

Cycle 1	38 Days		The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.
	Aug. 26 – Oct. 18, 2019		
Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:	
<p><b><u><a href="#">Unit 1: Setting Up for Science</a></u></b> In this unit, students will begin building a foundation for science learning including reviewing science safety, setting up interactive notebooks, using appropriate tools for measurement and exploring the contributions of scientists.</p>	<p><b>5</b> 45-minute lessons</p> <p><b>Part 1</b> <b>Suggested Pacing:</b> Aug. 26-28</p> <p><b>Part 2</b> <b>Suggested Pacing:</b> Aug. 29-30</p> <p><i>Labor Day</i> <i>Sept. 2</i></p>	<p><b>Part 1: Safety and Routines</b> (3 lessons)</p> <p>Ⓟ <b>SCI.4.1A</b> Demonstrate safe practices and the use of safety equipment as described in the Texas Education Agency-approved safety standards during classroom and outdoor investigations using safety equipment, including safety goggles or chemical splash goggles as appropriate, and gloves, as appropriate.</p> <p>Ⓟ <b>SCI.4.3C</b> Connect grade-level appropriate science concepts with the history of science, science careers, and contributions of scientists.</p>	
		<p><b>Part 2: Metric Measurement and Tools</b> (2 lessons)</p> <p>Ⓟ <b>SCI.4.2A</b> Plan and implement descriptive investigations, including asking well defined questions, making inferences, and selecting and using appropriate equipment or technology to answer his/her questions.</p> <p>Ⓟ <b>SCI.4.2B</b> Collect and record data by observing and measuring, using the metric system, and using descriptive words and numerals such as labeled drawings, writing, and concept maps.</p> <p>Ⓟ <b>SCI.4.2C</b> Construct simple tables, charts, bar graphs, and maps using tools and current technology to organize, examine, and evaluate data.</p> <p>Ⓟ <b>SCI.4.2F</b> Communicate valid, oral, and written results supported by data.</p> <p>Ⓟ <b>SCI.4.4A</b> Collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, and materials to support observation of habitats of organisms such as terrariums and aquariums.</p>	
<p><b><u><a href="#">Unit 2: Investigating Force and Motion</a></u></b> In this unit, students will design and carry out investigations with force and motion.</p>	<p><b>9</b> 45-minute lessons</p> <p><b>Suggested Pacing:</b> Sept. 3-13</p> <p><b>Extend Review Assess Reteach</b> Sept. 16-17</p>	<p><b>Investigating Force and Motion</b> (9 lessons)</p> <p><b>SCI.4.6D</b> Design a descriptive investigation to explore the effect of force on an object such as a push or a pull, gravity, friction, or magnetism.</p> <p>Ⓟ <b>SCI.4.2D</b> Analyze data and interpret patterns to construct reasonable explanations from data that can be observed and measured.</p> <p>Ⓟ <b>SCI.4.2C</b> Construct simple tables, charts, bar graphs, and maps using tools and current technology to organize, examine, and evaluate data.</p>	

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Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
<b>Unit 3: Matter</b> In this unit, students will explore matter and differentiate its physical properties.	<b>16</b> 45-minute lessons  <b>Part 1</b> <b>Suggested Pacing:</b> Sept. 18-20	<b>Part 1: States of Matter</b> (3 lessons) <b>SCI.4.5A</b> Measure, compare, and contrast physical properties of matter, mass, volume, <b>states of matter</b> (solid, liquid, gas), temperature, magnetism, and the ability to sink or float.
	<b>Part 2</b> <b>Suggested Pacing:</b> Sept. 23 – Oct. 2  <i>Early Dismissal</i> Sept. 27	<b>Part 2: Properties of Matter</b> (7 lessons) <b>SCI.4.5A</b> Measure, compare, and contrast physical properties of matter, mass, volume, states of matter (solid, liquid, gas), temperature, magnetism, and the ability to sink or float. <b>PS</b> <b>SCI.4.2B</b> Collect and record data by observing and measuring, using the metric system, and using descriptive words and numerals such as labeled drawings, writing, and concept maps. <b>PS</b> <b>SCI.4.2C</b> Construct simple tables, charts, bar graphs, and maps using tools and current technology to organize, examine, and evaluate data.
	<b>Part 3</b> <b>Suggested Pacing:</b> Oct. 3-11  <i>Fall Holiday</i> Oct. 9  <b>Extend</b> <b>Review</b> <b>Assess</b> <b>Reteach</b> Oct. 14-18	<b>Part 3: Mixtures and Solutions</b> (6 lessons) <b>SCI.4.5B</b> Compare and contrast a variety of mixtures including solutions.
	<b>District Formative Assessment 1</b> <b>Suggested Window:</b> Oct. 15-17  <a href="#">See Outline for TEKS Details.</a>  <i>Early Dismissal</i> Oct. 18	

