# Savvas Learning Texas Experience Physics

## Savvas Learning Texas Experience Physics Executive Summary

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

| TEKS Student % | TEKS Teacher % | ELPS Student % | ELPS Teacher % |
|---|---|---|---|
| 100% | 100% | 100% | 100% |

### Section 2. Instructional Anchor

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

### Section 3. Knowledge Coherence

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

### Section 4. Productive Struggle

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

### Section 5. Evidence-Based Reasoning and Communicating

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

### Section 6. Progress Monitoring

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

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## 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 Physics

## Indicator 2.1

Materials are designed to strategically and systematically integrate scientific and engineering practices and course-level content as outlined in the TEKS.

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| 1 | Materials provide multiple opportunities for students to develop, practice, and demonstrate mastery of appropriate scientific and engineering practices as outlined in the TEKS. | M |
| 2 | Materials strategically and systematically develop students' content knowledge and skills as appropriate for the concept and grade level or course as outlined in the TEKS. | M |
| 3 | 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 develop an understanding of science concepts. | M |

## Meets | Score 4/4

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

Materials provide multiple opportunities for students to develop, practice, and demonstrate mastery of appropriate scientific and engineering practices as outlined in the TEKS. Materials strategically and systematically develop students' content knowledge and skills as appropriate for the concept and grade level or course 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 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 appropriate scientific and engineering practices as outlined in the TEKS.

- The materials feature a comprehensive unit on two-dimensional motion, where students engage in predicting the distance traveled by projectiles shot from a cannon at various initial velocities, including 4m/s, 8m/s, 12m/s, and 16m/s. Throughout the unit, students actively inquire, conduct multiple trials, and gather data to support their understanding. They develop skills in data collection by creating tables and visually representing the motion of projectiles through drawings. By utilizing the collected data and their acquired knowledge, students effectively explain the principles behind the projectile motion.
- The materials offer numerous opportunities for students to engage in grade-level appropriate scientific and engineering practices. These opportunities encompass a range of activities, such as Engineering Projects found in the Engineering Workbench, Hands-On Inquiry Labs, and Claim-Evidence-Reasoning activities. Through these varied experiences, students can actively apply and refine their scientific and engineering skills in practical contexts.
- Several units within the materials feature designated activities referred to as Engineering Projects. For instance, in the unit on modeling motion, there is an Engineering Project where students are tasked with designing an airdrop system. These projects provide hands-on

opportunities for students to apply engineering principles and problem-solving skills in real-world contexts.
- In Experience 1 of Investigation 1, students are presented with numerous opportunities to develop, practice, and showcase their mastery of scientific and engineering practices. This lesson encompasses various inquiry lab investigations, a claim-evidence-reasoning assignment, and additional assignments that facilitate active student engagement and critical thinking. By engaging in these activities, students can enhance their scientific and engineering skills while deepening their understanding of the subject matter.

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

- The materials systematically align with the Concept TEKS as outlined in the Texas Administrative Code (TAC), ensuring comprehensive coverage of the required content. Each activity within the materials incorporates scientific and engineering practices, providing students with hands-on opportunities to develop and apply their skills in a practical context.
- Topics are systematically developed throughout the academic year, ensuring a coherent and progressive learning experience. In each lesson of the materials, there is a deliberate integration of specific scientific and engineering practices that are directly connected to the corresponding concepts for that particular topic. The TEKS and the SEPs are clearly identified and listed for every lesson, including laboratory activities.
- The materials in the units are designed to build upon one another in a logical progression. For instance, in the first investigation on modeling motion, the students start by exploring displacement and velocity. They then investigate how velocity changes with the introduction of acceleration. Finally, they apply their understanding of velocity and acceleration to solve problems related to circular and projectile motion. This sequential approach allows students to develop a solid foundation of concepts and skills, enabling them to tackle more complex topics as they progress through the units.
- The materials provide a comprehensive scope and sequence that outlines the integration of grade-level appropriate scientific and engineering practices aligned with the TEKS within the lessons and units of instruction. Each lesson begins with an Anchoring Phenomenon that serves as an engaging introduction to the topic at hand. This approach allows students to explore concepts related to motion progressively, starting from one-dimensional motion and then expanding to two-dimensional and circular motion through carefully designed Experiences. By following this structured progression, students can develop a solid understanding of the underlying principles and apply them effectively.

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 develop an understanding of science concepts.

- The materials offer students a range of open-ended and closed-ended questions pertaining to motion, enabling them to analyze data and make conclusions. For instance, in the Engineering Projects, students encounter exclusively open-ended questions, including prompts such as "Define the problem," "Identify criteria and constraints," and "Refine your solution."
- Each experience within the various investigations includes at least one laboratory activity, providing students with hands-on opportunities to explore and apply concepts. Furthermore,

each investigation concludes with a comprehensive problem-solving laboratory in the Engineering Workbench.

- Each 5E lesson in the materials includes problem sets, enabling students to apply their knowledge and problem-solving skills. Additionally, each investigation incorporates an engaging engineering project that allows students to actively participate in problem-solving activities while deepening their understanding of the concepts being explored.

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## Indicator 2.2

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

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| 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 and course-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 and course-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 and course-level content as outlined in the TEKS.

- The materials incorporate teacher demonstrations that feature phenomena problems aligned with real-world scenarios. These demonstrations effectively establish connections between exercises and concepts such as speed, velocity, and acceleration.
- Each investigation, referred to as units in this resource, commences with an anchoring phenomenon that provides students with meaningful real-world examples related to the topic being covered.
- The materials offer students opportunities to apply their knowledge and experiences to phenomena and engineering problems. In Investigation 10, for instance, there is an activity that involves analyzing sunscreen and UV protection data. Students have the chance to determine SPF values and calculate the energy of a photon. By engaging in these activities, students can deepen their understanding of the topic while connecting it to real-world applications.

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

- The units within the materials offer multiple points of entry to accommodate students with varying levels of background knowledge and understanding. One such example can be found in Investigation 2, which incorporates a teacher demonstration as well as a video resource.
- Each investigation within this resource includes a section called "Look Back" on the overview page of the teacher guide. This section provides information on the TEKS that students should have covered in previous grades. It serves as a teacher reference, providing a way for teachers to incorporate relevant background materials and build upon students' prior knowledge.
- The materials offer problem-solving opportunities that accommodate different learning needs and styles. This includes teacher demonstrations, hands-on experiences, and videos that cater to various approaches when exploring concepts related to speed and velocity.

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

- The materials clearly outline the expected student outcomes and scientific practices when they grasp the main concept. The objectives are explicitly listed in the teacher planner for reference. Additionally, a comprehensive 5E lesson plan is provided for each topic, offering detailed descriptions of the recommended activities.
- The materials offer valuable feedback to support teachers in addressing student needs. This includes providing vocabulary support for students who are English Language Learners (ELL), clarifying expected outcomes for everyday lessons, and offering background information to enhance topic comprehension for students.
- Within the teacher textbook, each unit features an overview page with a section titled "Preview the Investigation." This section provides teachers with a comprehensive outline of the concepts, goals, and objectives underlying the phenomena and engineering problems covered in the unit. It highlights the intended student learning outcomes, equipping teachers with a clear understanding of what students should know and be able to accomplish by the conclusion of the unit.
- The investigation planner offers background information on the concepts being taught. For instance, in experience 1 of investigation 1, there is a dedicated section providing teacher background information.

# Savvas Learning Texas Experience Physics

## Indicator 3.1

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

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

Evidence includes but is not limited to:

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

- The material is organized into units called Investigations, which are further divided into multiple 5E lessons called Experiences for students to build their knowledge. This structure is designed to facilitate students' knowledge-building process. For instance, Investigation 2 expands on the concepts covered in Investigation 1, where you acquire the ability to calculate acceleration in various scenarios.
- The Investigation overview establishes connections between the learning objectives of new knowledge and skills and their relationship to prior and future learning objectives across different grade levels. In particular, the Investigation 1 overview outlines the TEKS progression that encompasses grade 6, 7, and 8 knowledge and skills relevant to Investigation 1. For example, grade 8 skills involve the calculation of acceleration, which aligns with TEKS 5D on describing and analyzing acceleration.
- The materials systematically advance in complexity within and across units, focusing on the content area. For example, the concept of work and energy is initially introduced through an observation and discussion of a bungee jumper's vertical bouncing motion. Subsequently, the topic of work is explored, followed by the introduction of energy, energy transformations, and, ultimately, the conservation of energy. Throughout this progression, students engage in various activities such as discussions, video presentations, laboratory experiments, and practice

problems. These activities aim to enhance visualization and promote a deeper understanding of the concepts.

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

- The materials prioritize the presentation of concrete representations before abstract representations. Investigation 1, Experience 1 begins by utilizing motion diagrams to depict observed motion. It then progresses to the use of graphs to represent various types of motion and ultimately introduces the modeling of motion through equations. Furthermore, to successfully complete Experience 3 in Investigation 1, it is necessary to have acquired the knowledge from Experiences 1 and 2. These prior Experiences introduce concepts such as displacement, vector addition, and scalars.
- The materials feature a structured progression that follows a sequence of concrete, representational, and abstract reasoning to present concepts and promote a deeper conceptual understanding. As an illustration, TEK 7B is introduced through the use of a bow and arrow, which serves as a tangible example to demonstrate the concepts of kinetic energy (KE) and potential energy (PE) within a system. Subsequently, an Inquiry Lab, The Impact of Position on Energy, is conducted to further explore these concepts. To enhance comprehension, students may also engage with a video that explains KE and PE. Finally, students are challenged with math problems that require abstract reasoning, encouraging them to apply the acquired knowledge in a more abstract context.
- Investigation 1 incorporates a coherent sequence of materials that students encounter as they progress through the different Experiences. The content covered in the first Experience serves as a foundation upon which the second Experience builds. Similarly, the third Experience leverages the knowledge acquired in the first two Experiences and further expands upon them. This interconnected approach ensures a gradual and cumulative development of understanding throughout Investigation 1.

