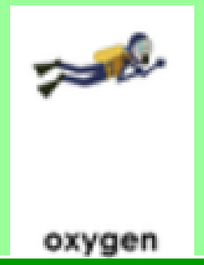
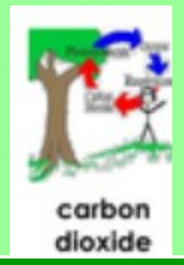
States of Matter

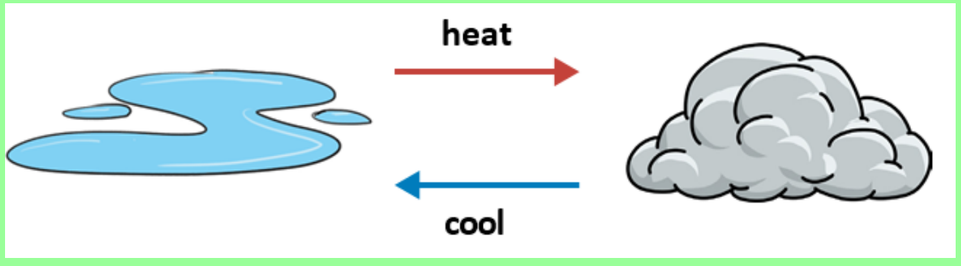
Vocabulary	Definition
water cycle	The water cycle is the journey water takes as it moves from the land to the sky and back again.
temperature	Temperature is a way to tell how hot or cold something is
evaporation	Evaporation is when water turns into a gas and goes up into the air.
boiling point	The boiling point is the temperature at which water starts to boil and turn into steam.
melting point,	The melting point is the temperature at which something solid, like ice, turns into a liquid, like water
freezing	Freezing is when a liquid, like water, gets so cold that
melting	Melting is when a solid, like ice, gets warm and turns into a liquid, like water. This happens at the melting point.
state change,	State change is when matter changes from one form to another, like from solid to liquid or liquid to gas.

Is there gas around us? How do we know?



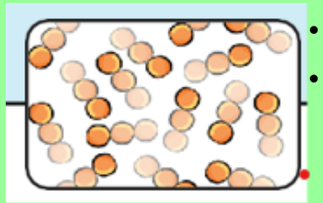


How does liquid become a gas ?



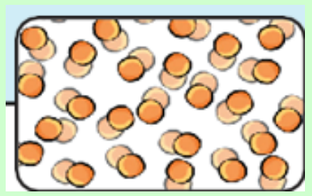
What are the different states? What are their properties?

Gas



- Gases are **often invisible**.
- Gases do not keep their shape or always take up the same amount of space. They **spread out** and change their shape and volume to fill up whatever container they are in.
- Gases can be **squashed**.

Liquid



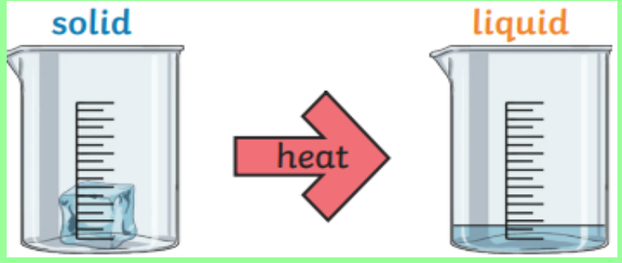
- Liquids can flow or be **poured**
- easily. They are not easy to hold.
- Liquids **change their shape** depending on the container they are in.
- Even when liquids change their shape, they always take up the **same amount of space**. Their volume stays the same.

Solid

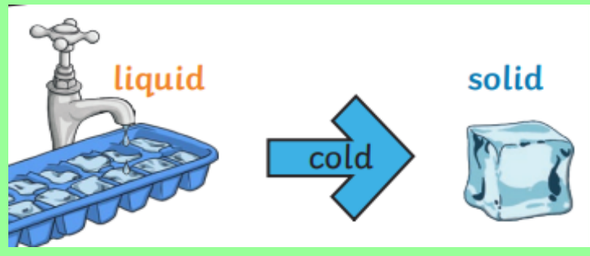
- Solids stay in one place and
- you can hold them in your hand.
- Solids **keep their shape**. They **do not flow** like liquids.
- Solids always take up the **same amount** of space. They **do not spread** out like gases.
- Solids can be **cut** or **shaped**.

