

Year 5 Marvellous Mixtures Knowledge Organiser



States Of Matter

State	Solid	Liquid	Gas
Diagram			
Arrangement of particles	Regular arrangement	Randomly arranged	Randomly arranged
Movement of particles	Vibrate about a fixed position	Move around each other	Move quickly in all directions
Closeness of particles	Very close	Close	Far apart

Dissolving

When the particles in a solid spread out in a liquid.

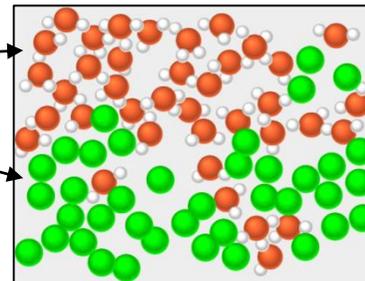
We call the liquid the **SOLVENT**

We call the solid the **SOLUTE**

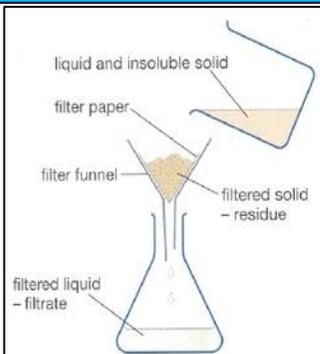
We call the mixture of the solid and the liquid a **SOLUTION**.

A solid that will dissolve in a liquid is called **SOLUBLE**.

A solid that will not dissolve in a liquid is called **INSOLUBLE**.



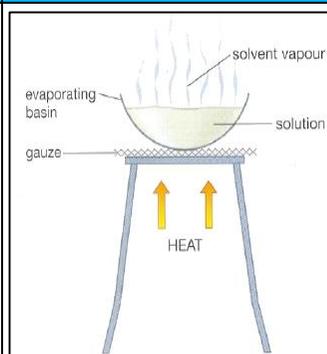
Filtration



Separates an insoluble solid from a liquid.

The solid pieces are too big to fit through the holes in the filter paper.

Evaporation



Separating a soluble solid from a liquid.

Crystallisation

Heat until almost all the water has evaporated. Leave for the remaining water to evaporate slowly to form crystals.

Key Vocabulary

dissolve	Pass into a solution.
evaporate	Change into a vapour.
filter	Remove by passing through a filter.
mixture	A substance consisting of two or more substances mixed together.
non-reversible	Incapable of being reversed into a different state.
particle	A tiny piece of anything.
reversible	Capable of assuming or producing either of two states.
saturated	Being the most concentrated solution possible at a given temperature; unable to dissolve still more of a substance.
separate	Force, take, or pull apart.
soluble	Capable of being dissolved in some solvent.
solution	A mixture of two or more substances; frequently (but not necessarily) a liquid solution.
suspension	A mixture in which fine particles are suspended in a fluid where they are supported by buoyancy.



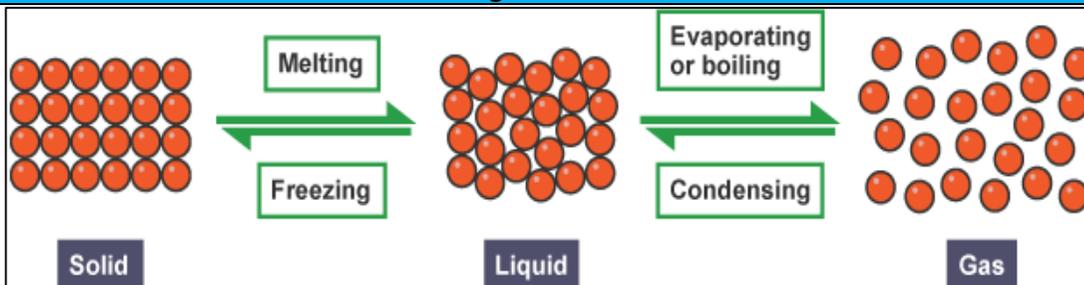
Year 5 All Change Knowledge Organiser



States Of Matter

State	Solid	Liquid	Gas
Diagram			
Arrangement of particles	Regular arrangement	Randomly arranged	Randomly arranged
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Changes Of State



Reversible Changes

Some changes can be reversed and the material can be changed to its previous form. An example of this is water into ice - it can be melted and turn back to water again.



Irreversible Changes

Other changes are irreversible which means they can't be 'undone'. Examples of this are cooking, baking, frying and burning materials. An example would be that you can fry an egg but you can't return it to a raw egg again.



Key Vocabulary

bubbles	A hollow globule of gas (e.g., air or carbon dioxide).
carbon dioxide	A heavy odourless colourless gas formed during respiration.
freeze	Change from a liquid to a solid when cold.
flammable	Easily ignited.
fuel	A substance that can be consumed to produce energy.
melt	Reduce or cause to be reduced from a solid to a liquid state, usually by heating.
irreversible	Incapable of being reversed into a different state.
oxygen	A colourless, odourless, tasteless, non-flammable gas that we breathe.
reaction	A process in which one or more substances are changed into others.
reversible	Capable of assuming or producing either of two states.
vapour	A visible suspension in the air of particles of some substance.