

Weather, Climate and Biomes

Weather

This term refers to the daily conditions of a place. Weather may be described as sunny, overcast, cloudy, hot, warm, cool or cold. It may be described according to the level of wind or the types of precipitation. This could be drizzle, rain, sleet or snow and may be described as light or heavy.

On a weather forecast, symbols are used to represent these weather conditions.



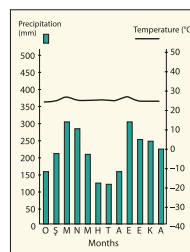
Climate

This term refers to the average weather conditions over a longer period, usually a year. The climate of an area can vary depending on the time of day and the season. For example, in summer in Florida, USA, the mornings are hot, dry and humid. In contrast, the afternoons bring thunderstorms with cooler temperatures higher levels of precipitation. In spring and autumn, rainfall and temperatures are half those in the summer.

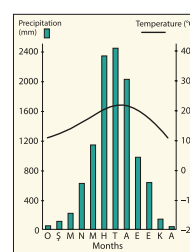
We often think of deserts as very hot places, but temperatures here can fall rapidly at night. Plants and animals in the Sahara Desert have to be able to survive both extremes of temperature to live here.

The climate of an area is often shown with a climate graph. This shows the temperature (measured in °C) and rainfall (measured in mm) for each month of the year. These can be used to compare places across the world.

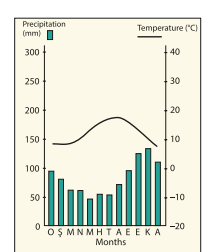
1 Temperature and precipitation graph in Ecuador



2 Temperature and precipitation graph for Monsoon



3 Temperate ocean climate temperature and precipitation graph



Biomes

A biome is an ecosystem (or biological community) that has grown and adapted to live in a particular climate. This means that the plants and animals who live in each biome survive there because they have features that work well in that climate. They are also dependent on each other to survive.

The major biomes of the world are:

Marine, polar, tundra, forest (including rainforests, deciduous forests and taiga), **grasslands** (including savannah) and **desert**.

If the climate of an area changes, then the biome will change too. For example, if the earth continues to get warmer, this will affect the polar biome. As the seas rise and get warmer, the polar ice caps will melt. The plants that grow there may not survive the warmer temperatures. If the plants die, the food chain that begins with those plants will be altered. If those animals cannot adapt and find a new food source, they will die too, as will other animals that eat those animals.

VOCABULARY FOCUS

1. What is the difference between weather and climate?
2. What is it called when an area has a long season with high precipitation, followed by a dry season?
3. What is another word for a biological community?
4. Which word describes how things change to fit their biome?
5. What is a biome?

VIPERS QUESTIONS

R

Name 3 biomes.

R

What can be used to compare the climate of two places?

R

What factors do these record?

I

Darwin once described the process of living things adapting to suit their biome as “survival of the fittest”. What do you think he meant by this?

I

What might happen to the polar biomes if we do not slow the pace of climate change?