

Filtering

When you have an incomplete mixture (e.g. sand and water), you can separate the larger particles (or fixed solid) away through filtering. By passing sand and water through a filter the water is small enough to pass through the tiny holes in the filter, whereas the sand is too large.



Dissolving



A **solute** is something which dissolves in a **solvent**. **Solutes** and **solvents** can be **liquids**, **solids** or **gases**; however, **solutes** are commonly **solids** and **solvents** **liquids**. When a **solute** dissolves in a **solvent**, it forms a **solution**. The **solute**, if fully dissolved, will not be visible in the **solution**.



Changing Materials Term 4 – Year 5 & 6

States of Matter

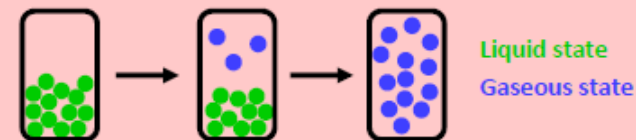
All matter (possessing mass and taking up space) exists in different states. There are 4 states of matter (**solid**, **liquid**, **gas** and **plasma**).



Solids have a rigid, fixed shape whereas **liquids** and **gases** are fluid (they flow). **Solids** and **liquids** cannot be compressed whereas **gases** can.

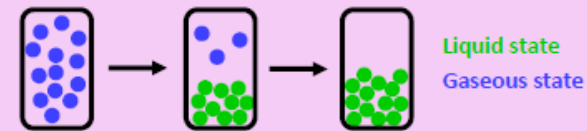
Evaporating

Evaporating is the process by which a liquid turns into a gas or vapour. It happens when surface liquid particles achieve enough energy to become gaseous (e.g by applying sufficient heat).



Condensing

Condensing is the process by which a gas or vapour turns into a liquid. As freely moving gaseous particles lose energy (e.g. by cooling down), they begin to slow down and become much closer together - eventually becoming liquid.



Vocabulary

Irreversible – a change that cannot be undone.

Reversible – a change that can be undone.

Conductor – something that allows electricity/heat to travel through it.

Insulator – something that does not allow electricity/heat to travel through it.

Properties – the qualities and characteristics of a substance.

