

Science Curriculum Map

Grade: 5

Variables

Enduring Understanding: Students will use scientific inquiry as they identify and control variables to design and conduct controlled experiments. They will observe and compare the outcomes of experiments, identify relationships, and make predictions using the results of their experiments.

Priority EALRs/GLEs	Big Ideas	Materials/Resources	Assessment
<p>1.2 Structures of systems.</p> <p>ST1.2.1. Analyze how the parts of a system go together and how these parts depend on each other.</p> <p>Predict and explain how a system would work if one of its parts was missing or broken.</p> <p>Describe what goes into (input) and out of (output) a system (e.g., what keeps a system running).</p> <p>Describe the effect on a system when an input in the system is changed.</p> <p>1.3 Changes in systems</p>	<p>Teacher Vocabulary</p> <p>Parts of a system</p> <p>Parts go together</p> <p>Function of a part</p> <p>Parts depend on each other</p> <p>Parts are missing</p> <p>Inputs/outputs</p> <p>Inputs changed-outcome</p> <p>Describe</p> <p>Understand</p> <p>Predict</p> <p>Cause and effect</p> <p>Types of forces</p>	<p>FOSS Kit</p> <p>www.k12.wa.us</p> <p>www.marcopolo.wednet.edu</p> <p>www.teachersdomain.org</p> <p>www.nettrekker.com</p> <p>www.fossweb.com</p> <p>See Grade Level Vocabulary List in Teachers Guide</p>	<p>FOSS Kit</p> <p>End of module written and performance assessments</p> <p>Key Concepts</p> <p>Capacity</p> <p>Controlled experiment</p> <p>Cycle</p> <p>Energy</p> <p>Graph</p> <p>Pendulum</p> <p>System</p> <p>Variable</p> <p>Controlled</p> <p>Manipulated</p> <p>Measured</p> <p>Prediction</p>

<p>Describe how the method of investigation insures reliable results (i.e., reliability means that repeating an investigation gives similar results).</p> <p>Identify and describe ways to increase the reliability of the results of an investigation (e.g., multiple trials of an investigation increase the reliability of the results).</p> <p>IN2.2.5. Understand that scientific comprehension of systems increases through inquiry.</p> <p>Describe how scientific inquiry results in facts, unexpected findings, ideas, evidence, and explanations.</p> <p>Describe how results of scientific inquiry may change our understanding of the systems of the natural and constructed world.</p> <p>Explain how ideas about the natural and/or constructed world have changed because of scientific inquiry.</p> <p>3.1 Designing solutions</p>	<p>Evaluate potential solutions</p>		
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<p>DE3.1.2. Understand how the scientific design process is used to develop and implement solutions to human problems.</p> <p>Propose, implement, and document the scientific design process used to solve a problem or challenge. define the problem</p> <p>scientifically gather information and collect measurable data</p> <p>explore ideas</p> <p>make a plan</p> <p>list steps to do the plan</p> <p>scientifically test solutions</p> <p>document the scientific design process</p> <p>Describe possible solutions to a problem (e.g., preventing an injury on the playground by creating a softer landing at the bottom of a slide).</p> <p>Describe the reason(s) for the effectiveness of a solution to a problem or challenge.</p> <p>DE3.1.3. Analyze how well a design or a product solves a problem.</p>			
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<p>Identify the criteria for an acceptable solution to a problem or challenge.</p> <p>Describe the reason(s) for the effectiveness of a solution to a problem or challenge using scientific concepts and principles.</p> <p>Describe the consequences of the solution to a problem or challenge (e.g., sharpening a crayon results in using up crayons faster).</p> <p>Describe how to change a system to solve a problem or improve a solution to a problem.</p> <p>Test how well a solution works based on criteria, and recommend and justify, with scientific concepts or principles and data, how to make it better (e.g., sharpen a crayon using sandpaper; one grit is better than another).</p>			
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