

# Lake District weather and climate



## Geography

Unit: UK region: why is the Lake District a national park?

# Outcome

I can research and explain some of the impacts of weather and climate on the Lake District.



# Keywords

## **climate**

Climate is the long term pattern of weather, usually taken over more than 30 years.

## **Gulf Stream**

The Gulf Stream is a strong, warm ocean current that travels across the Atlantic Ocean towards western Europe.

## **latitude**

Lines of latitude are imaginary lines on Earth showing position north or south of the Equator, measured in degrees.

## **wind farm**

A wind farm is an area in the countryside where a group of wind turbines has been placed to generate electricity.

## **hydro-electric**

Hydroelectric power generates electricity by using water.



# Lesson outline

## Lake District weather and climate



What is the climate of the Lake District?



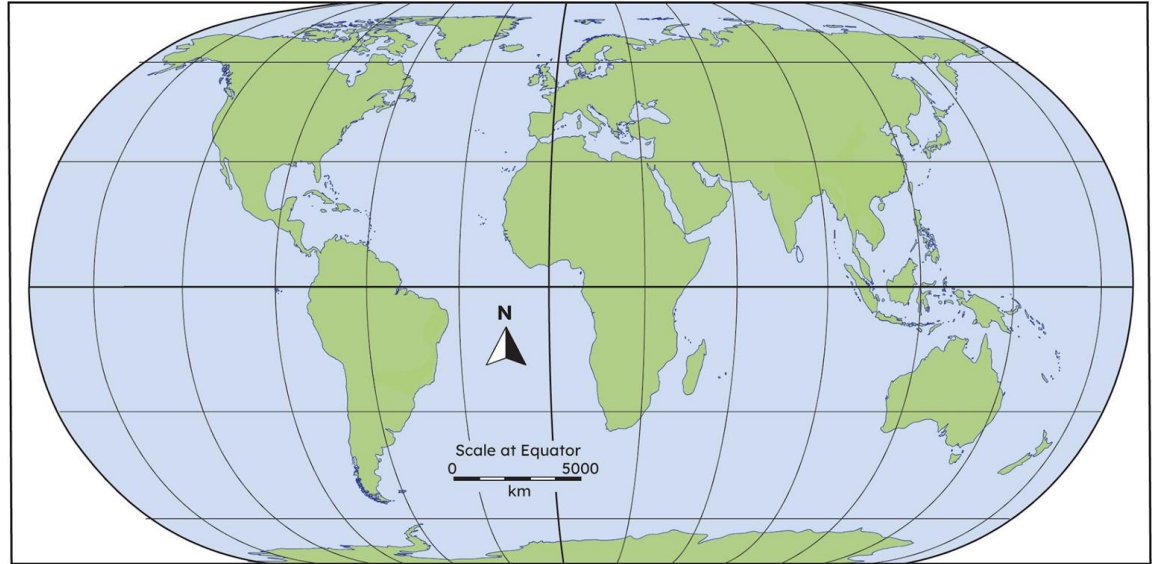
What is the impact of this weather and climate?



