

CHS Science Knowledge Organiser – Year 4 – States of Matter



| What? (Key vocabulary) | | | |
|------------------------|---|--|--|
| Temperature | How hot or cold something is. In the UK this is measured in degrees Celsius (°C). | | |
| Matter | matter is any substance that has mass and takes up space by having volume | | |
| Particle | An extremely small piece of matter, so small you cannot see a single one with your eyes. | | |
| Molecule | The very tiny particles that make matter. | | |
| Melting | The process of a solid being heated and changing into a liquid. | | |
| Evaporation | The process of a liquid being heated and changing in to a gas. | | |
| Condensation | The change of water in its gas form (water vapor) into liquid water. This happens when warm air rises and cools down. | | |
| Freezing | The process of a liquid cooling and changing in to a solid. | | |
| Precipitation | When rain, snow, sleet or hail falls to the ground. | | |
| Reversible | Capable of being reversed so that the previous state is restored. | | |
| Irreversible | Not able to be undone or altered – a chemical change has occurred. | | |

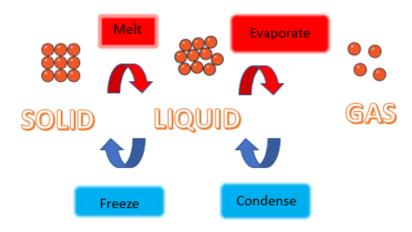
| v | e٧ | . C | - | ~+. | _ |
|---|----|-----|---|-----|---|
| | | | | | |

Changing State

Matter can change from one state to another if it is heated or cooled. If ice (a solid) is heated it changes to water (a liquid). This change is called melting. If water is heated, it changes to steam (a gas).

The Water Cycle

The water cycle is the complete journey that water makes, from one place to the other, and from one state to the other. As the word 'cycle' suggests, there is no starting point. This means that we can begin at any point and follow its path until it gets to where we started again



| Solid | Liquid | Gas | |
|---|---|---|--|
| Particles are close together and fixed in to place, Solids stay the same shape, can be held in your hands and can be cut in to a new shape. | Particles are close together but can move freely. Liquids flow and can be poured. They change shape to fit the container. Volume of a liquid doesn't change even if the container does. | Particles are not connected and move freely. Gases are often invisible. They change shape and volume based on the area or container which they are held in. | |

