

**Summer on the Hill**  
**SCIENCE CURRICULUM**

Grade	Curriculum Units
<p><b>Grades 3, 4, and 5</b></p>	<p>SOH elementary-level science classes use children’s curiosity about the natural world and everyday machines as a starting point. <b>The goals of grades 3, 4, and 5 science classes are to teach students the basics of scientific thinking: to make observations and draw conclusions, conduct research in books and selected Internet sites, and to use the microscope and describe their findings in words and drawings.</b> Students learn vocabulary in each new unit and use it in their science journals.</p> <p>3<sup>rd</sup> Grade: Balance and Motion; Liquids and Solids            4<sup>th</sup> Grade: Electricity. Land Forms. Food and Nutrition            5<sup>th</sup> grade: Ideas and Inventions, Models and Designs: How Machines Work</p> <p><b><u>Sample Labs: Students learn to solve problems using trial and error.</u></b></p> <p><u>Balance and Motion:</u></p> <ul style="list-style-type: none"> <li>○ Observe and experience different objects that are balanced and in motion.</li> <li>○ Explore and describe motion of rolling spheres</li> </ul> <p><u>Solids and Liquids</u></p> <ul style="list-style-type: none"> <li>○ Recognize, observe, and describe properties of solids and liquids</li> <li>○ Sort materials according to properties; observe results when solids are mixed with liquids</li> </ul> <p><u>Magnetism and Electricity:</u> Learn about types of circuits and create them</p> <p><u>Ideas and Inventions:</u> Design and construct model go-carts</p> <p><u>Land Forms:</u> Create models of SOH’s site at Horace Mann            Stream tables for observation of deposition and erosion</p>
<p><b>Grades 6, 7, and 8</b></p>	<p>At the middle school level, science study incorporates abstract ideas with hands-on labs. <b>The goals of SOH’s middle school science program are to continue to develop students’ ability to think scientifically through guided investigations, observations, note-taking, research, hypothesizing, organizing, explaining, and drawing conclusions.</b> Students are encouraged to master new vocabulary and use it in their journals and lab reports.</p> <p>6<sup>th</sup> Grade: <u>The Search for Life in the Universe:</u> The Macrocosmic Universe/The Microscopic Universe. Examine similarities and differences between plant and animal life; labs/projects to investigate specific cases.</p> <p>7<sup>th</sup> Grade: <u>The Student as Environmentalist:</u> Life and Earth Sciences</p> <p>8<sup>th</sup> Grade: <u>The Student as Investigator:</u> Genetics, Evolution, the Solar System</p> <p><b><u>Sample Labs:</u></b></p> <ul style="list-style-type: none"> <li>○ Aquatic environments: Monitor environmental factors in water with fish and plants</li> <li>○ Brine shrimp hatching: Controlled experiment to determine which of four salt concentrations allow brine shrimp eggs to hatch</li> <li>○ Salt: Controlled experiment to test the effect of salinity on four kinds of plants</li> </ul>

Science drawing (file name) of student’s memory of crayfish & his drawing: