



Science

States of Matter

Aim

- I can identify and describe the different stages of the water cycle.

Success Criteria

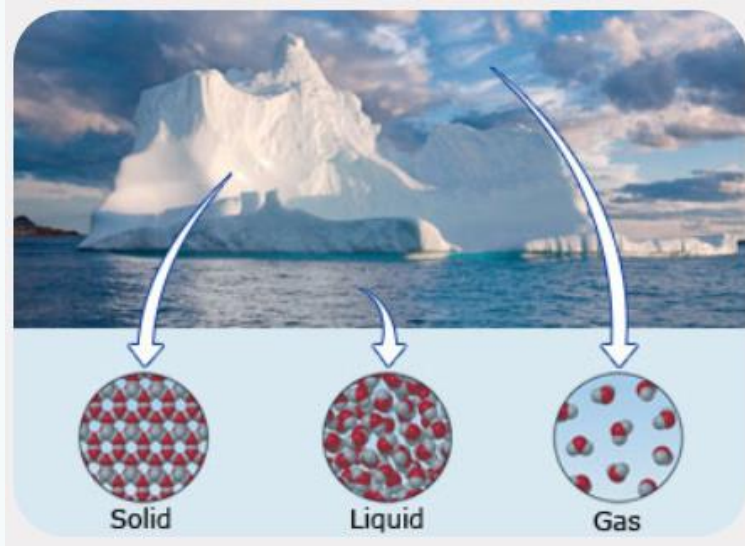
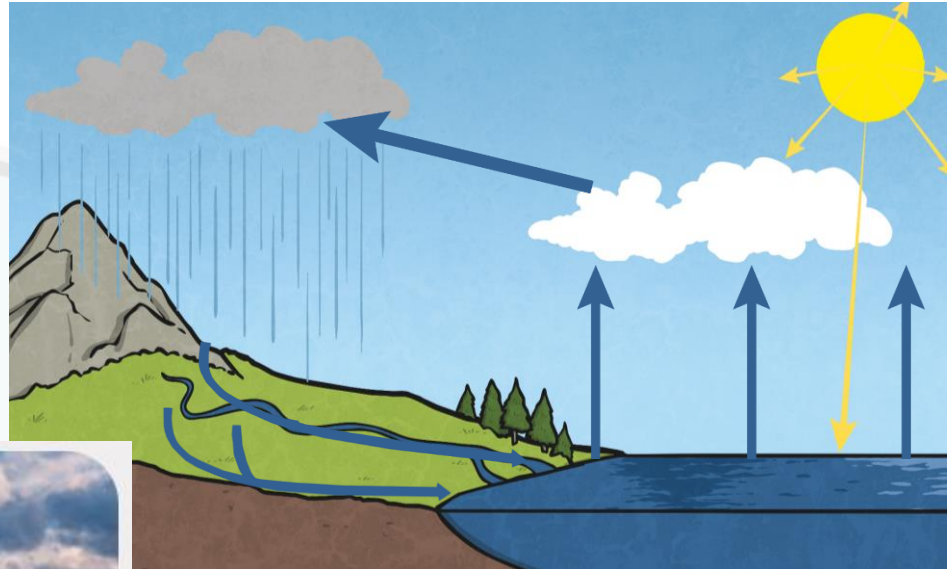
- I can describe the different stages of the water cycle.
- I can explain the role of evaporation and condensation in the water cycle.

States of matter and the water cycle.



