

Savvas Learning Texas Experience Science Grade 8

Savvas Learning Texas Experience Science Grade 8 Executive Summary

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

Grade	TEKS Student %	TEKS Teacher %	ELPS Student %	ELPS Teacher %
Grade 6	100%	100%	100%	100%
Grade 7	100%	100%	100%	100%
Grade 8	100%	100%	100%	100%

Section 2. Instructional Anchor

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

Section 3. Knowledge Coherence

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

Section 4. Productive Struggle

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

Section 5. Evidence-Based Reasoning and Communicating

- The materials promote students' use of evidence to develop, communicate, and evaluate explanations and solutions.
- The materials provide 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.

Savvas Learning Texas Experience Science Grade 8

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

Section 7. Supports for All Learners

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

Section 8. Implementation Supports

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

Section 9. Design Features

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

Section 10. Additional Information

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

Savvas Learning Texas Experience Science Grade 8

Indicator 2.1

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- The materials provide multiple opportunities to develop grade-level appropriate scientific and engineering practices, as outlined in the TEKS. For example, at the start of Topic 1, *Matter and Chemical Reactions*, the anchoring phenomenon, “Where did the matter come from to make this plant grow?” sets the stage for students to connect content standards to Science and Engineering Practices (SEPs) throughout the topic. The materials provide multiple opportunities to practice grade-level appropriate science and engineering practices as outlined in the TEKS.
- The materials provide multiple opportunities to practice and demonstrate mastery of grade-level appropriate scientific and engineering practices as outlined in the TEKS. For example, materials include opportunities for students to develop evidence-based explanations based on observations or investigations. In Topic 1, Experience 4, the Explore Hands-On Lab titled “How

Savvas Learning Texas Experience Science Grade 8

can you show conservation of mass?” asks students to conduct a descriptive investigation, make predictions, plan and conduct a second investigation, collect data, and record data. Students then develop an evidence-based explanation describing what happened to the reactants and products involved in the chemical reaction.

- The materials provide multiple opportunities to show mastery of grade-level appropriate scientific and engineering practices. For example, materials include opportunities for students to design and conduct grade-appropriate investigations, collect and analyze data, and develop and test hypotheses. In Topic 2, Experience 2, the Explore Hands-On Lab titled “How can you use Newton’s laws of motion to win a race?” provides students with a set of criteria to design and build a scooter and test the speed, acceleration, and force of the scooter during a race.

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

- The materials identify overarching concepts using recurring themes and show how they connect within the materials. For example, the materials in Topic 7, Experience 1, guide students to relate the structure and function of cell organelles to their interdependence within a system, while in Topic 8, Experience 1, students analyze and explain how change can disrupt food web systems and play a further role in cause-and-effect relationships.
- The materials provide multiple opportunities to use recurring themes in making connections between and within overarching concepts. On p. xxxiii of the Teacher’s Guide, the TEKS Grade 8 Correlation lists the Recurring Themes and Concepts (RTC) and states where each RTC correlates to Science Content (SC) standards in the materials. For example, in Topic 4, Experience 1, *Stars*, students identify and apply patterns to understand components of the universe, such as stars. Students revisit this recurring theme in Topic 5, Experience 2, *Patterns of Atmospheric Movement*, to identify patterns in ocean currents and weather fronts.

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

- The materials strategically develop students’ content knowledge and skills appropriate for the concept and grade level as outlined in the TEKS. Grade 8 materials integrate SEPs and RTCs (themes) to build and connect knowledge to new contexts. For example, as students plan and conduct investigations across the year, materials provide support for increasing complexity in student-led inquiry and investigation, including guidance for teachers to revisit topics with students in order to review previous learning and revise thinking on topics. Materials include lessons that build on prior learning to develop students’ content knowledge and skills by reexamining previous learning. In Topic 2, *Force, Motion, and Acceleration*, within the Topic Launch, the Vocabulary Builder activity builds on students’ previous learning of real-world applications of forces and provides teachers with scripted questions and suggestions to support the activation of prior knowledge and address possible misconceptions. While guiding student discussion at the end of Topic 2, Experience 2, materials direct the teacher to remind students of their previous classroom learning and experiences. Students refer back to the anchoring phenomenon that was introduced at the start of the lesson and adjust their thinking based on new information obtained during the lesson.
- The materials are systematically designed to develop and build student skills and content knowledge using phenomena appropriate to the grade level as outlined in the TEKS. For example, the Grade 8 materials include the Course Planner and Pacing Guide that explains how

Savvas Learning Texas Experience Science Grade 8

the topics and experiences are structured and provides an anchoring phenomenon for each topic, showing how the program systematically presents content and concepts for students to make connections across topics throughout the course. Within topics, each experience follows the research-based 5E model throughout the year to strengthen and develop inquiry skills, such as asking questions, planning investigations, and modeling. In grade 8, the first lessons within a topic on waves and the electromagnetic spectrum begin with an introduction to waves to ensure that students understand the parts of a wave and how they are measured. Later within the Topic, instruction builds to investigate electromagnetic waves, as well as their applications in real-world scenarios.

- The materials support teachers in developing student content concepts and skills by giving them resources and cues at varying points in lessons and units throughout the grade level. For example, materials contain a Topic Overview for each topic (chapter) and lesson notes located in the Teacher’s Guide within each experience that explain, describe, and make connections between the SEPs and the development of conceptual understanding.

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

- The materials include opportunities for students to ask questions and plan and conduct investigations. For example, in Topic 8, Experience 2, students plan and conduct a field investigation to investigate ecological succession. After analyzing data, students generate questions and make predictions based on their observations. Materials give students sufficient opportunities to plan and conduct classroom and field investigations. For example, in Topic 1, students use scientific practices to plan and conduct simple investigations to explore acids, bases, and conservation of mass. Later in Topic 1, students engage in problem-solving to propose a less acidic beverage choice for a person suffering from heartburn.
- The materials include sufficient opportunities for students to engage in problem-solving to make connections across disciplines and develop an understanding of science concepts. Throughout the Savvas Science 8 materials, students ask questions, plan and conduct investigations in order to answer questions, and explain phenomena using appropriate tools and models. For example, Topic 2, *Force, Motion, and Acceleration*, launches the topic with an anchoring phenomena question using a Claim-Evidence-Reasoning (CER) protocol to scaffold prior knowledge. At the end of the Topic 2 Wrap-Up, students revisit the CER protocol and make adjustments to develop a final explanation of the topic’s anchoring phenomenon, connecting new and previous learning concepts.
- The materials provide repeated opportunities for students to use grade-level appropriate scientific and engineering practices across various contexts throughout the course. For example, the TEKS Grade 8 Correlation resource states the multiple opportunities throughout the course that scientific and engineering practices are integrated into topics and experiences. This includes multiple opportunities to ask questions, plan and conduct investigations to answer questions, and explain phenomena using appropriate tools and models. Students also have opportunities to identify problems and design solutions using appropriate tools and models.

Savvas Learning Texas Experience Science Grade 8

Indicator 2.2

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

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

Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- The materials use phenomena as a central anchor in each topic (chapter) to drive student learning across grade 8 content disciplines, including physical, earth and space, and life sciences. Students examine phenomena using science and engineering practices through the lens of recurring themes. Students develop content knowledge as they form explanations of the phenomena and solve engineering problems. For example, Topic 1: Matter and Chemical Reactions launches the unit with the anchoring phenomena question, "Where did the matter come from to help this plant grow?" and continues to spiral the question throughout the topic. Each experience (lesson) within the topic begins with an everyday phenomena question that is relevant to students, allowing them to tap into and expand on prior knowledge while completing activities within each experience.
- The materials embed thought-provoking phenomena and engineering problems that require nuanced and appropriate grade-level explanations. Materials provide opportunities for students to develop, evaluate, and revise their thinking as they figure out phenomena and define/solve problems. In grade 8, materials present opportunities for students to investigate phenomena and problems before, during, and after experiences (lessons) as they construct, build, and

Savvas Learning Texas Experience Science Grade 8

develop their knowledge of grade-level content standards. For example, in grade 8, students investigate the anchoring phenomena question: “Why is this ice melting so fast?” in a topic about global climate. Students begin by watching a video describing a growing Glacial Lagoon, recording their thoughts using the Claim-Evidence-Reasoning (CER) framework, and engaging in discussion about why the Glacial Lagoon is changing. In each experience, students conduct investigations in which they compare models to investigate how heat is trapped in the atmosphere, analyze data about global forest loss and human population growth, conduct research about their carbon footprint, and communicate content knowledge. At the close of the topic, students revisit their anchoring phenomena claim and develop a final explanation using the evidence and information they collected throughout the topic.

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

- The materials provide opportunities for students to leverage prior knowledge and experiences related to the phenomena and engineering problems within a topic, thus allowing connections to previous science TEKS. For example, in grade 8, students design and build a mockup of a weather application that conveys a five-day forecast. They define potential problems within their design, conduct research on meteorologists and weather data, and construct a prototype of their application. While designing their weather application mockups, students build on content knowledge from prior grade levels as well as newly acquired knowledge from earlier in the lesson.
- The materials allow for different entry points to the learning phenomena and/or solving problems. Materials use the research-based 5E model, which allows students to experience each phenomenon through various means, including teacher demonstrations, hands-on investigations, videos, text, data, and images. For example, 8th-grade topics utilize different approaches to each phenomenon or problem presented in the materials. In the launch of Topic 2, students watch a video showing simulated car crashes involving crash dummies in restraints and record their thoughts on the question, “How can safety restraints keep you safe during a crash?” using the Claim-Evidence-Reasoning framework. In Topic 2, Experience 1, students observe objects being launched in a sling and determine which examples demonstrate acceleration during a teacher demonstration. At a later point in Topic 2, Experience 1, students conduct a quick hands-on investigation using masses and springs to explore how forces affect the motion of an object. Generally, when it is not possible for students to have first-hand experiences of phenomena within the classroom, videos, text, data, and images are used. For example, in Topic 6, Experience 1, students view a photo of the eruption of Mount Pinatubo in 1991, which caused global temperatures to cool, to discuss how volcanic eruptions can cause a change in global temperatures.
- The materials provide guidance for teachers and students to adequately address potential areas of misunderstanding. For example, at the beginning of each topic in the materials, the Topic Overview offers teachers a Teacher Background, Teacher Prep Videos, Common Misconceptions, and TEKS Progression sections. The “Common Misconceptions” section helps teachers gauge where some students may have inaccurate or inadequate prior knowledge. This section also informs teachers of the necessary prerequisite content and skills students will need to be successful in the topic. Such teacher guidance materials prepare teachers to provide accurate explanations of scientific content and concepts, as well as respond to students who may have gaps or misconceptions in their prior knowledge.

Savvas Learning Texas Experience Science Grade 8

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

- The materials clearly outline the scientific concepts behind each phenomenon and engineering problem that correspond to content concepts across the grade level. Materials provide opportunities for students to build an understanding of grade 8 content through anchoring phenomena or problems within the Experience 5E lessons. In grade 8, topics (chapters) provide multiple investigations within experiences, each of which works together to connect to the topic's anchoring phenomenon or problem to develop an understanding of corresponding science concepts.
- The materials clearly outline the learning goals behind each phenomenon or engineering problem. The materials offer learning goals for launching the anchoring phenomenon in the Teacher Guide on the Topic launch page. The TEKS being addressed are included on the overview and planner pages and include the SEP verbiage used in the launch paragraph. The Teacher materials clearly outline the scientific concepts and goals behind each phenomenon and science and engineering problem.
- A clear overarching goal or objective for the entire topic is evident in the Preview the Topic section of the Topic Overview page in the Teacher Guide. For example, on Topic 3, Properties and Changes in Matter Topic Overview page, the "Preview of the Topic" includes the overarching goal for the topic before providing an overview of the Experiences objectives that will allow them to meet the overarching goal for the topic.

Savvas Learning Texas Experience Science Grade 8

Indicator 3.1

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

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

Meets | Score 6/6

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

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

Evidence includes but is not limited to:

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

- The materials connect new learning to previous and future learning within and across grade levels. Materials in the Teacher's Guide explain how concepts like force and motion connect within a grade level. For example, In grade 8, Topic 3, Waves and the Electromagnetic (EM) spectrum, students investigate how light interacts with matter and learn about the EM spectrum. Later, in Topic 4, The Universe, students connect that knowledge to analyze spectra to draw conclusions about a galaxy's motion as evidence to develop the Big Bang theory on the origin of the universe.
- In the Teacher's Guide, topic (unit) overviews include a TEKS Progression, which indicates science content standards of focus for the grade-level topic and provides a vertical alignment for previous and future grade-level standards. For example, in grade 8, Topic 2, Force, Motion, and Acceleration, introduces students to Newton's second law of motion. The TEKS Progression within the Topic 2 Overview shows how the standard connects to prior content standards from grades 6 and 7, such as Newton's first and third laws of motion and future content standards in high school physics.
- The materials present content in a way that builds complexity within and across units and grade levels. For example, the Course Planner and Pacing Guide show how each topic connects to other topics within the grade 8 materials, and the scope and sequence shows how each topic

Savvas Learning Texas Experience Science Grade 8

connects to other topics across grades 6, 7, and 8. For example, in grade 7, in Topic 2, Thermal Energy, students explore how thermal energy moves into, out of, and within a system through the process of convection. Subsequently, in Topic 5, Plate Tectonics, students build on their prior knowledge by explaining how convection currents in the Earth's mantle cause tectonic plates to move. grade 8 students will expand their understanding of convection in Topic 5, Weather and Climate, to explore how solar energy interacts with Earth's atmosphere and hydrosphere to influence weather and climate.