# What is the climate of the Lake District?

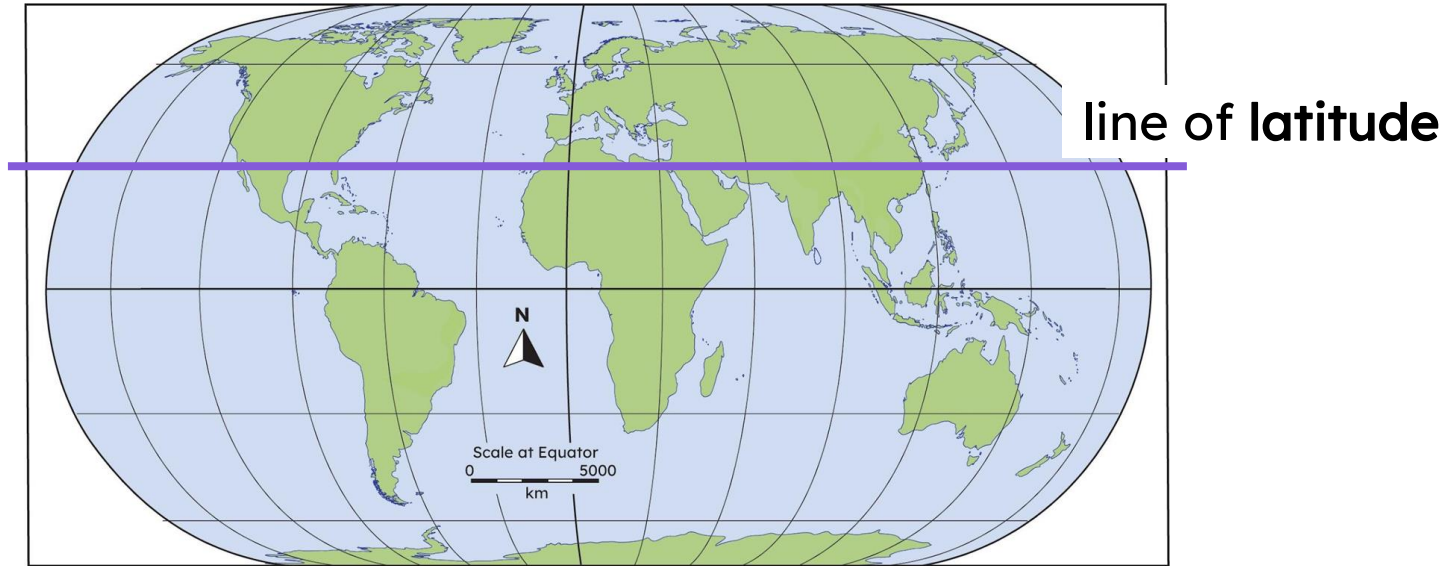
## Temperature

The average temperature of a place is linked to its location on the globe. Places close to the Equator are usually warmer and those further north or south are cooler.



# What is the climate of the Lake District?

Therefore, we might expect places on the same line of **latitude** to have similar temperatures.



# What is the climate of the Lake District?

The Lake District lies between  $54^{\circ}$  and  $55^{\circ}$  north of the Equator. However, it has milder winters and cooler summers than would normally be expected at this **latitude**.



# What is the climate of the Lake District?



Check

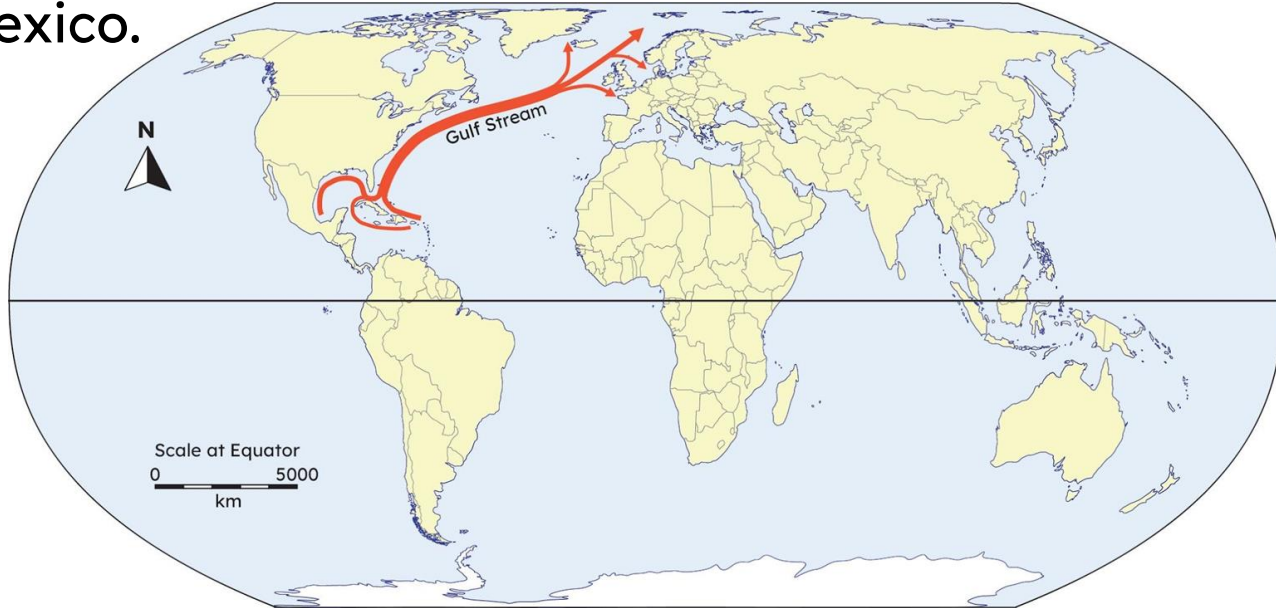
The **climate** in the Lake District has:

- a** milder winters and cooler summers ✓
- b** warmer summers and colder winters
- c** wetter summers and drier winters



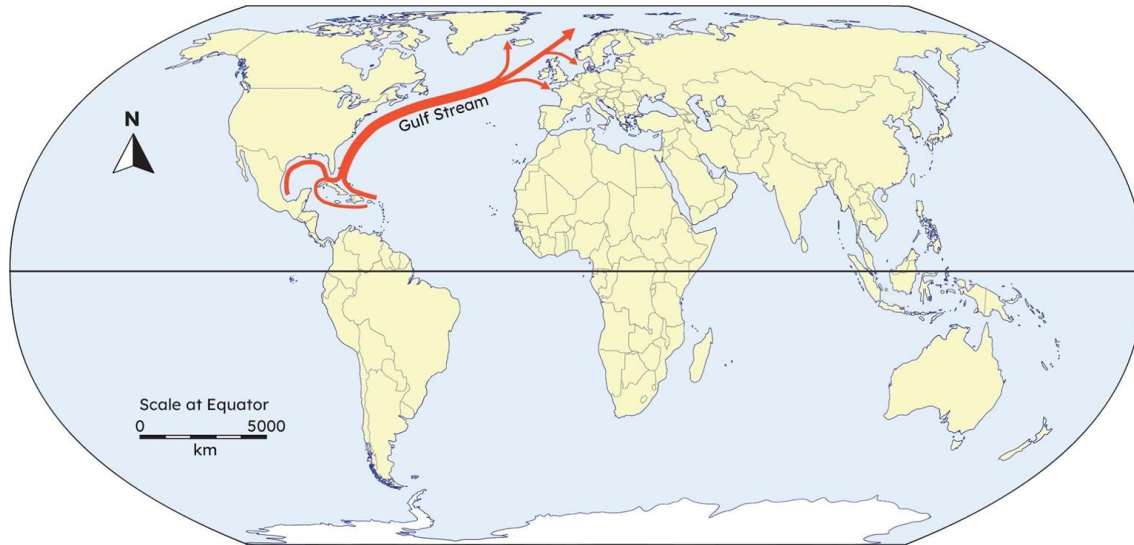
# What is the climate of the Lake District?

The climate of the Lake District is influenced by the sea and particularly the **Gulf Stream**. This ocean current flows northwards across the Atlantic Ocean, bringing warm water from the Gulf of Mexico.



# What is the climate of the Lake District?

In winter, the sea insulates the UK. It cools more slowly than the land. This helps to keep the UK warmer than most other countries of the same **latitude**. This helps create milder winter temperatures in the Lake District.



# What is the climate of the Lake District?



Check

What is the name of the ocean current which helps to keep the UK warmer in winter than countries at similar latitudes?