Cycle 2	39 Days	
	Oct. 21 – Dec. 19, 2019	
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Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
<p><b><u>Unit 4: Energy</u></b> In this unit, students will differentiate among the forms of energy.</p>	<p><b>10</b> 45-minute lessons</p> <p><b>Suggested Pacing:</b> Oct. 21 – Nov. 1</p>	<p><b>Unit 4: Energy</b> (10 lessons) <b>SCI.4.6A</b> Differentiate among forms of energy, including mechanical, sound, electrical, light, and thermal. <b>SCI.4.6B</b> Differentiate between conductors and insulators of thermal and electrical energy.</p>
<p><b><u>Unit 5: Investigating Circuits</u></b> In this unit, students will conduct investigations by making opened and closed electrical circuits.</p>	<p><b>10</b> 45-minute lessons</p> <p><b>Suggested Pacing:</b> Nov. 4-15</p> <p><i>Early Dismissal</i> Nov. 8</p> <p><b>Review Assess Reteach</b> Nov. 18-22</p> <p><i>Thanksgiving Holiday</i> Nov. 25-29</p>	<p><b>Unit 5: Investigating Circuits</b> (10 lessons) <b>SCI.4.6B</b> Differentiate between conductors and insulators of thermal and electrical energy. <b>SCI.4.6C</b> Demonstrate that electricity travels in a closed path, creating an electrical circuit.</p>
<p><b><u>Unit 6: Predicting Weather and Its Processes</u></b> In this unit, students will explore the processes of the water cycle. Students will record weather change using metric tools and make predictions using weather maps.</p>	<p><b>12</b> 45-minute lessons</p> <p><b>Part 1 Suggested Pacing:</b> Dec. 2-10</p> <p><b>Part 2 Suggested Pacing:</b> Dec. 11-17</p> <p><b>Extend Review Assess Reteach</b> Dec. 18-19</p>	<p><b>Part 1: Water Cycle</b> (7 lessons) Ⓢ <b>SCI.4.8B</b> Describe and illustrate the continuous movement of water above and on the surface of Earth through the water cycle and explain the role of the Sun as a major source of energy in this process. Ⓢ <b>SCI.4.3B</b> Represent the natural world using models such as water cycles, stream tables, or fossils and identify their limitations, including accuracy and size.</p> <hr/> <p><b>Part 2: Weather</b> (5 lessons) Ⓢ <b>SCI.4.8A</b> Measure, record, and predict changes in weather. Ⓢ <b>SCI.4.2B</b> Collect and record data by observing and measuring, using the metric system, and using descriptive words and numerals such as labeled drawings, writing, and concept maps. Ⓢ <b>SCI.4.2C</b> Construct simple tables, charts, bar graphs, and maps using tools and current technology to organize, examine, and evaluate data.</p>

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	Oct. 21 – Dec. 19, 2019		
Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:	
	<p><b><u>District Formative Assessment 2</u></b> Suggested Window: Dec. 18-19</p> <p><a href="#">See Outline for TEKS Details</a></p> <p><i>Teacher Preparation Day</i> Dec. 20</p> <p><i>Winter Break</i> Dec. 23 – Jan. 3</p>		

