

Glossary

Catholic Social Teaching

In this physical geography topic of Weather and Climate, earth's natural systems are explored, such as the water cycle. This topic explores the fragility of these systems and links to the catholic social teaching of stewardship. It is our duty to be stewards of God's creation.

Geography – Weather & Climate

Maths Skills

CALCULATE:

MEAN (average)

Add up all the values, then divide by how many values there are

RANGE

Take the smallest value away from the largest value

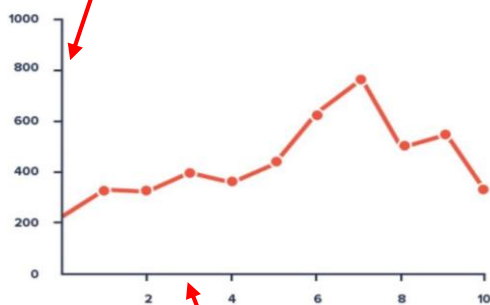
MODE

Find the value that appears the most

MEDIAN

Order the values from smallest to largest, then find the value that is in the middle of the list

y axis



x axis

English Skills

Connectives	Opinion phrases	Geographical key words
therefore moreover nevertheless on the other hand because this means that this suggests whereas however likewise nonetheless seemingly despite this so	in my opinion in conclusion conclusively overall clearly to a large extent to a small extent arguably undoubtedly the evidence suggests in summary ultimately finally for this reason	social economic environmental political local global national international north/south/east/west impact/effect response immediate long-term sustainable

Catholic Social Teaching

In this physical geography topic of Weather and Climate, earth's natural systems are explored, such as the water cycle. This topic explores the fragility of these systems and links to the catholic social teaching of stewardship. It is our duty to be stewards of God's creation.

What is weather and climate?

Weather

The changing conditions of the atmosphere from day to day (or over a short period of time).

Climate

The average weather in a place e.g. what the weather is commonly like, measured over a long period of time (50 years).

Microclimates

A small area with a distinctive climate which is different to the surrounding area.

Factors affecting microclimates:

1. **Effect of water:** Water heats up and cools down slower than the land.
2. **Effect of vegetation:** Trees and vegetation can shade the land.
3. **Effect of surface:** Light surfaces reflect heat. Dark surfaces store heat.
4. **Effect of buildings:** Buildings store heat and give it out in the afternoon.
5. **Effect of altitude:** The higher up you are, the lower the temperature.

Factors affecting the UK's climate

1. **Latitude** = Means how far a place is from the equator. The nearer to the equator you are, the warmer it is.
2. **Coast** = The sea is cooler than land in summer, and warmer in winter. So a sea breeze keeps the coast cool in summer - and warm in winter.
3. **Air masses** = If the winds are warm, they bring hot weather. If they are cold they bring cooler weather.
4. **Ocean currents** = A warm ocean current warms up the coast.
5. **Altitude** = Altitude is the height above sea level. The higher you are, the cooler it is.

UK Extreme Weather

This is unexpected, unusual, unpredictable, severe, or unseasonal weather.

Beast from the East

(22nd Feb - 4th March 2018)

A prolonged extreme cold weather event from Russia/Siberia that hit the UK.

Summer Heatwave

(22nd June - 7th August 2018)

No rainfall for several weeks and temperatures at record highs (above 30°C)

Types of Clouds:

- Cumulus
- Stratus
- Cirrus

Types of Clouds:

- Convective
- Relief
- Frontal

Measuring the Weather

Measuring current weather is useful to spot trends or patterns over a long time. The people who measure the weather are called Meteorologists. The **Met Office** is the UK's national weather service.

1. **Temperature** = It tells us how hot or cold a place is and is measured using a thermometer (°C).
2. **Precipitation** = It shows the amount of moisture that falls from the sky e.g. Rainfall/Snow. Measured using a tool called a rain gauge in millimetres (mm).
3. **Air Pressure** = It tells us how "heavy" the air is. Measured using a tool called a Barometer in millibars (mb).
4. **Wind Speed** = It tells us how fast the wind is blowing. Measured using an Anemometer (km per hr).
5. **Wind direction** = It shows the direction of the wind by showing us which direction the wind has come from. Measured using a weather vane/windsock (N/S/E/W).

Air Masses

- An air mass is a large body of air moving in the same direction with the same temperature, pressure and humidity throughout. An air mass will be warm or cold, damp or dry, depending on where it came from.
- For example, an air mass that has travelled over the sea will increase its moisture content and be more likely to produce rainy weather.

The UK weather is affected by air masses. These come from different regions. There are four areas where they come from. These are maritime, polar, continental and tropical regions.

Air Pressure

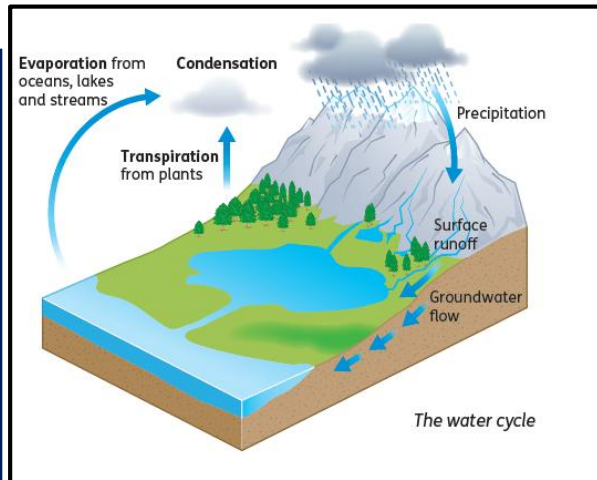
The force exerted onto the Earth's surface by the weight of the air.

High Pressure = dry weather. Molecules of air densely packed (Anticyclone).

Low Pressure = wet weather. Molecules of air spread apart (Depression).

The Water Cycle

Firstly the water starts off in the sea/ocean, it is transferred to the air by the process of evaporation. This is when the sun heats the water and it turns into water vapour. The water vapour then cools and condenses to form clouds and falls as precipitation (rain, sleet, snow). Water then travels back to the sea either by surface runoff or groundwater flow.



Climate Graphs

These plot average temperature and precipitation per month for a country.