- For example, In grade 7, Topic 1, Force and Motion, students analyze the effect of balanced and unbalanced forces on an object's motion using Newton's First Law of Motion. In grade 8, Experience 1 of Topic 2, Force, Motion, and Acceleration, students build on their prior knowledge and use Newton's second law of motion to calculate and analyze acceleration and the factors it depends on. The following experience further expands students' understanding when students describe how Newton's laws act simultaneously within systems.
- In the Teacher's Guide, the Topic Planners show how experiences build and connect across the topic, with specific information for each experience, including an Everyday Phenomenon question and the lesson components following the 5E model to build complexity of student knowledge by exploring and experiencing then applying and assessing for mastery.

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

- The materials include a progression of concrete knowledge, then representational, before abstract reasoning when presenting concepts that allow for increasingly deeper conceptual understanding using the 5E model for each grade level. In grade 8, materials ensure students experience a phenomenon or problem before using models as a tool for reasoning. Materials give students opportunities to use models to depict relationships and form explanations. For example, in Topic 2, Force, Motion, and Acceleration, students use the anchoring phenomenon of simulated car crashes involving crash dummies with restraints to explore force, acceleration, and Newton's second law of motion. Throughout the topic, students gain knowledge to develop and refine an explanation using the Claim-Evidence-Reasoning framework to explain how safety restraints keep riders safe. The content focus progresses from learning about the relationship between acceleration, force, and mass to observing and using Newton's laws of motion to explain the necessity of safety restraints in a vehicle, thus referring back to the anchoring phenomenon.
- Materials utilize visual aids and hands-on learning experiences as scaffolds to build an understanding of abstract concepts. For example, in Topic 2, Force, Motion, and Acceleration, materials logically sequence learning about the relationship between force, mass, and acceleration and Newton's second law of motion in a methodical manner to promote abstract learning. The materials initially introduce students to calculating and analyzing how the acceleration of an object depends on the applied force and mass of an object. Through this experience, students explore Newton's second law of motion in relation to the importance of safety restraints. Later, in the next experience, students explain how all of Newton's laws of motion simultaneously apply to real-world applications and systems.
- The materials use of the 5E model guides teachers to sequence instruction in a way that activates or builds prior knowledge before explicit teaching occurs, which allows for an increasingly deeper conceptual understanding. For example, in grade 8, Topic 1, Force, Motion, and Acceleration, students explore the effect of forces on the motion of an object or the object's acceleration. As students progress through the experience, they apply what they have

Savvas Learning Texas Experience Science Grade 8

learned to design and test a motorized cart in a virtual lab. Students explore how a change in mass and/or applied force impacts the acceleration of the cart, ultimately explaining the relationship between acceleration, mass, and force graphically.

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

- The materials clearly present required grade-specific core concepts, recurring themes and concepts, and science and engineering practices (SEP). For example, in grades 6-8, the Teacher's Guide provides teachers with a clear and concise Course Planner and Pacing Guide that leads students to learn via science instruction. Topic Overviews within the Teacher's Guide provide important course-specific concepts and recurring SEPs. The materials include student-driven conceptual learning strategies, concrete mathematical applications, and hands-on practice.
- Materials use the 5E (Engage, Explore, Explain, Elaborate, Evaluate) instructional model for sequencing science instruction. For example, in a grade 8 lesson within Topic 2, Force, Motion, and Acceleration, teachers engage students with an anchoring phenomenon based on the safety of vehicle restraints and the question, "How can safety restraints keep you safe during a crash?" Students then design motorized karts and explore how acceleration is related to force and mass. The teacher then explains the relationship between force and acceleration using a scientific text with key vocabulary and visual aids. Students elaborate on their learning by identifying examples of acceleration outside of the classroom. Materials provide a summative assessment of force and acceleration to evaluate student learning after the experience (lesson).
- The materials accurately present core concepts, recurring themes and concepts (RTC), and science and engineering practices. Across lessons, units, and grade levels, materials are free from scientific inaccuracies. The Teacher's Guide includes a Texas Essential Knowledge and Skills grade 8 Correlations chart, which lists the science content standards, RTCs, and SEPs and states where each is located in the Teacher's Guide and Student Activity Companion materials. This chart serves as a reference tool for teachers, providing them with a clear overview of the essential knowledge and skills that will be covered in grade 8.

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 grade level. For example, materials provide a scope and sequence document that outlines when learning targets are introduced, developed, and mastered within the program. For grades 6-8, the Course Planner and Pacing Guide, found in the Teacher's Guide, provides the overarching learning targets for each topic (unit). For example, in grade 8, the overview for Topic 2, Force, Motion, and Acceleration, states that students will use Newton's second law of motion to calculate and analyze acceleration and the factors it depends on and describe how Newton's three laws of motion act simultaneously within systems.
- The materials clearly define the boundaries of content that students must master for the grade level. For example, in Topic 1, Matter and Chemical Reactions, the TEKS Progression in the Topic Overview clearly defines the grade 8 science content standards covered in the topic and outlines upcoming standards for the future. The materials for this topic introduce the concept of investigating how mass is conserved in chemical reactions, as stated in student expectation 8.6E, and omit writing and balancing chemical equations using the Law of Conservation of Mass, as that concept comes in high school chemistry. In grades 6-8, each Topic Overview also provides

Savvas Learning Texas Experience Science Grade 8

teachers with Background Information, Teacher Prep Videos, and Common Misconceptions of students so the teacher is prepared for the lesson.

Savvas Learning Texas Experience Science Grade 8

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 provide explanations and examples of science concepts, including grade-level misconceptions, to support the teacher's subject knowledge and recognition of barriers to student conceptual development as outlined in the TEKS. Materials explain the intent and purpose of the instructional design of the program.

Evidence includes but is not limited to:

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

- The materials include guiding documents that support teachers in understanding how new learning connects to previous and future learning across grade levels. For example, the Teacher's Guide provides a scope and sequence (p. xxii-xxv) that outlines the big picture, broad references to the science and engineering practices (SEP), recurring themes and concepts (RTC), and science content standards vertically across grades 6-8. The Teacher's Guide includes a TEKS Progression summary for each topic, which supports teachers in understanding the necessary foundational knowledge and skills to develop grade-level content and how learning will progress in subsequent grades. For example, the Topic Overview for Topic 4, The Universe, details prior knowledge on physical properties and movements of objects in the solar system from grade 7, as well as future concepts on components of the universe from high school astronomy that connect to the grade-level concepts covered in the topic.
- The materials include guiding documents that explain how content and concepts increase in depth and complexity across lessons and units within the grade level. Within the Teacher's Guide, materials provide guidance for teachers to lead students through completing topic experiences to develop content, concepts, and SEPs. For example, in Topic 5, Weather and Climate, experiences about factors that influence weather and climate build over time, so

Savvas Learning Texas Experience Science Grade 8

students first observe how the sun and global patterns in the atmosphere and hydrosphere create and impact weather, then explore how local weather changes and major weather events affect Texas. In the next topic, students apply conceptual understandings to real-world contexts while investigating the crisis of global climate change.

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

- The materials include background information for teachers that provides explanations and examples of science concepts. For example, in grades 6-8, the Topic Overview documents in the Teacher's Guide each provide a short summary of concepts the teacher should have knowledge of before instruction of the topic (unit). The overview also includes a reference for teachers to watch the Teacher Prep Video for directions in instructing the experience.
- The materials identify common grade-level misconceptions students may have about science concepts. The Topic Overview provides a bulleted list of common misconceptions to provide teachers with an advanced overview of student misconceptions that may arise during instruction. The overview details the misconception in bold text and provides a brief explanation. As teachers progress through topic experiences, Address Misconceptions notes are included along the sidebars of the Teacher's Guide to highlight and provide guidance on those student misconceptions as they occur within the topic.
- The materials provide support for teachers to develop their own understanding of more advanced, grade-level concepts. The Topic Overviews within the Teacher's Guide provide teachers with a TEKS Progression summary and Background Knowledge section for each topic.

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

- The materials provide a rationale for the instructional design of the program. The Designed For Texas: Awe-Inspiring Phenomena Explorations section within the Teacher's Guide explains that Texas-centric phenomena are used to draw on student experiences and engage students through questioning and inquiry. Materials provide an explanation for why materials are designed the way they are and highlight key features of the instructional design. For example, the Course Planner and Pacing Guide, TEKS Grade 8 Correlation, and ELPS Correlation documents in the Teacher's Guide, and Texas Experience Science: Research-based Pedagogy document in the Getting Started resource in Savvas Realize, provide a comprehensive overview of how the content is structured, the use of anchoring phenomena, and the integration of concepts, science and engineering practices, recurring themes and concepts, and literacy and inquiry skills throughout the course.
- The materials provide a framework explaining the main intent or goals of the program. Materials provide a Teacher's Guide that thoroughly describes the program's instructional approaches and references the researched-based strategies present in each topic. For example, the Activate Learning using the 5Es page in the Teacher's Guide Introduction explains the research-based instructional design of the materials and provides information on the student-centered 5E format of the experiences within the grade 8 materials.

Savvas Learning Texas Experience Science Grade 8

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 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 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. For example, the SEPs and Themes Preview Presentation of the course provides an online presentation of activities aimed to promote student engagement and support students in making sense of concepts and phenomena by encouraging them to adopt the roles of scientists and engineers.
- The materials consistently provide learning activities that support students' meaningful sensemaking. For example, in Topic 2, Force, Motion, and Acceleration, students are introduced to acceleration as a change in velocity over time, become familiar with the relationship between force, mass, and acceleration, and describe how Newton's three laws act simultaneously within systems while investigating car safety restraints. The materials introduce the topic with the anchoring phenomenon question: "How can safety restraints keep you safe during a crash?" Students watch a video showing simulated car crashes involving crash dummies with restraints

Savvas Learning Texas Experience Science Grade 8

and use the Claim-Evidence-Reasoning framework to explain how safety restraints keep you safe during a crash. As students progress through the experiences within the topic, they design motorized carts and explore how acceleration is related to force and mass, build and race scooters to collect data that is used to calculate speed, acceleration, and force, and reflect on what they have learned about Newton's three laws in a Make Meaning Activity. In the Topic Wrap-up, students revisit the anchoring phenomenon by finalizing their Claim-Evidence-Reasoning chart and explaining in writing their answer to the original anchoring phenomenon question.

- In addition, the materials provide an everyday phenomenon demo and activity, lab investigation, and reading activity for each experience within topics, which support students thinking, reading, speaking, and writing as engineers. In Topic 6, Impacts on Global Climate, grade 8 students investigate the anchoring phenomenon of natural and human influences on climate. Each experience in the topic begins with an everyday phenomenon that ties back to the anchoring phenomenon. For example, in Experience 2, students preview an image of the 1991 volcanic eruption of Mount Pinatubo in the Philippines and use evidence from the image and prior knowledge to consider how a volcano can cause a global temperature change. Later in the lesson, students conduct a comparative investigation that models how heat becomes trapped in Earth's atmosphere. In the Read About It activity, students use strategies and science skills to make sense of the text and images and engage in peer discussion. This approach allows students to actively engage in scientific inquiry, develop their understanding of complex concepts, and effectively collaborate and communicate their findings like 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.

- The materials provide opportunities for students to engage in purposeful and targeted activities with grade-level appropriate scientific texts. For example, in Topic 2, Experience 1, students read a scientific text suitable for their grade level about Newton's second law of motion and how an object's acceleration depends on the net force acting on the object and the mass of the object. The Teacher's Guide recommends that students should read the day before classroom discussion of the text and directs teachers to use strategies to close the learning gap and deepen understanding. Following the reading, a companion application activity prompts students to use Newton's second law to calculate the acceleration of skateboards, explain which skateboard will reach the end of a hill first, and analyze how differences in force and mass affect the acceleration of skateboards.
- Materials provide opportunities for students to engage with scientific texts, including activities, such as pre-reading and vocabulary, to help them develop an understanding of concepts. For example, in Topic 1, Experience 1, the Read About It, Classification of Matter text highlights key vocabulary and includes diagrams and visuals to support students in developing an understanding of concepts. In addition, the slides within the Key Ideas Presentation, Classification of Matter are designed to support the Read About It activity, gauge student understanding of concepts through differentiated instruction activities, and provide vocabulary assistance to support science and engineering practices and promote student engagement.
- The materials provide multiple opportunities for students to engage with scientific texts to gather evidence and develop an understanding of concepts. Every topic in the course has an Authentic Reading and companion activity that provides opportunities for students to engage in reading grade-level scientific text and writing activities to gather evidence and develop and extend their understanding of concepts. For example, in Topic 4, Experience 3, students read the

Savvas Learning Texas Experience Science Grade 8

Authentic Reading, How to Find a Black Hole interview with Andrea Ghez, astrophysicist and 2020 Nobel Peace Prize winner in physics for her research leading to the discovery of the black hole at the center of our Milky Way, and use text evidence to answer questions and respond to prompts in the companion activity.

