McGraw Hill Texas Physics

McGraw Hill Texas 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.

McGraw Hill Texas Physics

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.

McGraw Hill Texas 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.

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 provide multiple opportunities to develop grade-level appropriate scientific and engineering practices, as outlined in the TEKS Correlation document. For example, in the lab titled Constant Speed, students predict and measure the time required for an object moving at a constant speed to reach selected positions and evaluate their predictions.
- In Chapter 1: Introduction to Physics, teachers administer pre-tests to assess student knowledge of previous TEKS. For example, in the Chapter Launch section, there is a pre-test and guidance for the teacher to reteach and help students master the topic of data collection.
- At the beginning of Chapter 4: Forces in One Dimension, there is a list of labs, assignments, and assessments for the entire unit. There are also exit tickets and lesson quizzes for each lesson listed in the chapter; there are 4 for this chapter. Also, in Chapter 7: Gravitation, Lesson 1: Planetary Motion, a sample 5E lesson shows how the lesson builds from the Engage activity and essential question to the Explore, Explain, Elaborate, and Evaluate sections. Each piece adds another area of practice and a chance to show mastery.

- Chapter 24 Planning and Support exhibits scientific and engineering practices in the Physics lab: Swinging Coils. Lesson 2, Explaining Induced Currents, emphasizes the knowledge of Lenz's Law, eddy currents, self-inductance, and transformers and serves as the prerequisite to the lab.

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 TEKS Progression chart and the Reteaching TEKS show reinforcement for prior TEKS 7.7B and TEKS 5.C. All activities in the Lesson Overview strategically and systematically develop the students' content knowledge. For example, Chapter 2: Representing Motion illustrates and depicts the development of students' knowledge in the Engage portion of the lesson with the 5E Model. In the section, the three predetermined activities increase in rigor and introduce prior TEKS by speaking, interactive technology-based activities, and hands-on work.
- The materials provide teacher support designed to guide teachers through the development of content and skills with the "Teaching Lesson with 5E Options." For example, the 5E option guides teachers through the lesson on Nuclear Decay and Reactions by activating prior knowledge in the Engage segment and then progresses through activities and investigations in the Explore, Elaborate, and Evaluate segments.
- In the Lesson 2 Blueprint, teachers use class discussions to introduce the concept of standardized units. This foundational information gets reinforced through activities later in the unit. For example, in an activity titled Conversion Factors in the Explore section Teacher's Guide of the Teacher eBook, Chapter 2, students work in groups to convert minutes and seconds.
- In Chapter 3: Accelerated Motion, the example problems go from a basic understanding of the material and simple algebra problems to more complex problems and more difficult examples, which provide students with opportunities to develop and practice their skills.

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.

- At the beginning of each chapter, under Chapter Digital Resources, there is a breakdown that lists the labs, assignments, assessments, and interactives students will be doing during the entire unit and each lesson within that unit.
- The Texas Essentials Physics Probeware Lab: Measure Velocity exhibits sufficient student planning, investigation, and research time as desired by TEKS to give the student a total grasp of the lesson. For example, the Engage section of Teaching Lesson 1 with 5E Options engages students with a 10-minute activity on slime that differentiates between solids and liquids. The mini-lab contains probing questions and several opportunities to engage the learners.
- The materials provide opportunities for students to design lab investigations. For example, in the Physics Probeware Lab: Constant Speed, students choose which equipment they will use to collect data to measure constant speed and make predictions on the time required for the object to reach selected positions. Students have an opportunity to evaluate their experimental design at the end of the investigation.
- In Chapter 14: Using Energy in the Teacher eBook, students watch a video about storing energy and are asked how the Earth's resources become electrical resources. Students then investigate wind energy in the Launch Lab: Assessing Wind Energy Lab.

McGraw Hill Texas Physics

Indicator 2.2

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

1	Materials embed phenomena and problems across lessons to support students in constructing, building, and developing knowledge through authentic application and performance of scientific and engineering practices 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 embed phenomena in the form of a driving question at the start of each chapter. For example, in Chapter 3: Acceleration Motion, a picture of two race cars on a circular track includes a driving question that focuses on the phenomena by asking, "How does the motion of an electric car change as it is driven?"
- In Chapter 4: Forces in One Dimension, students are given the questions "What is a force?" and "How does the force from a rocket lift a spacecraft?" These topics are covered in Chapters 2 and 3, so students are able to apply their prior knowledge to answer.
- Chapter 9, Lesson 2, Conservation of Momentum, has several different lab experiments listed, including ones with collision cars, Newton's cradle, and a Hover Gliders Simulation to give students a chance to practice their science and engineering processes.
- The materials use phenomena with early opening questions that direct lessons by tapping into real-world experiences. For example, in Chapter 21: Electrostatics, the students investigate common scenarios such as the Coulomb's Law Demonstration in which the teacher and students work problems together and correlate the problems to the essential question.

McGraw Hill Texas Physics

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

- At the start of each lesson, the Engage section has an Activate Prior Knowledge subsection. For example, in Chapter 20: Interference and Diffraction, Lesson 2, Diffraction, Engage, Activate Prior Knowledge: Diffraction of Light, students use their knowledge of double-slit interference, which students learned about in Lesson 1. In another example in Chapter 29, Lesson 1 engages prior knowledge with the opening activity in which students revisit the parts of an atom and the law of conservation of energy.
- In Chapter 4: Forces in One Dimension, Lesson 2, Newton's Second Law, students are given a real-world physics problem about rocket motion. Using their prior knowledge of Newton's Laws, students discuss some of the complicating factors that NASA engineers face when sending a rocket to space.
- In Chapter 28, Lesson 1, there is a section called Activate Prior Knowledge that discusses how bringing back students' knowledge of conservation of energy, conservation of mass, and chemical reactions leads to the equation $E = mc^2$ that is taught in the lesson.

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

- The Chapter Supports clearly outline the scientific concepts behind the driving question of the phenomenon by explaining the scientific concepts behind the phenomena. For example, Chapter 10: Energy and Its Conservation explains the concepts of the change from gravitational potential energy to kinetic energy as a roller coaster moves down a hill.
- The Probeware Lab: Colliding Carts distinctly outlines all steps and processes that are to occur as the students attempt to complete the lab as TEKS recommends.
- In the Lesson Blueprints at the beginning of each chapter, the scientific concepts are clearly laid out with the phenomena being taught and what engineering problem connects. For example, in the lab experiment from Chapter 4, Lesson 3, titled Quick Lab: Mass and Weight, the TEKS supporting science and engineering practices are referenced with a clear objective so teachers know the goal of the lab.
- Each chapter lesson has an Essential Question that is the target of the lesson. For example, in Chapter 7: Gravitation, the Lesson 1 essential question is "How do planets move?" After the question, there is a short excerpt on the answer to the phenomenon and how it relates to the TEKS. They also provide an overarching learning goal for students, along with background information to support the engineering problem.

McGraw Hill Texas Physics

Indicator 3.1

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

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 materials progress in complexity within and across units. For example, in Chapter 7: Gravitation, Lesson 2: Universal Gravitation, students learn Newton's Law of Universal Gravitation and how it provides an explanation for Kepler's Third Law. Students also learn how to use the law to derive equations for orbital period, orbital speed, and free-fall acceleration.
- In Chapter 3, Accelerated Motion, Lesson 1, students answer questions within the text as they read through the chapter to connect their knowledge within the unit. In Chapter 4 Lesson 2, students have the chance to revisit the skills and knowledge from a previous unit by incorporating the concept of motion graphs and acceleration
- In Chapter 16, Sound, students' knowledge and skills are connected within and across units using the suggested Target Vocabulary whereby prior vocabulary, lesson vocabulary, and supporting terms are all vital in this and future lessons. The Chapter 9 Fifteen Minute Pre Assessment gauges student knowledge prior to beginning the unit and assesses areas of focus just in case particular areas need more focus in this unit and in later units connected to the TEKS.
- In Chapter 15, Vibrations and Waves, students build on the TEKS mastered in grade 6. Students use prior knowledge of kinetic, potential, and chemical energy to understand wave energy propagation. In Chapter 22, Lesson 1 of the Teacher eBook, students analyze, design, and

construct circuits as they relate to energy transfer through circuits and food webs. Students integrate their knowledge of energy flow to gain a deeper understanding of circuits.

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

- The materials include a progression from concrete to representational before abstract when presenting concepts. For example, Chapter 7: Gravitation, Lesson 2: Universal Gravitation introduces the concept of universal gravitation with a video of a spacewalk in the engage section of the lesson, progressing to a PhET simulation: Gravity Force Lab in the explore section of the lesson, and then introduces the abstract concept of weightlessness.
- The Scope and Sequence section has a clear order of materials that gives students and teachers a chance to start with the basic material and skills and work on more difficult topics and skills as they progress through the textbook. In Chapter 10 Lesson 1, the lesson blueprint at the beginning of the chapter gives a clear picture of how the unit can progress starting from an engaging question, to lab activities, then working problems, and finally an assessment.
- Chapter 22 has a progression of learning and understanding circuits. Students begin with analyzing the parts of series and parallel circuits followed by designing and constructing working circuits. In the beginning of the school year, students learn about vectors and scalars. As they progress through the year, they build on this foundational skill to learn about forces in one dimension. After analyzing and calculating net forces, and discussing Newton's Laws in Chapter 4, students learn about Forces in Two Dimensions in Chapter 5.
- The Chapter 13, Accelerated Motion, Chapter Overview displays a sequenced scaffold for students. For example, the Lesson 1 TEKS Progression exhibits scaffolding that leads into deeper conceptual knowledge by presenting and revisiting 7th grade TEKS 7.7A, 7.7.B, & 7.7C. TEKS 5.A and 5.C build and deepen the lesson and prepare students for higher levels of rigor.

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

- Materials provide teachers with a clear blueprint to follow to accurately present course-specific core concepts and science and engineering practices using the 5E model of instruction by including simulations, videos, and science and engineering practices that use mathematics and computational thinking.
- Lesson 1 uses 5E options and begins with the engage phase, where students activate prior knowledge by working in small groups to draw a coordinate system for a runner on a straight track. The teacher gives explicit directives on what they should be drawing. Students then explore vectors via a rolling ruler. Next in the explain phase, students complete a formative assessment. Lastly, in the explain phase, students answer questions and a teacher key is provided. There are multiple opportunities for the teacher to ask open-ended questions and there are components to the lesson that give guidance on engaging students in critical thinking.
- At the beginning of Chapter 9, Momentum and Its Conservation, a list of TEKS being taught is provided in the unit to show the course-specific core concepts taught in the unit. At the end of each chapter, a STEM project provides students another opportunity to use science and engineering practices.

