Your notes

GCSE Geography: revision notes

Hot deserts

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Physical characteristics

- **Hot deserts** get less than 250 mm of rain a year. Days are very hot, often over 40 °C in summer, but nights can be cold because clear skies let the heat escape.
- Soils are thin, sandy or stony and low in nutrients. Plants and animals are spread thinly.
- Most **hot deserts** are around 30° north and south of the Equator, where sinking air creates high pressure, such as the Sahara, the Arabian Desert and the Thar Desert.

Adaptations

- Plants: cacti store water in their stems, have spines instead of leaves (so they lose less water) and have long or widespread roots. Some plants' seeds lie dormant until it rains.
- Animals: camels store fat in their humps and have wide feet for walking on sand and long eyelashes against blowing sand. Fennec foxes lose heat through their large ears. Many animals are **nocturnal**, avoiding the daytime heat.

Case study: the Thar Desert (India and Pakistan)

- Opportunities: mineral extraction, such as gypsum and limestone; energy, especially wind and solar power (such as the Jaisalmer Wind Park, one of India's largest); farming, made possible by **irrigation** from the Indira Gandhi Canal; and tourism, such as desert safaris and the fort city of Jaisalmer.
- Challenges: extreme temperatures (over 50 °C has been recorded); water supply (low, unreliable rainfall, high evaporation and overused groundwater); and inaccessibility (few roads, and shifting sand dunes).

Desertification

- **Desertification** is when land on the edge of a desert, in semi-arid areas such as the Sahel, turns into desert.
- Causes: climate change (less rain and higher temperatures), population growth, removal of fuel wood, **overgrazing**, **over-cultivation** and soil erosion.
- Reducing the risk: water and soil management, such as lines of stones ('magic stones') that slow rainwater and trap soil; tree planting, such as Africa's Great Green Wall; and **appropriate technology**, such as solar cookers that don't need firewood.

Key terms

Hot desert	An area with less than 250 mm of rain a year and high temperatures.
Nocturnal	Active at night and resting during the day.
Desertification	Land on the edge of a desert becoming desert.
Overgrazing	Too many animals eating the plants, leaving the soil bare.
Over-cultivation	Farming land so intensively that the soil loses its nutrients.
Irrigation	Supplying land with water for crops.
Appropriate technology	Simple, affordable technology suited to local people's needs.

Quick questions

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

1. How much rain does a hot desert get in a year?
2. Why are desert nights cold?
3. How are cacti adapted to deserts?
4. Why do camels have wide feet?
5. Why are many desert animals nocturnal?
6. Which is the world's largest hot desert?
7. Which canal brings irrigation water to the Thar Desert?
8. Which renewable energy is being developed in the Thar Desert?

Answers

1. Less than 250 mm
2. Clear skies let the heat escape
3. They store water and have spines instead of leaves
4. To stop them sinking into the sand
5. To avoid the daytime heat
6. The Sahara

Your notes

7. The Indira Gandhi Canal
8. Wind and solar power

What to do next

Practise 12 questions on this topic

Try 4 exam questions, with mark schemes

Read the lesson, one step at a time

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