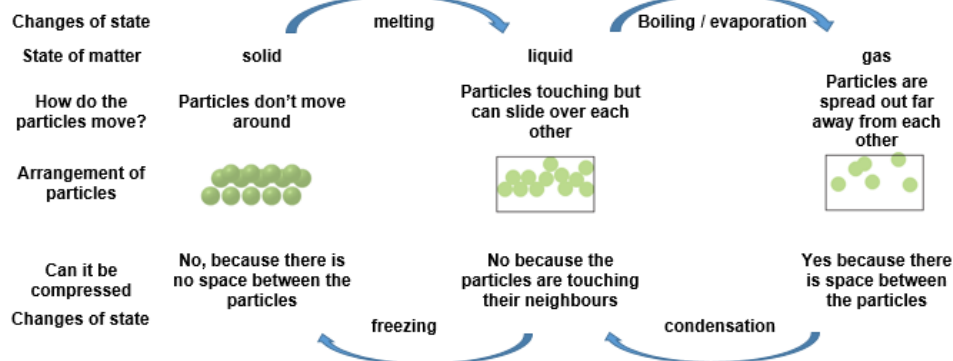


Matter Part 1 Particle Model

Knowledge Organiser

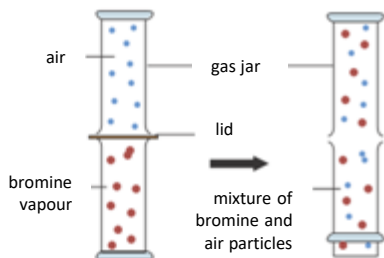
Changes Of State



Diffusion

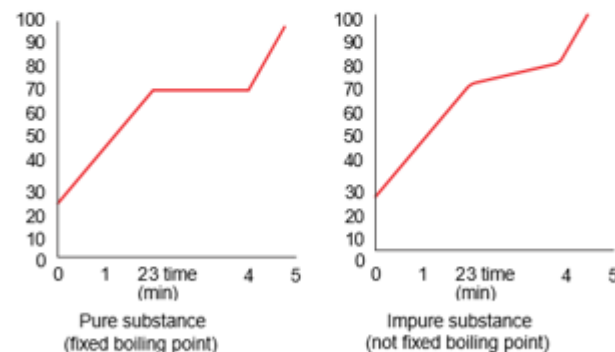
- Diffusion is the movement of particles from an area of high concentration (lots of the same particle) to an area of low concentration (not a lot of the same particle)
- It is a random process which does not need energy

- The speed of diffusion can be increased by:
- A higher temperature
- Smaller particles diffusing
- A gas rather than liquid
- Diffusion does not happen in a solid as the particles can't flow



Melting and Boiling Points

- The melting point of a substance is the temperature at which it turns from a solid to a liquid, or a liquid to a solid
- The boiling point of a substance is the temperature at which it turns from a liquid to a gas or a gas to a liquid
- Pure substances have a fixed (sharp) boiling or melting point, whereas impure substances have a range which appears as a diagonal line on a graph



Key Terms make sure you can write definitions for these key terms

property	properties	substance	freezing	Pure substance
condensation	diffusion	evaporation	Boiling point	Impure substance
Melting point				

Matter Part 2: Separating Mixtures

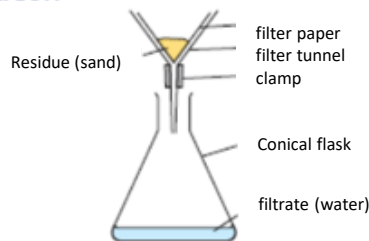
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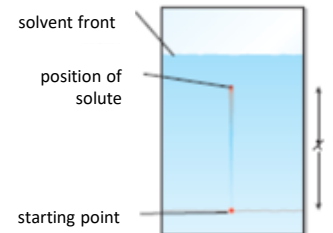
Mixtures

- Mixtures are different substances which are together, they are not chemically bonded and so are easy to separate
 - The substances which make up a mixture keep their own properties unlike those in a compound
 - A mixture is an impure substance as it does not have a fixed melting point, instead it has a range
-
- A solution is a type of mixture which is made up of two parts
 - A solute is the part which has dissolved in the solution
 - A solvent is the liquid part which the solute has dissolved into
-
- The solubility of a substance is a measure of how much of it will dissolve
 - Not all solutes will dissolve in all solvents
 - Solutes which do not dissolve are known as insoluble
 - Substances which do dissolve are known as soluble
 - The solubility of a substance can be increased by increasing the temperature of the solution or by stirring the solution
 - A saturated solution is one where the maximum amount of solute has dissolved in it, no more solute will be able to dissolve

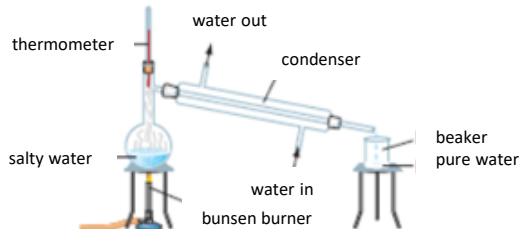
Filtration



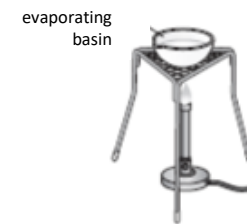
Chromatography



Distillation



Evaporation



Key Terms Make sure you can write definitions for these key terms

saturated solution	Solvent	mixture	chromatography	condensation	distillation	evaporation	filtration	impure substance
solute	solubility	property	dissolve	properties	solution	soluble	substance	pure substance
boiling point								