*The Gulf Stream is an ocean current which results in milder winter temperatures for the Lake District and the rest of the UK.*



# What is the climate of the Lake District?

Altitude is the height of an object or point in relation to sea level. The temperature drops as altitude increases, meaning that the higher you get, the cooler it becomes.

This is Helvellyn, with a snowy top, though the land below it has no snow.

↑  
Temperature decreases



# What is the climate of the Lake District?



Check

What happens to temperature as altitude increases?

- a** temperatures increase - it gets warmer
- b** they stay the same
- c** temperatures decrease - it gets cooler ✓



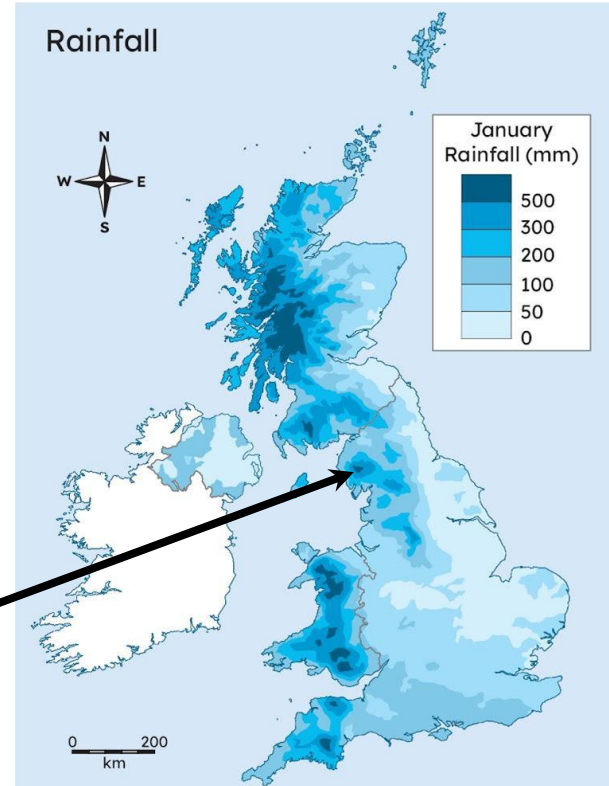
# What is the climate of the Lake District?