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.

- The materials provide opportunities for students to communicate thinking on scientific concepts in written and graphic modes. Every Experience within each Topic has a Read About It text that offers opportunities for students to engage in written and graphic modes of communication. Students respond to questions and writing or drawing prompts in the Apply It section of the Read About It text to demonstrate understanding of the text.
- Every Topic also includes a STEAM Activity that provides additional opportunities for students to demonstrate an understanding of science content in writing prompts and graphics by developing charts, tables, or models while incorporating science and engineering practices. For example, in Topic 1, Experience 3, students work in groups to research the effects of acid rain on soil and plants and techniques for mitigating crop damage. Students propose a written solution for mitigating crop damage based on specific criteria and constraints and draw a model to communicate the solution.
- In addition, at the end of the Explain portion of each Experience, students complete a Take-Notes companion activity to communicate what they have learned throughout the lesson, using various written and graphic ways to demonstrate understanding. For example, in Topic 2, Experience 1, students use graphic pictures and a velocity-time graph to respond to writing prompts to define acceleration and Newton’s second law of motion and describe the relationship between force, motion, and acceleration.

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

- The materials provide authentic student engagement and perseverance of concepts through productive struggle while acting as scientists and engineers. The SEPs and Themes Preview in the introduction pages of the Teacher’s Guide explains that students will plan and conduct investigations, then use models and analyze data to take on the roles of scientists and engineers, learning through active engagement with phenomena and the process of engineering design. As they design, plan, and conduct procedural investigations related to scientific phenomena and engineering problems, they may encounter challenges and experience productive struggle, which fosters critical thinking and problem-solving skills. By actively participating in these activities, students develop the mindset and skills necessary to excel as scientists and engineers. For example, in Topic 2, Experience 2, students discuss and design a vehicle that can transport items without damage. Students create prototypes of their vehicles that solve the problem, evaluate and compare their vehicles with other groups, and make revisions as needed.
- The materials support students as “practitioners” while they are figuring out (sensemaking) and productively struggling. Each Topic offers a Hands-On Lab Activity that provides students the opportunity to design, plan, and conduct investigations on scientific phenomena and

Savvas Learning Texas Experience Science Grade 8

engineering problems. For example, in Topic 1, Experience 4, investigate how mass is conserved in chemical reactions and relate the conservation of mass to the rearrangement of atoms in a chemical reaction. In the activity, students plan and conduct an investigation to model the conservation of mass. Students measure the mass of the substances before the reaction occurs and compare it to the mass of the substances after the reaction occurs. At the end of the activity, students develop an explanation about what happened to the molecules in the reactants and products and make predictions to explain why mass could change in repeated trials of the investigation.

- The materials create “transfer” opportunities for students to take what they have learned and use it flexibly in new situations. For example, after learning about how Newton’s laws of motion act simultaneously within systems in Topic 2, Experience 2, students are challenged to model how Newton’s laws of motion relate to tectonic plate movements and earthquakes, spiraling back to the concept of plate tectonics, which was covered in the prior grade-level.

Savvas Learning Texas Experience Science Grade 8

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

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.

- The materials provide opportunities for students to develop how to use evidence to support their hypotheses and claims. The grade 8 materials provide a SEPs and Themes Preview presentation to introduce students to the Science and Engineering Practices (SEP) and Recurring Themes and Concepts (RTC) while connecting to core science concepts. For example, the Plan and Conduct an Investigation Activity section introduces students to how scientists use the process of scientific inquiry to plan and conduct investigations and develop hypotheses, while the Use Models and Analyze Data Activity reminds students to develop models and/or analyze data to support or refute a claim or explanation. The questions and topics in the supporting Teacher's Guide pages provide detailed guidance for leading students through developing and supporting claims or hypotheses in preparation for the program's Anchoring Phenomenon and Everyday Phenomenon activities. The SEPs and Themes Preview presentation may be revisited throughout the year as needed to support student learning and reinforce how scientists use evidence to make inferences and predictions.
- The materials specifically prompt students to use evidence when supporting their hypotheses and claims. Each Topic of the program begins with an Anchoring Phenomenon Activity that prompts students to make a claim or develop a model. For example, in the Teacher's Guide, the

Savvas Learning Texas Experience Science Grade 8

Topic 3 Launch page instructs teachers to show students a video to introduce the phenomenon of cameras used to capture video of wildlife in the dark. Teachers then ask guiding questions as students gather evidence of the camera's features and complete a Claim-Evidence-Reasoning (CER) protocol. Materials prompt students to use their video observations, prior knowledge, and personal experiences as preliminary evidence in developing and supporting their claim. Students will revisit the CER graphic organizer as they progress through each Experience within the Topic and use their newly acquired evidence at the end of each lesson to revisit and revise their claims.

- In addition, throughout the materials, students are encouraged to formulate predictions or hypotheses as part of activities in which they utilize data and observations gathered during investigations as evidence to either accept or reject initial predictions. For example, in Topic 4, Experience 1, the hands-on lab in the Explore section, "How is a star's color related to its temperature?" prompts students to formulate their own predictions to the question as they work in groups to plan out an investigation and develop a model. In the subsequent Analyze and Interpret Data section of the lab, students employ the evidence they have observed, collected, and analyzed to validate or refute their initial hypotheses.

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

- The materials include opportunities to develop and use vocabulary after having a concrete or firsthand experience to which they can contextualize new terms. For example, in Topic 2, Force, Motion, and Acceleration, students complete a Vocabulary Builder activity after discussing and explaining the Anchoring Phenomenon question, "How can safety restraints keep you safe during a crash?" In the Vocabulary Builder, students are introduced to terms specific to Newton's second law of motion, shown in the Anchoring Phenomenon video, and consider words they already know or discuss those they do not know. The Evaluate section of every Experience includes an Experience Vocabulary activity with each vocabulary word provided in a table. Students are prompted to complete the table by locating or illustrating a picture that depicts the word and composing a definition for the term using their own words.
- The materials present scientific vocabulary using multiple representations. Students preview vocabulary in every Topic with the Vocabulary Builder to activate prior knowledge and launch the Topic's Anchoring Phenomenon. Students are also exposed to bolded and highlighted vocabulary terms in the Read About It activities within every Experience. The Vocab Tip sidebar features provide further guidance for engaging with content vocabulary terms. For example, in Topic 7, Experience 1 in the Read About It, Functions of Cell Structures text, the Vocab Tip provides a definition for the word *support* in student-friendly language and asks students to create a list of ways they provide support. In addition, materials provide editable/printable Vocabulary Cards and implementation guidance in the Teacher's Guide to help students organize and master Topic vocabulary.
- The materials provide opportunities for students to apply scientific vocabulary within context. In the Hands-on, Virtual, and Quick labs, materials prompt students to record evidence using newly acquired vocabulary to support claims made during the investigations. For example, in Topic 1, Experience 4, the Analyze and Interpret Data section of the Hands-On Lab prompts students to use the Law of Conservation of Mass to explain how mass could decrease in a repeated trial of the investigation and support their explanation with what they have learned up to this point in the Experience. Later in the Take Notes activity, students select appropriate terms to complete sentences about the parts of a chemical equation and the Law of Conservation of Mass.

Savvas Learning Texas Experience Science Grade 8

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

- The materials provide opportunities for students to develop how to engage in the practice of argumentation and discourse. For example, in Topic 3, Waves and the Electromagnetic Spectrum, the Anchoring Phenomenon Video and questions introduce students to the concept of scientific arguments as they investigate the phenomenon of cameras used to capture video of wildlife in the dark. In the grade 8 Teacher's Guide, the Topic Launch prompts teachers to lead a classroom discussion that engages and develops student content knowledge. In the Anchoring Phenomenon activity, students use the Claim-Evidence-Reasoning (CER) framework to develop arguments using scientific knowledge and reasoning, and the Teacher's Guide provides guidance for teachers to aid students in making a claim or an argument. At the end of each Experience, students revisit the Anchoring Phenomenon by updating and revising their arguments using evidence and knowledge gained from the lesson.
- In addition, the Thinking Like a Scientist and Mastering Scientific and Engineering Practices sidebar features of the Teacher's Guide provide teachers with strategies that will help build skills in argumentation. For example, in Topic 5, Experience 2, the Thinking Like a Scientist feature in the Explore section provides a strategy for students to listen respectfully, which is critical when engaging in scientific arguments.
- The materials integrate argumentation and discourse within stages of the learning cycle. For example, in Topic 4, Experience 3, students study the Big Bang theory and the origin of the universe. During the Engage section of the Experience, students engage in discourse as they discuss and use prior knowledge to develop explanations to the Everyday Phenomenon question: "How is the universe changing?" Later in the Explore section, materials prompt students to engage in an argument while using data evidence to answer a question. In the Make Meaning activity during the Explain section, the materials prompt students to read a classmate's claim on the movement of galaxies and provide evidence as to why they agree or disagree with the claim. During the Topic 4 Wrap-Up, materials ask students to revisit the CER chart they developed at the start of the topic and engage in discourse with a partner regarding evidence to include in their chart to support their claim and ways to clarify their reasoning.

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

- The materials provide instruction for how to construct and present a verbal or written argument to problems using evidence acquired from learning experiences. Throughout the grade 8 materials, students utilize the Claim-Evidence-Reasoning (CER) activity to use prior knowledge and discussion with peers to develop claims for a topic's Anchoring Phenomena. For example, in Topic 2, Force, Motion, and Acceleration, students watch an Anchoring Phenomenon Video of simulated car crashes involving crash dummies with restraints. Materials then prompt students to make a claim or statement to answer the Anchoring Phenomenon question: "How can safety restraints keep you safe during a crash?"
- The materials provide opportunities for students to justify explanations of phenomena and solutions to problems using written and verbal arguments to problems using evidence acquired from learning experiences. Throughout the course, the Anchoring Phenomenon allows students to justify explanations based on their evidence. At the end of each Topic, the Wrap-up materials

Savvas Learning Texas Experience Science Grade 8

prompt students to revisit their Anchoring Phenomenon activity and make revisions as needed using newly-acquired evidence from their learning in each Experience. For example, in Topic 3, Waves and the Electromagnetic Spectrum, the Teacher's Guide prompts teachers to guide students as they revisit their CER charts from the start of the topic and work with a partner to finalize their charts with evidence to support their claim and revise their reasoning.

- The materials provide criteria for developmentally appropriate arguments to explain a phenomenon or defend a solution to problems using evidence acquired from learning experiences. Every Topic incorporates a STEAM Activity in which students act as engineers to develop and evaluate solutions to problems using evidence acquired from Experiences. For example, in Topic 1, Matter and Chemical Reactions STEAM Activity, students work in groups to propose a solution for mitigating a farmer's crop damage caused by acid rain. Students collaborate to discuss and define the problem, conduct investigative research, and use evidence to propose and communicate a solution. Students then evaluate their solutions and describe how their proposal could be modified to a smaller scale and used in backyard or rooftop gardens.

Savvas Learning Texas Experience Science Grade 8

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

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 materials provide teachers with possible student responses to questions and tasks. For example, in Topic 2, Experience 2, students study Newton's laws of motion. During each section of the 5E lesson, the Teacher's Guide provides teachers with answers, possible responses, or expected outcomes to questions, worksheets, or lab investigations. For example, guidance for the Explain reading "Read About It, Newton's Laws of Motion" directs the teacher to ask two questions as a strategy to help students make sense of the images and text. Teachers should ask, "Why is it important that observations of Newton's laws are made in a closed system?" and the Teacher's Guide provides the sample answer: "In an open system, other forces can affect observations. For example, when balls are rolled across a table, friction between the table and the balls can affect what happens when the balls hit each other." In addition, every student worksheet has an accompanying Teacher Support Document with sample answers which serve as exemplars for teachers, providing them with reference points and guidance. For example, the Explain note-taking guide Key Ideas, Newton's Laws of Motion teacher support document provides correct answers to each component of the document, differentiated by a bright purple text.

