
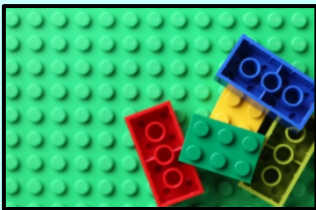
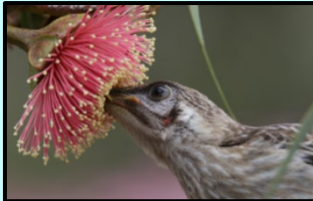




Harford County Public Schools - GRADE 2 Science Curriculum

[Next Generation Science Standards \(NGSS\)](#)

Access Grade Level Standards by clicking on Unit Titles below:

	Quarters 1-2 Earth Space Science	Quarters 2-3 Physical Science	Quarters 3-4 Life Science
Unit Title & Standards	 <p><u>A Changing Earth</u> <i>(Earth Systems: Processes that Shape the Earth)</i></p>	 <p><u>Matter and Materials</u> <i>(Structure & Properties of Matter)</i></p>	 <p><u>Biodiversity and Ecosystems</u> <i>(Interdependent Relationships in Ecosystems; Biodiversity & Humans)</i></p>
Unit Overview & Essential Question	<p>The Grade 2 Earth Space Science Unit focuses on Earth's landforms and bodies of water and how the Earth changes over time. Students will apply the idea that wind and water can change the shape of the land and compare design solutions to slow or prevent such change. They will use information and models to identify and represent the shapes of land and bodies of water in an area and where water is found on Earth.</p> <p>Unit Essential Question: <i>How do earth's natural systems shape our world?</i></p>	<p>The Grade 2 Physical Science Unit focuses on the properties of matter and how their use is determined by its properties. Students will be challenged to plan and carry out an investigation through hands-on experiences and observation to demonstrate how different materials and their properties are used for different purposes. Students will also examine how objects can be built from smaller parts and how heating and cooling affect whether a change is reversible or irreversible.</p> <p>Unit Essential Question: <i>How are properties of matter important in your life?</i></p>	<p>The Grade 2 Life Science Unit focuses on how plants grow and depend on animals for seed dispersal and pollination. If pollination is disrupted naturally, humans can design technologies to mimic animal seed dispersal and plant pollination. It also emphasizes the diversity of life in different habitats.</p> <p>Unit Essential Question: <i>How do plants and animals rely on their environment and natural systems to grow and survive in different habitats?</i></p>
Lesson Experience Topics	<p>Experience 1: Landforms and Waterways - Water and land is found on Earth and a model can be developed to represent the land and bodies of water in our world.</p> <p>Experience 2: Earth Events - Changes on Earth occur both quickly and slowly (over a period).</p>	<p>Experience 1: Observable Properties & Intended Purpose – The properties of materials determine their similarities and differences and can determine their use.</p> <p>Experience 2: Builders - Objects can be assembled, disassembled, and reassembled into something new.</p>	<p>Experience 1: Plants are Everywhere – Plants have needs to grow and survive.</p> <p>Experience 2: Habitat Research – Different types of plants and animals live in various habitats and the climate impacts which living things can survive in each habitat.</p>

	<p>Experience 3: <i>Create a Solution</i> - Wind and water change the shape of the land and a design solution can prevent damage from wind and water.</p>	<p>Experience 3: <i>Reversible and Irreversible Changes</i> - Objects can be changed by heating or cooling, and some changes can be reversed back to their original state while others can not reverse back to their original state.</p>	<p>Experience 3: <i>Pollination & Engineering Design Challenge</i> - Plants and animals depend on each other in a natural system; Technology (hand pollinators) can be designed to support natural systems in trouble by engineers who use creativity and their science knowledge in their designs to solve problems.</p>
<p>Grade 2 - Meaningful Watershed Educational Experiences (MWEE)</p>	<p>Meaningful Watershed Educational Experiences (MWEE) – At the end of each Grade 2 Science unit, a MWEE Lesson will be taught to address Maryland Environmental Literacy Standards and connect the Chesapeake Bay to each science unit content of Earth Space Science, Physical Science, and Life Science. At the end of the Life Science unit, an additional MWEE Lesson will be taught to encourage students to take action as an environmental steward. Students or classes will design and implement their own student initiated and designed action project to address an identified environmental issue with guidance from their teacher.</p>		
	<p>MWEE ESS Experience 4: <i>The Chesapeake Bay</i> – Harford County is in the Chesapeake Bay Watershed which means that the water found in Harford County flows into the Chesapeake Bay along with any trash or pollution which has an impact on humans, plants, and animals.</p>	<p>MWEE PS Experience 4: <i>Rivers, Streams, and the Bay</i> – Sediment mixed with water makes the water appear brown, cloudy, and not clear. Pollutants, such as soap and chemicals, poured on the ground in the watershed have a negative impact on the Chesapeake Bay but plants can help to slow down water and treat storm water pollution before it reaches the bay.</p>	<p>MWEE LS Experience 4: <i>Plants and Animals of the Chesapeake Bay</i> – Important plants and animals live in the Chesapeake Bay and are affected by litter, sediment and pollution that lands in the bay.</p> <p>MWEE LS Experience 5: <i>Stewardship and Civic Action</i> - An action project defines a focus problem/issue and a correlating solution (human action) to be implemented with a planned procedure which includes recording results and conclusions about how the plan benefits the environment like the Chesapeake Bay.</p>