Knowledge Organiser		
Science	Year 4	States of Matter

Key Vocabulary	
thermometer	an instrument that measures temperature in degrees Celsius (˚C) or Fahrenheit (˚F
melting point	the point where a solid melts and forms a liquid when heated
0°C freezing point	the point where a liquid freezes and forms a solid when cooled
100°C boiling point	the point where a liquid evaporates and forms a gas when heated
solid	state of matter that holds its form and shape
liquid	state of matter which flows and forms a pool
gas	state of matter which flows, can spread out and can be squashed
evaporation	the process where a liquid turns into a gas when heated
particles	one very small part of matter
condensation	the process where a gas forms a liquid when cooled
water vapour	the name of water as a gas
substance	the material, or matter, of which something is made

States of matter

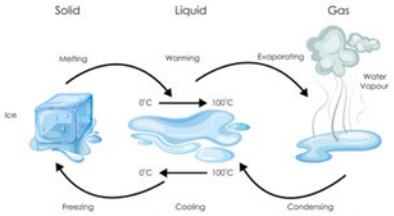
Everything in our universe is made of **matter**.
There are 3 states of matter:

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.



Ice **Water** **Water Vapour**

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.