



The Desert Climate Zone



What are temperatures and rainfall like in deserts?

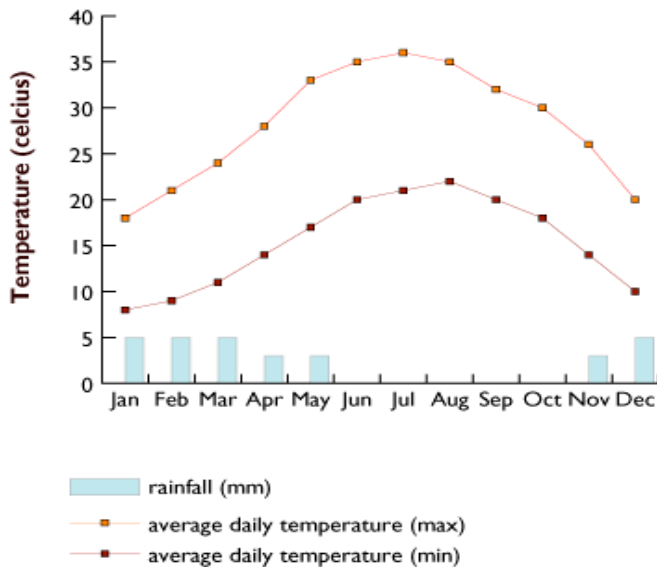


Fig. 1: Climate in an average desert

Deserts are the hottest and driest of all the climate zones. In fact an area has to have less than 25cm of rainfall per year to be known as a desert - that's roughly the length of your wrist to your shoulder. Sometimes deserts can get no rainfall at all for years! The world record temperature of 58°C was recorded in the Sahara Desert in North Africa. Indeed maximum temperatures of 40 to 45°C are common, although during colder periods of the year night-time temperatures can drop to freezing or below! The low humidity (how much water there is in the air) and cloudless skies allow heat from the sun to reach the ground and heat it during the day, whereas at night the lack of cloud and low humidity allow the heat to escape rapidly.

Where do you find desert climates?

There are several large deserts, found mostly near the equator. The most famous desert in the world is the Sahara, which covers much of North Africa. There are many other deserts too like the Simpson and Great Sandy in Australia, the Kalahari in south-west Africa and the Sonora desert in Mexico, to name just a few. Countries that have large areas of desert include Saudi Arabia, Iran and Iraq (all in the Middle East) and South Africa.

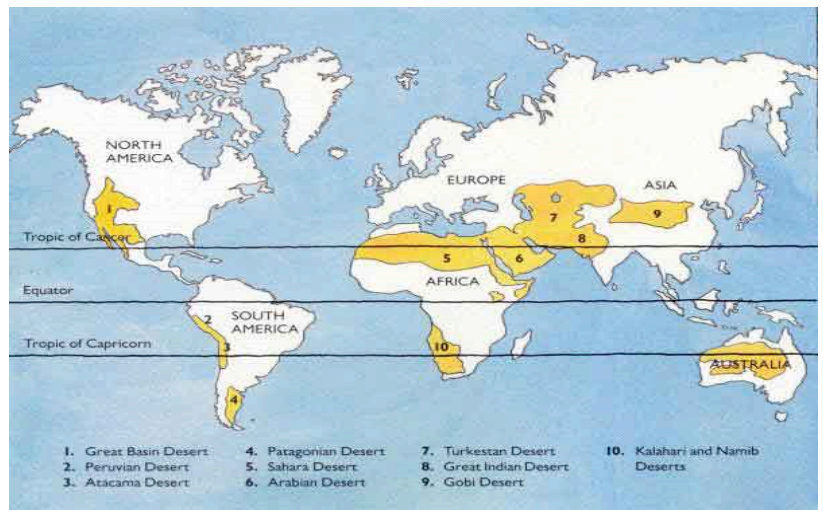


Fig. 2: Map of the globe that shows where the main deserts are

How do deserts influence people's lives?

The harsh climate makes life difficult for people. Life is difficult because the lack of water and rain means there is little water to drink or to use to grow crops. Many desert tribes such as the Australian Aborigines and the Tuareg of North Africa have survived as nomads. Nomads wander around from one area to the next looking for food, never staying for too long in one place because there is so little to eat, even in a large area.



Fig. 3: Tuareg people

What impact do people have on deserts?

Desertification, when areas become drier and sandier, is an increasing problem in the world. People can cause further desertification by removing trees and farming livestock (cows and sheep) which eat plants. The plants and trees help stop the soil being eroded. Erosion is when soil is washed or blown away: without soil trees and plants find it harder to grow.

