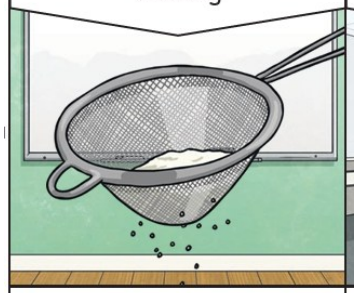
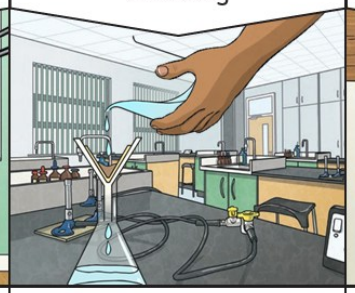
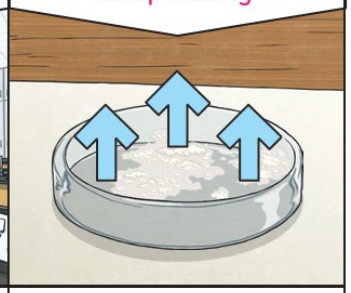
Y5 Science: Properties and Changes of Materials

Key Knowledge

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.

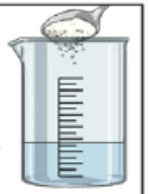
Irreversible changes often result in a new product being made from the old materials (reactants).

For example, burning wood produces ash. Mixing vinegar and milk produces casein plastic.

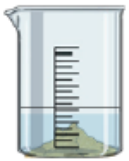
Dissolving

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.

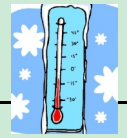
Sugar is a soluble material.



Sand is an insoluble material.



Vocabulary

materials		The substance that something is made out of. Examples: 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.
conductor		A material that heat or electricity can easily travel through. Most metals are both thermal conductors (they conduct heat) and electrical conductors (they conduct electricity).
insulator		A material that does not let heat or electricity travel through them. Wood and plastic are both thermal and electrical insulators.
transparent		A transparent object lets light through so the object can be looked through; for example, glass or some plastics.