Your notes

KS3 Geography: revision notes

Biomes and ecosystems

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Ecosystems and biomes

- An **ecosystem** is made of living parts (plants and animals) and non-living parts (climate, soil and water) that interact.
- A **biome** is a very large **ecosystem**, such as tropical rainforest, hot desert, savanna, temperate deciduous forest, taiga (coniferous forest) or tundra.
- Where each **biome** is found depends mainly on climate: temperature and rainfall, which change with latitude.
- The British Isles' natural vegetation is temperate deciduous forest, where trees lose their leaves in winter.

Tropical rainforests

- Found near the Equator (such as the Amazon). Hot (about 27 °C) and wet all year, with over 2000 mm of rain.
- Layers: emergents, **canopy**, understorey and forest floor. They have the highest **biodiversity** of any **biome**.
- Plant **adaptations**: **drip tips** let heavy rain run off leaves; **buttress roots** support tall trees in thin soil; lianas (woody vines) climb towards the light.
- **Deforestation** for cattle ranching, farming (such as palm oil and soya), logging, mining and roads destroys habitats, reduces **biodiversity** and adds carbon dioxide to the air. **Selective logging** and ecotourism are more sustainable.

Hot deserts and cold environments

- Hot deserts (such as the Sahara) are found around 30° north and south of the Equator. They get less than 250 mm of rain a year, with very hot days and cold nights.
- Cacti have spines instead of leaves (so they lose less water), store water in thick stems and have roots that spread out to catch rain. Camels store fat in their humps, have wide feet for sand and long eyelashes to keep sand out.

- Tundra is very cold, with **permafrost** (ground frozen all year) and low **biodiversity**.

Key terms

Ecosystem	Living things and their non-living environment, interacting.
Biome	A very large ecosystem, such as a tropical rainforest.
Biodiversity	The variety of living things in an area.
Canopy	The dense layer of treetops in a rainforest.
Drip tip	A pointed leaf tip that lets rain run off quickly.
Buttress roots	Large roots that support tall rainforest trees.
Deforestation	Cutting down large areas of forest.
Selective logging	Cutting down only some trees, so the forest can recover.
Adaptation	A feature that helps a living thing survive in its environment.
Permafrost	Ground that stays frozen all year.

Quick questions

Cover the answers and test yourself: remembering is what makes it stick.

1. What is a biome?
2. Where are tropical rainforests found?
3. What is the climate of a tropical rainforest?
4. Which layer of the rainforest is the dense layer of treetops?
5. What are drip tips?
6. What are buttress roots?
7. How much rain does a hot desert get?
8. How are cacti adapted to the desert?

Answers

1. A very large ecosystem, such as a tropical rainforest or desert
2. Near the Equator
3. Hot and wet all year
4. The canopy
5. Pointed leaf tips that let rain run off quickly
6. Large roots that support tall trees in thin soil
7. Less than 250 mm a year
8. They have spines instead of leaves, and store water

What to do next

Practise 14 questions on this topic

Your notes

Try 4 exam questions, with mark schemes

Read the lesson, one step at a time

Free revision for GCSE and KS3 at lycolearn.co.uk. Some notes are for one exam board only, and say so in brackets.

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