



## Science

### Supporting Science at Home

#### Grade 3

<b>Theme 1</b>	<ul style="list-style-type: none"><li>• Gravity</li><li>• Friction</li><li>• Balanced/Unbalanced Force</li><li>• Magnetism</li><li>• Air resistance</li><li>• Patterns in motion</li></ul>	<p>Let children experiment with refrigerator magnets. Walk around the house testing various materials to see if they are attracted to the magnet. Put two magnets together to see if they attract or repel.</p> <p>Drop various items at the same time from the same height to see which hits the ground faster. Discuss how air resistance might affect the motion of falling objects.</p> <p>Rolling toy cars over different surfaces to see how friction affects the movement of objects.</p> <p>Pointing out patterns in the motion of objects. For example, a swing has a rhythmic movement that ultimately comes back to rest if you stop moving your legs for momentum. A clock has hands that move very specifically to tell time.</p>
<b>Theme 2</b>	<ul style="list-style-type: none"><li>• Life Cycles of Plants and Animals</li><li>• Group Survival</li><li>• Inherited Traits</li></ul>	<p>Discuss the various life cycles of animals and plants in your home. For example, look for bird nests, insect eggs, or plant seeds. Discuss how a family pet has grown and changed from baby to adult.</p>



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	<ul style="list-style-type: none"><li>• Beneficial Characteristics</li><li>• How Environmental Changes Affect Organisms</li><li>• Fossils</li></ul>	<p>Engage children in discussion about why animals look the way they do. Why are squirrels brown? Why do cats have large ears and big eyes? Why do some moths look like wood? What might happen to a snake that wasn't able to camouflage?</p> <p>When driving past construction or development, discuss how the clearing of land and the deforestation of areas might affect the creatures that live there. Where do they go?</p>
<b>Theme 3</b>	<ul style="list-style-type: none"><li>• What is climate?</li><li>• World Climates</li><li>• Determining Climate</li><li>• How can humans reduce weather-related risks?</li></ul>	<p>Take note of the weather daily, including temperature and precipitation changes.</p> <p>Read the national and international weather maps in the newspaper or online to see what the weather is like in various parts of the country and the world. In Maryland it may be sunny and 65 degrees, but in Southern California, it's 85 degrees!</p> <p>Point out that places closer to the Equator are more likely to be warm year-round by checking the temperature in places like San Juan, Puerto Rico during months that are traditionally chilly in Maryland. Likewise, check the temperature for places that are towards the poles and discuss their cooler temperatures.</p>



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		<p>Watch the news for stories about tornadoes, hurricanes, and floods. Talk to your child about how humans protect themselves and their property from forces of nature. Good examples include: levees that protect low-lying areas from floods, storm shelters and tornado warning sirens, hurricane shutters and homes built on stilts, etc.</p> <p>When visiting a place that has a large parking lot, point out the landscaping (trees, bushes, flowerbeds) that are placed throughout the parking lot. These are necessary to prevent flooding in areas with a lot of concrete as the soil soaks up rain water. Businesses are required to put in these “pervious surfaces”.</p>
<b>Theme 4</b>	<ul style="list-style-type: none"><li>• Engineering Design (Parachute Design)</li></ul>	<p>At school, students will be building a parachute. They will test how canopy shape, canopy materials, and length of strings affect how fast a parachute falls. The unit focuses on how engineers build prototypes and then revise them based upon test data.</p> <p>At home, you can support this by letting your child experiment with making a parachute of their own out of common household materials like aluminum foil, grocery bags, cling wrap, or newspaper.</p>