Do deserts have seasons?

Deserts tend to be hot all year round with no real seasons, as they are always hot and dry. The Gobi desert in Mongolia is an example of a cool desert. Though hot in summer, it does have a cold winter.

Do any plants survive in the desert?

There are some plants in the desert. Indeed a common misunderstanding people have about deserts is that they are barren and lifeless; however several kinds of plants and animals are able to live in the desert. The plants that do survive have special adaptations. For example, the cactus has a tough outer skin to resist the heat and is able to store large amounts of water on the rare occasions when rain falls. Some seeds can survive for long periods, months or even years, waiting for rain. When rain does eventually fall they mature and bloom very quickly and shed more seeds, which in turn, will lie in wait for the next rains.



Fig. 4: Cactus

How do animals survive in the desert?



Fig. 5: Sidewinder snake

Animals such as insects, camels, lizards, snakes, and cougars live in deserts. Similarly to plants that live in the desert they have special adaptations. The sidewinder snake has a distinctive side-winding movement to ensure that not all of its body is touching the burning sand at any one time. A camel can store great amounts of water to sustain it for long periods without drinking. The camel also has the capacity to foam at the mouth when it overheats, just like we sweat. The foam spreads over parts of the animal's body and then evaporates in the sun, so reducing its temperature.



Fig. 6: Camel

Summary

Deserts are usually near the equator and are the hottest and driest of the major climate zones. It is difficult for plants, animals and people to survive in the desert because of the lack of water and rain. The few people who do live in the desert have to constantly move around to find food and the animals and plants that live there have special adaptations to help them survive.

References and sources

Text

http://www.bbc.co.uk/weather/features/weatherbasics/zones_desert.shtml

http://www.ace.mmu.ac.uk/eae/Climate/Older/Desert_Climate.html

Images

Fig. 1:

http://www.bbc.co.uk/weather/world/city_guides/results.shtml?tt=TT000180

Fig. 2: Map of the globe that shows where the main deserts are

<http://www.leo.lehigh.edu/envirosoci/weather/bitsofbiomes/deserts.htm>

Fig. 3: Tuareg people

<http://www.aworldtowin.net/reviews/Touareg.html>

Fig. 4: Cactus

<http://cdevroe.com/photos/arizona-cactus/>

Fig. 5: Sidewinder snake

<http://www.greatestplaces.org/questions/week24a.htm>

Fig. 6: Camel

http://images.google.co.uk/imgres?imgurl=http://fohn.net/camel-pictures-facts/the-pictures/Arabian-Camel-800x600.jpg&imgrefurl=http://bsnyderblog.blogspot.com/2009/02/do-you-need-integration-patterns-you.html&usq=__Hd8IybV1JaSAgrzqjIxod8wbpN8=&h=600&w=800&sz=57&hl=en&start=1&um=1&tbnid=kEQCTZihmRfTM:&tbnh=107&tbnw=143&prev=/images%3Fq%3Dcamel%26hl%3Den%26sa%3DG%26um%3D1

Date

T: understand a report on desert climates

- 1) Find and copy a subheading e.g. 'Where do you find desert climates'?
- 2) What is the world record temperature?
- 3) What does humidity mean?
- 4) Name two deserts.
- 5) Name two countries where there are large areas of desert.
- 6) Why is life difficult in deserts?
- 7) Name one tribe who live in a desert.
- 8) How do people cause desertification?
- 9) Name a cool desert.
- 10) Give one adaptation that a plant has to help it survive in the desert.
- 11) Give one adaptation that an animal has to survive in the desert.
- 12) In what way is a camel similar to a human?

Date

T: understand a report on desert climates

- 1) Any subheading (except 'Where do you find desert climates')
- 2) The world record temperature is 58°C.
- 3) Humidity means how much water there is in the air.
- 4) Sahara / the Simpson / Great Sandy / the Sonora desert
- 5) Iran / Iraq / Saudi Arabia / South Africa.
- 6) Life is difficult because the lack of water means there is little water to drink or to use to grow crops.
- 7) Australian Aborigines / Tuareg.
- 8) People cause desertification by removing trees and farming livestock, which eat plants.
- 9) A cool desert is the Gobi desert in Mongolia.
- 10) Cactus - store large amounts of water / tough outer skin
Seeds waiting for rain
- 11) Camel - store great amounts of water / foam at the mouth to prevent overheating
Sidewinder - distinctive movement
- 12) A camel is similar to a human because they foam at the mouth just like we sweat.