

# Year 4 Science

# States of Matter

LO – I can identify the part played by evaporation and condensation in the water cycle.

[www.grammarsaurus.co.uk](http://www.grammarsaurus.co.uk)



Grammarsaurus

# Changing States

Water is a liquid but it can change state.



What is the name for water when it is **solid**?

What is the name for water when it is a **gas**?

# The Water Cycle

All water moves continuously and is recycled over and over again!

This is called the **water cycle**.

The water cycle is vital in supporting all life on earth.

Without it, nothing would grow or survive.

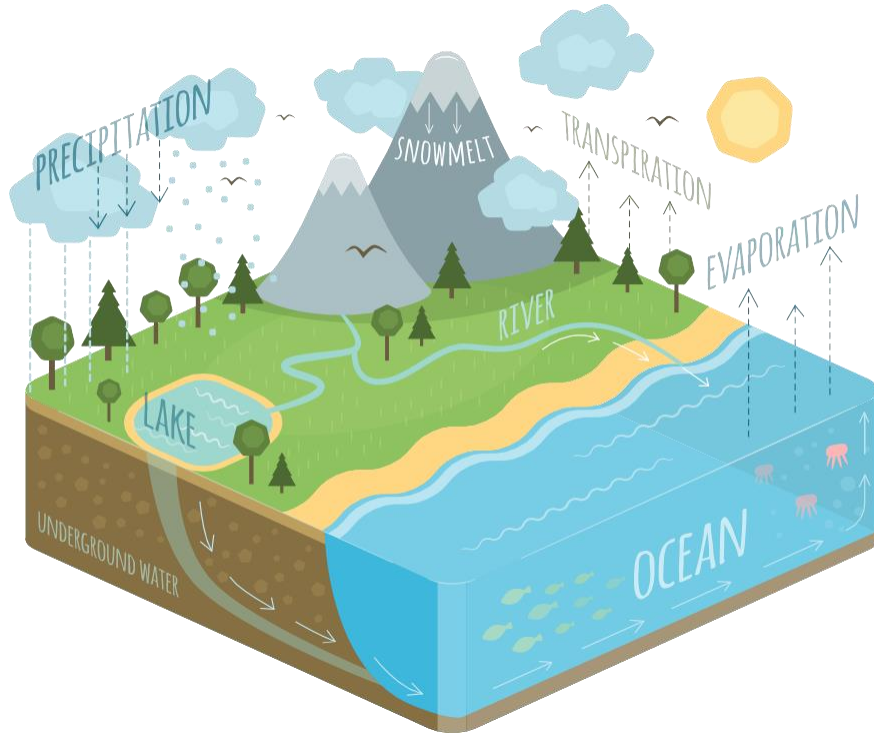
**Do you know any of the stages of the water cycle?**

**Did you know?**

The water we drink today has been around  
for as long as Earth!

# The Water Cycle

## Evaporation



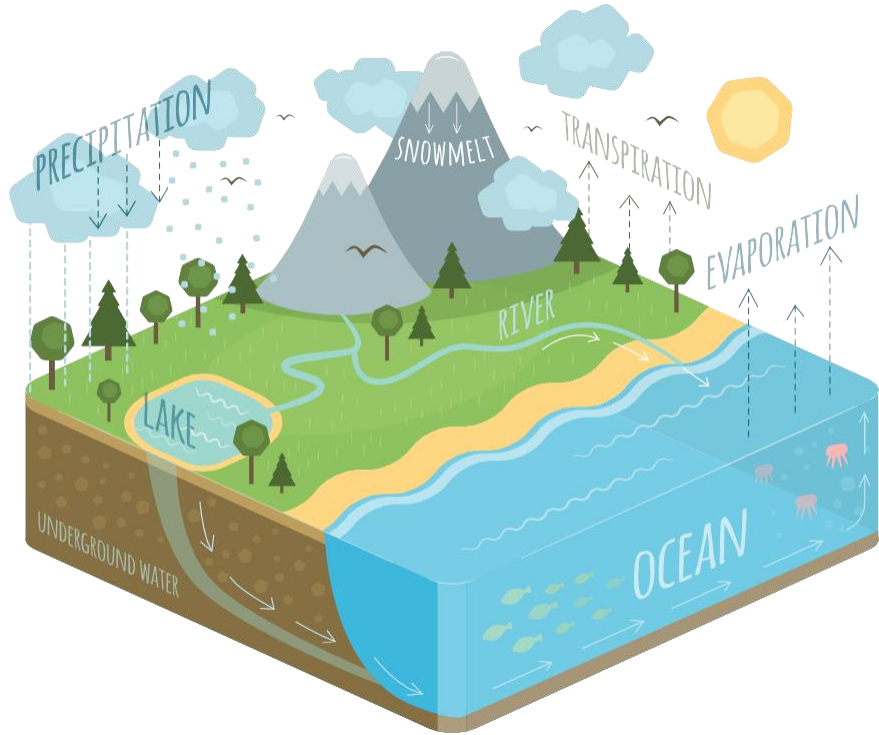
Evaporation is when water in oceans, lakes, or other bodies of water is warmed up by the Sun.

