



Knowledge

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| <p>What are materials used for?</p> | <p>Pattern seeking</p> <ul style="list-style-type: none"> · Materials are used for different purposes based on their properties. · For e.g., wood is used to make furniture and floors. · Metal can be used to make coins, cars and cutlery. · Glass can be used to make windows. <p>Glass, metal, rock, plastic, wood, water, brick., paper, fabrics, elastic, foil.</p> |
| <p>What materials have been used to build your house and school?</p> | <p>Identifying and classifying</p> <p>You can compare other places at home, journey to school, on visits, in stories, rhymes and songs.</p> |
| <p>Why are the properties of these materials suitable for these items?</p> | <p>Comparative</p> <p>Why are they suitable what would they be unsuitable for?</p> <ul style="list-style-type: none"> · Testing rigidity · Tough and flexible · Which is the strongest paper? · Make a paper bridge strong enough to hold a car. |
| <p>Which material would be best for the roof of the little pig's house?</p> | <p>Comparative</p> <p>Look at a variety of materials and decide on the best material for making the roof of the pigs house. Transparent, waterproof, opaque, stiff, soft, shiny, rough, absorbent, bright, bendy, stretchy, hard, smooth, dull. smooth, dull.</p> |
| <p>How are twisting and stretching and object different?</p> | <p>Comparative</p> <p>Variety of Materials that stretch and twist children to compare how they are different.</p> |
| <p>Which ball is the bounciest?</p> | <p>comparative</p> <p>A variety of balls, preferably of fairly similar size, e.g. tennis, sponge, rubber, ping pong (try to avoid large balls like footballs and basketballs), tape measure. (Children could bring in their own balls), large sheets of paper and pens for recording the bouncing, squared paper and rulers for creating bar charts.</p> |
| <p>Which materials are best to make bridges?</p> | <p>Pattern seeking</p> <p>Images of bridges and vocabulary cards from resource, a selection of materials for each group, including lengths of wood, metal, plastic, card (Make them similar lengths: you could use plastic, metal and wooden rulers), small weights (100g), tape, string.</p> |
| <p>Can some items be made by more than one material?</p> | <p>Observing and classifying</p> <p>Knives, forks, spoons, Plates, Houses</p> |
| <p>How did John Dunlop revolutionise tyres?</p> | <p>Research</p> <p>pneumatic inflatable rubber tyre</p> |
| <p>How have road surfaces changed over time? Who is John McAdam and how did he contribute to this change?</p> | <p>Observing over time</p> <p>John McAdam - Tarmac</p> |
| <p>Which materials can be recycled? Why is it important that we recycle substances?</p> | <p>Research</p> <p>Group items into recyclable and non recyclable. Is there anything that they notice about those that are recyclable or non recyclable. Look at the recycling process.</p> |

Vocabulary

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| Absorbent | Material that easily soaks up liquid. |
| Bendy | An object that bends easily into a curved shape |
| Elastic | A rubber material that stretches when you pull it and returns to its original size when let go. |
| Fabrics | Cloth or other material produced by weaving together cotton, wool, or other threads. |
| Man-made | Things which are created by people. |
| Natural | Things that exist in nature that are not man-made. |
| Opaque | An object or substance you cannot see through. |
| properties | The qualities or features that belong to something and make it recognisable. |
| recyclable | Waste or materials which can processed and used again. |
| rough | Uneven and not smooth |
| Shiny | Bright and reflect light |
| Smooth | No roughness, lumps or holes. |
| soft | Not rough or hard. |
| Squash | Pressed or crushed with force that something loses its shape. |
| Stiff | Firm and doesn't bend easily. |
| Stretchy | Slightly elastic |
| Transparent | An object you can see through. |
| Twist | Turn something to make a spiral shape. |
| waterproof | Does not let water pass through it. |



Hurst Hill Primary School Knowledge Organiser

Science

Everyday materials

Year 1

Autumn 2

Chemistry

Chemistry is the science that deals with the composition and properties of substances and various elementary forms of matter.

Uses of everyday materials

Statutory requirements

Pupils should be taught to:

- identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses
- find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.