

# DISCOVER our AMAZING WORLD

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CLIL Readers



Express Publishing

# AN AMAZING

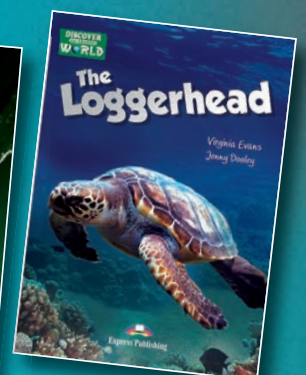
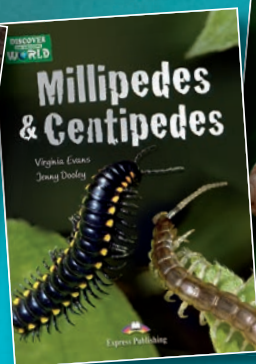
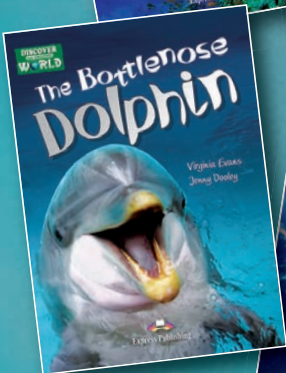
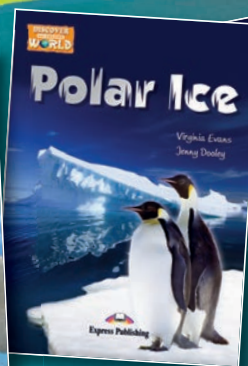
## Not Just a book ...

Levels A1 to B2

Express Publishing Discover Our Amazing World Readers is a brand new series of non-fiction titles which introduces learners to exciting topics related to our world. Learners enjoy the story as a reading text in several chapters with stunning photographs which help learners follow the story. Each chapter is accompanied by language activities to help comprehension and develop critical thinking. The accompanying Multi-ROMs provide a fully-dramatised recording of the story as well as a key to the activities and documentary style videos.

Great white sharks can smell a drop of blood in 100 liters of water. So, if an animal is bleeding in the ocean, the great white will be able to smell it from very far away.

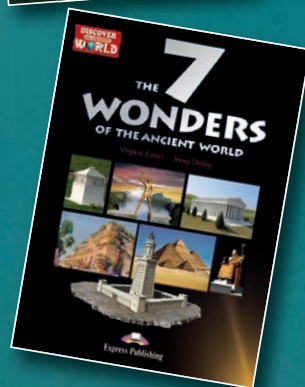
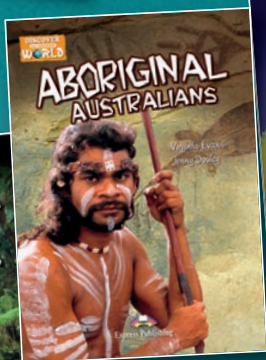
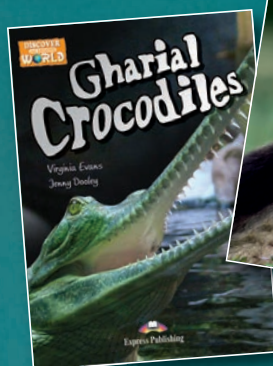
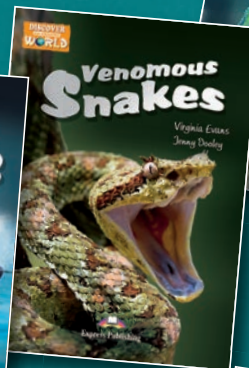
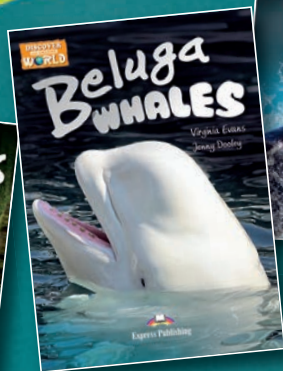
Female bonnethead sharks can reproduce without a male. Their young are exact copies of their mother.



# ADVENTURE!

Some people used the word 'Aboriginals' to refer to Aboriginal Australians. Using just that word is now considered offensive.

Sharks have very good vision, but scientists think that they may not be able to see colors.






DIVIDED INTO  
CLEARLY STRUCTURED  
CHAPTERS

# The Great White Hunts

Satisfied that no danger is present, the shark begins hunting. Great white sharks sometimes eat fish. In fact, when sharks are young, they feed mostly on small fish, squid and stingrays. This shark is an adult though, and today it swims past the few schools of fish that it sees. Sometimes adult great whites hunt schools of fish, but only when the schools are large enough to provide the shark with a huge meal. At the moment, this shark is looking for prey much larger than a fish. It swims towards the shore, the home of its favorite food.

The great white approaches the ocean's surface. It quickly spots its desired prey, a brown fur seal. The seal is about two meters long and probably weighs about 300 kilograms. The seal will be a good-sized meal for the shark if it can catch it. The seal is swimming just a half meter below the surface and is unaware of the shark. The shark circles around its target. It tries to decide whether or not it should attack.

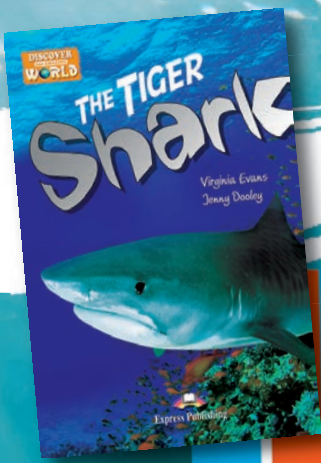


Seconds later, the shark attacks. The shark dives to a depth about 25 meters below its prey. Then, suddenly, it speeds towards the ocean's surface. The shark opens its mouth just before it reaches the seal. The shark's powerful jaws clamp onto the seal and they both fly two meters into the open air. The seal is still trapped in the shark's jaws as both animals splash back down into the water. The seal struggles to escape from the great white's teeth and claws at the shark's face. As the seal attacks the shark by scratching at the shark's face, the shark rolls its eyes back into its head to protect them from getting scratched. Instead of attacking the seal again and again, as might be expected of a large predator, the shark just holds the seal in its teeth underwater. The shark understands that if the seal does not die from loss of blood, it will run out of air in its lungs and drown. Unfortunately, the seal can't escape, and it soon bleeds to death. Once the seal is dead, the great white tears into it and eats it in seconds.



Great white sharks don't have eyelids.

