



# Kindergarten: FOSS

## Physical Science - Wood and Paper



Investigation Title and Synopsis	Concepts	Assessments and TE Page Numbers
<p><b>1. Getting to Know Wood</b>            Students work with five different wood samples to observe their properties. They begin with free exploration, go on a hunt for matching samples, drop water on the samples, and float them in basins. They test the wood to find out how many paper clips it takes to sink it, then organize their results by making a concrete graph.</p>	<ul style="list-style-type: none"> <li>• Wood is a resource that comes from different kinds of trees and it can be conserved</li> <li>• Some woods are processed and transformed by people</li> <li>• Wood is used for many everyday things</li> <li>• Wood has many observable physical properties</li> <li>• Wood floats in water. Some kinds of wood sink more easily than others</li> <li>• Wood absorbs water</li> </ul>	<ul style="list-style-type: none"> <li>• Part 1: Teacher Observation: Knows wood has observable physical properties/Compares properties of wood/Knows wood is a resource that comes from trees/Communicates observations/Assessment Checklist (pages 231-232)</li> <li>• Part 2: Teacher Observation: Compares and sorts wood by properties/Knows that many objects are made from wood/Teacher Masters 2 (page 198)/ Assessment Checklist (pages 231-232)</li> <li>• Part 3: Teacher Observation: Knows wood has observable physical properties/Communicates observations and uses new vocabulary/Teacher Masters 3 (page 199)/Assessment Checklist (pages 231-232)</li> <li>• Part 4: Teacher Observation: Knows wood has observable physical properties/Compares properties of wood/Communicates observations and uses new vocabulary/Teacher Masters 4 (page 200)/ Assessment Checklist (pages 231-232)</li> <li>• Part 5: Teacher Observation: Knows wood has observable physical properties/Compares properties of wood/ Communicates observations and uses new vocabulary/Teacher Masters 5 (page 201)/ Assessment Checklist (pages 231-232)</li> <li>• Narrative Report (page 233)</li> </ul>

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<p><b>2. Changing Wood</b>            Students use sandpaper to change the shape of wood. They compare sawdust and shavings and how they interact with water. They simulate the manufacture of two kinds of wood they observed in Investigation 1, particleboard and plywood.</p>	<ul style="list-style-type: none"> <li>• Wood has many observable properties</li> <li>• Wood that is waterlogged sinks</li> <li>• Sanding can change the shape of wood</li> <li>• Sawdust can be recycled into usable wood</li> <li>• Gluing thin sheets of wood together produces much stronger wood</li> <li>• Some objects occur in nature. Others are made by people</li> <li>• Water left in the open evaporates into the air</li> </ul>	<ul style="list-style-type: none"> <li>• Part 1: Teacher Observation: Knows wood has observable properties/Uses tools appropriately/ Communicates observations orally and in drawings/ Teacher Masters 6 (page 202)/Assessment Checklist (pages 231-232)</li> <li>• Part 2: Teacher Observation: Knows wood has observable physical properties/Compares properties of wood/Can describe the relative position of the sawdust and shavings in water/Communicates observations/Teacher Masters 7 (page 203)/ Assessment Checklist (pages 231-232)</li> <li>• Part 3: Teacher Observation: Knows that water in an open container evaporates/Compares the properties of wood/Knows that some objects occur in nature;others made by people/Teacher Masters 8 (page 204)/Assessment Checklist (pages 231-232)</li> <li>• Part 4: Teacher Observation: Knows wood has observable properties/Compares the properties of wood/Knows that some objects occur in nature; others are made by people/Communicates observations orally and in drawings/Teacher Masters 9 (page 205)/ Assessment Checklist (pages 231-232)</li> <li>• Narrative Report (page 233)</li> </ul>
<p><b>3. Getting to Know Paper</b>            Students observe and compare the properties of ten kinds of paper and go on a hunt for matching samples. They test the papers for different</p>	<ul style="list-style-type: none"> <li>• Paper has many observable properties</li> <li>• Many objects are made from paper</li> <li>• The properties of different papers determine their use</li> </ul>	<p>Part 1: Teacher Observation: Knows paper has observable properties/Knows that paper is a resource that comes from trees; people make paper from wood/Knows many objects are made from paper/Compares and sorts paper by properties/ Teacher Masters 10 (page 206)/Assessment Checklist (pages 231-232)</p>

