. The Parent Letter briefly describes the online program, a getting started section, and a troubleshooting checklist that includes the technical system requirements. The letter also has a place for the student's name, username, and password on the online platform. The Parent User Guide is an 8-page guide that provides step-by-step directions such as viewing and accessing assignments, completing and submitting assignments, grades and teacher feedback, browsing Realize and offline access, and support provided for the Realize platform.
- The Learner Tips is a 1-page document outlining seven tips for parents to learn at home. The tips include: *Take a Break*, *Enjoy the Sunshine*, *Plan for Attention Span*, *Practice Mindfulness*, *Love Over Lessons*, and *Keep up Communication*. The materials describe the Parents' Corner as having "All the information you need to access and use Savvas Realize to support your student's academic growth." There are links to all of the materials on this page and How-To Videos for Students and Parents.

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

- The online resources include a one-page School-to-Home Letter to send home at the beginning of the course. The letter gives parents suggestions for supporting student learning in science, such as, "Look through recently completed assignments and be sure to ask lots of questions. One of the best ways for students to check on their learning is to explain it to someone else," and "Ask about homework assignments and be sure that your student has completed them." The letter also suggests parents encourage computer literacy and help students collect materials and information for school activities. The materials provide the letter in English.
- Topic 1 includes a sidebar encouraging students to work with a family member at home to find objects to which they can make physical changes. The students work with an adult to change the object and record their observations in their science notebooks.
- Topic 2 includes a sidebar suggesting students list examples of objects they push at home. "They can draw themselves pushing the objects. If the object changes shape, such as a sponge or a seat cushion, ask students to write a sentence to tell how the object changes shape."
- Materials suggest parents/caregivers, "Look through recently completed content and be sure to ask lots of questions. Encourage students to explain what they have learned in their own words or their first language. Ask about homework assignments and check that your student has completed them. Help your student collect materials and information for school activities. Advise your student to use computers, tablets, or other devices in school or at the library. If you have a home computer, help your student do research online."

- Each topic includes a School-to-Home Letter that describes each topic and suggests that parents “check on their learning.” Topic 6’s letter states, “One of the best ways for students to check on their learning is to explain it to someone else. Ask your student about their class experiences, and ask them to explain the content that they are learning while at school in their own words or, if relevant, in their first language.”
- Topic 5 includes information about Earth's Resources, including the movement of Earth's resources and how to protect resources. It informs the parent that one of the best ways for them to check their student's learning is to explain it to someone else. It recommends caregivers ask students about their class experiences and explain the content they are learning at school in their own words or, if relevant, in their first language.
- In Topic 5, the Home Connection activity is to Identify Resources at Home. Students identify one type of resource, such as wood, aluminum, or glass, and have a scavenger hunt to find objects made of that resource in and around their homes. Students take pictures and talk with their families about how common the resource is and how important it is in their everyday lives.
- The materials include a School-to-Home Letter that provides information and suggestions to parents and caregivers to help students "gain proficiency in science." The letter offers tips such as, "Look through recently completed content and be sure to ask lots of questions. One of the best ways for students to check on their learning is to explain it to someone else. Ask about homework assignments and check that your student has completed them. Help your student collect materials and information for school activities. Encourage computer literacy. Advise your student to use computers, tablets, or other devices in school or at the library. If you have a home computer, help your student learn to do research online." The letter concludes by listing the topics students will study in physical, earth, and life science this year.

Materials include information to guide teacher communications with caregivers.

- Materials include a one-page School-to-Home Communication Guide with suggested strategies for communication with caregivers. Suggested strategies include sending home letters listing the topics covered and general ways to support learners and letters at the beginning of each topic with an overview of what should learn in the topic. The guide suggests the teacher use the Home, Community, and Texas Connections sidebars to engage caregivers and the community to help students connect to the content.
- Materials suggest teachers "Invite caregivers to stay involved in their student's learning. Make sure that they know you welcome their input and contributions, and that they know how to reach you."
- The materials include a School-to-Home Communications Guide that contains information to guide teacher communications with caregivers. It advises teachers on using the Grade and Topic School-to-Home letters and the *Home Connections*, *Take it Local*, *Collaborate with the Community* features in the Teacher's Guide.
- Materials include a one-page School-to-Home Communication Guide that provides a guide for teacher communication with caregivers. It offers six strategies for teachers to use. One is to share the Grade School-to-Home Letter provided for every topic, including the importance of phenomenon-based 5E science instruction. Another one is to invite caregivers to stay involved in their student's learning by providing opportunities for them to talk about what they learn at school.
- The materials provide several letters explaining the program and giving caregivers advice and instructions. One letter in the Realize Parent Support section focuses on support for the online

platform. Another letter is found in the Additional Program Resources and provides parents with the topics their student will study and some tips on how to assist and support student learning.

Savvas Learning Texas Experience Science Grade 2

Indicator 8.1

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

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

Meets| Score 2/2

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

Materials include a TEKS-aligned scope and sequence outlining the order in which knowledge and skills are taught in the course materials. Materials provide clear teacher guidance for facilitating student-made connections across core concepts, scientific and engineering practices, and recurring themes and concepts. Materials provide teachers with tools to revisit process skills, not content knowledge. Knowledge is introduced and taught; however, no evidence of spiraling was found.

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.

- Teachers can access *Teacher Supports* to locate a K-5 TEKS-aligned scope and sequence outlining the order in which knowledge and skills are taught and built in the course materials. The Teacher's Guide also includes a TEKS-aligned scope and sequence that details the kindergarten units and illustrates the vertical alignment from kindergarten to grade 5.
- Materials include a one-page TEKS-aligned scope and sequence table. The table outlines the order in which TEKS are taught and built in the course. For example, the materials provide a programmatic scope and sequence or instructional map for K-2 showing the vertical alignment of the essential knowledge and skills taught in the program throughout the school year.
- Materials suggest using a cohesive scope and sequence that shows how science knowledge and skills are addressed over the entire year. For example, at the beginning of each topic, materials list the TEKS and objectives that will be covered.
- Each topic includes an overview that includes a TEKS progression. For example, in Topic 5, *Earth Materials*, it states, "How does this topic connect to what students learned earlier?" and lists two kindergarten standards, K. 10A, and K. 11A. It then states "Throughout this topic, students connect to big ideas." It lists 1.10A, 1.10B, and 1.11C, as well as eight vocabulary words. Then it looks ahead to three second-grade standards.