McGraw Hill Texas Physics

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

- The materials include learning targets for each course-specific concept. For example, each lesson starts with a TEKS-based learning objective and ends class with an exit ticket that circles back to the lesson's learning objective.
- Driving Questions and Essential Questions at the end of the chapters lead the teacher and students through the material and are referenced again for students to answer to show mastery and alignment. In Physics TX Science TEKS 8A-8B test the questions listed match the level of difficulty and the verbiage of the TEKS being taught.
- Texas Physics Chapter 10 Digital Resources presents evidence of mastery requirement sequentially in their lessons that lead to exit tickets, check for understandings, and several variations of summative assessments. For example, in Chapter 21 Electrostatics, the Chapter Planning support shows the lesson's continuing progression toward a summative assessment.
- Every chapter clearly defines the vertical alignment to the physics TEKS. For example, in Chapter 5 Forces in Two Dimensions, the grade 6 TEKS 6.7.C and the grade 7 TEKS 7.7. are vertically-aligned to the High School TEKS 5.B. The boundaries for Lesson 1 in Chapter 5 are clearly stated throughout the graphic under the title TEKS Progression.

McGraw Hill Texas Physics

Indicator 3.2

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

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 beginning of each chapter has a section called Prerequisite Knowledge, which refers to skills and topics from previous sections that students will need to know in order to be successful. The first lesson of each chapter, under the Lesson Overview, has a section called TEKS progression, which lists out the specific TEKS taught earlier in the year and in earlier grades that helps students understand the material. For example in Chapter 6 Lesson 1, it mentions 8th grade TEKS 8.7.A and TEKS 5.D to show vertical alignment.
- In Chapter 1 Lesson 2, the students' learning objective focuses on standardized units. Students have been exposed to SI units in grade 6, at the beginning of the unit the teachers guide students in unpacking their current understanding of SI units and how they are used in science. Lesson 2, has a clear scope and sequence that aligns with the grade 6-8 TEKS 1.E and 2.C. In Lesson 3 of Chapter 1, students use their knowledge and mastery of SI units and simple conversions to discuss precision and accuracy. Students engage in more complex ideas of analysis, limitations, and quantitative relationships. A clear scope and sequence of how the teacher progresses through the unit is provided with opportunities to ask deeper questions.
- Chapter 2: Representing Motion exhibits vertical alignment in the TEKS At A Glance. It lays out TEKS 5.A 5.B & 5.C and the prerequisite knowledge students previously encounter in earlier

grade levels. The Science and Language Acquisition page in Chapter 2 provides teacher support in vertical alignment with the chapter vocabulary by delivering prior knowledge terms.

- The materials contain a TEKS progression flow chart at the beginning of each lesson that shows what students should have mastered in previous grade levels. In addition, there is also an "unpacking the TEKS" section that explains how the lesson builds on what students already know. Materials include guiding documents that describe how content and concepts increase in depth and complexity across the course. For example, a teacher must understand Newton's first and second law of motion, the addition of vectors in one dimension, normal forces, and forces acting on an object prior to teaching forces in two dimensions.

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 include clarifying a preconception in each chapter in the explain section of the 5E model. For example, in Chapter 5: Forces in Two Dimensions, Lesson 1: Vectors in Two Dimensions, using the Pythagorean theorem is explained. Background information provides explanations and examples of science concepts for teachers. For example, in Chapter 5: Forces in Two Dimensions, Lesson 1: Vectors in Two Dimensions, concept development in the teacher eBook guides teachers through two different methods of teaching vector addition with examples.
- Chapter 1 Lesson 3 has sections for teacher guidance on common misconceptions. For example, the Topic: Precision and Accuracy addresses the preconception of Metric vs. English Units with a clear distinction made between the two. Another example In Chapter 7 Lesson 1, has teacher guidance on clarifying a preconception of a Heliocentric Model of the solar system and how that is related to Newton's Laws. The teacher begins by addressing this topic and then students complete a reading activity and participate in a short class discussion.
- The Physics Lab on Centripetal Force shows evidence of science concepts including grade-level misconceptions in the Clarify a Preconception portion of the lesson. Chapter 3's Acceleration & Motion shows evidence of a common student misconception in the graphs where students may confuse a parabolic curve with the path of a moving ball.
- The beginning of each chapter has a section called Essential Questions to help teachers see the most important ideas from that chapter. These questions are listed with the TEKS that they correspond to, to show proper content alignment. In Chapter 5 Forces in 2 Dimensions the Lesson Blueprint has several activities and resources listed as Reinforce. The Reinforce activities help address student misconceptions throughout the unit.

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

- Chapters and Lessons begin with a Learning Objective and an Essential Question aligned with the TEKS. For example, in Chapter 7 Lesson 2 Universal Gravitation, students engage in assessments, demos, and class discussions that align with the identified TEKS and learning objective. Teacher implementation is clearly defined throughout the Lesson 2 Blueprint and in the 5E model.
- Each chapter has a section called Chapter Planning and Support which details how the chapter launches and how it will close to show the intent and purpose of the chapter. The lab experiments have sections called Objectives and Expected Outcomes to help teachers see the exact purpose and intent of a lab experiment.

- Materials provide a purpose for the instructional design of the lesson. For example, the Chapter Planning and Support highlights key features of the instructional design and provides a rationale on the features intent and outcome. A pre-test helps uncover prior student knowledge about forces in two dimensions in Chapter 5: Forces in Two Dimensions. The materials also include a program overview document under Course Resources. The Program Overview describes the intent of the program.
- The Chapter Overview in Chapter 12 explains the unit's intent and purpose, giving well-defined examples and setting student expectations per TEKS for the grade-level. The Chapter 15 Lab Reflection and Refraction clearly supports the intent and purpose of the lesson in the Procedures where everything is lined out and key concepts remain visible for assistance.

McGraw Hill Texas 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.

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 support students' meaningful sensemaking through reading, writing, thinking, and acting as scientists and engineers through project-based learning. For example, in the Chapter Close portion of Chapter 7, the digital activity Stem Project: Model A Planetary System, students use project-based learning to discover exoplanets and they model a planetary system after completion of lesson 1.
- The materials include a Claim, Evidence, and Reasoning (CER) template for every lesson. The CER guides the student to answer the chapter driving questions using observations from activities in the chapter, gathering evidence from a variety of resources, and explaining the reason why the evidence supports the claim. Each of these tasks require the student to read, think, write, and act like a scientist and engineer. For example, Chapter 16 includes CERs for The Doppler Effect, The Physics of Music, and Uses of Sound Waves.

- In Chapter 8 Chapter Overview for Rotational Motions, Lesson 2: Torque, the materials provide the essential question, "How do the properties of rotation motion compare to those of linear motion?." The concept of torque is related to everyday items such as doors, wrenches and bicycles. In the Chapter 8 Close, students use project-based learning to investigate rollercoaster motion.
- In Chapter 11 Lesson 1, students read through the text and answer questions about the text that requires them to think, process, and analyze what they have read to ensure that students are learning and adding as scientists. In the Lab: Sliding Down a Slope, students read, write, create data tables, perform calculations, analyze data, and answer questions giving students full practice in acting like a scientist.

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

- The text is written at a grade-appropriate level and consistent with the TEKS. As students read through Chapter 12 they have several activities called Ask Yourself, so they read additional information to help develop their understanding of the material.
- In Lesson 3 of Chapter 7: Gravitation, students read, research, and gather evidence to understand the reason eclipses occur in repeating cycles. In Lesson 1 of Chapter 12: States of Matter, students develop an understanding of what a solid is by reading the background information at the beginning of the lesson.
- In Chapter 8, EB/EL Learner Support provides teacher guidance on how to help students activate their prior knowledge. For example, students can look through the pictures in the chapter in small groups and share what they know. For advanced students, the teacher can ask them to look at the pictures, and their headings, and discuss topics they already know and share examples.
- Lesson 1 Chapter 14 "Energy Resources" in the student book opens with an Essential question that guides the students' thinking into the suggested reading. During the readings the students engage with images, examples, open ended questions, and interactive images.

Materials provide multiple opportunities for students to engage in various written and graphic modes of communication to support students in developing and displaying an understanding of scientific concepts.

- In the Chapter 10 Lab Conservation of Energy, after students perform the lab and collect their data, they explain in writing, make a graph, do calculations, answer questions, and then predict a solution to what would happen if they changed something about the lab setup. This design helps students understand the concepts better.
- In Lesson 1 of Chapter 12: States of Matter, students engage in and analyze density-temperature graphs. In Lesson 1 of Chapter 22: Electric Current and Circuits, students engage in a graphical model of circuits and Ohm's Law.
- In Chapter 23: Magnetism, students have multiple opportunities to engage in writing by way of essential questions (2) Ask Yourself Questions (6) and the Closer Look question directly tied into the Figure 9 image.
- In the lab titled, Probeware Lab: Measure Velocity, students use a motion detector and constant velocity cars to create and observe graphs on a graphing interface. In Chapter 14, Lesson 1

Teaching, under the elaborate tab, students research nuclear power, then create a timeline of major events in nuclear power research and development.

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.

- Each chapter starts with a phenomena and driving question to support students in acting as scientists and engineers to make sense of concepts and productively struggle. The Physics Lab: Constant Speed, found in Chapter 2, asks the student to make predictions prior to the start of the lab activity and then take measurements and evaluate the initial predictions based on the data gathered.
- In Chapter 5 Lesson 3, the guiding question is about the phenomena of forces acting on objects as they slide down or push up an incline. This question allows students to think about something they have seen before and what may be the cause of it. In the student ebook, toward the end of the chapter, a section called “Equilibrium and Static Balance” uses a picture of a house and asks students to "Explain how architects and engineers achieve equilibrium in structures".
- In Chapter 14, Lesson 2, the teacher sets up a pulley system with specific parameters for the system given to the teacher. Students record readings on the spring scale for each force and plot the effort-force versus an equation. Students then identify two variables that are given in the equation.
- Chapter 26 Quantum Physics and the Atom displays evidence of phenomena-based engagement in the lesson's Analyzing and Interpreting Data by having the students analyze several different element’s ionizations and chart them.

McGraw Hill Texas Physics

Indicator 5.1

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

1	Materials prompt students to use evidence to support their hypotheses and claims.	M
2	Materials include embedded opportunities to develop and utilize scientific vocabulary in context.	M
3	Materials integrate argumentation and discourse throughout to support students' development of content knowledge and skills as appropriate for the concept and 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.

- The materials provide opportunities for students to develop how to use evidence to support their hypotheses and claims. For example, in PhysicsLab: Constant Speed, students develop a hypothesis, test it, and then are prompted to evaluate and explain if their prediction was correct and to support it with data collected during the investigation.
- The Lesson 1 Blueprint in Chapter 5 provides prompts for students to use evidence to support their claims. The first section in the Lesson is titled CER: Vectors in Two Dimensions where students use the CER format to answer the question "How can you add vectors in two dimensions?" The materials consistently provide support for students to use claims and evidence to answer questions at the beginning of each lesson. Each Lesson Blueprint begins with Engage, which includes essential questions for students to answer using Claim Evidence and Reasoning. For example, in Chapter 14 students participate in a group discussion developing a hypothesis about machine efficiency and then they use the CER format to validate their hypothesis.

