



Year 3 Knowledge organiser
Autumn 2 - Raw and Synthetic materials

Properties of materials

Vocabulary

Malleable	A material that can be hammered or pressed into shape without breaking or cracking.
Durable	Able to withstand wear, pressure, or damage—hard wearing.
Flexible	Capable of bending without breaking.
Transparent	The material lets light through.
React	The way a material changes— difference.
Recycle	Process of converting materials into new materials or products.
Pollution	Harmful materials in the environment— known as pollutants.

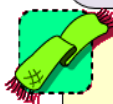
Metal



- Found in the ground, sometimes mixed in with rocks.
- Strong, hard, shiny, malleable (they can be hammered into a different shape without breaking and they can be stretched out into wires).
- **Iron** and **steel** are magnetic. Other metals are not magnetic.

Some metals are good electrical and thermal (heat) conductors.

Fabric



- Made of fibres woven together.
- Some fabrics are natural (the fibre comes from living things), e.g. wool, silk, cotton.
- Natural fabrics are quite expensive.
- Of natural fabrics, wool gives warmth and cotton is cool and absorbent (it soaks up liquids).
- Some fabrics are man-made, e.g. polyester, nylons.
- Man-made fabrics are usually easy to wash and dry and are hard-wearing.

Rock



- The raw material of the Earth. They are underground, on beaches, in soil.
- Some rocks are hard, e.g. granite.
- Some rocks are soft, e.g. chalk.
- Some rocks are impermeable to water (they do not allow water to go through), e.g. slate.

Some rocks are permeable to water (they allow water to go through), e.g. sandstone.

Plastic



- Made from oil.
- Strong, can be made into any shape.
- Not magnetic.
- Good electrical and thermal insulators.
- Can be coloured.

Can be transparent, translucent or opaque.

Pottery



- Made from clay which is first shaped and then heated.
- Strong, but glazed pottery can shatter.
- Usually opaque.

Can be made into objects that have different shapes.

Wood



- Comes from trees.
- Strong, flexible and long lasting.
- An electrical and thermal insulator.

Used to make paper.

Glass



- Made from heating sand and chemicals together.
- Strong, but can shatter.
- Usually transparent.

Can be made into objects with different shapes.

Raw material

A material, such as oil, cotton, or sugar in its natural condition, before it has been processed for use.

Synthetic material

Artificial material, not natural. Synthetic materials are formed when humans deliberately mix substances together for the purpose of a desired property. EG, plastics, polyester, carbon fibre.