We have learnt that water can exist in 3 states: solid, liquid and gas

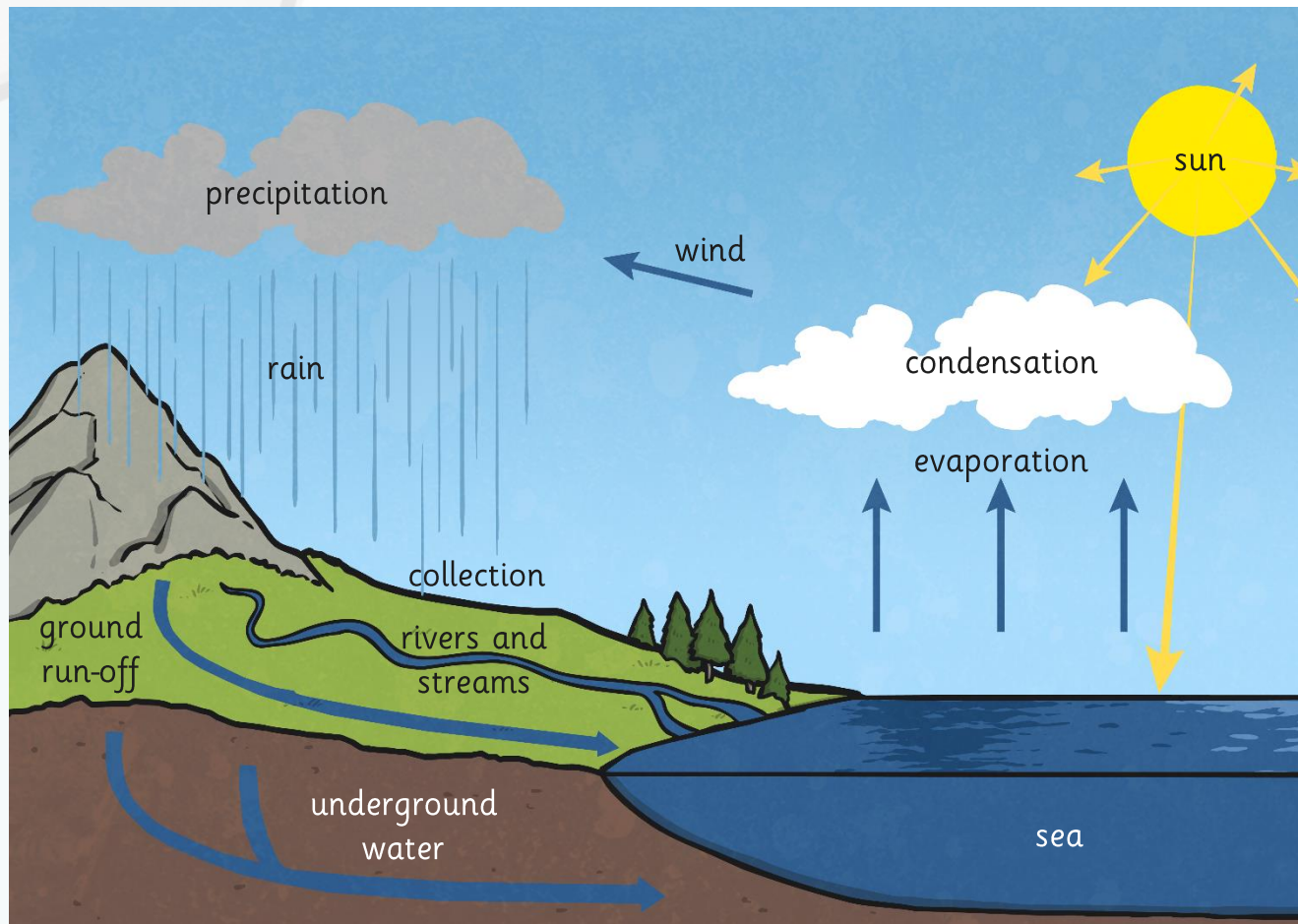
Today we are going to learn about how the change in states water plays a role in the water cycle.



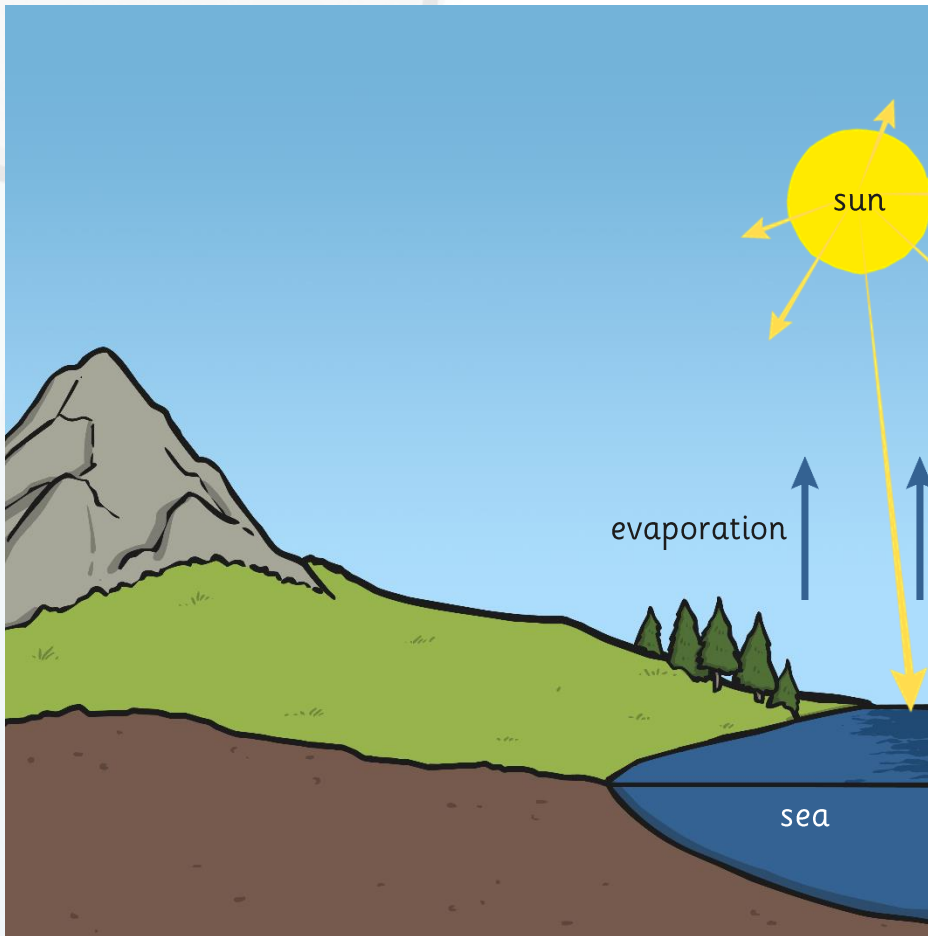
What Is the Water Cycle?

