

Time period	Standard	Resources (unit in textbook, learning center, recurring activity, other)	Internet/Media/ other resource
Weeks 1	(1) Scientific investigation and reasoning. The student conducts classroom and outdoor investigations following home and school safety procedures and environmentally appropriate and ethical practices. The student is expected to:		
	(A) demonstrate safe practices and the use of safety equipment as described in the Texas Safety Standards during classroom and outdoor investigations; and	Text Resource: <i>Safety in Science</i> – Harcourt Science, Pg xvi	Lab Safety Lesson Plans
	(B) make informed choices in the conservation, disposal, and recycling of materials.	Text Resource: <i>Conserving Natural Resources</i> – Harcourt Science, Pg C50 – C53	BrainPop: Recycling
Weeks 1 to 36	(2) Scientific investigation and reasoning. The student uses scientific methods during laboratory and outdoor investigations. The student is expected to:		
	(A) describe, plan, and implement simple experimental investigations testing one variable;	Teach explicitly in Unit 1: Matter & Energy. Continue reinforcement throughout all units and science investigations. Assess students through lab work and end-of-year science fair project.	BrainPop: Science Fair Projects
	(B) ask well-defined questions, formulate testable hypotheses, and select and use appropriate equipment and technology;	Teach explicitly in Unit 1: Matter & Energy. Continue reinforcement throughout all units and science investigations.	BrainPop: The Scientific Method

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		Assess students through lab work and end-of-year science fair project.	
	(C) collect information by detailed observations and accurate measuring;	<p>Teach explicitly in Unit 1: Matter & Energy.</p> <p>Continue reinforcement throughout all units and science investigations.</p> <p>Assess students through lab work and end-of-year science fair project.</p>	BrainPop: Precision & Accuracy
	(D) analyze and interpret information to construct reasonable explanations from direct (observable) and indirect (inferred) evidence;	<p>Teach explicitly in Unit 1: Matter & Energy.</p> <p>Continue reinforcement throughout all units and science investigations.</p> <p>Assess students through lab work and end-of-year science fair project.</p>	
	(E) demonstrate that repeated investigations may increase the reliability of results;	<p>Teach explicitly in Unit 1: Matter & Energy.</p> <p>Continue reinforcement throughout all units and science investigations.</p> <p>Assess students through lab work and end-of-year science fair project.</p>	Scientific Method and Measurement
	(F) communicate valid conclusions in both written and verbal forms; and	<p>Teach explicitly in Unit 1: Matter & Energy.</p> <p>Continue reinforcement throughout all units and science investigations.</p> <p>Assess students through lab work and end-of-year science fair project.</p>	Science Safety and Measurement

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	(G) construct appropriate simple graphs, tables, maps, and charts using technology, including computers, to organize, examine, and evaluate information.	<p>Teach explicitly in Unit 1: Matter & Energy.</p> <p>Continue reinforcement throughout all units and science investigations.</p> <p>Assess students through lab work and end-of-year science fair project.</p>	BrainPop: Statistics
Weeks 1 to 36	(3) Scientific investigation and reasoning. The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:		
	(A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student;	<p>Teach explicitly in Unit 1: Matter & Energy.</p> <p>Continue reinforcement throughout all units and science investigations.</p> <p>Assess students through lab work and end-of-year science fair project.</p>	How Scientists Work: What is the Scientific Method?
	(B) evaluate the accuracy of the information related to promotional materials for products and services such as nutritional labels;	<p>Cross-curricular: students will address this objective explicitly during math study of data and statistics.</p> <p>Objective will be addressed informally through other science units.</p>	
	(C) draw or develop a model that represents how something works or looks that cannot be seen such as how a soda dispensing machine works; and	During study of the weather and climate, students will create a model of the water cycle.	

	(D) connect grade-level appropriate science concepts with the history of science, science careers, and contributions of scientists.	Each chapter in the Harcourt science text ends with an expository article on the history of science, science careers, and contributions of scientists.	BrainPop: Nobel Prize
Weeks 1 to 36	(4) Scientific investigation and reasoning. The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:		
	(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, prisms, mirrors, pan balances, triple beam balances, spring scales, graduated cylinders, beakers, hot plates, meter sticks, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observations of habitats or organisms such as terrariums and aquariums; and	Teach explicitly in Unit 1: Matter & Energy. Continue reinforcement throughout all units and science investigations. Assess students through lab work and end-of-year science fair project.	BrainPop: Measuring Matter BrainPop: Metric Units BrainPop: Microscopes
	(B) use safety equipment, including safety goggles and gloves.	Text Resource: <i>Safety in Science</i> – Harcourt Science, Pg xvi	Science Safety and Measurement
Weeks 1 to 9	(5) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:		
	(A) classify matter based on physical properties, including mass, magnetism,	Lab: Harcourt Science, Pg E4 investigation	BrainPop Multimedia: States of Matter

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	physical state (solid, liquid, and gas), relative density (sinking and floating), solubility in water, and the ability to conduct or insulate thermal energy or electric energy;	Text Resource: <i>The Importance of Physical Properties</i> – Harcourt Science, Pg E6-E11	Discovery Education: Properties of Matter
	(B) identify the boiling and freezing/melting points of water on the Celsius scale;	Lab: Harcourt Science, Pg E12 investigation Text Resource: <i>The Changing States of Matter</i> – Harcourt Science, Pg E14 – E19	BrainPop: Temperature
	(C) demonstrate that some mixtures maintain physical properties of their ingredients such as iron filings and sand; and	Lab: Harcourt Science, Pg E20 investigation Text Resource: <i>Physical and Chemical Changes</i> – Harcourt Science, Pg E22 – E27	BrainPop: Property Changes
	(D) identify changes that can occur in the physical properties of the ingredients of solutions such as dissolving salt in water or adding lemon juice to water.	Lab: Harcourt Science, Pg E20 investigation Text Resource: <i>The Changing States of Matter</i> – Harcourt Science, Pg E14 – E19	BrainPop: Property Changes
Weeks 1 to 9	(6) Force, motion, and energy. The student knows that energy occurs in many forms and can be observed in cycles, patterns, and systems. The student is expected to:		
	(A) explore the uses of energy, including mechanical, light, thermal, electrical, and sound energy;	Lab: Harcourt Science, Pg F60 investigation Text Resource: <i>Forms of Energy</i> – Harcourt Science, Pg F58-F91	BrainPop: Kinetic Energy Greatest Inventions with Bill Nye: Energy
	(B) demonstrate that the flow of electricity in circuits requires a complete path through which an electric	Lab: Harcourt Science, Pg F66 – F67 investigation: Electric Circuits Text Resource: <i>Energy: Electric</i>	BrainPop: Electric Currents The Magic School

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	current can pass and can produce light, heat, and sound;	<i>Energy</i> – Harcourt Science, Pg F68 – F73	Bus Gets Charged
	(C) demonstrate that light travels in a straight line until it strikes an object or travels through one medium to another and demonstrate that light can be reflected such as the use of mirrors or other shiny surfaces and refracted such as the appearance of an object when observed through water; and	Lab: Harcourt Science, Pg F74-F75 investigation: The Path of Reflected Light Text Resource: <i>Energy: Light and Sound Energy</i> – Harcourt Science, Pg F76 – F81	The Magic School Bus Makes a Rainbow
	(D) design an experiment that tests the effect of force on an object.	Students will design an experiment tests the effect of force variables on a dropping ball.	5th Grade Force, Energy, Motion
Weeks 10 to 18	(7) Earth and space. The student knows Earth's surface is constantly changing and consists of useful resources. The student is expected to:		
	(A) explore the processes that led to the formation of sedimentary rocks and fossil fuels;	Lab: Harcourt Science, Pg C40-C41 investigation: What Kinds of Rocks Store Petroleum Text Resource: <i>How Fossil Fuels Form</i> – Harcourt Science, Pg C42-47	BrainPop: Fossil Fuels BrainPop: Rock Cycle
	(B) recognize how landforms such as deltas, canyons, and sand dunes are the result of changes to Earth's surface by wind, water, and ice;	Lab: Harcourt Science, Pg C4-C5 investigation: How Water Changes the Earth's Surface Text Resource: <i>Changes to the Earth's Surface</i> – Harcourt Science, Pg C6-C11	Discovery Education: Our Changing Earth
	(C) identify alternative energy resources such as wind, solar, hydroelectric, geothermal, and biofuels; and	Text Resource: <i>Natural Resources</i> – Harcourt Science, Pg C36 – C39	BrainPop: Natural Resources

