

Climate is important because it determines the types of plants and animals—the ecosystem—that can survive in a biome.

Biomes and Rainforests

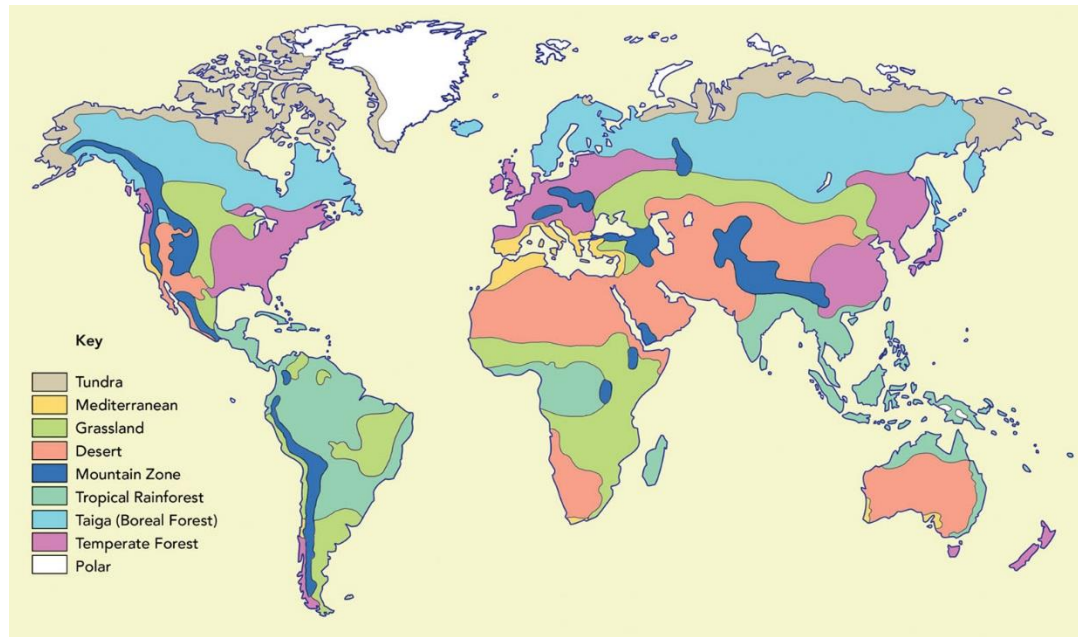
Characteristics of Biomes

Tropical rainforests are **hot** and **wet** all year round. They are home to **half** of all the different types of **plants** and **animals** on the planet.

Deserts are **hot** and **dry** all year round. The only things that grow are **cacti** and small **shrubs** because the soil is shallow and rocky. Animals come out at **dusk** when it is **cooler**.

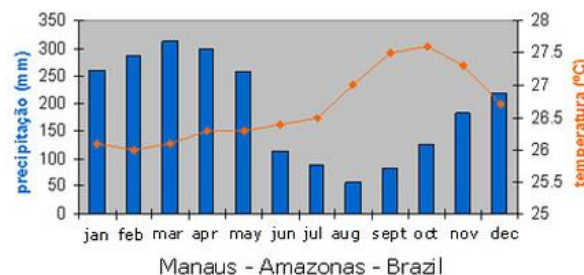
The **savannah** is **hot** all year round with a long, **dry season**. Only **grasses** and **shrubs** grow here but it is home to lots of different types of animals such as **elephants, zebras and wildebeest**.

