



# Making Primary Science Assessment Work

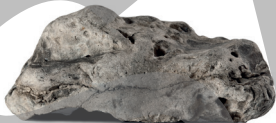
Uses of Everyday Materials -  
Teacher's information Key stage 1

## The Big Idea

Materials have properties that make them good for different uses.

### Programme of Study

- 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.



## Possible evidence of children's learning

### 1. Children's books

- Children could label the type of material around different photos of a variety of objects. The children could choose from the key words the words that describe the property of that material that makes it suitable for that use (e.g. 'hard', 'durable', 'water-proof', etc.).
- Children could make a number of drawings of objects. They can choose an unsuitable material to make this object from (e.g. an umbrella made from rock). The children could choose key words to help explain why that material is unsuitable for that object.
- Children could draw a table/bar graph in which they record the results from their enquiries: e.g. the height bounced by different balls, the amount of force required to move a shoe, how many times a fabric was rubbed on a rough surface before it was worn through, etc..
- The children could design an advertising poster for the owner of the timber yard; explaining the uses for wood.

### 2. Big books

- Questions concerning the properties of materials could be recorded on question bubble post-its and stuck in the big book.
- Pictures of objects with children's explanations as to why the materials used in these objects have been chosen could be stuck in the book.
- Photos of children's enquiries along with a short text from the children describing what they found out could be included.
- Photos of the outside of the school, along with descriptions of the properties of the materials from which parts of the building are made, could be added.

### 3. IT

- Children could make short videos of themselves advertising a product (e.g. the best welly boot).
- Children could use the digital microscope to take photos of different materials. They could then use these images in a presentation.

### 4. Models

- A video could be made of children acting out being different materials. They can invent movements to demonstrate different properties.

### Probing questions for the teacher

- How many different materials do you know?
- Why do you think objects are made from certain materials and not others?
- Which materials would make a good ... (e.g. 'jacket')? Why do you think this?
- Can you think of some positive, negative and interesting things that would happen if we had a ... (e.g. 'tea pot') made from...(e.g. 'chocolate')?
- Which of your materials would be good at soaking up water?
- What would happen if we place a flame on your materials?
- How many different properties can you think of for...?
- How could you find out whether your materials are attracted to a magnet?



### Possible tasks for TCM (Tactile Concept Map)

Resources required (This list is for each group. Suggest using no more than three children in a group)

- Key word cards
- Blank pieces of card
- Arrows
- Pencil
- Selection of different materials with a variety of properties

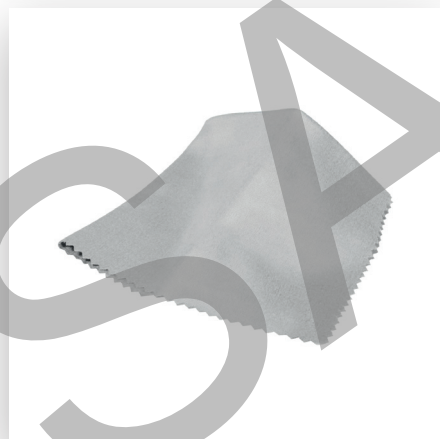


1. **Question Card 1** - The children could choose which materials would be best for making a fence from.
2. **Question Card 2** - The children could choose which materials would be best for making an umbrella from.
3. **Challenge Card 3** - The children could try to place materials under the headings of: 'bend', 'twist', 'squash' and 'stretch'.
4. **Sorting cards. (PowerPoint).** Each group of children could be given a paper copy of the slide headings and each of the statement cards. The children must place each of the statements under the heading that they think fits what they think.



## Teacher assessment grid for ongoing assessment of achievements

Learning expectations	Group 1 (lower ability)	Group 2 (average ability)	Group 3 (higher ability)	Comments
Can identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.				
Can find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.				



### Children's attainment in Uses of Everyday Materials

Children below the learning expectations	Children above the learning expectations

### Children attaining above these expectations could be:

- Naming many different properties for many different materials. These could include how well they: let through light, conduct heat, conduct electricity and move on different surfaces.
- Can refer to a range of properties when trying to explain why a material is suited to a particular use.
- Can recognise other ways by which the shapes of solids can be changed, e.g. through heating or burning.