THE UNITED KINGDOM KNOWLEDGE ORGANISER

Map and Overview

-The United Kingdom of Great Britain and Northern Ireland, also known as the UK, is a country located off the north-eastern coast of mainland Europe.

-It contains the constituent countries of England, Scotland, Wales and Northern Ireland, in addition to other territories and dependencies.

-The capital city of England is London, Scotland is Edinburgh, Wales is Cardiff and Northern Ireland is Belfast. London is the capital of the UK.

-The land area of the UK is around 242,500km² and the population is around 66 million. It is in the continent of Europe.

Places in the United Kingdom

Most Populous UK counties (people)

1. Greater London – 8.8 million
2. West Midlands – 2.9 million
3. Greater Manchester – 2.8 million
4. West Yorkshire – 2.3 million
5. Essex – 1.8 million

The UK is current split into 100 geographic counties – 48 in England, 33 in Scotland, 13 in Wales and 6 in Northern Ireland.

Most populous UK cities (people)

1. London – 9.75 million
2. Birmingham – 2.5 million
3. Manchester – 1.9 million
4. Glasgow – 1.1 million
5. Newcastle – 837,500

London

London is the capital and largest city of England and the United Kingdom. Founded by the Romans, London stands on the south-east coast of England on the River Thames. London is deemed to be an important global city, and is an important world financial/ political centre. Famous landmarks include Big Ben and Buckingham Palace.

Edinburgh

Edinburgh is the capital city of Scotland, and is the seat of the Scottish Government and Parliament. The city is a well-known centre of education, law, medicine and philosophy, and is the second-biggest financial centre (after London). It is widely considered to be an extremely beautiful city, and is amongst Britain's most visited tourist centres.

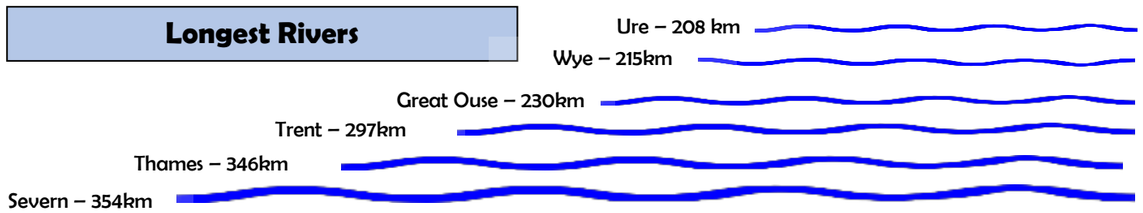
Cardiff

Cardiff is the capital and largest city of Wales, and the 11th-largest city in the UK. It is the seat of the National Assembly for Wales. Cardiff is Wales' chief commercial centre, and also its most visited city. Cardiff has undergone major development recently, to create new and vast business and sporting districts, including the Principality Stadium.

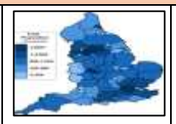
Belfast

Belfast is the capital and largest city of Northern Ireland. Since the early 19th Century, Belfast has been a major port, playing a key role in the Industrial Revolution and was the place in which *The Titanic* was built. Belfast was the scene of widespread violence in 'The Troubles' of the 1980s and 1990s, however it is now ranked as one of the UK's safest cities.

