



# Third Grade Science Unit Guide

2013-2014

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[www.science.dmschools.org](http://www.science.dmschools.org)

Literacy Unit	Theme	Iowa Core Standard 3-5	I Can Statements	Materials/ Resources	Project Ideas	Vocabulary needed
3	Scientific Experimentation and Variables	<p>Plan and conduct scientific investigations.</p> <p>Use appropriate tools and techniques to gather, process, and analyze data.</p> <p>Incorporate mathematics in science inquiries.</p> <p>Use evidence to develop reasonable explanations.</p> <p>Communicate scientific procedures and explanations.</p> <p>Follow appropriate safety procedures when conducting investigations.</p>	<p>I can determine what constitutes evidence.</p> <p>I can judge the merits or strengths of the data and information used to make explanations.</p> <p>I can use tools appropriately to gather information during an experiment.</p> <p>I can construct a simple graph using data from an experiment.</p>	<p>Foss Kit “Variables”</p> <p><b>Online Resources:</b></p> <p><b>Pendulums (Investigation 1)</b>  <a href="http://pbskids.org/zoom/games/pendulum/">http://pbskids.org/zoom/games/pendulum/</a></p> <p><a href="http://www.imcpl.org/kids/blog/?p=8891">http://www.imcpl.org/kids/blog/?p=8891</a></p> <p><a href="http://www.sciencebuddies.org/science-fair-projects/project_ideas/Phys_p016.shtml">http://www.sciencebuddies.org/science-fair-projects/project_ideas/Phys_p016.shtml</a></p> <p><b>Catapults (Investigation 4)</b>  <a href="http://science.discovery.com/tv-shows/punkin-chunkin/divisions/catapults.htm">http://science.discovery.com/tv-shows/punkin-chunkin/divisions/catapults.htm</a></p> <p><a href="http://kids.discovery.com/games/just-for-fun/catapult">http://kids.discovery.com/games/just-for-fun/catapult</a></p> <p><a href="http://www.wonderville.ca/asset/medieval-levers">http://www.wonderville.ca/asset/medieval-levers</a></p> <p><a href="http://www.buzzle.com/articles/catapult-history.html">http://www.buzzle.com/articles/catapult-history.html</a></p> <p><a href="http://www.squidoo.com/catapult-lessons">http://www.squidoo.com/catapult-lessons</a></p>	Foss Kit “Variables” Investigations 1, 3 and 4	Variable, experiment, pendulum, swing, cycle, mass, friction, catapult, angle, position, launch

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4	Structures of Life	<p><b>Understand and apply knowledge of organisms and their environments, including:</b></p> <ul style="list-style-type: none"> <li>•Structures, characteristics, and adaptations of organisms that allow them to function and survive within their habitats.</li> <li>•How individual organisms are influenced by internal and external factors.</li> <li>•The relationships among living and non-living factors in terrestrial and aquatic ecosystems.</li> </ul>	<p>I can describe that animals depend on plants. Some animals eat plants for food. Other animals eat animals that eat the plants.</p> <p>I can identify the structures of a crayfish that enable it to live in an aquatic environment.</p> <p>I can determine a suitable habitat for a crayfish based on its needs and characteristics.</p> <p>I can discuss the behavior of a crayfish based on my observations.</p>	<p>Foss Structures of Life Kit, Investigations 3 &amp; 5</p> <p><b>Order crayfish from Trans-Mississippi (see live animals ordering instructions at: <a href="http://science.dmschools.org/elementary.html">http://science.dmschools.org/elementary.html</a> )</b></p> <p><b>Order topical books from Heartland AEA</b>  <a href="http://media1.aea11.k12.ia.us/display/041/wwk770?kw=crustaceans+&amp;au=l&amp;submit=1">http://media1.aea11.k12.ia.us/display/041/wwk770?kw=crustaceans+&amp;au=l&amp;submit=1</a></p> <p><b>Online Resources</b>  <a href="http://www.johnston.k12.ia.us/schools/lawson/gradelevellinks/crayfish/crayhome.html">http://www.johnston.k12.ia.us/schools/lawson/gradelevellinks/crayfish/crayhome.html</a></p> <p><a href="http://www.biokids.umich.edu/critters/Orconectes_rusticus/">http://www.biokids.umich.edu/critters/Orconectes_rusticus/</a></p> <p><a href="http://www.enchantedlearning.com/paint/subjects/invertebrates/crustacean/Crayfishprintout.shtml">http://www.enchantedlearning.com/paint/subjects/invertebrates/crustacean/Crayfishprintout.shtml</a></p> <p><a href="http://www.buglife.org.uk/conservation/currentprojects/Species+Action/UK+Crayfish+Website/Crayfish+for+everyone/Crayfish+Fun">http://www.buglife.org.uk/conservation/currentprojects/Species+Action/UK+Crayfish+Website/Crayfish+for+everyone/Crayfish+Fun</a></p> <p><a href="http://www.gvds.org/Page/1738">http://www.gvds.org/Page/1738</a></p> <p><a href="http://academic.scranton.edu/faculty/cannon/kidsjudge/kj04/collins2.html">http://academic.scranton.edu/faculty/cannon/kidsjudge/kj04/collins2.html</a></p> <p><a href="http://animal.discovery.com/marine-life/crayfish-info.htm">http://animal.discovery.com/marine-life/crayfish-info.htm</a></p>	Foss Structures of Life Kit, Investigations 3 & 5	crayfish, crustacean, aquatic, habitat, behavior, legs, eyes, mouth, antennae, carapace, swimmerets, tail, pincers, gills, head, thorax, abdomen

