HL2 - Biomes (Large scale ecosystems) of the World

What is a Biome?

A biome is a large region of the Earth with a particular climate, landscape, plants, and animals that are adapted to survive there. Biomes are determined mainly by temperature, rainfall, and location. Different parts of the world have different climates, so biomes range from hot, wet rainforests to cold, icy tundra.



Tropical Rainforests

Tropical rainforests are found near the Equator, including the Amazon Basin (South America), the Congo Basin (Africa), and parts of Southeast Asia. They are hot and wet all year, with temperatures between 25–30°C and rainfall over 2,000 mm per year. Rainforests have layered trees: tall emergent trees, a dense canopy, and a dark understory. Plants have large drip-tip leaves to shed water and epiphytes grow on other trees to reach sunlight. These forests are extremely biodiverse, with species like monkeys, jaguars, parrots, frogs, snakes, and countless insects. Many animals live in the trees and use camouflage or bright colours to survive.

Hot Deserts

Hot deserts are located around 30° north and south of the Equator, including the Sahara, Arabian Desert, and Australian deserts. They are very hot during the day (up to 45°C) and cold at night (sometimes below 0°C). Rainfall is less than 250 mm per year, and the air is dry with clear skies. Vegetation is sparse: cacti and succulents store water, and many plants have small or waxy leaves or deep roots to survive droughts. Animals such as camels, fennec foxes, snakes, and lizards are adapted to heat and water scarcity. Many are nocturnal to avoid daytime heat, and some store fat or water in their bodies.

Tundra

The tundra is found near the Arctic Circle, in areas like Alaska, northern Canada, Greenland, and Siberia. It has very cold winters (–30°C) and short, cool summers (up to 10°C). Rainfall is low (100–300 mm per year), mostly as snow, and the ground is frozen (permafrost) for most of the year. No trees grow, but mosses, lichens, grasses, and small shrubs survive by staying low to the ground. Animals like reindeer, arctic foxes, snowy owls, and polar bears have thick fur or fat layers and often hibernate or migrate to survive the long, cold winter.

HL2 - Biomes Questions

1. What is a biome?

2. Name the three factors that determine a biome.

3. Where are tropical rainforests mainly found?

4. What is the climate like in tropical rainforests (temperature and rainfall)?

5. Name the layers of trees in a rainforest.

6. Give two adaptations of rainforest plants.

7. Name three animals that live in tropical rainforests.

8. Around which latitudes are hot deserts found?

9. What is the temperature range and rainfall in hot deserts?

10. Give one plant adaptation and one animal adaptation found in deserts.

11. Where is the tundra found?

12. Name two plant and two animal adaptations that help organisms survive in the tundra.