



Second Grade Science Unit Guide

2013-2014

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Literacy Unit	Theme	Iowa Core Standard K-2	I Can Statements	Materials/ Resources	Project Ideas	Vocabulary needed
2	Air and Weather	Understand and apply knowledge of observable information about daily and seasonal weather conditions.	<p>I can describe air as a material that takes up space and can be compressed into a smaller space</p> <p>I can name and describe various weather events</p> <p>I can describe changes that occur in weather over time.</p> <p>I can use vocabulary associated with properties of air and weather conditions in the appropriate context.</p> <p>I can use a graph to compare weather data over time.</p>	<p>Foss Kit Air and Weather, investigations 1-4</p> <p>Order related books from Heartland AEA http://media1.aea11.k12.ia.us/display/041/wwk770?kw=weather&fm=BK&au=P&submit=1</p> <p>Online Content resources: http://www.weatherwizkids.com/weather-clouds.htm</p> <p>http://www.enchantedlearning.com/subjects/astronomy/planets/earth/clouds/</p> <p>http://eo.ucar.edu/webweather/</p> <p>http://www.sciencekids.co.nz/weather.html</p> <p>http://kids.discovery.com/tell-me/curiosity-corner/weather</p> <p>http://www.theweatherchannelkids.com/weather-center/build-your-own-forecast/</p>	<p>Foss Kit: Air and Weather, Investigations 1-4</p> <p>Other project ideas:</p> <ul style="list-style-type: none"> Record student generated weather vocabulary on an ABC framework and uses those words to create a matching game for students to learn weather vocabulary. Students compare and contrast their collected weather data with that found on official weather websites. Together they discuss possible reasons for any differences. Students explore correlations between dress and weather. They write weather dress codes to be adopted by the elementary grades. Invite a meteorologist from a local television station to speak to your students about weather. <p>Cloud in a bottle http://www.stevespanglerscience.com/experiment/cloud-in-a-bottle-experiment</p>	Air, pressure, wind, weather, temperature, cloud, precipitation, tornado, hurricane, blizzard, drought, flood, rain, snow, thermometer, wind vane, meteorologist

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5	Insects	<p>Understand and apply knowledge of the characteristics of living things and how living things are both similar to and different from each other and from non-living things.</p> <p>Understand and apply knowledge of life cycles of plants and animals.</p> <p>Understand and apply knowledge of the basic needs of plants and animals and how they interact with each other and their physical environment.</p> <p>Ask questions about objects, organisms and events in the environment.</p>	<p>I can observe and describe the insects that go through complete metamorphosis (butterfly).</p> <p>I can explain how complete metamorphosis and simple metamorphosis are different.</p> <p>I can relate the needs of insects (air, water, food, and space) to their habitat.</p> <p>I can observe and record the behaviors of insects at different stages of their lifecycle.</p> <p>I can identify the 3 parts of an insect's body (head, thorax, abdomen).</p>	<p>Foss Kit Insects</p> <p>Milkweed bugs, painted lady butterfly larva, and wax worms (order from Trans-Mississippi ahead of time. Find ordering instructions here: http://science.dmschools.org/elementary.html)</p> <p>Order related books from Heartland AEA http://media1.aea11.k12.ia.us/display/041/wwk770?kw=insects&submit=1</p> <p>Web Resources: http://www.insects.org/ http://www.uksafari.com/creepycrawlies.htm http://www.kidinfo.com/Science/insects.html http://www.ars.usda.gov/is/kids/insects/insectintro.htm http://www.naturesongs.com/insects.html http://kids.sandiegozoo.org/animals/insects/dragonfly http://www.sciencekids.co.nz/sciencefacts/animals/insect.html http://teachingheart.net/teachinsects.html</p>	<p>Foss Kit "Insects", Investigations 2, 3 and 5</p> <p>Other Project Ideas:</p> <ul style="list-style-type: none"> • Have the students create a picture book about the lifecycle of an insect to share with the class or an adult. Some common insects they could choose include: grasshopper, butterfly, mosquito, dragonfly, house fly • The students can create a "bug diary" to record/draw all of the insects they see on a nature walk around the school or their neighborhood. • Create a "Wanted" poster on an insect considered a pest by humans. • Discuss and create a T-chart of the pros and cons of different kinds of insects in our environment. • Invite an entomologist (bug expert) to come in and talk with students. (Polk County Conservation would be able to help you locate a person) • Investigate the role of insects in food chains. What other species do they support? How do they assist in agriculture (bees)? 	<p>Insect, simple metamorphosis, complete metamorphosis, egg, larva, pupa, adult, lifecycle, head, thorax, abdomen</p>

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6	Solids, Liquids and Gases	<p>Plan and conduct simple investigations.</p> <p>Understand and apply knowledge of characteristics of liquids and solids.</p>	<p>I can explain that materials can exist in different states – solid, liquid, and gas.</p> <p>I can recognize differences between solids and liquids.</p> <p>I can demonstrate that some common materials, such as water, can be changed from one state to another by heating or cooling.</p> <p>I can describe what happens when solids are mixed with water.</p> <p>I can describe what happens when other liquids are mixed with water.</p> <p>I can use information gathered to conduct an investigation on an unknown material.</p>	<p>Foss Kit Solids and Liquids</p> <p>Order related books from Heartland AEA: http://media1.aea11.k12.ia.us/display/041/www770?kw=solid+s+and+liquids&au=P&submit=1</p> <p>Online Resources: http://www.sciencekids.co.nz/gamesactivities/gases.html http://www.brainpopjr.com/science/matter/solidsliquidsandgases/grownups.weml http://www.ducksters.com/science/solids_liquids_gases.php http://pbskids.org/dragonflytv/sci_surprise/liquid_or_solid.html http://studyjams.scholastic.com/studyjams/jams/science/matter/solids-liquids-gases.htm</p> <p>Video Resources: http://www.youtube.com/watch?v=RUMX_b_m3Js http://www.youtube.com/watch?v=idCFb3DqWkk</p>	<p>Foss Kit Solids and Liquids all investigations</p> <p>Other Lesson Ideas: Read the Dr. Seuss book “Bartholomew and the Oobleck” and then make Oobleck. Discuss and have students brainstorm if it is a solid, liquid or both and why. http://www.scientificamerican.com/article.cfm?id=oobleck-bring-science-home</p> <p>Oobleck Instructions: http://www.stevespanglerscience.com/experiment/quicksand-goo</p>	<p>Solid, liquid, gas, matter, phase, heat, energy, change, state, melting, freezing</p>