

**DISCOVER**  
our **AMAZING**  
**WORLD**

CLIL READERS

# The **DESERT** Biome

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# Introduction

All plants and animals on our planet have adapted in order to survive. Plants and animals which live in cold habitats, near the North Pole, have developed very differently to those in hot habitats, like the Sahara Desert. Different adaptations allow plants and animals to survive in their unique ecosystems. A camel for example, has wide feet for walking on sand, and can survive a long time without water. An ecosystem, like that of a desert, or of a rainforest, is a community of flora and fauna that all need each other in order to survive in that specific habitat. A large group of ecosystems, which share similar geographical and climatic habitats, is called a biome.

Biomes are life zones with a shared climate and geography. The desert biome for example, is mostly hot, rocky or sandy and has little rainfall. A number of different systems are used for defining the number of biomes, whether aquatic or terrestrial. The major terrestrial types are the Tundra Biomes, the Forest Biomes, the Grassland Biomes, and the Desert Biomes.



# The Tundra Biomes

These very cold biomes are found in the region close to the North Pole, called the Arctic tundra, and in very high mountainous parts of the world, where it is called alpine tundra. In the Arctic tundra, it is extremely cold, with average temperatures between 40° F and -25° F. The winter is long and the summer is very short. It's difficult for plants to survive because of the short growing season, 50-60 days per year. It also experiences low levels of precipitation, on average only 6-10 inches annually. In the Arctic tundra and the alpine tundra, cold-resistant plants, such as lichens, mosses and grasses grow. They are usually small with shallow roots to adapt to the frozen ground. Hibernation, migration and thick fur are all adaptations that have helped mammals, like the polar bear, the caribou, and the arctic fox to survive in these extreme biomes.



# Myth II

Animals have always played an important part in the lives of humans. The tribes of North America have many myths about how the animals around them were created. This is a story about how the rattlesnake, one of the most characteristic animals of the North American deserts, got its rattle.

