

Science

Everyday Materials Y1

Remember when

Objects feel and look different based on the material they are made from. (EYFS)

Used different materials when painting and making art. (EYFS)

Sticky knowledge

Objects are things that you can touch or see.

Objects are made from materials.

Objects are made from one or more material.

Objects can be made from different materials like glass, wood, metal, plastic, rock, fabric, water and paper.

Materials can be described by their properties using words like soft, shiny, rough, absorbent, bendy, stretchy, hard, smooth, dull, bright, waterproof, stiff, transparent, opaque.

The same object can be made from different materials e.g spoons can be made from wood, plastic or metal

Key vocabulary

| | |
|-------------|-------------|
| absorbent | bendy |
| fabric | hard |
| materials | metal |
| opaque | paper |
| plastic | rough |
| smooth | soft |
| stiff | |
| translucent | transparent |
| water | waterproof |
| wood | shiny |
| stretchy | rock |

National Curriculum

- Distinguish between an object and the material from which it is made
- Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock
- Describe the simple physical properties of a variety of everyday materials
- Compare and group together a variety of everyday materials on the basis of their simple physical properties.

Common misconceptions

Some children may think:

- only fabrics are materials.
- only building materials are materials.
- only writing materials are materials.
- the word 'rock' describes an object rather than a material.
- 'solid' is another word for hard.

| LO | Knowledge and Skills | Lesson outline |
|---|---|---|
| <p>Lesson 1</p> <p>LO: To be able to name materials.</p> <p>Enquiry type: Observation</p> | <p>Sticky Knowledge:</p> <p>Objects are things that you can touch or see.</p> <p>Objects can be made from different materials like glass, wood, metal, plastic, rock, fabric, water and paper.</p> <p>Skill: observing closely, using simple equipment.</p> | <p>What is a material? Discuss with the children.</p> <p>Let the children observe different materials on the tables. Examples: foil, wooden spoon, stick, lego, metal spoon, glasses or magnifying glass, stone. Label the materials using keywords provided.</p> <p>Make sure children understand the difference between an object and the material that it is made from.</p> <p>Materials hunting. Children to complete a table by investigating different materials/ objects which can be found in the classroom and playground. Complete a table finding at least one example for each material.</p> <p>Discussion: What did you find out about the different materials you found in the classroom and outside?</p> |
| <p>Lesson 2</p> <p>LO: To describe properties of materials.</p> <p>Enquiry type: Grouping and classifying</p> | <p>Sticky Knowledge:</p> <p>Materials can be described by their properties using words like soft, shiny, rough, absorbent, bendy, stretchy, hard, smooth, dull, bright, waterproof, stiff, transparent, opaque.</p> <p>Skill: Using their observations and ideas to suggest answers to questions.</p> | <p>Recap the different materials we looked at last lesson. List some of their properties. Example: hard, soft, shiny, etc.</p> <p>On tables, test materials' to see if they are bendy/stiff, shiny/dull, rough/smooth, or hard/soft. Label the object and material.</p> <p>In books, record the object, material and its properties next to each material sticker.</p> <p>LA- Support with key words, provide word mat.</p> <p>GD: List more than 1 property of each material/</p> <p>Additional: materials can be used to create a class display. Sort them and label their properties.</p> <p>Use "We're going on a Bear Hunt" and replace the obstacles to create a new version of the story as a class.</p> <p>Example:</p> |

| | | |
|--|---|---|
| | | <p><i>“Uh oh! Glass- shiny, smooth, see-through glass – clink! smash! clink! smash!”</i></p> <p><i>“Uh oh! Paper – smooth, cool, scrunchy paper – swoosh! crunch! swoosh! crunch!”</i></p> <p>End of lesson: children to use feely bag to describe the properties of different objects – twenty questions.</p> |
| <p>Lesson 3</p> <p>LO: To group materials according to their properties.</p> <p>Enquiry type: Grouping and classifying</p> | <p>Sticky Knowledge:</p> <p>Materials can be described by their properties using words like soft, shiny, rough, absorbent, bendy, stretchy, hard, smooth, dull, bright, waterproof, stiff, transparent, opaque.</p> <p>Skill: Using their observations and ideas to suggest answers to questions.</p> | <p>Recap materials and their different properties. Recap property vocabulary.</p> <p>Introduce children to a texture board. Think of a property label you would use to describe each material/ object. Example: fluffy, absorbent, rough etc.</p> <p>Children will create texture boards using different materials, grouping according to their properties. (rough, smooth, bumpy, soft, hard)</p> <p>Plenary: Can the children identify the texture boards by touch? (Blind-folded)</p> |
| <p>Lesson 4</p> <p>LO: To investigate which materials are waterproof.</p> <p>Enquiry type: Comparative</p> | <p>Sticky Knowledge:</p> <p>Waterproof materials do not let water through</p> <p>Skill: performing simple tests.</p> | <p>Discuss properties of different objects and why they are made from a certain material (e.g., umbrella is made of plastic because it is waterproof)</p> <p>Children to make a prediction about which materials are waterproof. Can you spot any similarities? Are they all shiny, smooth, hard?</p> <p>We are going to make a hat for teddy. We need to find out which material would be best.</p> <p>Children investigate different materials to see which ones are the most waterproof.</p> <p>Children record their investigation results in a table. Table headings: Materials, key words, waterproof/not waterproof.</p> <p>Children write up which material is fit for purpose and why.</p> <p>LA: adult to support discussions of materials, properties etc.</p> |
| <p>Lesson 5</p> <p>LO: To investigate transparent and opaque materials.</p> <p>Enquiry type: Observation</p> | <p>Sticky Knowledge:</p> <p>Transparent means light can pass through the material</p> <p>Opaque means light cannot pass through the material</p> <p>Skill: performing simple tests.</p> | <p>Introduce key terms/sticky knowledge.</p> <p>Children to investigate different materials by shining a torch onto squares of fabric and observing how much light is let through.</p> <p>Children to order pictures of the different fabrics from transparent to opaque.</p> <p>Children record their findings into books.</p> |
| <p>Lesson 6</p> <p>LO: To investigate which material is the stretchiest.</p> <p>Enquiry type: Comparative</p> | <p>Sticky Knowledge:</p> <p>Some stretchy materials stay into their changed shape and some go back to the original shape</p> <p>Skill: performing simple tests.</p> | <p>Sort everyday materials from previous lessons into stretchy and not stretchy as a class.</p> <p>Stretch different types of sweets (include refrigerated and non-refrigerated). What do you notice?</p> <p>Compare how long different materials can stretch. Create a physical bar chart in small groups to show the lengths of each material once it has been stretched.</p> <p>Do the materials look the same once they have been stretched?</p> |
| Working towards | End of unit assessment | |
| | Working at Age related expectations | Working at a greater depth |