Heat causes the water particles to move quickly. They move further apart, until they move so far apart that they become a gas instead of a liquid. The water becomes water vapour.

**Can you name any other bodies of water?**

# The Water Cycle

## Condensation

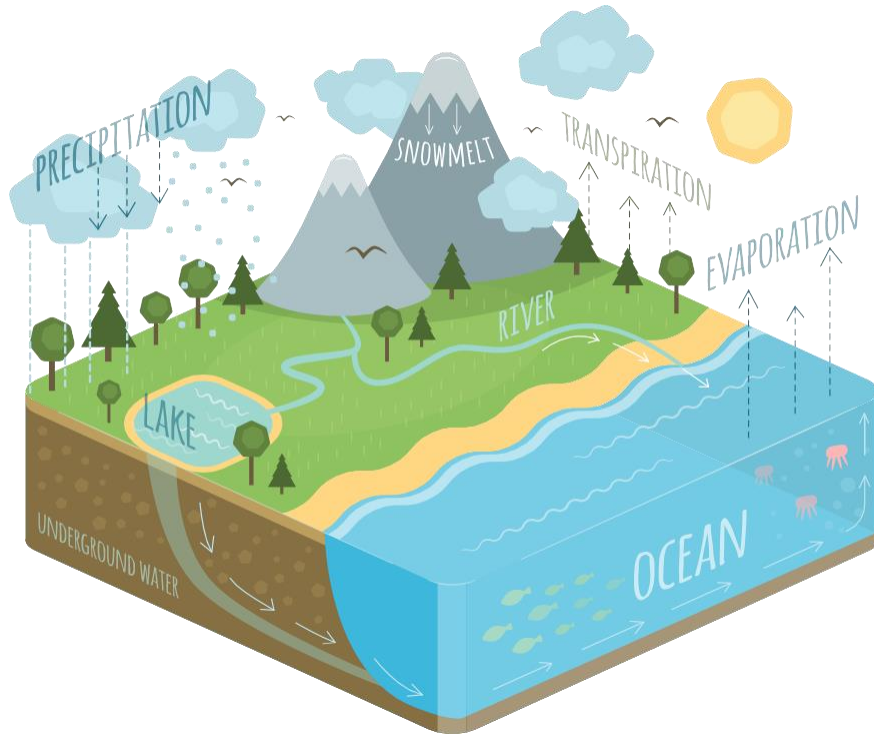


Eventually the water vapour **condenses** into clouds.

This means that the particles in the water vapour slow down and cool off, resulting in them becoming water droplets. These water droplets group together to form clouds.