## Rainfall

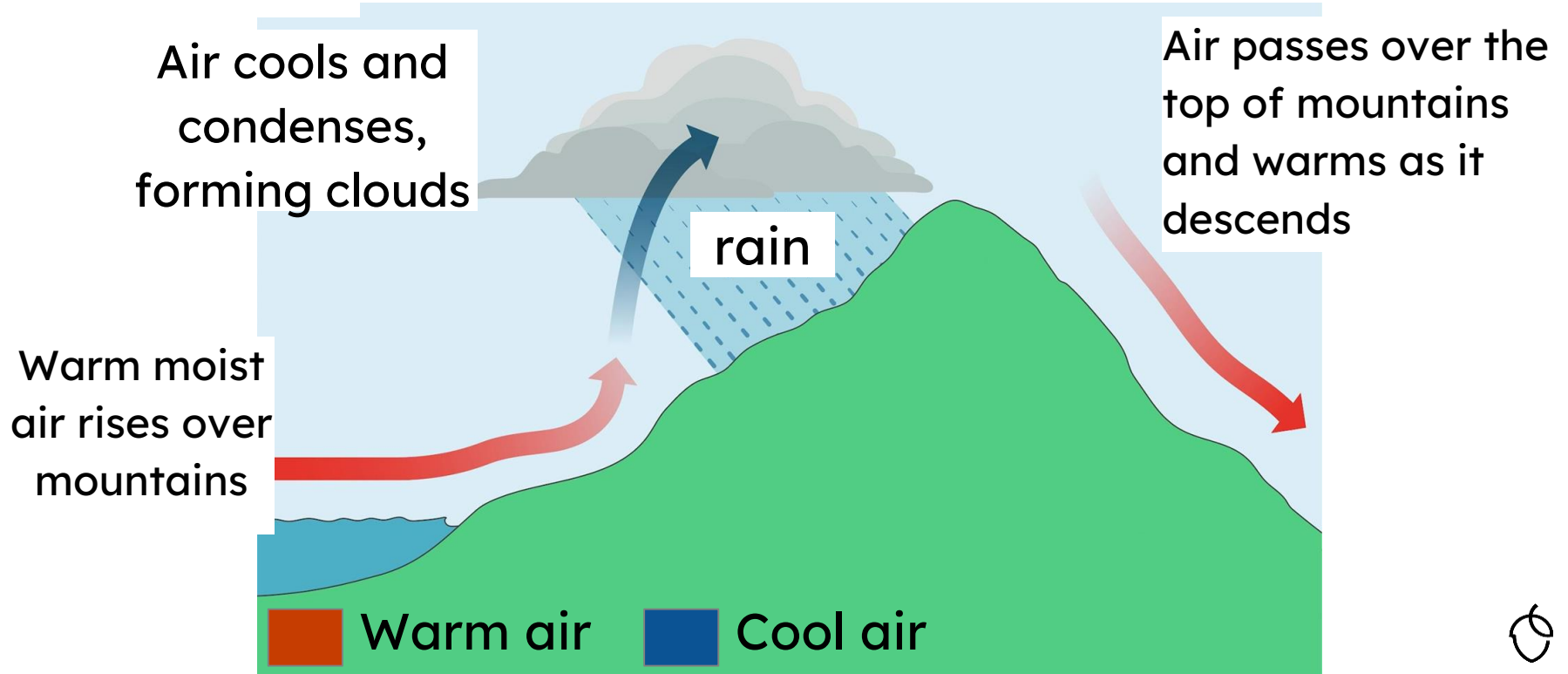
The wettest parts of the UK are in the west, especially over mountainous regions like the Lake District.

The **climate** in the West is especially influenced by the Atlantic Ocean. Westerly winds bring wet ocean air over the land.

