



Key Vocabulary

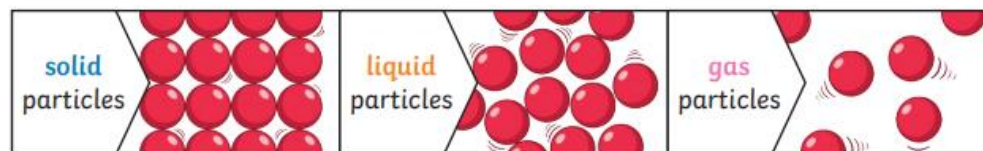
Word	Meaning
Materials	The substance that something is made out of, e.g. wood, plastic, metal.
Solids	One of the three states of matter. Solid particles are very close together and hold their shape.
Liquids	This state of matter can flow and take the shape of a container because the particles are more loosely packed and can move around.
Gases	Gas particles are spread further apart and are free to move around.
Melting	The process of heating a solid until changes to a liquid.
Freezing	When a liquid cools and turns into a solid.
Evaporating	When a liquid turns into gas or vapour.
Conductor	A material that heat / electricity can easily travel through (e.g. metal).
Insulator	A material that does not let heat / electricity travel through (e.g. plastic).

Properties of Materials

Different materials are used for particular jobs based on their properties:

- Electrical conductivity
- Flexibility
- Hardness
- Magnetism: does the material attract or repel magnets?
- Solubility: does the material dissolve in water?
- Insulation
- Transparency

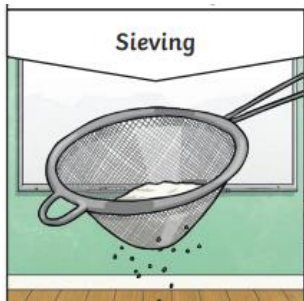
States of Matter



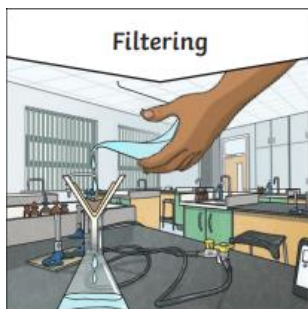
A **solution** is made when solid particles are mixed with liquid particles. Materials that will dissolve are known as **soluble** (e.g. sugar). Materials that won't dissolve are known as **insoluble** (e.g. sand). A **suspension** is when the particles don't dissolve.



Separating Mixtures



Sieving: Smaller materials are able to fall through the holes in the sieve, separating them from larger particles.



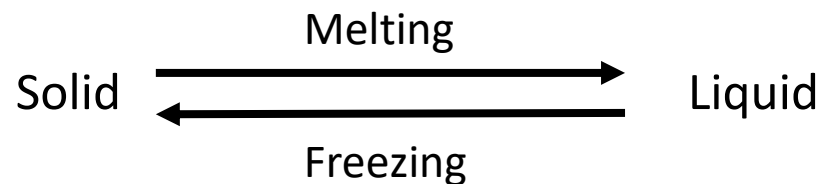
Filtering: The solid particles will get caught in the filter paper but the liquid will be able to get through.



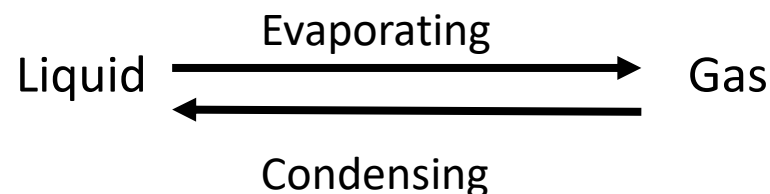
Evaporating: The liquid changes into a gas, leaving the solid particles behind.

Change of State

How to change from solid to liquid:



How to change from liquid to gas:



Extending your learning:

1. Conduct an experiment to see whether the following substances dissolve in water:
 1. Salt
 2. Sugar
 3. Coffee
 4. Sand
 5. Baking soda