- Chapter 2 Physics Lab: Constant Speed exhibits materials that prompt students to use evidence to support their hypotheses and claims. Each student must formulate a hypothesis about the relationship between distance traveled and elapsed time for a vehicle moving at a constant speed. Based on the students' hypothesis, they must predict the amount of time required for the vehicle to travel the distances identified in Data Table 1 at a constant speed.
- Chapter 8 Digital Resources require the students to use evidence to support a claim by using the Claim-Evidence-Reasoning in the lessons. The Claim Evidence Reasoning resource found in the online resources has a template to teach students how to do CER, and then in Chapter 8, they use a CER in the Describing Rotational Motion Assignment, Torque Assignment, Rotational Dynamics Assignment, and Equilibrium Assignment.

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

- The material has evidence of multiple opportunities for students to use their scientific vocabulary throughout the text. In Chapter 10 there is a Vocabulary Word Lab which includes videos and interactives to help students practice scientific vocabulary in context. Also, Chapter 3 uses multiple representations of scientific vocabulary. In the student textbook velocity vs time graphs are explained in words, pictures with explanations, a short description, and an option to click on the long description for students to read even more about the vocabulary term represented in the picture.
- The materials include embedded opportunities to develop and utilize scientific vocabulary in the Word Lab activities. In the Word Lab: Lesson 4.1, students write using words like forces, equilibrium, and system. The materials include embedded opportunities to develop and utilize scientific vocabulary in the Chapter Vocabulary Test: Chapter 4 where students have definitions and match them to the vocabulary word.
- Chapter 14 Using Energy emphasizes vocabulary and enrichment for students by getting students to enter the vocabulary Word Lab and continuously building the levels of context. Chapter 2 Representing Motion uses vocabulary enhancement in the Lesson Wrap Up by having students enter the Word Lab too. The Word Lab is an interactive tool that's designed to observe, examine, and practice lesson vocabulary.
- The materials provide experiences with new concepts followed by opportunities to use the vocabulary presented. For example, in Chapter 5: Forces in 2-Dimensions, students investigate "Forces on a Plane" followed by a vocabulary word lab and an interactive visual literacy on the concept. The materials present scientific vocabulary using multiple representations. For example, students read grade-level appropriate text with embedded vocabulary while studying forces in 2-dimension in Chapter 5. After reading, students complete a word lab to reinforce the use of the scientific vocabulary.

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

- The materials integrate argumentation and discourse, for example in Chapter 2, PhysicsLAB: Constant Speed, students critique their scientific inquiry and identify things that went well and things that did not. They also integrate argumentation and discourse, for example in Chapter 4 the teacher sets up spring scales with the scale reading facing away from the students. The teacher asks students to debate the scale readings and then the reveals the answers after students are done debating

- The materials integrate arguments and discourse within stages of the learning cycle, supporting student development of content knowledge and skills. For example in Chapter 5: Forces in 2-Dimensions, students engage in argumentation from evidence by investigating the scenario of pushing an empty box across the floor at a constant speed vs pushing the same box with a heavy load. Students are encouraged to encourage the qualitative change in the force and explain why the force required is greater in the second case.
- Chapter 11 Thermal Energy integrates argumentation and discourse while going over the law of thermodynamics and using substantial evidence with examples to support it all. Chapter 22: Electric Currents and Circuits uses argumentation and discourse while explaining and giving examples of OHM's Law and the ways it is used. The reader may interact with this material and get vital information regarding the law and usage.
- In Chapter 16 Lesson 2 there is evidence of students using argumentation and discourse to help students learn about the concept of sound. Throughout the text there are places in the student text where it asks to explain yourself, to give students a chance to verify and question what they have read.

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.

- Chapter 6: Apply Your Knowledge Relative Velocity gives students opportunities to construct and present developmentally appropriate written examples of relative velocity and the desired TEKS. Chapter 16 CER: Projectile In Motion provides opportunities for students to construct and present developmentally appropriate written and/or verbal arguments that justify explanations to phenomena and solutions by having students record their evidence, discuss it, revise it, and share out with individuals or groups.
- In Chapter 23 the evidence shows students having opportunities to write arguments and justify explanations using Claim Evidence Reasoning to write. Students practice all of these techniques through several CER writing pieces including Understanding Magnetism, Electromagnets, and Applications of Magnetic Fields.
- The materials provide a way to construct and present a verbal and written argument to problems using evidence acquired from learning experiences. For example, students construct a written argument to answer the driving question "What forces act on a spacecraft?" to explain the phenomena visualized at the start of Chapter 4: Forces in One Dimension. The materials provide the criteria for developmentally appropriate arguments to explain phenomena or defend a solution to a problem using evidence acquired from learning experiences. For example, when students learn about vectors in 2 dimensions students are prompted to respond to the posed question "How can you add vectors in two dimensions?"

McGraw Hill Texas 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. For example, the essential question, in Chapter 4 when studying the concept of "What is a force?", and students answer "How does the force from a rocket lift a spacecraft from a planet's surface?" The teacher's book states answers may vary but also provides what to look for in the student responses such as thrust from the rockets are contact forces or gravitational forces from various planetary objects like the earth, moon, or the sun. The materials provide support for teachers to deepen student thinking through questioning. For example, in Chapter 4 students learn about different types of forces in a scenario of a rolling cart and they consider two follow-up questions to deepen student thinking of the scenario.
- The materials provide sections titled "Driving Question Connection" that offer questions to help students think about and connect concepts. For example, in Chapter 3: Accelerated Motion, the section states "If students struggle to connect the content in this lesson and the Driving Question, have them review the question: "How does the motion of an electric car change as it is driven?" Then have students review the lesson for examples that could relate to different acceleration scenarios when driving a car."
- Additional student responses can be found throughout the chapter. For example, in Chapter 9, the driving question addresses whether a simulation can model velocity changes in a car

collision and has a sample response posted. In Teaching Lesson 1 with 5E options, the Activate Prior Knowledge states “Ask students what comes to mind when they think about the subject of physics” and provides the following possible responses: “things that move, such as sports balls and vehicles, things that light up.?

- Possible teacher responses to student questions appear throughout the text. For example, in Chapter 4 the explore section uses an activity about applying forces that includes several follow-up questions as the students go through the activity. There are student responses posted and follow-up questions listed.
- The materials provide teacher guidance on anticipating student responses and using questioning to deepen student thinking. In Chapter 6 Lesson 1 in the Teacher eBook, there is a reinforcement activity where there are example teacher led questions and exemplar student responses. Also, Apply Your Knowledge: The Effects of Gravity, provides the teacher with probing questions to lead student thinking; with an exemplar student response. The materials provide teacher guidance on anticipating student responses and using questioning to deepen student thinking. In Chapter 6 Lesson 2 in the Teacher eBook under the Topic: Centripetal Acceleration, discussion questions guide students thinking about uniform circular motion and how the velocity and acceleration vectors behave.

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

- The materials provide teacher guidance on how to scaffold and support students' development of scientific vocabulary. In Chapter 12: States of Matter, under the Science Language and Content Acquisition tab, a detailed table includes prior knowledge terms, lesson vocabulary, and supporting vocabulary. The materials provide teacher guidance on how to scaffold and support students' development of scientific vocabulary. In Chapter 12: States of Matter, under the Science Language and Content Acquisition tab, the section for EB/EL Learner Support uses a table that includes prior knowledge for beginner, intermediate, and advanced supports. Also a detailed list of transferable skills and non-transferable skills.
- The lesson vocabulary support enhances students' use of terms, showing the use as a verb and a noun and giving real-world examples. The materials also include an in-depth guide to the construction of a word wall. The target vocabulary suggests to the teacher several ideas for an interactive word wall and includes the TEKS, the prior knowledge vocabulary, lesson vocabulary, and the supporting vocabulary to assist.
- The materials provide embedded supports for the teacher on how to scaffold the students' development of scientific vocabulary related to the concepts being taught. For example, materials provide teachers with a lesson blueprint that previews the vocabulary that will be used in the lesson. The blueprint indicates when students should engage in the Word Lab tool to examine and practice vocabulary. The Word Labs offer digital flashcards, multiple choice questions, and short-response questions aimed at reinforcing the lesson vocabulary.
- The materials provide guidance for the teacher on how to support students' use of scientific vocabulary in context. For example, there are Word Labs and videos embedded within each lesson. In lesson 2 of Chapter 4: Forces in One Dimension, to reinforce the new vocabulary, there is a video about inertia in addition to the Lord Lab. The materials use scientific vocabulary with scaffolds to help students. In Chapter 5 the list of vocabulary words for each section includes prior knowledge terms, lesson vocabulary, and supporting vocabulary with vocabulary resources at the bottom of the page including a word lab. There is also a word usage in the lesson that talks about how the word is used in science and common language. Vocabulary

supports used throughout the text, like in the Chapter 28 word lab for students, includes both videos and interactives to help students master scientific concepts and vocabulary.

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

- The Visual Literacy activity presents an example of the teacher guiding the students and then having the student verbally express their views after seeing the images. This type of activity can be used in different parts of the lesson. The driving question, which is two questions, guides the teacher in presenting two separate questions to the students. After the students answer each question in order, they discuss it as a class.
- The materials provide teacher guidance on preparing for student discourse and supporting students in using evidence to construct written and verbal claims. The document titled CER: Physics (Printable) breaks down the parts of claim, evidence, and reasoning through writing. The definitions and directions are provided for each section of CER. The materials provide teacher guidance on preparing for student discourse and supporting students in using evidence to construct written and verbal claims. For example, the Teacher Support Lab Library: Physics document provides exemplar student responses for questions in each lab in student data collection and data analysis.
- The materials give teachers guidance on how to use evidence to write claims. Throughout the text, students use the Claim Evidence Reasoning method to support their claims. In Chapter 1 students write CERs about what is physics. The materials help students engage in discourse throughout the text. Chapter 10 Teaching Lesson 1 with 5E Options provides several opportunities for students to engage in discourse. In the engage sections students use CER to answer “What is energy?” In the explain section, students are presented with several questions about work in the visual literacy activity, and students discuss a phenomenon about motors providing no power in the explain section.

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

- The materials provide evidence of opportunities throughout for students to share their thinking and find solutions. Chapter 17 Lab: Reducing Glare provides several opportunities for students to have discussions about polarization, and analyze and make conclusions about their data.
- The materials support teachers in helping students share their thinking throughout the text, such as in Chapter 6, when students complete the Constant Horizontal Velocity Activity and discuss with each other when to drop the ball to get the ball to land in a cup as they walk across the floor. Then students discuss and work together to complete the projectile motion PhET Simulation, and discuss the driving question connection about players tossing a ball.
- The Probeware Lab: Tossed-Ball Motion presents a great example of teacher guidance in the students' thinking and finding solutions by all of the required items. The Probeware Lab: Terminal Velocity presents a real-world scenario, the student observes and collects data and in the end, the students expound on the data and describe the effects of the filters and their interaction with the variable.
- The materials provide teacher support and guidance to engage students' thinking in various modes of communication throughout the course. For example, students engage in whole group discussions, draw free-body diagrams, calculate solutions, and write written responses to scenario-based questions in Chapter 4 when learning about the different types of forces. The

materials provide teacher support for facilitating the sharing of students' finding solutions. For example, in the lab "Upside-down Parachute" there are data tables provided along with guiding questions such as "Were the coffee filters in free-fall?" and "How did you know?".

