States of Matter

Careers connected to States of Matter: Chemical Engineer, Pharmacologist, Pharmaceutical pharmacist, Chemist

In this unit, I will:

☐

Skills for working scientifically:

States of matter

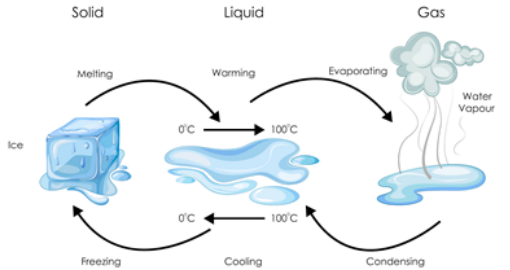
Everything in our universe is made of **matter**. There are 3 states of matter:

Solid **Liquid** **Gas**

Solid particles have **strong** bonds so solids have a fixed shape. **Liquid** particles have **weaker** bonds and more energy so liquids can change shape. **Gas** particles have **really weak** bonds so gases can spread out and move freely.

Changes of state

States of matter can change.
Substances can be **heated** or **cooled** to change from one state to another.

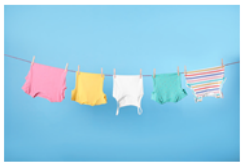


In water, the **melting** and **freezing point** is **0˚C** and the **boiling point** is **100 ˚C.**
Different substances have different melting, freezing and boiling points.

Condensation

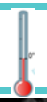
When **water vapour (gas)** touches a **cold** surface, the particles **lose energy** and the bonds become **stronger**, turning the gas into a **liquid**.

Evaporation



Heating liquid water **increases** the particle's energy and the bonds become **weaker**, turning it into a **gas**. The **hotter** the temperature, the **faster** the rate of evaporation.

Glossary

	boiling point	the point where a liquid evaporates and forms a gas when heated
	condensation	the process where a gas forms a liquid when cooled
	evaporation	the process where a liquid turns into a gas when heated
	freezing point	the point where a liquid freezes and forms a solid when cooled
	gas	state of matter which flows, can spread out and can be squashed
	liquid	state of matter which flows and forms a pool
	melting point	the point where a solid melts and forms a liquid when heated
	particles	one very small part of matter
	solid	state of matter that holds its form and shape
	substance	the material, or matter, of which something is made
	thermometer	an instrument that measures temperature in degrees Celsius (˚C) or Fahrenheit (˚F)
	water vapour	the name of water as a gas