

*TwigScience* serves as the primary curriculum material for grade 5 Science instruction and has been adapted to ensure alignment with the [Indiana Academic Standards for Science](#).

Timing	Module / Topic	Student Learning Outcomes
Quarter 1	<p><i>Haunted House</i></p> <p>Scientific Methods and Engineering Design</p>	<p>Students will:</p> <ul style="list-style-type: none"> <li>• Learn classroom routines, expectations, and teamwork skills.</li> <li>• Engage in scientific methods and engineering processes used to solve problems.</li> <li>• Investigate and observe materials for use in a design solution.</li> <li>• Research and design a solution to a simple challenge.</li> </ul>
Quarters 1-2	<p><i>Matter Mysteries Hotline</i></p> <p>Physical Science: Matter</p>	<p>Students will:</p> <ul style="list-style-type: none"> <li>• Plan and conduct fair tests.</li> <li>• Plan investigations to observe the properties of materials.</li> <li>• Learn about the properties of materials.</li> <li>• Plan and conduct investigations to observe chemical reactions.</li> <li>• Identify the properties of a mystery mixture to identify substances.</li> <li>• Measure and record the mass and other properties of substances.</li> <li>• Write a scientific explanation using evidence.</li> <li>• Use graphs to record and analyze data.</li> <li>• Use knowledge of properties of materials to design a recipe that meets criteria.</li> <li>• Write a design argument.</li> <li>• Understand that matter is made of particles that are too small to be seen.</li> </ul>



MSD Wayne Township Schools

Science

Grade 5



		<ul style="list-style-type: none"> <li>● Carry out investigations and make observations of solids, liquids, and gasses.</li> <li>● Plan and build a three-dimensional model to demonstrate particles of matter.</li> </ul>
Quarter 2	<p><i>Yellowstone: Uncovered</i></p> <p>Physical Science: Matter and Energy</p> <p>Life Science: Ecosystems</p>	<p>Students will:</p> <ul style="list-style-type: none"> <li>● Explore the phenomena of plant growth, food chains and food webs, matter cycling, energy flow, and decomposition.</li> <li>● Understand that plants need water, air, sunlight, and soil to grow.</li> <li>● Set up an investigation that provides evidence to support a claim.</li> <li>● Understand how matter flows through a food web.</li> <li>● Understand where plants get their matter.</li> <li>● Explain the importance of water, air, sunlight, and soil in relation to the body matter of plants.</li> <li>● Understand the relationships between organisms in the Antarctic Ocean.</li> <li>● Understand why the decline of one organism in a food web affects others in the same web.</li> <li>● Investigate where dead matter goes in an ecosystem.</li> <li>● Understand the movement of matter through a marine ecosystem.</li> <li>● Predict what might happen if a part of an ecosystem is changed.</li> <li>● Understand the positive impact that one keystone animal can have on an ecosystem.</li> </ul>
Quarter 3	<p><i>H2O Response Team</i></p> <p>Earth Science:</p>	<p>Students will:</p> <ul style="list-style-type: none"> <li>● Explore the phenomena of sphere interactions and ocean salinity.</li> <li>● Understand the relationship between living things and water.</li> <li>● Represent and collect data about water on Earth.</li> <li>● Design and build a model to learn about water pollution.</li> <li>● Research and collect information.</li> <li>● Explain how rain is formed and how different spheres like the hydrosphere and biosphere interact.</li> <li>● Use knowledge to write a scientific explanation.</li> </ul>



		<ul style="list-style-type: none"> <li>● Build a model to understand what makes seawater salty.</li> <li>● Name system interactions that make seawater salty based on information gathered through multiple sources.</li> <li>● Test water-saving solutions.</li> <li>● Design a campaign.</li> </ul>
<p>Quarters 3-4</p>	<p><i>Galactic Guidebook</i></p> <p>Earth and Space Science: Constellations</p>	<p>Students will:</p> <ul style="list-style-type: none"> <li>● Explore the phenomena of day and night, star brightness, gravity, and the Earth’s movement.</li> <li>● Use models to observe and visualize objects in the Solar System.</li> <li>● Conduct an investigation to measure the changing position of a shadow.</li> <li>● Collect and analyze data about shadows and constellations to identify patterns.</li> <li>● Use models to visualize the locations of stars relative to the Earth.</li> <li>● Gather evidence and make observations about sizes and locations of stars relative to Earth.</li> <li>● Write a scientific argument to explain why the Sun appears brighter than other stars.</li> <li>● Determine the size, shape and location of the Sun and the Earth.</li> <li>● Write a scientific argument to explain why we only see stars at night.</li> <li>● Conduct an investigation and make observations about how different objects fall when dropped.</li> <li>● Determine the direction in which objects on Earth fall.</li> <li>● Write a scientific argument to explain why humans don’t fall off the Earth.</li> <li>● Collect and analyze data to identify patterns of constellations.</li> <li>● Write a scientific argument to explain why the stars seem to move and return to the same place each year.</li> <li>● Analyze graphs and data to identify patterns in shadows and how the Earth’s movement causes changes in shadows.</li> </ul>