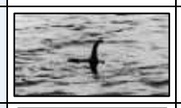
Longest Rivers



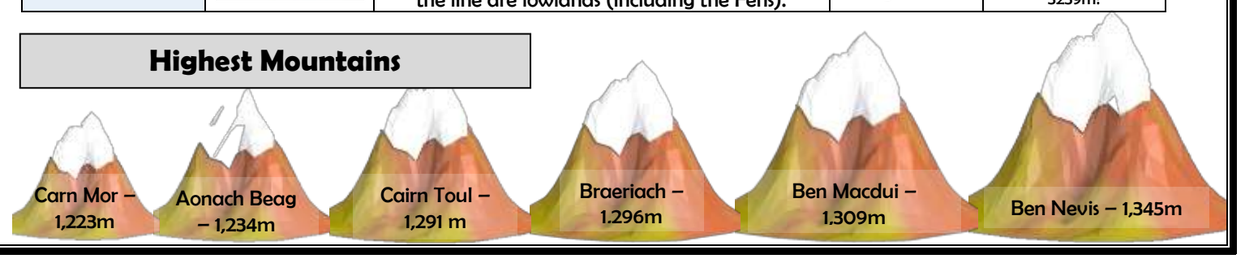
Human Geography Features

Population Densities		The overall population density of the UK is 259 people per square kilometre. England is the most densely populated of the constituent countries – especially the English southeast, where one third of UK's population lives.	**What?** A low birth rate means that the population of the UK is slow-growing.	**Key Fact:** The population density of London is 5,200 per km²
Ethnic Groups		For centuries, people have migrated to Britain from different parts of the world. Almost 87% of the population are white, with many holding ancestry from the European mainland (e.g. Angles, Saxons, Jutes, Vikings, and Romans).	**Who?** Those from Indian backgrounds account for 2.4% of the UK population.	**Key Fact:** Large communities of Caribbean and South Asians have lived in the UK since the 1950s and 1960s.
The Monarchy		Britain is a constitutional monarchy – it has a Royal Family, but they do not make most of the decision for the country (it is a democracy). The current monarch is Queen Elizabeth II, who has been the queen of the country since 1952.	**When?** Elizabeth's coronation was on 6th February 1952, a reign of over 67 years!	**Key Fact:** In the Middle Ages, there used to be separate monarchs for different areas of the country.
Sports/ Recreation		Sport plays a major part in UK culture. Several sports were founded in the UK, e.g. football, rugby, cricket, netball and tennis. Football is the most popular sport, with the FA Premier League is the most watched in the world.	**What?** 15.3 million people regularly play sport in the UK.	**Key Fact:** In the UK, around 2.9 million people participate each week.
Overseas Territories		Britain has 14 overseas territories, each with their own government. Most remain from the time of the British Empire, though Britain's policy now is to give independence to territories who want it.	**How?** Britain is responsible for providing defence to its territories.	**Key Fact:** Some territories are disputed, e.g. Gibraltar with Spain.

Physical Geography Features

Natural Resources		About 75% of land in the UK is suitable for farming – farmers both grow crops and rear animals. Oil and natural gas are also produced. Britain also has rich deposits of coal.	**What?** Coal production is down one-fifth since the mid-20th Century.	**Key Fact:** Crops are grown on flatter land, animals reared on more mountainous zones.
National Parks		There are 15 National Parks across England, Scotland and Wales, which have all been created since 1950. National Parks aim to protect the outstanding countryside in their area, and provide recreation opportunities.	**What?** The largest National Park is called Cairngorms in Scotland, at 3,800 km²	**Key Fact:** National Parks account for 10% of the total land in England, and 20% of Wales.
Climate and Weather		The UK has a reputation for grey skies, and indeed over half of all days are overcast. Britain is milder than other places at the same latitude, largely because of warm air arriving from the Atlantic via the Gulf Stream. In general, the south is warmer and brighter than the north.	**Where?** The east coast of the United Kingdom is drier than the west coast.	**Key Fact:** Northern Scotland has on average 5 hours of sun a day, whilst the Isle of Wight in the south has 8 hours.
Loch Ness		Loch Ness is a large, deep freshwater lake in the Scottish Highlands. For years, there was rumoured to be a monster ('Nessie') living in the lake, but this was later revealed to be a hoax!	**Where?** Loch Ness is 37km southwest of Inverness.	**Key Fact:** The Loch Ness Monster was first reported on in 1933.
Topography		The terrain of Britain is roughly split into highland and lowland by the Tees-Exe line (shown in picture). North and West of the line are the highlands (including Ben Nevis and Mount Snowdon) whilst to the south and east of the line are lowlands (including the Fens).	**Where?** The highest mountains on Great Britain are in the Scottish Highlands.	**Key Fact:** You could say the UK's tallest mountain is actually Mount Hope, in British Antarctic Territory, at 3239m!