Savvas Learning Texas Experience Science Grade 8

- The materials provide support for teachers to deepen student thinking through questioning. The Teacher's Guide provides general guidelines on how to deepen student thinking during class discussion and question prompts to help facilitate student thinking. For example, when presenting the Everyday Phenomenon at the start of each Experience, the Teacher's Guide provides teachers with questions to ask as students make sense of the phenomenon. In addition, each Topic's Anchoring Phenomenon Activity has an accompanying Teacher Support Document that provides possible student responses, probable changes to student responses when revisiting the phenomenon during the Topic Wrap-up, and an in-depth description of the phenomenon.
- Each Topic has a component that provides instructions and guidance to teachers that help clarify misconceptions. In the Teacher's Guide, the Overview pages for every Topic include a Common Misconceptions feature that enables teachers to anticipate potential misunderstandings among students and effectively address them. In addition, materials provide guidance for teachers to build on students' thinking. For example, in Topic 3, Experience 1, the Teacher Support notes in the Key Ideas Presentation, Characteristics of Waves provide teachers with specific instructions for each slide of the presentation, including directions, questions (with answers) to ask students, and differentiation strategies.

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

- The materials provide embedded support for the teacher in how to introduce and scaffold students' development of scientific vocabulary. For example, in the Teacher's Guide, each Topic Overview has a TEKS Progression section that provides teachers a preview of the current topic vocabulary, as well as a look back to vocabulary students should be familiar with from prior learning. The grade 8 materials offer guiding questions to teachers to support students in differentiating and understanding terms as they build their scientific vocabulary. For example, during each Experience's Key Ideas Presentation, vocabulary terms appear bolded and highlighted when first used in the presentation. In addition, the embedded Teacher Notes in the Presentation include a vocabulary list with definitions and guidance on how to introduce new terms to students and facilitate learning.
- In each Topic Launch, the Vocabulary Builder and Vocabulary Cards help provide clear guidance on building content vocabulary. The Teacher's Guide directs teachers to use both resources as students navigate through the Experiences and Vocabulary Support boxes along the sidebar providing examples of how teachers can support students' scientific vocabulary development. For example, in the Explore section of Topic 4, Experience 2, the sidebar Vocabulary Support box directs teachers to review key terms during a class discussion by challenging students to write sentences using the terms *weather* and *climate*, and volunteer to read sentences aloud.
- The materials provide guidance for the teacher on how to support students' use of scientific vocabulary in context. As students work through each Experience within a Topic, vocabulary is at the forefront of all 5E lesson components. For example, in the Explain section of Topic 4, Experience 2, the Read About It, Galaxies text highlights key vocabulary with reinforcement of meaning and use with embedded sidebar features, such as the Vocab Tip, Use Visuals, and Talk About It activities. Targeted vocabulary instruction is continued throughout every Topic in Experience activities, including Hands-on, Virtual, and Quick Labs during the Explore section, and Experience Vocabulary activities in the Evaluate section. Each activity has accompanying teacher supports to aid in the development of the student's use of scientific vocabulary in context.

Savvas Learning Texas Experience Science Grade 8

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

- The materials provide teacher support to prepare for student discourse. The grade 8 materials include SEPs and Themes Preview to introduce the skills of using evidence to support claims and engaging in respectful discourse. For example, the Teacher Support in the notes section of Slides 13 and 14 of the SEPs and Themes Preview Presentation provides guidance and structure for teachers to lead students to engage in discourse and develop written or verbal claims. In addition, several Topics in the course have students use the Claim-Evidence-Reasoning (CER) framework to make sense of the Anchoring Phenomenon. For example, the Topic Launch for Topic 4, The Universe, provides teachers with specific guidance to support students as they use prior knowledge, personal experiences, and observations from the Anchoring Phenomenon video to develop written and verbal claims to the Anchoring Phenomenon question, "What can an exploding star tell astronomers about the universe?"
- The materials provide teacher questions for supporting student discourse and the use of evidence in constructing written and verbal claims. Questions push students to use evidence to support their claims in both written and spoken discourse. Throughout the course, the Engage section of every Experience starts with an Everyday Phenomenon question and activity that drives the lesson and ties back learning to the Topic's Anchoring Phenomenon. The Teacher's Guide provides accompanying question prompts for teachers to guide student observations and assist students in constructing explanations to the Everyday Phenomenon question. For example, in Topic 5, Experience 3, students watch a weather map in motion, make observations, and choose an explanation describing New York's weather according to the map. The Teacher's Guide prompts teachers to ask: "What types of data does the weather map include?", "What does the blue triangle indicate?", and "What about the red semicircles?" to aid students in developing explanations to the Everyday Phenomenon question, "What type of weather will New York experience over the next few days?"
- The materials provide guidance that teachers can use to provide feedback to students while engaging in discourse. For example, in the Revisit Everyday Phenomenon activity at the end of the Explain section of Topic 7, Experience 2, students engage in a class discussion to tie back learning to the Everyday Phenomenon question. The Teacher's Guide instructs teachers to ignore wrong or right answers and rather, encourage students to explain their reasoning and consider different perspectives while revising their answers to the question. Additionally, in Topic 3, Experience 1, the Thinking Like a Scientist, Perspective-Taking feature along the sidebar of the Teacher's Guide instructs teachers to remind students of the importance of active listening while working in groups to complete the Hands-on lab investigation "How can I model transverse waves?" The feature also provides prompts teachers may use to help students engage in respectful discussions, such as, "I didn't think of it that way because ____.", "How did you make the connection between ___ and ___?", and "Have you considered ____?"

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

- The materials provide teacher support and guidance to engage students' thinking in various modes of communication throughout the year. The grade 8 materials include the SEPs and Themes Preview to introduce students to the skills of sharing their thinking and finding solutions. For example, the Teacher Support in the notes section of Slides 17 and 18 of the SEPs

Savvas Learning Texas Experience Science Grade 8

and Themes Preview Presentation provides guidance and structure for teachers to facilitate students in critical thinking and designing solutions to problems.

- In every Topic of the course, the materials include a STEAM Activity, which requires students to develop solutions to real-world problems and provide explanations in written and verbal form. For example, in Topic 6, Experience 2, the STEAM Activity, How can you calculate and reduce your carbon footprint? instructs students to conduct research on their own use of hydrocarbons and design and share a plan to reduce their carbon footprints. The Teacher Support document includes sample student answers to all questions and Teaching Tips specifically designed to assist students in finding solutions to the problem.
- The materials provide teacher support for facilitating the sharing of students' finding solutions. Materials provide feedback tips and examples teachers can use to support students throughout the learning cycle. For example, in Topic 2, Experience 2, the STEAM Activity, How can a vehicle accelerate without damaging its cargo? instructs students to take on the role of an automotive engineer to design and construct a model of a vehicle that will safely and efficiently transport glass products from place to place. The accompanying Teacher Support document provides detailed Teaching Tips offering valuable insights, strategies, and suggestions for teachers to effectively guide and support students throughout the problem-solving process. In addition, the Teacher's Guide provides support for concluding the learning cycle at the end of a Topic. For example, in the Topic 8 Wrap-up, the Performance-Based Assessment in the TEKS Practice activity challenges students to develop a short script for salespeople to use with restaurant owners to market a small device that emits ultraviolet (UV) radiation to kill bacteria. Students' scripts must be 4-5 sentences, explain why UV radiation is appropriate for this application, and persuade potential customers that their device solves a problem. The Teacher's Guide provides a rubric to aid teachers in scoring the assessment and guide students in developing their solutions.

Savvas Learning Texas Experience Science Grade 8

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

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.

- Materials include diagnostic assessments for measuring student learning and identifying learning gains in a variety of formats. Grade 8 course materials include opportunities for formal and informal diagnostic assessments. For example, every Topic includes a Topic Readiness Test, which serves as a formal diagnostic assessment to gauge students' prior knowledge before delving into the new grade-level content. In addition, course materials include both the Anchoring Phenomenon and Everyday Phenomenon activities as informal diagnostic assessments, which allow students to engage with real-world examples of phenomena and develop initial models or explanations. As students work through the Topic or Experiences and develop a deeper understanding of scientific concepts, they make revisions to their original models or explanations. For example, during the Engage part of Topic 2, Experience 1, students use observations and prior knowledge to develop a model for the Everyday Phenomenon question: "What determines how fast the object moves?" Later, in the Explain part of the Experience, students revisit their models and revise their initial answers with peer review, then share their explanations during a class discussion.
- Materials include formative assessments in a variety of formats to measure student learning and determine the next steps for instruction. Grade 8 course materials include opportunities for formal and informal formative assessments. For example, the Teacher's Guide includes Question

Savvas Learning Texas Experience Science Grade 8

Prompts for teachers to use as students complete the Explain activities of each Experience, including the Read About It articles and Key Ideas Presentations. These questions serve as informal moments for teachers to gauge student understanding, identify misconceptions, and make instructional adjustments as students engage in discussions and explanations with peers. In addition, the materials embed Exit Tickets at the close of the Engage, Explore, and Explain portions of every 5E Experience. These Exit Tickets serve as formal opportunities for students to demonstrate their understanding of new scientific concepts in a variety of formats. For example, on slide 11 of the Key Ideas Presentation for Topic 2, Experience 2, the Exit Ticket asks students to describe a system in which all three of Newton's laws of motion are demonstrated by writing a 7-8 sentence paragraph or drawing and labeling a diagram of the system.

- Materials include summative assessments in a variety of formats to measure student learning. The grade 8 course materials include Experience Quizzes, Topic Tests, and Short Constructed Response tests that serve as formal summative assessments at the end of every Experience and Topic. For example, in Topic 2, Force, Motion, and Acceleration, the Topic Test includes 15 multipart and multiple-choice questions, while the Short Constructed Response test includes 3 open-ended questions. Each assessment is offered in two formats, as an assignable, auto-graded, online assessment or as an editable printable version. In addition, the Performance-Based Assessment included in every Topic Wrap-Up provides teachers an opportunity to formally assess students' application of knowledge and skills to real-world problems and phenomena.
- Materials include a variety of informal assessments that give teachers feedback on student learning in the moment so that they can modify instructional approaches. The grade 8 course materials follow the 5E model, which allows teachers to assess student's learning at each step of the model in every Experience, using a variety of formats, including verbal question prompts, graphic organizers, and multiple-choice or open-ended questions. In addition, the Revisit Anchoring Phenomenon and Revisit Everyday Phenomenon activities provide teachers with an informal opportunity to check for understanding and allow students to modify their original models or explanations with peer and/or teacher assistance. For example, during the Engage part of Topic 4, Experience 1, students use observations and prior knowledge to develop and communicate an explanation to the Everyday Phenomenon question: "Why do these two stars look so different?" Later, in the Revisiting Everyday Phenomenon during the Explain part of the Experience, students revise their initial explanations with peer review and teacher assistance, then share their explanations during a class discussion.

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

- The materials assess all student expectations, as outlined in the TEKS by grade level. The grade 8 course materials offer multiple options for assessing all TEKS and student expectations, including Hands-On Labs, Data Analysis activities, STEAM activities, Virtual Labs, Performance-Based Assessments, Topic Tests, and other activities. In the Teacher's Guide, the Texas Essential Knowledge and Skills Grade 8 Correlation serves as a resource for teachers to identify TEKS that are assessed throughout the course and where each student expectation may be found in the Teacher's Guide and Student Activity Companion. In addition, the Savvas Realize platform offers teachers a search function that may be used to search for assessments by specific TEKS standards.
- The Topic Overview and At-A-Glance documents in the Teacher's Guide also provide a resource where teachers may identify where each student expectation is assessed in each Experience.

Savvas Learning Texas Experience Science Grade 8

The grade 8 course materials offer assessments that are purposefully designed to measure students' comprehension and proficiency in the concepts and skills covered within the materials. For example, in Topic 7, Cell Structures, Inheritance, and Survival, the Topic Wrap-up includes a TEKS Practice activity using multiple-choice questions, open-ended questions, and a "Revisit Anchoring Phenomenon" to evaluate student understanding of all student expectations covered within the topic.

- The materials indicate which student expectations are assessed. Student materials such as Hands-On Labs, Make Meaning activities, Read About Its, Key Ideas Take Notes activities, Experience Reviews, and TEKS Practice activities indicate which student expectations are assessed by listing all relevant TEKS at the beginning of the student version of the activity. For example, the first page of the Hands-On Lab: "What effect does carbon dioxide in the atmosphere have on temperature?" found in Topic 6, Experience 1, lists the TEKS "8.11A, 8.1D, 8.1G, 8.2D, 8.5E" below the title of the activity. In addition, the Savvas Realize platform offers Teacher Resources for formal assessments such as Topic Tests and Short Constructed Response tests, which include answers for multiple-choice questions, rubrics, and exemplar responses for open-ended questions, and lists the Depth of Knowledge (DOK) level and the student expectations that are assessed for each question.