<https://www.bbc.co.uk/bitesize/topics/zk-gg87h/articles/z3wpp39>

The Stages of the Water Cycle



The Stages of the Water Cycle



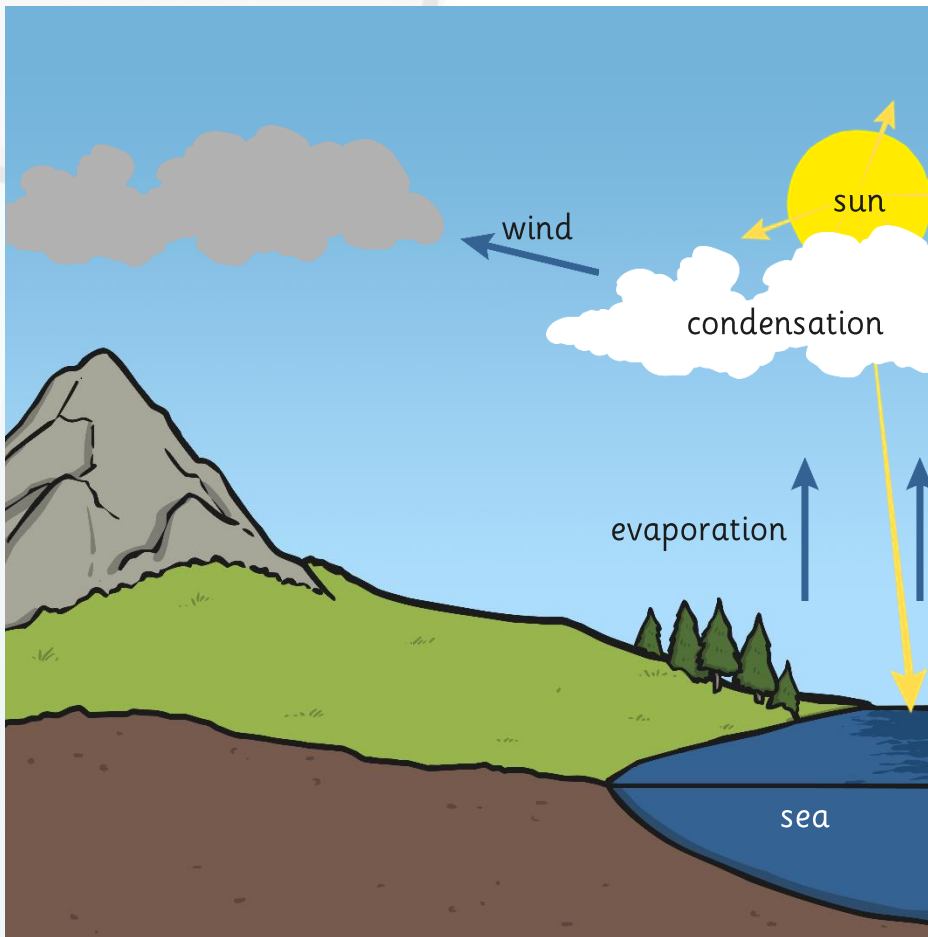
Evaporation

Heat from the Sun causes water to evaporate from seas, lakes, rivers and streams. Water also evaporates from puddles and ponds.