**Can you think of any other times when water vapour becomes water droplets?**

# The Water Cycle



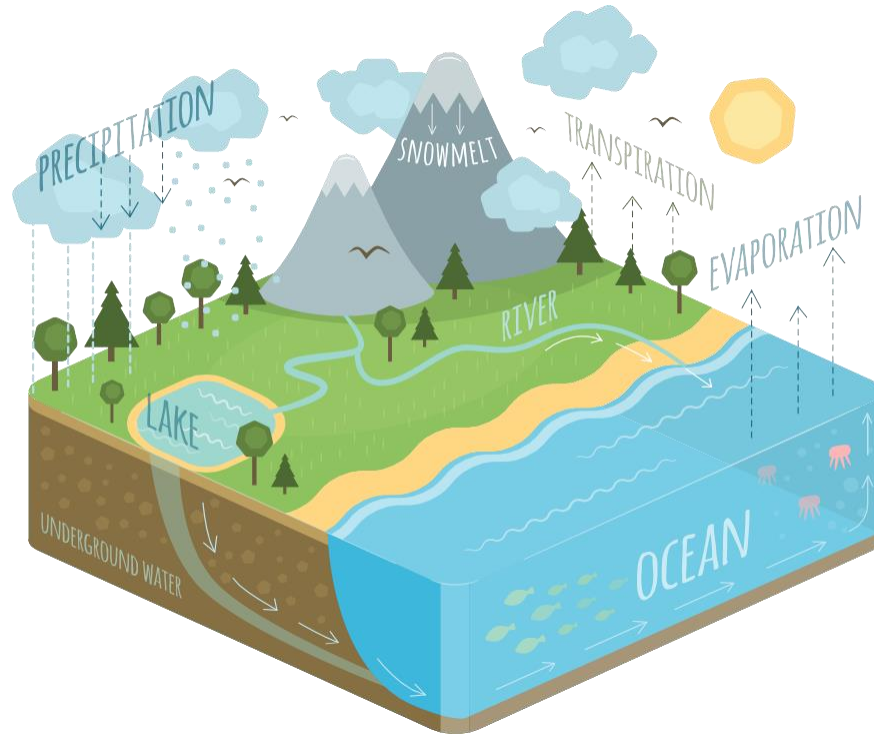
## Precipitation

When enough water droplets group together inside clouds, they become heavy enough to fall towards the Earth.

This usually falls as rain, but **precipitation** can also occur as snow, hail, or sleet depending on the temperature.

# The Water Cycle

## Collection (Run off)



Run off is when water travels across land. Rain will land in the ground, streets, oceans, and in streams and rivers.

Eventually it collects in a body of water. After a while, the water is evaporated and the water cycle starts again!

### Did you know?

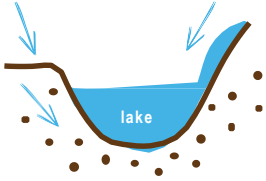



Scientists believe that a water droplet can spend approx. 3,200 years in the ocean before repeating through the water cycle!

# Partner Activity

On your tables, you have each of the stages of the water cycle and a description of each of them.

Can you and your partner  
match them up?

# Partner Activity Answers

<p><b>Collection (Run Off)</b></p>		<p><i>When water flows into lakes and rivers, and gets carried back to sea.</i></p>
<p><b>Condensation</b></p>		<p><i>When water vapour cools and turns back into liquid, forming clouds in the sky.</i></p>
<p><b>Evaporation</b></p>		<p><i>When heat from the sun causes water in the sea, lakes and rivers to rise into the air and turn into vapour.</i></p>
<p><b>Precipitation</b></p>		<p><i>When water falls from clouds in the sky.</i></p>

**Did you match them all correctly?**

# Independent Activity

Walter is a water droplet and he spends his life travelling through the water cycle.

You are going to draw a comic strip to explain what happens to Walter.

**Don't forget to use scientific vocabulary!**



# Missing Words...

Can you fill in the missing words?

## Precipitation

R \_\_\_\_\_, hail, sleet and snow that falls from the clouds.

## Condensation

When water vapour cools and turns into c \_\_\_\_\_.

## Evaporation

When the sun h \_\_\_\_\_ up water from the s \_\_\_\_\_,

l \_\_\_\_\_ and r \_\_\_\_\_ and it turns into a gas.

# Missing Words...

Can you fill in the missing words?

## Precipitation

R ain \_\_\_\_\_, hail, sleet and snow that falls from the clouds.

## Condensation

When water vapour cools and turns into clouds \_\_\_\_\_.

## Evaporation

When the sun heats \_\_\_\_\_ up water from the sun \_\_\_\_\_,

lakes \_\_\_\_\_ and rivers \_\_\_\_\_ and it turns into a gas.



# Thinking Time...

**What part of water cycle would be affected if...**

... it was a hot sunny day?

...it rained heavily?

