

5th Grade Lessons Offered

Lesson Title & Description	Standards	FOSS Correlation	Lesson Length	Season, Location & Special Requirements	No. of Garden Parents
<p><i>Energy Salad:</i></p> <p><i>Part 1 and Part 2</i> Students develop a model to demonstrate the flow of energy and nutrients through a community while planting salad crops and later preparing and eating a salad. Students will understand that the energy found in animals' and our food was once energy from the sun and the importance of energy and nutrients in animals' ability to survive.</p>	<p>Next Generation Science Standard: 5-PS3-1 Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.</p> <p>Framework for K-12 Science Education</p> <p>Science & Engineering Practices: Developing and Using Models</p> <p>Disciplinary Core Ideas PS3.D Energy in Chemical Processes and Everyday Life</p> <p>LS1.C Organization for Matter and Energy Flow in Organisms</p> <p>Crosscutting Concepts Energy and Matter</p>		<p>Two Sessions, 60 Minutes each</p>	<p><i>Fall</i> <i>Date-Range:</i></p> <p>Part 1: From: 9/13/16 Through: 10/14/16</p> <p>Part 2: From: 11/15/16 Through: 12/16/16</p> <p>Outdoors</p> <p><u>Requirement:</u> Access to school gardens necessary.</p> <p><u>Scheduling Note:</u></p> <p>Try to place approx. 8 weeks between lessons. Thus, if Part 1 is scheduled in September you should plan to do Part 2 in November. If Part 1 is in October, Part 2 will fall in December.</p>	<p>2 Garden Parents needed each session</p>

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<p>Self Similarity:</p> <p>Students explore pattern recognition and proportional reasoning, and are introduced to mathematical models that represent quantitative relationships. Students will understand the term “self-similarity” and recognize self-similarity in plants through direct observation and use simple mathematical rules to draw trees.</p>	<p>CCSS Mathematical Practice Standard 7: Look for and make use of structure.</p> <p>CCSS Mathematical Practice Standard 8: Look for and express regularity in repeated reasoning.</p>		<p>One Session, 60 Minutes</p>	<p>Winter Date-Range: From: 1/3/17 Through: 3/31/17</p> <p>Indoors</p>	<p>2 garden parents</p>

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<p>Eyewitness to Photosynthesis:</p> <p>Students learn about photosynthesis and discover how plants and animals exchange oxygen and carbon dioxide. Students observe and record the number of gas bubbles released from an aquarium plant (<i>Elodea</i>) when exposed to different intensities of light. Students also participate in an interactive photosynthesis game and take part in a demonstration to test if the gas bubbles released by plants are similar or not to the carbon dioxide we exhale. Students will become familiar with the difference between respiration and photosynthesis and discover first had the different gases produced during respiration and photosynthesis.</p>	<p>Next Generation Science Standard: 5-LS1-1 Support an argument that plants get the materials they need for growth chiefly from air and water.</p> <p>Framework for K-12 Science Education</p> <p>Science & Engineering Practices Engaging in Argument from Evidence --Support an argument with evidence, data, or a model.</p> <p>Disciplinary Core Ideas LS1.C Organization for Matter and Energy Flow in Organisms --Plants acquire their material for growth chiefly from air and water.</p> <p>Crosscutting Concepts Energy and Matter --Matter is transported into, out of, and within systems.</p>	<p>Foss Module: Living Systems</p>	<p>One Session, 60 Minutes</p>	<p>Spring Date-Range From: 4/10/17 Through: 6/1/17</p> <p>Outdoors</p>	<p>2 garden parents</p>

<p>Water World:</p> <p>Students discuss the cycle of water from evaporation to condensation to precipitation.</p> <p>Students create a self-contained wetland environment utilizing recycled tennis ball cans, sand, soil and seeds and play a water droplet game.</p>	<p>Next Generation Science Standard:</p> <p>5-LS2-1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.</p> <p>Framework for K-12 Science Education:</p> <p>Science & Engineering Practices</p> <ul style="list-style-type: none"> • Developing and Using Models • Science Models, Laws, Mechanisms, and Theories Explain Natural Phenomena <p>Disciplinary Core Ideas</p> <ul style="list-style-type: none"> • LS2.B: Cycles of Matter and Energy Transfer in Ecosystems <p>Crosscutting Concepts</p> <ul style="list-style-type: none"> • Systems and System Models 	<p>FOSS Module: Water</p>	<p>One Session 60 Minutes</p>	<p>Fall Date-Range:</p> <p>From: 10/1/2014 Through: 12/19/2014</p> <p>Indoors and Outdoors</p>	<p>2 garden parents</p>
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