Savvas Learning Texas Experience Science Grade 2

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

- Materials for grade 2 provide a SEPs & Themes Preview to provide clear teacher guidance and information to help students make connections between core concepts, SEPs, and recurring themes and concepts. The preview describes using the SEPs & Recurring Themes and Concepts Presentation to facilitate student-made connections. For example, the guide details how to use slides 2-6 from the presentation to help students explore the processes of investigating and designing solutions.
- Grade 2 lesson materials include embedded sidebars to guide the teachers in facilitating student-made connections in SEPs. For example, in Topic 2, Experience 1, the sidebar guides the teacher to master the recurring theme of cause and effect in a hands-on station activity. The teacher is guided to ask students to predict the effect on clay when they drop a marble from a greater height.
- The presentation is divided into five key ideas corresponding to Texas Essential Knowledge and Skills for Science 1–5. These key ideas include Investigate or Design, Use Models, Share Ideas, Scientists' Help, and Themes and Concepts. The teacher is provided with activities that can be used to introduce students to SEPs as well as Recurring Themes and Concepts in science. For example, in grade 2, teachers assign the “What are Models?” activity to students. This activity asks students to build a model by identifying, analyzing, comparing, and explaining. In grade 2, teachers also assign students the “Properties of the Sun” activity. This activity asks students to predict, analyze, explain, and tell about the sun's properties.
- For example, the materials provide a TEKS correlation that details the locations throughout the course where teachers can find review and practice previously introduced knowledge and skills. For example, 2.1G is utilized in several topics as students develop and use models as part of their scientific investigations. Provided materials suggest a topic overview at the beginning of each topic that provides the scientific and engineering TEKS that are present in the lessons. For example, Topic 3 lists several SEPs TEKS along with recurring themes and concepts TEKS present in the lessons on this topic.

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

- Materials provide review and practice of skills spiraled throughout the year. Each topic has a Topic Wrap-up that includes a test and a short constructed response quiz for students to show mastery of the particular topic. Each topic includes two experiences that have opportunities to support the review and practice through an evaluation tool.
- Content knowledge is spiraled throughout the year for new content. Every topic in the Teacher's Guide has an explicit explanation of previously learned content that is reviewed and spiraled into the current topic. This explanation is in the Preview of the Topic section of the topic overview in the Teacher's Guide. For example, the grade 2 Teacher's Guide: Topic 5 *Earth's Resources* Overview: Preview the Topic Section, supports content from Topic 4, *Patterns in the Sky*. Students will use what they learned in Topic 4 about precipitation, wind, and severe weather events such as floods (TEKS 2.10B, 2.10C) and apply it to what they are learning about resources and how the movement of water and wind can change Earth’s surface in Topic 5.

Savvas Learning Texas Experience Science Grade 2

Indicator 8.2

Materials include classroom implementation support for teachers and administrators.

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

Grade 2 Meets | Score 2/2

Materials provide teacher guidance and recommendations for the use of all materials, including text, embedded technology, enrichment activities, research-based instructional strategies, and scaffolds to support and enhance student learning. Materials include TEKS correlations, including cross-content standards explaining standards within the context of the grade level. Materials include a comprehensive list of all equipment and supplies needed to support instructional activities. Materials include guidance for safety practices, including the grade-appropriate use of safety equipment during investigations. The rating of Meets is true only if the digital resources are purchased with the set, and access is given.

Evidence includes but is not limited to:

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

- Materials include research-based SEPs and Themes previewed in the Teacher's Guide, providing the teacher guidance on how to utilize the materials to support TEKS 1-5, which are integrated and ongoing throughout the remaining units.
- Embedded technology provides the teacher with information on using slides and implementing activities. Teachers can access the digital user guide for support and understanding of how to use featured digital components, such as the teacher home page, program dashboard, My Library, Digital books, interactive PDFs, assignments and scoring, and the student home page. The digital user guide includes QR codes with video links. One example guides teachers in navigating the digital resource library. QR codes are linked to a video detailing how to navigate the teacher home page, the starting point for accessing all features. The digital guide includes clear labels with information about each feature. Teachers can access links and videos to embedded technology to support and enhance students' learning of science concepts.
- Grade 2 provides scaffolds to support student learning, as seen in The Teacher's Guide, which includes several supports to assist the teacher in understanding how to use the materials. The Teacher's Guide provides information at the beginning of each unit to assist teachers in knowing which components of the materials to use within the unit and how to use them. There are embedded sidebars throughout the Teacher's Guide to assist the teacher with items, such as

images of which station card to use, addressing misconceptions, vocabulary support, and mastering SEPs.

- Materials for each topic include a planner providing teacher background, common misconceptions, TEKS information, as well as home and literacy connections. It also lists all necessary components for the topic and suggested time periods. For example, in Topic 4, *Patterns in the Sky*, there are three experiences. In Experience 2, *Weather*, the Engage section is an Everyday Phenomenon Photo. The Explore section is a hands-on station and literacy station. The Explain/Elaborate section includes a key ideas presentation, a key ideas video, and a STEAM activity. The Evaluate section is an exit ticket.
- The materials include overview documents to support teachers in understanding how to use all materials and resources as intended. For example, the materials have a Getting Started with Texas Experience Science K guide to support teachers. It includes a Program Overview, Teacher Support, Correlations, and Research.