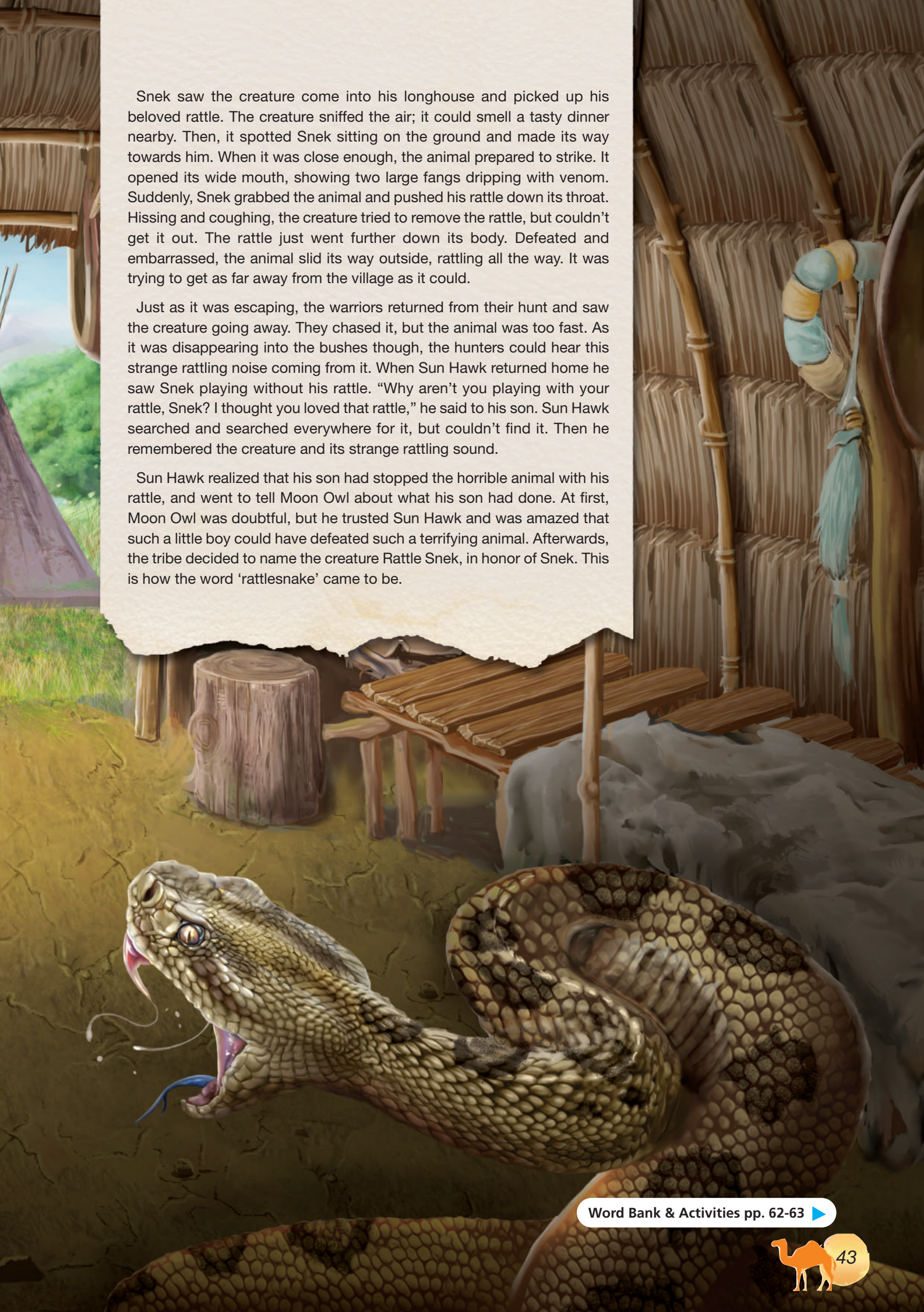
## How the Rattlesnake Got its Rattle

Once, there lived a little boy called Snek. Snek's family was part of the Lenni Lenape tribe.

Snek, like the rest of his family, lived in a longhouse, and his favorite toy was a rattle made out of dried fruit shells and nuts. One day, while Snek was playing with his rattle, a messenger came to his village. He had come from another tribe to warn the villagers that there was a dangerous, slithering creature roaming around their land. Moon Owl, the tribe's chief, thought long and hard. He called all the warriors and hunters in the village together. "We must stop this creature before it attacks us. If it comes into the village it will surely kill one of us. Maybe even one of our children!" said Moon Owl. So, they decided to hunt the creature and kill it before it did any harm.

While the chief and his men were off hunting, a slimy creature reached the village. It headed straight for the longhouse where Snek was playing. Snek's father, Sun Hawk, had gone with the other hunters to find the creature. His mother, Daisy Flower, was in the chief's longhouse with the other mothers, preparing a feast for when the hunters came back. But the creature was getting closer and closer to Snek.





Snek saw the creature come into his longhouse and picked up his beloved rattle. The creature sniffed the air; it could smell a tasty dinner nearby. Then, it spotted Snek sitting on the ground and made its way towards him. When it was close enough, the animal prepared to strike. It opened its wide mouth, showing two large fangs dripping with venom. Suddenly, Snek grabbed the animal and pushed his rattle down its throat. Hissing and coughing, the creature tried to remove the rattle, but couldn't get it out. The rattle just went further down its body. Defeated and embarrassed, the animal slid its way outside, rattling all the way. It was trying to get as far away from the village as it could.

Just as it was escaping, the warriors returned from their hunt and saw the creature going away. They chased it, but the animal was too fast. As it was disappearing into the bushes though, the hunters could hear this strange rattling noise coming from it. When Sun Hawk returned home he saw Snek playing without his rattle. "Why aren't you playing with your rattle, Snek? I thought you loved that rattle," he said to his son. Sun Hawk searched and searched everywhere for it, but couldn't find it. Then he remembered the creature and its strange rattling sound.