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	(D) identify fossils as evidence of past living organisms and the nature of the environments at the time using models.	<p>Lab: Harcourt Science, Pg C40-C41 investigation: What Kinds of Rocks Store Petroleum</p> <p>Text Resource: <i>How Fossil Fuels Form</i>– Harcourt Science, Pg C42-47</p>	BrainPop: Fossil Fuels
Weeks 10 to 18	(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:		
	(A) differentiate between weather and climate;	<p>Lab: Harcourt Science, Pg C62-C63 investigation: Measuring Weather Conditions</p> <p>Text Resource: <i>Ch. 3 – The Weather and Climate</i> – Harcourt Science, Pg C60 – C85</p>	Discovery Education: Weather & Climate
	(B) explain how the Sun and the ocean interact in the water cycle;	<p>Lab: Harcourt Science, Pg B12-B13 investigation: Water, Water Everywhere</p> <p>Text Resource: <i>Weather Systems</i> – Harcourt Science, Pg C64 – C69</p> <p>Text Resource: <i>Why the Water Cycle is Important</i> – Harcourt Science, Pg B14-B17</p>	Magic School Bus: Wet All Over Planet Earth: Fresh Water
	(C) demonstrate that Earth rotates on its axis once approximately every 24 hours causing the day/night cycle and the apparent movement of the Sun across the sky; and	<p>Lab: Harcourt Science, Pg D4 – D5 investigation: How the Earth, the moon and the sun move through space</p> <p>Text Resource: <i>How Earth and Moon Compare</i>– Harcourt Science, Pg D6-D7</p>	TLC Elementary School: The Moon and Beyond
	(D) identify and compare the physical characteristics of	<p>Lab: Harcourt Science, Pg D4 – D5 investigation: How the Earth, the</p>	BrainPop: The Sun

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	the Sun, Earth, and Moon.	moon and the sun move through space Text Resource: <i>How Earth and Moon Compare</i> – Harcourt Science, Pg D6-D7	BrainPop: The Moon
Weeks 19 to 27	(9) Organisms and environments. The student knows that there are relationships, systems, and cycles within environments. The student is expected to:		
	(A) observe the way organisms live and survive in their ecosystem by interacting with the living and non-living elements;	Lab: Harcourt Science, Pg B26-B27 investigation: The Local Environment Text Resource: <i>Living Things Interact</i> – Harcourt Science, Pg B24-B57	Magic School Bus: All Dried Up (Desert Ecosystem Survival)
	(B) describe how the flow of energy derived from the Sun, used by producers to create their own food, is transferred through a food chain and food web to consumers and decomposers;	Lab: Harcourt Science, Pg B32-B33 investigation: What Eats What Text Resource: <i>How Energy is Transferred in an Ecosystem</i> – Harcourt Science, Pg B34 – B39	Oceans Alive: The Food Web BrainPop: FoodChains
	(C) predict the effects of changes in ecosystems caused by living organisms, including humans, such as the overpopulation of grazers or the building of highways; and	Lab: Harcourt Science, Pg B48-B49 investigation: Vanishing Habitats Text Resource: <i>Extinction & Its Causes</i> – Harcourt Science, Pg B50-B53	BrainPop: Ecosystems BrainPop: Everglades
	(D) identify the significance of the carbon dioxide-oxygen cycle to the survival of plants and animals.	Lab: Harcourt Science, Pg B4-B5 investigation: How Plants Use Carbon Dioxide Text Resource: <i>How Natural Materials are Reused</i> – Harcourt Science, Pg B6 – B11	Cycle Series: The Oxygen Cycle

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Weeks 19 to 27	(10) Organisms and environments. The student knows that organisms undergo similar life processes and have structures that help them survive within their environments. The student is expected to:		
	(A) compare the structures and functions of different species that help them live and survive such as hooves on prairie animals or webbed feet in aquatic animals;	<p>Lab: Harcourt Science, Pg B40-B41 investigation: Body Color</p> <p>Text Resource: <i>Ways in Which Organisms Compete</i> – Harcourt Science, Pg B42-B47</p> <p>Text Resource: <i>Types of Plants & Their Adaptations</i>– Harcourt Science, Pg A62-A125</p>	<p>BrainPop: Camoflauge</p> <p>Biomes: The Adaptations of Animals</p>
	(B) differentiate between inherited traits of plants and animals such as spines on a cactus or shape of a beak and learned behaviors such as an animal learning tricks or a child riding a bicycle; and	<p>Lab: Harcourt Science, Pg A50-A51 investigation: Inherited Characteristics</p> <p>Text Resource: <i>Inherited Traits</i>– Harcourt Science, Pg A52-A55</p>	<p>BrainPop: Heredity</p>
	(C) describe the differences between complete and incomplete metamorphosis of insects.	<p>Lab: Harcourt Science, Pg A44- A 45 investigation: The Stages of a Mealworm’s life</p> <p>Text Resource: <i>The Stages of Life</i>– Harcourt Science, Pg A46-A49</p>	<p>TLC Elementary School: Life Cycles</p>