### **Barn Owls**

# **States of Matter – Knowledge Organiser**



#### **Key Vocabulary**

**Boiling point** – the temperature at which a liquid boils.

**Condensation** – when a gas turns into a liquid.

Cool - to lower the heat.

**Evaporation** – when a liquid turns into a gas.

Freeze – when a liquid becomes a solid.

Gas – when particles do not have a fixed state and can move freely.

**Heat** – to increase the heat.

**Liquid** – when particles are close together but can still move freely.

Melt - when a solid becomes a liquid.

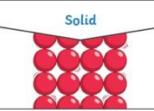
**Solid** – when particles are close together and cannot move.

**Temperature** – how hot or cold something is measured in degrees Celsius.

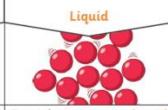
**Thermometer** – a device for measuring temperature Water cycle - describes the continuous movement of water on, above and below the surface of the Earth. Water vapour - water once turned into a gas.

#### The 3 States of Matter

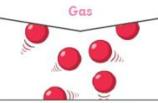
There are three states of matter.



solid are close together and cannot move. They can only vibrate.



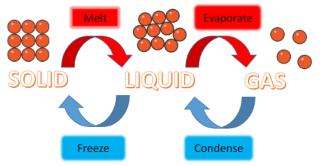
Particles in a liquid are close together but can move around each other easily.



Particles in a gas are spread out and can move around very guickly in all directions.

#### **Changing States**

When water and other liquids reach a certain temperature, they change state into a solid or a gas. The temperature that these changes happen at are called the melting, boiling and freezing point.



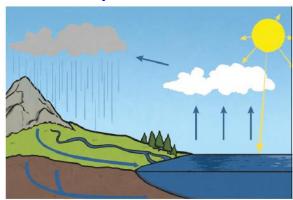


**Evaporation** occurs when water turns into water vapour. This happens very quickly when the water is hot, like in a kettle, but it can also happen slowly, like a puddle evaporating in the warm air.



when water vapour is cooled down and turns into water. You can see this when droplets of water form on a window. The water vapour in the air cools when it touches the cold surface.

### **The Water Cycle**



- 1. Water from lakes, puddles, rivers and seas is evaporated by the sun's heat, turning it into water vapour.
- 2. This water vapour rises, then cools down to form water droplets in clouds (condensation).
- 3. When the droplets get too heavy, they fall back to the earth as rain, sleet, hail or snow (precipitation).

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