- The materials support and guide teachers in facilitating the sharing of students' thinking and finding solutions. For example, in the Teacher Support Applying Practices: Analyze a Major Global Challenge, teachers have a daily guide to direct student thinking, research, and reaching conclusions. The materials support and guide teachers in facilitating the sharing of students' thinking and finding solutions. For example, in the Teacher Support Applying Practices: Analyze a Major Global Challenge, on Day 2 of the investigation, a bullet point that says, "If students are having difficulty with their research,...." provides a solution to common issues students might run into.

McGraw Hill Texas 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 this indicator. Materials include a variety of TEKS-aligned and developmentally appropriate assessment tools.

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

Evidence includes but is not limited to:

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

- The materials provide summative assessments by TEKS in the course resources. They have a variety of question types including open-response and multiple choice. For example for TEKS 8A - 8B, there are 31 questions available including conceptual and mathematical questions. The Pre-Tests can be used as a diagnostic assessment of the materials. For example, Chapter 2 has a Chapter pre-test under digital resources under assessments. However, only Chapter 0 and Chapter 4 provide Post-Tests under course resources.
- Informal assessments can be found throughout the resources. In Chapter 9, several exit tickets help guide and direct student learning throughout the chapter and include 3 exit tickets, one for each lesson.
- Chapter 12, States of Matter has both summative and formative assessments spread throughout the unit. The types of assessments include quizzes, exit tickets, apply your knowledge sections, and several others. Chapter 2, Representing Motion Chapter digital resources page lists 7 different assessments that provide either summative or formative data using different formats including a Chapter Pre-Test, Science Probe, Chapter Review, Vocabulary Test, Chapter Test, and Exit Tickets and Lesson Quizzes for every lesson.
- The materials include diagnostic assessments to provide the teacher with information to progress and identify learning gains. For example, in the course materials, there is a chapter

Chapter Pre-Tests described as “digital formative assessments” for each chapter that can be given to assess student skills at the beginning of a chapter. Formative assessment guidance in Chapter 6 recommends students take part in a group activity to check for understanding of velocity and relative velocity. The Lesson Wrap-Up at the end of chapters provides a summative assessment, for example, the summative assessment for Chapter 6 is titled 'Relative Motion'.

- Materials include formative assessments in a variety of formats to measure student learning and the next steps for instruction. For example, in the Explore section of Lesson 1,Chapter 1: Introduction to Physics has a formative assessment in the "ask yourself reading comprehension" questions and then again in the Evaluate section there are "exit ticket" questions. Furthermore, the materials include summative assessments in a variety of formats. For example, materials include a chapter review and a chapter test at the end of each chapter.

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

- The materials indicate which student expectations are being assessed. The beginning of each Chapter has the TEKS clearly listed and an essential question for each lesson with the TEKS listed below it. For example, in Chapter 2, TEKS 5.A, 5.B, and 5.C are all listed as well as the following essential questions: “How fast is position described within a frame of reference, How are latitude and longitude used to describe positions on Earth's surface, How can the motion of an object be represented on a position-time graph,” and ”How are the speed and velocity of an object calculated and represented in data displays.”
- In Chapter 13, Lesson 1, the materials assess all student expectations found in that lesson. Lesson 1 Blueprint lists all of the lessons for the unit and a timeline of how long each activity should take. They include a TEKS progression page on the previous page to show student expectations of the material.
- In the Teacher Manual, the TEKS Progression page for each lesson shows which student expectations are covered in that lesson. The Unpack the TEKS portion supports teachers with a diagrammatic plan for the TEKS. For example, Chapter 5 TEKS Progression contains a cohesive scope and sequence that maps out and outlines what will be taught in a specific course or grade level. Grade 6 includes TEKS 6.7.A and High School includes TEKS 5.F.
- The materials assess all student expectations, as outlined in the TEKS, for the course. For example, the table of contents outlines the order in which TEKS knowledge and skills are taught and in which chapters and lessons. The materials indicate which student expectations are assessed. For example, included in the assessments is a group of assessments that are TEKS-specific where that particular assessment is only testing one TEK at a time.
- The TEKS Progression chart in Chapter 2, Lesson 1 shows the TEKS students are expected to learn and master by the unit's conclusion. After all lessons and even throughout the text, TEKS are assessed in numerous ways. The lesson 3 blueprint in chapter 2 places focus on the TEKS that are to be mastered for this unit and the blueprint provides a very detailed and laid out customizable plan that leads to student mastery of the content.

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

- The materials include assessments that require the student to integrate scientific knowledge and science and engineering practices, appropriate to the student expectations being assessed. For example, after students have studied free-fall acceleration they are challenged to design and build a rocket in order to analyze its flight.

- The materials include science and engineering practices assessed throughout the lab library. In the Chapter 5 lab, Sliding Down a Slope, students investigate how slope angles affect the time down the ramp, calculate the acceleration down the ramp, and use data to create an association between angle of slope and the acceleration.
- The Teacher Manual pages include teacher support for targeted SEP content, which helps students assess scientific and engineering practices or themes. For example, in the Elaborate section for Chapter 7, the materials provide a task where students drop an object and make inferences about the object and the Earth's mass, as well as relate it to satellites. Then students use mathematics and computational thinking to develop an appreciation for the curvature of the Earth by drawing diagrams and performing calculations.

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

- The materials include assessments that require students to apply knowledge and skills to a new phenomenon or problem. For example, the materials present motion in a variety of modes to have students chart, graph, and compare the motion in terms of speed, velocity, and acceleration.
- Lesson 1: Energy In Earth's System, presents an essential question, an in-depth reading, and then a small summative assessment to give students an opportunity to express their learning. The lesson Acceleration With Constant Speed presents a reading with detailed explanations, equations, and solvable problems then a space for a brief summative assessment.
- In the lab materials, the assessments require students to apply knowledge to novel contexts. In the Pendulum Vibrations Lab students investigate the amplitude, period, frequency, and gravitational field of the pendulum. Students use their knowledge to design a procedure to see if a pendulum demonstrates properties of a wave.
- Activities such as Applying Practices allow students to approach a problem or challenge at their own pace through research, development of evidence, and supporting a hypothesis. Teachers may use this activity as an assessment of student application of knowledge to a new situation. For example the Applying Practices: Egg Heads, "students design a solution that will prevent [their] eggheads from cracking when dropped from a height of one meter onto a hard surface."

McGraw Hill Texas 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 this indicator. Materials include guidance that explains how to analyze and respond to data from assessment tools.

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

Evidence includes but is not limited to:

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

- Throughout the program, the Teacher Manual provides guidance for evaluating student responses to a variety of question types and evaluative situations. For example, Chapter 9 Lesson 2 Answer Key provides possible correct student responses for each "Ask Yourself" question and guides teachers on leveraging student data in the Assessment Administration Guide. The Teacher Manual also provides guidance for evaluating student responses to a variety of question types and evaluative situations. For example, on the page titled EB/EL in Chapter 6 there are questions for the teacher to ask students to determine if they are beginning, intermediate or advanced. In the Assessment Adminstration Guide there are informal assessment opportunities and a McGraw Hill Science Assessment Routine that provides guidance for evaluating a variety of student responses.
- The materials provide answer keys for all lab investigations including calculations and conceptual questions. Also, sample rubrics for how to grade a CER and projects are available. For example, the "Scoring Rubric_HS '' document scores student projects on a scale of 1-4 in several categories such as; Planning and Process, Record Keeping and Project Completion.
- The materials provide answer keys to help teachers check student work and provide feedback. In Chapter 7 Lesson 1, the answer key is given for the exit ticket by comparing two pictures and

identifying what is at the center of the solar system, then students draw what the orbit of Venus would be like and why. A sample response is given in red.

- The Chapter 0 lesson Wrap Up revisits the essential question presented at the unit's beginning and answers the question again and it also provides relevant detail that can assist in evaluating student response. The Lesson 2: Activate Prior Knowledge activity presents a question geared at sparking students prior knowledge and communicating it back to the teacher. The material states for teachers to accept all reasonable answers. Materials include information that guides teachers in evaluating student responses. For example, in clarifying a preconception of applied forces a suggested preconception is presented that students may believe and what follow-up questions to ask. The preconception might be that students believe that objects must have a continuous force exerted on them in order to have a non-zero velocity. The follow-up questions the text provides to guide the teacher are the following: does the object have a velocity? Is there still a significant force exerted on it? Is it possible in this scenario that the object could accelerate?

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

- The materials provide guidance documents and resources to support teachers' analysis of assessment data. For example, the materials provide a document on data-driven instruction in science. The materials provide guidance documents and resources to support the teachers' interpretation of data. For example, the materials provide questions and prompts for teachers to reflect upon while examining patterns in data. For example, in the Quick Task Analysis section of the Assessment Administration Guide teachers are prompted with three questions: "Did students appropriately use the relevant and intended vocabulary?" and If the question pertains to a process, did the student correctly explain,in the correct order?"
- The materials support responding to individual students' needs through REINFORCE activities. Teacher support guides teachers to help struggling students with concepts and content. For example, in Chapter 9 of the teacher ebook, in the explore section, the Reinforcement: Vector Subtraction activity guides the teacher through the activity and its goals, however, there is no support for the teacher's analysis of the data. The materials support responding to individual students' needs through EXTEND activities. Teacher support guides teachers to help students with advanced concepts and content. For example in Chapter 10 in the Elaborate section, the extension activity clearly guides the teacher through the activity but there is no support for the teacher's analysis of the data.
- The reports tab in the Texas essential physics dashboard places emphasis on the students' data from the vantage point of activity data and standards performance but provides no clear indicator of how to respond to student needs or development. The Teacher Support Quick Lab: vector models give the teacher a good amount of data to assess from each student but no clear direction or indication of what to do with it moving forward or how to develop afterward.
- The materials provide information about student data and progress through the use of the pre-test and exit tickets. For Chapter 4, the pre-tests and exit tickets can be used to track student data on their progress in learning the material. No clear guidance is given on how to analyze or interpret the data.
- The materials provide instruction on responding to data and how to adjust instruction to support students who have not mastered a concept through the Reinforce Activities and how to support students who have mastered a topic through the Extend Activities found throughout

the text. In Chapter 6 Lesson 1, under the Engage, the activity called Activating Prior is labeled as Reinforce to help students with their knowledge about vectors before applying it to the new situation. In the Elaborate section of Lesson 1, the activity called Analyze a Kickoff is labeled as an Extend to help students who have mastered a topic relate it to real-world scenarios.

