

# World Climate and Biomes

The climate in a particular part of the world will influence its vegetation and wildlife, so is fundamental to life on Earth. Find out about factors influencing weather and climate and how to interpret climate data.

## Weather and climate



Sunny weather in Hyde Park, London

**Weather** describes the condition of the atmosphere. It might be sunny, hot, windy or cloudy, raining or snowing. Climate means the average weather conditions in a particular location based on the average weather experienced there over 30 years or more. Global climate zones with similar *flora*, *fauna* and climate are called **biomes**.

Climates are influenced by many factors, such as proximity to the equator or the poles and proximity to the sea, as well as things like ocean currents, atmospheric pressure belts and *prevailing winds*.

A place's climate influences the types of vegetation and animals that live there. It is possible to divide the world into a number of climatic zones or *biomes*, each with their own characteristic climate, vegetation and wildlife.

Learn more about the world's nine major biomes and view an animation of their distribution throughout the world. Please follow the link below to find out more.....

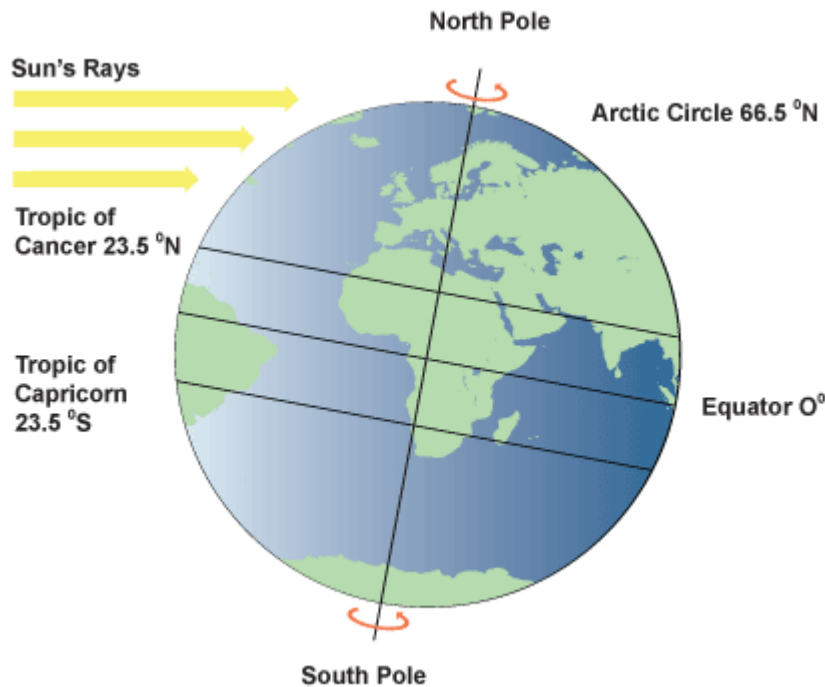
[http://www.bbc.co.uk/schools/gcsebitesize/geography/ecosystems/biomes\\_rev2.shtml](http://www.bbc.co.uk/schools/gcsebitesize/geography/ecosystems/biomes_rev2.shtml)

## Factors affecting climate

### Latitude or distance from the equator

Temperatures drop the further an area is from the equator due to the curvature of the earth. In areas closer to the poles, sunlight has a larger area of atmosphere to pass through and the sun is at a lower angle in the sky. As a result, more energy is lost and temperatures are cooler.

In addition, the presence of ice and snow nearer the poles causes a higher *albedo*, meaning that more solar energy is reflected, also contributing to the cold.



The effect of the Sun's rays

### Altitude or height above sea level

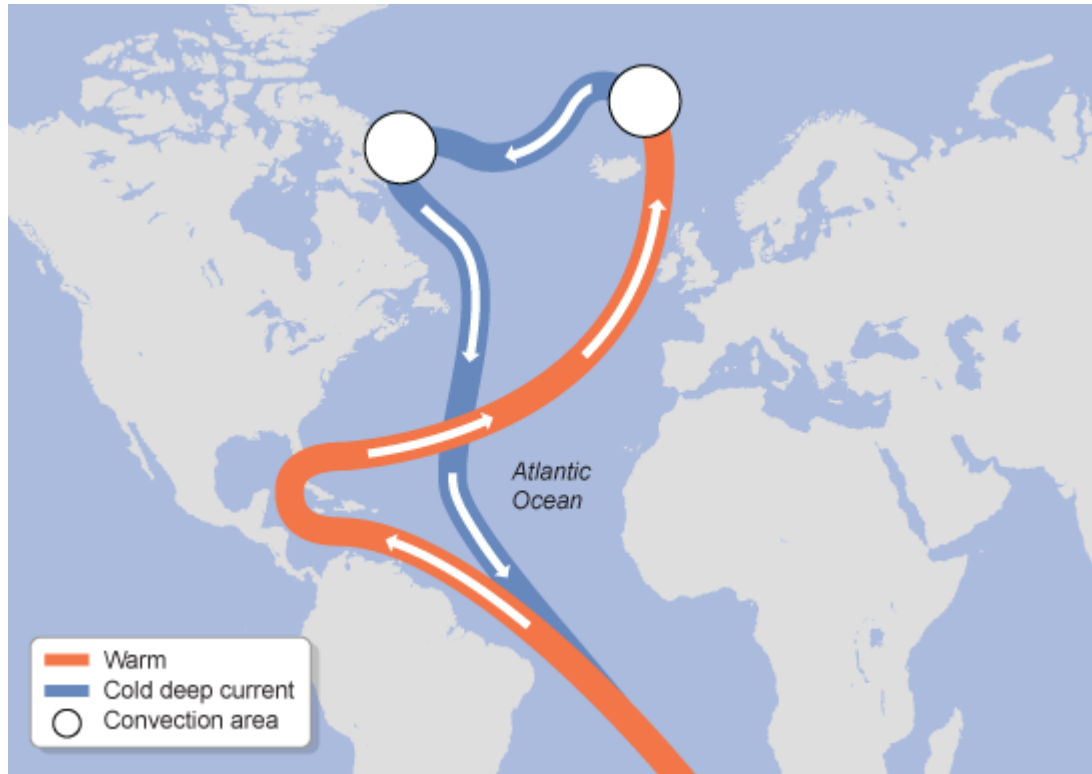
Locations at a higher altitude have colder temperatures. Temperature usually decreases by 1°C for every 100 metres in altitude.

### Distance from the sea

Oceans heat up and cool down much more slowly than land. This means that coastal locations tend to be cooler in summer and warmer in winter than places inland at the same latitude and altitude. Glasgow, for example, is at a similar latitude to Moscow, but is much milder in winter because it is nearer to the coast than Moscow..

### Ocean currents

Britain has a **maritime climate**. A warm ocean current called the **North Atlantic Drift** keeps Britain warmer and wetter than places in continental Europe.



The North Atlantic Drift

### Prevailing wind

The prevailing wind is the most frequent wind direction a location experiences. In Britain the prevailing wind is from the south west, which brings warm, moist air from the Atlantic Ocean. This contributes to the frequent rainfall. When prevailing winds blow over land areas, it can contribute to creating desert climates.

### **Revision Resources:**

**Video:** <http://www.youtube.com/watch?v=95TtXYjOEv4&feature=related>

**Website:** <http://www.blueplanetbiomes.org/climate.htm>

**Website:** <http://www.thewildclassroom.com/home/nav/worldbiomes.html>