

**Hot, warm or coastal?**

Deserts tend to be hot during the daytime, but cold at night since there are no clouds to keep in the day's heat. Cool deserts such as the Gobi desert experience frequent strong winds, usually from a consistent direction. Coastal deserts such as the Namib Desert experience coastal fog which brings water to the high sand dunes.

**Activities:**

Draw up a chart to show the difference between hot, warm and cool deserts. Include features such as rainfall, night-time temperature, daytime temperature, landscape etc. Use the internet to find the information you need – [The Desert Biome](#) is a useful source of information. Compare with similar information about your own location. What do you notice?

**Nearest desert**

The nearest deserts to the UK are the Sahara desert and the Arabian desert. Both are hot deserts.

**Activities:**

How near is 'near'?

Using an atlas, measure the distance to the closest desert. Check the scale used and calculate the measured distance. Check both the Sahara and the Arabian desert. How far is it to the nearest desert? If you were going to go there, you are highly unlikely to be able to travel along the straight line you used to measure the distance to the desert. To consider how to get there, go to [Tourism](#)

The Sahara desert is the largest desert in the world, covering 3,500,000 square miles (9,065,000 square kilometres) of North Africa. How big is the UK? How many United Kingdoms could you fit into the Sahara desert?

**Temperature**

For information on the climate of the Sahara desert visit this [website](#)

**Activities:**

What is the maximum temperature difference between daytime and night-time?

What is the mean, median and mode daytime temperature?

Find out the same information for night-time temperatures.

## Weather

Many deserts are windy. Some winds are so persistent that they have their own names, for example the Khamsin in Algeria and the Chubaseos in North America. Desert winds can pick up sand and dust, blowing them around in storms which make it hard to see or breathe. These strong, dusty winds wear away rocks, creating some strange shapes. Sand grains are rubbed together within the winds making them smooth and round.

Rain is very rare in the desert. Some are dry for more than ten years. Animals and plants must take advantage of the rain when it does happen. Plants flower after rain, carpeting the desert. They dry out and leave their seeds ready to take advantage of the next rain, however long the wait. Frogs lay their eggs in rain pools. Their tadpoles must mature quickly, before the pools dry out.

## Activities:

Can the children answer the following questions:

Which desert receives the least rain? Which desert receives the most? Has it ever snowed in the Sahara desert?

They could also generate their own weather-based questions to answer.

## Animals

Although the conditions are harsh, some animals not only survive but thrive in the desert. Desert squirrels use their bushy tails as a sunshade during the day and a warm blanket at night. Elf owls hunt at twilight when it is cooler; they nest underground where it is cooler. Woodpeckers nest in the cool holes in damaged cacti. Many animals soak up the warmth during the day and use it to keep themselves warm at night. Smaller creatures such as insects, rodents and reptiles thrive because they need so little water. Some hide from the heat underground, others hide from the cold.

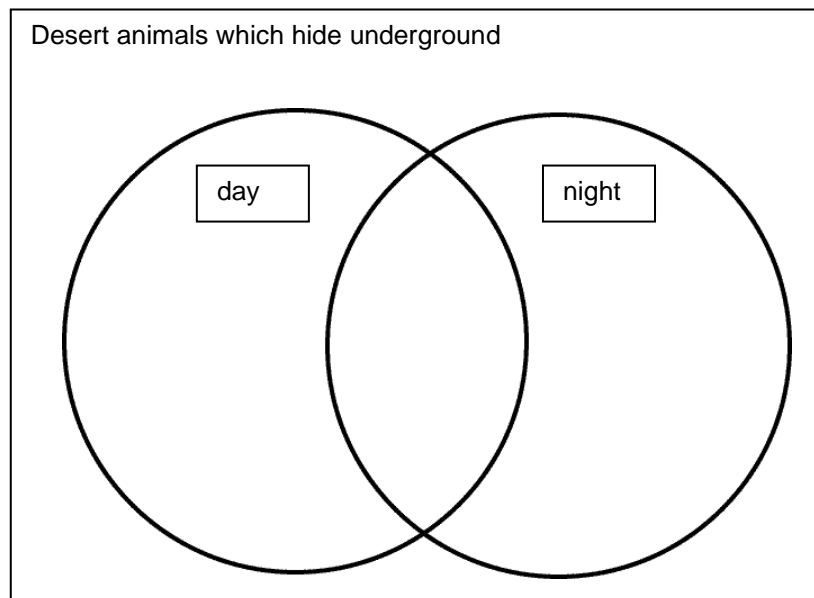
Desert animals include the addax antelope, barn owls, camel, cape hare, civet, dama deer, desert hedgehog, dorcas gazelle, dromedary, dung beetle, Egyptian vulture, fan-tailed raven, Fennec fox, flamingo, gazelle, gerbil, horned viper, hyena, ibex, jackal, jerboa, lesser bustard, lizard, locust, mouse, Nubian bustard, oryx, ostrich, peregrine falcon, porcupine, sand cobra, sand fox, scorpion, skink, shrew, slender mongoose, spiny-tailed lizard, spotted hyena, veiled chameleon, viper, etc.

Take the [Animal Loop trail](#) around the Desert Tortoise Natural Area (DTNA) in Kern County, California.

The [living desert](#) has lots of information about desert animals, including factsheets on certain animals.

## Activities

Draw a two-circle venn diagram and label as shown. Research desert animals to find out where they belong on the diagram. What other characteristics do the creatures in each section have in common? How do larger animals keep cool?



