

Locational knowledge and climate zones

Prior knowledge:

In KS1 you learnt about weather in different seasons of the year and you compared the UK climate with that in Gambia.

In KS2 you have used world maps, atlases and globes to identify the United Kingdom and its countries, as well as other countries and continents around the world.

National Curriculum links:

Locational knowledge

- identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night)

Human and physical geography

- describe and understand key aspects of physical geography, including climate zones.

Geographical skills:

- You will interpret information from a range of maps, globes and atlases.

Vocabulary you will use:

Word	Definition
climate	is the average measurements of temperature, wind, humidity, snow, and rain in a place over the course of years
climate zones	areas with distinct climates
Equator	an imaginary line around the middle of the Earth
fauna	scientific name for animal life
flora	scientific name for plant life
Greenwich (Prime) Meridian	the imaginary line that divides Earth into the Eastern and Western Hemisphere. It is the starting point of longitude
hemisphere	half of a sphere (or the Earth)
latitude	lines which run parallel to the Equator, showing how far North or South a place is
longitude	lines which run from the North to South poles, showing how far East or West a place is
meridians	imaginary lines which are used to measure distance in degrees east or west
poles	the locations at the North and South of the Earth where the axis runs through
Tropic of Cancer	an imaginary latitude line located above the equator that runs across the globe at about 23 degrees north
Tropic of Capricorn	an imaginary latitude line located below the equator that runs across the globe at about 23 degrees south
weather	the short-term conditions of the atmosphere which change regularly e.g. temperature, rainfall

Quick Summary

In this unit you will learn about lines of latitude and longitude and use these to describe the location of climate zones on the map. You will collect data about the weather in this location and learn about how weather is different to climate. You will learn about some of the characteristics of different climate zones.

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

What is the purpose of lines of latitude and longitude?

Why is the Greenwich Meridian so significant?

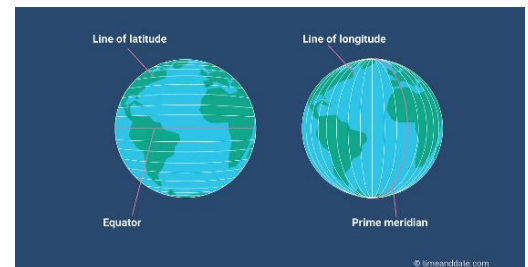
How is weather different to climate?

Summarise the location and characteristic features of the main climate zones.

Lesson 1: Longitude and latitude zones

What is latitude and longitude?

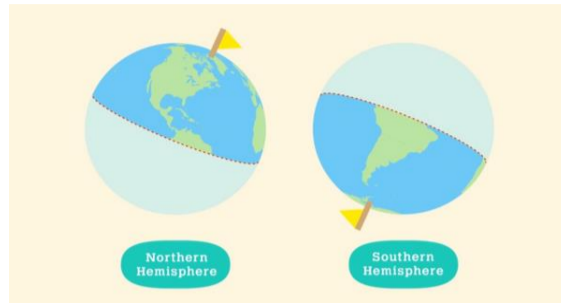
To help locate where a place is in the world, people use imaginary lines: To find out how far **north** or **south** a place is, lines of **latitude** are used. These lines run parallel to the Equator, which is at 0° latitude.



To find out how far **east** or **west** a place is, lines of **longitude** are used. These lines run from the top of the Earth to the bottom.

What is a hemisphere?

The **Equator** is an imaginary line around the middle of the Earth. Identify this on a map **and**



The **Tropic of Cancer** is a specific line of latitude north of the Equator. The **Tropic of Capricorn** is a specific line of latitude south of the equator.



Anything lying south of the Equator is in the **Southern Hemisphere**. Anything lying north of the Equator is in the **Northern Hemisphere**.

The **North Pole** is the most northern point on Earth, at the centre of the Arctic Circle.

The **South Pole** is the most southern point on Earth, at the centre of the Antarctic Circle.

Use a world map **and** a globe to identify all these features.

Lesson 2: Time Zones

The line labelled 0° longitude is called the **Prime Meridian** or the **Greenwich Meridian** and runs through London. Anything lying east of the Greenwich Meridian is in the **Eastern Hemisphere** and is labelled °E. Anything lying west of the Greenwich Meridian is in the **Western Hemisphere** and is labelled °W. The North Pole is 90° N and the South Pole is 90° S.

What are time zones?

