



Year 5 – Properties & Changes of Materials



Key Vocab

Material – The matter from which a thing is made or can be made from (for example plastic, glass, metal, rock, wood, paper etc.)

Solid – The particles in a solid are very close together and so things in a solid state of matter can hold their shape

Liquid – The particles in a liquid are more loosely packed than in a solid, so liquids can flow and take on the shape of the container they are in

Gas – Particles in a gas are further apart than those in a solid or a liquid and they are free to move around

Melting - When a solid is heated and becomes a liquid

Solidifying – When a liquid is cooled and becomes a solid (sometimes called freezing)

Evaporating – When a liquid is heated and becomes a gas

Condensing – When a gas is cooled and becomes a liquid

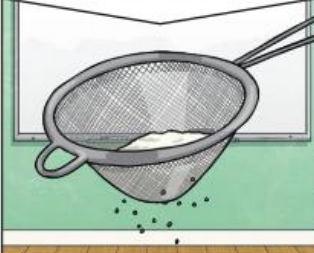

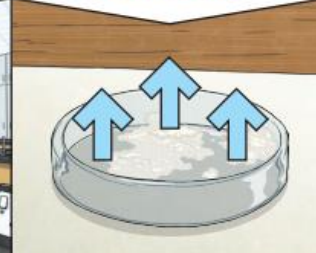
Dissolving – When a soluble solid is mixed with a liquid and creates a solution. Solids that don't dissolve in liquid are called insoluble

Properties of materials

hard, soft, flexible, rigid, rough, smooth, magnetic, transparent, translucent, opaque, permeable, impermeable (waterproof), soluble, insoluble, electrical conductor, electrical insulator, thermal conductor, thermal insulator

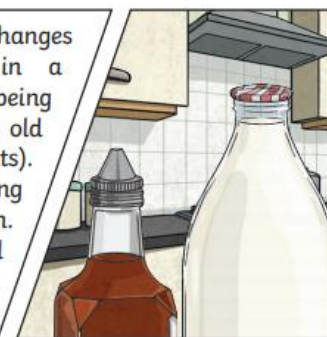
Key Knowledge

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.



Changes of State



solid

The **solid** melts.

The **liquid** freezes.



liquid



liquid

The **gas** condenses.

The **liquid** evaporates.



gas