Materials clearly and accurately present course-specific core concepts and science and engineering practices.

- The Teacher Guide Lesson Planner organizes each Experience within the Investigations using a 5E learning method. Additionally, each Experience includes explanatory videos that students can watch, providing coverage of the material they are expected to learn within that specific Experience.
- The course materials effectively deliver instruction on course-specific core concepts and science and engineering practices (SEPs). The eText Experience Planner in the Teacher Guide provides a clear and concise roadmap for each Exploration. In Investigation 3, Experience 1, there is focused instruction provided for conducting inquiry lab investigations related to universal gravitation. The SEPs (TEKS) 1F, 1H, 2A, and 2C are listed and explained in subsequent pages, detailing their implementation and differentiation strategies.
- The materials offer teachers a clear and succinct roadmap that guides students through science instruction. Embedded within this roadmap are key Physics TEKS concepts and science and engineering practices (SEPs). For instance, in the Work and Energy unit, there are resources available to differentiate lessons to meet the needs of various learners, including advanced students, struggling learners, students with special education needs, English as a Second Language (ESL) students, and those who may have difficulties with reading comprehension. The

materials incorporate effective conceptual learning strategies, such as engaging in discussions on energy changes using a bow and arrow, applying concrete mathematical concepts through asteroid models, and providing hands-on opportunities for student-driven learning through the use of PHET simulations and inquiry labs.

Mastery requirements of the materials are within the boundaries of the main concepts of the course.

- When used alongside the scope and sequence and year plan, the Investigation Planner establishes clear learning targets. In the case of Investigation 5, the planner provides a list of TEKS, and the corresponding assessment section describes the specific skills targeted by those TEKS and how they will be evaluated. Also, in conjunction with the Phenomenon Tracker, which establishes a goal for each Experience, benchmarks that students should strive to achieve before advancing to the subsequent Experience.
- The materials encompass distinct learning targets for each course, with student learning objectives outlined for every lesson. These objectives are prominently displayed at the start of each Experience. To illustrate, Experience 2 begins with a clear listing of the four objectives pertaining to mechanical energy.
- Within each Experience, there are designated sections labeled as Assess on the Spot. These sections provide guidance on assessing students' mastery of the materials covered thus far, ensuring their readiness before progressing to new content.

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## Indicator 3.2

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

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| 1 | Materials support teachers in understanding the vertical alignment of course-appropriate prior knowledge and skills guiding the development of course-level content and scientific and engineering practices. | M |
| 2 | Materials contain explanations and examples of science concepts, including course-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 vertical alignment of course-appropriate prior knowledge and skills guiding the development of course-level content and scientific and engineering practices. Materials contain explanations and examples of science concepts, including course-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 vertical alignment of course-appropriate prior knowledge and skills guiding the development of course-level content and scientific and engineering practices.

- The materials provide teachers with helpful guiding documents. The teacher eText includes investigation overviews that offer a preview with conceptual background information and TEKS (Texas Essential Knowledge and Skills) progression. Additionally, other sections of the planning document provide additional background information and suggestions for effectively teaching the concepts. In Investigation 10, for instance, the materials provide a thorough description of electromagnetic radiation, offering teachers an understanding of how the TEKS align with prior grade-level TEKS and the overall course TEKS.
- The materials incorporate guiding documents that assist teachers in comprehending the connection between new learning and its relevance to previous and future learning. This is highlighted in the overview section, where each Investigation includes a section called TEKS Progression. This section examines the TEKS that have been covered in previous grades, highlighting the similarities with the TEKS addressed in the current Investigation. The materials include a scope and sequence that outlines the specific skills and standards students are expected to have mastered.
- The materials incorporate a spiral approach to mastering concepts and skills, emphasizing conceptual learning and fostering the development of science and engineering practices (SEPs).

This spiral progression is evident through various instructional components, including Inquiry Labs, data analysis activities, and engagement with the Engineering Workbench. Furthermore, the Overview section outlines the specific Tessional development session, which guides teachers on incorporating a discrepant polarization event into the lesson, which fosters a deeper understanding of the topic. TEKS that will be covered within the Investigation, providing a clear roadmap of the content progression.

Materials contain explanations and examples of science concepts, including course-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 a Teacher Background section that offers additional support and information for teachers. Moreover, if students lack the necessary prior knowledge for a particular Experience, a solution is provided to address this gap and ensure their readiness to engage with the content. For instance, in Investigation 10, Experience 1, a dedicated teacher background section delves into the production and propagation of electromagnetic (EM) waves.
- Within each Investigation, there is a dedicated Addressing Misconceptions section. This section provides guidance on addressing potential topics or ideas that students may find challenging or struggle with, offering strategies to support their understanding. In Experience 1, specifically on the topic of Classifying Work and Energy, a common misconception involves the confusion between force and pressure. The materials describe how the force exerted by a person on the ground remains constant, but the pressure can vary based on the type of shoe worn by the individual.

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

- The materials offer a framework that elucidates the primary intent or goals of the program. Within the program, there is a section, A Phenomenal Experience, that comprehensively explains the phenomenological approach and the rationale behind its utilization.
- Students are provided with the opportunity to articulate their initial ideas and examine them through hands-on exploration activities. They engage in gathering evidence and utilizing it to construct scientific explanations. The 5E lesson plans for each topic offer a wide array of SEPs and inquiry-based activities, ensuring an abundance of opportunities for active learning and investigation.
- The teacher guide includes an About This Book section, which provides a comprehensive overview of the organizational structure and setup of all the materials contained within. In the Look Back section of each Experience supplementary information regarding the vertical alignment of course content-specific content is provided, offering a retrospective perspective for further understanding.

# Savvas Learning Texas Experience Physics

## 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.

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

Evidence includes but is not limited to:

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

- The materials consistently offer learning activities that foster meaningful sensemaking for students. The book follows a structured approach centered on inquiry investigations and the application of science and engineering practices. For example, Investigation 10 commences by introducing the concept of light using polarized lenses as a phenomenon. Subsequently, students engage in inquiry investigations and other research-based instructional methods within the framework of the 5E model.
- The materials offer a clear definition of sensemaking and outline specific sensemaking behaviors exhibited by students. Sensemaking is identified as the primary objective of science. The teacher guide emphasizes that learning revolves around real-world phenomena and provides a range of hands-on and digital activities to facilitate sensemaking.

- Several of the Experiences feature labs that are designed with varying levels of difficulty to effectively address and challenge students at their current level of understanding. Materials provide multiple opportunities for reading, writing, critical thinking, and acting as a scientist through a 5E method.

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

- Each Investigation offers a dedicated resource known as the eText, specifically designed for that particular section. The eText comprehensively covers the material that students are expected to learn in the investigation, providing additional support through graphs and charts to enhance their understanding. For example, Investigation 9 presents a series of tasks that actively engage students in reading.
- Investigation 9: Waves, Sounds, And Light introduces mechanical waves, and students are prompted to model wave behavior by moving their pencil back and forth while a classmate pulls the paper along, fostering a hands-on understanding of wave concepts.
- The materials offer students purposeful and targeted activities aligned with the grade level/course, along with appropriate scientific texts. For instance, the student textbook includes a digital notebook link that provides interactive and digital engagement opportunities. Additionally, each Investigation features an Engineering Workbench activity, which prompts students to locate and analyze scientific texts to gather evidence and deepen their understanding of an engineering problem connected to the concepts covered in the Investigation.

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 offer diverse opportunities for students to communicate their understanding of scientific concepts through written and graphic modes. Several of the Experiences include writing assignments known as Writing About Science, which prompt students to articulate their understanding of the content in a written format. Through engaging in investigations, students document evidence and express their ideas, questions, drawings, charts, and graphs in their student notebooks. This enables them to engage in discussions and revise their understanding at different stages of the lesson. For instance, in Investigation 8, students participate in a modeling assignment where they effectively communicate their understanding of the potential difference generated by a battery through diagrams, showcasing their conceptual comprehension.
- The materials offer students numerous opportunities to communicate their understanding of scientific concepts through written and graphic modes. These opportunities arise from conducting investigations, during which students document evidence using written and graphic formats. For instance, in the work/energy section, students can engage in various activities such as answering questions about work, solving work-related problems, and completing an inquiry lab on gas particles and work. They also have the chance to construct graphic tables of data, allowing them to effectively communicate their findings and enhance their comprehension of the topic.

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- Every Investigation commences with an Anchoring Phenomenon, which fosters student engagement and promotes active learning. During this phase, students are encouraged to record their ideas, questions, drawings, charts, and graphs in their student notebooks. This practice allows for ongoing reflection and revision of their understandings at different stages throughout the unit.