This evaporation happens even on cloudy or cold days.

The liquid water turns into water vapour when it has evaporated.

The Stages of the Water Cycle



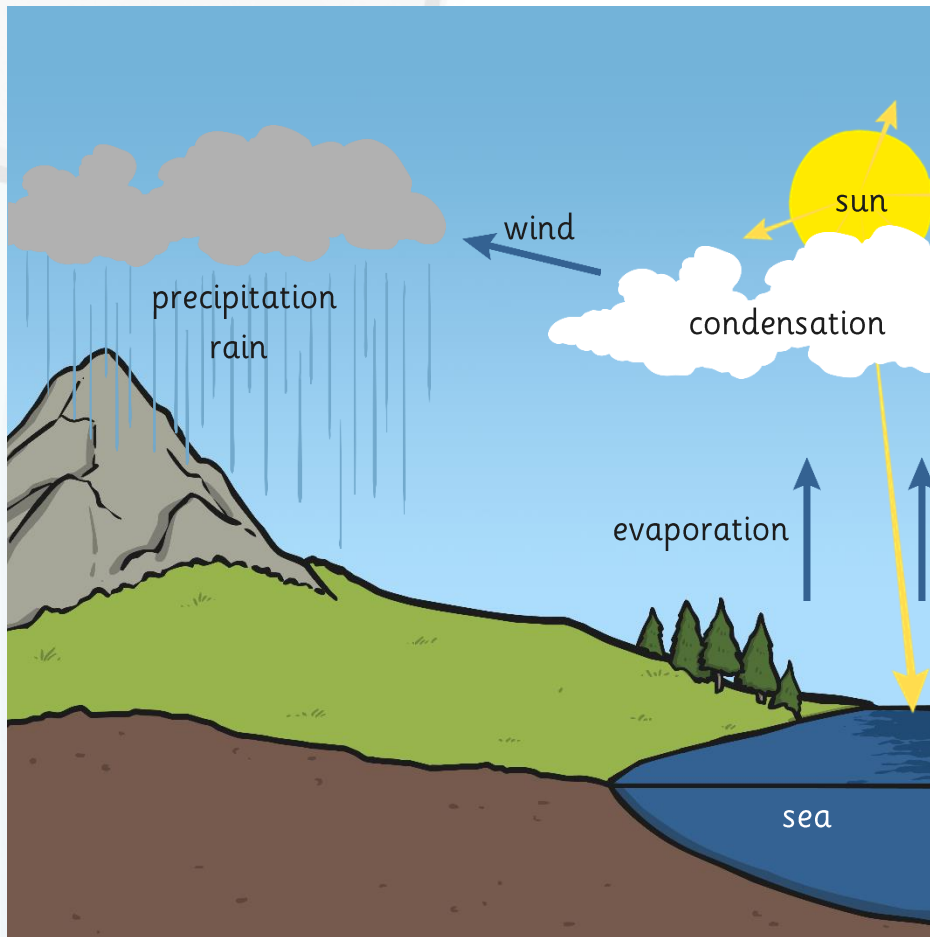
Condensation

The water vapour in the air rises, and as it does so, it cools down.

Eventually, it cools enough for the water vapour to condense and form small droplets of water.

The droplets of water clump together to form clouds.