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

- The materials provide the ability to check student data on summative, formative, and informal assessments through the use of the assessment tool. Under Chapter 4, once you create an assessment and assign it, teachers can view students' progress on topics to help plan their instruction. Results can be analyzed through the assessment feature and then used to help modify their instruction.
- Chapter 11 Lesson Planning & Support lays out a detailed plan with assessments and expectations the teacher should get from responses. The ELPS Support area of the lesson gives the teacher guidance and direction in which to assist the language learners but it gives a slight bit of intervention and different levels of questioning.
- The Assessment module provides teachers and administrators with the ability to monitor and evaluate student performance across activities, standards, and time. Teachers have the flexibility to utilize pre-existing tests or develop their own assessments. The module offers guidance on effectively implementing various assessment methods and provides instructions on generating comprehensive reports to gain insights into student performance on assignments and assessments. Reports can be generated at both the activity and assessment levels, allowing teachers to monitor the progress of the entire class or individual students through multiple perspectives.
- The information gathered from the assessment tools help the teacher when planning differentiated instruction. For example, on the reports tab of the dashboard, teachers can generate reports based on standards or activity performance.

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

- The Supporting All Learners document places emphasis on all learning types and tools to assist them with emphasis on data-driven learning and intervention. The Chapter 3 Lesson Blueprint offers a huge array of tools with a variety of embedded techniques for all learner types but there is no distinguishing direction for data or its use after the lesson.
- The Teacher Manual offers guidance to assist students in making connections between the chapter's Driving Question and the content they have learned. Teachers have the flexibility to employ various methods, both formal and informal, to assess and gather student responses. For example, in Chapter 9 the Driving Question Connection gives teacher guidance on class discussion about collisions, friction, and Newton's laws; however, it provides no guidance on which activities in the program to assign students when they have difficulty answering assessment questions. The materials provide direct instruction of science concepts, followed by reviews. For example, the Chapter 4 Review includes multiple choice, free response, and calculations.
- The materials do provide a variety of student resources for the teacher to use in responding to student data. For example, provided interactive word labs and learnsmart activities can be assigned to reteach the material. The materials provide a variety of teacher guidance for

responding to student data. For example, the materials include a teacher guidance document called the Assessment Administration Guide that explains how the data from small-group instruction addresses gaps in learning.

- Throughout the text and resource, several different materials provide a variety of student resources for teachers to use to help students learn based on their data. In each Chapter, a list of Core Resources gives students and teachers access to videos, interactives, labs, assignments, Claim Evidence Reasoning Practice, Pre-Tests, Chapter Reviews, Vocabulary Tests, Exit Tickets, Lesson Quizzes, and Chapter Tests. In Chapter 8, these resources are broken down by chapter and then the four individual lessons. The materials provided to teachers help with different levels of students including Reinforce Activities, Extend Activities, and support for EB learners. All of these different types of activities are identified in the 5E Lesson Plans for the units. In Chapter 18 Lesson 2, there are Reinforce Activities in the Engage, Explore, Explain sections. The ELPS support in the Explain section is broken down by level (beginning, intermediate, and advance/advanced high). There are Extend Activities in the Elaborate section. Materials provide clear guidance on how to score and give feedback to students in the Assessment Administration Guide in the section titled The Assessment Process – how to analyze and respond to data. Teachers are provided step-by-step directions as well as a diagram that demonstrates the process. The instructional leader is given several differentiated ways to assess the data, give feedback and direction into bridging a learning gap in the lesson.

McGraw Hill Texas 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 materials provide scientifically accurate assessments, avoid bias, and are free from errors. In the Physics TEKS 7C Test, all of the questions are correct, there is no bias in the questions, and they have no errors. Question 15 asks, "A diver stands on a diving platform 10.0m above the surface of a pool and leaps upward with an initial speed of 2.5 m/s. Apply the concept of conservation of energy using energy transformation equations to determine how fast the diver is moving while falling past a diving board that is 3.0 m above the surface of the pool." The answer choices below are listed in correct A,B,C, D order and the correct answer is present.
- The Apply Your Knowledge activity in Chapter 3, Lesson 1 presents the student an opportunity to complete a graph as instructed as an assessment of the lesson. This brief assessment is free from errors and also provides an exemplar in Figure 8.1 to guide students. The exit tickets in Chapter 3, Lesson 2 serve as a brief assessment of the unit's concept in the form of equations that are scientifically accurate, avoid bias, and are free from errors.
- Assessments contain scientifically accurate items for the course. For example, in Chapter 4, the assessment clearly defines that terminal velocity is when the drag force on an object falling through the air equals the force of gravity. Assessments contain items for the course that avoid bias. When students are assessed on what needs to take place for the object to become in motion the materials provide a graphic depicting the object as stationary and a graphic depicting the object in motion.
- Formative and summative assessments include assessment items that align with taught objectives and present course content and concepts, science and engineering practices, and recurring themes and concepts in a scientifically accurate way. For example, the assessment

titled Physics TX Science TEKS 5C Test accurately describes cars moving and stopping in one dimension. Also, the assessment titled Physics TX Science TEKS 5D Test accurately describes the Earth's acceleration due to gravity and how it impacts objects traveling in one and two dimensions.

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

- Assessment tools use clear pictures and graphics. For example, with the motion in one-dimension assessment, there is a clear picture of a person in a wheelchair not moving and a clear picture of a person in a wheelchair moving. Assessments contain pictures and graphics that are developmentally appropriate. For example, in the TEKS 8A-8B test there are clear graphics of p and s waves.
- Assessment tools use developmentally appropriate pictures and graphics. For example, the Physics TX Science TEKS 5B test includes graphics of position versus time for people riding bicycles. Assessment tools use clear pictures and graphics that are developmentally appropriate. For example, the Physics TX Science TEKS 9 test includes graphics of Maximum Kinetic energy in eV versus Frequency measured in Hz.
- The exit ticket in Chapter 3, Lesson 2 is an assessment in two parts that uses clear pictures and graphics. Figures 11 and 12 both use color coding and clear graphics to represent velocity-time graphs for a car with constant acceleration. The Visual Literacy reinforcement activity serves as an assessment with clear images and graphics directly focusing on the lesson's objective.
- The materials provide assessment graphics that are clear and developmentally appropriate. In Question 13, students are asked to pick the correct graph that describes the relationship between the force of kinetic friction and the normal force. Each answer choice has a graph that has a clear shape on it (some are curves and some are straight lines) and clearly labeled the x and y-axis.

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

- Chapter 1, Lesson 1's Using Observations activity has an assessment that gives the teacher guidance, clear instructions, and detail that help with assessing the student's final outcome. The Driving Question Connection is a brief assessment directly pointing at real-world phenomena and the e-book gives the instructor a brief insight into what the students' responses should look like.
- The materials provide clear guidance for teachers to consistently and accurately administer assessment tools. There is a video called Assessment and Report eLearning, that goes step by step on how to create, give, and score assessments. The materials provide guidance to accurately give and score assessments in the Assessment and Report eLearning Video. The video talks about the different versions of the tests and how to identify them and how to pull reports to see how well students performed on a specific standard or on a specific question.
- The materials provide clear guidance to teachers to consistently and accurately administer assessment tools. For example, the lesson blueprint provides guidance on when and how to assign the various assessment tools. The materials include detailed information that supports the teacher's understanding of assessment tools and their scoring practices. For example, an answer key is provided for each assessment.
- The materials include an assessment guide via Professional Development Video that supports teachers in understanding the types of informal assessment tools included in the curriculum, such as graphs and pie charts, that support teachers in collecting consistent and purposeful

data. An assessment guide via the Professional Development video in the Physics: Program Resources on assessment includes an example of a scored performance assessment with an explanation for each of its components.

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

- The materials offer accommodations for assessments and tools so that students of all abilities can demonstrate mastery of learning goals. For example, the assessment of TEKS 4 has bolded words to provide a visual cue. Materials also provide a text-to-speech option within each assessment.
- The Lesson Wrap-Up in Chapter 1 presents a 30-minute summative assessment of the unit's key points and it also integrates the learn smart application which provides differentiated support. Chapter 2, Lesson 1 provides ELPS support in 3 different tiers for the learning levels within the bounds of support in the physics lab. The materials provide guidance on accommodations so students can demonstrate mastery of learning goals in the Supporting All Learners: Equity and Access in Science document. The document discusses how the program is designed with Universal Design for Learning which is a flexible approach to teaching that can be easily modified to accommodate all learners. The materials provide accommodations students can use on assessments to help them demonstrate mastery. These accommodations on assessments include text-to-speech, a line reader that you can adjust the size, a notepad, and a built-in calculator.
- Teachers can use tools such as Text-to-Speech, Highlighter, Notepad, Line Reader, Calculator, and Reference Sheet when creating an assessment. Materials offer fully customizable tests that have fewer questions (while still holding true to objective coverage) to students with this accommodation.

McGraw Hill Texas 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 include targeted strategies for ELLs that have not yet achieved mastery. Each chapter contains a Wordlab and a Learnsmart interactive that is differentiated and can be used for remediation for students who have not yet mastered the concept.
- The Chapter 2 Planning and Support Chapter Pretest and the reteaching library in LEARN SMART focus on TEKS that are required as prior knowledge for student success in the present unit. The TEKS Progression chart in Chapter 4 clearly exhibits TEKS presented in earlier classes that directly tie into these units TEKS.
- In Chapter 6, Lesson 1, Projectile motion, the first example problem has a hyperlink titled "Long Description" that provides clarification for the solution and the diagram. Chapter 14, Lesson 2 Blueprint outlines instructional tools to clarify, develop, and reinforce the topic of machines. For example, teachers are guided through a 10-minute activity to clarify the word efficiency and how it is applied in real-world examples like gasoline in an engine.
- In Chapter 7, the videos, interactives, exit tickets, quizzes, vocabulary tests, and practice problems are completely worked out to help students master the content. In Chapter 6, Lesson 3 in the Teaching Lesson 3 with 5E Options, next to the activity, it has a Reinforce section to help scaffold students in learning the new material by referencing material that they have learned previously.

McGraw Hill Texas Physics

Materials provide enrichment activities for all levels of learners.