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 promote authentic student engagement and foster perseverance in understanding scientific concepts by encouraging students to take on the role of scientists and engineers. Each Experience follows a structured 5E method, providing a comprehensive framework for effective lesson delivery. Within this framework, multiple activities are available for each step of the lesson, allowing for flexibility and adaptation to accommodate diverse learning styles. This approach is exemplified by the inclusion of inquiry labs in each investigation. For instance, in Investigation 7, Exploration 3, students are tasked with an open inquiry lab where they are required to design, construct, and test a balloon rocket.
- The materials facilitate genuine student engagement and foster a persistent understanding of concepts through productive struggle as students assume the roles of scientists and engineers. A notable example of this is the roller coaster activity, which immerses students in the exploration of energy concepts. Students start by studying work and energy, then proceed to design and construct their own roller coasters. These activities are thoughtfully designed to cater to students with different preferences to take authority over their learning. Finally, students test their creations. In cases where their models do not work as expected, students engage in discussions with peers who have achieved success and make necessary modifications to their models.
- Each Investigation culminates with an engaging activity known as the Engineering Workbench, presenting students with an engineering problem that requires the application of the newly acquired knowledge and engineering principles. This activity prompts students to utilize the concepts and skills they have learned to devise innovative solutions to real-world engineering challenges. For example, in Investigation 4: Engineering Workbench, Electric Forces students are asked to design and build an electronic quiz board. A bulb lights up when the correct question and answer are selected.

# Savvas Learning Texas Experience Physics

## Indicator 5.1

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

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| 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 course. | M |
| 4 | Materials provide opportunities for students to construct and present developmentally appropriate written and verbal arguments that justify explanations to phenomena and/or solutions to problems using evidence acquired from learning experiences. | M |

## Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- In Investigation 6, Experience 1, there is an Everyday Phenomenon Demonstration that challenges students to predict the amount of energy needed to perform a certain quantity of work. Also, in the Experiences, such as Investigation 1, Experience 1, students are given prompts such as "What happens to the kinetic energy of a falling object when it lands on the ground?" The materials provide a Claim-Evidence-Reasoning framework for students to build a scientific argument about the phenomenon.
- The materials help students learn how to use evidence to support their hypotheses and claims. In Investigation 2, Anchoring Phenomenon, there is a Claim-Evidence-Reasoning (CER) activity focused on forces. Students are instructed to make a claim and provide evidence and reasoning related to a concept in the Anchoring Phenomenon. The materials prompt for evidence by stating, "Provide at least two observations or data points that can be used to justify your claim. Avoid "I" statements. If possible and appropriate, use multiple sources." Students are then asked to share their arguments with classmates, revise their claims, reassess their evidence, and strengthen their reasoning.

- The materials provide opportunities for students to develop how to use evidence to support their hypotheses and claims. For example, students engage in building a roller coaster model that ensures the safe ride of a marble, preventing it from falling off and stopping before rolling off the track. Prior to construction, students conduct research on circular loops versus clothoid loops, define the problem, establish criteria and constraints, and then construct and test their model. Another example involves discussing positive work, negative work, and no work on a system in the textbook. Following the discussion, students analyze a photo of a skier pulling a sled and determine whether it exemplifies positive, negative, or no work where they must provide supporting reasons.

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

- The materials provide experiences with new concepts followed by opportunities to use the vocabulary presented. The text explains the new vocabulary words, while the Investigations offer hands-on experiences. For example, in Investigation 3, Experience 1, the term "gravity" is introduced and explored through various activities. The background lab employs a pendulum to enhance students' understanding, and additional resources like videos further elaborate on the concept.
- The materials provide experiences with new concepts followed by opportunities to use the vocabulary presented. For example, in TEKS 7A and 7B, numerous activities are available for students to understand and utilize the new vocabulary involving work and energy. These activities include an anchoring phenomenon related to bungee jumping, an inquiry lab on gas particles performing work, a PHET simulation over classifying energy and work, and a video on kinetic energy to enhance understanding.
- Within each eText, the vocabulary is highlighted, and at the bottom of the section, there are questions in the student notebook that aid in the further development of their vocabulary knowledge. Also, Investigation 6, Experience 2 has an Inquiry Lab that requires students to make observations about potential, kinetic, and mechanical energy. There is an additional extension for students to apply vocabulary using a skate park pHet simulation.

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

- The materials provide opportunities for students to develop the practice of argumentation and discourse and support the growth of content knowledge and skills. In Investigation 6, Anchoring Phenomenon, there is a CER activity that guides students in creating a scientific argument concerning energy. Students make a claim regarding the transformation of potential energy during the fall of an object, and they must support their argument with evidence and data.
- The engineering workbench projects provide opportunities for students to engage in argumentation and discourse, promoting the development of content knowledge and skills. For instance, in the work/energy section, students can design, construct, and test a roller coaster. All the engineering activities follow a similar pattern. They begin with argumentation as students research, define the problem, and identify criteria and constraints for their initial design. Subsequently, students test their roller coaster, gather data, and make modifications. They present evidence to discuss the strengths and weaknesses of their roller coasters with their group and the entire class. Finally, students are given a chance to make further adjustments based on the feedback received.

- Several labs in the curriculum include a peer review rubric that prompts students to evaluate and justify scores assigned to their peers' work through written arguments. This process encourages students to not only examine their classmates' work but also engage in the practice of constructing persuasive written justifications for the given scores. For example, in the Landslide Prevention Engineering Project, the materials offer the following prompts to guide discourse around peer review “How well did they do? What improvements could they make? Leave constructive comments on the projects you view. Compare your system with those your classmates produced. How might you improve your system to better meet your criteria and constraints? Would you modify any of your criteria or constraints?”

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 students with opportunities to construct and deliver verbal and written arguments for problem-solving using evidence from learning experiences. For instance, in the introductory section of the text Getting Started With Experiencing Physics, specifically Experience 4 on Models and Communication in the Introduction to Science and Engineering, the process is explained. The accompanying worksheet provides additional instruction and practice, guiding students to incorporate evidence and reasoning into their scientific communication.
- The materials provide criteria for developmentally appropriate arguments to explain a phenomenon or defend a solution to problems using evidence acquired from learning experiences. For example the roller coaster engineering activity, students are required to conduct research, identify the problem, and establish criteria and constraints before constructing their assigned model. When explaining a phenomenon, students are expected to provide justifications for classifying it in a particular manner.
- In each Experience, there are four Flinn Labs of different difficulty levels that involve students conducting experiments and constructing explanations based on the evidence gathered. For example, in Investigation 4, in the Flinn Guided Inquiry Lab for electric fields, the materials require students to explain their learning using the following prompt: “Where is the electric field mostly uniform for the two point charges configuration, showing lines most evenly spaced? What do you think is the reason behind this? Explain.”
- In Investigation 6 Experience 2, students engage in a Peer Review activity within small groups, where they defend their thoughts on vocabulary to their peers. They support their arguments with evidence extracted from the text.

# Savvas Learning Texas Experience Physics

## Indicator 5.2

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

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

## Meets | Score 4/4

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

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

Evidence includes but is not limited to:

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

- The materials provide teachers with possible student responses to questions and tasks that help students in lessons and investigations. For example, in Investigation 9, Experience 1, the teacher instructions for the discussion rubric cover TEKS 8C, 3B, and 3C and include questions about the relationship between wave speed and frequency. These questions are open-ended to encourage discussion.
- Every Investigation starts with a thinking question to promote thinking throughout the lesson. For example, Investigation 6, Experience 1 begins the Engage section with the question, "What causes door knob shocks?" The Investigation 9 Encounter section has Anchoring Phenomenon Demonstration has an "Ask" section stating, "How would increasing the amplitude of waves of the water affect how the water interacts with the sand? *Increasing the amplitude of the waves would cause the water to carry away more sand."*
- The materials provide teachers with possible student responses to questions and tasks that support students during lessons and investigations. For example, in Investigation 1: Modeling Motion, the teacher receives background information on motion. The materials also mention that students may not have a calculus background, but they will use tangent lines and the area under a graph to calculate acceleration, velocity, and displacement. Investigation 1 Experience 2 also includes the misconception explanation for fast-moving objects always having high

acceleration. The book offers various examples, such as low speed with high acceleration, low speed with low acceleration, high speed with low acceleration, and high speed with high acceleration, to counter the misconception of speed and acceleration being related but separate entities.

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 scaffold students' development of scientific vocabulary related to the concepts being taught. In Investigation 9, Opener, there is a section dedicated to vocabulary support. The suggested strategy is for students to collaborate and construct a concept map for the chapter opener vocabulary. Furthermore, in Investigation 9, the Encounter section includes a Support Vocabulary component where students are grouped into small groups to create a concept map. It is recommended to group students with the same home language together to promote learning.
- The materials provide embedded support for the teacher in how to scaffold students' development of scientific vocabulary related to the concepts being taught. For example, in Investigation 6, when discussing work and energy, the materials recommend having students create concept maps with the vocabulary. It is also suggested to revisit these concept maps after completing additional activities.
- The materials provide a Claim-Evidence-Reasoning assignment for many of the Experiences in which students have to write and use academic vocabulary to build an argument. For example, the instructions for the claim section state, "Your claim should be a response to the stated question. Place only what you intend to argue. If appropriate, use the relevant vocabulary you have learned in this course."

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. Each discussion rubric includes a teacher reference to assist in preparing for discourse. For example, in Investigation 1, Experience 1, teachers are provided guidance for leading a discussion on the slope of a position-time graph and velocity. Investigation 10, Experience 1, in the Elaborate lesson of the 5E, students are guided to prepare for a Discussion on Laser Interference in order to provide a model of understanding.
- The materials provide teacher support to prepare for student discourse. For example, materials offer opportunities for peer review in Investigation 9 Experience 2 on waves.
- Investigation 5 Experience 2 contains multiple writing assignments to further develop communication skills, such as Writing About Science: Skills in Inducing Magnetism, that enable students to construct written claims using evidence.

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 course. In Investigation 4, Experience 1, there are several student activities that involve using different communication modes. Each activity

provides guidance for teachers. For instance, the Experience begins with a class discussion, followed by written communication during the lab activity and one-on-one communication with the teacher in the "assess on the spot" section.

