

Woodthorpe Community Primary Knowledge Organiser – Science Properties and Changes of Materials

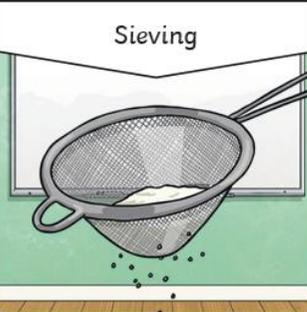
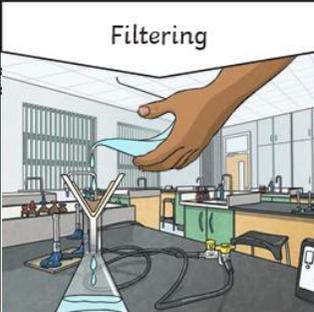
Year 5: Spring 1 2021



What will I be learning?

We use certain materials for different purposes based on their properties. For example, a material like wood is very hard and insoluble. This makes it good to use for construction, as it is unlikely to break easily.

Reversible changes, such as mixing and dissolving **solids** and **liquids** together, can be reversed by:

Sieving	Filtering	Evaporating
		
Smaller materials are able to fall through the holes in the sieve, separating them from larger particles.	The solid particles will get caught in the filter paper but the liquid will be able to get through.	The liquid changes into a gas , leaving the solid particles behind.

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**.




Some changes are irreversible. This means you would be unable to recover the original substances again. An example of this is burning a candle. A chemical reaction occurs, creating a new substance. This means the two original materials now can't be recovered.

Key Vocabulary

materials	The substance that something is made out of, e.g. wood, plastic, metal.
melting	The process of heating a solid until it changes into a liquid.
freezing	When a liquid cools and turns into a solid.
evaporating	When a liquid turns into a gas or vapour.
condensing	When a gas, such as water vapour, cools and turns into a liquid.
magnetism	The force exerted by magnets when they attract or repel each other. If an object is magnetic, a magnet will be attracted to it.
hardness	The toughness of a material.
soluble	When a solid dissolves.
dissolves	When a solid dissolves into a liquid, forming a solution.
reversible change	When a substance can be recovered.
irreversible change	When a substance cannot be recovered.
insulator	An insulator is a material that does not let heat or electricity travel through them. Wood and plastic are both thermal and electrical insulators.
transparency	A transparent object lets light through so the object can be looked through, for example glass or some plastics.

Try it at home...

- How many transparent things can you find around your house? Create a poster.
- Melt some chocolate and ice. Can you get them back to their original state?
- Find three everyday objects in your house. Test their properties using the key vocabulary.