

**What we already know:**

The physical properties of a variety of everyday materials (including those that are transparent) and to compare and group materials on the basis of these properties.  
 How materials are suitably used based on their properties.  
 How magnets and electrical circuits work.  
 I know that some materials are magnetic.  
 How shapes of solid objects can be changed by squashing, bending, twisting and stretching.  
 I know about the different particle structures of solids, liquids, and gases.  
 I know some materials change state when they are heated or cooled and the temperature at which this happens.

**What's next?**

Next term, we will focus on the properties of light and how it reflects, produces shadows and what light sources can emit light. We will also look at how light travels and contains seven colours.  
 In year 6, we will be exploring electricity, are further our knowledge of circuits, how they can be created and adjusted.

**Properties of materials**

How to group materials



magnetic



flexible



transparent



soluble



insoluble



permeable

Dissolving:

- When the particles of a solid mix with the particles of a liquid.
- The result is a solution.



dissolving



solution

Can materials be separated after they have been mixed?

- Some materials can be separated - this is called a reversible change. You can separate some materials by using a magnet or a filter.
- When a mixture cannot be separated back into the original parts, this is called an irreversible change.

**Insulators and conductors**

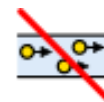
ELECTRICAL:

Electrical conductors allow electricity to pass through them easily.



electrical conductor

Electrical insulators make it hard for electricity to pass through them.



electrical insulator

THERMAL:

Thermal conductors allow heat to move through them easily. Like a saucepan.



thermal conductor

Thermal insulators do not let heat travel through them easily. Like woollen clothes and flasks for hot drinks.



thermal insulator

**Vocab**

**Tier One**

Gas  
 Liquid  
 Solid  
 Melting  
 Temperature

**Tier Two**

Flexible  
 Electricity  
 Circuit  
 Dissolves  
 Magnetic  
 Particles  
 Transparent  
 Thermal  
 Solution  
 Soluble  
 Reversible