

DISCOVER
our AMAZING
WORLD
CLIL READERS

The Bottlenose Dolphin

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Express Publishing

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The Earth's Oceans

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About 70% of the Earth's surface is covered in water. More than 97% of this water is found in the Earth's oceans and seas. The water in the oceans and seas is saltwater. Some scientists believe that life on Earth began in the sea, and all living creatures on Earth today evolved from sea creatures.

The oceans affect the weather and the temperature on Earth. They absorb the heat of the sun and move it around the planet. The ocean is always moving. It heats the land and air in the winter and cools it in the summer. Without the oceans, no life on Earth would survive.

The Earth's oceans and seas are all connected. There are five oceans and many smaller seas. The five oceans are the Pacific, the Atlantic, the Indian, the Southern and the Arctic Ocean. The largest seas are the Philippine Sea, the Coral Sea, the Arabian Sea, the South China Sea, the Caribbean Sea and the Mediterranean Sea.



Pacific ocean

During winter, the Arctic Ocean is almost completely covered in sea ice.

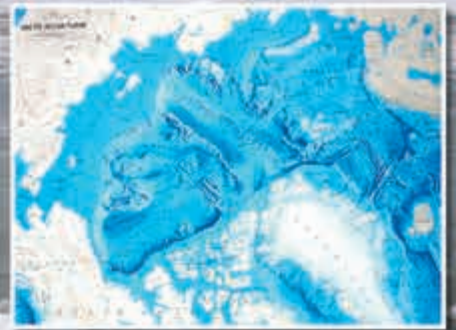


Indian ocean
Maldives

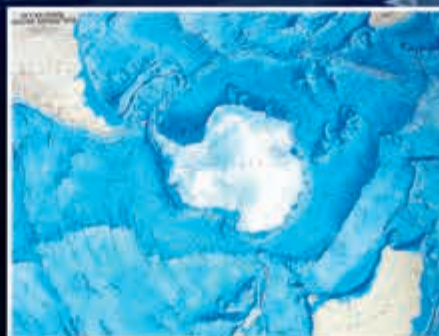
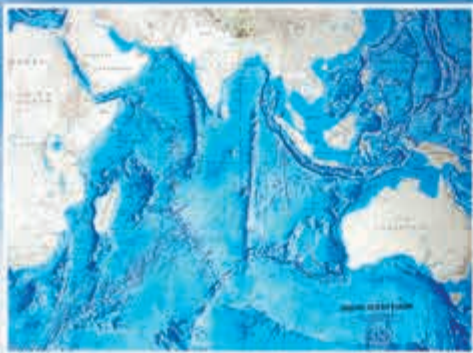
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Atlantic ocean
Waterfront on Madeira



Arctic ocean



Antarctica
Iceberg in Antarctica

Ocean Zones

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Scientists have studied the ocean for many years, and have divided it into five different zones, or layers. Each of the five zones receives a different amount of sunlight, from the lightest zone, near the surface of the ocean, to the darkest zone, at the very bottom of the ocean. Different creatures live at different depths in the ocean. The deeper zones are home to some very strange but amazing creatures.

The Sunlight Zone

(Epipelagic Zone)

The layer of the ocean nearest the surface is known as the Sunlight Zone, because this is the layer which gets the most light from the sun. The Sunlight Zone extends from the surface of the ocean to about 200 meters down. This layer has a wide range of temperatures from 40 to -2 degrees Celsius. Although the Sunlight Zone is the smallest zone in the ocean, it is home to the largest number of sea creatures and plants. Sharks, jellyfish, seals, stingrays, sea turtles and seaweed all live in the Sunlight Zone.

Some of the creatures which live in the Sunlight Zone have counter-shading on their bodies. This means that the top part of their body is a dark color and the bottom part of their body is a light color. This helps to camouflage and protect them from predators. When a predator looks down on a counter-shaded creature, the creature's dark top side blends in with the dark waters of the ocean below. When a predator looks up at a counter-shaded creature, the creature's light underside blends in with the lighter waters of the ocean above.

The Twilight Zone

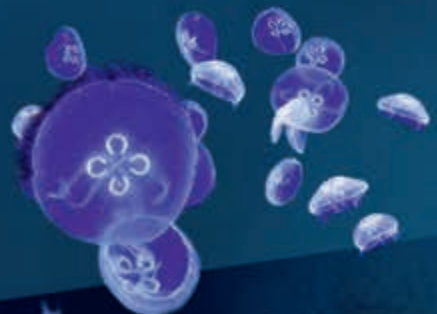
(Mesopelagic Zone)

The Twilight Zone extends from about 200 meters below the surface of the ocean to about 1000 meters down. The light in this zone is not very strong. This zone is home to some of the ocean's bioluminescent creatures. Bioluminescent creatures use the chemicals in their bodies to produce light. Hundreds of species of ocean creatures have adapted to live in the darkness in this way.

