

# WHY IS WATER IMPORTANT TO OUR PLANET?

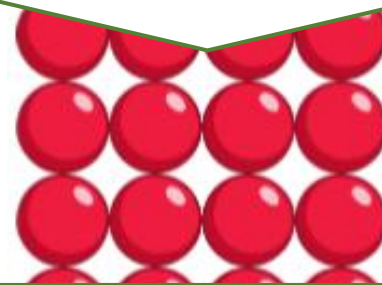
## KNOWLEDGE ORGANISER

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.



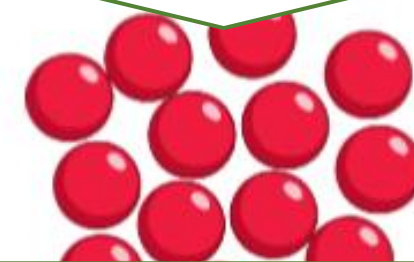
There are three states of matter.

**solid**



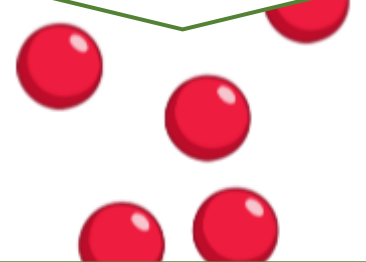
Particles in a solid are close together and cannot move. They can only vibrate.

**liquid**



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

**gas**

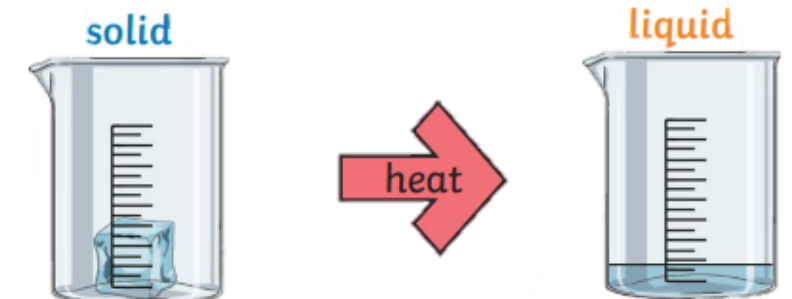


Particles in a gas are spread out and can move around very quickly in all directions.

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

Condensation is 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.

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.

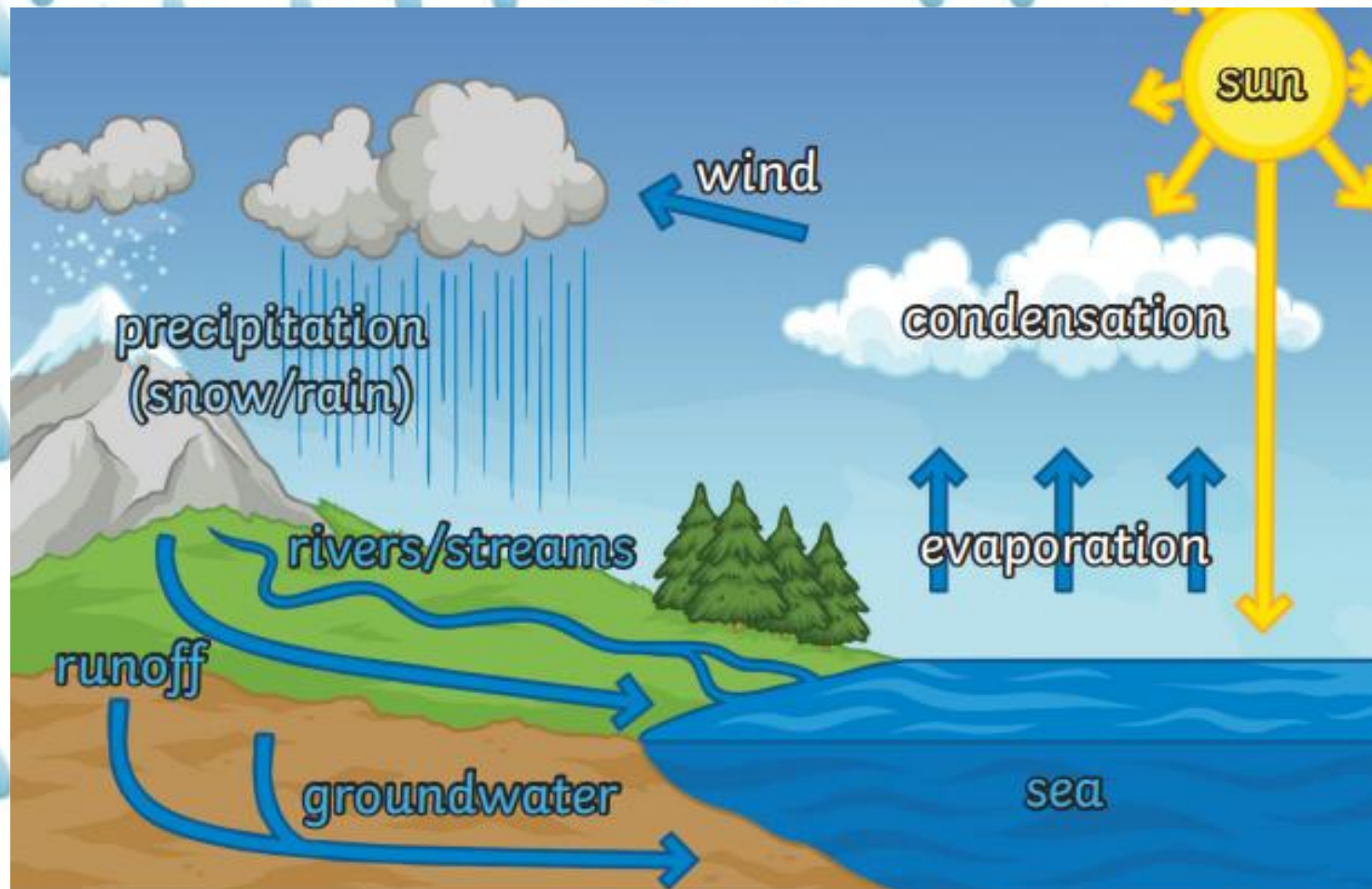
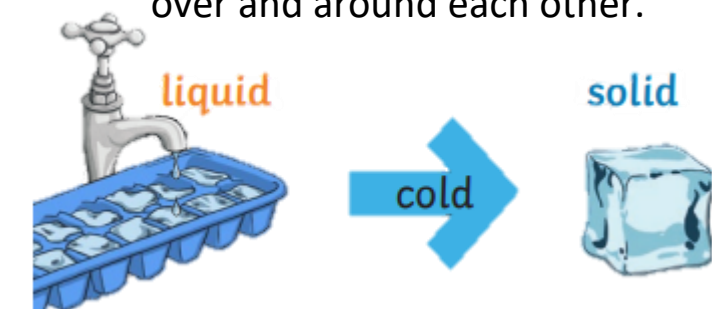