Word Bank & Activities pp. 24-25 ▶

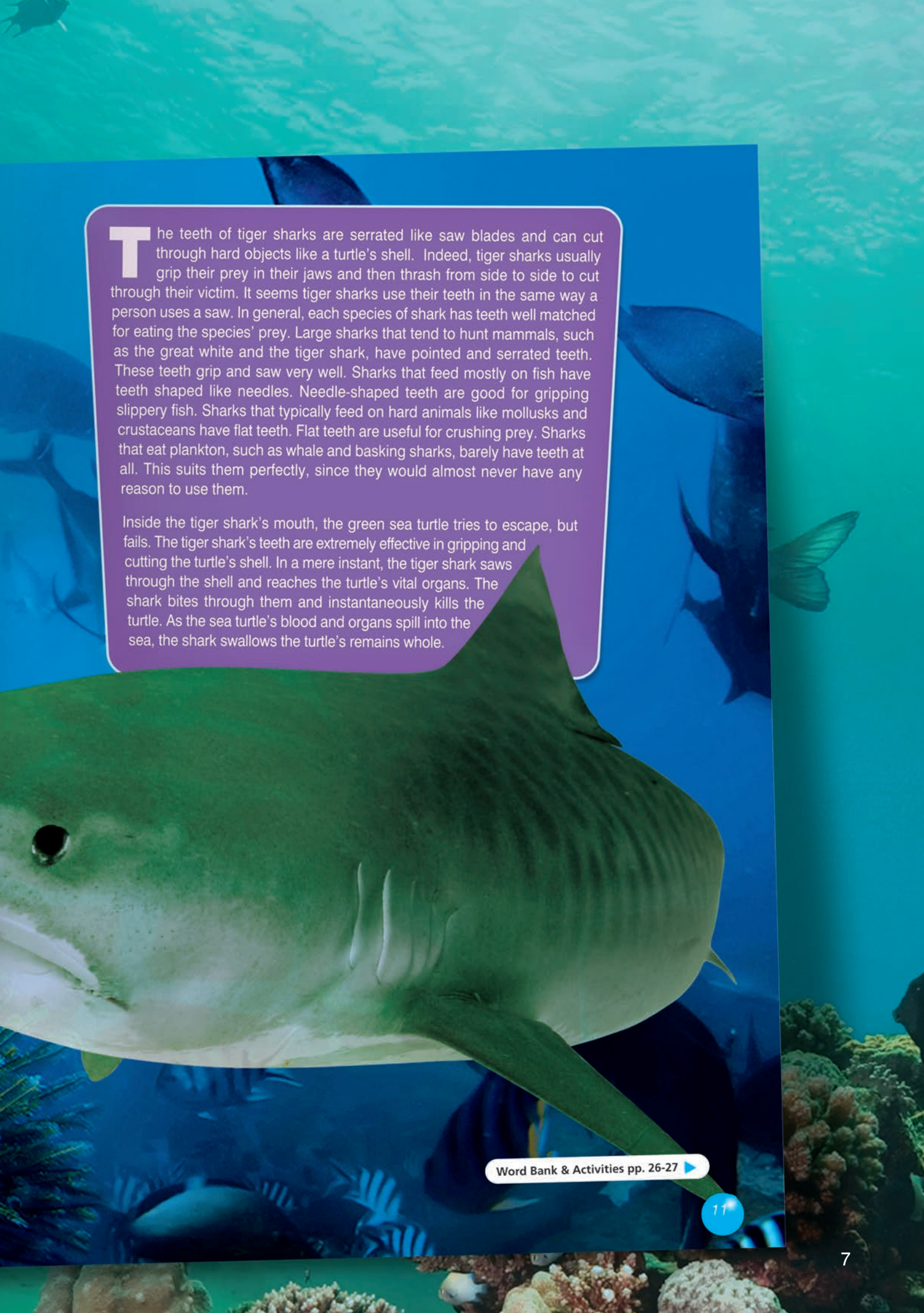


# Hunting for Prey

A green sea turtle glides through the water. It is the middle of the night, and the only source of light is the moon above. The turtle is heading for the shore so it can lay eggs on the beach. Meanwhile, a dark, three-and-a-half meter long shape drifts beneath the turtle. It is a tiger shark.

The tiger shark moves slowly because it does not want to alert its prey to its presence until it gets close enough to attack. In fact, tiger sharks move slowly most of the time, except when they attack. They move slowly, even when their potential prey can see them.

When they are heading for a new hunting ground, tiger sharks can swim up to 32 kilometers per hour. In this case, however, the sea turtle does not know that the tiger shark is there until it is too late. All of a sudden, the shark darts towards the sea turtle and grasps it in its mouth. The turtle struggles, but the tiger shark's teeth quickly saw through the turtle's shell.



**T**he teeth of tiger sharks are serrated like saw blades and can cut through hard objects like a turtle's shell. Indeed, tiger sharks usually grip their prey in their jaws and then thrash from side to side to cut through their victim. It seems tiger sharks use their teeth in the same way a person uses a saw. In general, each species of shark has teeth well matched for eating the species' prey. Large sharks that tend to hunt mammals, such as the great white and the tiger shark, have pointed and serrated teeth. These teeth grip and saw very well. Sharks that feed mostly on fish have teeth shaped like needles. Needle-shaped teeth are good for gripping slippery fish. Sharks that typically feed on hard animals like mollusks and crustaceans have flat teeth. Flat teeth are useful for crushing prey. Sharks that eat plankton, such as whale and basking sharks, barely have teeth at all. This suits them perfectly, since they would almost never have any reason to use them.

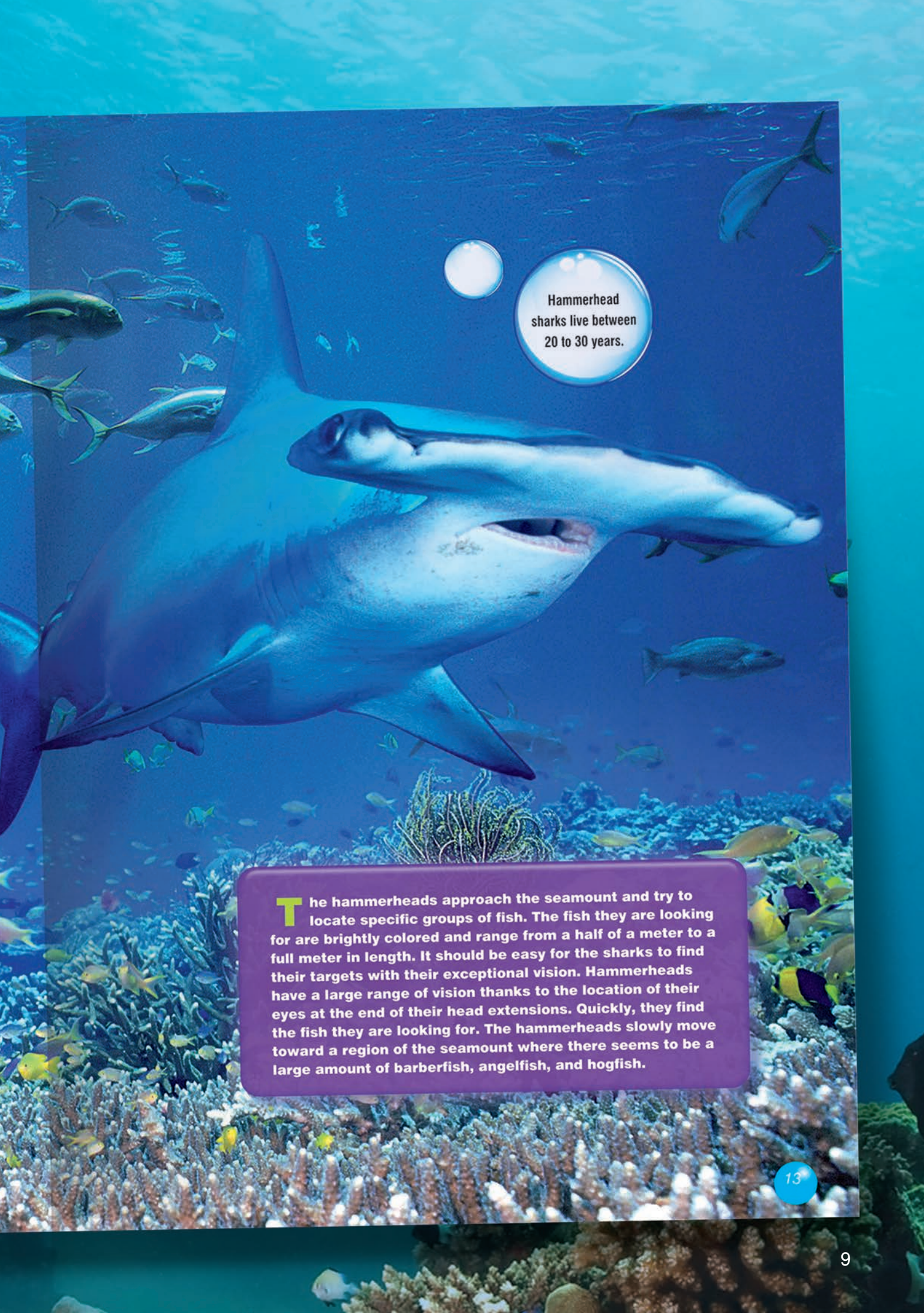
Inside the tiger shark's mouth, the green sea turtle tries to escape, but fails. The tiger shark's teeth are extremely effective in gripping and cutting the turtle's shell. In a mere instant, the tiger shark saws through the shell and reaches the turtle's vital organs. The shark bites through them and instantaneously kills the turtle. As the sea turtle's blood and organs spill into the sea, the shark swallows the turtle's remains whole.