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

- The materials include assessments that require students to integrate scientific knowledge and science and engineering practices (SEP) with recurrent themes and concepts (RTC) appropriate to the student expectation being assessed. The grade 8 course materials include multiple opportunities for SEPs and RTCs to be integrated into student assessments. In the Explore section of every Experience in the course, the Hands-On Labs, Quick Labs, and Data Analysis activities allow for the integration of the assessment of scientific concepts, SEPs, and RTCs. For example, in Topic 4, Experience 3, the Data Analysis Activity: "What can you tell about a galaxy from the radiation it emits?" asks students to analyze data and analyze and explain how factors affect stability and change in objects as they investigate the evidence behind redshifting and blueshifting.
- In addition, the Elaborate section of every Experience in the course offers STEAM Activities and Performance-Based Assessments, which integrate SEPs as students apply their knowledge of scientific concepts to real-world problems and phenomena. For example, in Topic 2, Force, Motion, and Acceleration, the STEAM Activity: "How can a vehicle accelerate without damaging its cargo?" asks students to design, build, and test a wheeled vehicle that can safely accelerate by defining problems based on models, evaluating engineering designs, proposing solutions, and applying patterns to design solutions.
- The Evaluate section of every Experience in the course includes assessments such as Experience Quizzes, Topic Tests, and Short Constructed Response tests that integrate scientific concepts with SEPs and RTCs. For example, in Topic 6, Impacts on Global Climate, question 3 of the Short Constructed Response test asks students to develop explanations supported by data and identify cause-and-effect relationships to explain how carbon dioxide can affect the average global temperature.

Savvas Learning Texas Experience Science Grade 8

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

- Materials include assessments that require students to apply knowledge and skills to a new phenomenon or problem. Grade 8 course materials include multiple assessments requiring students to apply knowledge and skills to novel contexts. Every Topic includes Hands-On Labs, STEAM Activities, Virtual Labs, Performance-Based Assessments, Data Analysis Activities, and Quick Labs that are aligned to student expectations and scientific and engineering practices (SEP).
- For example, in Topic 7, Cell Structures, Inheritance, and Survival, during the STEAM Activity: “Which animal has the adaptations to survive?” students are given the opportunity to apply their knowledge and skills related to adaptations to create a game to model how adaptations can increase survival and reproductive success in a species. This assessment challenges students to apply their understanding of adaptations to conduct research, develop prototypes, and test, evaluate, and revise their prototypes following the engineering design.
- In addition, during the Explore section of Topic 5, Experience 4, the Data Analysis Activity: “What patterns can you observe in hurricane landfalls?” directs students to analyze data related to hurricane landfalls in the United States. Students analyze data to identify patterns and develop explanations as to what factors contribute to hurricane landfalls. To close the activity, students construct a map designating areas of the United States most often affected by hurricanes and make predictions as to future hurricane landfalls.

Savvas Learning Texas Experience Science Grade 8

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, scaffolds, supports, and extensions that maximize student learning potential.

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.

- Materials include information that guides teachers in evaluating student responses. Materials guide teachers to look for specific components when evaluating student responses. In every Topic of the grade 8 course, the Topic Wrap-Up includes a Performance-Based Assessment that challenges students to apply newly acquired science content to a real-world problem or issue. The Teacher's Guide provides guidance as to what components should be included in student responses, as well as a rubric with clear criteria and guidelines to assist teachers in making informed judgments about student designs. For example, in Topic 8, Ecosystems and Population Change, the Teacher's Guide directs teachers to ensure that student responses to the Performance-Based Assessment should "identify the type of solution, describe how it is used, and identify its pros and cons."
- Materials include resources that guide teachers in evaluating student responses. The grade 8 course materials offer teachers recommended questions or prompts, distinguished by a blue font and bolded "Ask." Teachers may use these prompts when checking for student understanding while progressing through each Experience. The Teacher's Guide provides teachers with specific expected answers and suggested follow-ups to each question prompt, designated by an italicized font. For example, during the Explain part of Topic 8, Experience 1, the Teacher's Guide directs teachers to ask students, "What are the effects of chemicals such as

Savvas Learning Texas Experience Science Grade 8

fertilizers and pesticides on populations?” as they read the Read About It: Ecosystem Disruptions and Food Webs text. The Teacher's Guide provides sample student answers: “fertilizers may improve soil, rat poison may help humans control rodents but disrupt food webs,” then directs teachers to follow up by sharing a time you have personally seen a natural disaster mentioned in the text, such as a wildfire. In addition, every activity in the grade 8 course materials has an accompanying Teacher Support document teachers may use to score and evaluate student responses. Furthermore, each slide of every Key Ideas Presentation includes Teacher Support notes with sample student answers and discussion guidance teachers may use as they evaluate and guide student responses.

- The Savvas Realize digital platform offers Experience Quizzes and Topic Tests as editable and printable documents or assignable, online, auto-graded assessments. The printable versions of these assessments have corresponding Teacher Support documents that include answer keys and exemplar responses teachers may use to evaluate student responses to multiple-choice and open-response items. For the online versions of Experience Quizzes and Topic Tests, teachers may review auto-scored items, evaluate submitted answers, and provide feedback on the scoring page of the Realize dashboard.

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

- Materials provide guidance documents and resources to support teachers' analysis and interpretation of assessment data. The grade 8 course material provides supports that guide teachers when responding to individual student needs based on measures of student progress, including observational data gathered during classroom interactions. The Savvas Realize digital platform Help video, “Class Mastery by Standard,” 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. Teachers may use this information as guidance for developing individual standards-informed plans for striving students.
- Materials provide guidance and tools to support teachers in responding to data to inform instruction. Guidance for analyzing and responding to student data for formal summative assessments, such as Topic Tests, is provided in the Topic Test Remediation documents. This resource explains, in detail, the answers and supporting concepts for each item in the Topic Test. The document can be assigned to students to review alongside their completed Topic Test, or teachers may use the information to inform targeted remediation. In Topic 1, Matter and Chemical Reactions, the Topic Test Remediation tool provides short explanations of every test question in student-friendly language. For example, information for question 13 states, “Acids have a pH lower than pure water, which has a pH of 7. Unknown liquids 3 and 4 have a pH lower than 7, making them acidic. If the liquids have pH levels higher than 7, the liquids are considered basic.”
- Materials include assessment tools that yield data teachers can easily analyze and interpret. For example, the Savvas Realize digital platform Help video, “Data Overview,” provides an overview for teachers on how data reports can be filtered and sorted to show patterns of performance and students' strengths and needs, individually and as a class. When reviewing score data for assignments, teachers will see a color-coded report that shows average scores on completed tests or quizzes, e.g., blue for 80-100%, yellow for 60-79%, and red for 0-59%.

Savvas Learning Texas Experience Science Grade 8

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

- The information gathered from the assessment tools helps teachers when planning core science instruction. The Savvas Realize Digital platform offers several assessment tools with relevant information teachers may use to plan future instruction, remediation, and extensions. For example, the “Digital User Guide” and Help video, “Data Overview,” provide an overview for teachers on how data reports can be used for planning instruction and differentiation. Student data in the Classes tab enables teachers to view color-coded class results by assignment or standard and drill down to each completed assessment to analyze individual student responses. The information in these reports helps teachers monitor class progress and make necessary adjustments for intervention and/or extension.
- In addition, the Help videos, “Score Data Overview,” “Class Results by Assignment,” and “Class Mastery by Standard,” provide additional guidance to teachers on how to access data reports and utilize them to plan instruction, intervention, or extension. For example, Experience assignments such as Interactivities and Virtual Labs may be used as formative assessment tools that provide instant mastery feedback to both teachers and students. Teachers may also add comments to student assignments in the Realize Digital platform, which students may read to aid in the intervention process.
- The information gathered from the assessment tools helps teachers when planning differentiated instruction. Data reports in the Savvas Realize Digital platform allow teachers to color-code or organize student data to differentiate science instruction and easily group students according to assessment results. For example, when reviewing score data for assignments, teachers will see a color-coded report that shows average scores on completed tests or quizzes, e.g., blue for 80-100%, yellow for 60-79%, and red for 0-59%. The data also include reports of completion rate and usage to help teachers monitor class progress and make necessary adjustments for intervention, extension, and future instruction.

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

- Materials provide a variety of student resources for teachers to use in responding to performance data. The grade 8 course materials include remediation tools and intervention activities teachers can use for reteaching concepts. For example, every Topic Test includes a Remediation document that describes, in detail, the answers and supporting concepts for each item in the Topic Test. This document may be assigned to students to review alongside their completed Topic Test, or teachers may use the information to inform targeted remediation.
- In addition, Math Support documents include a description of relevant math skills as they apply to science concepts and provide a guided sample problem to help students practice the skill. These documents are available in the Explore part of Experiences when appropriate and may be assigned if student performance data indicates students need support with math skills as related to the Topic or Experience. For example, in Topic 1, Experience 4, the Math Support: Using Multiplication to Analyze Chemical Equations document may be assigned to students to reinforce the skill of using multiplication to compare the number of atoms of each element on both sides of a chemical equation.
- Materials provide a variety of teacher guidance for responding to student data. For example, the grade 8 materials provide direct instruction of science concepts, vocabulary flashcards, and TEKS

Savvas Learning Texas Experience Science Grade 8

Practice activities for students to develop mastery through each Experience. The Teacher's Guide provides teachers with “Differentiated Instruction” features that may be revisited after collecting and analyzing student assessment data. This feature suggests ways teachers can assist struggling students as well as provide extension options for students who have mastered the standard. For example, in Topic 2, Experience 3, the “Differentiated Instruction” feature directs teachers to ask struggling students to draw a diagram of a plant with arrows and labels to show cohesion and adhesion of water, while students in need of a challenge try withholding water from plants, allowing them to wilt, then later water the plants to observe adhesion.

Savvas Learning Texas Experience Science Grade 8

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

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.

- Assessments contain items for the grade level that are scientifically accurate. Formative and summative assessments found in the Savvas Texas Experience Science include assessment items that align with taught TEKS and present grade-level content and concepts, science and engineering practices, and recurring themes and concepts in a scientifically accurate way. For example, in Topic 2, Force, Motion, and Acceleration, the Topic Test at the end of the unit accurately describes the relationship between force and acceleration and Newton’s laws of motion.
- Assessments contain items for the grade level or course that avoid bias. Formative and summative assessments include assessment items that present content and examples fairly and impartially with no impact on student performance based on such factors as a student’s home language, place of origin, gender, or race and ethnicity. For example, in Topic 6, Impacts on Global Climate, question 8 in the Topic Test includes an illustration of a greenhouse and asks students to identify which statement accurately compares the greenhouse with greenhouse gasses. This illustration assists students from diverse backgrounds who may not have experience with a greenhouse in answering the question.
- Assessments contain items for the grade level that are free from errors. For example, every Topic in the grade 8 course materials includes formal and informal assessment opportunities, such as Exit Tickets, Experience Quizzes, and Topic Tests, which include multiple-choice items and short constructed responses free from errors and accompanied by answer keys.

Savvas Learning Texas Experience Science Grade 8

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

- Assessment tools use clear pictures and graphics. In the grade 8 Texas Experience Science Program, assessments, including Readiness Tests, Experience Quizzes, and Topic Tests, use clear pictures and graphics. For example, in Topic 1, Matter and Chemical Reactions, questions 3-5 of the Topic Test ask students to refer to an illustration of a molecular model of a chemical reaction involving glucose, carbon, and water. The illustration is an appropriate size compared to the question. It is clearly labeled and provides enough information for students to answer the questions without being distracted or overwhelmed.
- Assessments contain pictures and graphics that are developmentally appropriate. All assessments in the grade 8 course materials incorporate illustrated and real-world pictures and graphics to enhance student understanding. For example, in Topic 8, Ecosystems and Population Change, the Topic Test incorporates pictures and graphics relevant to the questions, allowing students to collect data from tables and diagrams that align with the developmentally appropriate content and skills as outlined in the TEKS.
- In addition, the variety of pictures and graphics available in assessments are identifiable and age-appropriate. They provide students with a visual representation of science content to support understanding of suitable questions. For example, in Topic 3, Waves and the Electromagnetic Spectrum, questions 1-3 ask students to refer to a labeled diagram of different types of electromagnetic waves and how they interact with the atmosphere to answer questions. The provided diagram of electromagnetic waves assists students by including distinct labels of the types of waves and accurate representations of varying wavelengths and frequencies.

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

- Materials provide clear guidance for teachers to consistently and accurately administer assessment tools. Every Topic in the grade 8 course materials includes a Topic Overview and Topic Planner in the Teacher's Guide, with guidance for the primary assessment tools for all Experiences and Topics. For example, the Evaluate row in each Topic Planner indicates that the Topic Wrap-Up and Topic Quiz should be performed at the end of the Experience and includes the recommended amount of time to administer the assessments. All Topic Planners include a Topic Assessment box at the bottom of the page to show what assessment options are available for a topic, such as the Topic Readiness Test, TEKS Practice, Revisit Anchoring Phenomenon, and End of Topic Test. In addition, the materials provide teachers with clear and efficient guidance on administering assessments, including reminders and helpful tips.
- The materials include detailed information that supports the teacher's understanding of assessment tools and their scoring procedures. For example, in each Topic Wrap-Up, assessment tools are outlined and provided for evaluating student understanding of the Topic. For example, in Topic 1, Matter and Chemical Reactions, the Topic Wrap-up in the Teacher's Guide includes a rubric for scoring the Performance-Based Assessment and guiding teachers in evaluating student products. In addition, the Topic Wrap-up includes a suggested time frame for the Topic Test and guidance on using the Topic Test Remediation activity for addressing areas of concern and content not mastered on the Topic Test.
- In addition, the Teacher's Guide offers recommendations for breaking down long assessments into manageable parts across multiple days or class periods, ensuring a smooth and organized assessment process for both teachers and students.

