

DISCOVER
our AMAZING
WORLD
CLIL READERS

The Killer Whale

Virginia Evans
Jenny Dooley



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Whales

For teachers' inspection ONLY



Whales are the largest animals that have ever lived on the Earth. Some are even larger than the dinosaurs of prehistoric times. Whales are mammals. Unlike fish, which take in oxygen from the water, whales breathe air through blowholes at the tops of their heads and feed milk to their babies. Millions of years ago, whales probably had legs and walked on the land. Over the millennia, whales evolved to become ocean creatures. Their back legs became powerful tails and their front legs became strong flippers. Now, whales spend their entire lives in the water, and they are the only mammals that have adapted to life in the ocean.





Newborn killer whales don't sleep for a month after birth.

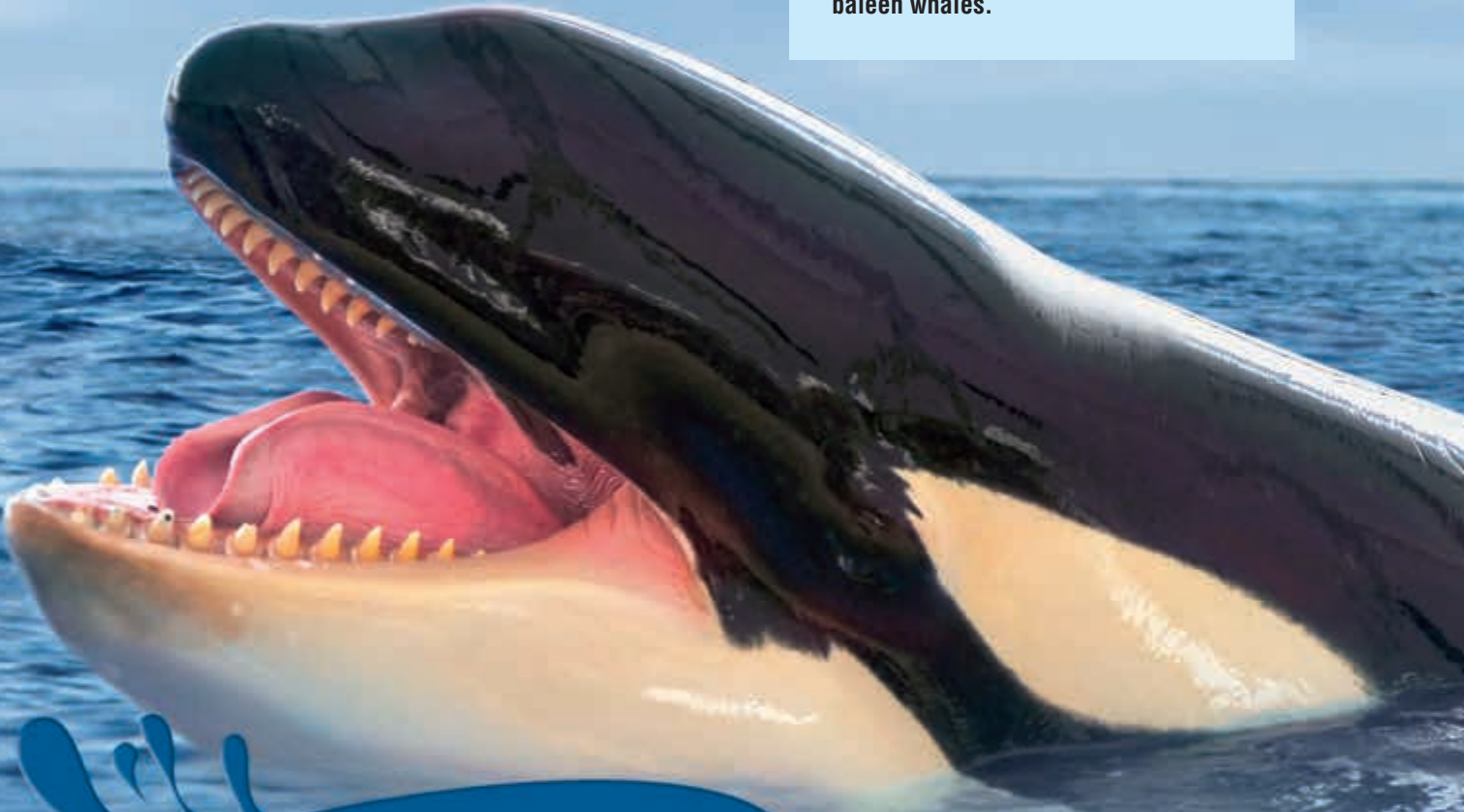
Whales have smooth, streamlined bodies so they can move easily through the sea. Most species of whales have dorsal fins on their backs which cut through the water. They swim by moving their tails up and down and using their flippers to pull themselves through the water. Some species of whales can swim at over 50 kilometers per hour. Sometimes, whales swim quickly up to the surface and blow a jet of water out of their blowholes. The water creates a fountain in the air which is called a 'blow'. Although their bodies are enormous and extremely heavy, whales can lift themselves out of the water and can perform amazing acrobatics in the air above the surface of the ocean.



