

States of Matter

Strand: Chemistry



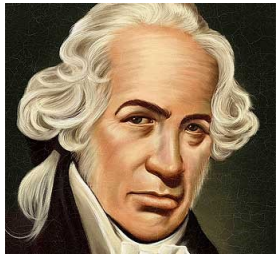

Did you know?

Solids, liquids and gases are described by observable properties.
The temperature at which given substances change state are always the same.

Key vocabulary

Change state	The physical process where matter moves from one state to another.
Condensation	small drops of water which form when water vapour or steam touches a cold surface.
Evaporation	to turn from liquid into gas; pass away in the form of vapour.
Gas	a form of matter.
Liquid	a form of matter that is easily poured.
Melting point	the melting point of a particular substance is the temperature at which it melts.
Particle	a tiny amount or small piece.
Precipitation	rain, snow, sleet, dew, etc, formed by condensation of water vapour in the atmosphere.
Solid	having a firm shape or form that can be measured in length width and height.
Water vapour	water in the gaseous state, especially when due to evaporation at a temperature below the boiling point.

Significant People

Daniel Fahrenheit and Anders Celsius (temperature).

Sticky knowledge

Particles are what materials are made from. They are so small that we cannot see them with our eyes. The properties of a substance depend on what its particles are like, how they move and how they are arranged.

Particles behave differently in solids, liquids and gases.

In the solid state, the material holds its shape. Solids have vibrating particles which are closely packed in and form a regular pattern. This explains the fixed shape of a solid and why it can't be poured.

Solids always take up the same amount of space.

In the liquid state, the material holds the shape of the container it is in. This means that liquids can change shape, depending on the container.

Liquids have particles which are close together but random.

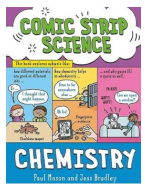
Liquid particles can move over each other.

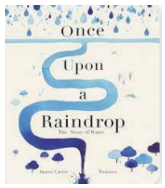
In the gas state, particles can escape from open containers. Gases have particles which are spread out and move in all directions.

When water (in its liquid form) is heated, the particles start to move faster and faster until they have enough energy to move about more freely. The water has evaporated into a water vapour.

When water is cooled, the particles start to slow down until a solid structure (ice) is formed. The water has frozen.

Exciting books







Useful websites

https://www.bbc.co.uk/bitesize/guides/zthyj6f/revision/1
https://www.youtube.com/watch?v=8zrbbvxWgJk