- The materials include simulations and lab activities to provide enrichment for all levels of learners. They also include short videos to provide enrichment for all levels of learners. For example, Lesson 1 of Chapter 5: Forces in Two Dimensions, includes a Phet Simulation on vector addition, a video on vector addition, and a lab on perpendicular forces.
- The materials provide enrichment lessons for English Language Learners in each tier learning level and give strategies for measuring conceptual understanding. For example, Chapter 2 Explain provides a short lesson to review the concepts of latitude and longitude. After the teacher draws a circle and labels the equator, latitude, and longitude, the materials provide strategies to explain the concept for each language proficiency level. For Beginner students, the materials suggest "'Use gestures and pointing to explain latitude and longitude," and for Advanced High students, the materials suggest "Ask: What do you think we use these lines for?"
- Chapter 6, Science and Language Content Acquisition provides vocabulary enrichment by creating interactive word walls using the chapter's target vocabulary for each TEKS in 3 different levels: Prior Knowledge, Unit Vocabulary, and Supporting Vocabulary. The teacher's guidance says, "Build this together as a class on the wall for each lesson's Interactive Word Wall." The materials link to professional development videos and Interactive Word Wall support.
- In Chapter 8, the section at the beginning of the chapter titled "EB/EL Emergent Bilingual/English Learner Support" helps teachers in supporting EB/EL learners. These supports can also be used to help struggling students. This differentiated activity is used to activate prior learning and introduce new terms for beginning, intermediate, and advanced/advanced high EB students. The beginner activity involves previewing the pictures and graphs in the lesson and having students share in groups what they know about the topics. The advanced high activity asks students to preview the pictures and headings in the lesson, discuss in groups the topics they already know, and give examples.
- Each chapter includes a list of hands-on experiments and activities for students. The extension activities, for example, Chapter 5's Lesson 2 Blueprint, have an extension activity titled "A Microscopic View of Friction." Different types of labs are included in Chapter 5, such as a Forensics Lab in which students use simulated skid marks to look at a car's motion.

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

- The materials include guidance for analogies for just-in-time learning acceleration for all students. For example, in Chapter 12: States of Matter, when explaining how solids expand when heated, the text compares forces between vibrating particles to springs. They also include critical thinking questions and scenarios to accelerate learning for students who are ready, along with Lesson Blueprints that provide a detailed list of activity options used to teach each concept.
- At the beginning of Chapter 8, there is a section called Beyond the TEKS that provides real-time instruction and resources for accelerated learners. Chapter 8 Quick Research: Tidal Drag provides evidence of just-in-time learning for acceleration by giving the student time and resources to find applicable information for learning. For example, students must find an article from a reliable source that relates to tidal effects on Earth's angular velocity, read the article with a partner, and prepare a short summary of the article.
- In Chapter 14, students participate in sections titled "Ask Yourself," which provide enrichment activities with challenging activities and assignments that extend beyond the regular curriculum and stimulate critical thinking, problem-solving, and creativity. Two examples include "Describe

how the efficiency of transportation can be increased" and "Describe how energy can be stored and used in a pumped storage hydropower station."

McGraw Hill Texas 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 this 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 in information about people and places.

Evidence includes but is not limited to:

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

- The materials use the 5E Model of instructional approach to engage students in the mastery of the content. They also include demonstrations and authentic tasks for students to measure and collect data.
- Chapter 3 has a section called Chapter Digital Resources which lists all of the different types of instructional resources that students will be interacting with during the unit. The resources include videos and interactives, labs, assignments, and different types of assessments including pre and post-tests, exit tickets, vocabulary quizzes, lesson quizzes, and science probes.
- In Chapter 5 the teacher demonstrates the concept of friction using household items. The teacher asks students to choose which surface of an item will need the most force for it to be pushed at a constant speed on a cookie sheet. Then the students compare different sides of the object and summarize their results.
- Chapter 6's English Language Proficiency Standards accompany the Ask Yourself question and exhibit different strategies for each learning level of the Emergent Bilingual students. Chapter

9's English Language Proficiency Standards include a variety of developmentally appropriate instructional approaches to engage students in the lessons focused on Example Problem 1.

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

- Materials consistently support a variety of instructional groupings such as whole group for discussions, small groups or partners for lab activities, and one-on-one for reviews. In the Teaching Using the 5E Model section of Lesson 1, What is a Force, there is an Explain activity called Forces on Falling Objects where one student is dropping a book and the other student is dropping a feather. This could easily be done as whole group or adjusted to work in small groups or groups of 3 to meet the needs of the students.
- Chapter 6, CER: Work, Energy & Power clearly exhibits small group work with 3 or more students in the instructions. Chapter 6's Physics Lab: Stair Climbing and Power, a physically challenging lab, encourages groups of students to do all predetermined activities and document them for proper measurements.
- Each lesson uses a Reteaching Library with many resources for teachers to support the needs of students. The resources in the Reteaching Library support building on prior knowledge. The Teacher Support PhysicsLAB: Lifting with Pulleys, under the Materials section, suggests that students work in groups or in pairs and lists the materials needed per lab group/pair.

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

- Lessons include opportunities for students to examine a driving question at the start of each chapter and then independently complete a Claim, Evidence, and Reasoning assignment. The Lesson Plans say when to use direct instruction and when to use independent or group work. Each Lesson Blueprint provides guidance in the form of a table. For example, in Chapter 14: Using Energy, there are videos and interactives, labs, assessments (in the form of projects and practice problems), and assessments (in the form of exit tickets and quizzes).
- Chapter 3, Lesson 1 5E model exhibits multiple types of practices (e.g., modeled, guided, collaborative, independent) in at least one of the quadrants of the 5E learning model. Chapter 11 Thermal Energy's Digital resources exhibit clear examples of multiple types of practices (e.g., modeled, guided, collaborative, independent) by way of videos, interactives, labs, and assessments.
- In Chapter 5, Lesson 3 5E model, students work as a whole group during the Engage, working as in-class examples, working in smaller groups during the Moving Frame of Reference Lab, and working independently on exit tickets.

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

- In the first chapter of the student eBook, jobs of all types that involve physics are included. There are crane operators, athletes, engineers, and lab technicians. People of different ethnic backgrounds and genders are represented. In Chapter 2 Representing Motion, there is an athlete with a prosthetic leg shown in Figure 26.
- The images shown in Chapter 8 show people in a city, a desert, a plane, an amusement, and a dancer to give students a chance to see physics in all different places. In the TEKS 5B Test and other assessments the names nclude John, Tom, Sunhee, Thomas, Morhinder, and Linda.

- The materials include images representing the diversity of school communities in terms of race and ethnicity, gender identity, skin tone, and hair texture. Assessment materials include an equality of male and female names and racially diverse names. Assessments also include neutral terminology such as skydiver, man, and nephew.
- The student version of Chapter 1 in the textbook displays images of all types of people ranging from children, people with disabilities, athletes, and blue-collar workers. Chapter 16: Sound depicts a range of diverse images of people such as a violinist, an ultrasound tech, and a diver with a sonar device.

McGraw Hill Texas 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 this 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 beginning of each chapter has clear evidence of the ELPS being used and supported. A section called EB/EL Emergent Bilingual/English Language Supports gives feedback on how to support students that are beginning, intermediate, and advanced/advanced high. The Explore section of Lesson 1 uses a word lab activity to help all students with vocabulary from the unit, and below a section called ELPS Support, ELPS 2C provides support to EL/EB students with examples for beginning, intermediate, and advanced/advanced high students.
- The materials include linguistic accommodations commensurate with various levels of English language proficiency as defined by the ELPS. For example, the Emergent Bilingual/English Language Support has strategies listed for beginner, intermediate, and advanced. The material uses teacher prompts to help them know that beginner students can look through the chapter and review the pictures and graphs and later share what they know in small groups using their native language.
- The materials include guidance for linguistic accommodations in each chapter in the Science Language and Content Acquisition. For example, Chapter 8's Science Language and Content Acquisition has a table that outlines Spanish Language Transfer. Vocabulary words from the chapter such as radian/radián are listed to show similarity in English and Spanish.
- Chapter 7 Gravitation presents very detailed information and support for ELPS with a complete chart that focuses on Emergent Bilinguals and Emergent Bilingual Supports on all levels (beginner, middle, and advanced) and shows misconceptions and understandings to eliminate confusion. Chapter 8 Rotational Motion uses EPLS support and guidance that differentiate the

learning lessons for ELLs and EBs through the Targeted Strategies by the way of listening, speaking and writing.

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

- The materials encourage strategic use of the student's first language in the Science Language and Content Acquisition. For example, Chapter 8's Science Language and Content Acquisition has a table that outlines Spanish Language Transfer. For example, the vocabulary words from the chapter, like the English word spin and the Spanish word espina have different meanings, but similar sounds.
- The beginning of Chapter 2 has clear evidence of materials to support students' first language. For example, cognates listed for Spanish include the main terms for this unit including origin, distance, latitude, and elevation. They also include false cognates listed to help students avoid errors for example frame, mark, and tape.
- Chapter 8 Rotational Motion encourages academic development by accessing Dr. Julie Jackson's Professional development videos to assist teachers in strengthening their use of word walls for student support. Chapter 8 Rotational Motion presents students with a visual literacy chart that has vocabulary terms for the unit, imagery, descriptors, and formulas associated with the unit.
- The materials encourage strategic use of students' first language for linguistic, affective, cognitive, and academic development in English. For example, the student materials include embedded glossary links to text boxes for the definition in Spanish.

McGraw Hill Texas 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.

- The materials provide information about the design of the program in an editable document called Communicating with Caregivers. Inside this resource, there are documents that include paragraphs about how the materials are written for every student, every learner, every teacher, and for you. It also includes sections that explain the teacher tools and guidance, teacher support, integration used, resources for your lessons, explanation about the student resources, the design behind the lab experiments, and reading comprehension support.
- The materials provide information to be shared with students and caregivers about the design of the program. For example, there is a Letter To Home for the Chapter: Forces in One Dimension. The letter provides information about the TEKS and what the students will be learning.
- Inside the student book, which is accessible at home, the Lesson 2 Blueprint is very thorough, detailed, and well laid out for anyone who accesses the lesson. The Unpack the TEKS section presents very straight-to-the-point resources for anyone who is facilitating the lesson or following it with a student.

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

- The Communicating with Caregivers component contains information that can assist families and caregivers to reinforce student learning. For example, the document provides information

for how the digital components of the materials work as well as the Program Overview Letter that can be sent home to caregivers. The Program Overview Letter contains information about the resources provided in the student textbook overview including the ask-yourself prompts, review questions, and the digital student experiences.

- In the Letter to Home, the evidence of a family activity that caregivers could do with students at home to help increase student understanding of the concept is present. In the Accelerated Motion Letter to Home, the specific TEKS being taught are listed and the family activity is referenced. The separate document called Family Activity talks about driving down the highway and having the student create a pictorial motion diagram of the motion and it references the page in the textbook to help the student with the activity.
- Materials provide information to be shared with caregivers for how they can help reinforce student learning and development. For example, in the "Letter to Home" for the Chapter: Forces in One Dimension, there is a Family Activity that describes what students can do at home and what the parent/guardian should focus on during the activity. For this chapter, the caregiver is asked to work with their students to record examples of balanced and unbalanced forces at work, in their daily lives or on TV.
- The EB/EL language supports are in-depth and laid out in a manner that anyone would be able to understand and guide a student but nothing indicates this information is pointing at a caregiver of the student. The Chapter Planning & Support presents a detailed layout from start to finish with options to implement online as needed. Each section is designed and laid out specifically detailed to tell the reader exactly what's being presented.

Materials include information to guide teacher communications with caregivers.

