

**2nd Grade Science**  
**PISD Curriculum: Year at a Glance**

<b>Overarching Themes: *Patterns *Cycles *Systems *Models *Change and Constancy</b>		
<b>Bundle</b>	<i>Title</i> <b>Enduring Understanding</b>	<b>Guiding Questions</b>
1	<p><b><i>Safety, Processes, and Notebooks</i></b></p> <p>Safety should always be considered when exploring, learning, and using various tools and equipment both inside and outside of the classroom.</p> <p>Notebooks help us organize our thoughts, data, and learning.</p> <p>Science is an ongoing cycle of questioning and problem solving.</p>	<p>Why do we need to be careful when we are doing classroom or outdoor investigations?</p> <p>How do we organize our thoughts, information, connections, and other data?</p> <p>What skills and tools do we use as scientists?</p>
2	<p><b><i>Shadows and the Moon</i></b></p> <p>There are predictable patterns in the natural world, including shadows and moon phases.</p>	<p>How do you explain the changes in our shadows throughout the day and year?</p> <p>How can you apply your knowledge of patterns to explain the appearance of the moon in the night sky?</p>
3	<p><b><i>Weather &amp; Water Cycle</i></b></p> <p>Weather occurs in predictable patterns and impacts our everyday life.</p>	<p>How does the weather affect your choices in activities and clothing?</p> <p>How does water change due to temperature?</p> <p>How do patterns in seasons help me make future plans?</p> <p>What is the relationship between weather and the water cycle?</p>
4	<p><b><i>Resources</i></b></p> <p>The Earth provides us with resources that help us meet our needs.</p> <p>Earth's natural materials each have unique properties that can be identified and classified.</p>	<p>How do resources help us meet our needs?</p> <p>How can you describe the properties of a rock?</p> <p>How can tools, such as a pan balance or hand lens, help us to identify and sort materials?</p> <p>Where on Earth do bodies of salt water and fresh water occur?</p> <p>What are identifying characteristics of fresh and salt water?</p>
5	<p><b><i>Plants</i></b></p> <p>Plants have characteristics that help them meet their needs and survive in their environments.</p>	<p>How do the parts of a plant help it survive?</p> <p>How does a plant use its environment to meet its basic needs?</p> <p>Does the absence or removal of plant parts affect the plant's health and survival?</p> <p>How can you use your knowledge of life cycles to predict what a young plant will look like when compared to an adult plant?</p>

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6	<p><b><i>Scientific Investigation and Reasoning</i></b></p> <p>Science is an ongoing cycle of questioning and problem solving.</p> <p>We ask certain questions to find out certain information.</p>	<p>How can I learn new things on my own?</p> <p>How can I use my senses and other tools to help me learn things?</p> <p>How can I gather information and organize it?</p> <p>How can asking questions and finding the answers look differently depending on what I want to know?</p>
7	<p><b><i>Animals</i></b></p> <p>Animals have characteristics that help them meet their needs and survive in their environment.</p>	<p>How do the parts of an animal help it to survive?</p> <p>How does an animal use its environment to meet its basic needs?</p> <p>Does the absence or loss of an animal part affect the animal's health and survival?</p> <p>How can you use your knowledge of life cycles to predict what a young animal will look like compared to an adult?</p>
8	<p><b><i>Interdependence</i></b></p> <p>Living things depend upon their living things and their environment to meet their needs.</p>	<p>How do plants and animals depend upon each other to meet their needs?</p> <p>How do patterns of behavior help living things survive changes in their environment?</p>
9	<p><b><i>Matter</i></b></p> <p>All matter has observable properties that can be measured and changed by energy.</p>	<p>How can heat change matter?</p> <p>Can we see evidence of heat energy?</p> <p>What properties lead you to conclude that something is solid or liquid?</p>
10	<p><b><i>Energy (light, sound, magnetic)</i></b></p> <p>There are many forms of energy that cause change.</p>	<p>How can you describe sound?</p> <p>How do different energies change or interact with matter (light, sound, magnetism)?</p> <p>How do we use magnets in everyday life?</p>
11	<p><b><i>Energy &amp; Motion</i></b></p> <p>Energy can cause objects to move.</p>	<p>How will the position of an object change due to a force being applied?</p> <p>How will the amount of force applied change the position of an object?</p> <p>How can a magnet change the position of an object?</p>
12	<p><b><i>Enrichment</i></b></p>	