- In Investigation 10, Electromagnetic Radiation, the materials present a discrepant event using UV-sensitive beads for teachers to perform with their students. Students are encouraged to make predictions, create models, and write explanations. They then evaluate competing explanations through a class discussion. This is further supported by Investigation 9, Experience 2 under the Elaborate lesson of the 5E; students are guided to perform a peer review assignment in order to provide a model of understanding of sound waves.
- Many of the lab experiences have questions in them that not only require a numeric answer but also require the students to use higher-level thinking to come up with a solution to the problems. For example, the experiment for Motion Plots asks the students to construct an explanation. It states, “Describe why choosing an appropriate data collection window, or amount of time over which data is collected, is important when using a motion detector to monitor walking in a finite space.”
- Materials provide feedback tips and examples teachers can use to support students thinking throughout the learning cycle. For example, in Investigation 10, Electromagnetic Radiation, the materials state the importance of teaching the students to gather evidence to answer a question and to evaluate information or arguments. The materials give specific steps on how the students can accomplish this.

# Savvas Learning Texas Experience Physics

## 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. | 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 the indicator. Materials include a variety of TEKS-aligned and developmentally appropriate assessment tools.

Materials include a range of diagnostic, formative, and summative assessments to assess student learning in a variety of formats. Materials assess all student expectations over the breadth of the course and indicate which student expectations are being assessed in each assessment. Materials include assessments that integrate scientific concepts and science and engineering practices. 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 a range of diagnostic, formative, and summative assessments that include formal and informal opportunities to assess student learning in a variety of formats. The Assessment resource includes a large number of assessments and a variety of assessment types. For example, there is a diagnostic math assessment, the Math Readiness Test, to make sure students have the math skills to work the problems.
- The materials include summative assessments in different formats, including a digital test bank with quizzes, formal tests, and extra practice problems for all topics. Each topic also includes performance-based assessments and engineering design assessments. For example, when covering TEKS 7A, 7B, and 7C (work and energy), an example of an engineering design assessment is the design and construction of a roller coaster.
- The Resource includes editable quizzes as formative assessments for their students' learning. One example is the Editable Quiz: Electric Current, which serves as a mid-unit assessment for evaluating students' understanding of electrical current concepts. Additionally, the resource provides Assess on the Spot questions as formative assessments.
- Investigation 9 includes formative and summative assessments in the form of multiple-choice and short-answer questions. These assessments cover topics such as general wave construction,

light waves, and sound waves. Formative assessments are integrated throughout the three Experiences, while the summative assessment takes place at the end of Investigation 9.

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

- Materials assess all student expectations and indicate which student expectations are assessed.The Investigation and Experience dashboards contain quizzes for students. While the student handout does not directly list the TEKS, they are listed in the teacher investigation guide. For example, in Investigation 1, Experience 1, the displacement and velocity quiz covers TEKS 5A, 5B, and 5C.
- The materials indicate which student expectations are assessed. Each unit overview includes an assessment table that lists all assessments within the unit along with the corresponding student expectations they evaluate. Furthermore, the materials provide TEKS correlations for each assessment item, and answer keys are provided for all assessments. The TEKS are conveniently located in the upper right-hand corner, allowing teachers to select which TEKS they want to assess.
- The materials include a Scope and Sequence, which indicates the TEKS are covered in each unit. Additionally, the Assessments tab includes a test or quiz for each unit that specifically addresses the TEKS covered in that unit.
- Investigation 3 Overview provides a look at the vertical alignment where students were supposed to learn in 6th, 7th, and 8th grade, in addition to which TEKs (5H, 5F, and 5E) will be assessed in this investigation.

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

- The materials include performance assessments, which are based on science and engineering skills. For example, the materials include a performance assessment over force, mass, and acceleration. Students must apply Newton's second law of motion to determine the net force and acceleration acting on a cart-hanging-mass system. Students determine the experimental acceleration of the system. This assessment specifically targets science and engineering practices such as developing and using models, analyzing data, and utilizing mathematical calculations.
- The materials include assessments that require students to integrate scientific knowledge and science and engineering practices appropriate to the student expectation being assessed. For example, when assessing TEKS 7A, 7B, and 7C related to work and energy, the materials provide a digital test bank as well as a performance-based assessment. In the performance-based assessment, students conduct experiments to determine the direct relationship between mechanical energy and electrical energy.
- In the Investigation Test: Electricity and Circuits, students are presented with an engineering problem. They are tasked with solving the problem of harnessing electricity from abundant sunshine, such as in San Diego, to charge a cell phone. Students are required to develop a device or system that effectively utilizes solar energy for this purpose.
- Investigation 8, Experience 2, provides students the opportunity to be assessed on science and engineering TEKS through observing the Energy Transmission of Circuits. The Focus on Scientific Practices section lists TEKS 2C (use mathematics), 3A (develop explanations and propose solutions), and 3B (Communicate explanations and solutions) and also assesses the concept of circuits in TEKS 6D**.**

# Savvas Learning Texas Experience Physics

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 novel contexts. The engineering projects apply the skills and knowledge in novel contexts. Investigation 4 includes an engineering project where students apply their knowledge of electric circuits to creating an electronic quiz board.
- Another example of assessments that demand students to apply their knowledge and skills to a novel situation is the construction of a roller coaster where a marble can navigate the track safely, come to a stop before rolling off, and abide by the principles of work, energy, and conservation of energy. After learning about these concepts, students engage in a roller coaster design project that entails designing a model, constructing it, conducting tests, and addressing associated mathematical problems. The final working project is evaluated, and the limitations of the model are discussed.
- In the Investigation Test: Collisions, there is a test question that prompts students to examine the engineering goals related to designing a protective mechanism for a falling plum. Students are required to consider how to safeguard the plum as it descends from a certain height to the ground.
- Investigation 10 provides an assessment where students apply their knowledge of wavelengths' length to provide clothing recommendations to best address each wavelength.

# Savvas Learning Texas Experience Physics

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

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

Evidence includes but is not limited to:

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

- Materials include information and/or resources that provide guidance for evaluating student responses. Investigation Assessment answer keys provide guidance for evaluating student responses. The Investigation 7 assessment key includes answers and rubrics for grading student responses.
- Materials include resources that guide teachers in evaluating student responses. For example, the materials provide answer key scoring rubrics that provide guidance for evaluating students' open-response answers in Investigation 2, Experience 3 Quiz Answer Key (scoring rubric for items 1, 5) and Investigation Test Answer Key (scoring rubrics for items for items 2, 9, 10).
- In Investigation 1, Experience 1, specifically in the section titled Inquiry Launch, the resource presents questions for the teacher to ask the students and also provides suggested answers.
- Materials provide sample answers for the INQUIRY LAB TEACHER SUPPORT. For example: "The air is expelled out the opening, and the air exerts an equal and opposite force on the balloon. The balloon pushes the air out, and the air pushes back on the balloon in the opposite direction."

# Savvas Learning Texas Experience Physics

## 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 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. In Investigation 6, Experience 3, there is a section called Assess on the Spot. This section provides guidance for the teacher to extend and enhance the assessment for students who have demonstrated proficiency and are ahead of their peers.
- Materials guide teachers to look for specific components when evaluating student responses. For example, in Investigation 1 Experience 1, teachers are advised to use scoring notes and remediation strategies. It is recommended to provide targeted feedback for each item in order to address areas for improvement. For example, suppose students have difficulty adding multiple vectors using a coordinate plane and a protractor. In this case, teachers should verify their understanding of proper protractor placement and the head-to-tail method. Additional remediation strategies are also provided in this section.
- In the Evaluate section of Investigation 1, Experience 1, there is a section called Remediation Suggestions that offers various ideas to assist students who are struggling with a concept. These suggestions are provided after the teacher has conducted a formative assessment and identified a student's difficulty. For this particular Experience, the materials offer four suggestions, one of which states, "If students struggle to add multiple vectors using a coordinate plane and a protractor, then check that they know how to place the protractor correctly to apply the head-to-tail method."
- Materials provide for expected levels of learning as well as remediation steps for students that may not meet standards. For example, the materials state, "If students have a hard time considering nonvisible EM Light research theory of Infrared by William Hershel."

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

- Assessment tools yield relevant information for teachers to use when planning instruction, intervention, and extension.The Teacher Guide and Editable Investigation Planner provide important information. For example, in Investigation 6, the Assessment section outlines the assessments, their recommended time allocation, and details for intervention and extension support.
- The assessment tools provide valuable information for teachers when planning science instruction. They offer usage data, overall class performance, individual assignment progress, and percent completion, which assist in determining the content and structure of core science lessons.
- The system provides information on students' progress in completing assignments and assessments, enabling teachers to assess their performance and plan accordingly. This data helps teachers gauge how much students have accomplished, allowing for informed instructional decisions and adjustments to meet their learning needs.
- The materials include an Assess on The Spot, which serves as an informal assessment to help students and teachers gauge the need for reteaching or extension activities. For example, an extension writing about EM Wave Properties and Applications.