The Midnight Zone

(Bathypelagic Zone)

The Midnight Zone reaches from about 1000 meters below the surface of the ocean to about 4000 meters down. The only light in this zone is produced by the many bioluminescent creatures which live there. Although this zone is very dark with high water pressure, a large number of creatures manage to survive here. Most of these creatures are dark in color, so they are camouflaged in the water.



The Abyss (Abyssopelagic Zone)

The Abyss extends from 4000 meters below the ocean's surface to about 6000 meters down. This zone is completely dark with temperatures close to freezing. Very few creatures can live at this depth. It is home to only some tiny species of squid and some other invertebrates. Although there is very little life here, this is the largest of the five ocean zones, and includes about three quarters of the ocean's water.

The Trenches (Hadalpelagic Zone)

This is the deepest zone of the ocean. It stretches from about 6000 meters below the surface to the bottom of the deepest areas of the ocean. The deepest point in the Earth's oceans is in the Mariana Trench, which is in the Pacific Ocean, off the coast of Japan, and is around 11,000 meters deep. The temperature in this zone is just above freezing, and the water pressure is immense. However, some creatures, such as starfish and tube worms can still survive here.

The
largest ocean on
Earth is the Pacific
Ocean. It covers about
30% of the Earth's
surface.

The ocean is home to hundreds of thousands of creatures, but scientists believe that there are still many more species which have not been discovered yet. In fact, there could be millions of creatures living at the bottom of the ocean which we don't know about. Every ocean creature has evolved to have the best chance of survival in its habitat. Some of the creatures living in the ocean have strange and wonderful ways of surviving and completing their life cycle.

Dolphins

Dolphins look like fish, but in fact, they are mammals. Unlike fish, dolphins are warm-blooded. They are actually small whales, and belong to the group known as “toothed whales.” There are around forty different species of dolphins, including river dolphins and killer whales.

Dolphins have adapted to life underwater, but they must still come to the surface of the water in order to breathe. Like larger whales, dolphins have a blowhole on the top of their heads which they use to breathe air through. Dolphins usually come to the surface every two or three minutes to breathe, though they can stay underwater without breathing for up to twenty minutes. Dolphins are normally found in the Sunlight Zone of the ocean, but will occasionally dive down to the Twilight Zone in search of food. They can dive down to around 300 meters below the surface of the ocean.



A dolphin's blowhole can open and close. Dolphins open their blowholes when they come to the surface to take in air. They can store a lot of oxygen in their bodies which allows them to stay underwater for a long time. Dolphins sleep for about eight hours a day, but they wake up several times during that period. When a dolphin sleeps, one side of their brain stays active and the other side shuts down. The active side of the brain controls surfacing and breathing. As the dolphin sleeps, it will stay near to the surface of the water, swimming slowly or just floating. It will sometimes close just one eye. When it needs to breathe, it will break the surface of the water to take in air.

The Earth's Oceans/Ocean Zones

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Word Bank

(pp. 4-5)

creature (n) = animal

evolve (v) = to develop gradually

affect (v) = to influence

absorb (v) = to soak up

survive (v) = to stay alive

connected (adj) = joined together

(pp. 6-7)

divide (v) = to separate

zone (n) = area

layer (n) = zone

surface (n) = the top layer of sth

depth (n) = the measurement of how far down sth is

extend (v) = to reach a certain distance

range (n) = variety

seaweed (n) = a plant that grows in the ocean

bottom (adj) = not top

camouflage (v) = to disguise/hide

protect from (v) = to keep safe from

predator (n) = an animal that hunts another animal for food

blend in with (phr v) = to combine with

bioluminescent (adj) = producing light naturally

chemical (n) = substance that is used in, or made by, a chemical process

adapt (v) = to change

reach (v) = to extend down as far as a certain point

water pressure (phr) = the force exerted by water onto its surroundings

close to (adj) = near

freezing (adj) = extremely cold

home to (phr) = where sth lives

tiny (adj) = very small

invertebrate (n) = an animal with no backbone

stretch (v) = to reach

immense (adj) = huge

species (n) = type of animal, plant, bird, etc

discover (v) = to find

habitat (n) = the place where sth lives

Pre-Reading activities

1 a) Which of the following sentences do you think are *T* (true) or *F* (false) about the Earth's Oceans?

