

PUSD Science District Instructional Guides (Date Updated: \_\_\_\_\_)

Grade Level: 5		Quarter 1			
Unit Title: Physical Science		Cross-Cutting Concepts: patterns; scale, proportion and quantity; energy and matter, cause and effect; scale, systems and system models			
		Phenomena: <a href="https://www.ngssphenomena.com/">https://www.ngssphenomena.com/</a>			
Standards	Essential Questions	Objectives (I Can)	Key Vocabulary	Resources (Activities/Lessons/Experiments)	Assessments
<p><b>5.P1U1.1 Analyze and Interpret Data</b> to explain that matter of any type can be subdivided into particles too small to see and, in a closed system, if properties change or chemical reactions occur, the amount of matter stays the same.</p> <p><b>5.P1U1.2 Plan and carry out investigations</b> to demonstrate that some substances combine to form new substances with different properties and others can be mixed without taking on new properties.</p> <p><b>5.P2.U1.3 Construct an explanation</b> using evidence to demonstrate that objects can affect</p>	<p>What exactly is matter?</p> <p>How are particles different in solids, liquids and gases?</p> <p>How does the arrangement of particles in different states of matter affect their properties?</p> <p>How do particles move in different states of matter?</p> <p>What happens when matter changes state?</p> <p>How does matter change state?</p> <p>How are new substances created?</p>	<ul style="list-style-type: none"> <li>I can write a CER that explains why even though matter may change form its amounts remains the same.</li> <li>I can create and explain the difference between mixtures and solutions.</li> <li>I can explain how forces affect objects.</li> <li></li> </ul>	<p>Matter</p> <p>Particles</p> <p>mixtures</p> <p>Solutions</p> <p>properties</p> <p>temperature</p> <p>mass/weight</p> <p>solid, liquid, gas, melting</p> <p>evaporation</p> <p>gravity</p> <p>universal attraction</p> <p>Orbit</p> <p>Forces:friction &amp; elastic</p> <p>inertia</p>	<p>Betterlessons.com</p> <p>Amy Miller</p> <p>Unit 1</p>	

<p>other objects even when they are not touching.</p> <p><b>5.P3U1.4 Obtain, analyze and communicate evidence</b> of the effects that balanced and unbalanced forces have on the motion of objects.</p> <p><b>5.P3.U2.5 Define problems and design solutions</b> pertaining to force and motion.</p> <p><b>5.P4U1.6 Analyze and interpret data</b> to determine how and where energy is transferred when objects move.</p>	<p>What effects do property changes or chemical reactions have on matter?</p> <p>What is the difference between mixtures and solutions?</p>				
--	---	--	--	--	--

PUSD Science District Instructional Guides (Date Updated: \_\_\_\_\_)

<b>Grade Level: 5</b>		<b>Quarter 2</b>			
<b>Unit Title: Life Science</b>		<b>Cross Cutting Concepts: patterns; cause and effect; structure and function; stability and change</b>			
		<b>Phenomena: <a href="https://www.ngssphenomena.com/">https://www.ngssphenomena.com/</a></b>			
<b>Standards</b>	<b>Essential Questions</b>	<b>Objectives (I Can)</b>	<b>Key Vocabulary</b>	<b>Resources (Activities/Lessons/Experiments)</b>	<b>Assessments</b>
<p><b>5.L3U1.9 Obtain, evaluate, and communicate information</b> about patterns between the offspring of plants, and the offspring of animals (including humans); construct an explanation of how genetic information is passed from one generation to the next.</p> <p><b>5.L3U1.10 Construct an explanation</b> based on evidence that the changes in an environment can affect the development of the traits in a population of organisms.</p> <p><b>5.L4.U3.11 Obtain, evaluate, and communicate evidence</b> about how natural and human-caused changes to habitats or climate can impact populations.</p>	<p>What are the identifying characteristics of an ecosystem?</p> <p>What are basic plant structures and how do they help plants thrive and grow?</p> <p>How do plants cycle through an ecosystem?</p> <p>How does a food web show relationships within a specific ecosystem?</p> <p>When an event occurs in one of Earth's systems does it affect other systems?</p>	<p>I can draw and label a model of and ecosystems identifying characteristics.</p> <p>I can explain how basic plant structures help plants thrive and grow.</p>	<p>Traits            Generation            Offspring            Genes/genetics            Habitats            Climate            Characteristics            Reproduce            Species            Organisms            Biotic            Abiotic            System            Ecosystem</p>	<p>Betterlessons.com            Unit 2</p>	

<p><b>5.L4U3.12 Construct an argument based on evidence</b> that inherited characteristics can be affected by behavior and/or environmental conditions.</p>	<p>What is the Energy Cycle and how does it transfer energy through an ecosystem?</p> <p>What conditions are necessary for a healthy ecosystem?</p> <p>What factors are needed to create a balanced ecosystem?</p> <p>What does it mean to be living or nonliving?</p> <p>What makes an ecosystem healthy?</p> <p>How can humans benefit and harm an ecosystem?</p> <p>How do environmental changes affect an ecosystem?</p>				
---	--	--	--	--	--

PUSD Science District Instructional Guides (Date Updated: \_\_\_\_\_)

<b>Grade Level: 5</b>		<b>Quarter 3/4</b>			
<b>Unit Title: Space Standards</b>		<b>Cross-cutting Concepts:</b> patterns, systems, models, cause and effect; Scale, Proportion, Quantity			
		<b>Phenomena:</b> <a href="https://www.ngssphenomena.com/">https://www.ngssphenomena.com/</a>			
<b>Standards</b>	<b>Essential Questions</b>	<b>Objectives (I Can)</b>	<b>Key Vocabulary</b>	<b>Resources (Activities/Lessons/Experiments)</b>	<b>Assessments</b>
<ul style="list-style-type: none"> <li>5.E2U1.7 Develop, revise, and use models based on evidence to construct explanations about the movement of the Earth and Moon within our solar system.</li> <li>5.E2U1.8 Obtain, analyze, and communicate evidence to support an explanation that the gravitational force of Earth on objects is directed toward the planet's center.</li> </ul>	<p>How do the Earth and Moon move in our solar system?</p> <p>Why does the moon orbit Earth?</p> <p>What causes day and night?</p> <p>What are the major systems that make up our planet?</p> <p>What is gravity?</p> <p>Where does Earth's gravitational force direct objects?</p>	<p>I can construct that explains the Earth and Moon movement in our solar system.</p> <p>I can write a CER to explain how the gravitational force of Earth works.</p>	<p>Earth Axis Rotation Revolution Seasons Orbit Solar System Weight Mass Gravity</p>	<p>Better Lessons.com Amy Miller Lessons Stacy DeVeau StudyJams</p>	<p>Better Lessons.com assessments Amy Miller Lessons</p>

--	--	--	--	--	--