# Savvas Learning Texas Experience Physics

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. For each topic, there is a comprehensive 5E lesson plan that includes various resources such as inquiry labs, engineering design projects, problem-solving tasks, PHET simulations, and more. In Investigation 1, Experience 1, the teacher begins with a fitness tracker demonstration, followed by the optional assignment of a walking inquiry lab where students explore their walking habits and create graphs. The materials also offer flexibility in answering questions, such as whether a car's odometer measures distance or displacement, allowing students to choose their preferred mode of response. Additionally, there are Assess on the Spot options available as needed. For further activities based on formative or summative assessments, the materials provide additional resources like PHET simulations, engineering workbench designs, hands-on activities, and more to suit the specific needs of the students.
- In Investigation 3, Experience 2, there is a section dedicated to revisiting the anchoring phenomenon. This section provides guidance for teachers to review and respond to student data, particularly the assessment results related to orbital motion.
- At the end of each Experience, there is a section called Revisit Anchor Phenomenon. This section offers various activities related to the anchoring phenomenon of the unit. Students can utilize these activities to reinforce the concepts if the assessment results indicate a need for further support. For example, in Investigation 1, Experience 1, one recommendation is for students to construct a model that represents the phenomenon.
- Investigation 10, Experience 3, provides remediation steps for topics that students did not meet and activities for students to go back to as a reteach. For example, if students struggle with understanding whether EM radiation will cause heating or ionization in a molecule or cell, have them do a pHet simulation on Light and Molecule interactions.

# Savvas Learning Texas Experience Physics

## Indicator 6.3

Assessments are clear and easy to understand.

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

## Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The performance assessments are also scientifically accurate and free from bias and errors. For example, "Build and Test an Electroscope" contains no errors, accurately represents Coulomb's law, and is free from bias.
- Assessments consist of grade-level or course-specific items that are error-free. For instance, during my review of Investigation 7 Evaluation on collisions, all questions are grammatically correct, concepts accurately presented, and the grading is flawless. No errors were observed.
- The assessment on acceleration has questions that are scientifically accurate and, in this case, use velocity over time graphs to not only practice the material but also practice graph reading skills at the same time. Investigation 1 Experience 2 Quiz question 1 has answer choices where students are tasked to describe motion based on the graphs.
- Assessments contain items for the course that are scientifically accurate.For example, in Investigation 5, Experience 2 Inducing Magnetism Quiz, the test charge will experience a force from the particle with charge Q. The charge Q exerts a force on the area around it as a magnetic field. The magnitude of the particle with charge Q determines the strength of the magnetic field.

# Savvas Learning Texas Experience Physics

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

- The assessment tools incorporate developmentally appropriate, clear pictures and graphics. For example, in the quiz for Investigation 4, Experience 2, Question 3, two charges are depicted, and students are asked to determine the force between them using Coulomb's law.
- Assessment tools use clear pictures and graphics. For example, in Question 2 of Investigation 7 digital evaluation, there is a clear black and white photo illustrating the question; a group of students is tasked with creating an apparatus that can protect a plum, an oval-shaped fruit that is slightly heavier than a large egg, from breaking when dropped from a great height. A firefighter is dropping a plum onto the pavement from the ladder of a firetruck. It is the student's task to devise a device that will protect the plum and prevent it from breaking. The firefighter, plum, fire truck, pavement, and other nouns are clearly represented in the graphic.
- The assessment on Electrical Forces includes diagrams of various electrical fields and a drawing depicting the charges associated with a thunderstorm and how these charges lead to lightning.
- Materials provide clear images for assessments. For example, Investigation 9, Experience 2 Quiz: Wave Behavior and Sound has clear images of wave heights for the amplitude of sound waves.

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

- Materials provide guidance to ensure consistent and accurate administration of assessment tools. Each Investigation includes details on every assessment item and its integration into the course. For example, Investigation 1 includes information about the investigation test, its intended use, summative assessment, recommended class time for the test, and the location of relevant documents.
- Materials provide clear guidance for teachers to consistently and accurately administer assessment tools. For example, the PBA Build Your Own Egg Transport Vehicle includes information to increase the probability of success, mastery, and organization with this project. Some of the suggested information includes group size of 2-3 students, safety, duration of 2 class periods, and advanced preparation, including a. The ceiling hooks are weighted to hold 5–10 pounds. Extra ceiling hooks are included in the kit. b. Securely attach one piece of nylon string to each ceiling hook, and c. Cut the nylon string so that it is 1 meter above the ground. Teaching tips and sample solutions are also included.
- The Getting Started with Texas Experience Physics page has multiple links. Specifically, the Realize Assessment and Data Support gives guidance on how to build a test and how to use test banks with videos on how to assess data and class mastery for individual students broken down by the corresponding TEKS.
- Materials provide a rubric for open-ended quiz answers to ensure consistent grading in replies for assessments. For example, Investigation 7, Experience 1 Answer Key revealed: "Since the balloon had the same change in momentum when it was tossed both times, it had the same impulse. When an object experiences an impulse, a force is exerted over a period of time. Student B's approach to catching the balloon increased the amount of time it took for the balloon to change its momentum. By increasing the amount of time it took to change the balloon's momentum, the average force on the balloon decreased. If Student A increases the amount of time it takes to catch the balloon and change its momentum, the average force on the balloon will decrease. Rubric:1 pt: Student states the balloon in Student B's hand experienced a lower average force because the amount of time it took for the balloon to change its momentum was increased by cradling the balloon.1 pt: Student states Student A must

increase the amount of time it takes for the change of momentum in order to decrease the amount of force and prevent the balloon from popping."

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

- Materials include guidance to offer accommodations for assessment tools that allow students to demonstrate mastery of knowledge and skills aligned to learning goals. For example, Experience 1 includes accommodations, which can be found under the remediation suggestions section in the Experience Assessment.
- The materials provide accommodations for assessment tools, ensuring that students of all abilities can demonstrate mastery of learning goals. For example, the web-based assessment platform provides a text-to-speech feature, allowing students to hover over the speaker icon, have the text converted into digital speech, and have the platform read aloud to them.
- The assessments, such as editable investigation test: collisions, are all set up in Google Docs, which can be edited to offer accommodations to the test while still allowing students to demonstrate mastery of the skills.
- Materials provide for differentiated learning to demonstrate mastery of material. Investigation 3, Experience 1 Gravitational forces provides an Assess on the Spot where a level, less proficient, and advanced set of questions are provided. Advanced students are assigned values in order to calculate the force of gravity acting between spheres.

# Savvas Learning Texas Experience Physics

## 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 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 mastery.

- The materials offer support for teachers in scaffolding instruction and tailoring activities to meet the needs of students who have not yet mastered the content. The Teacher's Guide offers recommendations for classroom modifications, including ideas for small group instruction and providing math and ELPS (English Language Proficiency Standards) support to students. Investigation 6 provides an example of this by suggesting modifications such as having students physically experience different springs to enhance their understanding of the spring constant. Furthermore, the materials provide guidance on differentiating the explanation of kinetic energy to accommodate diverse learners.
- Materials provide a Vocabulary Support section for students to collaborate and communicate with each other to understand the topics. Specifically, the teacher textbook offers recommendations for supporting students who have not yet achieved mastery. In the explore section of Experience 2, there is a detailed description of how teachers can assist struggling students, less proficient readers, ELL students, and other student groups.
- The teacher guidebook includes various sections that address the needs of struggling students. These sections, such as Differentiated Instruction, provide strategies for meeting the needs of both advanced and special education students.

Materials provide enrichment activities for all levels of learners.

- The materials offer enrichment activities that are designed to accommodate different skill levels and interests. For instance, in Investigation 5, Experience 2, students engage in inquiry labs focused on electromagnets and magnetism. The labs are available in different formats, including

open inquiry, guided inquiry, shortened inquiry, and advanced inquiry, allowing students to choose the level of inquiry that best suits their needs and abilities.

- The materials include a dedicated section on supporting advanced students, addressing their unique requirements. Additionally, there is a wide range of labs available, catering to different levels of proficiency. For instance, students can engage in inquiry labs, engineering labs, and CER (Claim-Evidence-Reasoning) labs.
- The Experience Planner provides a list of core activities and additional enrichment activities. The core activities are the primary focus for each experience, ensuring comprehensive coverage of the content. Additionally, the materials provide a selection of enrichment activities that can be utilized during spare time or to provide further enrichment for students. For example, Investigation 4, Experience 2 provides an extension via the Integrate Other Domains section about electric eels to gather more information for electric fields.

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

- The lessons incorporate scaffolds to facilitate just-in-time learning. In Investigation 3, the topic of the cause of the seasons is introduced through a guided discussion. The teacher guide suggests that if students encounter difficulty in providing an answer, they should reflect on the previous video to help generate an explanation. The teacher's guide includes a section labeled "Remediation Suggestions" that offers guidance on supporting students based on their current progress. These suggestions are designed to help students move forward from their current point of understanding by providing targeted recommendations and strategies.
- The materials incorporate advanced resources, including online materials, that offer comprehensive coverage of the subject matter within each lesson. These resources support self-paced learning, enabling students to allocate more time to challenging topics and less time to familiar ones. Each lesson plan includes a Fast Track section, indicating core activities with a checkmark, and a Got More Time section, providing additional activities.

# Savvas Learning Texas Experience Physics

## Indicator 7.2

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

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

## Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The course materials follow the organization of the 5E model, providing a structured framework for each lesson. Furthermore, each Investigation centers around an anchoring phenomenon that sets the context for the exploration. For instance, in Investigation 1, the anchoring phenomenon revolves around mysterious rocks that move across the desert.
- The materials employ diverse instructional approaches, including demonstrations, videos, inquiry labs, and the use of anchoring phenomena to facilitate student mastery of the content. In the work/energy section, students are exposed to a video showcasing a bungee jumper, engaging them in a real-world application of the concept. The materials include an inquiry lab investigating the impact of position on energy and engaging in the creation of a roller coaster.
- The Experiences include labs that are designed with varying levels of difficulty and support to cater to the student's level of mastery of the material. This allows the teacher to select and provide appropriate lab experiences based on the student's individual needs and readiness. Experiences incorporate a variety of activities, including videos, Claim-Evidence-Reasoning (CER) activities, and inquiry labs, to actively engage students in the learning process.