1. Water from lakes, puddles, rivers and seas is evaporated by the sun's heat, turning it into water vapour.

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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| Key Vocabulary                     |                                                                                                                                                  |                         |                                                                                                                                                                                                                                                                                         |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>condense /<br/>condensation</b> | Turn a gas into a liquid.                                                                                                                        | <b>particle</b>         | A particle is an extremely tiny piece of matter, and scientists believe that everything in the universe is made up of particles.                                                                                                                                                        |
| <b>dam</b>                         | A barrier that blocks off flowing water.                                                                                                         | <b>precipitation</b>    | Liquid or solid particles that fall from a cloud as rain, sleet, hail or snow.                                                                                                                                                                                                          |
| <b>evaporate /<br/>evaporation</b> | When a liquid turns into a gas.                                                                                                                  | <b>solids</b>           | These are materials that keep their shape unless a force is applied to them. They can be hard, soft or even squashy. Solids take up the same amount of space no matter what has happened to them.                                                                                       |
| <b>filter / filtration</b>         | pass (a liquid, gas, light, or sound) through a device to remove unwanted material.                                                              | <b>states of matter</b> | Materials can be one of three states: solids, liquids or gases. Some materials can change from one state to another and back again.                                                                                                                                                     |
| <b>freeze</b>                      | Liquid turns to a solid during the freezing process.                                                                                             | <b>reservoir</b>        | A man-made lake that is used to store water.                                                                                                                                                                                                                                            |
| <b>gases</b>                       | Gases can spread out to completely fill the container or room they are in. They do not have any fixed shape but they do have a mass.             | <b>runoff</b>           | Runoff occurs when there is more water than land can absorb. The excess liquid flows across the surface of the land and into nearby creeks, streams, or ponds. Runoff can come from both natural processes and human activity.                                                          |
| <b>liquids</b>                     | Liquids take the shape of their container. They can change shape but do not change the amount of space they take up. They can flow or be poured. | <b>water cycle</b>      | The water cycle shows the continuous movement of water within the Earth and atmosphere. It is a complex system that includes many different processes. Liquid water evaporates into water vapor, condenses to form clouds, and precipitates back to earth in the form of rain and snow. |
| <b>melt</b>                        | This is when a solid changes to a liquid.                                                                                                        | <b>water vapour</b>     | This is water that takes the form of a gas. When water is boiled, it evaporates into a water vapour.                                                                                                                                                                                    |