



Fair testing



research



Observation over time

STATES OF MATTER



Pattern seeking



Identify and classify



Problem solving

Lesson 1 compare and group the 3 states of matter.
Which state of matter can change volume?



Solid, liquid, gas, matter, volume.

Lesson 2 investigate melting points.
What is the melting point of ice?



Particle, melting, melting point, thermometer, temperature.

Lesson 3 Explore how different states of matter behave at different temperatures.

What is condensation?

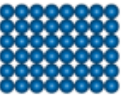


Boil, freeze, condense, evaporate, condensation


What happens when we heat solids?

States of matter


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



Solid



Gas

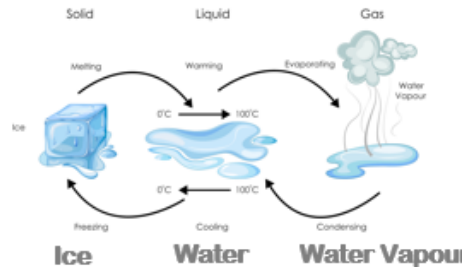


Liquid

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.

Careers connected this topic
Chemical engineer, pharmacologist, pharmacist, chemist

Year 4
Spring 1

Lesson 4 water cycle
Why is the water cycle so important?



Water cycle, precipitation, transpiration, ground water, surface run off.

Lesson 5
STEM investigation

Lesson 6
Can you explain all you have learned from this topic?

Vocab-all words from previous lessons.