

Year 8 – Wild Weather

Wild weather is a topic to develop an understanding of weather and climate locally and globally. It also looks at how it impacts people's lives.

What should I already know?

- Location of continents and oceans
- British Isles geography
- UK and the surrounding land masses
- How to present data

Key vocabulary and definitions

Weather	The state of the atmosphere at a particular place and time as regards heat, cloudiness, dryness, sunshine, wind, rain, etc.
Climate	Climate is the long-term weather pattern in an area, typically averaged over 30 years.
Precipitation	Precipitation is any liquid or frozen water that forms in the atmosphere and falls back to the Earth (rain, sleet, and snow).
Air mass	A large area of air with the same temperature and humidity.
Microclimate	A small area with a significantly different temperature and humidity to its surroundings.

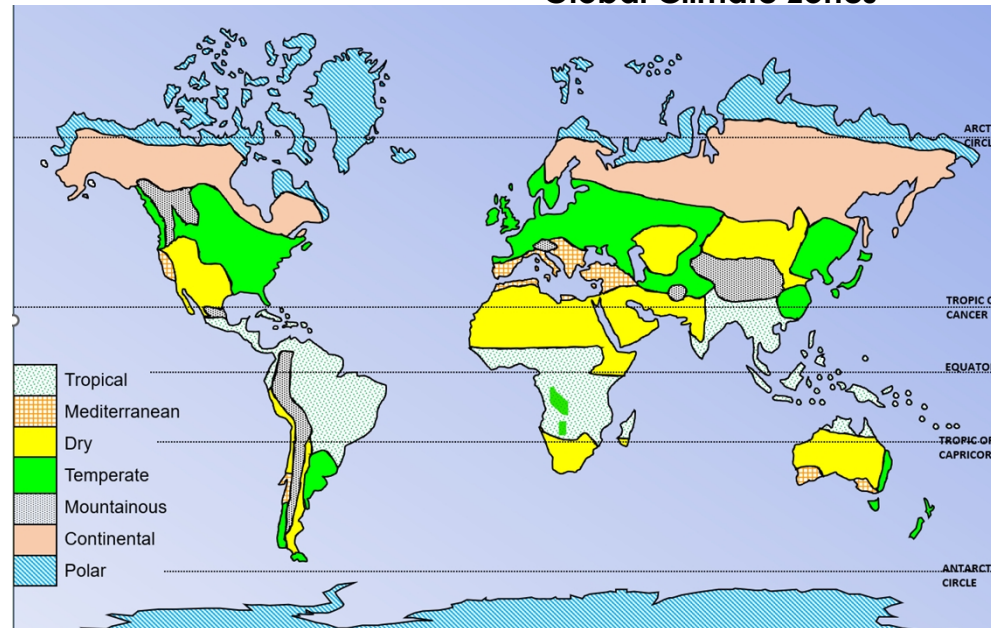
Measuring the weather

Weather variable	Instrument
Air temperature	Thermometer
Wind speed	Anemometer
Wind direction	Wind vane
Precipitation	Rain gauge
Cloud cover	Satellite or naked eye
Air pressure	Barometer

Cause-and-effect describes a relationship in which a certain event (the cause) makes another event happen (the effect). The weather is a "cause" as it can make other things happen. For example, the wind can make leaves move.



Global Climate Zones



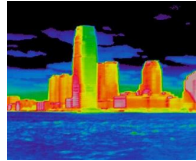
- Tropical** - hot and wet
- Mediterranean** – mild winters, hot summers
- Dry** – hot and dry
- Temperate** – cold winters and mild summers
- Mountainous** – cold
- Continental** – cold winters and hot summers
- Polar** – cold and dry

Countries around the world have different climates. Near the equator, countries have hotter climates and the Arctic and Antarctic have much colder climates. Climates can affect many things, such as which plants can grow. Many animals are specially adapted to the climate they live in.

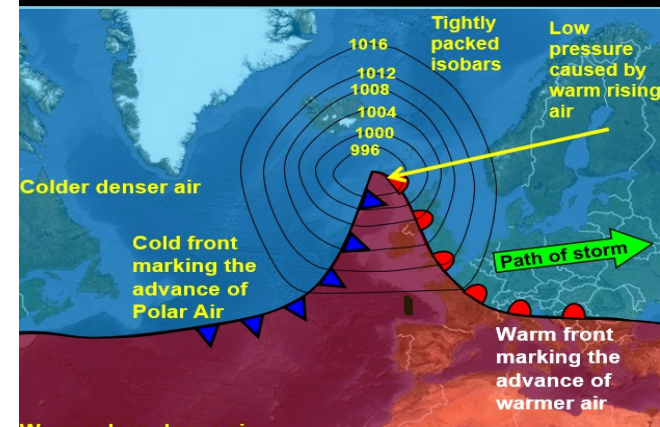
Anticyclones are high pressure weather systems that bring sunny weather to an area and no (or very little) rain. Once anticyclones develop they tend to remain for several days, **bringing dry, bright and settled weather to the UK**. There is also very little wind during anticyclone conditions.

Urban Temperatures

An urban heat island is an urban area which is **warmer than its surrounding rural areas**. The temperature difference is usually larger at night than during the day, and is most **apparent when winds are weak**.



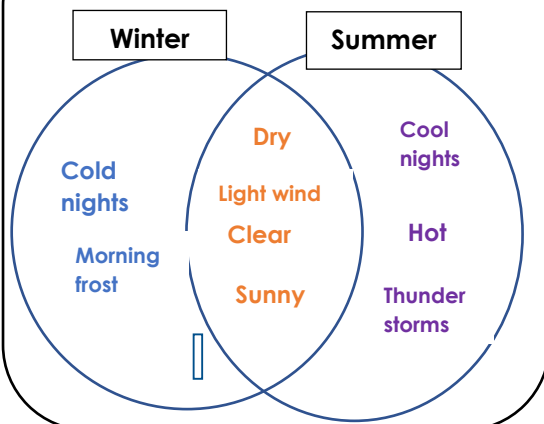
A mid latitude low - DEPRESSION



A depression has a **warm front** and a **cold front**.

Depressions usually move across the UK **from west to east**.

The weather in an anticyclone

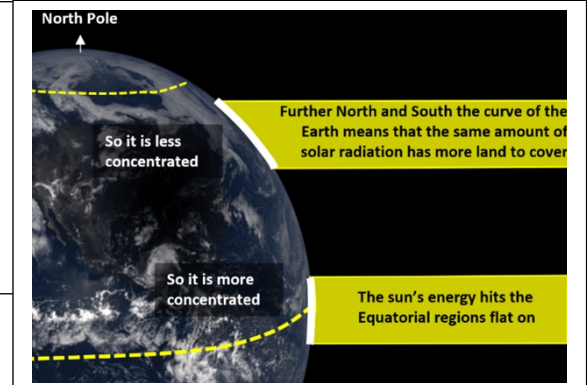


Climate in the United Kingdom

Britain has a temperate climate, this means that weather in the country can be variable.

Some of the factors that influence the weather and climate in the UK are:

- **Location** – the sun's energy is spread over a larger area due to the curvature of the Earth.
- **Prevailing wind** - ours comes from the tropics to the South West. This brings plenty of rainfall.



Warmer air meets colder air at areas that we call **FRONTS**. At a **warm front**, warm air rises gently over colder air creating nimbostratus and higher cirrus clouds. At a **cold front**, cold dense air pushes warmer air up to create large cumulonimbus clouds.