Sun Hawk realized that his son had stopped the horrible animal with his rattle, and went to tell Moon Owl about what his son had done. At first, Moon Owl was doubtful, but he trusted Sun Hawk and was amazed that such a little boy could have defeated such a terrifying animal. Afterwards, the tribe decided to name the creature Rattle Snek, in honor of Snek. This is how the word 'rattlesnake' came to be.

# Desert Landscapes & Features

## Word Bank

(pp. 14-15)

**landscape** (n) = scenery

**feature** (n) = characteristic

**Tuareg** (n) = Berber nomadic people who live in the Sahara desert

**caravan** (n) = a group of people traveling together

**fertile** (adj) = rich, able to support plant growth

**aquifer** (n) = an underground layer of rock or sand that can absorb and hold water

**artesian well** (phr) = a deep hole in the ground which leads to a supply of underground water that is forced to the Earth's surface

**cluster** (n) = a small group

**vast** (adj) = extremely large

**irrigated** (adj) = having a constant supply of water so that plants can grow

**crop** (n) = a plant that is grown in large amounts so that humans can eat it

**shelter** (n) = a place that offers protection from danger, extreme weather, etc.

**nearly** (adj) = almost

**march** (v) = to walk in a military way

**characteristic** (adj) = typical

**mass** (n) = a large amount of sth

**ridge** (n) = a long, narrow area of raised land

**still** (adj) = not moving

**pattern** (n) = the way sth is arranged, designed, etc.

**structure** (n) = form

**essentially** (adv) = basically

**erode** (v) = to destroy sth over time by constantly damaging its surface

**grain** (n) = a tiny, hard piece of sth (e.g. salt, sand)

**loose** (adj) = not held tightly together

**breeze** (n) = a gentle wind

**obstacle** (n) = an object that blocks the way to sth

(pp. 16-17)

**playa** (n) = an area of flat land in a desert which can become a shallow lake

**flat** (adj) = smooth

**interior** (n) = the inside part of sth

**evaporate** (v) = to change from a liquid into a gas

**mud** (n) = soft, wet soil

**process** (n) = procedure

**tectonic plate** (phr) = a huge piece of the Earth's surface which shifts very slowly, often causing earthquakes and volcanic eruptions

**erosion** (n) = the slow destruction of sth over time by sth else constantly damaging its surface

**landslide** (n) = a large amount of earth, rocks, and other materials falling off a cliff or a mountain and damaging the surface below

**meteor strike** (phr) = an amount of space rock entering the Earth's atmosphere and hitting the Earth's surface

**salt deposit** (phr) = salt which was once contained in a pool of water but which has now been left on the ground as the water dried up

**haboob** (n) = a strong and violent desert storm which is able to raise sand into the air

**fast-moving** (adj) = drifting rapidly


**dense** (adj) = thick


**tornado** (n) = a violent wind storm which has a single column of air that spins very fast


**pick up** (phr v) = to lift

**caravaneer** (n) = a person who travels in a caravan

**subjected** (adj) = affected by

**shield** (n) = 

**eyelash** (n) = 


**nostril** (n) = 

## Pre-Reading activities

1 a) Choose the word/phrase that best completes each sentence.

• Bolivia • North America • high • sand • drought • rock • wide  
• beaches • glass • water evaporation • sandstorms • hills

- Some sand dunes in the desert can be more than 3,000 feet .....
- Flat areas of salt land in the desert have been created by .....
- Sand dunes can be found in deserts, semi-arid areas, and on .....
- Sand is basically very small pieces of ..... that has been made smaller over time.
- Haboobs carry huge amounts of ..... into the air.
- Haboobs occur in the Sahara Desert and the desert regions of ..... and Asia.

b)  Listen, read, and check if your answers were correct.