# Savvas Learning Texas Experience Physics

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

- The materials provide support for different instructional groupings, including whole group, small group, partner, and one-on-one settings. For instance, the work/energy lesson begins with a whole group demonstration, followed by individual work where students answer questions in their digital notebooks. Additionally, the roller coaster lab is assigned for students to collaborate in groups of 3 or 4. The materials also offer guidance on how to differentiate instruction for both advanced and struggling students, providing suggestions for the teacher to meet the diverse needs of learners.
- Several Experiences within the materials incorporate a range of instructional groupings, often initiating with whole group instruction and transitioning to small groups and partner work as students engage in problem-solving activities. For example, in Investigation 10, Experience 1, the instructional approach begins with a whole group exploration of Everyday Phenomenon, followed by collaborative inquiry activities in pairs or small groups. Additionally, individual Assess on the Spot assessments are integrated throughout the Experience.

## 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 support for various types of practice. The Explorations offer opportunities for modeled problem-solving, guided problem-solving, and independent problem-solving activities. For instance, in Investigation 1 Exploration 1, there are six distinct problem sets that cater to different levels of practice. In the work/energy section, the teacher demonstrates problem-solving techniques for work problems, guiding the students in their own problem-solving process. Additionally, during the roller coaster lab, students engage in collaborative work to ensure successful outcomes.
- In Investigation 10, Experience 1, students engage in guided, collaborative, and independent practice. The experience begins with a demonstration of an Everyday Phenomenon, followed by collaborative work in an inquiry lab. Furthermore, students participate in whole group instruction followed by Assess as You Go sections. Students then complete an Assess on the Spot activity individually before transitioning to further collaborative assignments. These sections provide opportunities for independent practice and formative assessment as students progress through the material.

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

- The images throughout the book are inclusive and respectful. They consist of diverse drawings representing a variety of people, as well as images of animals and non-living things. For example, in the Texas Connection titled “How can Texas Prevent Blackouts?” there is a picture of a snowy neighborhood in Texas with a male walking down the street. In the presentation for Circular and Projectile Motion, the materials use several avatars; however, they depict a dark-skinned male skater, two females with light and dark skin throwing projectiles, and another female avatar with dark skin demonstrating circular motion.
- The student book and assessments avoid using specific names and instead use generic terms like "you," "the student," and "your teacher." For instance, problem 60 in Investigation 1, Experience 3 starts with the statement, "A friend kicks a soccer ball...". In another example, the Investigation Test: Work and Energy uses the wording “The child” in Question 1 and “A Worker” in Question 7.

# Savvas Learning Texas Experience Physics

- The materials include diversity in information about people through their scientist biographies. For example, in the Program Resources icon, the materials include biographies of diverse scientists such as Mario Molina, the first Mexican-born scientist to receive a Nobel Prize in chemistry, and Manu Prakash, a bioengineer from India with more than 30 patents.
- The materials include diversity in images and information about people. For example, in the Introduction to Science and Engineering, Experience 1 lesson in the digital course includes images and passages about diverse scientists such as Black scientists Frederick McKinley Jones, “a self-taught mechanic and engineer.” and Jeramie Strickland, who “co-developed the nationally recognized Turtle Camp Research and Education in Ecology Program for students, primarily from urban areas and underrepresented groups.”
- Diversity in images and videos can be found throughout the materials. For example, the videos in many of the careers featured throughout the course include names such as Ariana Hernandez and Guadalupe Ruiz (INV2 Forest and Conservation Worker), Oleg Kononenko and Raffi Kuyumjian (INV3 Astronaut), Monica Dujic (INV7 Aerospace Engineer), and Reginald DesRoches (INV9 Civil Engineer).

# Savvas Learning Texas Experience Physics

## Indicator 7.3

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

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

Evidence includes but is not limited to:

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

- The materials provide linguistic accommodations suitable for different levels of English language proficiency, as outlined by the ELPS. For example, in Investigation 1, Experience 1, teacher instructions incorporate targeted ELL support for speaking and listening at various levels: beginning, intermediate, advanced, and advanced high. As an example, the intermediate level for listening includes the use of sentence frames.
- The materials include linguistic accommodations that are commensurate with various levels of English language proficiency as defined by the ELPS. For example, in Investigation 6 on Work and Energy, vocabulary strategies are provided to support English learners. Additionally, in the explain section in the eText, the materials provide the following guidance for supporting the ELPS: "With a partner, look ahead and read the headings and highlighted terms of this experience. Draw a table in your notebook to summarize the important information. Discuss what headings to use and what information you will need in order to fill in the rest of the table."
- In the various Experiences, there are sections labeled as Vocabulary Support that provide ideas to assist students in learning concepts. For example, Investigation 1 Experience 1 suggests using sticky notes and a poster to create a concept map for the vocabulary. Also, the Investigation 6, Experience 1 ELPS section provides sentence stems for students ranging from Beginner to Advanced High, i.e., Beginner Level: Have the beginning students use the following sentence frames to explain what they heard: "I wanted to know about____. You said ____ was. I did not hear you talk about____."; Intermediate Level: Have student pairs take turns using the three

terms in sentences, using what they know about work, energy, and power to complete the following sentence stems, “I think ____ is _____. I can use the term ____ when ____.”

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 and academic development in English. In Investigation 1 Experience 1, it is suggested to group students with the same language together to facilitate content discussions. In Investigation 3 Experience 1, students are directed to “use accessible language and learn new and essential language in the process.” Have students work in pairs using root words, suffixes, or words they already know before having students write a brief summary of the vocabulary.
- In the vocabulary support section of the various Experiences, there is a specific subsection titled "Support English Learners." Investigation 1 Experience 1 recommends grouping students with the same first language together, enabling them to utilize an online translator and subsequently share a vocabulary list in their native language.
- In Investigation 6 Experience 1, there is a direct YouTube video that serves as an explanatory resource, offering a visual representation to help build vocabulary. The video is closed-captioned, allowing for its use in multiple languages.

# Savvas Learning Texas Experience Physics

## Indicator 7.4

Materials provide guidance on fostering connections between home and school.

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

## Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- Materials provide information to share with students and caregivers about the design of the program. Each Investigation includes a letter home that explains the organization and content of the Investigation. For example, the Investigation 6 Letter Home: Work and Energy provides details about Investigation 6 and how it addresses the work and energy TEKS. The Investigation 8 Letter Home: Electricity and Circuits outlines the key aspects of the unit and offers suggestions for caregivers to support the student's success in the unit.
- The letters home assist parents in understanding these phenomena by engaging in scientific investigation, communication, and critical thinking. It encourages students and caregivers to actively observe phenomena in their everyday environment and ask questions about them there. For example, in the Investigation Letter Home: Waves, Sound, and Light, the following statements are bulleted: “Look through recently completed lessons and be sure to ask lots of questions. One of the best ways for students to reinforce their learning is to have them explain it to someone else. Ask about homework assignments and check that they have completed them. Help your student collect materials and information for school activities and assignments.”
- In addition to the letters home, many lessons include embedded communication through the teacher and home. For instance, Investigation 1, Experience 3 provides an Online Practice set for circular and projectile motion as an extension to be completed at home.

# Savvas Learning Texas Experience Physics

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

- The course letter home provides information guiding caregivers in helping their students succeed in the course. For example, it suggests parents and caregivers ask lots of questions about the class to help students retain what they have learned. For example, in Magnetic Forces, Investigation 5, the School to Home Letter suggests caregivers to review completed lessons and ask plenty of questions. It emphasizes that explaining concepts to someone else is an effective way for students to reinforce their learning. The letter also encourages caregivers to help students observe phenomena in their daily surroundings and inquire about them.
- In each investigation, there is a resource called Hook & Inspire, which provides materials for students and caregivers to deepen their understanding of the subjects taught in class. For example, the document "Hook & Inspire! Educational Resources: Modeling Motion'' provides a variety of videos, animations, math supports, and activities for students and their families to explore.
- The materials provide ideas for hands-on experiences at home to help reinforce concepts. For example, in Investigation 6, Experience 3, materials have suggestions for students with access to a swing outside of school to better understand the conservation of energy.

## Materials include information to guide teacher communications with caregivers.

- The materials include a Teacher-Caregiver Communication Guide, which offers suggestions for various types of communication, including the Investigation Letter Home. For example, the first suggestion states, “Use the following strategies to optimize your communication with caregivers: 1. Share the course School to Home Letter at the beginning of the school year. This letter contains an overview of the content that will be covered throughout the course of the year, and it describes the design of the program and the importance of phenomena-based 5E science instruction. It also includes some general ways in which caregivers can support students throughout the year.”
- Materials include guidance on communicating with caregivers and students who may speak another language. For example, the Communication Guide states, “Encourage students to share what they learn at school with their caregivers in their own words and, if relevant, in their first language!”
- The materials provide an Investigation Assessment for each investigation, which includes questions categorized by TEK to identify strengths and weaknesses in terms of accuracy. This information can be effectively communicated to parents regarding their student's mastery. Additionally, teachers can use the guidance materials to send home report cards, explaining how they provide support and differentiation to facilitate student learning after major assessments. These report cards offer a concise overview of the current progress.

# Savvas Learning Texas Experience Physics

## 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 and scientific and engineering practices. | 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 into the course materials. Materials provide clear teacher guidance for facilitating student-made connections across core concepts and scientific and engineering practices. Materials provide review and practice of knowledge and skills spiraled throughout the year to support mastery and retention.

