



<p>particle</p> <p>A tiny piece of something</p>	<p>arrangement</p> <p>The way things are organised or placed</p>	<p>heat</p> <p>Heat is a type of energy that makes things warm. When something is hot, it has a lot of heat.</p>	<p>evaporation</p> <p>Evaporation is when a liquid changes into a gas, often due to being heated up.</p>	<p>condensing</p> <p>Condensing refers to the process of turning a gas into a liquid by cooling it down.</p>	<p>freezing</p> <p>Freezing is when a liquid turns into a solid due to a drop in temperature.</p>	<p>cooling</p> <p>Cooling means to lower the temperature of something, making it less hot.</p>
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Solid	Liquid	Gas
<p>X Solids cannot be compressed</p> <p>X Do not flow</p> <p> Have a fixed shape</p>	<p>X Liquids cannot be compressed</p> <p>✓ Can flow</p> <p> Can take the shape of the bottom of the container</p>	<p>✓ Gases can be compressed</p> <p>✓ Can flow</p> <p> Can fill the shape of their container</p>

There are also some materials that do not 'fit' or are exceptions. These are called non-Newtonian fluids. These can act like a solid but are also a liquid – much like jelly or cornflour mixed with water.

Evaporation

Evaporation occurs when water turns into **water vapour**. This happens very quickly when the water is hot, like in a kettle, but it can also happen slowly, like a puddle **evaporating** in the warm air.

Condensation

Condensation is when **water vapour** is cooled down and turns into water. You can see this when droplets of water form on a window. The **water vapour** in the air cools when it touches the cold surface.

When water and other **liquids** reach a certain temperature, they change state into a **solid** or a **gas**. The temperatures that these changes happen at are called the boiling, **melting** or **freezing** point.

solid → **heat** → **liquid**

If a **solid** is heated to its **melting** point, it **melts** and changes to a **liquid**. This is because the particles start to move faster and faster until they are able to move over and around each other.

liquid → **cold** → **solid**

When **freezing** occurs, the particles in the **liquid** begin to slow down as they get colder and colder. They can then only move gently on the spot, giving them a **solid** structure.