



**Subject:** Science  
**Year group:** 2  
**Term:** Autumn  
**Unit name:** Uses of everyday materials

**National curriculum:**

- 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

**Prior Knowledge –**

- Distinguish between an object and the material from which it is made. (Y1 - Everyday materials)
- Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. (Y1 - Everyday materials)
- Describe the simple physical properties of a variety of everyday materials. (Y1 - Everyday materials)
- Compare and group together a variety of everyday materials on the basis of their simple physical properties. (Y1 - Everyday materials)

**Key vocabulary**

Names of materials	Shape
Opaque	push/pushing
transparent and translucent	pull/pulling
reflective	twist/twisting
non-reflective	squash/squashing
flexible	bend/bending
rigid	stretch/stretching

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**Scientific enquiry ideas**

Classifying	Based on the children's own criteria, classify materials e.g. samples of wood, metal, plastic, etc.
Observing over time	Not relevant
Pattern seeking	Not relevant
Comparative/fair testing	Test materials for different uses (e.g. Which material can you use to make an aeroplane? Which fabric would you use for curtains? Which materials are best for Cinderella's mop? Which fabric would you choose for Elastigirl's costume? Which paper can be used for a book, fabrics for a child's dungarees, materials for aeroplanes etc?)
Researching	Not relevant

**Assessment for Learning**

Recapping prior knowledge- beginning of unit- what do children already know?



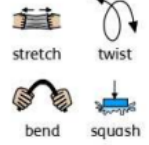
Beginning of each lesson- focus on recall of previous learning (quick quizzes)

**Spiritual Development *Isaiah 43:19***  
 "See, I am doing a new thing! Now it springs up; do you not perceive it? I am making a way in the wilderness and streams in the wasteland."

**Key Learning- what will the children know by the end of the unit?**

*All objects are made of one or more materials that are chosen specifically because they have suitable properties for the task. For example, a water bottle is made of plastic because it is transparent allowing you to see the drink inside and waterproof so that it holds the water. When choosing what to make an object from, the properties needed are compared with the properties of the possible materials, identified through simple tests and classifying activities. A material can be suitable for different purposes and an object can be made of different materials.*

*Objects made of some materials can be changed in shape by bending, stretching, squashing and twisting. For example, clay can be shaped by squashing, stretching, rolling, pressing etc. This can be a property of the material or depend on how the material has been processed e.g. thickness.*

<p><b>To identify the uses of materials based on their properties.</b></p>	<p>Materials are used for different purposes based on their properties. For example, wood is used to make furniture and floors. Metal can be used to make coins, cans, cars and cutlery. Glass can be used to make windows</p>	
<p><b>To understand what properties of materials make them suitable for a particular use.</b></p>	<p>Glass can be used to make windows because it is transparent. Rulers can be made from wood, plastic or rubber because these materials are smooth and can be cut straight. Spoons are made from metal, because it is waterproof and can be cleaned easily. They can also be made from plastic for children because plastic is light and it cannot hurt children's growing teeth.</p>	
<p><b>To explore how can you change the shape of materials.</b></p>	<p>The shape of some materials can be changed when they are stretched, twisted, bent and squashed.</p>	

**Activity ideas**

- Compare the uses of everyday materials in and around the school with materials found in other places (at home, the journey to school, on visits, and in stories, rhymes and songs)
- Observe closely the uses of different materials and record your observations.
- Distinguish between absorbent and waterproof materials. Discuss what happens when water is placed on these materials.
- Consider why some properties of materials make them suitable or unsuitable for different uses.
- Investigate if some items can be made by more than one material (e.g. cutlery) and explain why.
- Investigate if some materials can be used to make more than one thing.
- Discuss which materials are recyclable and why. Follow the recycling process.
- Investigate how some objects can be changed by squashing, bending, twisting and stretching.
- Find out about people who have developed useful new materials, for example John Dunlop, Charles Macintosh or John McAdam