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

- The Teacher's Guide includes TEKS and ELPS correlations in the planning resources detailing where to find them in the Teacher's Guide. Each unit includes a topic that contains knowledge and skill and explains the standards being taught within the unit, as well as how it was covered in first grade and how it is covered in second grade. A list of the SEPs of TEKS, the recurring themes, and concepts of TEKS, ELPS, and cross-content standards are also present in the topic overview.
- Teachers are provided suggestions for cross-content standards. Topic overviews include a section titled "Math and English Language Arts and Reading TEKS" to illustrate standard correlations, including cross-content standards. For example, Topic 4, *Patterns in the Sky*, lists the math standard 2.1D. It also lists the ELAR standards 2.9D, 2.6E, 2.7E, and 2.12D.
- For example, topic overviews include a "Connect to Literacy" section in the sidebar that lists recommended topic readers and trade books. The materials also include an activity that accompanies the topic readers for each topic.
- For example, in Topic 3, *Sound and Volume*, the three topic readers are: *What are Forces and Energy?* by Ann Dickson, *Sounds Around Us* by Catherine Little, and *Musical Instruments* by Marilyn Leggett. Teachers have access to recommended trade books: *Oscar and the Bat: A Book About Sound* by Geoff Waring and *Sounds All Around* by Wendy Pfeffer. Suggested reading material for teachers to use, support, and enhance students' learning of science concepts shows alignment with the TEKS.

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

- A Master Materials List for grades K–5 can be accessed in the digital materials under the program resources. The teacher can either click on the program resources tab and scroll to find the link to the Master Materials list or use the search feature to find the material list. The materials list the downloads as an Excel spreadsheet. The Excel spreadsheet details the topic and activity in which the material is used. The spreadsheet also notes whether the material is included or school supplied, the quantity needed, a description of the material, and whether the material is consumable or non-consumable. Teachers are directed whether the school or the Classroom Materials Kit, the Consumable Refill Kit, or the Safety Kit K-5 supplies those materials.

In Topic 4, Experience 1, the hands-on station is “How does the sun affect temperature?” The file shows that the Classroom Materials Kit and the Consumable Refill Kit supply the plastic cup. The school supplies water and sunlight. The Classroom Materials Kit supplies the thermometers.

- The materials include a Texas Experience Science Grade K Master List located in the Additional Program Resources. This list includes a list of supplies needed to support students, teachers, and administrators during investigations in accordance with and/or in addition to the grade level. For example, each experience card includes a "What You Need" section that lists the materials for that activity. Topic 3, *Sound and Volume*, “How can sound cause motion?” lists the materials: a plastic cup, string, clear plastic wrap, and sand. For example, the Topic 4 activity “Why doesn't the moon always shines at night?” lists the materials needed: a flashlight, batteries, a solid color ball, and a table.

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

- The materials provide teacher guidance for safety practices and grade-appropriate use of safety equipment during investigations, in accordance with Texas Education Agency Science Safety Standards. For example, materials include a Hands-On Activity Safety Guide to support teachers and students.
- Teacher-provided station cards contain a warning symbol along with a description of a warning associated with that station. For example, a station card in the unit on force and motion warns students to use safety goggles and to use caution to avoid falling. Materials provide a student contract, including pictures of the possible danger symbol, noting that the materials used must do so with caution. Teachers can access the student book, which includes 47 lab safety rules, safety in the lab, in the classroom, and in the field. A student-friendly contract includes a picture of a caution sign when referencing possibly dangerous materials used during the lab.
- The Student Activity Companion includes a section on laboratory safety. Sections included are Laboratory Safety Rules, a safety contract, and sections on preventative as well as emergency safety equipment. Sections on safe practices and appropriate use of resources are also included. These are included in a consumable student activity book and are written in student-friendly terms. Topic 2, *Force and Motion*, Experience 2, “How can you move the ball?” states, "Do not share straws. Use caution with rolling objects to avoid falling." Materials include safety practices during experiences. For example, during the Topic 7, Experience 1, hands-on station, the teacher reminds students to handle the scissors carefully to demonstrate safe practices during an investigation as outlined in the TEA-approved safety standards.

Savvas Learning Texas Experience Science Grade 2

Indicator 8.3

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

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

Meets | Score 2/2

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

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

- In the Teacher's Guide, teachers can reference a year-long Course Planner and Pacing Guide. The Pacing Guide gives the teacher two options for pacing under each topic. Materials provide a fast-track method designated by a checkmark in the activities for those with limited time available to teach science. Teachers can view activities designated with a plus sign to personalize student learning. The Pacing Guide lists how many days are needed for each topic depending on whether the teacher uses the fast track or the personalized track. The Pacing Guide further breaks down how many days are needed to launch the topic, participate in the lab experiences, and wrap up each unit.
- Each unit includes a topic planner which breaks down the time needed for each component of the lesson. The planner lists the amount of time needed for each component of the 5E lesson plan, including the optional personalized student-centered options. For example, Topic 3 has three 5E lesson plans that are each listed as taking a total minimum of five days. The planner then breaks down the components of a 5E lesson into the number of minutes needed for each part of the 5E lesson, including the amount of time needed for the additional personalized student activities.
- The materials include support for specific scheduling considerations, with guidance for covering required science content for the grade level within a variety of schedules. Materials include a Course Planner and Pacing Guide where you can see average durations in days. You can see durations in minutes in the Topic Planners, the Experience At-A-Glance pages, and the instructional pages of the guide. Each topic gives you the flexibility to focus on core assets that cover the TEKS by taking the fast track or pulling in additional resources to create a more robust experience when there is additional time.

Savvas Learning Texas Experience Science Grade 2

- Each topic includes a Topic Planner that lists all activities and recommended time for each activity. In Topic 4, *Patterns in the Sky*, Experience 3, the total suggested time is five days or 150 minutes. This is broken down into Everyday Phenomenon Photo (10 min), hands-on station (30 min), literacy station (30 min), key ideas presentation (20 min), key ideas video (15 min), WalkSTEM (30 min), and exit ticket (15 min).