Lake District



## Relief rainfall

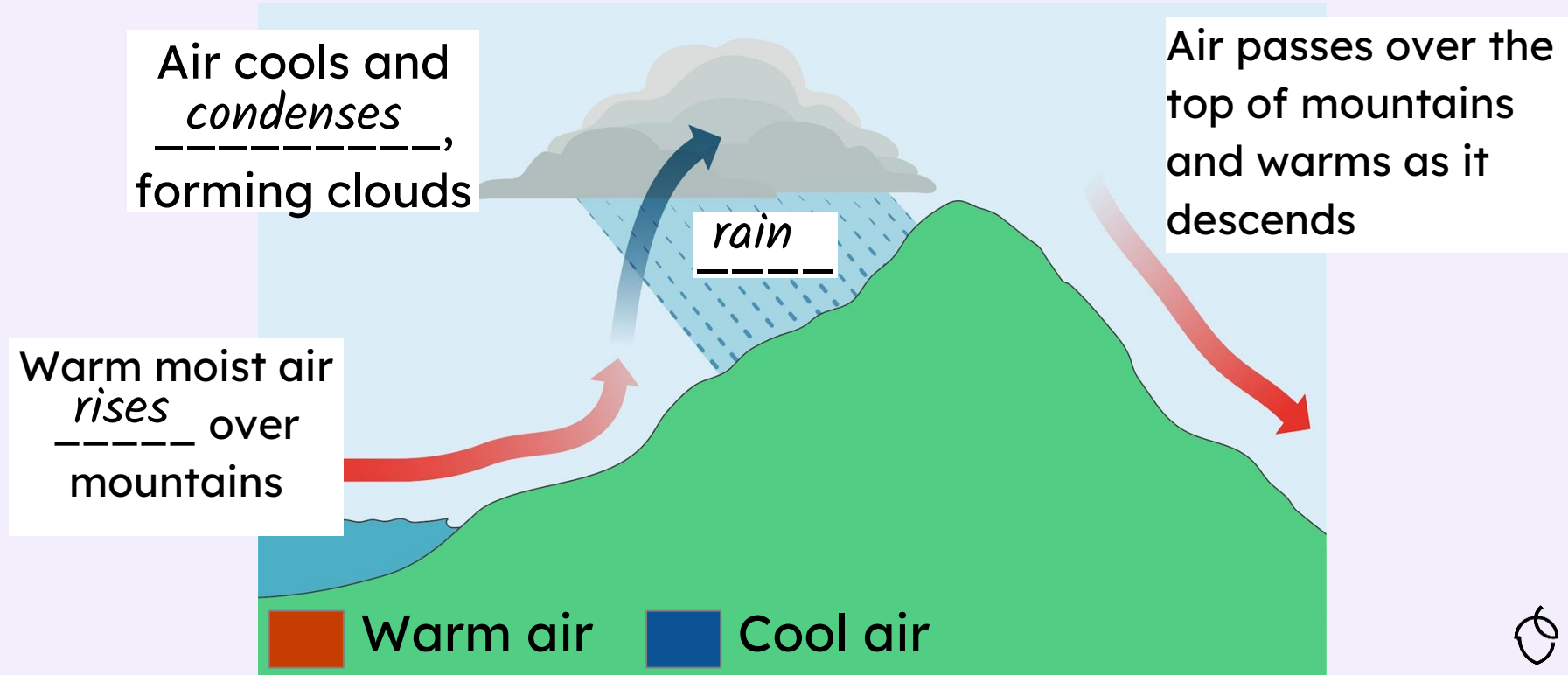


# What is the climate of the Lake District?



Check

Which words are missing from the relief rainfall diagram?



## Task A What is the climate of the Lake District?



Practice

Complete the passage about the Lake District's climate.

The Lake District has \_\_\_\_\_ winters and \_\_\_\_\_ summers than would normally be expected at this **latitude**. The climate of the Lake District is influenced by the sea and particularly the \_\_\_\_\_. In winter, the sea insulates the UK as it cools more slowly than the land. This helps to keep the UK warmer than most other countries of the same \_\_\_\_\_.

The temperature drops as altitude \_\_\_\_\_, meaning that the tops of the mountains are colder than the valleys.

The Lake District is one of the wettest places in the UK. High rainfall is a result of \_\_\_\_\_ where damp ocean air meets the mountains.

increases cooler **Gulf Stream** relief rainfall milder latitude



## Task A What is the climate of the Lake District?



Feedback

Complete the passage about climate in the Lake District.

The Lake District has \_\_\_\_\_ *milder* \_\_\_\_\_ winters and \_\_\_\_\_ *cooler* \_\_\_\_\_ summers than would normally be expected at this *latitude*. The climate of the Lake District is influenced by the sea and particularly the *Gulf Stream*. In winter, the sea insulates the UK as it cools more slowly than the land and this helps to keep the UK warmer than most other countries of the same *latitude*.

The temperature drops as altitude *increases*, meaning that the tops of the mountains are colder than the valleys.

The Lake District is one of the wettest places in the UK. High rainfall is a result of *relief rainfall* where damp ocean air meets the mountains.



# Lesson outline

## Lake District weather and climate



What is the climate of the Lake District?



What is the impact of this weather and climate?



# What is the impact of this weather and climate?

The climate of the Lake District (wet, cooler in summer and mild in winter) has an impact on many aspects of life there. Sophia is a tourist:

I wish the weather in the Lake District was different because in summer it's cooler and it rains a lot!



