

# Year 2 Materials

## (Chemistry)



### Prior and future learning

Prior Knowledge	What's next?
<ul style="list-style-type: none"> <li>I can distinguish between an object and the material from which it is made.</li> <li>I can identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.</li> <li>I can describe the simple physical properties of a variety of everyday materials.</li> <li>I can compare and group together a variety of everyday materials on the basis of their simple physical properties.</li> </ul>	<ul style="list-style-type: none"> <li>I can compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. (Y3 - Rocks)</li> <li>I notice that some forces need contact between two objects, but magnetic forces can act at a distance. (Y3 - Forces and magnets).</li> </ul>

### Track your learning

How I will show what I have learned	☹️	😐	😊
I can identify the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.			
I can compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.			
I can find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.			

### Key knowledge I need to understand

- 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.



**Scientist:** Charles Macintosh (Chemist and inventor of waterproof clothing).

**Working scientifically assessment:** Waterproof, materials hunt

**Possible texts to read:**  
The 3 Little pigs

### Link to maths curriculum:

#### Measurement:

- Measuring how much different stretch (*Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); to the nearest appropriate unit, using rulers.*)
- Measuring out a specific volume of water when testing materials for absorbency (*Choose and use appropriate standard units to estimate and measure (litres/ml) to the nearest appropriate unit, using measuring vessels.*)

#### Statistics:

- Interpret and construct simple tables (*Recording data from classification and comparative tests, such as waterproofness, absorbency, flexibility, transparency.*)

### Key vocabulary I need to know

<b>absorbent</b>	Material that soaks up liquid easily.
<b>bendy</b>	An object that moves easily into a curved shape
<b>stiff</b>	Firm or does not bend easily
<b>elastic</b>	A rubber material that stretches when you pull it and returns to its original size and shape when you let go.
<b>transparent</b>	If an object is transparent you can see clearly through it.
<b>foil</b>	Sheet of metal as thin as paper
<b>glass</b>	A hard transparent material
<b>man-made</b>	Things are created by people
<b>metal</b>	A hard substance such as iron, steel, gold or lead
<b>natural</b>	Things that exist in nature and are not made by people
<b>non-reflective</b>	A material that does not provide a reflection
<b>opaque</b>	Something you cannot see through.
<b>plastic</b>	A material which is light in weight and does not break easily.
<b>stretchy</b>	Slightly elastic
<b>reflective</b>	A material that you can see a reflection in.
<b>rough</b>	Uneven and not smooth.
<b>shiny</b>	Things are bright and reflect light
<b>smooth</b>	No roughness, lumps or holes.
<b>soft</b>	Not rough or hard
<b>brick</b>	Rectangular blocks of clay.