How does solid become liquid and how does liquid become a solid?

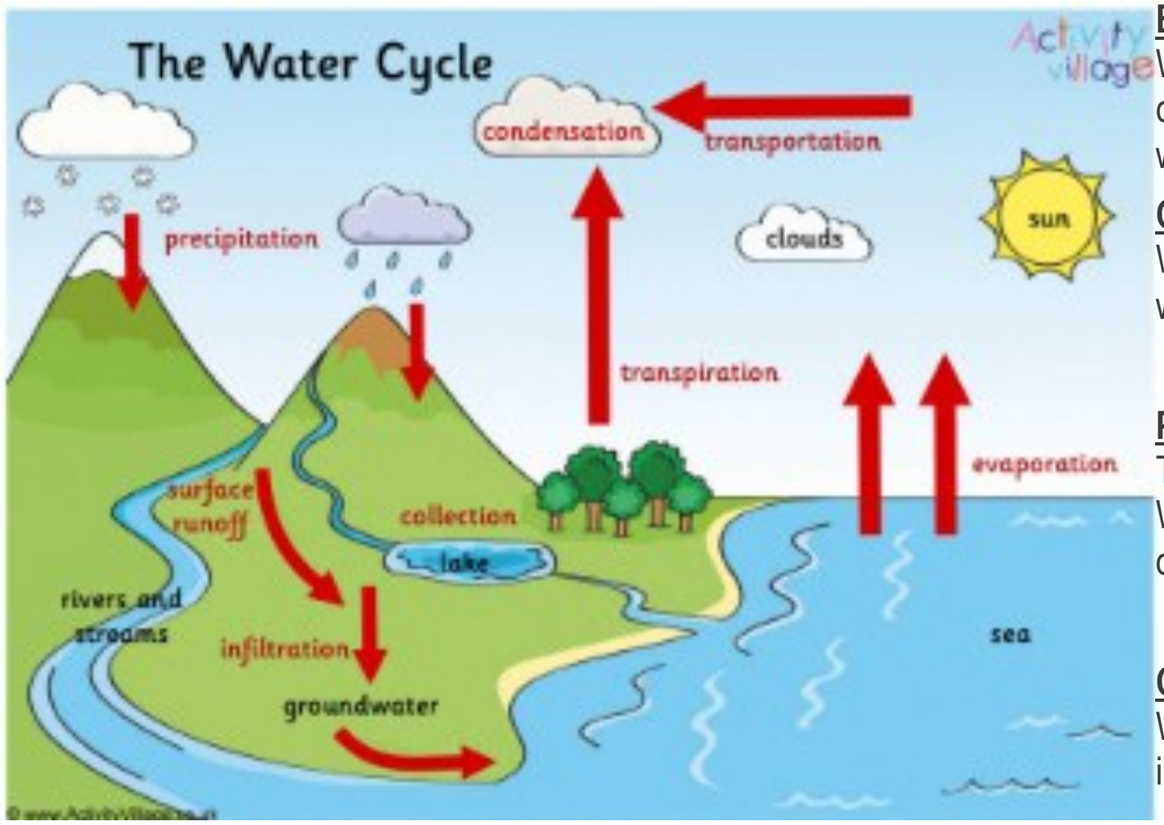
- If a solid is heated to its melting point, it melts and changes to a liquid.
- This is because the particles start to move faster and faster until they are able to move over and around each other.



- When freezing occurs, the particles in the liquid begin to slow down as they get colder and colder.
- They can then only move gently on the spot, giving them a solid structure.



What happens during the water cycle?



Evaporation:
When the sun heats the surface of seas, lakes, rivers and streams, some of the water changes state and becomes water vapour, mixing with the air. Warm air rises so the water vapour rises too.

Condensation:
When the air cools down, the water vapour condenses back into water droplets. These water droplets collect together and form clouds.

Precipitation:
The water droplets in clouds attract other water droplets to them and they grow bigger. When they get too big and heavy they fall to ground as rain. If the air is cold enough the droplets remain frozen and fall as snow or hail.

Collection:
When the water falls to Earth it collects as streams, rivers or lakes. When it falls on land in can filter in to the Earth and become groundwater or it can flow over the land as run