Evidence includes but is not limited to:

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

- The materials include a cohesive scope and sequence that shows how the science TEKS are addressed over the course of the entire year. The Course Planner and Pacing Guide contains each investigation, the order in which each investigation is covered, and the class periods required for each experience. For example, Investigation 4, Electric Forces, has three different Experiences with the TEKS and SEPs listed for each Experience. The Investigation should take a total of 18 class periods to fully implement based on the Pacing Guide.
- The TEKS addressed in each part of the scope and sequence are identified and correlated to their respective content. For example, Investigation 6 is designed to take 16 class periods. It starts the Investigation with the anchoring phenomenon of a bouncing bungee jumper. Experience 1 covers the classification of energy and work, including TEKS 7A and B and SEP 1F, 2C, 3C, and 4A. The following experience and other investigations are represented in a similar manner.
- The materials contain a TEKS Physics Correlation chart that lists all of the TEKS and where they can be found within the materials. For example, TEKS 6A can be found in the following locations in the materials: SE: 4-1 (pp. 144–158, 183) Inquiry Labs: 4-1 TG: 4-1 (pp. 84–89) Answer Key: 4-1 Inquiry Lab Teacher Support: 4-1.

# Savvas Learning Texas Experience Physics

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

- The materials provide teacher clarity in helping students understand how activities and experiences connect concepts and scientific and engineering practices.
- The Pacing Guide provides examples of questions for student-made connections, such as “How did this rock move across the valley? How can we sustainably generate electrical energy?”
- Each of the different investigations in the resource comes with an Editable Experience Planner located in the Teacher Support tab. The planner provides guidance using the 5E method that facilitates connections to the concepts and lab activities that encourage a connection to the scientific and engineering practices. For example, the modeling motion planner includes instruction on anchoring phenomena.

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

- Instructional materials provide review and practice of knowledge through Revisiting Anchoring Phenomenon to support mastery and retention of concepts within each chapter. For example, Investigation 5, Magnetic Forces utilizes the following anchoring phenomena “How does this egg cook if the stove does not get hot?” At the end of the Experience, the Revisit Anchoring Phenomenon gives four writing prompts that revisit the investigative question based on what they have learned in the experience such as “An induction stove is an electrical device that generates a magnetic field to heat a pan. How do you think this magnetic field is generated? Sketch a model by hand or computer.”
- The materials include intentional practice and spiraling of previously taught knowledge and skills from earlier lessons/grade levels and current lessons’ science knowledge and skills. The Course Planner and Pacing Guide clearly shows the TEKS addressed in each Investigation. For example, TEKS 5F appears in both Investigations 2 and 3, TEKS 6B appears in Investigations 4 and 5, and TEKS 1-4 appears continuously throughout Investigations 1-6.
- The materials allow for easy editing of assessments to spiral in knowledge and skills throughout the year. For example, each Experience contains an editable and printable quiz that assesses mastery of concepts presented in the lesson. The quizzes contain five questions, and the teacher can edit each quiz to add questions from any other Experience or TEKS.

# Savvas Learning Texas Experience Physics

## Indicator 8.2

Materials include classroom implementation support for teachers and administrators.

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

## Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- Within each unit, there is a link to a unit-specific page that provides guidance and recommendations for utilizing the materials. For example, in the Collisions Unit, the real-world momentum section has a link to a 5E plan for implementation. Each "E" in the plan offers guidance for that particular section of the unit.
- The materials provide comprehensive overview documents to assist teachers in understanding the usage of all the materials. The Getting Started with Texas Experience Physics Teacher Support section includes a dedicated My Savvas Training tab.
- In the early sections of the teacher guide, there is a comprehensive overview that showcases the scaffolding of scientific and engineering practices, enrichment activities, and hands-on investigations. This section includes brief explanations on how to effectively utilize them.
- The materials offer the Fast Track Guide for direct instruction in each lesson, providing a concise and efficient pathway. Additionally, there are extensions available such as Got More Time, which empower students to take ownership of their learning.

# Savvas Learning Texas Experience Physics

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

- The TEKS Physics correlation chart shows each standard along with the corresponding activities and materials to facilitate easy reference and alignment. It indicates the specific locations relating to the standards in both the teacher and student editions of the materials.
- The materials include lessons that establish connections between various physics topics and engineering, offering project-based activities for each unit.
- In the teacher guide, each investigation is accompanied by an overview page that provides information regarding standards and cross-content correlations. This includes the TEKS progressions for vertical alignment, the specific TEKS addressed by the investigation, the English Language Proficiency standards, and the College and Career Readiness Standards relevant to the current investigation.
- The Cross-Content Standards Correlation Chart lists the TEKS Algebra I and English I correlations to Savvas Texas Experience Physics activities.
- The materials incorporate science standards correlations specifically aligned with the TEKS. Additionally, math skills are reinforced through the inclusion of math tutorial videos, fostering cross-content correlations. Digital notebooks offer writing experiences for students.

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

- The resource includes a document known as the Texas Physics Master Materials List for Lab Activities, which provides a comprehensive list of all the materials required for each lab in the resource. The document lists the supplies, the activity, the quantity, and the use of the materials.
- The list of all materials is provided at the beginning of each experience. For example, in the inquiry lab, Model Projectile Motion, 15 materials needed for each group are listed, such as steel balls, clamp holders, and meter sticks.

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

- The materials include grade-appropriate safety videos that cover various laboratory situations.
- The materials include teacher guidance on safety practices and the appropriate use of safety equipment during investigations, adhering to the Texas Education Agency Science Safety Standards. Detailed safety information is provided at the beginning of each lab, ensuring a secure learning environment for students.
- The teacher guide contains a dedicated two-page section on lab safety, addressing specific hazards commonly encountered in a physics lab. This comprehensive section covers various topics, including electrical hazards, vacuum and pressure hazards, magnet safety, projectiles, and other mechanical hazards.
- At the beginning of each activity, safety procedures are clearly listed in bold font, ensuring their visibility and emphasizing their importance. Additionally, there is a dedicated section in the resource specifically focused on lab safety. This section provides comprehensive instructions for various situations that may arise during laboratory experiments.

# Savvas Learning Texas Experience Physics

## Indicator 8.3

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

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

## Meets | Score 2/2

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

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

Evidence includes but is not limited to:

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

- The materials include a pacing guide and an editable planner for each unit that provides recommended timeframes for lessons and activities. Additionally, each lab includes the duration of time specified at the beginning, allowing teachers to effectively allocate time for hands-on experiments and investigations. For example, the activity planner for Displacement and Velocity lists a total amount of time for the section as 4.5 Periods and has a total amount of time for the core assets of only 120 minutes, totaling around 27 minutes of instructional time per class period.
- The materials offer a clear timeline and sequential order for teaching various concepts, starting from the introduction of motion to non-linear motion and forces. An investigation planner is provided, outlining lessons along with the recommended number of periods needed for each topic, such as Universal Gravitation (5 periods), Orbital Motion (4.5 periods), etc.
- The materials provide flexibility in terms of activity duration, allowing teachers to adjust the length as needed while ensuring effective learning experiences.

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

- The course planner and pacing guide provide a well-structured order for instruction that maintains the necessary sequence of content. This ensures that the topics are taught in a specific order, following a developmental progression that supports effective learning. The

materials prioritize the instructional sequence, allowing teachers to deliver content that aligns with the natural progression of concepts and fosters student understanding and mastery.

- The units are thoughtfully structured to follow a developmental progression, where foundational concepts like one-dimensional motion are introduced before moving on to more advanced topics like two-dimensional motion.
- The units within this resource are thoughtfully designed to promote a sequential and progressive learning experience. Each unit builds upon the knowledge and skills acquired in previous sections, fostering a cohesive and interconnected learning journey. For example, in Investigation 1, the class starts by exploring displacement and velocity, then progresses to acceleration, and ultimately delves into circular and projectile motion. This intentional progression allows students to build upon their understanding and competencies, ensuring a solid foundation for each subsequent topic within the unit.

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

- The course planner and pacing guide incorporate helpful features such as the Fast Track and Got More Time options, allowing flexibility to adjust for slower or faster pacing.
- The Experience Planner allows teachers to customize and adapt the materials to ensure that the content can be effectively covered within the allocated time frame specified in the scope and sequence. It offers a flexible approach that allows teachers to select and adjust the materials based on their instructional needs and the available time. By using the Experience Planner, teachers can optimize the use of instructional resources and ensure that the desired learning outcomes are achieved within the designated time frame.

The materials provide flexibility for each topic based on equipment available and time constraints. Each investigation has the option to shorten or lengthen lessons.

# Savvas Learning Texas Experience Physics

## Indicator 9.1

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

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

## Not Scored

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

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

Evidence includes but is not limited to:

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

- Materials include an appropriate amount of white space and a design that supports and does not distract from student learning. The text, Investigation 4, provides an exemplary amount of whitespace.
- The digital materials include an appropriate amount of white space and overall design that does not distract from student learning. For example, student materials include the following: A clear main subject, topic, or purpose in larger font. Vocabulary is in blue font. The content is organized in a logical progression with a conceptual explanation of the topic before math problems.Ancillary student materials, such as glossaries and tools, are easy to find and/or access.There is a blue text box with a white font spelling notebook identifying the student's digital notebook where the student can solve problems, take notes, etc., while reading digital text.
- In the digital version of the student textbook for the resource, the text and pictures are centered in the middle of the page, with whitespace on either side.
- Materials have ample amounts of white space that makes the source clear and easy to read. A planner is provided with all available assignments broken down by Investigation (Unit) and Experience (Lesson) in bold letters. Investigation 7 Planner on Collisions is divided into three different Experiences: 1. Momentum and Impulse, 2. Conservation of Momentum, and 3.Real World Momentum, with each section having clear delineation from one another.