Savvas Learning Texas Experience Science Grade 8

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

- Materials offer accommodations for assessment tools so that students of all abilities can demonstrate mastery of learning goals. The grade 8 Realize online platform includes assessments that provide teachers with the ability to make accommodations for assessment tools, including Experience Quizzes, Topic Readiness Tests, Topic Tests, and Topic Short Constructed Responses. In the Realize platform, teachers can choose from both digital and printable versions of these assessments, providing teachers the option to edit the number of questions on an assessment and/or reduce the number of distractors for multiple-choice questions. These accommodations reduce the amount of reading and question complexity while still allowing students to demonstrate mastery of knowledge and skills. Teacher guidance for accommodations on all assessment materials can be accessed in the *TX Science Accommodation Guide* found in Additional Program Resource on the grade 8 Realize online platform.
- Assessments in the grade 8 Realize online platform offer accessibility features such as alternative text for images and tagged page content for screen reading clarity. These features ensure clear pictures and graphics in assessments are accessible for students with different needs. Online assessments and Google-formatted documents in the Realize platform are designed to work with screen readers, Braille devices, and screen magnification features in online browsers.
- In addition, the grade 8 Realize online platform provides a “Build a Test” feature that allows teachers to develop tailored assessments based on student’s individual needs and learning levels. Using the “Build a Test” feature, teachers may add their questions or select questions from a test bank to customize the length and complexity of a formal assessment.

Savvas Learning Texas Experience Science Grade 8

Indicator 7.1

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The materials include teacher guidance for scaffolding instruction and differentiating activities for students who have not yet achieved mastery. The grade 8 Teacher's Guide includes instructions for teachers to scaffold learning and support students in knowledge building. In the Explain section of each Experience, the “Make Meaning” segment provides teachers with specific guiding questions to support students who struggle while demonstrating their ability to explain what they have learned at this point in the Experience. For example, in Topic 1, Experience, the “Make Meaning: What are Acids and Bases?” segment asks students to read about an investigation and develop an explanation of what happened. The Teacher's Guide states that if students have difficulty providing an explanation, the teacher should conduct a demonstration using an eggshell and vinegar and have students test the pH of the acid before and after.
- In addition, in each Experience within each Topic, the “Differentiated Instruction” and “ELPS Targeted Support” boxes provide teacher guidance to assist students who may struggle with conceptual connections, address the needs of diverse learners, and support students at different levels of language proficiency. For example, in the Explain section of Topic 1, Experience 2, materials provide differentiated strategies, such as identifying language structures like suffixes, to guide students as they learn new academic vocabulary and better understand the Read About It text. Later, in the Evaluate section of the Experience, the Differentiated Instruction box guides teachers to draw and label a diagram on the board to aid struggling students with determining the relationship between the Anchoring phenomenon and Everyday phenomenon.

Savvas Learning Texas Experience Science Grade 8

- Materials ensure that teachers can target instruction to reteach skills necessary to access grade-level content. For example, materials contain recommended additional lessons for students who do not master skills on Topic Readiness Tests. The Teacher's Guide recommendations direct the teacher to assign "Remediation Reading" assets and use the "Topic Look Back Presentation" to scaffold student understanding toward mastery of the topic concepts.
- Materials provide additional resources for targeted instruction and differentiation to support students who have not yet achieved mastery. The materials provide supporting activities such as the guided versions of Hands-on Lab activities, Math Support documents, and Read About It side column features. Each Hands-on Lab activity is accompanied by a guided version that accommodates the skill level of the activity for students in need of scaffolds yet still provides opportunities for students to explore a concept through a tactile experience.

Materials provide enrichment activities for all levels of learners.

- The materials provide enrichment activities that account for learner variability. Teacher's Guide resources encourage the exploration and application of grade-level science knowledge and skills in a variety of ways, including applying new learning to things such as real-world applications. For example, the grade 8 materials include robust STEAM activities found in every Topic, which enhances the Experience of science content by providing opportunities for students to investigate a question using science, technology, engineering, art, and mathematics. Each STEAM activity connects to a Hook and Inspire Career activity to further enrich the experience for all students.
- In addition, the materials incorporate curriculum-aligned Legends of Learning games and high-interest Authentic Reading passages, which enrich Topic science content and review key academic vocabulary in meaningful ways. These components aim to engage all learners and ultimately prepare students for mastery of the Topic Readiness Test.
- The Saavas Realize online materials include a variety of real-world scenarios students can explore based on their interests in particular areas of science or community needs. For example, materials include STEM career biographies of renowned scientists and opportunities for students to identify STEM careers related to their study of choice. Students may also conduct independent research on STEM careers and related resources, evaluate and analyze various STEM career resources, and develop an understanding of how STEM careers impact society and the world.

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

- The materials include recommendations for just-in-time scaffolds to develop productive perseverance in learning at the moment. For example, the materials offer students instant feedback when answering multiple-choice questions incorrectly, providing them with immediate information on their responses to support their learning and understanding. In addition, the materials include prompts and cues to assist learners when they face challenges or uncertainty in a task, providing guidance and support to move forward effectively.
- In addition, the grade 8 Teacher's Guide provides multiple Exit Tickets, which allow teachers to check for understanding and assess student mastery before moving on to the next step in the Experience. The Addressing Misconceptions sidebar feature in the Teacher's Guide provides guidance for teachers to spot common student misconceptions in time during instruction to address them with suggested context.

Savvas Learning Texas Experience Science Grade 8

- The materials provide support and resources for students who are ready to accelerate their learning. The grade 8 materials include enrichment activities that contain challenging activities and assignments, which extend beyond the regular curriculum and stimulate critical thinking, problem-solving, and creativity. For example, in the Explore section of Topic 6, Experience 2, the Teacher's Guide offers differentiated instruction support to challenge students who are ready to extend their learning beyond the Virtual Lab. In the challenge, students use their observations to develop a short story about human activities and their impact on a town in Texas, relating cause and effect relationships observed from the Virtual Lab.

Savvas Learning Texas Experience Science Grade 8

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

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 engage students in the mastery of the content through a variety of developmentally appropriate instructional approaches. The materials introduce each Topic (chapter) with an Anchoring Phenomenon question that drives the Experiences (lessons) within the Topic and connects scientific concepts to real-world experiences. For example, in Topic 4, The Universe, students investigate the phenomenon of an exploding star to explain how astronomers use information and data about stars to learn about the universe. Throughout the Topic, students observe examples of everyday phenomena and make connections to the Anchoring Phenomenon at the close of each Experience.
- The grade 8 materials include opportunities for students to engage in inquiry-based learning activities within the Explore section of every Experience. For example, in Topic 2, Experience 2, students conduct a hands-on lab investigation to investigate Newton's laws of motion with authentic tasks in which students use tools to measure and collect data and make connections to everyday phenomena. The Experience also includes a hands-on lab video to use in conjunction with the investigation to reinforce key concepts, a PhET online simulation from the University of Chicago to further explore how Newton's laws apply to colliding objects, and the

Savvas Learning Texas Experience Science Grade 8

Legends of Learning educational game “Bot Lab: Newton’s First and Second Law,” which provides students with another opportunity to demonstrate mastery of the content and practice using key vocabulary in a grade-appropriate context.

- In addition, the materials include connections to scientific concepts in the real world or current events in the Elaborate section of every Experience. For example, in Topic 1, Experience 3, students apply what they have learned about properties of acids and bases in a STEAM Activity. Students work in groups to research the effects of acid rain on soil and plants. Students explore techniques for mitigating crop damage and use specific criteria to propose a solution. To wrap up the activity, student groups produce presentations of their research and present conclusions to their peers.

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

- The materials support a variety of instructional groupings, including whole group, small group, partners, and one-on-one. The grade 8 materials include Experience components that introduce science content and concepts to be provided to the whole group, while suggestions are provided for small group or one-on-one practice in other components of the Experience.
- Flexibility in grouping is incorporated across all 5E components of every Experience in the program. For example, in Topic 1, Experience 2, students conduct a Hands-on lab investigation in small groups to explore the cohesion, adhesion, and surface tension of water. Student groups collaboratively design the investigation process, conduct their investigation, record results, and develop a conclusion to answer the question. Later in the Experience, students individually read about the properties of water in the Read About It activity. Flexibility is built into every 5E section of the materials to utilize whole group discussions at any point in the Experiences.
- The materials provide guidance to teachers on when to use specific grouping structures based on the needs of students. Throughout the Teacher's Guide, the grade 8 materials actively encourage teachers to use collaborative group work during Hands-on lab activities, foster partner work for vocabulary development when introducing Anchoring Phenomenon, and utilize different grouping strategies during reading and note-taking activities to support all learners. For example, during the Explain section of Topic 7, Experience 2, the Teacher's Guide suggests to “consider grouping students by heterogeneous reading abilities” instead of having students independently read the Read About It: *Variations, Adaptations, and Survival* text.

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

- The materials provide multiple types of practices, including modeled, guided, collaborative, and independent practice. For example, every Experience utilizes the 5E method to ensure students engage in a variety of practices as they work through the lesson. Each Experience is introduced with an Engage section in which a teacher models an Everyday Phenomenon to drive the purpose of the lesson and tie back new learning to the Topic’s Anchoring Phenomenon. Guiding questions are provided within the Teacher's Guide to assist teachers in engaging students in the phenomenon demonstration. The Explore section includes a Hands-on lab, Virtual lab, or Quick lab activity for students to engage in collaborative group learning while investigating a science concept. The Hands-on lab is available in two versions, Open-Ended or Guided, to provide content or language support as needed for effective implementation. Students complete independent work during the Read About It activity found in the Explain section of each

Savvas Learning Texas Experience Science Grade 8

Experience. The Teacher's Guide provides detailed recommendations for each 5E section of the Experience to provide guided support or model learning with various structures for all learners.

- The materials provide teacher guidance and structures for the effective implementation of multiple types of practices. Grade 8 materials include opportunities in every Experience in which the teacher may model or demonstrate a new skill or concept, and students may practice the skill or concept in a variety of ways. For example, each Hands-on lab activity is available as an Open-ended or Guided version, each with directions on how to effectively implement it in the classroom. In the grade 8 Teacher's Guide, the Explore section of Topic 6, Experience 1 offers both hands-on lab activity options along the sidebar of the resource. This adaptability allows educators to provide suitable levels of support and guidance based on individual student requirements. The teacher instructions within the Teacher's Guide also include a reminder of how to access each version of the lab activity in the online Savvas Realize resource and the Experience Science Activity Companion. Additionally, the teacher tips provided in the materials assist educators in effectively tailoring these activities, ensuring optimal engagement and learning outcomes for students.

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

- Materials represent diverse communities using images and information that are respectful and inclusive. In grade 8 materials, science concepts are associated with stories from individuals of various ethnic backgrounds, promoting cultural awareness and providing positive role models. By incorporating these diverse perspectives, students are encouraged to appreciate and understand the contributions of different cultures to the field of science. For example, each Topic includes STEM Career biographies and Authentic Reading activities illustrating real-world examples from a diversity of communities and places, including rural, urban, and suburban communities, cities, and states across the United States and other countries around the world. Depictions of places are respectful and inclusive, with an emphasis on community strengths, resources, and unique characteristics.
- Information in teacher guidance documents, student materials, scientific texts, and assessments positively portrays a diverse group of scientists and engineers representing a variety of genders, races, ethnicities, abilities, religions, and national origins. For example, in Topic 1, Experience 4, the STEM Careers biography of Mario Molina, tells the story of a chemist from Mexico City who, in 1995, was jointly awarded a Nobel Prize for his discovery of the dangers that CFCs pose on the ozone layer, and in 2013 was awarded the Presidential Medal of Freedom by President Barack Obama.
- Images within the grade 8 materials reflect the diversity of school communities and match the content. Characteristics vary in images to include race and ethnicity, skin tone, gender identity and expression, age, disability status, body size and shape, and hair texture. For example, in the Topic 2, Experience 3, Read About It: *Newton's Laws of Motion* activity, the text is accompanied by images of individuals varying in age, gender, race and ethnicity, and skin tone using forces to conduct everyday activities in grade-level appropriate settings.