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

- Materials provide guidance for strategic implementation that ensures the sequence of content taught in an order consistent with the developmental progression of science. The Topic Overview supports teachers in identifying the developmental progression of TEKS to ensure that students are supported with instructions that are organized to optimize their learning.
- In grade 2, a unit planner leads the teacher through the order of a 5E lesson progression. Materials provide guidance on flexible options to modify the lessons for implementing a five-, four-, or three-day lesson cycle without disrupting the sequence of content, allowing it to follow a modified 5E progression.
- Materials include a suggested scope and sequence that supports a strategic implementation without disrupting the sequence of content. Students learn about plants and animals in unit 6 prior to learning about ecosystems in unit 7. Within unit 7, students learn about environments prior to learning about living things in environments. The materials clearly delineate the order of units to ensure students learn about precursor concepts first. Students first learn to investigate physical properties of matter to explain how it is described, classified, and used in Topic 1 before using those skills in subsequent units, as noted in the Course Planner and Pacing Guide.
- The general sequence of instruction follows the same specific order: engage, explore, explain/elaborate, and evaluate. These various experiences repeat this same cycle to follow the developmental progression of learning. In Topic 1, Experience 1, the Engage section is an Everyday Phenomenon Photo, the Explore section is stations, the Explain/Elaborate section includes key ideas presentation, key ideas video, and WalkSTEM, and the Evaluate section is an exit ticket.

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

- Materials include a flexible Pacing Guide list with options from 67 to 161 days, depending on which option is chosen. Teachers opting for the fast-track option would be able to teach the components under the fast-track pacing option in 67 days. By including components of the personalized student learning option, the Pacing Guide indicates the program would be 161 days. Materials include opportunities for differentiating learning to provide extra support for struggling learners, connecting to literacy with trade book suggestions, or additional time spent on other activities, such as related phenomena.
- The materials provide guidance on flexible pacing teaching options to cover the content throughout the course of a school year and provide guidance for adjusting to time and scheduling constraints. Materials provide a choice for teachers to follow a five-, four-, or three-day track. The five-day track is considered full instruction with a 5E lesson format with a separate day for each of the following components: Engage, Explore, Explain, Elaborate, and Evaluate. Materials include two models for four days of weekly instruction and one three-day streamlined option. A four-day option combines the Engage and Explore components on day 1.

Suggestions provide teachers with a fast-track plan that removes the elaborate portion allowing lesson completion in three days.

- Teachers are guided by the pacing options in the Topic Planner, including icons to adjust for flexible pacing. The green check mark represents fast-track activities to use when time is limited. The blue plus sign represents the “Got More Time?” activity and is available to personalize students' learning. The Topic Planner also includes a section for Topic Assets that include an anchoring phenomena video, vocabulary cards, and topic readers.

Savvas Learning Texas Experience Science Grade 2

Indicator 9.1

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

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

Not Scored

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

Materials include an appropriate amount of white space and a design that supports and does not distract from student learning. Materials embed age-appropriate pictures and graphics that support student learning and engagement without being visually distracting. Materials 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 a design that supports and does not distract from student learning. The visual design of the materials is clear and easy to understand.
- Digital and print student materials include an appropriate amount of white space and overall design that does not distract from learning.
- The Teacher's Guide and digital platform are designed with clear, designated places for important information. The Teacher's Guide is designed in a way that teachers can locate important information easily for planning and implementation. The guide includes titles and headings that are prominent and clear, along with photos of included materials for the lesson. The digital platform may be accessed by topic, standard, or by category.
- The Topic 1, *Matter*, student Read About It Text: *Matter and Properties* features ample white space and uses a large font for the vocabulary-based titles and subheadings. The text includes short sentences and ample white space between sentences. Vocabulary words, such as matter and property, are highlighted in yellow and appear within the sentence along with their definitions.
- Topic 5, *Earth's Natural Resources*, includes Read About it Text: *Movements of Earth Materials* features an appropriate amount of white space and uses titles and subheadings. The text includes short sentences and ample white space between sentences. The vocabulary words surface and dunes are highlighted in yellow when used in a sentence.
- The Topic Cards feature ample white space and use large colored font for the headings and the steps. The Topic 6, *Plants and Animals*, Experience 3, *Animal Life Cycles*, Hands-On Station includes the title “How do butterflies grow and change?” in a large, bolded font at the top. The required materials are in a box labeled “What You Need” and include illustrations of each item.

Instructions are given using single short sentences, such as, “Look at caterpillars each day,” with ample white space between the lines of type.

- Student materials include the following: titles and headings are prominent and clear, sections are marked with subheadings, pages in the student book have "cut lines" so students can add work pages to a journal, and the content is organized in a logical progression.
- The Literacy Station Cards in every Experience include optimal, grade-appropriate font size, text, and colors for ease of reading for all students.
- Station cards can be utilized by students online or in a printed version. All station cards have a prominent, clear title, a photo of the activity in hands-on stations or related to the text for literacy stations, and a box labeled, "What You Need," with black-line illustrations and labels. The left edge of each station card is color-coded green for literacy stations and purple for hands-on stations. The station directions on the lower half of each card include large numerals indicating each of the 2-3 steps for the station and text at a beginning reader level in a large, easy-to-read font.
- The literacy station cards are organized with a clear title on the top and a picture that supports the title. To the right of the picture is a "What You Need" box that provides pictures and words describing what the students need to complete the station. The bottom half of the card is labeled with a large 1 Read, 2 Describe, and 3 Identify. The amount of white space is optimal and does not distract from student learning.
- The literacy station Read About It texts and Topic readers available in print and online have an overall design that does not distract from learning. The texts feature vocabulary-based titles in a large font with a photo correlated to the topic. Pages within the readers feature large photos and one or two simple sentences. The font size, spacing, and white space around the text make the content easy to read. Sidebars and labels, used sparingly so they do not distract from the text, are simple and in an easy-to-read large font.
- Topic 5, *Earth's Natural Resources*, Literacy Card for Experience 3, *Protect Resources*, “How can you conserve resources?” uses large colored types for the headings and the steps to help students follow the steps to do the activity. Instructions are in single short sentences, use pictures, and include ample white space between the lines to help struggling readers. Step 1, “Think What do you know about saving resources?”; Step 2, Connect, “How can you conserve resources? Use the text to help you;” Step 3, “Share Explain how your ideas will conserve resources.”