Baleen whales have two blowholes, and they use baleen – a special comb-like structure in their mouths – to allow water to pass through, trapping large amounts of tiny crustaceans called krill inside. This method of consuming food is called filter feeding. However, baleen whales do not only eat krill. Unlike toothed whales, baleen whales are omnivores. This means they eat both plants and animals. They are opportunistic feeders; they eat any and all food that enters their mouths.



There are over 80 different species of whales that live all over the world's oceans and seas. The different species of whales can be divided into two separate groups: toothed whales and baleen whales.



Toothed whales are generally smaller than baleen whales, and this group includes all the different species of dolphins and porpoises. They have only one blowhole and a set of teeth. Some have many teeth, and others have only a few. Toothed whales are carnivores – meat eaters – and must hunt for their food. They have an excellent sense of hearing, and use a method called echolocation to hunt and navigate. Toothed whales are also more social than baleen whales; they tend to travel in larger groups and stay together most of the time.

A Unique Creature

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In the clear, cool depths of the Pacific Ocean, a huge, dark creature moves through the water. Its body is about six meters long, and as it glides gracefully through the ocean, patches of white gleam against the dark waters. The enormous creature moves slowly upwards, and its large dorsal fin breaks the calm surface as its heavy body pushes up toward the sunlight. As the creature exposes the upper part of its body to the air, we can see that its body is mostly black, but its chest and sides are white and it has distinctive white patches behind each eye. Its unique appearance leaves us with no doubt that this creature is a killer whale: the largest member of the dolphin family and one of the ocean's most powerful predators.



Countershading is useful when killer whales are hunting. From below, their white bellies make them blend in with the light coming from the sky. From above, their dark backs make them hard to see in the darkness of the water. This means that the killer whale can easily sneak up on its prey, no matter which direction it is approaching from.

A Legend

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The Sea Wolves

A man was walking along the beach when he noticed two small wolf cubs. The cubs were cold, wet, and hungry, so the man decided to take them home and raise them. Over time, he came to love the cubs as if they were his own children, and they loved him in return. They grew to be very large and strong under his care and protection.

One day, the man and the wolves were walking along the beach. The two wolves wanted to repay the man for his kindness, so they ran out into the ocean. They were very powerful, and soon they found the perfect gift for the man: a whale. They attacked the large creature and killed it, then dragged its body onto the shore. The man was very happy with the gift the wolves had given him. He harvested the whale's meat to eat, and made use of the blubber and bones.

The wolves were proud of their hunting ability. Every day, they would swim into the ocean, kill a whale, and drag it onto the beach. However, the man could not work fast enough to use up all the meat, blubber, and bones of the whales. Soon, the beach was covered with dead whales.

God looked down and saw the whales covering the beach. He became angry at the huge waste of life. He decided to stop the wolves from hunting so many whales. The next morning, when the two wolves went hunting in the sea, God sent a great storm. The waves were very high and a thick fog rose up from the water's surface. The two wolves could not find their way back to shore. The man tried to find them, but the water was too rough and the fog was too thick.

A long time passed, and eventually the wolves' legs were transformed into strong flippers and their tails became very large and powerful. Their bodies became sleek and streamlined so they could swim more quickly. They became the first killer whales. This is why killer whales are called the wolves of the sea. Although they still hunt and kill whales, they also remember the man who raised them. To this day, this is why the killer whale does not harm people.

