

**Sixth Grade Science**  
**PISD Curriculum: Year at a Glance**

Bundle	<i>Title</i> Big Ideas/Enduring Understandings	Guiding Questions
1	<p><b><i>Science Processes</i></b></p> <ul style="list-style-type: none"> <li>▪ Problem solving involves the scientific method.</li> </ul>	<ul style="list-style-type: none"> <li>▪ How is the scientific method used in everyday life?</li> <li>▪ Are all parts of the scientific method always used?</li> <li>▪ Why is the metric system used in science?</li> </ul>
2	<p><b><i>Energy</i></b></p> <ul style="list-style-type: none"> <li>▪ Energy can be transferred from one object to another.</li> <li>▪ Energy can be transformed from one type to another.</li> </ul>	<ul style="list-style-type: none"> <li>▪ What are different forms of energy and how do they apply to everyday activities?</li> <li>▪ What happens to energy during a transfer (lost/ gained)?</li> <li>▪ How do everyday appliances transform energy?</li> </ul>
3	<p><b><i>Force &amp; Motion</i></b></p> <ul style="list-style-type: none"> <li>▪ Forces on objects cause changes in motion.</li> </ul>	<ul style="list-style-type: none"> <li>▪ How do force and energy interact?</li> <li>▪ How can we use forces to understand the motion of objects?</li> </ul>
4	<p><b><i>Matter</i></b></p> <ul style="list-style-type: none"> <li>▪ Properties of matter can be used to classify substances.</li> </ul>	<ul style="list-style-type: none"> <li>▪ How do matter and energy relate to the periodic table?</li> <li>▪ How can a chemical change be identified?</li> <li>▪ How is energy involved in chemical changes?</li> </ul>
5	<p><b><i>The Periodic Table</i></b></p> <ul style="list-style-type: none"> <li>▪ The periodic table is a useful way to organize our knowledge of the elements.</li> </ul>	<ul style="list-style-type: none"> <li>▪ How are chemical symbols used in the real world?</li> </ul>
	<p><b><i>Cells</i></b></p> <ul style="list-style-type: none"> <li>▪ All organisms are made up of cells.</li> </ul>	<ul style="list-style-type: none"> <li>▪ How does cell theory help us determine if things are living or nonliving?</li> </ul>
6	<p><b><i>Genetics</i></b></p> <ul style="list-style-type: none"> <li>▪ Organisms pass their traits on to their offspring.</li> </ul>	<ul style="list-style-type: none"> <li>▪ How do living systems reproduce and pass hereditary information to the next generation?</li> <li>▪ How is selective breeding similar to and different from natural processes that determine traits of organisms?</li> <li>▪ Where is genetic material located in a cell?</li> </ul>
7	<p><b><i>Ecosystems</i></b></p> <ul style="list-style-type: none"> <li>▪ Organisms interact with their environment.</li> </ul>	<ul style="list-style-type: none"> <li>▪ How does an organism react to internal stimuli/ external stimuli?</li> <li>▪ How does an organism interact with its environment?</li> <li>▪ How can we model the transfers of energy that happen in an ecosystem?</li> <li>▪ What happens to the organism, population, community, ecosystem, and/or biosphere if natural processes are interrupted?</li> </ul>

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8	<b><i>Water</i></b> <ul style="list-style-type: none"> <li>▪ Water cycles through the environment.</li> </ul>	<ul style="list-style-type: none"> <li>▪ How is energy transferred through the water cycle?</li> <li>▪ Where does water come from?</li> <li>▪ How does pollution affect surface water?</li> <li>▪ How do surface water and groundwater interact?</li> </ul>
9	<b><i>Atmosphere and Weather</i></b> <ul style="list-style-type: none"> <li>▪ The atmosphere interacts with and has an effect on the earth.</li> </ul>	<ul style="list-style-type: none"> <li>▪ How does the jet stream affect weather?</li> <li>▪ How is energy dispersed through the atmospheric layers?</li> <li>▪ How is the ozone layer affected by pollution?</li> </ul>
10	<b><i>Earth (Rock Cycle)</i></b> <ul style="list-style-type: none"> <li>▪ The earth's matter changes over time through a process called the rock cycle.</li> </ul>	<ul style="list-style-type: none"> <li>▪ How do rocks form?</li> <li>▪ How is energy transferred in the rock cycle?</li> <li>▪ What are some physical properties of rocks used in classification?</li> <li>▪ What is the difference between a rock and a mineral?</li> </ul>
11	<b><i>Earth (Structures and Features)</i></b> <ul style="list-style-type: none"> <li>▪ The earth's features change over time.</li> </ul>	<ul style="list-style-type: none"> <li>▪ How is energy transferred through the earth's layers?</li> <li>▪ How does the rock cycle interact with shaping the Earth?</li> <li>▪ What is the earth's structure?</li> <li>▪ How do faulting and folding shape the earth?</li> </ul>
12	<b><i>Solar System</i></b> <ul style="list-style-type: none"> <li>▪ The earth is part of a larger system of planets and other objects that orbit the sun.</li> </ul>	<ul style="list-style-type: none"> <li>▪ How does gravity control the motion of our solar system?</li> <li>▪ What properties do objects in space have?</li> <li>▪ How are planets alike and different from each other?</li> <li>▪ How has our ability to explore space changed over time, and how has our exploration of space affected our world?</li> </ul>