

Exemplar 41

Properties and characteristics of materials

first and second classes

<p>Initial problem: What will I use to mop up the water?</p> <p>Background Children do not usually classify materials according to what they are made of, for example plastic, wood, etc. They could be introduced to the idea that there is a link between the properties of a material and the uses to which it is put.</p>	<p>Assessment: Among the techniques that may be used are</p> <ul style="list-style-type: none">• teacher observation: willingness to try different ideas; willingness to work with others• portfolio: annotated drawings of work• concept maps. <p>Resources Paper, soft plastic, Plasticine, cloth.</p>
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<p>Starting points</p> <p>observing</p>	<p>A wet day could be a topic of discussion. The children could observe and discuss the type of clothing worn, for example a raincoat or a hat.</p> <p>Children's ideas about the absorbency of different materials can be clarified through questions such as:</p> <ul style="list-style-type: none">• <i>What does it look like?</i>• <i>What does the material feel like?</i>• <i>Does it soak up water?</i>• <i>Does it keep water away from you?</i>
<p>Development of lesson</p> <p>predicting</p>	<p>Make a collection of materials, for example cloth, different types of paper, plastic and wool. The children should consider:</p> <ul style="list-style-type: none">• <i>Which of these would be best for mopping up water?</i>• <i>How would you find out?</i>
<p>experimenting</p> <p>fair testing</p>	<p>The children could put a little water on a tray and use different materials to soak up the water. They should be encouraged to make the test fair, for example to use</p> <ul style="list-style-type: none">• <i>the same number of wipes</i>• <i>the same amount of water</i>• <i>the same container</i>• <i>an equal-sized sample of each material to be tested.</i>
<p>recording</p>	<p>The results of the test should be recorded.</p>
<p>Extension activities</p>	<p>Links between the suitability of materials and their uses could be explored in the context of houses: for example, why do we use glass for windows, bricks or cement for walls?</p> <p>Tell the story of 'The Three Little Pigs'. Discuss the materials that were used for each house. Consider the effectiveness of each material.</p>