Savvas Learning Texas Experience Science Grade 8

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

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 ELPS. Grade 8 materials include listening, reading, writing, and speaking support to help emergent bilingual (EB) students meet grade-level science content expectations. The Teacher's Guide embeds scaffolds for EB students into lessons, such as visuals, gestures, sentence stems, graphic organizers, anchor charts, and manipulatives.
- For example, in Topic 4, Experience 1, the materials provide appropriate scaffolding based on students' English language proficiency level while reading and answering questions in the Read About It: *Stars* activity. Later, materials provide an alternative exit ticket with sentence frames at the end of the Explain section and a T-chart as differentiated instruction support for students to connect the Everyday Phenomenon to the Anchoring Phenomenon at the end of the lesson.
- Materials include teacher guidance for communication with EB students to create comprehensible input. Every Experience embeds ELPS Targeted Supports and Differentiated Instruction features to provide specific guidance for linguistic accommodations commensurate with various levels of English language proficiency (i.e., beginning, intermediate, advanced, and advanced high). For example, in Topic 7, Experience 1, the differentiated instruction supports in the Take Notes: *Functions of Cell Structures* section prompt teachers to use visual supports and kinesthetic learning to help students comprehend key vocabulary related to plant and animal cell vocabulary.

Savvas Learning Texas Experience Science Grade 8

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. The Read About It activities in the Explain section of every Experience (lesson) encourage student use of their first language to foster linguistic, affective, cognitive, and academic language development. The Read About It activities include feature sidebar boxes, such as Write About It, Talk About It, and Connect To It, to strategically support student language development. For example, in Topic 3, Experience 2, the Read About It: *Electromagnetic Waves* text features a Talk About It sidebar box directing students to discuss their responses to accompanying questions with their group members and use hand gestures or drawings to enhance their explanations.
- Every Experience provides a Key Ideas Presentation to discuss science concepts and vocabulary as a class. Each slide in the presentation includes Teacher Support notes for differentiation and guidance on conversation questions to elicit student language about concepts. In addition, the Teacher's Guide provides detailed implementation notes for supporting students' first language in the Take Notes activity that accompanies the Key Ideas Presentation. For example, in Topic 5, Experience 1 in the Take Notes: *Energy in Earth's Atmosphere and Hydrosphere* activity, teachers are prompted to allow students to take notes in their native languages and then work toward writing their notes in English.
- Grade 8 materials include family letters explaining the instructional objectives and/or homework in languages other than English. The School-to-Home Letter encourages caregivers to explain science concepts in their own words or first language as a means of supporting students' linguistic, affective, cognitive, and academic development.

Savvas Learning Texas Experience Science Grade 8

Indicator 7.4

Materials provide guidance on fostering connections between home and school.

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- Materials provide information to share with students and caregivers about the design of the program. For example, the materials provide a Grade 8 School-to-Home Letter, which may be shared with parents and caregivers at the start of the school year. The letter provides information about some of the topics that will be covered in the course and how the program is designed around phenomena and the 5E research-based model.
- Additional information from the Teacher's Guide may be provided to students and caregivers regarding the design of the program. The "Engage in Dynamic Experiences" section details how the program is centered around the 5E model, intending to drive scientific inquiry within the classroom.
- The materials also offer a Planner for every Topic and Experience within the course. These resources include details about how the 5Es are implemented in each topic and lesson and may be shared with parents, caregivers, and students as an overview of the instructional approach for the course.

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

- Materials provide resources and strategies for caregivers to help reinforce student learning and development. The course includes a Grade 8 School-to-Home Letter that may be shared at the beginning of the school year to encourage parents and caregivers to aid in reinforcing student learning outside of the classroom. The letter provides caregivers with suggestions to help their students gain science proficiency and succeed in the course. For example, suggestions include

Savvas Learning Texas Experience Science Grade 8

“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 in their first language,” “Ask about homework assignments and check that your student has completed them,” and “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.” While the Grade 6 School-to-Home Letter is available in Spanish, the grade 8 letter is not.

- In addition, every Topic in the course offers a Topic School-to-Home Letter that provides the Experiences in the Topic, the Science and Engineering Practices, Recurring Themes and Concepts, and Science Content TEKS that are addressed in the topic, and a brief description of the Anchoring Phenomenon that will be discussed in the topic Launch. The letter may be shared with parents and caregivers to provide valuable information about the specific concepts and skills that students will be learning throughout the Topic, as well as practical ideas and suggestions for caregivers to effectively support and engage with students outside of the classroom.
- Materials provide at-home activities for caregivers to help reinforce student learning and development. The Overview for every Topic in the course includes a Home Connection feature along the sidebar of the Teacher's Guide with point-of-use guidance and strategies to engage caregivers to help reinforce learning and development. For example, in the Overview for Topic 5, Weather and Climate, the Home Connection feature instructs teachers to have students work with members of their home community to compile a list of local weather conditions that they have experienced during their lives, rank their experiences, identify similarities and differences in choices, and share their findings with their classmates.

Materials include information to guide teacher communications with caregivers.

- Materials include teacher guidance for communicating with caregivers. The grade 8 materials include information on engaging caregivers as partners in learning and offer suggestions for establishing a relationship, inviting ongoing communication and partnership, and sharing progress updates.
- The School-to-Home Communications Guide contains valuable information to guide teachers in effectively communicating with parents and caregivers. The guide provides tips to support clear and informative communication, facilitating a strong partnership between teachers and caregivers. For example, the guide instructs teachers to “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 they can reach you.”
- In addition, the School-to-Home Communications Guide instructs teachers to make use of the Home Connections, Take It Local, and Collaborate with the Community features embedded in Topics throughout the course. These features are found along the sidebar of the Teacher's Guide and may be used to engage caregivers and community members to help students make personal connections to the content.

Savvas Learning Texas Experience Science Grade 8

Indicator 8.1

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

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

Meets | Score 2/2

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

Materials are accompanied by a TEKS-aligned scope and sequence outlining the order in which knowledge and skills are taught and built 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 review and practice of knowledge and skills spiraled throughout the year to support mastery and retention.

Evidence includes but is not limited to:

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

- The scope and sequence for Savvas Science 8 provides a broad vertically TEKS-aligned overview of topics (chapters) for grades 6-8. It is easy to navigate and details the order in which knowledge and skills are presented, but skills are not clarified within topics.
- The order of grade 8 topics follows the order topics are taught and built within the course materials. For example, on p. xvi of the Teacher’s Guide, the scope and sequence begins with Topic 1, *Matter and Chemical Reactions*, and progresses in a logical order for teachers to follow.
- The specific Science Content Standards (SC), Science and Engineering Practices (SEP), and Recurring Themes and Concepts (RTC) TEKS related to each topic are indicated in the scope and sequence.

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

- The materials provide teacher guidance to help students make connections between topics over the course of the year. For example, the Teacher’s Guide for Savvas Science 8 provides guidance on how to use the resource, options for how to teach the knowledge and skills, instructional plan suggestions, extensions of learning, and where to find Science and Engineering Practices (SEP), Recurring Themes and Concepts (RTC), and Science Content Standards (SC) within teacher resources and student resources.

Savvas Learning Texas Experience Science Grade 8

- The materials provide clarity in understanding how topics and experiences connect core concepts, SEPs, and RTCs. For example, within the grade 8 Teacher’s Guide, each Topic Planner lists all SEPs and RTCs that connect with the Science Content Standards addressed in each experience. In addition, the instructional pages in the Teacher’s Guide provide teachers with strategies to facilitate student-made connections in the “Mastering Scientific and Engineering Practices” and the “Mastering Recurring Themes and Concepts” features which appear along the sidebar in each experience.
- In the Teacher’s Guide, the “Topic Planner” outlines correlating SEPs, RTCs, and SCs organized by Experiences within each topic. The “Topic Launch” and “Experience At-A-Glance” sections of the Teacher’s Guide provide guidance on where to find key resources, such as videos and hands-on lab activities, visuals of resources, common student misconceptions, and guiding questions to facilitate each activity within the lesson.
- The “Experience At-A-Glance” section provides an overview of each experience within a topic. Detailed teacher guidance on how the activity is presented to students following the 5E model, the teacher’s role throughout the process, and how to facilitate students through a hands-on lab activity can be found in the instructional pages following the “Experience At-A-Glance” introduction.

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

- "The materials indicate that there is intentional practice and review of Science and Engineering Practices (SEP), Recurring Themes and Concepts (RTC), and Science Content Standards (SC) throughout the year.
- The Teacher’s Guide for Savvas Science 8 details where the SEPs and RTCs are located and practiced across all topics and experiences. For example, as noted in the “Topic Planner” pages, RTC 8.5C is integrated into Topic 1, Matter and Chemical Reactions, within Experience 3, and again reviewed in Topic 2, Force, Motion, and Acceleration, within Experience 1 to support mastery and retention.
- Each “Topic Overview “ includes a vertically aligned TEKS Progression chart that outlines Science Content Standards taught in prior years and upcoming years. The "Topic Look Back Presentation" provides a spiral progression of knowledge, including key ideas and concepts from prior grade-level content standards that build on current grade-level topic concepts. To assist with the connections between previous and current science concepts and content, a Spiraling Activity is included in each topic as well as a Spiraling Content section in the Topic Wrap-Up, which prompts teachers to utilize the Spiraling Activity. For example, the Topic 8, Ecosystems and Population Change, Spiraling Activity describes content learned in previous topics and provides opportunities for students to make connections between previously taught content and current content. To determine mastery of prior content, the materials include a Topic Readiness Test and Remediation Reading for each topic to reinforce, reteach, or review concepts not mastered.

Savvas Learning Texas Experience Science Grade 8

Indicator 8.2

Materials include classroom implementation support for teachers and administrators.

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The materials include overview documents that provide teacher guidance and recommendations on how to use all materials and resources. Within the Table of Contents, the "Getting Started with Texas Experience Science Grade 8" tab includes the Program Overview, Teacher Support, and Correlations sections in which teachers may navigate through a multitude of guides and recommendations for all topics (chapters).
- In the Teacher's Guide, the "Topic Planner" details the embedded technology and enrichment activities available for each experience (subchapter) within each topic. For example, on page 212, "Topic Assets" (embedded technologies) for Topic 6, *Impacts on Global Climate*, are indicated by specific icons within each experience. A legend is provided at the bottom of the page to assist teachers in identifying each technology resource. Enrichment activities are also listed within each experience and indicated by the "Got More Time?" blue plus sign icon.
- Each experience is organized by the 5E model, a research-based instructional strategy, to allow for scaffolded instruction across topics and experiences. Within the Teacher's Guide, each component of the 5E model includes detailed explanations, guiding questions, and teacher

Savvas Learning Texas Experience Science Grade 8

supports to enhance student learning. For example, within the “Explore,” the Hands-On Lab activities provide instructional guidance, such as short lists of materials, expected outcomes, and examples of differentiation. Within the “Explain,” text support is provided in the “Read About It” section, including scripted guiding questions and ELPS Targeted Support for emergent bilingual students.

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

- Savvas Science 8 materials include science standards correlations for each topic and experience. On p. xxx, the “TEKS Grade 8 Correlation” document lists all standards, including the Science and Engineering Practices (SEP), Recurring Themes and Concepts (RTC), and Science Content (SC) standards, and states where, by page, topic, or experience, the standards may be found within the materials.
- In the Teacher’s Guide, the “Topic Overview” includes a section titled “TEKS Progression,” which includes the grade-level standards addressed in the topic, the content standards from prior grades that set a foundation for the topic, and the content standards for subsequent grades. Below the “TEKS Progression,” correlating SEPs and RTCs are listed for each topic and demonstrated in the anchoring phenomenon that drives critical thinking and enhances student learning throughout each topic.
- The materials include cross-content standards within the grade-level resource for each topic. Each “Topic Planner” within the Teacher’s Guide provides English Language Proficiency Standards (ELPS), College and Career Readiness Standards (CCRM), and Mathematics and English and Reading Language Arts (ELAR) TEKS that correlate with each topic. For example, the Math Support: Interpreting Graphs activity in the Explore component of Topic 6, Experience 2: “Human Activities that Influence Climate,” provides a cross-content correlation to math and makes connections to interpreting graphs and analyzing data.

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

- Materials include a comprehensive list of all equipment and supplies needed to support instructional activities. Within the Table of Contents, the “Additional Program Resources” tab provides a spreadsheet titled “Master Materials List for Lab Activities: Texas Experience Science Grade 8,” which lists all equipment and supplies needed to support students, teachers, and administrators during investigations following the grade level.
- The Master Materials List includes grade-appropriate equipment and supplies that support instructional activities for the grade level and can be filtered by topic, experience, and activity type, such as Hands-On Lab, STEAM Activity, or Everyday Phenomenon Demo. For grade 8, materials include appropriate tools, such as graduated cylinders, metric rulers, balances, scales, thermometers, laboratory ware, timing devices, pH indicators, models, microscopes, slides, life science models, magnets, spring scales, satellite images, hand lenses, and lab notebooks or journals.