# Savvas Learning Texas Experience Physics

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

- Materials embed age-appropriate pictures and graphics that support student learning and engagement without being visually distracting. In Investigation 4, Experience 1, the text features an engaging and informative graphic of a Bohr model atom.
- The materials include age-appropriate pictures and graphics that support student learning and engagement. For example in Investigation 1, Experience 2, acceleration is introduced using acceleration graphs, and the concept of dinosaur acceleration is discussed. On the following page, there is a picture of a skateboarder descending an incline.
- In the digital version of the student textbook, pictures are positioned at the center of the text box or the page, with text placed either above or below. However, the captions and explanations are included with the pictures. This layout choice eliminates text being placed around pictures, which can be distracting for certain students. For example, in Experience 3, Forces on Systems, after a paragraph of text, there is some whitespace followed by an image caption, then the image of an elevator, and finally more whitespace followed by a guiding question.
- Materials provide age-appropriate images. For instance, Investigation 8 Experience 2 has an Inquiry Lab, Energy Transmission in Circuits, with series and parallel circuits, including images of a battery with multiple resistors.

## Materials include digital components that are free of technical errors.

- The materials include digital components that are free of technical errors. Investigation 1, Experience 2 explains velocity as the slope of a position time graph, is error-free, with no spelling or grammar mistakes.
- Materials are free of inaccurate content materials or information. Investigation 6, Experiences 2 included accurate and clear content for mechanical, work, and kinetic energy. For example, a bow string being pulled back as an example of potential energy.
- The home page for this resource is designed to provide easy access to all the various components through various links to documents and other resources for support. For example, all of the links found on the home page work correctly and direct the user to Activities, Teacher Support, Presentations, Assessments, Practice, Hands-On Labs, and many other components.
- Materials are free of technical errors. For instance, Investigation 10, Experience 3 provides clear explanations for how electromagnetic radiation and matter interact with each other, specifically giving an explanation for opacity, i.e., "Students might assume that opacity is only the result of light, not light absorption."

# Savvas Learning Texas Experience Physics

## 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 and course-specific 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 and course-specific 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 materials include a variety of videos, simulations, and other tools. For example, Investigation 2, Experience 2 includes six videos, three links to online text, and an online simulation.
- The materials integrate digital technology and tools that support student learning and engagement. For example, in Investigation 1 Modeling Motion, the student digital components include a note-taking feature that appears after an SEP (Science and Engineering Practice) question is presented at the bottom of the page. The digital notebook icon, represented by a blue rectangular box with white font spelling "notebook," allows students to translate the question into various languages, ranging from Korean to Sudanese. Furthermore, students have access to annotations and highlighting features to enhance their interaction with the content.
- The Engineering Workbench section comprises 15 projects, each accompanied by a student workbook utilizing Google Docs. Students can utilize digital tools while working through the assignments. Additionally, there is a teacher guide provided to offer support and facilitate student learning throughout the projects.
- The materials integrate digital technology and tools that support student learning and engagement. For example, Investigation 4, Experience 1: Coulomb's Law offers students digital

components that include embedded tools such as note-taking, variable font size, and highlighting.

Materials integrate digital technology in ways that support student engagement with the science and engineering practices and course-specific content.

- Materials integrate digital technology in ways that support student engagement with the science and engineering practices and course-specific content. For example, For instance, the PhET simulations used throughout the materials significantly support student engagement. In Investigation 9, Experience 3, students utilize a PhET simulation on wave optics and light. This activity prompts them to develop a model of the index of refraction and conduct an investigation into reflection.
- The materials integrate digital technology in ways that support student engagement with the science and engineering practices and course-specific content through providing interactive simulations and models for students to explore scientific and engineering practices in a virtual environment. For example, in Investigation 8 on Electricity and Circuits, students encounter Junkyard Electromagnet activity. Through this interactive simulation, students are encouraged to design a magnet that meets specific criteria, balancing cost-effectiveness and magnetic strength to lift a predetermined mass.
- The materials include 10 virtual labs, such as the Investigation 1 Evaluations's Motion virtual lab Pba: Coin Drop, to actively engage students with the science and engineering practices and course-specific content of freefall motion with and without a parachute from the heights of different famous monuments. For this particular investigation, the students are using models, analyzing and interpreting data, and using mathematics and computational thinking.
- The materials integrate digital technology in ways that support student engagement with the science and engineering practices and course-specific content. For example, in Investigation 9 in Hook and Inspire, there are digital activities such as the Falstad Ripple Tank Simulation, which allows students to manipulate a simulated ripple tank by changing variables about the waves as well as the characteristics of the tank itself. The students are able to make conclusions based on the evidence gathered. There are also videos such as The Tacoma Narrows Bridge Collapse, which was once thought to have been caused by resonance and constructive interference which is a classic example of when SEPs were not implemented.

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

- The materials integrate digital technology that provides opportunities for students to collaborate. For example, the interface connects to pre-existing web-based communication such as Schoology, Canvas, Google Classroom, Blackboard, etc., to work on assignments together. Specifically, Schoology allows for students to collaborate on assignments and projects remotely.
- On the Getting Started with Texas Experience Physics page, there is a document titled "Support for Collaborative Tools in Realize." This document provides teachers with information about the various collaborative tools available in the resource that can be used to facilitate group work and collaboration among students. For example, in the Discussion Prompts section, it describes how the teacher can start an active online discussion with a class where the students can collaborate if they choose. The document states, "Discussions on the Savvas Realize LMS enable

the teacher to facilitate class and group discussions on important academic and social topics. Students can reflect on learning, share ideas and opinions, or ask and answer questions."

- The materials integrate digital technology that provides opportunities for teachers and students to collaborate. For example, teachers can grade assignments and provide digital comments to students. Students have the ability to view the teacher's feedback, make necessary changes, and resubmit their assignments.
- The materials integrate digital technology that provides opportunities for teachers and/or students to collaborate. The materials are designed to be used within Google Classroom, where the teacher can create and distribute group assignments, assign roles and responsibilities, monitor progress, and grade the final product. The comment feature within Classroom can be used to provide feedback and guidance to each group, or the teacher can use the private comment feature to communicate with individual students.

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

- Materials integrate digital technology that is compatible with a variety of learning management systems. The materials are compatible with Google Classroom.
- The assignments in this resource are primarily conducted on Google Docs, making them compatible with all major operating systems and accessible on various phone-based systems.
- Digital materials are accessible and compatible with multiple operating systems, devices, and tools. For example, The materials can be used with Canvas, Schoology, and Blackboard. The materials are accessible and compatible with Chromebooks, PCs, and smartphones with internet access.

# Savvas Learning Texas Experience Physics

## Indicator 9.3

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

| | | |
|---|---|---|
| 1 | Digital technology and online components are developmentally appropriate for the course 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 course-appropriate and provide support for learning.

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

- Digital technology and online components are developmentally appropriate for the course and align with the scope and approach to science knowledge and skills progression. Investigation 1, Experience 3 includes a lab explanation video describing projectile motion. This video is developmentally appropriate and aligns with the scope approach.
- Materials provide information that identifies how online and digital components align with science knowledge and skills. The materials provide related TEKS, SEPs, and ELPS for online and digital components within the Teacher’s Guide. For example, in Investigation 1 Modeling Motion, states 5A, 5B, 5C, and 5D are covered, 6th, 7th, and 8th-grade related TEKS are written, and SEP 1G and 2C and ELPS 2I, 3B, 3H, 4F and 4G are covered.
- The resource provides a page called "Hook and Inspire" for each unit, offering an array of digital educational resources. For instance, in the collisions unit, students can access six diverse digital lab activities, six animations, two math help resources, and six videos. These resources are carefully aligned with the unit's scope.
- The digital technology and online components are aligned with the course scope and approach to science knowledge and skills progression. For example, The Teacher's Guide Investigation 7 Overview provides related TEKS 7D and 7E, SEPs 1F and 1G, and ELPS 2D 3D and 4F for online and digital components.

# Savvas Learning Texas Experience Physics

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

- The materials provide guidance for how to use the embedded materials. For example, Investigation 5, Experience 2 provides information for how to conduct a PhET lab on magnetic fields with step-by-step instructions for conducting the assignment.
- Each of the Virtual Labs in the resource is accompanied by a document like the "Virtual Lab Teacher Support: Sliding Down." These documents provide teachers with detailed guidance on how to run and operate the virtual labs effectively. Additionally, they include sample answers to assist teachers in understanding the expected outcomes and how to evaluate student responses accurately.
- The materials provide clear instructions and tutorials within the teacher platform, such as the Savvas Realize digital user guide. This comprehensive guide provides step-by-step explanations, ranging from setting up classes to navigating different components within the platform. Additionally, the guide includes information on accessing Help and Support Resources.
- The materials provide teacher guidance for utilizing embedded technology to support and enhance student learning. For instance, in Investigation 5, Encounter, specific instructions are provided on how to effectively use a video during instruction. The guidance advises when to have students watch the video and includes questions to help tie the video to other activities, ensuring a seamless integration of the video content with the overall learning experience.

## 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 each Investigation, there are letters home that describe the content and outline what parents can expect from their students. The letters also serve as reminders, informing parents that they can follow along and view the materials online through the student account.
- Materials provide a letter with tips for families for how to support appropriate student engagement with digital and online components. For example, in the first letter sent to the caregivers, it is stated towards the end of the letter, "This course is accompanied by a variety of online activities, such as videos, animations, and virtual labs. If you do not have a home computer, advise your student to use computers, tablets, or other devices in school or at the library. If you do have a home computer, help your student learn to complete assignments, collaborate with peers, and do research online."
- The materials provide for multiple devices to use the same student login so that caregivers have access to all the materials students have. For example, with the student's login, parents can read ahead in the online text to assist student learning.