Cycle 3	49 Days		The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.
	Jan. 6 – Mar. 13, 2020		
Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:	
<p><b><u>Unit 7: Classifying Natural Resources</u></b> In this unit, students explore natural resources and classify them as renewable and nonrenewable natural resources and determine how they can be conserved.</p>	<p><b>5</b> 45-minute lessons</p> <p><b>Suggested Pacing:</b> Jan. 6-10</p>	<p><b><u>Unit 7: Classifying Natural Resources</u></b> (5 lessons)</p> <p>Ⓢ <b>SCI.4.7C</b> Identify and classify Earth’s renewable resources, including air, plants, water, and animals; and nonrenewable resources, including coal, oil, and natural gas, and the importance of conservation.</p> <p>Ⓢ <b>SCI.4.1B</b> Make informed choices in the use and conservation of natural resources and reusing and recycling of materials such as paper, aluminum, glass, cans, and plastic.</p>	
<p><b><u>Unit 8: Exploring Soil</u></b> In this unit, students will explore soil composition and its ability to retain water and sustain life.</p>	<p><b>7</b> 45-minute lessons</p> <p><b>Suggested Pacing:</b> Jan. 13-22</p> <p><i>Early Dismissal</i> <i>Jan. 17</i></p> <p><i>MLK Jr. Day</i> <i>Jan. 20</i></p>	<p><b><u>Unit 8: Exploring Soil</u></b> (7 lessons)</p> <p>Ⓢ <b>SCI.4.7A</b> Examine properties of soils, including color and texture, capacity to retain water, and ability to support the growth of plants.</p> <p>Ⓢ <b>SCI.4.3B</b> Represent the natural world using models such as water cycles, stream tables, or fossils and identify their limitations, including accuracy and size.</p>	
<p><b><u>Unit 9: Weathering, Erosion, and Deposition</u></b> In this unit, students will investigate weathering, erosion and deposition and their effects on Earth’s landscape.</p>	<p><b>7</b> 45-minute lessons</p> <p><b>Suggested Pacing:</b> Jan. 23-31</p>	<p><b><u>Unit 9: Weathering, Erosion, and Deposition</u></b> (7 lessons)</p> <p><b>SCI.4.7B</b> Observe and identify slow changes to Earth’s surface caused by weathering, erosion, and deposition from water, wind, and ice.</p> <p>Ⓢ <b>SCI.4.3B</b> Represent the natural world using models such as the water cycle and stream tables and identify their limitations, including accuracy and size.</p>	

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Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:		
<p><b>Unit 10:</b> <u><a href="#">Exploring Natural Cyclical Events</a></u> In this unit, students will explore the causes of the night/day cycle, seasons, and changes in the appearance of the moon.</p>	<p><b>11</b> 45-minute lessons</p> <p><b>Part 1</b> <b>Suggested Pacing:</b> Feb. 3-5</p> <p><b>Part 2</b> <b>Suggested Pacing:</b> Feb. 6-10</p> <p><b>Part 3</b> <b>Suggested Pacing:</b> Feb. 11-17</p> <p><i>Early Dismissal</i> Feb. 14</p> <p><b>Extend Review Assess Reteach</b> Feb. 18-21</p>	<p><b>Part 1: Shadows</b> (3 lessons)            Ⓢ <b>SCI.4.8C</b> Collect and analyze data to identify sequences and predict patterns of change in <b>shadows</b>, seasons, and the observable appearance of the Moon over time.            Ⓢ <b>SCI.4.3B</b> Represent the natural world using models such as the water cycle and stream tables and identify their limitations, including accuracy and size.</p> <hr/> <p><b>Part 2: Seasons</b> (3 lessons)            Ⓢ <b>SCI.4.8C</b> Collect and analyze data to identify sequences and predict patterns of change in shadows, <b>seasons</b>, and the observable appearance of the Moon over time.            Ⓢ <b>SCI.4.3B</b> Represent the natural world using models such as the water cycle and stream tables and identify their limitations, including accuracy and size.</p> <hr/> <p><b>Part 3: Moon Phases</b> (5 lessons)            Ⓢ <b>SCI.4.8C</b> Collect and analyze data to identify sequences and predict patterns of change in shadows, seasons, and the <b>observable appearance of the Moon over time</b>.            Ⓢ <b>SCI.4.3B</b> Represent the natural world using models such as the water cycle and stream tables and identify their limitations, including accuracy and size.</p>		
	<p><b>Unit 11:</b> <u><a href="#">Comparing Animals and Plants</a></u> In this unit, students will explore the growth of organisms and their life cycles.</p>	<p><b>10</b> 45-minute lessons</p> <p><b>Part 1</b> <b>Suggested Pacing:</b> Feb. 24-28</p> <p><b>Part 2</b> <b>Suggested Pacing:</b> Mar. 2-6</p> <p><b>Extend Review Assess Reteach</b> Mar. 9-13</p>	<p><b>Part 1: Animal and Plant Growth</b> (5 lessons)  <b>SCI.4.10C</b> Explore, illustrate, and compare life cycles in living organisms such as beetles, crickets, radishes, or lima beans.</p> <hr/> <p><b>Part 2: Comparing Plant and Animal Life Cycles</b> (5 lessons)  <b>SCI.4.10C</b> Explore, illustrate, and compare life cycles in living organisms such as beetles, crickets, radishes, or lima beans.</p>	