## While-Reading activities

2 Read the text, and choose the correct answer A, B, C, or D.

- Oases are very important, because they provide
  - a cluster of palm trees for food.
  - water and shelter for people.
  - a vast number of crops.
  - a place to begin crossing the desert.

- Which is NOT true about sand dunes?
  - They can be found near the sea.
  - They are formed when sand hits against a tree or a rock.
  - They come in different shapes.
  - They hardly ever move.

- Most playas are formed
  - when salt, sand, and mud are left behind when water evaporates.
  - when being covered by extremely salty water.
  - by the movement of the wind.
  - by large volcanoes that are nearby.

- Haboobs often occur
  - by rising cold and warm winds.
  - when a sandstorm and a tornado hit each other.
  - in the northern Sahara.
  - at the end of a thunderstorm.

3 Choose the correct word/phrase.

- Playas can be created by tectonic **plates/landslides** moving underground.
- Wind **erosion/grain** can do a lot of damage to rocks in the desert.
- When large amounts of desert material are carried into the air, a **dense/still** wall of sand forms.
- A meteor **strike/breeze** can move a lot of sand very quickly, and badly damage the ground.
- A large **mass/cluster** of sand shaped by the wind and formed into a ridge is called a sand dune.

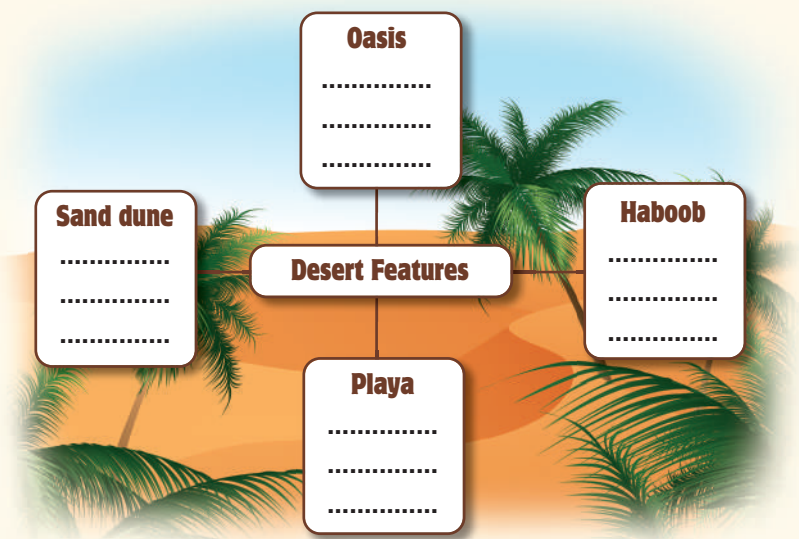
4 SUBJECT-SPECIFIC VOCABULARY: Fill in: *deposits, artesian, landslides, fertile, caravans.*

- People have been traveling in ..... in the desert for hundreds of years.
- The oasis is the only ..... ground found in the desert.
- When water evaporates from lakes in the desert, it leaves large salt .....
- A(n) ..... well supplies water to an oasis.
- ..... can also be responsible for the creation of playas.

## After-Reading activities

5 a) SUBJECT-SPECIFIC VOCABULARY: Complete the spidergram with the words/phrases below.

- strong winds • artesian well • salt deposit
- fertile • sandstorm • breeze • obstacle
- evaporate • shelter • flat surface
- wall of sand • grains



b) Use the information from the spidergram to give a talk about the different features of arid deserts.