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

- The materials include age-appropriate pictures and graphics that support learning and engagement. Hands-on station cards include a photo of children performing the activity and a box beside it labeled, "What You Need," with black-line, labeled drawings of all materials needed. Literacy station cards have the same design, but the photo is an age-appropriate photo related to the topic. A hands-on station card in Topic 2, *Force and Motion*, Experience 2, *Motion*, features a photo of a child with a straw in their mouth blowing towards a table tennis ball. The box next to the photo contains labeled drawings of a table tennis ball, straw, ruler, and Hands-on Station Activity Paper. The literacy station card included in the same experience includes a drawing of two children pushing toy cars on a track. The box beside the photo contains a drawing of a book labeled, "Read About It" and a paper labeled, "Literacy Station Activity."
- The Station Cards feature photos that illustrate the content they read about and saw pictured earlier in the lesson as well as diverse representations of students engaged in the hands-on

activity that they will be doing in class. The Topic 1, *Objects*, Experience 1, *Properties of Matter,* Station card: “Which objects can bend?” shows a photo of a girl completing the station activity. The card includes simple black-and-white line art illustrations and captions of the materials needed to do the activity, which are pipe cleaners, a pencil, uncooked pasta, a rubber band, and the Hands-On Station Activity.

- The Key Ideas PowerPoint presentations use age-appropriate photos and graphics that support student learning and engagement. Topic 3, *Sound and Volume*, Experience 2, *Volume*, includes a Powerpoint with photos that show loud or soft noises, such as a lion roaring, a mouse, a police car, and a butterfly.
- The Read About it: *Movement of Earth Materials* in Topic 5, *Earth*, includes seven different photos to represent how water and wind can move rocks. It includes a picture of a dune and explains how the wind moved sand to create it.
- The Hands-on Station Card on each Experience includes age-appropriate pictures and graphics that support students' learning. Topic 5, *Earth's Natural Resources*, Experience 1, *Movement of Earth Materials*, Hands-on Station Card features a photo of a boy and a girl doing the hands-on activity that they will be doing. The visual reinforces what is being taught. Materials needed for the activity are represented by simple art illustrations. Graphics and color are used to help students and provide clear navigation and tracking through the activity.
- The Topic 6, *Plants and Animals*, Student Read About It Text: *Plants* features age-appropriate photos and graphics that support student learning and engagement without being visually distracting. The reader includes photos of a variety of plants and a realistic illustration of a labeled flower. The text includes captions that support the images, such as, “The leaves on these plants are different shapes and sizes. Leaves catch sunlight.”
- The materials include Read About It readers with clear and authentic images and graphics to support the new vocabulary students are learning. Vocabulary words within the text are highlighted yellow and serve as captions of the pictures. For example, in the *Living Things in Environments* reader, The word pollen is highlighted in the text, "Flowers make a powder called pollen. Plants use pollen to make seeds." The bottom half of the page is a close-up picture of a bee on a flower. The pollen the bee has collected in the picture is labeled pollen. There is also a caption about the picture that states, "Bees and bats leave some pollen on each new flower they visit."
- The Key Ideas Presentation contains slides with the important concepts within a Topic. Each slide has a corresponding photo, graph, or picture that supports the content of the slide. For example, in the Living Things in Environments Key Idea Presentation, a slide asks, "How do water and wind help pollination?" The slide contains two pictures, one of the underwater plants giving off pollen and spreading it to a nearby plant and one picture of cattail plants in a field that are sharing pollen. The text on the slide is, "The flowers of plants make a powder called pollen. The spread of pollen from one plant to another is pollination." The words pollen and pollination are bolded.
- When creating classes on the online platform, the teacher can choose between the Default Theme and the Early Learning Theme. Both are appropriate for students and provide a clear and useful platform to find content and tools. The Early Learning Theme is a simpler platform that is age appropriate for K-2 learners. Instead of having three tabs at the top to Browse, toggle between Classes, and see Grades, the Early Learning Platform has two color-coded tabs, one for My Work and one to Explore. The Assignments for the Early Learning Theme are listed as the main listings on the page, with a large Get Started button for each assignment. To the left of the screen, there are tabs for Assignment, eTexts, and Tools. Each of these tabs is labeled with an accompanying symbol; for example, the eTexts has a book icon to identify it.

Savvas Learning Texas Experience Science Grade 2

Materials include digital components that are free of technical errors.

- The materials include digital components that are free of spelling, grammar, and punctuation errors. An example is a question from the online Topic 2 Force and Motion test that reads, "Look at the pictures. Show the two pictures that show a push." Students choose from black-line drawings of a student pushing another child on a swing, a child walking while holding an adult's hand, a child pushing another child in a wheelchair, and a child pulling another child in a wagon. The test is correctly graded when submitted online.
- The student activity pages are free of spelling, grammar, and punctuation errors. The pages may be assigned and utilized online or printed. The pages are free of inaccurate content materials or information. A sample page from Topic 2, *Forces and Motion*, "How are pushes used every day?" includes the directions, "Draw Show two ways you use pushes everyday. Use the vocabulary from your text to label your picture." A large box is provided for the picture. This activity page is part of the literacy station for the experience.
- Topic 5, *Earth's Natural Resources*, Read About It: *Movement of Earth Materials* is free of spelling errors and includes no grammar concerns. It uses simple sentences starting with a capital letter and ending with a period; for example, “Waves move sand on beaches.”
- The materials are free of inaccurate information and wrong answers. In Topic 1, *Matter*, Experience 2, *Changes in Matter*, Key Ideas Presentation: Changes in Matter, the content is accurate, and the answer key for the question, “What are solids and liquids?” is correct. The key labels the ice as solid and water as liquid. The online Topic 6, *Plants and Animals*, Test is free of inaccurate information and wrong answers. When asked, “How does water move through a plant?” selecting the correct answer choice, “Water enters the plant through roots and moves through the stem,” the answer is counted correctly.
- The Answer Keys to test include no wrong information. For example, in Topic 5, *Earth's Natural Resources*, the Topic test includes the correct answers to all questions. On question five, students are given four statements and choose which resource is human-made. The answer is A- A lake created by a dam built on a river and it is accurate and correct. In Topic 7, Experience 3, *Food Chains*, the Literacy Station Activity, "How do organisms get food?" provides directions and questions to students that are error-free and accurate. The main question of the activity sheet serves as the title, and the verb in the directions is highlighted. For example, the directions state, "Explain Find the food chain in the text. Write about it. Use these words." The Explain section is bolded. The words students need to use, producer and consumer, are also bolded.