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	<p><b>District Formative Assessment 3 Suggested Window:</b> Mar. 10-12</p> <p><a href="#">See Outline for TEKS Details.</a></p> <p><i>Spring Break</i> Mar. 16-20</p>	

Cycle 4	47 Days		The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.
	Mar. 23 – May 29, 2020		
Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:	
<p><b><u><a href="#">Unit 12: Exploring Producers and Consumers</a></u></b> In this unit, students will explore interactions that occur between producers and consumers.</p>	<p><b>11</b> 45-minute lessons</p> <p><b>Part 1 Suggested Pacing:</b> Mar. 23-27</p> <p><b>Part 2 Suggested Pacing:</b> Mar. 31 – Apr. 7</p> <p><i>Chávez/Huerta Day</i> Mar. 30</p>	<p><b>Part 1: Producers and Consumers</b> (5 lessons) <b>SCI.4.9A</b> Investigate that most producers need sunlight, water, and carbon dioxide to make their own food, while consumers are dependent on other organisms for food.</p>	
		<p><b>Part 2: Food Webs</b> (6 lessons) <b>SCI.4.9B</b> Describe the flow of energy through food webs, beginning with the Sun, and predict how changes in the ecosystem affect the food web.</p>	
<p><b><u><a href="#">Unit 13: Inherited Traits, Learned Behavior, and Adaptations</a></u></b> In this unit, students will learn how inherited traits, learned behaviors, and adaptations help organisms survive and thrive in their environments.</p>	<p><b>17</b> 45-minute lessons</p> <p><b>Part 1 Suggested Pacing:</b> Apr. 8-17</p> <p><i>Spring Holiday</i> Apr. 10</p> <p><b>Part 2 Suggested Pacing:</b> Apr. 20 – May 1</p> <p><b>Extend Review Assess Reteach</b> May 4-12</p>	<p><b>Part 1: Inherited Traits and Learned Behavior</b> (7 lessons) <b>SCI.4.10B</b> Explore and describe examples of traits that are inherited from parent to offspring, such as eye color and shapes of leaves and behaviors that are learned such as reading a book and a wolf pack teaching their pups to hunt effectively.</p>	
		<p><b>Part 2: Adaptations</b> (10 lessons) <b>SCI.4.10A</b> Explore how structures and functions enable organisms to survive in their environment.</p>	
	<p><b>District Formative Assessment 4 Suggested Window:</b> May 5-7</p> <p><a href="#">See Outline for TEKS Details</a></p>		



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Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
<p><b>Unit 14: Designing Investigations</b> In this unit, students will design and conduct experimental investigations.</p>	<p><b>12</b> 45-minute lessons</p> <p><b>Suggested Pacing:</b> May 13-29</p> <p><i>Memorial Day</i> May 25</p>	<p><b>Unit 14: Designing Investigations</b> (12 lessons)</p> <p>Ⓟ <b>SCI.5.2A</b> Describe, plan, and implement simple experimental investigations testing one variable.</p> <p>Ⓟ <b>SCI.4.2A</b> Plan and implement descriptive investigations, including asking well-defined questions, making inferences, and selecting and using appropriate equipment or technology to answer his/her questions.</p> <p>Ⓟ <b>SCI.4.2B</b> Collect and record data by observing and measuring, using the metric system, and using descriptive words and numerals such as labeled drawings, writing, and concept maps.</p> <p>Ⓟ <b>SCI.4.2C</b> Construct simple tables, charts, bar graphs, and maps using tools and current technology to organize, examine, and evaluate data.</p> <p>Ⓟ <b>SCI.4.2D</b> Analyze data and interpret patterns to construct reasonable explanations from data that can be observed and measured.</p> <p>Ⓟ <b>SCI.4.2E</b> Perform repeated investigations to increase the reliability of results.</p> <p>Ⓟ <b>SCI.4.2F</b> Communicate valid, oral, and written results supported by data.</p>