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Whales

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Word Bank

(pp. 4-5)

prehistoric times (phr) = millions of years ago

mammal (n) = warm-blooded animal that gives birth to live young

breathe (v) = to take in and release air using the lungs

blowhole (n) = hole at the top of a whale's head for breathing

unlike (prep) = not like

take in (phr v) = to bring sth into the body

leg (n) = a limb used for walking

millennia (pl n) = thousands of years (singular: millennium)

evolve (v) = to develop

ocean creature (phr) = animal that lives in the sea

back legs (phr) = the limbs at the back of an animal's body

powerful (adj) = very strong

flipper (n) = 

entire (adj) = whole

adapt (v) = to change in order to suit a new environment

smooth (adj) = not rough

streamlined (adj) = having a smooth shape

easily (adv) = with little/no difficulty

dorsal fin (n) = 

blow (v) = (of a whale) to send water out from its blowhole

jet (n) = a powerful stream of water

fountain (n) = a stream of water

enormous (adj) = very large

extremely (adv) = very

perform (v) = to do sth

acrobatic (adj) = agile

above (prep) = over

surface (n) = the top of sth

(pp. 6-7)

divide (v) = to separate

species (n) = type (of animal/plant)

separate (adj) = distinct

comb-like structure (phr) = an arrangement of narrow, pointed prongs similar to a comb

trap (v) = to catch

amount (n) = a quantity

tiny (adj) = very small

crustacean (n) = a sea creature with a hard shell, e.g. a crab

filter feeding (phr) = eating by separating large amounts of tiny creatures from the water

omnivore (n) = an animal that eats both plants and animals

opportunistic (adj) = ready to take advantage of a situation to benefit yourself

carnivore (n) = an animal that eats only meat

hunt (v) = to search for an animal to eat

echolocation (n) = a system used by whales to determine the location, size, and shape of an object by focusing high-pitched sounds and receiving the echoes

navigate (v) = to find the way to a place

social (adj) = (of a species of animals) living in groups

Pre-Reading activities

- 1 a) Decide which words best complete the sentences.

• baleen • ocean • mammals
• flippers

- Whales are
- They evolved to become creatures.
- They pull their bodies through the water with their
- whales are filter feeders.

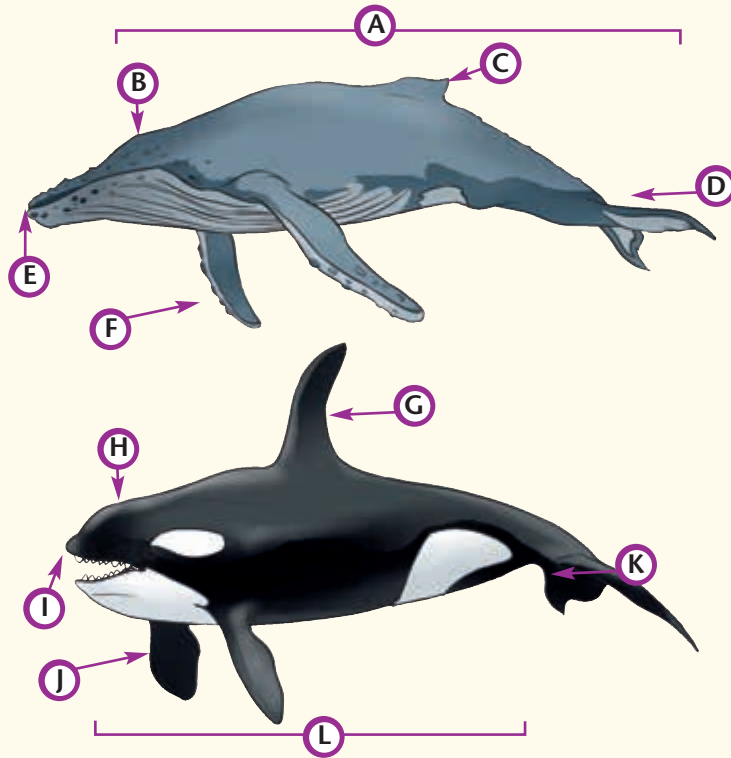
b) Listen, read, and check.

While-Reading activities

- 2 Read the text and answer the questions with A, B, or C.

- How do we know whales are mammals?
 - They are the largest animals that have ever lived on Earth.
 - They are larger than the dinosaurs of prehistoric times.
 - They feed milk to their babies and breathe air through their blowholes.
- What were whales probably like millions of years ago?
 - Four-legged creatures that walked on land
 - The dinosaurs of prehistoric times
 - Ocean creatures

- 3 **SUBJECT-SPECIFIC VOCABULARY:** Match the numbers to the letters to label the parts of the bodies of different types of whales. Some words will be used more than once.