### Plants

Some plants hide underground, with just a few leaves above the surface until it rains. They then flower quickly, carpeting the desert. The plants then dry out and leave their seeds ready to take advantage of the next rain, however long the wait. Creosote bushes drop their leaves when it is dry and grow them again when it rains. Other plants have thick skins, small shiny leaves and spines. Cacti have no leaves. They store water in their stems, protected by their thick skins and spines.

Areas at the edges of deserts can be irrigated to grow plants and stop the desert from spreading.

According to [this website](#), deserts are second only to tropical rainforests in the variety of plant and animal species that live there. Take the [Plant Loop trail](#) LINK around the Desert Tortoise Natural Area (DTNA) in Kern County, California.

### Activities:

Ask the children to explore the different fauna of the desert and consider how they could organise the information to share with others. Would a Venn or Carroll diagram be useful? A pie chart? How should the different parts of the chosen diagram be labelled and what title could the diagram be given?

### Human Settlements

Human settlements tend to occur where there is water. Water can be found at an oasis. Here, a river running through the desert or bubbling up from underground provides the water, though it may have to be accessed through a well. An oasis may become a small settlement for both wildlife and people. Trees may grow too, helping to make the settlement more permanent.

Alice Springs in Australia may not have any rain for years but the town survives because it is located on top of underground aquifers. Some desert people are nomads, living in tents and travelling around to find grazing for their animals and fresh water. Others settle in areas within a daily walk to a well.

### Activities:

Ask the children to explore a population map of the world alongside one of climatic regions. What do they notice? What is the given population for each desert area? Which desert has the largest number of inhabitants per square kilometre/mile? Which has the least?

### Nancy Cory Elementary School

[Nancy Cory Elementary School](#) is in the Lancaster School District in California. The area is part of the Mojave Desert and is known for the many Joshua trees that grow nearby.

### Activities:

Explore the school information for Nancy Cory School, or one of the others listed. How is it the same as your school? How is it different?

### Kerzaz

[Kerzaz](#) is an ancient city in the Sahara desert. People there use water very carefully – check the precipitation graph to see why.

### Activity

Kerzas is at Latitude 29.4500, Longitude -1.4167. Find out your own latitude and longitude. Use the information to find the distance between your location and Kerzaz.

The calculation is complex, but there are websites that will do it for you - <http://www.csghnetwork.com/ldistcalc.html> , <http://www.nhc.noaa.gov/gccalc.shtml> . Alternatively, use google maps.

### Tourism

You can go on a virtual tour of the desert to help prepare yourself for a real visit.

[Tramline](#) and the [Chihuahuan Desert Wildlife Rescue](#) take you to Chihuahuan Desert (NB. Page 2 is a broken link. Go to page three, then return to page 2. You will then be able to choose which desert to find out about).

Deserts offer opportunities for some fun sports. Sand boarding, climbing and driving sand buggies are popular activities. Hot dry air in deserts can dry out remains and keep them preserved for thousands of years before they are discovered. Mummified bodies of people, rock art and dinosaur fossils have all been found in deserts. So you could go and see rock art and go fossil hunting too.

### Activities:

Research these fun sports. How many people do them at the same time? How much do they cost? If you had a budget of £200, how many could you do?

Plan an activity day that includes some of these activities. The children could make a timetable.

### Plan a visit

Where would you like to go? To the nearest desert, or would it be better to head to a town such as Kerzaz? Alternatively, you could plan a visit to Nancy Cory Elementary School in the Mojave Desert.

### Activity:

Plan the trip! Each child will need to decide where they want to go before planning their adventure. They could work together in groups, exploring the best route to take. It may well work out cheaper to travel as a group. When considering accommodation, a family room will work out much cheaper than the same number of singles. Consider budgets.

### Journey and route

How will the children get there? Areas of both land and sea will need to be crossed, so trains, boats, planes of varying sizes may be needed. [The trainline](#) LINK offers details of trains times and prices, though time of travel can have a big effect. The same is true of flights. Children may need to search a number of sites such as [Skyscanner](#) or [Cheapflights](#) to find what they want. You might decide to give the children a time to leave, for example after 9am on a particular date, to help with searches. A return date and time could be useful too.

### Cost

There is much to include. As well as the cost of the journey, children will need accommodation, food and drink, money for entertainment and souvenirs too.

### Activities:

How much will the children's planned trips cost? How do these compare with a standard summer holiday in a warmer country? The children will have to decide what they consider to be a 'standard' holiday – perhaps a mixture of those they have experienced themselves?

**What to take**

All flights specify a baggage allowance. If more than one flight is to be taken, then children should work with the smallest allowance. What to take will depend upon the type of desert the children are visiting.

Once the baggage allowance is known, children can pack a bag within the baggage limit. If they assume that a typical suitcase or bag weighs 4kg, how much weight do they have left for everything else?

Assume the following weights for clothing:

T shirt or light top 250 g; jeans 1 kg; trainers 2.5 kg; jumper/cardigan 400 g; sunglasses 100 g; each single item of underwear 100 g; dress 350 g; swimwear – girls 250 g, boys 150 g; canvas shoes or sandals 350 g. Alternatively, wear the real items and round weights to the nearest 10 g.

Once there, children might like to take a day trip into the desert. Use [Desert 101](#) to find out what to take, then calculate the weight of the rucksack they would need to carry.

**Resources**

Although deserts appear empty, they hide valuable resources, usually below their surface. Those hidden are oil, gas, salt, precious stones and minerals. Opals are found in the Australian desert, in fact almost all of the world's opals are mined there.

**Activity:**

Ask the children to explore world resources maps alongside those of the desert regions. What are the desert's natural resources? Draw a chart to compare the resources from the world's major deserts.