Highest Mountains



CLIMATE ZONES KNOWLEDGE ORGANISER

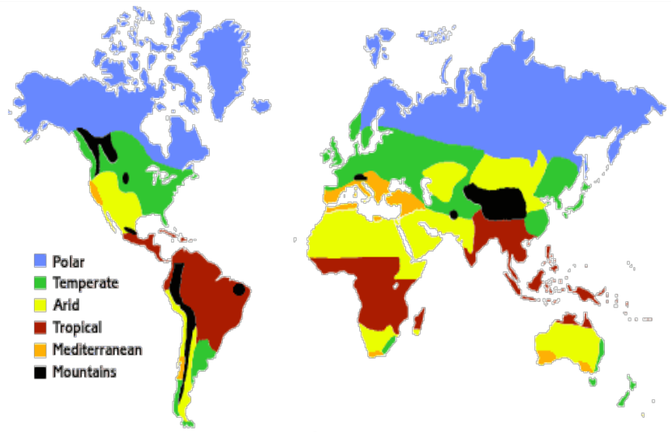
Overview

-Climate zones are regions of the Earth that share similar climates.

-Climates are normally typically defined by factors such as: temperature, precipitation (rainfall), humidity, and specific weather patterns.

-These zones are influenced by geographical factors including latitude, altitude, and how close the place is to seas and oceans.

-Knowledge of climate zones helps us to understand the types of vegetation and animal life that can thrive in different parts of the world.



A map showing where different climate zones are found across the world.

Answers to the Important Questions

What are biomes?

-Climate zones are areas with distinct climates. When gauging a place's climate, we think about its:
-Temperature
-Precipitation
-Humidity
-Weather Patterns.

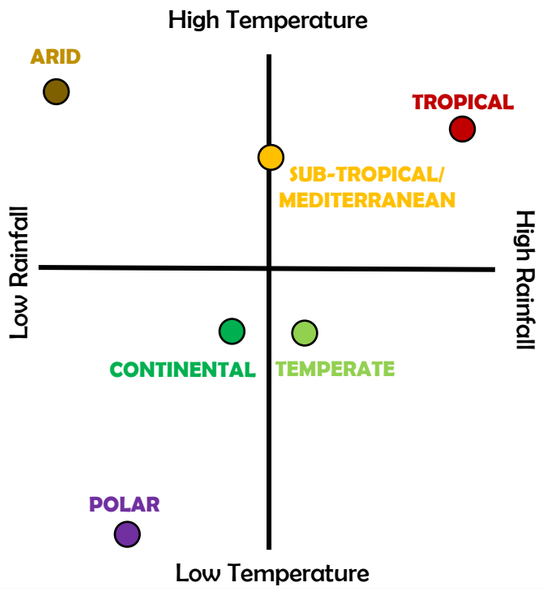
What is the Köppen Climate Classification?

-One of the most widely used systems of climate zones. Originally developed by the climatologist Wladimir Köppen in 1884, it has had several revisions and changes over the years. It divides climates into five categories:
Tropical climates (A)
Dry climates (B)
Temperate climates (C)
Continental climates (D)
Polar climates (E)
These climates can then be subdivided based on smaller differences, e.g. temperature based on proximity to the ocean, etc.

What is a microclimate?

A microclimate is a small area with a different climate to its surroundings, e.g. lakes, hills, etc.