# A Visit to a Seamount

At the moment, the entire school of hammerheads is moving in the same direction. As they swim in the school, they are joined by more individuals swimming up from the ocean floor. The sharks are going to a seamount, an underwater mountain that does not reach the ocean's surface. Seamounts and islands interact with ocean currents to create complex current patterns that support a wide range of ocean life. Because of this, islands and seamounts are usually home to a wide range of fish, coral and other sea life. Seamounts may be more attractive to sea animals, though, because their tops are underwater. This exposes more area to the ocean and gives reefs more room to grow on the seamount's surface. Unfortunately for the creatures that make reefs around seamounts and islands their home, the attractiveness of the seamounts also means that these reefs are great places for many aquatic predators to hunt.





Hammerhead  
sharks live between  
20 to 30 years.

**T**he hammerheads approach the seamount and try to locate specific groups of fish. The fish they are looking for are brightly colored and range from a half of a meter to a full meter in length. It should be easy for the sharks to find their targets with their exceptional vision. Hammerheads have a large range of vision thanks to the location of their eyes at the end of their head extensions. Quickly, they find the fish they are looking for. The hammerheads slowly move toward a region of the seamount where there seems to be a large amount of barberfish, angelfish, and hogfish.

# CATERERS FOR ALL STYLES AND NEEDS

## Before, While and After Reading Activities

### Reading in Context II

#### Pre-Reading activities

- 1 a) Based on the headline, what information do you think the text will provide?
- An essay about a man-eating shark on the loose.
  - A letter written by someone who was attacked by a shark.
  - A news story about a person who survived a shark attack.
- b) Listen, read and check.



## A Brush with Death: Bull Shark Attack

Paul de Gelder, a top Navy SEAL, was swimming close to shore as part of a training exercise one morning in the summer of 2009. He was heading back to the beach when he felt something bump against him in the water. Without warning, a massive bull shark clamped its jaws down tightly around his right arm and leg.

De Gelder tried to fight back and began hitting the shark's nose as hard as he could. The shark shook him like a rag doll, but lost its grip and de Gelder was freed. He immediately began to swim away. He was horrified when he was released. When he awoke, the doctors informed de Gelder that his right leg would need to be amputated. Grateful to have survived, de Gelder pushed his body to heal as quickly as possible. Doctors were amazed to find him doing one-handed chin-ups the day after his amputation surgery!

Keeping a positive outlook, de Gelder pushed himself even harder. With prosthetic limbs, he was able to retrain his body to do almost anything he could do before the attack. He could walk, run and even swim! De Gelder has written a book about his experiences and now gives talks as a public speaker to show others that anything is possible with a good attitude. His story is truly an inspiration.

#### Word Bank

- navy SEAL (n) = a member of the US Sea, Air and Land special operations force
- training exercise (phr) = activity to practise certain skills
- bump (v) = to hit with force
- massive (adj) = very big
- clamp (v) = to hold sth tightly
- to shake sth like a rag doll (phr) = to move sth backwards and forwards very violently
- to lose one's grip (phr) = to let go
- to break free (phr) = to escape from sth
- amputate (v) = to cut off a part of the body
- grateful (adj) = thankful
- heal (v) = to become well again
- surgery (n) = cutting open the body to treat injury or disease
- positive outlook (phr) = optimistic attitude
- prosthetic limb (phr) = false arm/leg
- public speaker (phr) = sb who makes a living by giving talks
- inspiration (n) = sb who is an example which people admire

#### After-Reading activities

#### While-Reading activities

- 2 Read the article and choose the correct answer from A, B, C or D.

- Paul de Gelder was swimming as part of a .....  
A surgery B inspiration C training exercise D public speaker
- A bull shark ..... its jaws down on his arm and leg.  
A climbed B clamped C crammed D clamped
- The doctors told him that his right leg would need to be .....  
A amputated B prosthetic C surgery D healed
- He was able to use a ..... to walk again.  
A public speaker B positive outlook C training exercise D prosthetic limb

- 3 Fill in the gaps with: rag doll, public speaker, bump, grip, heal.

- Paul de Gelder felt something ..... against him.
- The shark shook him like a .....
- It lost its ..... and he broke free.
- He pushed himself hard to .....
- Now he is a ..... and has written a book about his experience.

- 4 Choose from A, B or C to replace the following sentence in the text: "His story is truly an inspiration."

- His story is a warning about the dangers of the ocean.
- His story is one that offers encouragement to all of us.
- His story is a message of the importance of shark conservation.

- 5 Correct the summary.

Paul was swimming 1) away from/towards the beach when a bull shark attacked him. He started punching the shark on the 2) nose/mouth, and managed to break free. Unfortunately, his right 3) arm/leg was missing. Doctors told him that they had to 4) stitch/cut it off. Paul didn't lose courage. He had a 5) prosthetic/fake limb and soon he was able to walk, run and swim. He gives 6) lessons/talks to people to show that we can overcome problems if we really want to.

### Myths & Legends

#### Pre-Reading activities

- 1 a) Which of the following do you think are 7 (true) or 8 (false)?
- A rag fell into the ocean and turned into the first Greenland shark.
  - Bull sharks lived in lakes in South America.
  - Blue sharks can smell death.
  - Megalodon sharks have been extinct for more than 1 million years.
- b) Listen, read and check.

#### Stories thematically related

#### The Bull Shark ...

... can live in freshwater regions, even in lakes! In South America, the villagers living near one lake believed that bull sharks were magical beings. They would hold elaborate funeral ceremonies to appease the "lords of the water". They would cover the body of a deceased person with precious jewels and offer the body to the sharks by placing it in the water. The sharks would consume the body along with the jewels. The villagers believed that these ceremonies would convince the sharks to protect them from harm.



#### The Greenland Shark's ...

... origin is described in an Inuit legend. The flesh of the Greenland shark has a strong scent that is similar to urine. Because of this scent, the legend says that the Greenland shark came from a rag soaked in urine. In the story, an old woman washed her hair in urine and dried it with a cloth. The cloth fell into the ocean and turned into the first Greenland shark.



#### The Megamouth Shark ...

... is believed to be a very old species of shark, but it was only discovered in 1976. This discovery is viewed by some as a sign that other ancient sea creatures may not be extinct. For example, the megalodon shark became extinct over one million years ago. It was almost twenty meters in length and weighed up to one hundred tons, making it the largest fish that ever lived. Some people believe that the discovery of the megamouth shark is evidence that megalodon may still exist today!



#### The Blue Shark ...

... was believed to be able to smell death. According to superstition, if blue sharks were seen following a ship, someone on board would soon die. This myth arose because blue sharks would often follow ships to eat any scraps that were thrown into the water. If someone on board the ship died, the body would also be thrown into the water. When sailors saw the blue sharks devouring human bodies, it led them to create this myth.



#### Word Bank

- elaborate (adj) = with a lot of detail
- ceremony (n) = formal traditional actions performed on an important occasion
- deceased person (phr) = sb who is dead
- precious jewels (phr) = valuable gems and precious stones
- consume (v) = to eat
- origin (n) = where sb/sth comes from
- legend (n) = story
- flesh (n) = meat
- urine (n) = waste fluid from the body
- scent (n) = smell
- to turn into sth (phr v) = to change into sth else
- species (n) = a group of similar animals
- recently (adv) = not long ago
- sea creature (phr) = any animal that lives in the sea
- extinct (adj) = no longer in existence
- megalodon (n) = a prehistoric shark
- according to (phr) = as stated by
- superstition (n) = a belief not based on reason/science but on luck/magic
- arise (v) = to happen
- scraps (pl n) = small pieces of food
- devour (v) = to eat hungrily

#### While-Reading activities

- 2 Choose the correct answer from A, B, C or D.

- The lakeside villagers believed that ...  
A the sharks were evil spirits.  
B the sharks were good luck.  
C the sharks were magical beings.  
D the sharks were bad luck.
- What did the Inuit people believe about the first Greenland shark?  
A It was created from a rag soaked in water.  
B It was created from a magical spell.  
C It was created from a dead body.  
D It was created from a rag soaked in urine.
- Does the megalodon shark still exist?  
A No, it became extinct in 1976.  
B Yes, it is a recently discovered species.  
C No, it became extinct 1 million years ago.  
D Yes, it was discovered in 1976.
- What did sailors believe would happen if a blue shark was seen following a ship?  
A Someone on board would become wealthy.  
B Someone on board would become ill.  
C Someone on board would be healed.  
D Someone on board would die.

- 3 Fill in the gaps with: origin, superstition, arose, evidence, precious.

- There is an Inuit legend explaining the ..... of the Greenland shark.
- Megamouth sharks may be ..... supporting the existence of megalodon sharks.
- The villagers offered ..... jewels to the 'lords of the water'.
- Sailors have a ..... about blue sharks predicting a person's death.
- This myth ..... because sailors noticed blue sharks following their ships.

#### After-Reading activities

- 4 Match the following phrases to make sentences.

- The Greenland shark ...
- The bull shark ...
- The blue shark ...
- The megamouth shark ...

- ... follows ships to collect food scraps.
- ... has a scent similar to urine.
- ... is a recently discovered species.
- ... can live in the lakes of South America.

# The Whale Shark



- They live in the warm waters within the Northern and Southern Tropics. They prefer deep water, but may be observed in the coastal waters of Australia, Africa and Asia.
- Whale sharks are the largest fish in the sea. They can grow to be more than 14 meters long and weigh over 30 tons! They are reddish brown in color with pale yellow spots and stripes in unique patterns on their backs.
- The whale shark is a "filter feeder". It filters water through its mouth, trapping and swallowing plankton, krill and other small fish.

## Complete the sentences.

- 1 Whale sharks's backs have got .....
- 2 They can be seen near the coast in .....
- 3 Their weight can be over .....
- 4 They eat .....

## Did you know?

Whale sharks have been around about 16 million years.

## Amazing facts

### Did you know?



Spotted sharks live in New Zealand. They 3) ..... like dogs.

Tiger sharks' livers 2) ..... high levels of vitamin A which is processed into vitamin oil.

A long time ago sharks were known as sea dogs; that's why sharks' backs are called 4) .....

Sharks 5) ..... up to 20,000 teeth during their lifetime.

A whale shark has more than 40,000 teeth but each is less than 1/8 inch 6) .....

The whale shark, which is the largest shark of all, can 7) ..... up to 70 years.

1) Fill in the correct word: carnivorous, bark, pups, grow, live, long, contain.

2) ICT in groups collect facts about tiger sharks. Prepare a Yes/No quiz.

A tiger shark is 1) ..... It might eat a smaller bull shark.

## Bite-Sized Facts

## Review

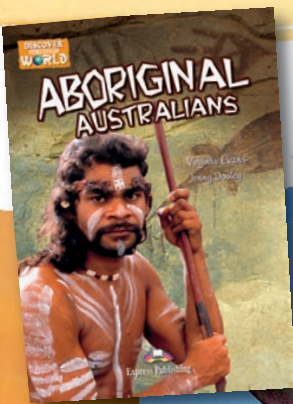
### Listening Activities

1 Listen to a dialogue about sharks. For questions 1-4 choose the correct answer A, B, C or D.

- 1 What are the speakers mainly discussing?
  - A ways that great white sharks die
  - B why great whites prefer to eat mammals
  - C places where great whites hunt seals
  - D why seals store their energy as blubber
- 2 Why does the man say: "Do you know how some sharks can't stop swimming or else they'll suffocate?"
  - A to establish how much the woman knows about the subject
  - B to introduce an explanation of how sharks breathe
  - C to ask about how previous information relates to the current subject
  - D to check whether the woman understood his previous statement
- 3 According to the man, what is blubber?
  - A something seals eat
  - B something that kills sharks
  - C a body organ where fat is stored
  - D a form of fat in mammals
- 4 How does the woman respond when she learns that sharks eat blubber?
  - A positively
  - B with revulsion
  - C skepticism
  - D angrily

2 Listen to a lecture about sharks. For questions 1-4 choose the correct answer A, B, C or D.

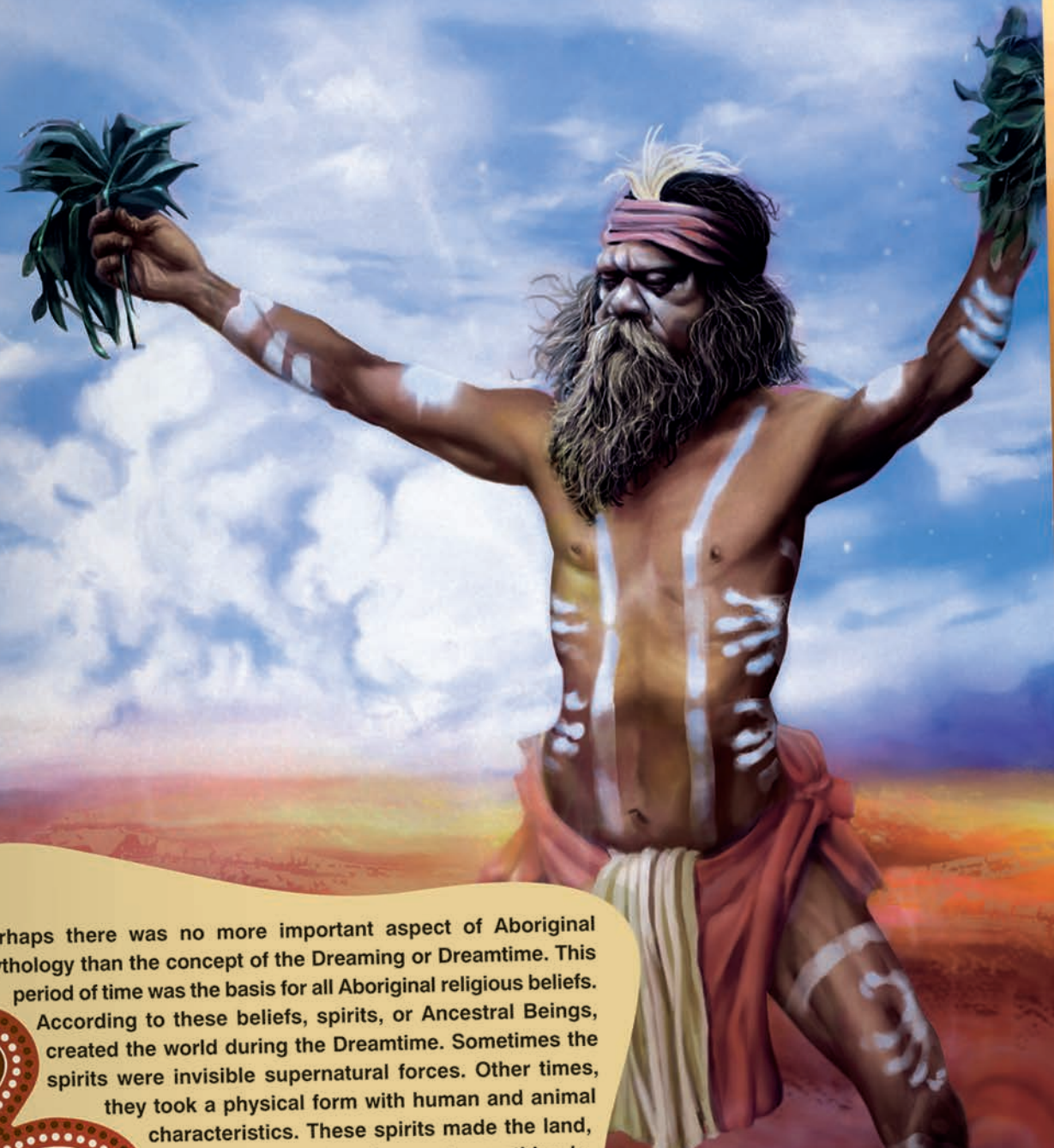
- 1 What is the main topic of the lecture?
  - A whether or not sharks sleep
  - B how sharks differ from fish
  - C new discoveries about sharks
  - D how fish and sharks breathe
- 2 Why does the teacher say: "Does anybody know whether sharks sleep?"
  - A to review previous information the students have studied
  - B to find out specific information about the subject
  - C to introduce the question she will attempt to answer
  - D to present a possible topic to write a paper on
- 3 Why does the teacher mention the inactive state that fish enter?
  - A to prove a popular idea about sharks wrong
  - B to contrast ways that animals rest
  - C to compare fish and shark behavior
  - D to introduce a theory about sharks
- 4 According to the professor, what has never been scientifically proven?
  - A that sharks sleep in caves.
  - B that divers have found sharks in a sleep-like state.
  - C that sharks enter a sleep-like state.
  - D that sharks enter caves.



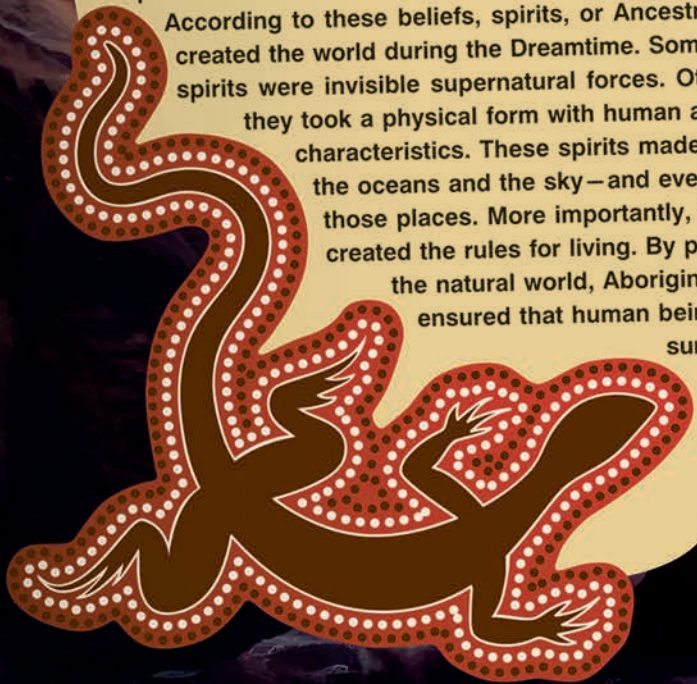
# A Very Long Dream



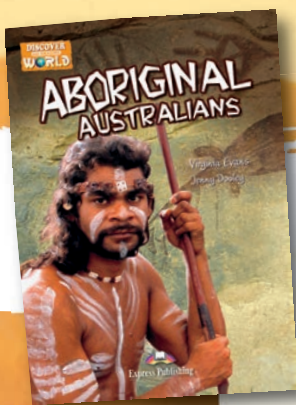
Hunting was a key part of Aboriginal survival. Animals and the natural environment influenced the Aboriginal people's religious beliefs, too. For spiritual reasons, it was important for them to preserve and respect the world around them.



Perhaps there was no more important aspect of Aboriginal mythology than the concept of the Dreaming or Dreamtime. This period of time was the basis for all Aboriginal religious beliefs. According to these beliefs, spirits, or Ancestral Beings, created the world during the Dreamtime. Sometimes the spirits were invisible supernatural forces. Other times, they took a physical form with human and animal characteristics. These spirits made the land, the oceans and the sky—and everything in those places. More importantly, they also created the rules for living. By preserving the natural world, Aboriginal people ensured that human beings would survive.



Word Bank & Activities pp. 42-43 ▶



## A Very Long Dream

### Word Bank (pp. 16-17)

- influence** (v) = to affect
- religious belief** (phr) = what sb believes to be true regarding faith
- spiritual reasons** (phr) = the motives that are based on religious beliefs
- preserve** (v) = to maintain
- aspect** (n) = part
- concept** (n) = idea
- basis** (n) = foundation
- spirit** (n) = a supernatural being
- invisible** (adj) = unable to be seen
- supernatural force** (phr) = a power that scientists cannot explain
- physical form** (phr) = used to describe sth that can be touched or seen
- rule** (n) = an instruction that says what sb is (not) allowed to do
- ensure** (v) = to make sure

### While-Reading activities

- 2 Read the text and choose from A, B, or C.
- 1 What was the most important aspect of Aboriginal mythology?
    - A the Ancestral Beings
    - B hunting
    - C the Dreaming or Dreamtime
  - 2 What was the Dreaming?
    - A The Aboriginal people's belief of how the universe was created.
    - B The Aboriginal people's belief that nature is important.
    - C The Aboriginal people's belief that spirits exist.
  - 3 What did the Ancestral Beings do?
    - A They created the hunting-and-gathering lifestyle.
    - B They created the world and the rules for living.
    - C They created weapons and war.
  - 4 What physical form would the Ancestral Beings take?
    - A They took a form with elemental characteristics.
    - B They took a form with plant and animal characteristics.
    - C They took a form with human and animal characteristics.

### Pre-Reading activities

- 1 a) Choose the word you think best completes each sentence.

- 1 Nature **influenced/preserved** the Aboriginal people's religious beliefs.
- 2 It was important for them to **influence/respect** the world around them.
- 3 The "Dreamtime" was the **basis/spirit** for all Aboriginal religious beliefs.
- 4 According to some beliefs, Ancestral Beings, or **forces/spirits**, created the world.

- b) Listen, read, and check.

- 3 Replace the words in bold with the following: *ensured, aspect, invisible, physical, supernatural.*

- 1 The Dreaming was the most important **feature** of Aboriginal mythology.
- 2 The Ancestral Beings could be both **unseen** and physical in form.
- 3 They sometimes took the form of **mystical** forces.
- 4 They could also take **bodily** forms with human and animal characteristics.
- 5 By following the Ancestral Beings' rules for living, Aboriginal people **guaranteed** survival.

4 Fill in the blanks with: *preserving, influenced, spiritual beliefs, importantly, concept.*

- 1 Nature ..... the Aboriginal people's religious beliefs.
- 2 The most important aspect of their ..... was the Dreaming.
- 3 This ..... explains how the world was created by the Ancestral Beings.
- 4 Most ....., the Ancestral Beings created the rules for living.
- 5 They believed that ..... the natural world would ensure survival.

5 Using the words/phrases to fill in the blanks of the chapter summary.

- natural world • religious beliefs • ensure
- Ancestral Beings • rules for living
- respect • Dreamtime • preserving

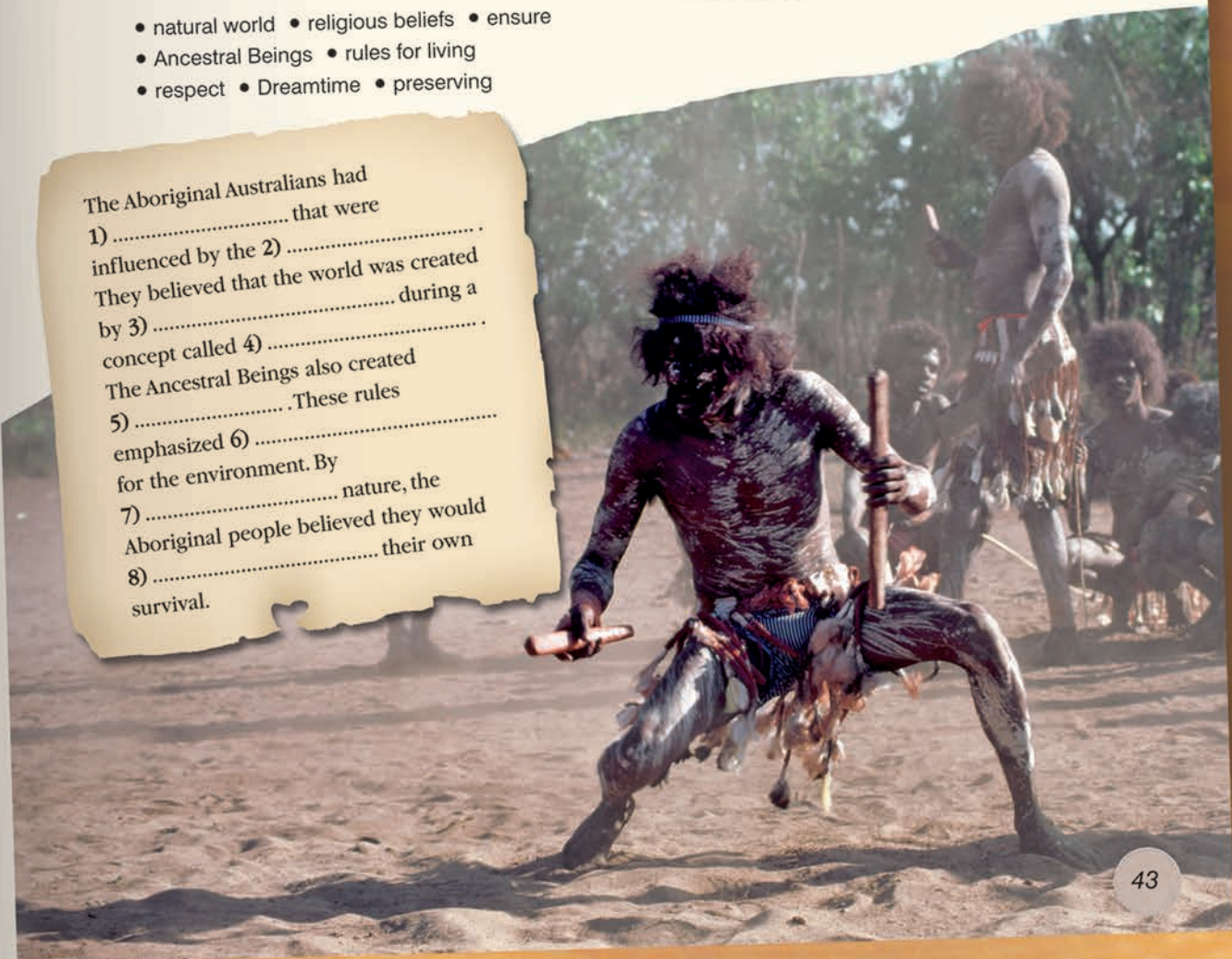
The Aboriginal Australians had  
 1) ..... that were  
 influenced by the 2) .....  
 They believed that the world was created  
 by 3) ..... during a  
 concept called 4) .....  
 The Ancestral Beings also created  
 5) ..... These rules  
 emphasized 6) .....  
 for the environment. By  
 7) ..... nature, the  
 Aboriginal people believed they would  
 8) ..... their own  
 survival.

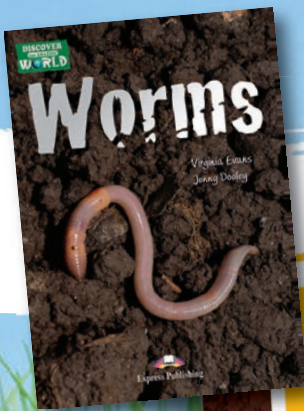
### After-Reading activities

6 Aboriginal Australians believed that the Ancestral Beings created the rules for living. One of these rules was to preserve the natural world. Which of the following might be other Aboriginal rules for living?

- 1  You should show loyalty to your family and tribe.
- 2  You should not be greedy.
- 3  You should never kill an animal.
- 4  You should never cut down trees.
- 5  You should share food with your family and tribe.

7 **ICT** Collect information about Dreamtime. Present it to the class.





# The Story of Egypt's Tiny Farmers

One day in ancient Egypt, a farmer walks through his fields near the banks of the Nile River. The Nile River valley is a very fertile place. The rich land surrounding the river provides food for the entire Egyptian kingdom. The farmer looks at his fields and those of his neighbors. Crops are blowing in the breeze, and the smell of blooming plants is in the air. But then the farmer sees something on the ground. It's moving. "What is this?" he asks. He bends down and looks closely at the thin, creature. It is as long as his hand, and it has no legs. He picks it up. It slithers around, just like a snake. It has no eyes or face. "Disgusting!" says the farmer. He throws it on the ground. He crushes the creature with his foot. The creature is dead. But another is coming out of

the ground right next to it! The farmer gets on his hands and knees and examines the ground. He sees several more of these little creatures. "How many are there? They seem to live under my farm!"

The farmer walks all over his land. He steps on any worms he sees. His neighbors see him stomping around. "What are you doing?" they ask. "These tiny creatures are all over my land!" he answers. "They could be bad for the crops. You should check your farms, too." Sure enough, the other farmers also find many worms crawling on their land. Worried, they squash the worms, too. Day after day, they step on any worms they see. Eventually the farmers stop seeing





the worms. They all feel much better. Word spreads about the worms. All over the valley, some of the farmers kill any worms that they find. This happens for years. The farmers are glad to be rid of the worms. But soon they are worried about something else. Their crops are mysteriously dying. At first it is just a few plants. As time goes on, though, more and more crops die. Soon there is not enough food to feed them. The people begin to panic. "Why is this happening," they wonder.

**E**ventually, the news reaches Cleopatra. As ruler of Egypt, Cleopatra is concerned about the crop failure. "My people must eat!" she thinks. "What is the cause of this curse?" Cleopatra decides to investigate. She assembles her counselors and visits the farms. First, they go to a farm where the crops are still growing. "You're doing so well," says Cleopatra. "What is your secret?" The farmer picks a worm off of the ground and shows it to Cleopatra. "I think these creatures help," he says.

"Disgusting!" says the queen. "Yes, they are quite strange. But I leave them alone," explains the farmer, "and my crops grow! All of my neighbors' crops are withering away."

**C**leopatra and her counselors visit other farmers nearby. Some of them have healthy crops, and some have empty fields. As she is walking and thinking, she sees a farmer step on a worm. She also notices that the farmer's land is empty. She stops the farmer. "Do you always kill your worms?" she asks. "Yes, always," he says. "These creatures don't belong on my land." Cleopatra visits other dying farms. She asks the other farmers the same question and she gets the same answer. "Yes". Cleopatra finally understands. "That first farmer was right," she says to

her advisors. "The farms with worms are all very healthy. The farms without worms have dying crops."

"But my queen," one advisor says, "Why is killing the worms bad for the crops?"

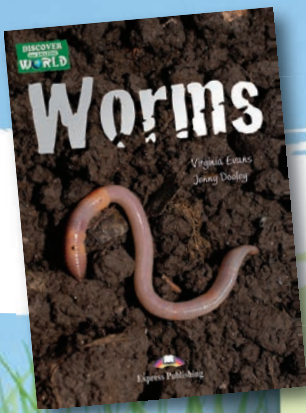
"The gods must be punishing the farmers who kill the worms!" Cleopatra says. "To anger the gods is a terrible mistake. If the farmers continue killing the worms, there will be no more food! We must put a stop to this worm killing."

And so, Cleopatra creates a new law. "No citizen of Egypt," declares the queen, "shall kill another worm ever again. Worms are sacred and we must honor them. Any person who kills a worm will be punished!"

It takes time, but the worms return to all of the fields. The crops flourish. There is enough food for the whole kingdom.

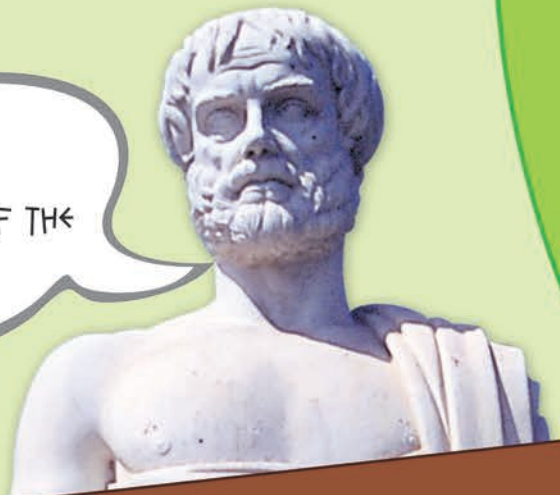
The Nile Valley is fertile once again, with the help of the sacred worm.





# The World's Smallest Farmers

WORMS ARE  
THE INTESTINES OF THE  
EARTH

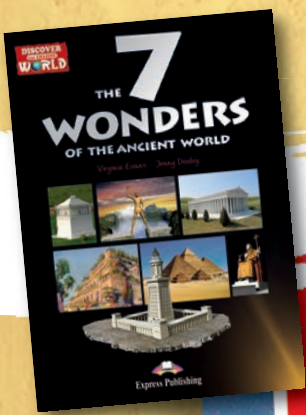


The Egyptians were not the only ones who respected the helpful earthworm. The Greek philosopher Aristotle said that worms were “the intestines of the earth”. Later, the naturalist Charles Darwin – famous for the theory of natural selection – also studied worms. Darwin observed worms for over forty years. He even wrote a book on worms. Darwin said that few other animals “have played so important a part in the history of the world as have these lowly organized creatures.”



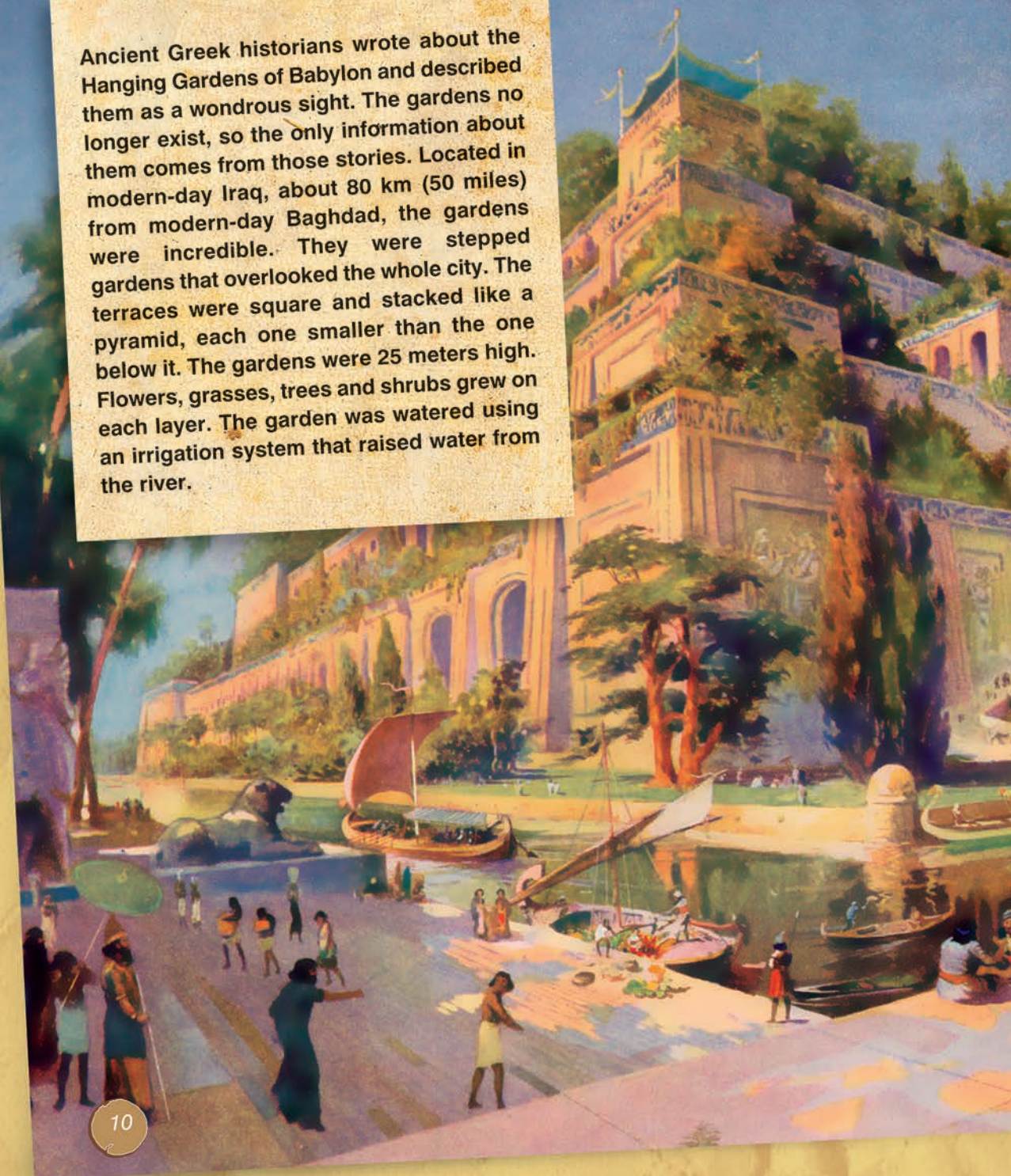
**W**orms play a very important role in cleaning soil and in the growth of plants. If not for worms, there would be no fresh soil. Without clean soil for plants, we would have no food. Clearly, worms are a key part of agricultural ecosystems.

Word Bank & Activities p. 30-31 ▶



# The **Hanging Gardens** of Babylon

Ancient Greek historians wrote about the Hanging Gardens of Babylon and described them as a wondrous sight. The gardens no longer exist, so the only information about them comes from those stories. Located in modern-day Iraq, about 80 km (50 miles) from modern-day Baghdad, the gardens were incredible. They were stepped gardens that overlooked the whole city. The terraces were square and stacked like a pyramid, each one smaller than the one below it. The gardens were 25 meters high. Flowers, grasses, trees and shrubs grew on each layer. The garden was watered using an irrigation system that raised water from the river.



## The Story of a King's gift

In 605 BCE, Nebuchadnezzar II became King of the ancient Mesopotamian city of Babylon. Years earlier, Babylon was a great place. However, invaders took over and the city fell. It took many years, but Babylon regained its independence. King Nebuchadnezzar wanted to bring the city back to its former glory. He built a new royal palace, temples, bridges and massive walls and gates. He made Babylon into a magnificent metropolis.

Nebuchadnezzar's goal was to make Babylonia a great kingdom. Political support from other kingdoms was essential. He formed an alliance with the kingdom of Media by marrying Amytis, the daughter of its king. When Amytis arrived in Babylon, she was sad. "She just needs to get settled," Nebuchadnezzar thought.

