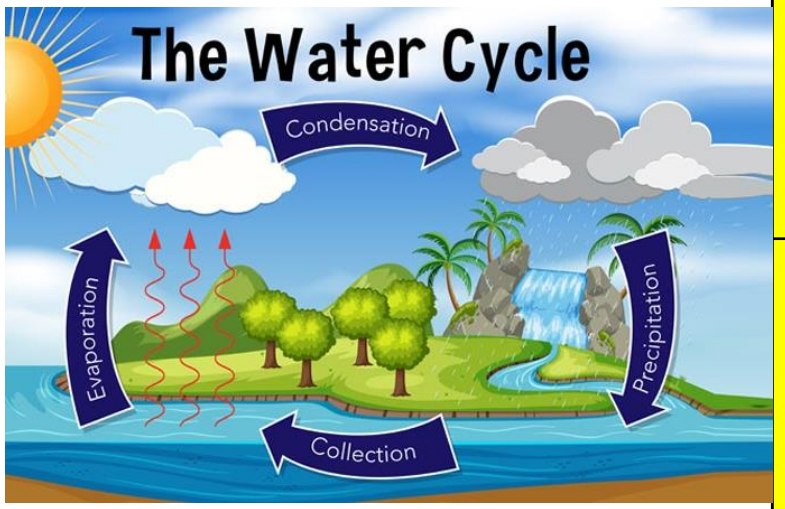
Year 4: States of Matter Knowledge Mat

Subject Specific Vocabulary

matter	Any solid, liquid or gas that exists in the universe. It is made up of tiny particles (atoms), which are too small for the eye to see.
solid	A substance which retains its shape. Its particles vibrate only.
liquid	A substance which flows and finds its own level. It is made of loosely packed particles
gas	When liquid changes into gas, usually when it heats up.
state	Matter can exist in three forms: solid, liquid or gas. Heating or cooling a substance causes it to change state.
temperature	Describes how warm or cold a substance is.
Celsius (C)	The scale used to measure temperature. On the Celsius scale, water freezes at 0°C and boils at 100°C
melting	When a solid becomes a liquid through heating
freezing	When a liquid cools and becomes a solid
boiling	When a liquid becomes a gas through heating
evaporation	When a liquid changes into a gas through gaining energy from the surrounding air
condensation	When a gas cools and forms a liquid.
precipitation	When water in any form falls to the Earth. This includes rain, sleet, snow, or hail.

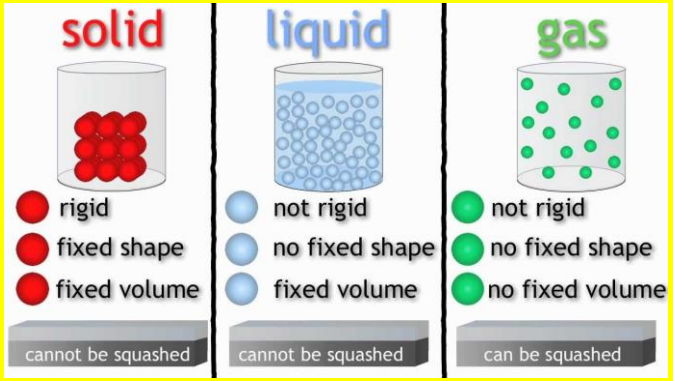
The water cycle

- The **sun heats rivers**, lakes and the sea.
- Water **evaporates** into the air. This is called water vapour.
- The **water vapour rises,** cools and the **water condenses** to form clouds.
- The droplets in the clouds become too heavy and fall as rain, snow, sleet or hail (**precipitation**).
- The precipitation **collect in rivers**, which run off into the seas.
- **The cycle starts again.**



Sticky Knowledge

Materials can be grouped based on their states of matter, solid, liquid or gas



Know that liquid water becomes solid (ice) at 0°C and gas (water vapour) at 100°C

Know that boiling and freezing points change for different substances





Can briefly describe the water cycle: sun evaporates water into vapour; water vapour cools and condenses into clouds; when these get heavy, it rains; water goes back into rivers, lakes and seas.