Savvas Learning Texas Experience Science Grade 2

Indicator 9.2

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

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

Not Scored

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

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

Evidence includes but is not limited to:

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

- The materials include Key Ideas PowerPoint presentations designed to be projected on a screen for each experience. Topic 2, Forces and Motion, Experience 2, Motion, includes a 16-slide presentation designed to review the key ideas in a large group discussion. The presentation includes slides that prompt students to discuss their observations from their explorations and slides that prompt them to apply their learning. Slides review key vocabulary and an exit ticket to assess learning. A slide reviews student learning in a literacy station as students as shown a graphic that matches the graphic on the literacy station card and is prompted to discuss how they could make the cars move farther. Additional slides review the vocabulary words *motion, position,* and *direction* with photos and definitions for each. A final slide included as an exit ticket includes a picture of a bowling ball hitting pins and the prompt, "What is happening in this picture? Use the words direction, position, motion, and strength."
- The online platform includes Key Ideas videos that can be utilized in a whole group setting or assigned to individual students, small groups, or the class to be viewed online. While viewing the video, the students have the ability to change the volume, turn closed captioning on or off, control the speed of the video, and change the video to full screen.
- Digital technology and tools enhance student learning through the features in online videos. The video player allows students to control when to play or pause the video, control the volume, turn on closed captions, increase the size to full screen, and control the speed of the video.

- The Hip Hop Science Song: “Matter” in Topic 1, Matter, enhances student learning and engagement. The song reviews content and vocabulary through a song with lyrics embedded in the video.
- Materials feature, Legends of Learning, an educational game that brings curriculum-aligned science games to engage students in assessing their science knowledge and support with vocabulary comprehension. These games enhance hybrid, blended, and distance learning environments. In Topic 5, Earth's Resources, Experience 2, Resources, students play the World of Resources game. Students play a mage in which they help manage a farm, using natural resources to fulfill different needs. In the game, students drag and drop resources to categorize them as either natural or made by people and determine the resources living things need to live.
- The materials integrate tools that support student learning. For example, in Topic 4, Patterns in the Sky Wrap-Up, the materials provide a Hip Hop Science Song: “Weather.” This digital tool is a song video that "helps students reinforce their understanding of weather." It can be assigned to students individually or shown to a whole class. The song is a rap and engages students in thinking about the weather and the decisions that must be made because of the weather. The first stanza of the song is: "What’s the weather? What’s the forecast today? Is it sunny? Is it clear? Can I go out and play? Or is it rainy? Grab my boots and umbrella. And if it’s really cold, I’ll be sure to grab a sweater."
- The integration of digital technology is used to support student engagement with grade-level content. In Topic 4, Patterns in the Sky, Experience 1, Sun and Moon, the materials provide a Key Ideas Presentation that is "designed for front-of-classroom instruction to explain and review the content of Sun and Moon" and Key Ideas Video to "support and enhance student understanding of the key ideas" of the experience.
- Features included are learning games, interactives, and online assessments. Each topic includes an option for the teacher to administer the topic test online or on paper. Topic 5, Earth's Resources, Experience 2, Resources, includes a "Legends of Learning Game: World of Resources. This game lets students help manage a farm, using natural resources to fulfill different needs. Students also determine the resources living things need to live."

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

- The Topic 1, Matter, Experience 1, Properties of Matter, Key Ideas Presentation includes an interactive slide show about the topic content. The teacher presents the slides with embedded questioning that supports scientific thinking with the topic content. Questions include, “What is matter?” and “How can you classify matter?"
- Materials include videos and songs to reinforce science and engineering concepts taught in topics. Topic 1, Matter, includes a video and song on matter. The video includes animation and lyrics for students to follow.
- Materials include Key Ideas Presentations with embedded classroom activities that integrate digital technology that supports student engagement with science and engineering practices. Teachers use them after completing the stations in the Explore phase of the experiences. Topic 2, Force and Motion, Experience 1, Pushes, includes a Key Idea Presentation that includes an activity where students collaborate to identify the pushes in four pictures. Teachers use it to check for students' sense-making and understanding of the concept taught. Students can interact with the presentation by participating in a class discussion.
- The materials provide topic readers covering grade-level content that can be assigned to students in the online platform to be viewed digitally. Topic 2, Force and Motion, includes the

topic readers: Magnetism and Gravity, Energy, Force, and Motion, and Exploring Force and Motion. The readers contain engaging photos that correlate with the print. When accessed online the reader can read the text by scrolling down.

- The materials provide a 38-slide SEPs and Themes Preview PowerPoint presentation designed to be projected on a screen to explain and review the scientific and engineering practices and themes of the TEKS. The presentation covers the key ideas Investigate or Design, Analyze Data and Use Models, Share Ideas, Scientists Help, and Themes and Concepts. The final slide includes a turn and talk prompt, "How will you be a scientist or an engineer today?" as an exit ticket.
- At the beginning of each topic, there is an Anchoring Phenomenon Video that introduces students to the question that will recur throughout the topic and be revisited at the end of the topic. For example, Topic 4, Patterns in the Sky, begins with the Anchoring Phenomenon Video, “How is the weather changing?” The video introduces and engages students in the idea of observing changes in the weather.
- In Topic 7, Organisms and Environments, Experience 1, Environments, the materials provide a Key Ideas Presentation that is "designed for front-of-classroom instruction to explain and review the content of Environments" and Key Ideas Video to "support and enhance student understanding of the key ideas" of the experience.
- Topic 6, Plants and Animals, Experience 3, Animal Life Cycles, includes the Key Ideas Video: Animal Life Cycles, which shows a video and animations of a variety of animal life cycles to support student engagement with the topic content.