However, Amytis was still unhappy months later. One day, she told him, "I am so homesick. This land is very strange to me. Everything is flat and brown, and there's so much sand! I miss the mountains of my homeland. I miss the trees and the flowers and the grass."

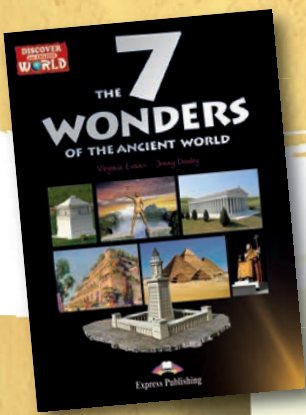
Nebuchadnezzar did not want Amytis to be sad. A few days later, he had an idea. Nebuchadnezzar told his city planners, "I want to create a garden for my wife, and it must be truly amazing!"

The king showed the planners a drawing. "The garden will look like a mountain, and you will cover it with plants—grasses, flowers, vines, cypress trees, palms, everything!"

Work began immediately. For months, workers hauled dirt and stone. They created a series of terraces that looked like a mountain. They brought plants all the way from Media. They made beautiful statues and fountains. When Nebuchadnezzar revealed his gift to Amytis, she was happy. Her gardens felt just like home.

Babylon was once one of the world's greatest city states. Today, all that remains is a large mound with crumbling mud-brick walls. It is in modern-day Iraq.

Word Bank & Activities pp. 42-43



## The Hanging Gardens of Babylon

### Word Bank (pp. 10-11)

**no longer** (phr) = not any more

**exist** (v) = to actually be

**located** (pp) = situated

**incredible** (adj) = amazing, fantastic

**stepped** (adj) = in layers or tiers, like a series of steps or stairs

**overlook** (v) = to have a view of somewhere (e.g. from a window)

**terrace** (n) = a platform outside or on top of a building

**square** (adj) = having four equal sides

**shrub** (n) = a small bush

**water** (v) = to give water to plants

**irrigation system** (phr) = a man-made way of giving water to plants

**raise** (v) = to lift to a higher position

**invader** (n) = a person who wants to take over or conquer another place

**take over** (phr v) = to take control without permission

**fall** (v) = to be taken over and controlled by invaders

**regain** (v) = to get back what belongs to you

**independence** (n) = the state of being free from other people's control

**former** (adj) = previous

**glory** (n) = splendour, magnificence, brilliant appearance

**royal** (adj) = of kings and queens

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

**temple** (n) = a building for a god

**bridge** (n) = a structure which joins two sides of a river, etc

**massive** (adj) = huge, enormous

**magnificent** (adj) = splendid, impressive

**metropolis** (n) = a large city

**goal** (n) = an aim, an intention, knowing what you want to do in the future

**kingdom** (n) = a country or area ruled by a king or queen

**political** (adj) = about governing a country, about politics

**support** (n) = help when in trouble

**essential** (adj) = necessary, very important

**form** (v) = to make

**alliance** (n) = a formal friendship

**settle** (v) = to feel comfortable in a place

**homesick** (n) = a strong wish to go home or to your country when you are away from it

**land** (n) = a country

**miss** (v) = to feel sad because you don't have something that you had before

**planner** (n) = a designer, an architect

**create** (v) = to make

**truly** (adj) = really

**plant** (n) = a flower, a tree, etc

**vine** (n) = a plant which grapes grow on

**cypress tree** (n) = a type of tree found in the Middle East and the Mediterranean

**palm** (n) = a tropical tree

**haul** (v) = to pull, to lift something heavy

**dirt** (n) = soil, earth

**statue** (n) = a large sculpture of a person, an animal, etc

**fountain** (n) = a man-made structure for decoration, which water comes out of and runs into a pool below it

**reveal** (v) = to show something that was hidden

**gift** (n) = a present

**once** (adv) = before

**city state** (phr) = a city with its own government

**remain** (v) = to still exist


**mound** (n) = a small hill or a pile of earth

**crumble** (v) = to break into very small pieces

## Pre-Reading activities

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

- 1 We know about the Hanging Gardens because of the writings of the Babylonians. ....
- 2 From the Gardens you could see the whole city. ....
- 3 It was easy to get water to the gardens. ....
- 4 King Nebuchadnezzar of Babylon wanted to make the city smaller. ....
- 5 Queen Amytis was ill when she lived in Babylon. ....
- 6 The Gardens were a present for Queen Amytis. ....

b)  Listen, read and check.

## While-Reading activities

2 Choose the correct answer.

- 1 How did the ancient Babylonians water the Hanging Gardens?
  - A They had a natural supply of water in the Gardens.
  - B They made a system for watering the Gardens.
  - C The workers carried water from the river to the Gardens.
  - D They used the water from the fountains.
- 2 When Nebuchadnezzar became King of Babylon, he
  - A wanted to make Babylon great again.
  - B had to fight for its independence.
  - C gave the city a water supply.
  - D only made an impressive palace for himself.
- 3 Why was Amytis sad?
  - A She didn't want to be married to the king.
  - B She wanted to live in the desert.
  - C She didn't like the buildings in Babylon.
  - D She missed the plants and landscape of her country.
- 4 Which statement best describes the Gardens?
  - A There were a lot of steps connecting lots of plants.
  - B There were only flowers from Media in them.
  - C The Gardens only contained flowers and other plants.
  - D There was a mountain in the Gardens.


3 Choose the correct word.

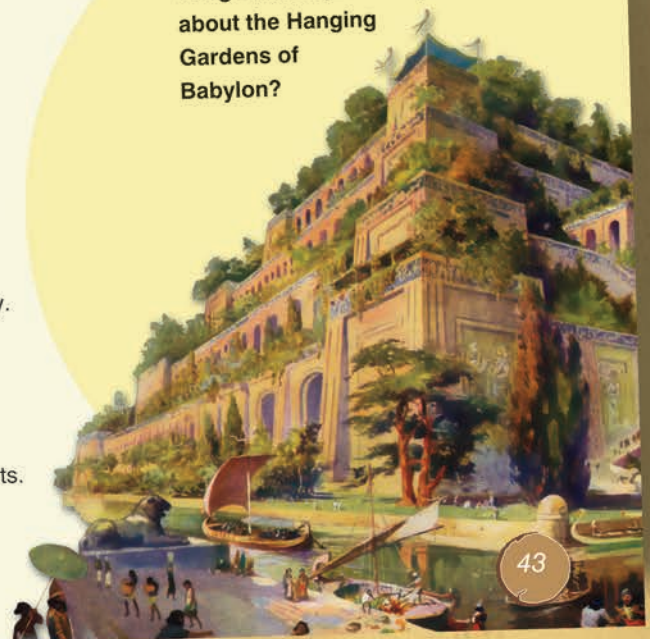
- 1 The Hanging Gardens were square **steps/terraces** that had a view of the city.
- 2 There was an **essential/irrigation** system to keep the plants healthy.
- 3 King Nebuchadnezzar built a royal **palace/temple** for himself.
- 4 The king needed to have the **support/alliance** of kings of countries close to Babylon.
- 4 At first, Amytis was **happy/homesick** in Babylon.
- 5 The city **planners/invaders** designed the Hanging Gardens.

## After-Reading activities

4 Write a sentence based on the text. Use the words in the list.

- Nebuchadnezzar II
- Babylon • Amytis • Media

5  What were three things that impressed you about the Hanging Gardens of Babylon?





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UNITED KINGDOM

Liberty House, Greenham Business Park, Newbury, Berkshire RG19 6HW

Tel.: (0044) 1635 817 363, Fax: (0044) 1635 817 463 e-mail: [inquiries@expresspublishing.co.uk](mailto:inquiries@expresspublishing.co.uk)

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