# Myth I

## Word Bank

(pp. 40-41)

**monster** (n) = a supernatural being

**form** (n) = appearance; shape

**pray** (v) = to ask God for help

**collection** (n) = a group of similar things

**tale** (n) = story

**attendant** (n) = a helper, person employed to serve

**come across** (phr v) = to meet or find by chance

**magnificent** (adj) = very impressive

**chase** (v) = to run after sth/sb

**beast** (n) = a wild animal

**grow** (v) = to become

**escape** (v) = to get away

**keep up** (phr v) = to go at the same speed as sth/sb else

**confused** (adj) = not knowing what to do

**be in trouble** (phr) = to have difficulties

**suddenly** (adv) = unexpectedly

**exhausted** (adj) = extremely tired

**take pity on sb** (phr) = to feel sorry for sb

**ruined** (adj) = falling apart, collapsing

**impatient** (adj) = upset because you are waiting for sb/sth for too long

**secretly** (adv) = without being noticed

**chilling** (ad) = frightening

**horrified** (adj) = very afraid

**panic** (v) = to feel very worried and afraid

**fear** (v) = to be afraid of sth

**greatly** (adj) = very much

**wealthy** (adj) = rich

**satisfied** (adj) = happy

**evil** (n) = sth that is very bad and can harm you very much

**vanish** (v) = to disappear

**palace** (n) = a place where kings and queens live

**ordeal** (n) = a very unpleasant experience

**realize** (v) = to understand

## Pre-Reading activities

1 a) Choose the word/phrase that you think best completes each sentence.

- 1 Desert people feel that the desert is a **safe/dangerous** place.
- 2 A prince **got lost while hunting/ran away from home**.
- 3 The prince found a woman who was **sleeping/crying**.
- 4 The prince **asked the woman for directions/let the woman ride on his horse**.
- 5 The prince realized that the woman wanted to **harm/marry** him.
- 6 The prince managed to get back to his home after he **prayed/fought and won**.

b) Listen, read, and check if your answers were correct.

## While-Reading activities

2 a) Decide if the following sentences are T (true) or F (false).

- 1 The king's attendant refused to go hunting with the prince. ....
- 2 The prince caught a beautiful animal. ....
- 3 The prince realized that he needed to get home as soon as possible. ....
- 4 The woman asked the prince to stop at a ruined building. ....
- 5 The woman hid her identity from the prince. ....
- 6 The woman did not stay in the ruined building for long. ....
- 7 The ghouls suggested that the prince should pay his enemy. ....
- 8 The prince escaped from the ghouls after he followed her advice. ....

b) Correct the false statements.





**3 Use the correct form of the words in parentheses to complete the sentences.**

- 1 The ghouls' ..... voice scared the prince. **(CHILL)**
- 2 The prince was allowed to hunt in the desert only if one of the king's ..... was with him. **(ATTEND)**
- 3 *1001 Nights* is a ..... of Arabian stories. **(COLLECT)**
- 4 The prince became ..... afraid when he realized that the woman was a ghoul. **(GREAT)**
- 5 The woman told the prince that she was ..... because she had been traveling through the desert. **(EXHAUST)**
- 6 The prince was a ..... king's son. **(WEALTH)**
- 7 After waiting for the woman for some time, the prince became ..... and went to look for her. **(PATIENT)**
- 8 The woman suggested that the prince should give his enemy money to keep them ..... **(SATISFY)**

**4 Fill in with: *panicked, took, keep, come, prayed, escaped.***

- 1 The prince chased the wild animal for some time but it .....
- 2 The assistant could not ..... up with the prince so they became separated.
- 3 The prince ..... when he heard that the woman wanted her children to eat him.
- 4 The prince ..... for protection against the ghoul.
- 5 The prince ..... pity on the woman and decided to help her.
- 6 When the prince and his assistant went hunting they were hoping to ..... across a big animal to chase.

**After-Reading activities**


**5 What can we understand about the prince from the story?**

- A He did not obey his father.
- B He nearly experienced disaster.
- C He never hunted again.
- D He became angry with the woman.

