

GIPS 2nd Grade Science Design Map

Units (in sequence)	Estimated Time Frame (days)	K-12 Program Strands With Corresponding Course/Grade Level Standards	K-12 Program Enduring Understandings (for content only)	K-12 Program Essential Questions (for content only)	Unit Assessments (note if optional)	C/GL Key Vocabulary Concepts
Unit 1 Air & Weather	13 sessions	<p><u>Earth & Space Science:</u> 4.2 Energy</p> <p><u>Earth & Space Science:</u> 4.3 Origin and Evolution</p> <p>Record through drawings and writing daily weather conditions on a chart</p> <p>Differentiate instruments used by meteorologists to monitor air and weather conditions</p>	<p>The elements that makeup the molecules of living things are continually recycled.</p> <p>Although the various forms appear very different, each can be measured in a way that makes it possible to keep track of how much of one form is converted to another.</p> <p>Energy is responsible for changes to Earth's/Universe's structures and systems.</p> <p>Development of new technology to make energy more accessible, powerful, and safe is one of the most critical global issues today.</p> <p>The capacity of available tools affects the quality and specificity of information that scientists can collect.</p> <p>Energy is responsible for changes to the Earth's/Universe's structures and systems.</p> <p>See strand one for full text.</p>	<p>How does energy cause change?</p> <p>How do scientists work to figure out how the world began?</p>	<p>FOSS End-of-Module Assessment</p> <p>Performance Page 4</p> <p>Structured Response (Written Page 5-6)</p>	<p>air</p> <p>air resistance</p> <p>pressure</p> <p>weather</p> <p>temperature</p>
Unit 2 Balance & Motion	12 sessions	<p><u>Physical Science:</u> 2.2 Motions and Forces</p> <p>Identify and describe how an object can be balanced using counterweights</p> <p>Describe an objects motion by tracing its position over time</p> <p>Explore and describe circular motion</p> <p>Construct, observe, and describe toys that spin</p> <p>Demonstrate that the motion of objects can be changed by forces (pushing and pulling)</p>	<p>An object's motion is the result of the combined effect of all forces acting on the object.</p> <p>The interaction between energy and matter creates forces (pushes and pulls) that produce predictable patterns of change.</p> <p>See strand one for full text.</p>	<p>In what ways can objects move and what makes objects move the way they do?</p> <p>What role do the forces play here?</p> <p>How does energy cause change?</p>	<p>FOSS End-of-Module Assessment</p> <p>Performance Page 4</p> <p>Structured Response (Written Page 5-7)</p>	<p>balance</p> <p>motion</p> <p>force</p> <p>position</p> <p>gravity</p> <p>system</p>

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Unit 3 Insects	5 sessions Periodic observation & journaling to observe stages of mealworm, milkweed bug, butterfly	<p>Life Science: 3.1 Diversity of Life</p> <p>Explain what insets need for survival (air, water, food, shelter)</p> <p>Identify the common structures of insects</p> <p>Observe and communicate the behaviors of a variety of insects</p> <p>Explain differences between plants and animals</p> <p>Life Science: 3.2 Classification</p> <p>Observe and communicate the similarities and differences in the life cycle of insects</p> <p>Identify the common structures of insects</p> <p>Life Science: 3.3 Ecosystems</p> <p>Explain what insets need for survival (air, water, food, shelter)</p> <p>Observe and communicate the behaviors of a variety of insects</p> <p>Life Science: 3.4 Genetics</p> <p>Identify the common structures of insects</p>	<p>All living things are made of similar chemicals, compounds and elements.</p> <p>Living things have certain structures that serve necessary functions for growth, response to stimulus, reproduction and use of energy.</p> <p>The level of classification system is an ongoing effort within the science community so that there are meaningful ways to study groups.</p> <p>Organism can only survive in environments in which their needs are met.</p> <p>All living things go through predictable phases of life or maturity.</p> <p>Environment has the power to shape/change how an organism responds/functions in it's surroundings</p> <p>While an organism's traits are inherited, the appearance of those traits can be modified.</p> <p>See strand one for full text.</p>	<p>What is the difference between living and nonliving things?</p> <p>What does it mean to be alive?</p> <p>What are living things made of?</p> <p>Why and how do scientists classify living things?</p> <p>How do organisms change, survive and adapt to their environments?</p> <p>What are the life cycles of living things?</p> <p>Where do living things get their traits?</p>	<p>FOSS End-of-Module Assessment</p> <p>Structured Response (Written Page 4-7)</p>	<p>insect life cycle habitat</p>