


Subject	Topic	Year	Term
Science 	States of Matter	3 & 4 (Y4)	Autumn 2

N.C. Statements

- Compare and group materials together, according to whether they are solids, liquids or gases.
- Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)
- Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature

What are the three states of matter?

Solids – hold their shape, **Liquids** – form a pool not a pile,
Gases – escape from an unsealed container.

What is special about Water?

Solid



Liquid



Gas



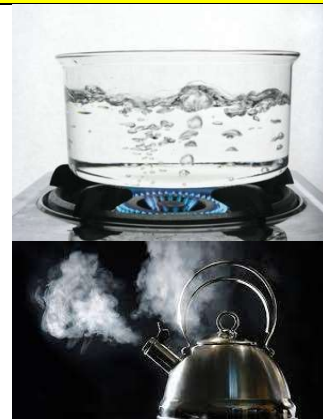
Key Vocabulary

Spelling	Definition
air/oxygen water vapour/gas	Water in its gaseous state is known as water vapour and its tiny particles float in the air.
degrees Celsius	Unit of measure for temperature (°C)
change state heating (boil)/cooling melt/freeze	To change state means to either heat or cool something, turning it from solid to liquid, liquid to gas or liquid to solid.
condensation & evaporation	Turning water vapour to liquid Turning liquid to water vapour
Water Cycle	the water circulation process
particles	one of the very small parts of water

Key Questions

- What do the particles look like in a solid, liquid and gas?
- What state of matter takes on the shape of the container that it is poured in to?
- What is a melting point?

Important Diagrams

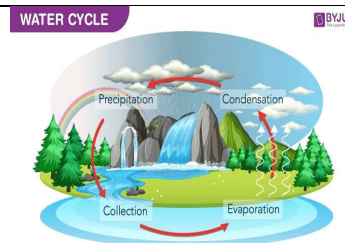


CHANGING STATES OF MATTER



Common Misconceptions

- If a solid or liquid is heated the particles get bigger.
- Melting is not the same as dissolving.
- Most of a gas is empty space.
- Atoms, molecules and particles are very very small.
- The particles in a liquid are still close together but they are free to move around.



Working Safely

Never touch the steam when you boil water – it is hot.
When something is melted it may become hot – caution.