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6	Great Discoveries: Magnetism and Electricity	Understand and apply knowledge of sound, light, magnetism, electricity and heat.	<p>I can identify how electricity in circuits can produce light, heat, sound, and magnetic effects.</p> <p>I can demonstrate that electricity can only flow through a closed circuit.</p> <p>I can describe how magnets attract and repel each other and certain kinds of other materials.</p>	<p>Foss Kit: Magnetism and Electricity, Investigations 1-4</p> <p><b>Order related books from Heartland AEA</b></p> <p><b>Magnets</b>  <a href="http://media1.aea11.k12.ia.us/display/041/wwk770?kw=magnets&amp;au=l&amp;submit=1">http://media1.aea11.k12.ia.us/display/041/wwk770?kw=magnets&amp;au=l&amp;submit=1</a></p> <p><b>Electricity</b>  <a href="http://media1.aea11.k12.ia.us/display/041/wwk770?kw=electricity&amp;au=l&amp;submit=1">http://media1.aea11.k12.ia.us/display/041/wwk770?kw=electricity&amp;au=l&amp;submit=1</a></p> <p><b>Online Resources</b></p> <p><b>Magnetism</b>  <a href="http://www.sciencekids.co.nz/sciencefacts/magnets.html">http://www.sciencekids.co.nz/sciencefacts/magnets.html</a></p> <p><a href="http://www.neok12.com/Magnetism.htm">http://www.neok12.com/Magnetism.htm</a></p> <p><a href="http://video.nationalgeographic.com/video/kids/cartoons-tv-movies-kids/i-didnt-know-that-kids/idkt-magnets-kids/">http://video.nationalgeographic.com/video/kids/cartoons-tv-movies-kids/i-didnt-know-that-kids/idkt-magnets-kids/</a></p> <p><a href="http://www.explainthatstuff.com/magnetism.html">http://www.explainthatstuff.com/magnetism.html</a></p> <p><b>Electricity</b>  <a href="http://www.sciencekids.co.nz/electricity.html">http://www.sciencekids.co.nz/electricity.html</a></p> <p><a href="http://www.vrml.k12.ia.us/curriculum/quicktip/science/electricity/electricity.htm">http://www.vrml.k12.ia.us/curriculum/quicktip/science/electricity/electricity.htm</a></p> <p><a href="http://kids.saveonenergy.ca/en/what-is-electricity/">http://kids.saveonenergy.ca/en/what-is-electricity/</a></p>	Foss Kit: Magnetism and Electricity, Investigations 1-4	magnet, electricity, circuit, series, parallel, wire, conductor, insulator, closed circuit, open circuit, poles, positive, negative, attract, repel, iron