

# The Water Cycle

## Prior Knowledge:

In Year 3 you learnt about the Lake District. In this unit you will look at this area again and make a comparison with another area in the UK. Later in Year 4, we will use this knowledge when we learn about rivers. In science, we will also learn more about evaporation and condensation in the water cycle when looking at changes of state.

## Books, texts, primary and secondary sources you may use:

Water and Rivers by Liz Miles  
Wonderful water by Helen Lanz  
The Water's Journey by Eleonore Schmid

## Suggested family experience:

Family walks around Clent, Uffmore Woods, Leasowes and Haden Hill Park are great opportunities to look at streams and discuss where the water comes from and where it goes.

## National Curriculum:

- Describe and understand key aspects of: physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle.
- Use fieldwork to observe, measure, record and present the human and physical features in a the local area using a range of methods including sketch maps, plans and graphs and digital technologies.

## Fieldwork skills:

We will be looking back at our study of the Lake District in Year 3 and making a comparison between one of the rainiest place in the UK (Seathwaite) and one of the driest (Cambridge). We will also use rain collectors to measure precipitation over a period of time.

## Vocabulary you will use:

Word	Definition
atmosphere	The gases that surround a planet
cirrus	Thin, wispy clouds
condensation	The process of vapour cooling and turning into liquid form
continuous	Happening all of the time without any breaks
cumulonimbus	Thunder clouds
cumulous	Small puffy clouds
evaporation	The process of water turning into vapour
percolation	The process of water soaking into the ground
precipitation	Rain, snow, sleet or hail falling from clouds
stratus	Featureless rain clouds in layers

## Quick Summary



The Water Cycle is a physical process that happens on the surface of the Earth and in the Earth's atmosphere. It is a continuous process that is made up of different stages.

A cloud is a large group of tiny water droplets that we can see in the air. They are formed when water on earth evaporates into the sky and condenses high up in the cooler air. Rain, snow, sleet and hail falling from clouds is called precipitation. The main cloud types include stratus, cumulus and cirrus.

Click [here](#) or scan the QR Code for an explanation of the water cycle.



Questions we'll ask you throughout the unit to check your knowledge and understanding

Can you name and describe the steps in the water cycle?

Can you say how clouds are formed and how they are part of the water cycle?

The Lake District is rainier than the east of England. Can you explain why?

Can you explain the effect that extreme weather has on some places?

# The Water Cycle



Physical processes

Water on Earth is **constantly moving**. It is recycled over and over again.

## 1. Water evaporates into the air

The sun **heats up** water on land, in rivers, lakes and seas and turns it into water vapour. The water vapour rises into the air.

## 2. Water vapour condenses into clouds

Water vapour in the air **cools** down and changes back into tiny drops of liquid water, forming clouds.

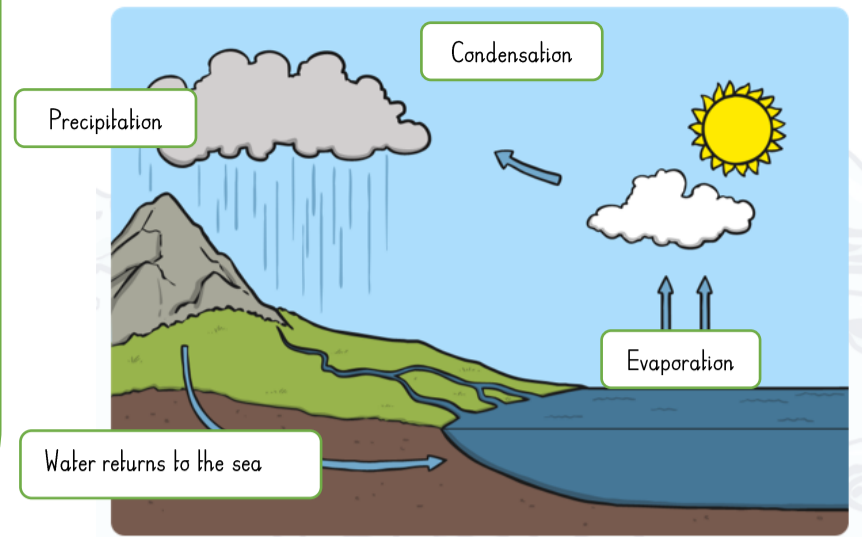
## 3. Water falls as precipitation

The clouds get **heavy** and water falls back to the ground in the form of rain or snow.

## 4. Water returns to the sea

Rain water runs over the land and collects in lakes or rivers, which take it **back to the sea**. The cycle starts all over again.

# The Water Cycle



# Types of Clouds



Physical features



A cloud is a large group of tiny water droplets that we can see in the air.

Different types of cloud have different types weather associated with them.

Clouds are formed when water on Earth evaporates into the sky and condenses high up in the cooler air. Rain, snow, sleet and hail falling from clouds is called precipitation. Only lower clouds give precipitation; the cumulonimbus cloud creates thunder and lightning storms.

# UK Place Knowledge



Location



The map shows the main bodies of water and mountain ranges around the UK. We will take a closer look.

In this lesson we will be familiarising ourselves with the geography of the United Kingdom. Knowledge of where some of the UK's mountain ranges are will help us when we try to spot patterns in weather systems later in this unit.



The Lake District, England

# Precipitation



Physical features

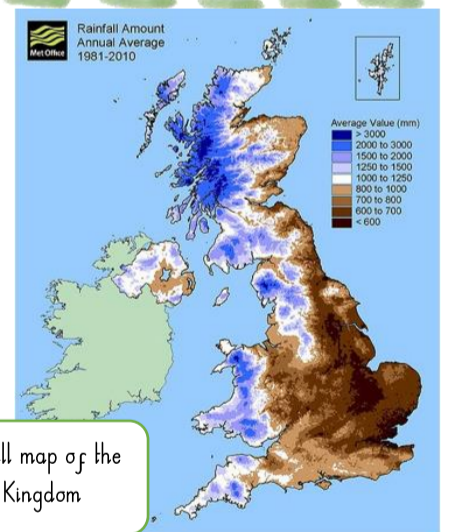


Location



Hill walkers in the Lake District. This is one of the rainiest places in the UK, so ramblers need to be well dressed in waterproof clothing and sturdy boots.

Some places have higher rainfall than others. In this lesson we will compare Seathwaite in the Lake District with one in Cambridge. Seathwaite is the rainiest place in the UK. Whilst Cambridge has the lowest precipitation. We will discover why mountainous places in the west have higher rainfall than places in the east.



Rainfall map of the United Kingdom

We will carry out a fieldwork study into precipitation (rainfall in mm) in Halesowen over a week by leaving a rain gauge outside in the same place each day.

We will measure, record and present in a graph our findings applying our knowledge of statistics.



We will use our data to compare the precipitation to other areas of world, including Seathwaite and Cambridge.

Hurricane in Haiti. To see a video link, scan the QR code or click [here](#).



What happens when there is just too much rain? Some parts of the UK regularly flood. In other areas of the world hurricanes and monsoons are extreme forms of precipitation. We will also explore how these extreme forms of precipitation affect the people who live in these places.