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

- The online materials provide the opportunity for teachers to create discussion prompts to assign to students to respond to on the online platform. Students and teachers can link files up to 10 MB in their comments. Supported file types include .doc, .docx, .ppt, .pptx, .jpg, .png, .mp3, .mp4, or .pdf. "Teachers can create, monitor, moderate, and reply to comments from students in these discussions." There is no speech-to-text, an option to make a recorded response or to respond by a drawing to make this accessible for young students that are typically in the beginning stages of writing at this age.
- The teacher can assign PDF activities included with the materials or a teacher-created PDF uploaded to My Library. The students receive their copy which they interact with utilizing the PDF toolbar features. The student is able to "add text, highlights, notes, and use various formatting options and other tools to complete the assignment." The teacher is able to view the assignment while it is in progress or after it is completed and use the toolbar to, "add text, highlights, notes, and use various formatting options to provide feedback."
- The materials provide a discussion forum for teachers to post class discussion topics. Students can collaborate via an online discussion.
- Topic 1, Matter, Experience 3, Combining Matter, contains a Key Ideas Video that provides an opportunity for students and teachers to collaborate. Students watch a video of examples and explanations of how materials can be combined to make new objects for different purposes. The Teacher's Guide directs the teacher to facilitate a classroom discussion about the materials used to construct a baseball.
- Topic 5, Earth's Resources, includes an Anchoring Phenomenon Video, "How did the Lighthouse Rock get its name?" that students watch at the beginning of the topic. Throughout the topic, students gain knowledge that will help them explain how the Lighthouse Rock at Texas's Palo

Duro Canyon got its shape. The teacher leads a class discussion to answer the question, “How did the Lighthouse rock get its shape?”

- Materials include Key Ideas Presentations that include technology that provides opportunities for teachers and students to collaborate. Teachers and students participate in the presentations after completing the stations in the Explore phase of the experiences and they have embedded classroom activities and notes for teachers to use. Topic 2, Force and Motion, Experience 1, Pushes, includes a Key Idea Presentation that includes an activity where students collaborate to identify the pushes in four pictures. Teachers use this to check for students' sense-making and understanding of the concept taught. Students interact with the presentation by participating in a class discussion.
- Within the Getting Started teacher tools, there is a guidance document named Support for Collaborative Tools in Realize. Within this document, there is a description of four collaboration tools within the materials, including Collaboration in Assignments, Discussion Prompts, PDF Toolkit, and Playlists. In the Collaborating in Assignments, the "Teachers can preview assignments in progress and provide comments to help students with their work. Teachers can do the same after grading an assignment and reassign the work so that students can improve their grade." Students can see and respond to their teacher's comments. Discussions between students are supported by online materials. "Discussions on the Savvas Realize Learning Management Systems (LMS) enables the teacher to facilitate class and group discussions on important academic and social topics." Teachers are provided guidance on how to set up these collaborative discussions. The final collaboration tool addressed in this guide is the PDF Toolkit. "When a teacher assigns a PDF activity from a Savvas Realize program, (or a PDF the teacher has uploaded to My Library) to a class, each student receives an individual copy of the PDF that enables the student to interact with the assignment. Using the PDF toolbar features, the student can add text, highlights, notes, and use various formatting options and other tools to complete the assignment." Teachers and students can interact and collaborate on the PDF by adding text, highlights, and notes. The last tool mentioned is playlists. Teachers are provided guidance to create a playlist with the program content as well as their content. "Once teachers have a playlist, they can assign content items from a playlist to students, share playlists that contain content with other teachers within their district, and collaborate with students and/or caregivers to create playlists as tasks or a tool to support co-teaching."

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

- The materials are accessible and compatible with Chromebooks, iPads, PCs, and Mac computers. The Realize and Realize Reader operating systems requirements include Windows 10, Chrome OS 90, Mac OS 10.15, iPadOS 14.5.1, iPad OS 13.7, and Android 10. "The Realize and Realize Reader system requirements include the latest versions of Google™ Chrome™, Microsoft Edge®, Mozilla® Firefox®, and Apple® Safari®."

- The materials can be accessed through a variety of Learning Management Systems. The materials can be accessed through systems such as Classlink, Oneroster, Aeries, Infinite Campus, Canvas, Google Classroom, Onedrive, PowerSchool, and Schoology. Teachers can assign an assignment in Seesaw, Microsoft Teams, or any other format they can post a link. The link will recognize the student and send them to the digital platform to sign in and complete the assignment.
- The digital learning platform is accessible via desktop and mobile devices through the publisher's website and individual login. The interface is the same on desktop and mobile.

Savvas Learning Texas Experience Science Grade 2

- The System Requirements page of the online platform indicates that the program is compatible with Windows, Chrome, and Mac operating systems.
- Materials integrate digital technology that is the "most versatile LMS on the market" as stated in Digital User Guide.
- In the Realize Integrations Overview, the materials indicate that the online platform will integrate with the learning management systems of Canvas, Google Classroom, and Schoology.
- The online platform supports "deep linking" assignments by teachers. "This means teachers can assign a Realize assignment in their platform of choice (Seesaw, Microsoft Teams, and anywhere else you can post a link) and when accessed by the students, that link will recognize them and send them to log in and complete the assignment in Realize."

Savvas Learning Texas Experience Science Grade 2

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.	No
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

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.

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

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.

- Lexile levels in the assessments for grade 2 are not developmentally appropriate.
- The planner in the Teacher's Guide provides the amount of time students access digital materials via screens in each topic. Most materials are available to be printed, reducing the amount of screen time. The components that are accessed digitally only are 30 minutes or less in length each. Topic 3, Sound and Volume, includes three Key Ideas PowerPoint Presentations that are projected on a screen and are 20 minutes each. There are four video clips in the 15-day topic. The videos range in length from 30 seconds to 2 minutes. The online topic test is 5 minutes long and is available in a printed version.
- The video clips provided in the materials are developmentally appropriate for the grade level. The videos are an appropriate length and include bold, easy-to-read text, with simple explanations. Topic 2 includes an Anchoring Phenomenon video to introduce the topic, Force and Motion. The clip shows construction vehicles moving dirt. A bulldozer is shown pushing dirt, a backhoe pulling dirt, and a jackhammer pushing into rock. The text, "How does construction change the land?" is in bold print on a yellow bar across the video as the topic is presented.
- The Hip Hop Science Songs provided in the materials are developmentally appropriate for the grade level. The videos are an appropriate length of time and include the lyrics as part of the animation. The Topic 7, Animals, song is titled “Animals” has lyrics that include, "See through their eyes. Breathe through their nose. Food, Air, Water, and don't forget the home. An-An-Animals An-An-Animals.”
- Digital technology and online components are aligned with the scope and approach to science knowledge and skills progression. The online component provides the standards listed on the top right-hand side of the online site. It indicated the standard number for the Topic or

Experience covered according to the scope and sequence with a link to its definition. Topic 5, Earth's Resources, Experience 2, Resources, covers second-grade standards.