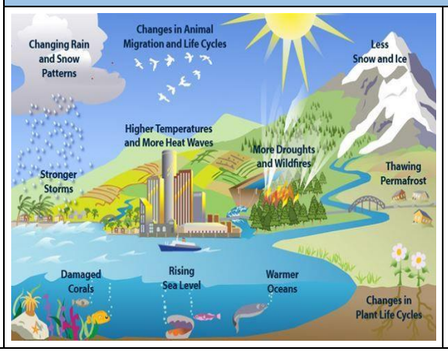
Features of different climate zones



Types of Climate Zones

Polar		Polar climates experience persistently low temperatures throughout the year. The average temperature in the warmest month does not exceed 10°C (50°F). Most of these regions are far from the Equator and near the Earth's poles.
Temperate		Temperate climates are characterised by moderate temperatures and distinct seasonal changes (spring, summer, autumn and winter). These areas occur in the middle latitudes, between tropics and polar regions. There is moderate rainfall.
Continental		Continental zones are similar to temperate zones, except that they are near the middle of continental landmasses, away from the moderating influence of the oceans. This means that they often have more extreme summer and winter seasons.
Arid		Arid climates receive less than 250 mm (10 inches) of precipitation per year. Rainfall is often infrequent, unpredictable, and can vary greatly from year to year. Arid regions typically experience diurnal temperature ranges, with very hot days and cooler nights. Daytime temperatures can be above 40°C
Sub-tropical/ Mediterranean		Subtropical climates are typically located between the tropics and temperate zones, usually between 23.5° and 35° latitude in both hemispheres. They are characterized by hot summers and mild winters.
Tropical		Tropical climates are characterized by consistent warm temperatures throughout the year and lots of rain. They are typically found near the equator, between the Tropic of Cancer and the Tropic of Capricorn. They often have wet and dry seasons.

Effects of Climate Change



Climate change is having widespread and varied impacts on different climate zones around the world. These effects are driven primarily by global warming due to increased greenhouse gas emissions.
Examples include:
-Polar regions are warming at twice the average rate. Icecaps are thus melting.
-Tropical regions are also warming rapidly.
-Arid regions are becoming drier, with more extreme droughts;
-Temperate zones are experiencing earlier springs and later autumns.

Key Vocabulary

- Climate Zone
- Climate
- Precipitation
- Temperature
- Weather
- Altitude
- Latitude
- Polar
- Temperate
- Continental
- Sub-Tropical
- Arid
- Tropical
- Equator
- The Tropics

Climate Zones Key Facts

- The hottest places on Earth tend to be in the arid zones, not the tropical zones around the Equator.
- The UK has a temperate climate. To be exact, it is in the Cfb category. This means we have a temperate climate (C), with no dry season (f) and a warm summer (b).
- High mountains have their own type of climate, which resembles the polar climate type (but often windier!)
- Climate zones are closely linked to biomes, e.g. rainforests are found in tropical zones, etc.
- Climate is not the same as weather. Climate is measured over an extended period of time.
- The boundaries of climate zones are changing due to global warming.

THE WATER CYCLE KNOWLEDGE ORGANISER

Overview

-The water cycle, also known as the hydrologic cycle, is a natural process that describes the continuous movement of water on, above, and below the surface of the Earth.

-The water cycle is a crucial part of Earth's climate system and plays an important role in helping the planet's weather patterns, ecosystems, and availability of freshwater.

-At its core, the water cycle involves the transformation and movement of water through various states—liquid, vapour, and ice.

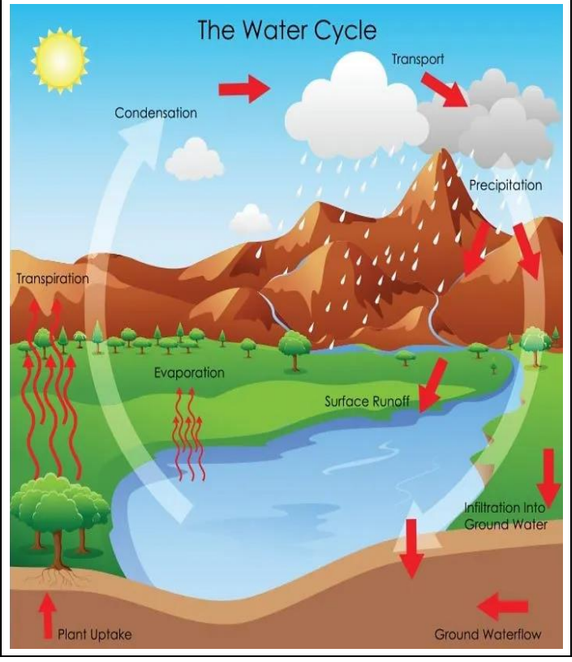
-The cycle is driven mainly by the energy from the sun and the force of gravity, which together help to guide the transfer of water between the different points within the cycle.