The **tundra** is the **coldest** of all the **biomes**. There is very little **rain** or **snow** and the temperatures are **freezing**. Winters are **long** and summers are **short**. Part of the soil is **frozen** all year round, although the top part **defrosts** in summer and plants such as **mosses** can grow

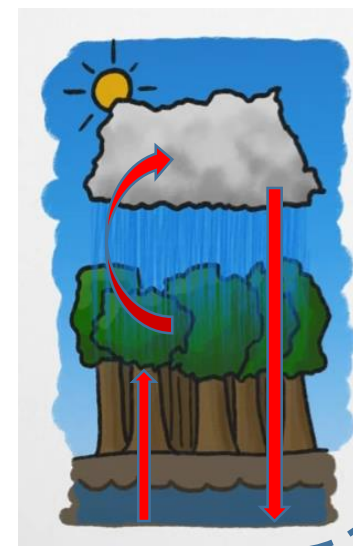


Climate graph and why it rains

Temperature and Precipitation Chart (Yearly)



Evapotranspiration creates clouds. Loss of water from evaporation pulls more water up from the soil. The heavy clouds cause precipitation to occur where they are formed.

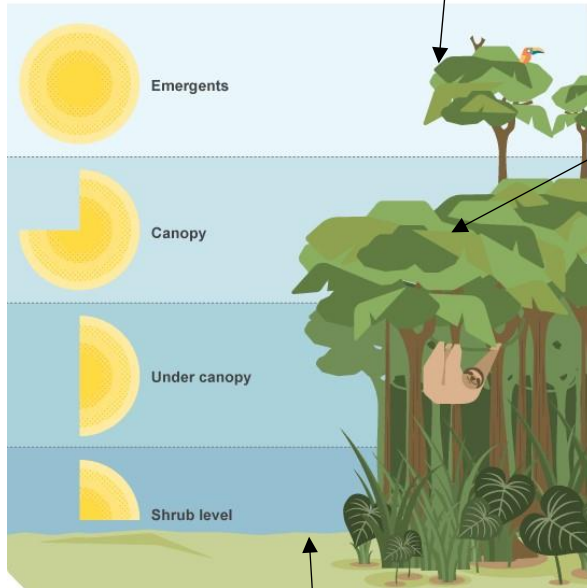


Location of the Amazon Rainforest



The Amazon Rainforest is in the **continent of South America**. The ocean to the **east** is the **Atlantic Ocean**. The rainforest includes the longest river in the world which is called the **Amazon River**. The Amazon Rainforest stretches across a number of countries including: **Brazil, Columbia and Peru**. The Amazon Rainforest has an annual **average temperature** of **27 °C** and **annual rainfall** of **2104 mm**

The layers of the Rainforest



Emergents. These are the tops of the tallest trees in the rainforest. These are much higher, and so are able to get more light than the average trees in the forest canopy.

The canopy. This is where the upper parts of most of the trees are found. The canopy is typically about 65 to 130 feet (20 to 40 metres) tall. This leafy environment is home to insects, birds and some mammals.

The under canopy. It is the second level up. There is limited sunlight. Saplings wait here for larger plants and trees to die, leaving a gap in the canopy which they can grow into. Woody climbers called lianas are also found here

The shrub layer. It is dark and gloomy with very little vegetation between the trees. During heavy rainfalls this area can flood.

The climate in the Tropical Rainforest

Very wet with over 2,000 mm of rainfall per year.

Very warm with an average daily temperature of 28°C. The temperature never drops below 20°C and rarely exceeds 35°C.

The atmosphere is hot and humid.

The climate is consistent all year round.

Animals and plants have to adapt to the climate in the Tropical Rainforest

Drip tips - plants have leaves with pointy tips. This allows water to run off the leaves quickly without damaging or breaking them.



Buttress roots - large roots have ridges which create a large surface area that help to support large trees.



The sloth uses camouflage and moves very slowly to make it difficult for predators to spot.



Threats to the Tropical rainforest

The tropical rainforests of the Amazon Basin face the threat of deforestation. Deforestation is happening due to the following reasons: Farming, logging, mining, roads and population growth- All of these threats have one thing in common- **HUMANS**

But what can we do?

- **Education** - It is important that local people, businesses and politicians understand the true value of the tropical rainforest.
- **Ecotourism** - this encourages sustainable tourism that creates jobs for local people whilst ensuring that the money generated is used to protect and conserve the tropical rainforest for future generations to enjoy.