- The materials include information to guide teacher communication with a Family Welcome Letter. This letter is found in the Communicating with Caregivers guide and provides information about what students should expect in class as well as at home regarding their physics class. The letter also explains what digital access the students and caregivers will have at home.
- In the beginning of the year, the materials provide a Letter to Home Program Overview for Physics that details how the teachers can communicate information to caregivers for each chapter throughout the year. For example, the editable letter states "I will provide you with a letter like this for each chapter of the program so you may stay informed about the topic and the TEKS that will be explored in that chapter."
- The materials provide guidance to teachers with a letter called Fostering School to Home Connections. The editable letter is found in the Communicating with Caregivers Guide and details out the different communication options available between teacher and caregiver as well as communication about the chapters and assessments that will occur throughout the year. For example, the letter states "We know that all families are different. Some prefer in-person meetings, phone calls, or written letters while others prefer technology-based communication methods such as video conferencing, texts, and mobile apps."
- Evidence of how teachers should communicate with caregivers includes the Letter to Home. This letter is provided for each chapter and details the TEKS being taught and provides an activity to help caregivers support their students in the learning of physics. The letter can be edited and guides teachers in providing
the learning objectives for the chapter to the caregivers and thanks the caregiver for their support, and encourages them to make contact if they have any questions.

McGraw Hill Texas 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 in 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.

- Materials guide teachers with a scope and sequence and instructional map in the TEKS Correlation document. The document can be found on the Dashboard and is called TEKS Correlations, Physics. The TEKS Correlation document shows the correlation between the TEKS and where the material is presented in both the student and teacher books.
- At the beginning of each chapter, there is a TEKS at a Glance component that breaks down which TEKS will be taught in the chapter. For example, in Chapter 7: Gravitation, TEKS 4B and 5H are listed, and in Chapter 8: Rotational Motion, TEKS 5C, 5E, and 5F are listed.
- The chapters provide a Chapter Overview which outlines the specific order in which the TEKS are taught. For example, Chapter 9: Momentum and Its Conservation lists the following progression: Lesson 1: TEKS 7D Impulse and Momentum, Lesson 2: TEKS 7E Conservation of Momentum, Lesson 3: TEKS 7D Angular Momentum.

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

- The Lab Library: Physics, found on the Dashboard, provides teacher guidance for facilitating student-made connections across core concepts and scientific and engineering practices. The Library contains PDF documents with embedded engineering practices in the questions. For example, in the Chapter 15 PhysicsLAB: Pendulum Vibrations, students are asked to formulate hypotheses, evaluate errors, and assess design.

- The Teacher Resource materials provide a lesson blueprint with an overview of all the lesson activities for each chapter. This one-page document clearly displays where and how science and engineering practices will be utilized during the lesson. For example, the Chapter 17: Fundamentals of Light, Lesson 1 Blueprint shows the SEPs utilized three times during the Explain portion of the lesson for Engaging in Argument from Evidence, Developing and Using Models, and Using Mathematics and Computational Thinking, and once again in the Elaborate portion for Engaging in Argument from Evidence.
- Lesson 4 of Chapter 0: The Process of Science is devoted entirely to introducing and reinforcing knowledge of science and engineering practices. The lesson revolves around the essential question, "How do scientists and engineers define explanations and solve problems?" In the Explain portion of the lesson, the materials provide a table that lists eight examples of science and engineering practices. The materials guide students to study the table and answer the questions "Which scientific practices are used mainly by scientists and which are used mainly by engineers? Which are used by both?"
- The 5E Model is integrated into each chapter to guide students in making connections across concepts while engaging in engineering practices. For example, the Engage portion of each lesson always includes an Activate Prior Knowledge section to make connections to previous learning. In Chapter 18: Reflection, the Lesson 1 Activate Prior Knowledge guides teachers to "Ask students to list what can occur when light strikes a surface, including examples." Furthermore, the Explain and Elaborate portions of the lessons contain multiple opportunities to use science and engineering practices. For example, the Explore section utilizes Developing and Using Models by guiding teachers to "Help students model the law of reflection with a ball bouncing off a wall." The materials continue to explain how to develop the model and the concept for student understanding.

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

- The end of each chapter in the student textbook includes a chapter study guide that recaps the concepts introduced in the previous lessons with an emphasis on answering essential questions that were introduced at the beginning of the chapter.
- The teacher book has a TEKS Progression section that references TEKS taught in previous grade levels. At the start of each chapter, the Science Language and Content Acquisition section breaks down both the prior knowledge vocabulary as well as the new targeted lesson vocabulary.

An Activating Prior Knowledge section is provided within every 5E model lesson for each chapter. For example, in the Engage section of Lesson 2, Chapter 9: Gravitation, the Activating Prior Knowledge states, "Review with students how they can calculate the weight of an object by using the relationship F_g=mg. Have them use this knowledge to calculate their own weight (or the weight of another object of known mass) in newtons."

McGraw Hill Texas 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.

- The materials guide the teacher within Course Resources and the Chapter Planning and Support sections of the Chapter Overview. Each chapter has a Launch and Close section with guiding questions, reteach, assessments, and technology. Chapters start with a Chapter Planning and Support section which recommends a lesson sequence for implementation.
- The materials include a lesson blueprint that provides guidance for differentiation and lesson scaffolding that offers flexible options for teaching the same content in different ways.
- Enrichment activities and scaffolds to support student learning are both evident in the Lesson 1 Blueprint of the Teacher Edition. The Activate Prior Knowledge in Chapter 4, Lesson 1, gives the teacher the instructions to engage the student with a question and a few small manipulatives that tap previously learned TEKS.
- The Chapter Digital Resources section lists videos, labs (some as simulations), assignments, and assessments for the entire unit so that teachers can see what a complete lesson looks like.

- The chapters have an Emergent Bilingual/English Language Supports section at the beginning. This provides scaffolding for students at different levels and targeted strategies to help students, as well as more detailed English Language Supports throughout the 5E lesson.

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

- In Chapter 1, the TEKS at a Glance clearly indicates cross-content standards using TEKS 1.F and 2.B that both include mathematical prior knowledge.
- In the TEKS Correlations: Physics section, there is a list of TEKS with a list of materials and applied practices for each unit. At the end of each chapter, there are practice problems that include math skills for solving each problem.
- The TEKS Progression at the beginning of all chapters in the Teacher Edition eBook includes cross-content standards from previous science courses that explain the standard within the context of the current course. For example, in Lesson 2, the TEKS Progression includes TEKS from grades 6-8 which discusses evaluating evidence and methodologies. The cross-content standards align with the lesson in Chapter 2.

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

- The materials include a comprehensive master list of equipment and supplies needed to support instructional activities for the entire curriculum on one spreadsheet and on each individual lab sheet. For example, Probeware Lab: Measure Velocity provides very detailed and clear instructions and a very distinct list of materials (per pair) for students within the Materials section.
- On the Lesson blueprint, there is a checklist for the 5E model lessons, and each section has lists for what materials are beginning used.

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

- The Lab Library depicts clear evidence of grade-appropriate safety practices by using symbols the students encounter in previous science classes and safety training. For example, safety symbols and extra cautionary items lead the Probeware Lab: Measuring Acceleration before students begin working.
- The Lab Library teacher's support explains how to use the materials so students can use the equipment safely.
- Materials include a Lab Skill and Safety Handbook, which provides guidance for safety practices, including grade-appropriate use of the safety equipment during investigations. The lab handout sheet includes a reference to what safety equipment is needed and should be followed in the lab. For example, the Chapter 1-3 safety icons include goggles and an apron. There is a section labeled Caution in each lab that outlines course-appropriate safety guidance.

McGraw Hill Texas 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 Lesson Blueprint includes a session plan with times for each activity to be completed.

  For example, there is a table provided for each lesson that has customizable lesson options with the pacing for each piece of the lesson shown in minutes.

- In alignment with the 5E learning model, the Quick Lab “Model Mercury’s Motion” in Chapter 7, Lesson 1, includes all instructions with times and adds extra time consideration for any student with accessibility issues.

- The materials include "Teaching with 5E Options" at the start of each lesson within each chapter. This section breaks down the recommended amount of time for each activity.

- The Chapter Planning and Support section of each chapter in the Teacher Edition eBook includes a summary of activities and time requirements. For example, there is a Chapter Pre-Test under the label Chapter Launch, and it states that it will take 15 minutes.

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

- The Lesson Wrap-Up section spirals back to the essential question, a relevant question that explains why, with real-world examples and a quiz serving as a summative assessment of the unit.

McGraw Hill Texas Physics

- The Lesson Blueprint provides a clear sequence with strategies for implementation, and the materials include a Table of Contents with a suggested sequence of chapters that consider the interconnections of conceptual understanding.
- The Chapter Planning and Support section of each chapter in the Teacher Edition eBook includes a summary of chapter activities. For example, in the Lesson 2 Blueprint, customizable lessons guide teachers to implement the lesson in a strategic way.

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

- The materials include lessons and activities to support a full academic year of learning and include time for pre-teaching and re-teaching content and skills based on periodic formative assessments.
- The times in the Lesson Blueprint are suggestions, and teachers can adapt them to their specific needs.
- The McGraw Hill Physics Textbook aligns with the TEKS designed to be taught in one school year. With the flexibility of the lessons, including time constraints, there is enough evidence to suggest these materials can be completed in one school year.

McGraw Hill Texas 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.

- The digital materials include an appropriate amount of white space and an overall design that does not distract from student learning. For example, student materials include the following: clean main subject/topic, titles, and heading are prominent, content is organized in a logical progression, and ancillary tools are easily accessible like embedded links to glossary words.
- Chapter 13: Energy & Earth's Processes Student Ebook is set up and laid out in a manner that welcomes students and is also easy to navigate even if a student was a first-time user. Chapter 16 Lesson 2 The Physics of Music is constructed in a manner where a student man uses the images, equations, and interactive tools that all enhance the student experiences and that may maintain student interest.
- When text is read aloud by the computer, a line appears next to the paragraph as it is read. Ancillary student materials, such as glossaries and tools, are easy to find and/or access. The content is organized in a logical progression.
- The materials incorporate an appropriate amount of white space throughout its pages, enhancing readability and preventing overwhelming blocks of text. Materials include a collection of high-quality diagrams, illustrations, and graphs strategically placed alongside the relevant text. For example in Chapter 0 Lesson 1 "What is Science" a photo of a person using a microwave is to the right of the heading, demonstrating how science is everywhere.
- In Chapter 9 in the Student eBook, the main subject listed is clear and in a colored text box titled Impulse and Momentum, with an essential question listed below to help guide students in their learning. The colored textbox ends to help students transition from titles to text. The reading material is on a white background to make it very easy for students to read since there are no other colors. The vocabulary words are listed in a different color and underlined to make them

pop out and let students know you can click on them to learn more. Vocabulary terms and equations are also listed in a separate textbox that has a muted green color to it, to help students see that the term momentum is important and its equation is too, the muted color helps it to stand out without being distracting.

