

<b>Science Focus:</b> States of Matter	<b>Year Group:</b> 4	<b>Spring Term</b>
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**Key Knowledge:**

**Materials (solids, liquids and gases).**

● **Solids** – These materials keep their shape unless a force is applied to them. They can be hard, soft or squashy.

● **Liquids** – **Liquids** take the shape of their contained. They can change shapes and can flow or be poured.

● **Gases** – **Gases** can be spread out to completely fill the contained or room they are in. They do not have any fixed shape.

**Changes in materials.**

- Water when is **frozen** it will turn from a **liquid** to a **solid**.
- When water is heated it will turn from a **liquid** into a **gas**.
- **Gas** when **condensed** will turn into a **liquid**.
- **Solids** when **melted** will turn into a **liquid**. This can be reversed by **freezing** the **liquid** back into a **solid**.

**Water cycle (see Diagrams and Symbols)**

1. Water from lakes, puddles, rivers and seas are **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 Earth as rain, sleet, hail or snow (**Precipitation**).



**Key Vocabulary:**

**States of matter** – Materials can be one of three states: solids, liquids or gases. Some materials can change from one state to another and back again.

**Solids** – These are materials that keep their shape unless a force is applied to them. They can be hard, soft or squashy.

**Liquids** – Liquids take the shape of their contained. They can change shapes and can flow or be poured.

**Gases** – Gases can be spread out to completely fill the contained or room they are in. They do not have any fixed shape.

**Water Vapour** – Water that takes the form of a gas. When water is boiled, it evaporates into a water vapour.

**Melt** – This is when a solid changes to a liquid.

**Freeze** – Liquid turns to a solid during the freezing process.

**Evaporate** – Turn a liquid into a gas.

**Condense** – Turn a gas into a liquid.

**Condensation** – Water which collects as droplets on a cold surface when hot air is in contact with it.

**Precipitation** – Rain, snow, sleet or hail that falls to the ground.

**Possible Experiments:**

To group various materials into three categories: solids, liquids or gases. Use the rules about whether they hold their shape, can be poured or can move around freely.

To change materials from one state to another.

**Diagrams and Symbols:**

Water Cycle