Key Details and Diagram

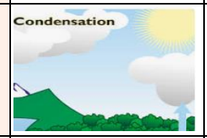
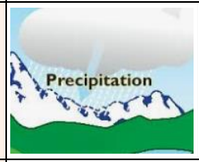
What are the stages of the water cycle?
The main stages are:
-Evaporation
-Condensation
-Precipitation
-Collection
-Infiltration and Percolation
-Runoff

How does the water cycle impact weather patterns?
The water cycle influences weather patterns by regulating humidity and precipitation. Evaporation adds moisture to the atmosphere, which can contribute to cloud formation and precipitation. Changes in evaporation & precipitation patterns lead to variations in weather, including droughts, floods, and storms.

What role do plants play in the water cycle?
Plants play a role in the water cycle through transpiration. water cycle through transpiration. They absorb water from the soil and release it into the atmosphere as water vapor through their leaves. This process contributes to cloud formation and can humidity and precipitation.



Stages of the Water Cycle

Evaporation		Water from oceans, rivers, lakes, and other bodies of water absorbs heat from the sun and turns into water vapour. Plants also contribute through a process called transpiration, where water is absorbed by roots, travels through plants, and is released as vapour through leaves.
Condensation		As the water vapour rises and cools in the atmosphere, it transforms into tiny water droplets, forming clouds or fog. This process occurs because cooler air can hold less water vapor, leading to the formation of droplets.
Precipitation		When the water droplets in clouds combine and grow large enough, they fall to the Earth's surface as precipitation. Precipitation can take several forms, including rain, snow, sleet, or hail, depending on the temperature and atmospheric conditions.
Collection		Once the precipitation reaches the ground, it collects in various bodies of water, including rivers, lakes, and oceans. Some of the water also goes under the ground, replenishing groundwater supplies.
Infiltration and Percolation		Part of the precipitation soaks into the soil, a process known as infiltration. The water continues to move downward through soil and rock layers in a process called percolation.
Runoff		Water that does not infiltrate into the ground flows over the land as surface runoff. This water moves through streams and rivers, eventually flowing to larger bodies of water, like lakes, seas and oceans.

Effects of Climate Change

Climate change significantly impacts the water cycle, altering its patterns and processes in various ways. These changes can have wide-ranging effects on ecosystems, water resources, and weather patterns. Examples include:
-Rising temperatures due to climate change lead to increased evaporation rates.
-Climate change is shifting precipitation patterns, causing some regions to experience more intense rainfall, while others see reduced precipitation and droughts.
-Higher temperatures are causing glaciers and icebergs to melt more rapidly.

Key Vocabulary

- Water Cycle
- Hydrologic
- Evaporation
- Condensation
- Precipitation
- Collection
- Infiltration
- Percolation
- Energy
- Solar
- Gravity
- Transpiration
- Movement
- Vapour
- Ice

Water Cycle Key Facts

At any given time, 96.5% of the Earth's water is in the oceans. Only 0.01% is in the Earth's atmosphere.

Human activities, such as deforestation, urbanization, and agriculture, can disrupt the water cycle by altering evaporation rates, reducing infiltration, and increasing runoff.

The Earth has been recycling water through the water cycle for over 4 billion years.

Water can change from a solid to a gas, without becoming a liquid first" – this is called sublimation.

Around 97% of the world's water is salty or otherwise undrinkable. A further 2% is locked in ice caps and glaciers. That leaves just 1% for all of mankind's needs.