



# First Grade: FOSS

## Physical Science - Solids and Liquids



Investigation Title and Synopsis	Concepts	Assessments and TE Page Numbers
<p><b>1. Solids</b>            Students explore solid objects, such as pieces of wood, plastic, and metal. They observe, describe, and sort the objects according to their properties. They construct towers (and other structures), using the properties inherent in the materials to accomplish the task.</p>	<ul style="list-style-type: none"> <li>Solids are one state of matter</li> <li>Solid materials have properties that separate them from other states of matter</li> <li>Solids can be sorted by their properties</li> <li>Solid materials have distinct uses, based on their properties</li> </ul>	<ul style="list-style-type: none"> <li>Part 1: Pre-assessment Anecdotal Notes (page 239)</li> <li>Teacher Observation: Identifies the properties of solid objects and sorts objects based on a property/Assessment Checklist (pages 240-242)</li> <li>Part 2: Notebook Sheet 2: <i>Sorting Circle</i> (page 184)</li> <li>Part 3: Teacher Observation: Identifies the properties of a solid used for specific purposes in construction/Assessment Checklist (pages 240-242)</li> </ul>
<p><b>2. Liquids</b>            Students investigate liquids in a variety of settings to become familiar with their properties. They play games to rehearse precise liquids vocabulary. Students use representational materials to enhance their understanding of the unique behaviors of liquids.</p>	<ul style="list-style-type: none"> <li>Liquids are one state of matter</li> <li>Liquids have many properties</li> <li>Liquids pour and flow</li> <li>Liquids take the shape of their container</li> <li>The surface of liquid is level with respect to the ground</li> </ul>	<ul style="list-style-type: none"> <li>Part 1: Anecdotal Notes (page 239)</li> <li>Part 2: Teacher Observation: Uses new vocabulary accurately/Assessment Checklist (pages 240-242)</li> <li>Part 3: Notebook Sheet 6: <i>Liquids in Containers</i> (page 188) and Notebook Sheet 7: <i>Liquid Level in a Bottle</i> (page 189)</li> </ul>

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<p><b>3. Bits and Pieces</b>            Students work with beans, rice, and cornmeal to find out how solids behave when the pieces are small. They shake, rattle, and roll the materials in bottles, pour them from container to container, and separate them using screens.</p>	<ul style="list-style-type: none"> <li>• Solid materials come in all sizes and shapes</li> <li>• Particles of solid materials can pour like liquids, but maintain their shape</li> <li>• Solid materials can support denser materials on their surface</li> <li>• Mixtures of solid particles can be separated with a screen</li> </ul>	<ul style="list-style-type: none"> <li>• Part 1: Anecdotal Notes (page 239)</li> <li>• Part 2: Anecdotal Notes (page 239)</li> <li>• Part 3: Teacher Observation: Compares liquids and solids/Assessment Checklist (pages 240-242)</li> <li>• Part 4: Notebook Sheet 12: <i>Bead Mix A</i> (page 194) and Notebook Sheet 13: <i>Bead Mix B</i> (page 195)</li> </ul>
<p><b>4. Solids and Liquids with Water</b>            Students investigate interactions between solids and water and liquids and water. They observe, describe, record, and organize the results. They test toothpaste to determine if it is a solid or a liquid. They investigate melting and freezing of familiar liquids.</p>	<ul style="list-style-type: none"> <li>• Some solids change when mixed with water; others do not</li> <li>• Some solids dissolve in water; evaporation leaves the solid behind</li> <li>• Some liquids mix with water; other liquids form a layer above or below water</li> <li>• Heating and cooling solids and liquids can change them from one state to another</li> </ul>	<ul style="list-style-type: none"> <li>• Part 1: Anecdotal Notes (page 239)</li> <li>• Part 2: Notebook Sheet 15: <i>Liquid with Water</i> (page 197)</li> <li>• Part 3: Teacher Observation: (pages 240-242)</li> <li>• Part 4: Teacher Observation: (pages 240-242) Accurately reports observations</li> <li>• End of Module Assessment (pages 243-246)</li> </ul>