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Science – Knowledge Organiser 'Materials : properties and changes'


Important Topic Vocabulary

Conductor	A material or device which allows heat or electricity to carry through
Dissolve	When something solid mixes with a liquid and becomes part of the liquid
Evaporation	The process of turning from liquid to vapour
Flexible	Capable of bending easily without breaking
Gas	A air-like fluid substance which expands freely to fill any space available
Insulator	A substance which does not readily allow the passage of heat or sound
Irreversible	Cannot be reversed back to its original state
Liquid	A substance that flows freely but can be measured by volume e.g water or oil
Magnetic	Capable of being magnetised or attracted by a magnet
Solid	Firm and stable in shape, not a liquid or fluid
Soluble	Able to be dissolved, especially in water
Thermal	Relating to heat


What you should already know ...


A variety of everyday materials. The physical properties of a variety of everyday materials. How materials are suitably used based on their properties.

Materials can be grouped based on their properties using more complex vocabulary.

Magnetic 	Transparent 	Permeable 
Soluble 	Insoluble 	Impermeable 
		Flexible 

Dissolving
A solution is made when **solid** particles are mixed with **liquid** particles. **Materials** that will dissolve are known as soluble. **Materials** that won't dissolve are known as insoluble. A suspension is when the particles don't dissolve.

Sugar is a **soluble material**. 

Sand is an **insoluble material**. 

What are thermal insulators and conductors?

- Materials which are good thermal conductors allow heat to move through them easily.
- Thermal conductors are used to make items that require heat to travel through them easily, such as a saucepan which requires heat to travel through to cook food.
- Thermal insulators do not let heat travel through them easily.
- Examples of thermal insulators include woollen clothes and flasks for hot drinks.



Changes of State

solid 	The solid melts.		liquid
liquid 	The liquid freezes.		solid
gas 	The gas condenses.		liquid
liquid 	The liquid evaporates.		gas