The Stages of the Water Cycle



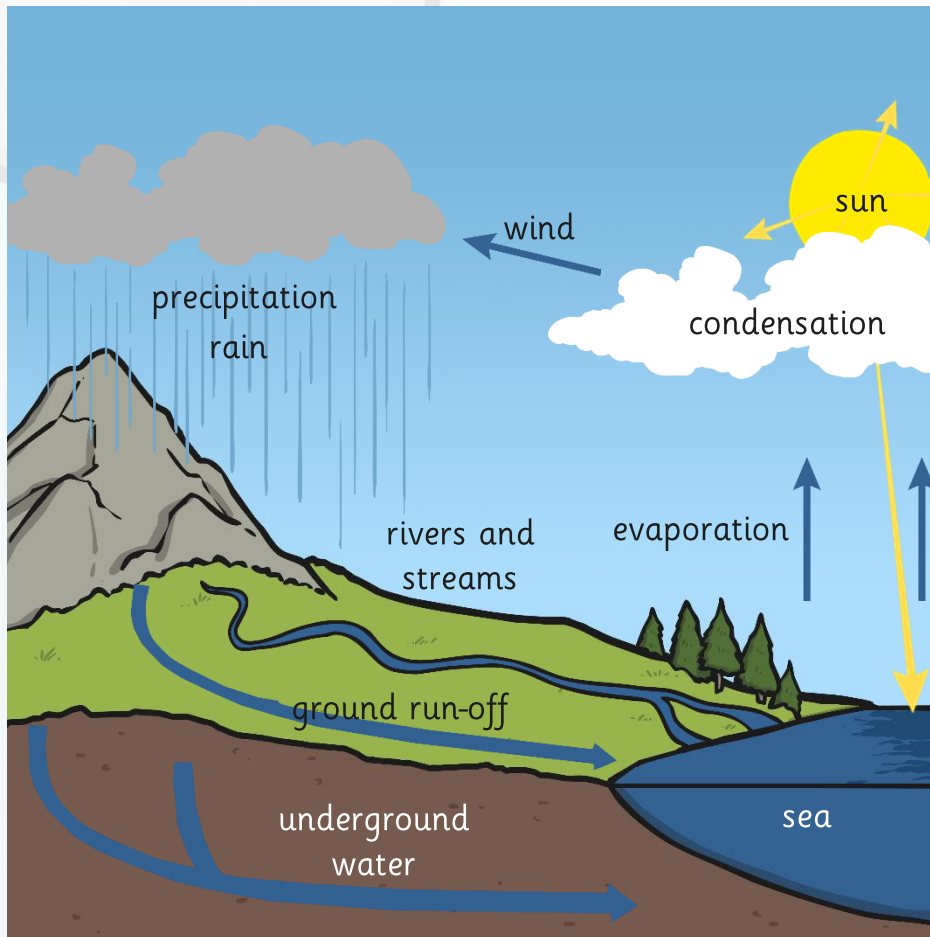
Precipitation

As more water vapour condenses, more water droplets are formed in the clouds.

Eventually, the water droplets are large enough and heavy enough to fall back to the surface of the Earth.

These droplets of water fall from the clouds in the form of rain, sleet, hail or snow.

The Stages of the Water Cycle



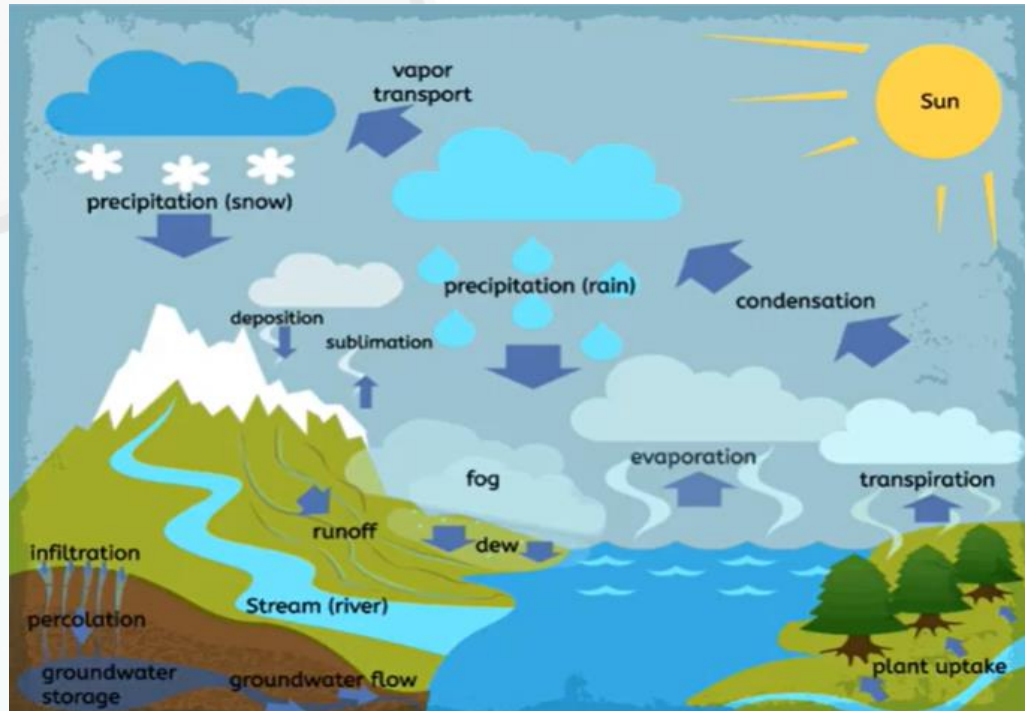
Collection

When water falls back to Earth as precipitation, the water may fall on oceans, lakes, rivers or on the ground.