# What is the impact of this weather and climate?

Climate can have both a positive and negative impact. Two examples of how it impacts life in the Lake District are:

- farming
- renewable energy production

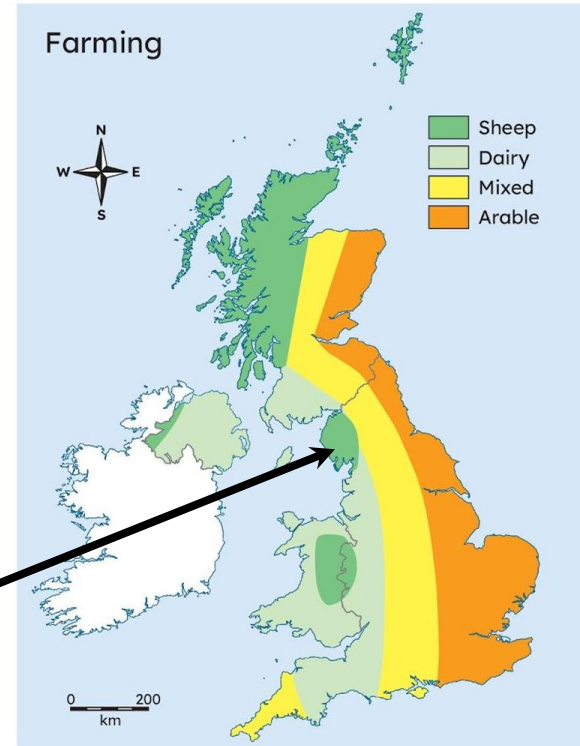


# What is the impact of this weather and climate?

The climate of the Lake District suits hill farming with hardy sheep.

It is hard to grow crops on steep slopes with poor soil and a cool climate, so the land in the Lake District is not suited to arable crops.

Lake District



# What is the impact of this weather and climate?



Which farming type is best suited to the Lake District?

- a** hill sheep farming ✓
- b** dairy
- c** arable



# What is the impact of this weather and climate?

The combination of the landscape and the climate suits renewable energy schemes such as **hydro-electric** and **wind farms**.

This **hydro-electric** plant is at Stickle Ghyll in the Lake District and uses the power of the water flowing downhill to create electricity.



# What is the impact of this weather and climate?

**Wind farms** use the power of the winds to generate renewable electricity.

The windy climate of the Lake District suit this type of energy scheme.



## What is the impact of this weather and climate?



Why can the landscape and climate support schemes such as hydro-electric and wind farms?

*Because the Lake District has high rainfall and lots of rivers and streams it can generate hydro-electric renewable energy.*

*Higher areas receive more wind which allow wind turbines to generate electricity.*



## Task B What is the impact of this weather and climate?



Can you explain how the climate has an impact on farming and energy production in the Lake District?

Use these sentence starters to help you:

The climate of the Lake District suits \_\_\_\_\_ farming because...

The climate of the Lake District suits \_\_\_\_\_ energy because...



## Task B What is the impact of this weather and climate?



Feedback

Can you explain how the climate has an impact on farming and energy production in the Lake District?

Use this sentence starter to help you:

*The climate of the Lake District suits hill sheep farming because of the mountainous land, cooler temperatures and wet climate.*

*The climate of the Lake District suits renewable energy schemes such as wind farms or hydro-electric because of the high rainfall and many rivers and streams.*



## Summary Lake District weather and climate

- Milder winters and cooler summers than would normally be expected at this **latitude**.
- The **climate** is influenced by the sea, particularly the **Gulf Stream**, with relief rainfall where damp ocean air meets the mountains.
- The **climate** suits hill farming with hardy sheep but short growing season not suited to arable crops.
- The temperature drops as altitude increases, so the tops of the mountains are colder than the valleys.
- The climate of the Lake District suits renewable energy schemes such as wind farms or **hydro-electric** because of the high rainfall and many rivers and streams.



© Oak National Academy 2024.

Produced in partnership with The Geographical Association.

Licensed on the [Open Government Licence v3.0](#), except where otherwise stated. See [Oak terms and conditions](#).

**OGL**