Savvas Learning Texas Experience Science Grade 8

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, following Texas Education Agency Science Safety Standards. The Explore section of each experience provides explicit guidance for the teacher regarding student safety during each investigation. For example, in Topic 6, Experience 1: “Natural Events that Influence Climate,” the Teacher’s Guide states, “Students should be careful when using Infrared heat lamps, which can get very hot, and should avoid touching the light bulb and shade. They should not leave the lamps unattended. Remind students to wash their hands when they complete the investigation.”
- The materials provide student guidance for safety practices and grade-appropriate use of safety equipment during investigations, following the Texas Education Agency Science Safety Standards. Within the Table of Contents, the “Additional Program Resources” tab provides a Lab Safety Manual, which includes a Student Laboratory Safety Contract, an index of Safety Symbols with icons and short descriptions, and a list of all rules associated with the Dress Code, General Precautions, First Aid, Heating and Fire Safety, Using Chemicals, Glassware, and Sharp Instruments Safely, Animal and Plant Safety, and End-of-Investigation Rules.
- Guidance for safety practices, including the grade-appropriate use of safety equipment during investigations, as provided in the student materials. For example, the Hands-On Lab: “How can you show conservation of mass?” the worksheet states, “Safety: Be sure to follow all safety procedures provided by your teacher.” and includes safety symbol icons with instructions to serve as visual reminders for students.

Savvas Learning Texas Experience Science Grade 8

Indicator 8.3

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

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

Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- Savvas Science 8 materials include guidance and recommendations on required time for lessons and activities with options for a variety of scheduling considerations. The “Course Planner and Pacing Guide” is organized by topic (chapter) and includes the number of suggested class periods for each topic, following a traditional schedule. The document also includes “Fast Track” and “Got More Time?” options for accelerating and extending topics to fit local scheduling considerations.
- Materials contain a “Topic Planner” providing teachers with considerations for planning instruction at the topic and experience levels. For example, the Topic 1, *Matter and Chemical Reactions*, planner states Experience 1: “Classification of Matter” lasts 6 periods or 270 minutes. The planner also includes a detailed 5E pacing summary with a breakdown of how long each component within the experience should take, ranging in time from 10-45 minutes each.

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

- Materials guide strategic implementation without disrupting the sequence of content that must be taught. Within the Savvas Science 7 Teacher’s Guide, the “Course Planner and Pacing Guide” offers options for adjusting the time spent on particular activities within topics and experiences without disrupting the sequence of content.
- The materials offer differentiation opportunities to implement for students at varying levels of understanding and ability. For example, the Teacher’s Guide provides strategic implementation

Savvas Learning Texas Experience Science Grade 8

supports within each experience, such as Alternative Exit Tickets, Differentiated Instruction, Addressing Misconceptions, ELPS Targeted Support, and Vocabulary Support.

- Materials provide guidance for the sequence of content taught in an order consistent with the developmental progression of science. For example, materials clearly delineate the order of topics to ensure students learn about precursor concepts first. The “Course Planner and Pacing Guide” follows a sequence of scientific concepts that introduces fundamental topics in grade 8. For example, the materials have students use the periodic table to identify the atoms involved in chemical reactions before they investigate the conservation of mass in chemical reactions. For example, materials clearly delineate the order of topics to ensure students learn about precursor concepts first. The “Course Planner and Pacing Guide” follows a sequence of scientific concepts that introduces fundamental topics in grade 8. For example, the materials have students use the periodic table to identify the atoms involved in chemical reactions before they investigate the conservation of mass in chemical reactions.

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

- The Science Savvas 8 materials are flexible and outline a full school year of instruction. The scope and sequence state the Science and Engineering Practices (SEP), Recurring Themes and Concepts (RTC), and Science Content Standards (SC) included throughout the grade-level material.
- The “Course Planner and Pacing Guide” organizes the topics (chapters) and experiences (subchapters) for a full year of instruction, with suggested time stamps that can be adjusted. The topics can be implemented within the time constraints of a school year, and the activities and routines within each experience can be completed within the length of time suggested.
- The “Course Planner and Pacing Guide” also includes “Fast Track” or “Got More Time?” choices for adjusting instructional time. For example, Topic 1, *Matter and Chemical Reactions*, may be completed in 13.5 periods following the “Fast Track” option, whereas following the “Got More Time?” option extends the instructional time to 26.5 periods. Throughout the Teacher’s Guide, icons for both flexibility options are included in teacher materials, including the “Topic Planner,” “Topic Launch,” and “Experience-At-A-Glance” to personalize instruction based on student needs.

Savvas Learning Texas Experience Science Grade 8

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. Student documents have clear titles and headings with consistent formatting and sufficient white space to support student attention. Some documents include the strategic use of color, such as the Reading Companions.
 - For example, the Google Slide deck that accompanies each unit uses appropriate-sized font and white space. The slides employ color coding and symbols to indicate activities, discussions, and important vocabulary words consistently across units.
- Materials include a clear heading/title for each page, while subheadings have a clear hierarchy.
 - For example, The Unit 1 Overview page begins with a heading of Introduction followed by bulleted (with specific icons) relevant subheadings of Challenge, Science Methods, and Culminating Experience, following a logical progression.

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

- Materials consistently embed age-appropriate pictures and graphics that support student learning and engagement without being visually distracting. The activities within each unit include student handouts and presentation slides that have clear, visually engaging images that support student learning. These images can be found in the slide deck, reading companions, and unit roadmaps.
 - For example, slide 7 of the Unit 1, Transportation, Google Slide Deck shows three pie charts and asks students to compare the information represented in each chart. This is

Savvas Learning Texas Experience Science Grade 8

- an age-appropriate skill for students to complete, as they should be aware of different representations of data and how to interpret it.
- In Unit 1, Lesson 1.6, the phenomenon shows an image of two trucks with different masses striking a telephone pole.
- Each slide deck has color-coded slides to represent “Discussion Slides.” These are orange in order to showcase the skill for both the teacher and student without distraction.

Materials include digital components that are free of technical errors.

- Materials are free of technical errors, including spelling, grammar, punctuation, and incorrect content and information. Errors are not found in the teacher lesson resources or the slide deck presentation.
 - For example, Lesson 3.2, Hurricane Harvey Part I, has zero technical errors as it is free of spelling, grammar, and punctuation errors.
- Materials are free of inaccurate content materials or information. Each worksheet (embedded or linked) does not contain inaccurate content information.
 - For example, the Pre-Assessment for Unit 2, Monarchs, has clear and accurate information included in the Answer Key, as well as additional background information explaining the content in the Teacher Background Section.

Savvas Learning Texas Experience Science Grade 8

Indicator 9.2

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

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

Not Scored

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

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

Evidence includes but is not limited to:

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

- Materials integrate digital technology and tools that support student learning and engagement. The PocketLab activities are strategically integrated to provide students with real-time data for lab activities.
 - For example, in Unit 3, students use PocketLab to participate in demonstrations of different densities of water due to temperature and salinity.
 - Videos are strategically integrated to provide students with engaging experiences. In Unit 4, students watch the “Anthropology Apology” video and then participate in discussions about waste.
- Materials provide digital technology and tools enhance student learning through such features as simulations.
 - For example, in Lesson 4.26, Carbon in the Air, students complete a PocketLab simulation to “investigate if the bluebonnet flower could grow and live in a space station as they learn about carbon and concentrates of carbon in the United States and in the world.”
- Materials provide teacher guidance for using simulations, interactives, and related activities to support student learning. Teacher guidance includes suggestions for time and pacing, as well as ways to assist students with making observations, asking questions, collecting data, and

Savvas Learning Texas Experience Science Grade 8

participating in discussions. The digital technology provided can be found in the Teacher's Guide and/or digital presentation (Google Slides) materials.

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

- Materials integrate digital technology in ways that support student engagement with the science and engineering practices, recurring themes and concepts, and grade-level content.
 - For example, materials provide opportunities for students to obtain, evaluate, and communicate information using digital tools. These opportunities can be found in the student digital materials (PhET simulations and PocketLab activities) and Teacher's Guide and/or digital presentation (Google Slides) materials.
 - For example, in Lesson 4.8, From Sound to Light, “students will explore the Spectrum Widget website which shows the spectrum of a star like our Sun. Students' goal is to see what happens to it as it moves towards or away from Earth at different speeds. The Spectrum Widget worksheet Lesson 4.8 guides students through the exploration,” emphasizing Systems as a recurring theme.
 - In Lesson 4.8, students will utilize an online simulation to model the effects on a star's visibility as it moves toward or away from Earth at various speeds (8.5D).
 - Videos are strategically integrated to provide students with engaging experiences. In Unit 4, students watch the “Anthropology Apology” video and then participate in discussions about waste.
- Pocket Lab activities are designed for students to experience real world applications of the content.
 - For example, in Lesson 4.26, Carbon in the Air, students complete a Pocket Lab simulation to “investigate if the bluebonnet flower could grow and live in a space station as they learn about carbon and concentrates of carbon in the United States and in the world.” This task is related to 8.6C, “analyze how differences in scale, proportion, or quantity affect a system's structure or performance.”
 - In Unit 3, students use PocketLab to participate in demonstrations of different densities of water due to temperature and salinity.

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

- Materials integrate digital technology to support student-to-student collaboration.
 - For example, in Lesson 4.26, Carbon in the Air, students work together to complete a PocketLab simulation to “investigate if the bluebonnet flower could grow and live in a space station as they learn about carbon and concentrates of carbon in the United States and in the world” including a discussion of their findings.
 - In Lesson 4.8, From Sound to Light, students are guided through the exploration, then they “explain our original phenomenon” through class discussion.
 - In Unit 3, students collaborate with the teacher to use PocketLab to participate in demonstrations of different densities of water due to temperature and salinity.

Savvas Learning Texas Experience Science Grade 8

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

- Materials utilize digital resources often in Google-based formats, i.e., Google Docs and Google Slides. These formats are commonly implemented in a variety of learning management systems that are found in the classrooms.
- Materials often include files and instructions in PDF format, which enables the teacher to provide student access through a variety of learning management systems. In addition, it allows simplistic viewing on mobile devices when computers are not available.
- Materials are accessible and compatible with multiple operating systems and devices. The Unit Google Slide Decks are accessible and compatible with Chromebooks, iPads, PCs, and Apple computers, and or/smartphones, as well as editable on each of these platforms. For example, Unit 1, Minerals, Slide Deck can be edited and downloaded from the Unit Overview page.

Savvas Learning Texas Experience Science Grade 8

Indicator 9.3

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

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

Not Scored

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

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

Evidence includes but is not limited to:

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

- Digital technology and online components are developmentally appropriate for the grade level and align with the scope and approach to science knowledge and skills progression.
 - For example, the PocketLab and PhET Simulations are used to enhance the teaching of the TEKS aligned content. Each is used when a specific TEKS is being taught. Throughout the grade levels these digital materials can be found in each lesson/unit in the Teacher’s Guide.
 - The materials provide a rationale in the course overview for their approach to technology and how it enhances student learning.
 - The materials provide related TEKS and ELPS for online and digital components within the lessons. Hyperlinks are available where appropriate to facilitate planning and ease of use.
- Materials provide a rationale for the use of the digital and online components in the Grade 8 Course Overview, Technology and Teaching Section. It states, “Students use a variety of technologies in their learning in Grade 8. In Unit 1, students consider various technologies that are changing the way people and goods are being moved. They carry out research on the type of technology they will propose as a sustainable form of transport. In Unit 2, students observe images of cells viewed under a microscope. They learn how monarch populations have been tracked over many years, using simple observations but also using more complex technologies to record patterns. In Unit 3, students view weather reporting in action. They update and

Savvas Learning Texas Experience Science Grade 8

analyze weather data for three adopted cities using modern websites that display real-time weather data from around the world. In Unit 4, students compare different telescopes, view images produced by these telescopes, and explore and analyze satellite information as a way to understand Earth's surface. They use a PhET simulation to find out more about waves. A PocketLab device provides data about carbon dioxide inside and outside the classroom. The culminating project asks the students to prepare a video combining their knowledge gained through the unit.”

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

- Materials provide clear instructions and tutorials on how to use the embedded technology.
 - For example, the 8th Grade Course Overview, Technology and Teaching Section, gives teacher guidance on how to implement PocketLab Activities, including a video tutorial as well as a PDF of both student instructions and teacher instructions.
- Materials include professional development videos and training for teachers to continue to develop their skills and knowledge in using the embedded technology to support and enhance student learning. Short “Crash Courses” are available, as well as (Zoom) Green Ninja Office Hours where teachers can ask questions and get guidance on embedding technology. All Day Professional Development Opportunities are also available in addition to the Course PocketLab Page that includes video tutorials.

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

- Materials are available to parents and caregivers to support student engagement with digital technology and online components.
 - For example, all of the online simulations are accessible at home or any other location with internet access.
 - The majority of the worksheets and activities are included in PDF format to easily facilitate learning outside of the classroom.
- In the 8th Grade Course Overview, materials provide a PDF letter that teachers can share with families outlining the program and how caregivers can support their students' learning. It encourages families and caregivers to encourage curiosity in their students, get involved with the school and reinforce learning. This can be easily shared through any school's Learning Management System.
- Simulations, Green Ninja Show Videos, and Green Ninja Games like Carbon Command and Carbon Runner, are available on Green Ninja's Website without a required log-in, so they are easily accessible to families and caregivers to help support student engagement.