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<p><b>3. Getting to Know Paper (cont'd)</b>            properties, comparing how well they fold and which has the best surface for writing. They drop water on the samples to compare absorption, then soak the samples overnight.</p>	<ul style="list-style-type: none"> <li>• People make paper from wood</li> <li>• Wood is a resource that comes from trees</li> <li>• Resources can be conserved</li> <li>• Water left in the open evaporates into the air</li> </ul>	<ul style="list-style-type: none"> <li>• Part 2: Teacher Observation: Knows paper has observable properties/Compares properties of paper/Teacher Masters 11 (page 207)/Assessment Checklist (pages 231-232)</li> <li>• Part 3: Teacher Observation: Knows paper has observable properties/Compares properties of paper/Teacher Masters 12 (page 208)/Assessment Checklist (pages 231-232)</li> <li>• Part 4: Teacher Observation: Knows paper has observable properties/Compares properties of paper/Teacher Masters 13 (page 209)/Assessment Checklist (pages 231-232)</li> <li>• Narrative Report (page 233)</li> </ul>
<p><b>4. Changing Paper</b>            Students learn two ways to transform paper, making it stronger and more durable. They make a piece of recycled paper and papiermâché bowls. They work with water, freezing and melting it to see the change in its properties. They evaporate water.</p>	<ul style="list-style-type: none"> <li>• New paper can be made from old paper</li> <li>• Recycling extends the use of trees and other resources from the earth</li> <li>• The properties of recycled paper can be compared to those of new paper</li> <li>• Objects can be made from paper</li> <li>• Water left in the open evaporates into the air</li> <li>• Water changes to a solid when it freezes and to a liquid when ice melts</li> </ul>	<ul style="list-style-type: none"> <li>• Part 1: Teacher Observation: Knows paper has observable properties/Knows that many objects are made from paper/Knows that paper is a resource that comes from trees and that recycling extends the use of the trees/Communicates observations orally and in drawings/Teacher Masters 14 (page 210)/Assessment Checklist (pages 231-232)</li> <li>• Part 2: Teacher Observation: Knows paper has observable properties/Knows that many objects are made from paper/Communicates observations orally and in drawings/Teacher Masters 15 (page 211)/Assessment Checklist (pages 231-232)</li> </ul>

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<p><b>4. Changing Paper (cont'd)</b></p>		<ul style="list-style-type: none"> <li>Part 3: Teacher Observation: Identifies resources from Earth such as trees, water, land, and air/ Knows that natural resources from Earth are used in everyday life/Knows that many resources can be reused and recycled as they can be conserved/ Assessment Checklist (pages 231-232)</li> <li>Part 4: Teacher Observation: Knows that water has observable properties/Knows water can be a liquid, solid and can change from one form to another/Assessment Checklist (pages 231-232)</li> <li>Narrative Report (page 233)</li> </ul>
<p><b>5. Constructions</b> Students explore a variety of techniques for making things from paper and wood. They combine all the processes to make a free-form wood, paper, and cloth sculpture.</p>	<ul style="list-style-type: none"> <li>Knowledge of the properties of wood, paper, and fabric can be used to make useful or artistic constructions</li> <li>Paper containers we use every day began as flat pieces of paper</li> <li>Paper can be woven by using an under-over alternating pattern</li> <li>Some fabrics are woven</li> </ul>	<ul style="list-style-type: none"> <li>Part 1: Teacher Observation: Knows paper has observable properties/Knows that many objects are made from paper/Communicates observations orally and in drawings/Teacher Masters 16 (page 212)/ Assessment Checklist (pages 231-232)</li> <li>Part 2: Teacher Observation: Knows paper has observable properties/Knows that many objects are made from paper/Communicates observations orally and in drawings/Teacher Masters 17 (page 213)/ Assessment Checklist (pages 231-232)</li> <li>Part 3: Teacher Observation: Knows wood, paper, and fabric have observable properties/Knows that many objects are made from wood, paper, and fabric/Knows that people can construct useful and artistic things from wood, paper, and fabric/Teacher Masters 18 (page 214)/Assessment Checklist (pages 231-232)</li> <li>Narrative Report (page 233)</li> </ul>

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