- | | | |
|---|------------------------|--------------------------|
| 1 | mouth with baleen | ☐ |
| 2 | dorsal fin | ☐ |
| 3 | flipper (pectoral fin) | ☐ |
| 4 | single blowhole | ☐ |
| 5 | mouth with teeth | ☐ |
| 6 | smaller body | ☐ |
| 7 | tail | ☐ |
| 8 | larger body | ☐ |
| 9 | two blowholes | ☐ |

- 4 **Fill in the blanks with:** *hunting, trap, evolved, adapted.*

- Whales over the millennia to become ocean creatures.
- They are the only mammals to have to life in the ocean.
- Baleen whales filter feed instead of for food.
- They large amounts of tiny creatures in their mouths.

- 5 **Replace the words in bold with:** *entire, streamlined, prehistoric, separate.*

- Whales' bodies are smooth and **sleek** so they can move through the water easily.
- Some whales are larger than the dinosaurs of **ancient** times.
- Whales can be divided into two **different** categories: toothed whales and baleen whales.
- Whales spend their **whole** lives in the water.

After-Reading activities

- 6 Which of the following are characteristics of baleen whales? Which are characteristics of toothed whales? Which apply to both types of whales? Complete the table.

- ocean creatures • two blowholes • hunters
- filter feeders • omnivores
- streamlined bodies • teeth • dorsal fin
- opportunistic feeders • one blowhole
- flippers • baleen • echolocation • carnivores
- acrobatics

BALEEN WHALE	TOOTHED WHALE	BOTH

A Legend: The Sea Wolves

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Word Bank

(pp. 38-39)

wolf (n) =



legend (n) = a cultural story passed down through generations

cub (n) = the baby of some animals, e.g. wolves, tigers, bears etc

raise (v) = to bring up; to take care of

in return (prep phr) = to do sth because sb did the same

repay (v) = to pay back

attack (v) = to hurt using physical violence

care (n) = looking after sb/sth

protection (n) = the act of keeping sb/sth safe from danger

drag (v) = to pull sth along the ground

harvest (v) = to collect the useful materials from sth

meat (n) = the parts of an animal that can be eaten

blubber (n) = the thick, outer layer of fat of a marine mammal such as a whale

bone (n) =



use (sth) up (phr v) = to use all of sth

angry (adj) = furious

waste (n) = the act of destroying sth without good reason

storm (n) = bad weather with heavy rain and strong winds

fog (n) = misty weather

thick (adj) = (of fog) impossible to see through

transform (v) = to change the shape

flipper (n) = a flat part on some sea animals' bodies

sleek (adj) = smooth

raise (v) = to bring up

harm (v) = to injure sb

Pre-Reading activities

1 a) Choose the words that you think best complete the sentences.

- 1 A man was walking along the beach when he noticed two **wolf cubs/whales**.
- 2 The man took them home and **ate/raised** them.
- 3 The wolves started killing **whales/people**.
- 4 The wolves became **cubs/killer whales**.

b) Listen, read, and check.



While-Reading activities

2 Read the text and choose the best answers from A, B, or C.

- 1 Why does the man take the wolf cubs to his home?
 - A to raise them
 - B to harvest their meat, blubber, and bones
 - C to stop them from hunting whales
- 2 Why did the wolves hunt whales?
 - A to cover the beach
 - B to repay the man for his kindness
 - C to anger God
- 3 How did God stop the wolves?
 - A He sent a storm.
 - B He killed them and dragged their bodies to shore.
 - C He got lost in the thick fog.
- 4 Why don't killer whales harm people?
 - A They remember the man who raised them.
 - B They are proud of their hunting ability.
 - C They cannot find their way back to shore.

3 Fill in: *harm, use up, raised, dragged, harvested, transformed.*

- 1 Killer whales don't people.
- 2 Legends are from generation to generation.
- 3 The wolves the whale's body onto the beach.
- 4 The man the meat, bones, and blubber of the whale.
- 5 The man the two wolf cubs and came to love them.
- 6 The man could not so many whales.

4 Choose the correct sentence from a or b.

- 1 a The man found two wolf cubs on the beach.
b The man found two whale calves on the beach.
- 2 a God became angry at the huge waste of fog.
b God became angry at the huge waste of life.
- 3 a The wolves could not find their way back to the sea.
b The wolves could not find their way back to shore.

After-Reading activities

5 a) Replace the words in bold. Use: *origin, cubs, beach, blubber, killed, angry, fog, transformed.*

- A ☐ A man took in two wolf **babies** and raised them.
- B ☐ The man harvested the meat, **fat**, and bones of the whale.
- C ☐ The wolves were eventually **changed** into killer whales.
- D ☐ God was **furious** and decided to stop the wolves.
- E ☐ *The Sea Wolves* is a legend that explains the **beginning** of the killer whale.
- F ☐ He sent a storm and a thick **mist** so they would get lost.
- G ☐ The wolves **caught** many whales and soon the beach was covered in them.
- H ☐ The wolves were good hunters; they caught a whale and dragged it onto the **shore**.

b) Rearrange the sentences in Ex. 5a to summarize the chapter.

6 **ICT** Collect information about the similarities and differences between killer whales and wolves. Tell the class.

Review

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Listening activities

1 Listen to a dialogue about killer whales.

For questions 1-3 choose the correct answer A, B, C, or D.

- 1 Why didn't the man watch the documentary?
A He was at work.
B The documentary didn't interest him.
C He wasn't at home.
D He already knows about killer whales.
- 2 Why does the man say, "Well, that's worse"?
A Because he thinks it's bad for whales to kill other whales.
B Because he likes whales more than he likes humans.
C Because whales are bigger than humans.
D Because humans are easier to kill than whales.
- 3 According to the woman, which of these statements is true?
A Killer whales in captivity never hurt humans.
B Killer whales have never hurt a human.
C Killer whales don't mean to hurt humans.
D Killer whales in the wild rarely hurt humans.

Reading activities

1 Choose the correct word/phrase in bold.

- 1 Baleen whales get food by **filter feeding/hunting**.
- 2 There are about 8,500 killer whales in the **northeast/tropical** Pacific Ocean.
- 3 Submarines use **sonar/spyhopping** to navigate.
- 4 Killer whales hunt in **groups/alone**.
- 5 **Family groups/Clans** of killer whales are led by the oldest female.

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

- 1 Whales are the only mammals that have adapted to life in the ocean.
- 2 They are among the ocean's most powerful predators.
- 3 The killer whale can leap out of the water and plunge back into the ocean.
- 4 They can stay on land for a long time before wriggling back into the water.
- 5 Killer whales will suffocate if they are beached for too long.
- 6 They have the largest brains of all ocean mammals.
- 7 The killer whale can only communicate using clicking sounds.
- 8 They use body language as a part of courtship rituals.
- 9 They also make rhythmic, repetitive sounds to send messages to each other.
- 10 Female killer whales can live for decades after they stop reproducing.

3 Correct the sentences. Use: *legend, problems, scientific, decades, hear*.

- 1 Female killer whales are the only species to live for **days** after they can no longer reproduce.
- 2 Salmon cannot **see** the killer whales' calls.
- 3 Killer whales can solve **puzzles**.
- 4 The **common** name of the killer whale is *Orcinus Orca*.
- 5 According to the **song**, wolves transformed into killer whales.

4 Go through the reader and check your answers for Exs 1-3.

Reading in Context

Pre-Reading activities

- 1 a) Look at the text. Is it:
- A a newspaper article? B a fictional story?
C an advertisement? D an essay?
- b)  Listen, read, and check.

The Daily News

One-of-a-Kind Whale

Peter Graham-staff reporter

November 10, 2012 – An all-white killer whale spotted off the coast of Russia this month may well be one-of-a-kind.

Scientists were studying whales and dolphins in the North Pacific when they noticed a white dorsal fin cutting through the surface of the water. The fin belonged to a completely white killer whale. The scientists named the whale 'Iceberg' because of its large white dorsal fin, which is almost two meters tall.

The scientists were surprised and delighted when they spotted and photographed Iceberg swimming with a group of other killer whales, which all had the usual black and white coloring. But this may not be the first time that Iceberg has been seen. An all-white killer whale was also spotted in 2000 and 2008 in Alaska. Iceberg and the previously seen whale look very similar, and it wouldn't be strange for a killer whale to swim across the ocean from Alaska to Russia.

"It is highly possible that they are the same whale," said Holly Fearnback, a research biologist at the University of Aberdeen in the UK, "but we cannot be certain until a match is confirmed."

Iceberg is seven meters long and is a healthy-looking male. Scientists don't know whether Iceberg is an albino killer whale, or whether he has a disease which affects his skin color. However, Iceberg appears handsome and strong, so scientists are convinced that his unique color hasn't had any negative effects on his health.

"Hopefully he will be seen again and we can collect a genetic sample," said Fearnback.