Water that falls on the ground is either absorbed into the soil, and is used as drinking water for animals and plants, or it runs over the ground and collects in the oceans, lakes and rivers.

This water is then evaporated and the cycle starts all over again!

The Stages of the Water Cycle



<https://www.youtube.com/watch?v=y5gFI3pMvoI>

This video reminds us of the importance of water for all living things

Listen out for the key vocabulary relating to changes in states of matter:

Evaporation

Condensation

Gas

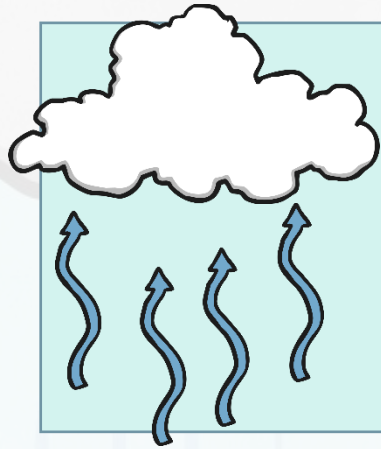
Liquid



<https://www.youtube.com/watch?v=msVNYOV777A>

This clip explains the water cycle again and adds some extra details.

Sort the Stages



Rearrange the letters of each word below to make the name of a stage of the water cycle.

Can you put the stages in order?

If it is a cycle – does it matter where we start?



1

condensation

2

collection

3

precipitation

4

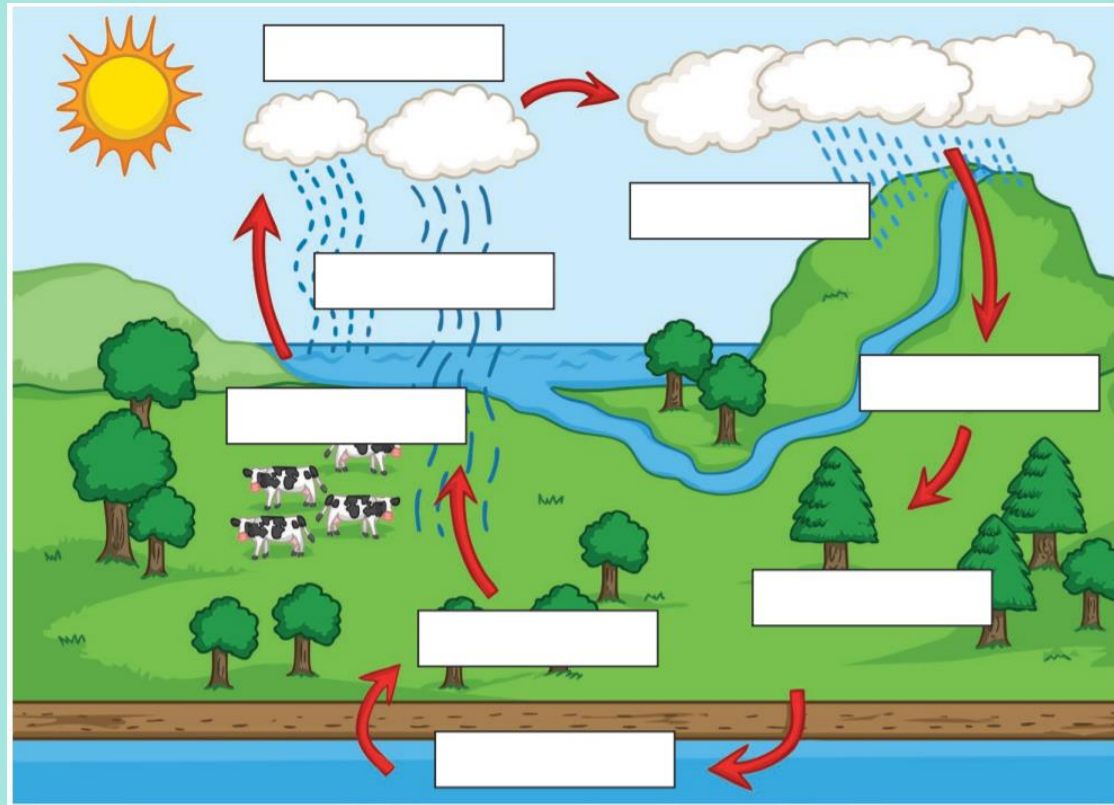
evaporation

The Water Cycle

Complete the water cycle diagram either by printing the sheet or better still drawing your own.