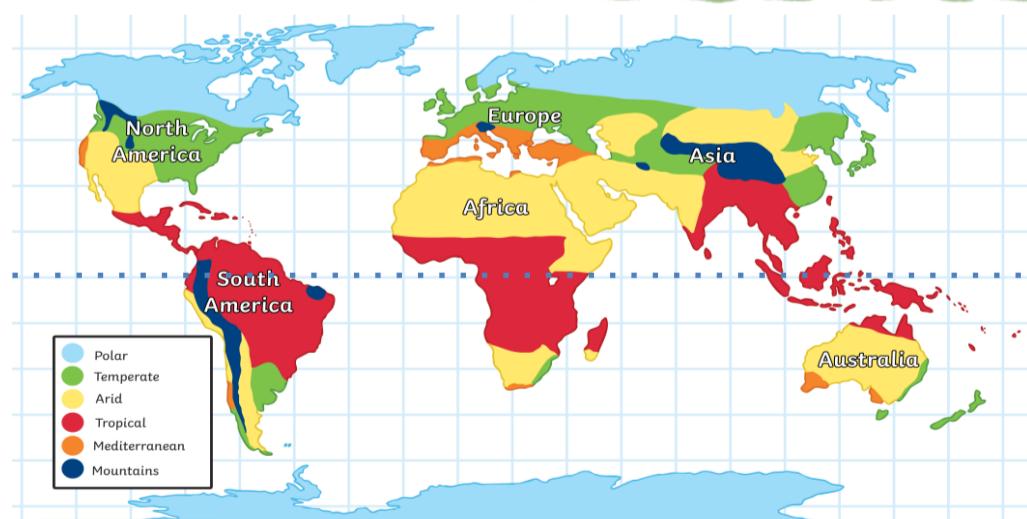
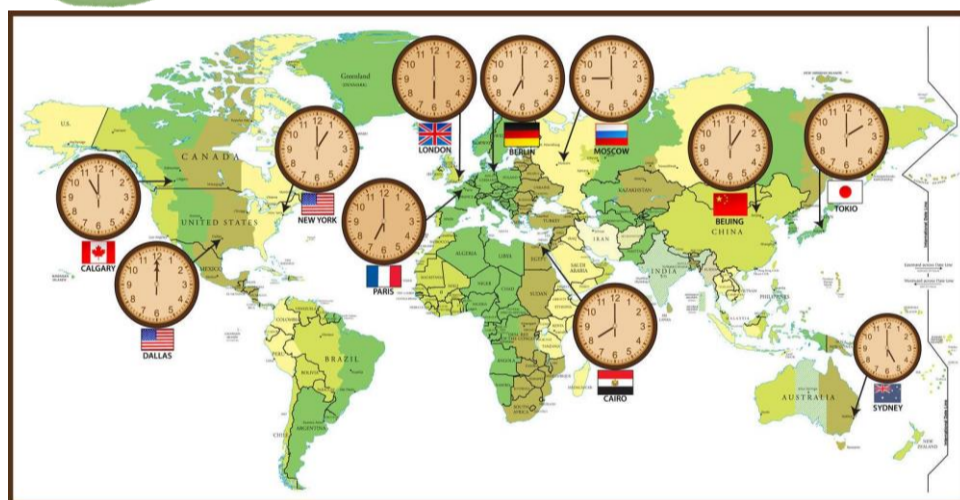
Time zones are divided by imaginary lines called **meridians**, which run from the North Pole to the South Pole.

There is an imaginary line running through the UK called the **Prime Meridian**. It runs through a place in London called **Greenwich**.

The Prime Meridian splits the world into eastern and western **hemispheres**.

Time in countries to the east of the Prime Meridian is always in front of that in the UK.

Time in countries to the west of the Prime Meridian is always behind that of the UK.



Lesson 3: Climate Zones

Weather is the day-to-day temperature and rainfall conditions, which change frequently in a location. For instance: wet or dry, hot or cold, windy or calm.

Where there are similar average weather patterns over time, this is known as a **climate** and it is grouped into zones.

Climate is influenced by lots of factors such as:

- Distance from the Equator
- Distance from the sea.
- Elevation (height) of the land

Different climate zones will have different climatic conditions, and this will affect what flora (plants) and fauna (animals) will be found in that region.

Identify climate zones on both world map and globe.

At the top of the Earth there is an arctic climate and some of the coldest temperatures in the world are found here. Temperate climates are found a bit further south, and as you approach the equator you find Mediterranean and desert climates. Some of the hottest places on Earth are found here, and few people live in this climate. At the equator there is a tropical climate, and travelling south of the equator it gets cooler again before reaching the Antarctic.

Biome	Description	Example
Polar	Very cold and dry all year round	Antarctica
Temperate	Cold winters and mild summers	UK
Arid	Dry and hot all year round	Sahara Desert
Tropical	Hot and wet all year round	Brazil
Mediterranean	Dry, hot summers and mild winters	Spain
Mountainous	Very cold, sometimes wet, all year	Himalayas