Finding a rare and beautiful animal like Iceberg shows that there are still great surprises to be found in the mysterious depths of the ocean. Scientists hope that the discovery of Iceberg will encourage people to make conservation a priority in order to protect whales and their habitat.

Word Bank

one-of-a-kind (adj) = the only one of a type; sth unique

spot (v) = to notice

belong to (v) = to be part of sth

delighted (adj) = very happy

photograph (v) = to take a picture of

highly possible (phr) = very likely

research biologist (n) = a scientist that studies living things

match (n) = sth that is just like sth else

confirm (v) = to verify

whether (conj) = if

albino (n) = a person or animal whose skin and hair have no color

disease (n) = an illness

handsome (adj) = good-looking

unique (adj) = one-of-a-kind

negative effects (phr) = bad results

health (n) = physical condition

hopefully (adv) = hoping that sth will/won't happen

genetic sample (phr) = a small amount of cells from the body collected for research

rare (adj) = uncommon

mysterious (adj) = strange; unusual; weird

depths of the ocean (phr) = the deep parts of the sea

encourage (v) = to give sb a reason to do sth

conservation (n) = protection of the environment

priority (n) = sth very important to be done first

While-Reading activities

2 Read the text and choose from A or B to answer the questions.

- 1 Where was Iceberg more recently spotted?
A the UK B Russia
- 2 Why is Iceberg unusual?
A his coloring
B his health
- 3 Why did the scientists give Iceberg his name?
A his black and white coloring
B his tall, white dorsal fin
- 4 How can scientists find out more about Iceberg?
A by collecting a genetic sample
B by photographing him

3 Match the following phrases to make sentences.

- 1 ☐ Iceberg was spotted ...
- 2 ☐ He was swimming with ...
- 3 ☐ He has got a ...
- 4 ☐ He may also have been seen ...
- 5 ☐ He may have a disease ...
- 6 ☐ He seems to be ...

- A ... in the ocean off Alaska.
- B ... strong and healthy.
- C ... in the North Pacific Ocean.
- D ... which affects his skin color.
- E ... a group of killer whales.
- F ... very tall dorsal fin.

4 Which of the following are possible explanations for Iceberg's coloring? Check (✓). More than one answer is possible.

- 1 ☐ He is an albino killer whale.
- 2 ☐ He is the first of a new species of killer whale.
- 3 ☐ He has a disease which affects his skin color.
- 4 ☐ His skin was damaged by pollution.

5 Complete the sentences with the words in the box.

• similar • delighted • negative • completely • convinced

- 1 Iceberg is white.
- 2 Scientists were when they saw Iceberg for the first time.
- 3 Iceberg looks to a whale seen in Alaska.
- 4 Scientists are that Iceberg is healthy.
- 5 Iceberg's unusual color hasn't had a(n) effect on his health.

6 Choose the correct word from the words in bold.

- 1 An all-white killer whale was **belonged/spotted** off the coast of Russia.
- 2 Iceberg **looks/acts** similar to a whale seen in Alaska.
- 3 The scientists cannot **confirm/research** that it is the same whale.
- 4 Scientists hope that Iceberg will **surprise/encourage** people to save whales.

After-Reading activities

7 Use the sentences in Ex. 3 to prepare a TV news report about the events in the article. Present your report to the class.

8  Which of the following would make a good alternative title?

- A A Mystery Solved
- B An Amazing Journey
- C A White Whale

Amazing Facts

Did you know?

Killer whales are not called
1) because they attack
2), but because they prey on other
3) of the whale and dolphin family.

Killer whales eat up to 5% of their 4) every day.

The killer whale's brain is four to five times
5) than a human's brain.

Killer whales spend 60% of their time
6) for food.

The average 7) of a killer whale in the wild is 50-60 years for males and up to 90 years for females. However, the 8) lifespan of a killer whale in 9) is only 20 years.

Killer whales are one of the top
10) in the ocean; they even prey on great white
11)

The ancient Romans called the killer whale
12), which means demon.

1 a) Fill in the gaps. Use: larger, killers, global, population, body weight, people, members, foraging, life expectancy, average, captivity, orca, predators, sharks, hunt.

b) Listen and check.

2 **ICT** In groups, collect facts about killer whales. Prepare a Yes/No quiz for your classmates.

13) warming is increasing the size of the areas where killer whales 14) This is causing killer whales to over-fish and may result in lowering the 15) of fish in these areas.