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

- The visuals feature diverse characters and relatable scenarios that resonate with students, fostering a sense of inclusivity and representation. For example, diverse groups of professionals in Chapter 0, Lesson 3 depict a female professor, and Kizzmekia Corbett, a Black woman and leading expert in infectious disease. Real-life applications of physics principles in familiar contexts like sports, technology, and nature in Chapter 0, and an image of a squirrel are used to prompt a thought-provoking study.
- The materials embedded age-appropriate pictures and graphics that support student learning and engagement. For example, the detailed visuals in kinematics clearly depict the connection between position and velocity over a period of time for a particle.
- The materials include age-appropriate pictures to support student learning. The pictures in the text for Chapter 15 show the damage from a tsunami, revealing how powerful they can be but not in a graphic way so students would not be put off by the image. The image is designed to peak student interest in the topic but also relate to other contents (history and geography).
- The images and all charts, manipulatives and any other imagery are all age appropriate and relatable to high school students and the lesson being presented. Chapter 3 Lesson 1 has several images but the publisher uses more charts and graphs to represent acceleration in a manner that the students can interact with and correlate into knowledge. Chapter 3 Lesson 3 Free Fall uses two distinctly relatable images that go directly with the topic of Free Fall. Students have likely experienced or been in contact with these experiences at some point in their lives.

Materials include digital components that are free of technical errors.

- The foldables handbook provides a digital tool that walks students through each manipulator step by step according to the lesson they are on. The CER Physics provides digital and printable tools with the ability for students to digitally express their evidence and reasoning as needed or instructed by the teacher.
- The materials include digital components that are free of technical errors. In Chapter 12 Lesson 3 on Pressure in Gases, the title of the section is capitalized correctly and in the section below there is correct capitalization and punctuation on the sentences. In the Ask Yourself Section, the statement students are describing "Describe the differences between real and ideal gasses.," uses proper punctuation and capitalization.
- The materials include digital components that are free of technical errors. For example, lab materials are free of spelling, grammar, and punctuation errors. Materials are also free of wrong answers to problems in the teacher's lab sheets.

McGraw Hill Texas 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.

- Chapter 12 Lesson Planning & Support integrates technology and tools that support student learning and engagement with the Video: Floating Ice in its effort to enhance student knowledge. Chapter 12, Interactive Visual Literacy integrates video and interactives that drive the lesson into enhancing student knowledge of the predetermined TEKS. For example, Lesson 4: Fluid Mechanics offers a review with the Interactive Visual Literacy called “Buoyant Force and Sinking and Floating” as well as an additional video titled “Bernoulli's Principle”
- The materials integrate digital technology and tools to support student learning. Each chapter has a section called Chapter Digital Resources, that lists all of the different digital resources for that chapter. Chapter 3's list of technology tools includes videos, labs, simulations, interactive visual literacy, and assessments. Lesson 1 includes a video about the take-off Acceleration of a jet that discusses the change in velocity, the same question as the CER activity the students completed in the engage section of Lesson 1.
- The materials integrate digital technology and tools to support student learning and engagement. For example, each chapter lesson has an interactive vocabulary learning lab and LearnSmart activity available for students. The lesson blueprint includes teacher guidance for using simulations, interactives, and videos.
- The materials provide teacher guidance for simulations, interactives, and related activities to support student learning. Teacher guidance includes suggestions for time and pacing, as well as

ways to assist students with making observations, asking questions, collecting data, and participating in discussions. In the Supporting All Learners: Equity and Access in Science document detailed information for implementation of materials is provided. Sections include Multiple Tiers of Student Support, Strong Professional Support, and Universal Design for Learning.

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

- The materials integrate digital technology into science and engineering practices. In the Chapter 2 Lab: Constant Speed, students use photogates to help determine if a car is traveling at a constant speed. Students collect and analyze data graphically to determine if the car traveled at a constant speed. The materials provide technology tools used with science and engineering practices in the lab investigations. In Probeware Lab: Measure Velocity, students use motion detectors and either a graphing calculator or LabPro Interface to collect and analyze their lab data to determine the velocity of the car.
- The materials integrate digital technology in ways that support student engagement with the science and engineering practices, recurring themes and concepts, and course-specific content. For example, in Chapter 3 students participate in a simulation where they must analyze accelerated motion and graphs.
- The materials provide opportunities for students to obtain, evaluate, and communicate information using digital tools. For example, in Chapter 6: Motion in 2 Dimensions, students watch a video on a projectile path to evaluate how athletes use motion in 2 dimensions in sports. The materials provide interactives and models for students to explore in a virtual environment. For example, in Chapter 26: Quantum Theory and the Atom, students engage in a simulation on fiber optics.
- Chapter 16 Activity: Sound Graphs for Noise & Music integrates digital technology along with science and engineering practices by using an oscilloscope and its readings to observe the waves produced and the difference in the properties in each one. The PhysicsLab: Acceleration integrates digital technology along with scientific practices by having a photogate collect digital images of a ball to have the students track the acceleration.

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

- The materials provide opportunities for collaboration. For example, the materials state "McGraw Hill Texas Science has digital activities that encourage collaborations like simulations, virtual labs, and interactive case studies. McGraw Hill will support other collaborative tools that the district utilizes through an LTI integration such as Google."
- The materials integrate digital technology that supports student-to-student collaborations. For example, McGraw Hill and Kahoot have partnered to create interactive games and quizzes for students to play collaboratively in pairs or teams. When the teacher visits the Kahoot website they will be able to search for McGraw Hill to find quizzes that directly relate to the materials.
- Chapter 3 Lesson 3 Visual Literacy: Figure 15 presents an opportunity for teacher-student collaboration by the way of digital technology. The students view a digital image and then recreate an image of their own doing the total opposite followed by a discussion.
- The Probeware Lab: Tossed Ball Motion integrates the use of a digital motion detector. The students graph the data and compare it with the instructor's findings or prerequisite of the lab.

Students repeat data collection and will check with the teacher to identify areas of improvement or error.

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

- The materials are compatible with a variety of operating systems. For example, the product website has a page with McGraw Hill System Requirements and lists compatibility with the following operating systems: Windows 10+, Mac OS X v12+ (Monterey), ChromeOS v104+, tablets and mobile devices with iOS 15+ or Android 13+ (Tiramisu)
- The materials work on a variety of devices including Chrome on a Windows computer, Google Chrome on a Chromebook, and on iPads with the browser and through the McGraw Hill app. In the Digital Technical Support Page of the product website, there is a section titled “ReadAnywhere App - Device Requirements” that lists the minimum operating system requirements for the app as Android 5.0+ and iOs 12.0+
- The Program Overview PDF in the Partnerships section lists partnered organizations such as If/The She Can, Kahoot, Actively Learn, and PhET. The materials can be accessed readily and "Core content is available offline via the McGraw Hill Read Anywhere app"

McGraw Hill Texas 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.

- The materials provide digital technology and online components which are developmentally appropriate and aligned with the course scope and sequence. At the beginning of each chapter, the TEKS are listed, then the chapter overview has the TEKS referenced, and essential questions with short answers to help teachers align materials with the TEKS. The next pages have digital resources listed and a 5E lesson plan to show how the resources are matched to the TEKS. For Chapter 6, the TEKS are 5.c, 5.D, and 5.F.
- The materials provide online components aligned with the course scope and sequence. In the Lab Library, all of the lab investigations listed have the TEKS listed below them to make sure that the labs are aligned to the scope and sequence. For example, in Chapter 19: Forensics Lab: A Whole Spectrum of Possibilities TEKS 1.B, 1.C, 1.D, 1.F, 2.B, 2.C, and 8.D are all referenced showing that both science processing and science content TEKS are used in the lab.
- The materials provide related TEKS and ELPS for online and digital components within the Teacher's Guide. For example, Chapter 3 of the Teacher eBook includes a TEKS Progression and ELPS Support. They also provide a description of the amount of time students access digital materials. For example in Chapter 3, Lesson 2 Blueprint, Simulation: Accelerated Motion 10 min, Vocabulary Word Lab 20 min, and Interactive Visual Literacy: Area Under a Curve 5 min.
- The materials provide information that identifies how the digital and online components align with the science knowledge and skills. For example, at the start of each lesson, the TEKS are listed explicitly that will be covered in that section.

- The Engage Activity: Moving Pictures integrates digital technology that is course appropriate in the lesson and that aligns with TEKS 5.B & 5.C. The Interactive Visual Literacy: Degrees Minutes and Seconds includes videos and interactives that align with TEKS 5.B & 5.C and direct the students in an appropriate direction to the objective of the concept.

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

- The materials provide teacher guidance for the use of embedded technology to support and enhance student learning. For example, in the blueprint of the lesson, there is guidance on when teachers should assign embedded technology like the vocabulary learning lab. Materials also provide a program overview that discusses the uses of embedded technology.
- The Activity: GPS Instructions gives the instructor clear instructions and directions for the activity which is a downloadable GPS application that the students will fully operate. The PHET Simulation Graphing Lines integrates digital technology for the students but there is no direction or guidance for the teacher present in the e-book.
- The materials provide teacher guidance on how to use technology to support student learning. For each chapter, there are videos and interactives listed and they come with a description of when in the lesson to use them, and how long it should take. In Chapter 7, the video “Newton and Gravity" is listed as part of the Engage activity with a driving question for students to discuss after they watch the video, the time frame is listed as 5 minutes.
- The materials provide teacher guidance on the embedded technology to help with student learning. In Chapter 23: Magnetism the explore section for Lesson 1, there are 2 PhET Simulations listed, Build a Nucleus and Isotopes and Atomic Mass, both contain a description, a time limit (20 minutes for each one), and an introduction before the simulations to make sure students are ready to do the simulations.
- The materials provide recommendations for teachers on which Lesson categories (Engage, Explore, Explain, Elaborate, and Evaluate) use technology with students. "McGraw Hill Texas Science digital materials provide embedded professional development in the forms of downloadable guides and videos for using technology, including best practices, science and literacy pedagogy, differentiation, step-by-step how-tos, model lessons, EB/EL support, and assessments." Professional Development videos can be found in the Physics: Program Resources tab.

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

- The materials provide digital access to all student resources for caregivers by using students’ individual credentials. Teachers are provided with a Letter to Home for each chapter. The Letter to Home includes a list of the specific instructional TEKS and a Family Activity that provides parents and caregivers opportunities to expand on the science and engineering concepts presented in the classroom.
- The support page on McGraw Hill provides a link to the YouTube page which supports the creation of a student account for the ebook and classroom platform associated. No resources are directed at parents or caregivers of students to assist with digital technologies in accordance with the books. After reading and looking again it shows that caregivers will have the same access as students.

McGraw Hill Texas Physics

- The materials provide a letter to home that covers the TEKS in that unit and an activity that students can do at home. In the letter for Chapter 2, it references some of the technology that students will see in that unit including motion detectors, photogates, and digital applications. The program overview has digital help for caregivers if that document is available for caregivers. The program overview discusses the different parts of the online textbook and its resources to help caregivers support their students.
- Materials include resources for parents and caregivers to support student engagement in digital and online components. For example, there is a help menu in the upper right hand corner of the product home page that gives specific guidance to students and families for digital technical support. This includes troubleshooting, how to use the textbook materials, as well as login issues.