Write a paragraph explaining each stage of the water cycle.

Re-watch the videos to help you or there is an information sheet to read.

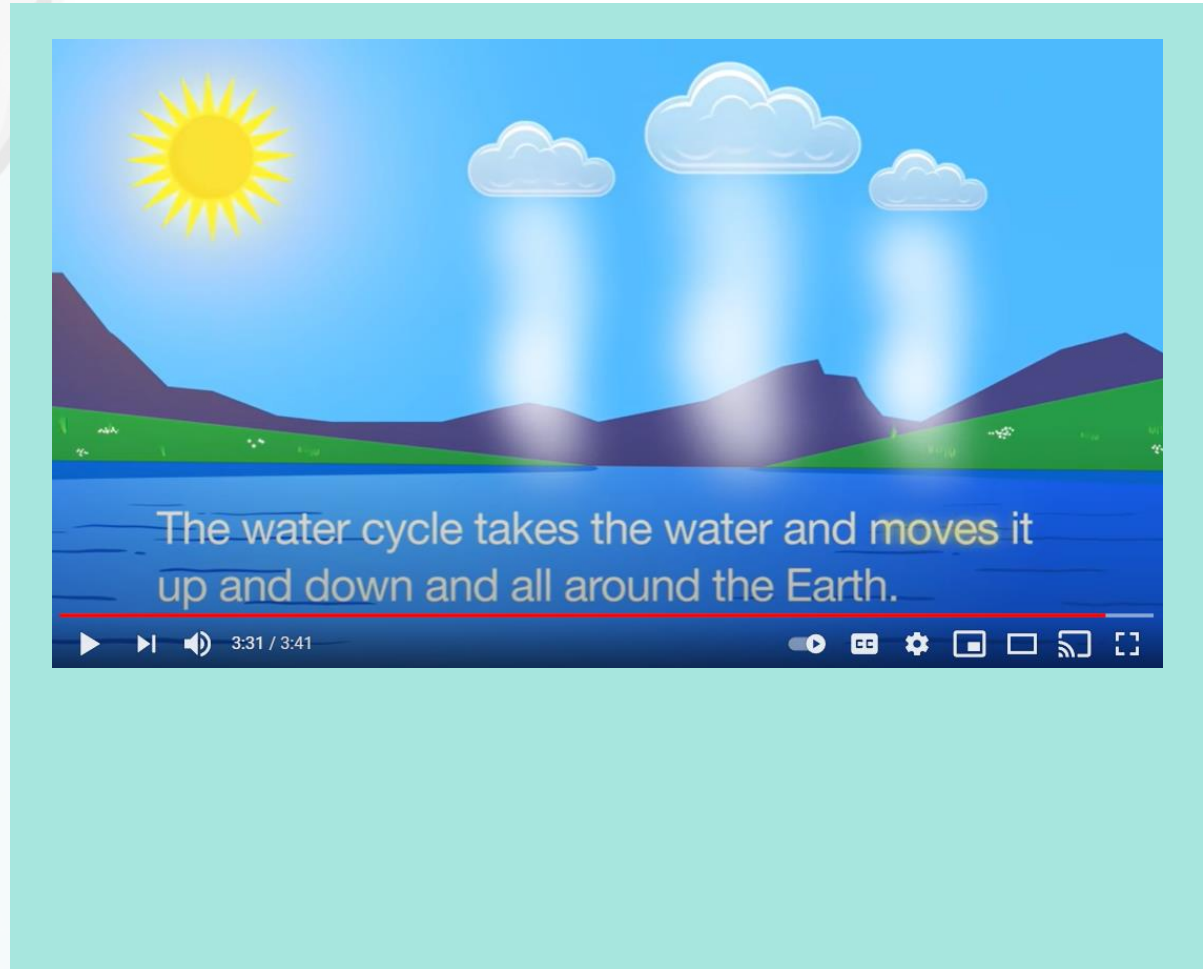


The Water Cycle



<https://www.youtube.com/watch?v=TWb4KlM2vts>

Listen to the catchy tune to help you remember the processes involved in the water cycle!