- The online components are developmentally appropriate and align with the science knowledge and skills progression. The Mountain Habitats reader for Topic 7 presents text at an appropriate level for grade 2. Although some of the words may be difficult, they can be decoded. The text is written in simple sentences and supported by visuals. For example, page 5 is titled Mountain Habitats and reads, "Everything lives in a habitat. Some habitats are in water. Some habitats are on land." The page is split into two paragraphs, each one accompanied by a picture with a caption related to the text on the page. The first paragraph has a picture of a village at the base of a mountain. The caption reads, "Mountains are higher than other landforms."
- The online components are developmentally appropriate and align with the science knowledge and skills progression. For example, in Topic 4, Patterns in the Sky Launch, the materials provide a Hip Hop Science Song: “Weather.” This digital tool is a song video that can be assigned to students individually or shown to a whole class. The song is a rap and engages students in thinking about the weather and the decisions that need to be made because of the weather. The first stanza of the song is: "What’s the weather? What’s the forecast today? Is it sunny? Is it clear? Can I go out and play? Or is it rainy? Grab my boots and umbrella. And if it’s really cold, I’ll be sure to grab a sweater."

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

- The materials provide a user guide for the digital platform. The user guide includes topics such as navigating the digital platform, assigning and assessing content, helpful class tools, managing class assignments, scoring student work, and student experience. The user guide also includes the topics, available integrations, and help and support. The user guide is designed for the Learning Management System utilized for several programs and is not specific to this set of materials.
- The Realize user guide includes QR codes with links to videos to assist the teacher in utilizing the technology included in the digital platform. Videos included are Realize and Google Classroom Setup, Getting Started with Realize, Playlist Sharing, Interactive PDFs, Transfer Student Data, and Realize for Parents and Students. The user guide also includes QR codes with links to text translation and accessing etext online but states this is available by program. The user guide is designed for the Learning Management System utilized by several materials and is not specific to this set of materials.
- The Realize User Guide provides teacher guidance for the use of embedded technology to support and enhance student learning. It provides illustrated instructions on navigating the software, accessing and assigning content, managing assignments, scoring work, and what the student experience looks like.
- The My Savvas Training platform provides teacher guidance for the use of embedded technology to support and enhance student learning. The self-paced learning modules provide a video tutorial and printable handouts. There are topics to support getting started, assessments and reporting, and Google integration.
- My SAVVAS training platform is a self-paced learning module that provides a video tutorial and printable handouts for teachers to use during the year. One example of training is Explore Elevate Science K-5: "Learn how to fill out a lesson planning template one step at a time, see the purpose of phenomena-based learning, and even try a virtual teaching scenario complete with reflection and next steps."

Savvas Learning Texas Experience Science Grade 2

- The Teacher Support section on SAVVAS Realize includes guidance for teachers to use technology. The Navigational Support link includes the link to the Realize User Guide that includes Navigation Realize, Accessing and Assigning Content, Helpful Class Tools, Managing Class Assignments, Scoring Student Work, Student Experience, Available Integrations, and Help and Support Resources.
- Within the Getting Started guidance documents, there is a Digital User Guide to provide teachers guidance on the use of embedded technology. The guide includes content about Navigating Realize, accessing and assigning content, helpful class tools, managing classroom assignments, scoring student work, student experiences, available integrations, and help and support resources.
- The Getting Started Page includes guidance and support for using digital materials, including links to several online training modules. These training modules include the synchronous Virtual Program Activation Training, Additional Technical Support and Training, and mySavvas training on Google Docs/Google Classroom and Realize/Realize Reader.

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

- The materials provide a video titled Realize for Parents and Students. The video assists parents with navigating the dashboard for the digital platform The video shows parents where to access digital textbooks, where to access each of the student's Realize classes, where to find and access assignments, how to help the student find and participate in class discussions, and view grades. The video shows parents where to find additional resources and where to go in settings to change the language they wish to use. The video shows parents where to navigate for additional help with the digital platform and how to sign out of the platform.
- The materials provide a one-page Parent Access Instructions document. The document includes an image of the Realize dashboard with labels and descriptions of the various components found on the dashboard. Information highlighted includes Navigate Anywhere, Student Profile, Find Content, At-a-Glance Info, and Get Help.
- Materials provide a parent letter in English and Spanish with instructions for families on how to log into digital and online components. The letter includes space for the student's username and password. It includes instructions on how to get started and troubleshoot errors.
- Materials provide a parent website called Parents' Corner to assist caregivers navigate the Realize platform. The website includes pages for the Realize Parent Guide, Realize Help for students and parents, how-to videos for students and parents, and tips for learning at home.
- The Teacher Support section on SAVVAS Realize includes a Realize Parent Support link. This link includes four links as support for parents using Realize. The Realize Parent Guide is for caregivers to support student engagement with digital technology and online components. The guide includes topics such as: Viewing & Accessing Assignments, Completing And Submitting Assignments, Grades & Teacher Feedback, and Browsing Realize & Offline Access.
- The Materials include a Parent Letter for parents and caregivers on how to support student engagement with digital technology and online components. The Parent Letter includes a brief explanation of the program, instructions on how to get started, a troubleshooting checklist, and how to get help when needed.
- In the Getting Started with Texas Experience Science section of the online materials, there is a Realize Parent Support section under Navigational Support. The resource consists of a Realize Parent Letter, Realize Parent Guide, Realize Learner Tips for Parents, and Realize Parents Corner.

Savvas Learning Texas Experience Science Grade 2

The Parent Letter explains how parents and students can access the program from home. Students are given a username and password to access their assignments at home.

- The Realize Parent User Guide gives parents visual instructions on how to view and access assignments, complete and submit assignments, see grades and teacher feedback, and browse program content and offline access from home.