**6 a) Read the story and take notes using the following headings:**


<b>PLACE</b>	
<b>CHARACTERS</b>	
<b>EVENTS</b>	
<b>CLIMAX EVENT</b>	
<b>END OF STORY/FEELINGS</b>	

**b) Use your notes from Ex. 6a to give the class a summary of the myth.**


**7  Imagine you were the prince and you had just heard the ghoul talk to her children. How would you feel? What would you do? Tell the class.**

# Review

## Listening activities

**1**  Listen to two students. For questions 1-4, choose the correct answer (A, B, C, or D).

- 1 What are the speakers mainly discussing?  
**A** the difference between the oases we see in the movies and real ones  
**B** a very strange oasis in the Chihuahuan Desert  
**C** the different types of oasis in the Saharan and Arabian deserts  
**D** a rare type of plant species in the Ciénegas oasis
- 2 What do we learn about the Cuatro Ciénegas oasis?  
**A** It is the only oasis in northern Mexico.  
**B** Humans have been trapped there.  
**C** It had once dried up.  
**D** It is home to some species of sea plants and animals.
- 3 What is a 'poza'?  
**A** a common desert animal  
**B** a type of sand dune  
**C** a pool of water  
**D** an unusual plant
- 4 What does the woman say about the Sahara Desert?  
**A** She points out the difference between Saharan oases and the Cuatro Ciénegas oasis.  
**B** She shows how its oases are very similar to the Cuatro Ciénegas oasis.  
**C** She explains why it is used in movies so much.  
**D** She compares it to the Chihuahuan Desert.

**2**  Listen to a writer. For questions 1-4, choose the correct answer (A, B, C, or D).

- 1 Where is Paul Booth appearing as a guest?  
**A** on a TV show  
**B** in a lecture  
**C** on a radio show  
**D** at a conference
- 2 What is Paul Booth mainly talking about?  
**A** a buried treasure that he has found in the desert  
**B** a mysterious oasis that people have been searching for  
**C** an ancient civilization that archaeologists have discovered  
**D** a hidden tomb that explorers have been searching for
- 3 How did Hamid Keila end up in Zerzura?  
**A** He was taken to the city by people who lived there.  
**B** Some of his friends took him there.  
**C** People from Zerzura invited him to their city.  
**D** He went there looking for treasure.
- 4 Why does the writer say: "But there's more to Zerzura than myths and old stories."?  
**A** to present another myth about the people of Zerzura  
**B** to explain the usefulness of myths in the search for Zerzura  
**C** to imply that he will be telling more stories about Zerzura  
**D** to introduce the next part of his talk



# Amazing Facts

## Did you know?

The Marathon Des Sables is a six-day 'ultra-run' that covers a 3) ..... of 156 miles in the Sahara Desert.

Many desert plants release toxic 5) ..... into the soil to kill their neighboring plants so that they don't have any 6) ..... for water.

A German physicist has calculated that in six hours, the world's deserts get more 8) ..... energy than humans use in a year.

The Valley of the Whales in the Western Desert has a collection of 1) ..... of whales that lived in this area when it was an 2) ..... 50 million years ago.

The largest desert in the world is the Antarctic 4) ..... Desert covering an area of 5.5 million square miles.

Camels that have one 7) ..... are called dromedary camels, while those that have two are called Bactrian camels.

The first whole 9) ..... eggs were discovered in the Gobi Desert in Mongolia in 1923.

Fennec foxes can go without water for extremely long periods of time. Their bodies have developed the ability to 10) ..... water from the food they eat.

The desert tortoise can 11) ..... for almost a year without water.

The Rub al Khali (literally, 'quarter of emptiness') in Saudi Arabia is the world's largest sand sea. The Empty Quarter, as it is commonly called, features more than 250,000 square miles of 12) ..... sand.

1 Complete the sentences using the words below.

- hump • solar • Polar • competitors • fossils
- distance • absorb • unbroken • ocean • survive
- dinosaur • chemicals

2 **ICT** In groups, collect more information about the desert biome, and prepare a Yes/No quiz.



# The **DESERT** Biome

Take a trip to the hottest place on Earth: the desert. A land of beautiful oases, amazing animals, and impressive sand dunes.

Learn about the plants, animals, people, and unique features of this beautiful place through stunning images, interesting facts, and engaging stories.

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