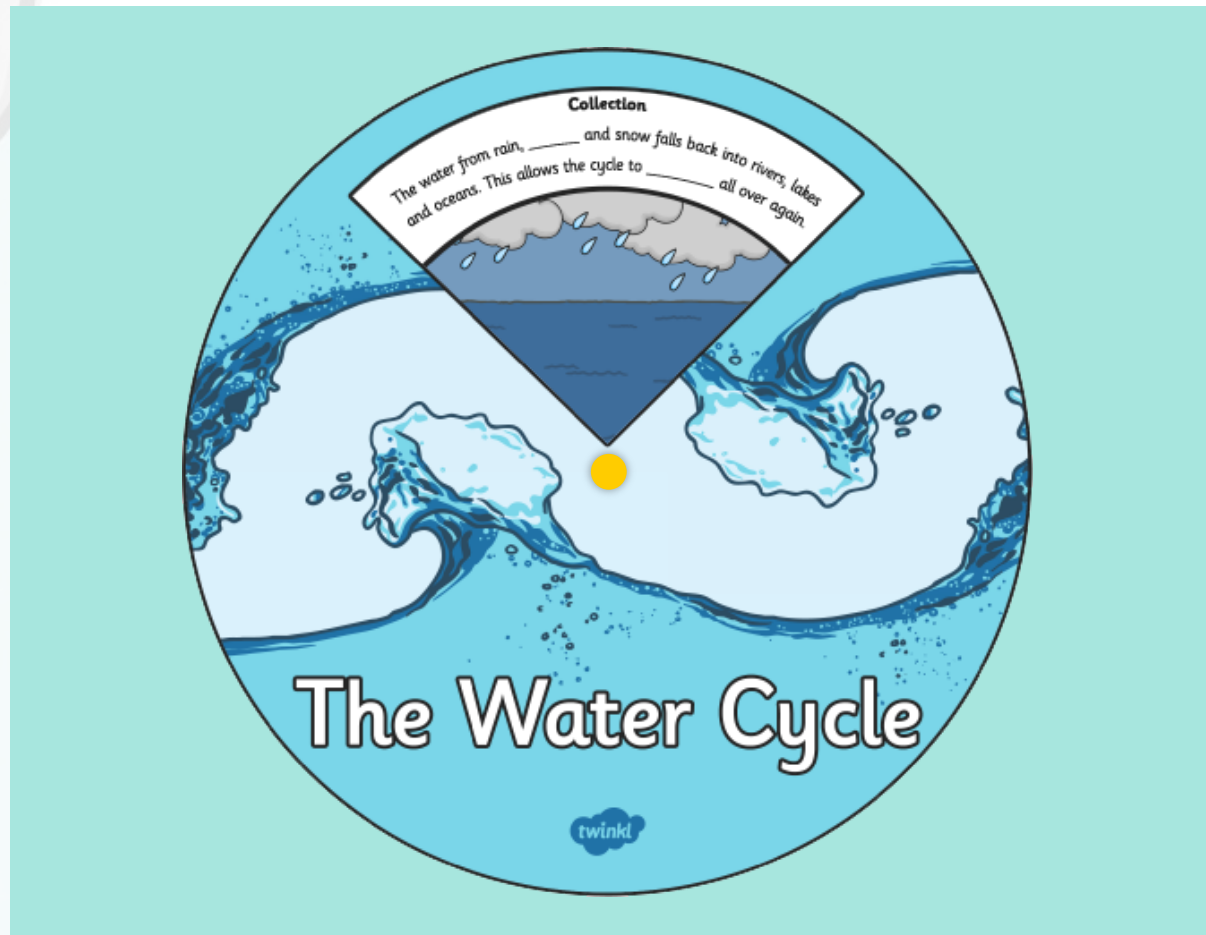


Water Wheel

Can you remember the stages of the water cycle?

Use your knowledge to create this interactive Water Wheel.

If you can't print the water wheel you could draw it.



Mini Water Worlds


You could have a go at making your own mini water world to watch the water cycle in action!

Follow the instructions on your Mini Water Worlds Activity Sheet.


If you don't have any seeds, the cycle will still work with just soil in a cup, watered and covered with cling film. You could also adapt it by using a house plant.

Mini Water World


Follow these instructions to make your own Mini Water World!




Place a layer of compost in a clear plastic cup.



Sprinkle some cress seeds onto the compost.




Pour on enough water to make the compost damp, but not soaking.




Stretch cling film over the cup to form a lid.

Over the next few days, watch your Mini Water World. You should be able to see the water cycle in action!

The water from the compost will evaporate as water vapour. When it rises, it will hit the cooler cling film and condense, forming water droplets on the cling film. As these droplets grow bigger, they will get heavier, and eventually fall from the cling film back onto the compost. The cycle will then start again!





twinkl planit

Science Year 4 | States of Matter | The Water Cycle | Lesson 5