- 1 There are five oceans on Earth.
- 2 The oceans affect the planet's temperature.
- 3 There are six different zones in the ocean.
- 4 The Sunlight Zone is the largest zone in the ocean.
- 5 Creatures are able to survive in the Midnight Zone.
- 6 Scientists have discovered all the existing species of ocean creatures.

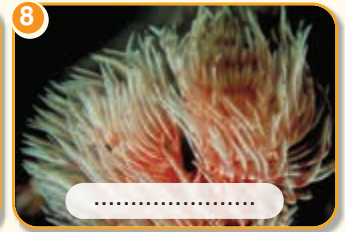
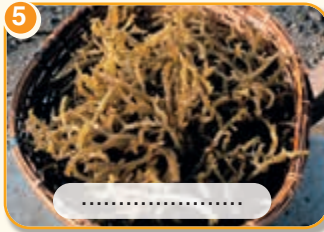
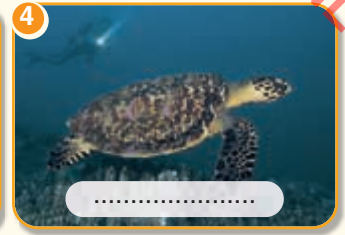
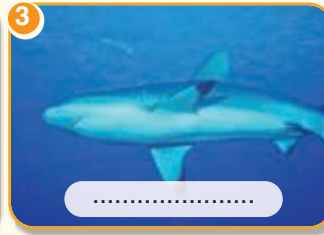
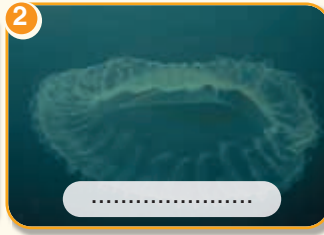
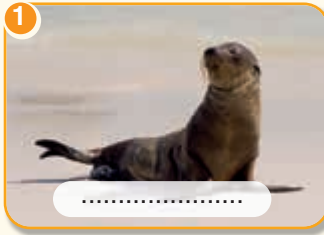
b)  Listen, read and check.

While-Reading activities

2 Read the text and choose the correct word.

- 1 Around **seventy/ninety-seven** percent of the Earth is covered in water.
- 2 The Earth's oceans are divided into **five/two** different zones.
- 3 Counter-shading protects dolphins from **bioluminescent creatures/predators**.
- 4 The **Sunlight/Twilight** Zone has the largest number of sea creatures and plants living in it.
- 5 Bioluminescent creatures use chemicals in their bodies to produce **pressure/light**.
- 6 The deepest part of the ocean is called The **Trenches/Abyss**.

- 3 Label the following pictures. Use: shark, tube worms, squid, seaweed, jellyfish, sea turtle, seal, starfish.



- 4 Use these words to complete the sentences: creatures, habitat, predators, surface, pressure, zones.

- 1 The Sunlight Zone is the layer nearest to the of the ocean, so it receives the most light.
- 2 Many creatures in the Sunlight Zone are counter-shaded to protect from
- 3 The bioluminescent that live in the Twilight Zone produce light using chemicals in their bodies.
- 4 The Midnight Zone is very dark and the water is extremely high.
- 5 Although The Abyss is the largest of the five ocean, very few creatures are able to live there.
- 6 Ocean creatures evolve so that they can survive in their and complete their life cycle.

- 5 Add these words and phrases to the right group, according to their meaning: extend, variety, zone, immense, adapt, discover.

- 1 evolve, change,
- 2 find, learn,
- 3 range, selection,
- 4 huge, large,
- 5 layer, area,
- 6 reach, stretch,

After-Reading activities

- 6 SUBJECT-SPECIFIC VOCABULARY:

Fill in: predators, bioluminescent, zones, chemicals, water pressure, invertebrates, life cycle, camouflage, blend in, freezing.

The Earth's Oceans are made up of five different 1), or layers, each of which is home to some weird and wonderful creatures. The Sunlight Zone is nearest to the surface of the ocean. Many creatures that live in the Sunlight Zone have bodies which are counter-shaded. This helps to 2) and protect them from potential 3) When a predator approaches, the counter-shading helps dolphins to 4) with their surroundings. The Twilight Zone is home to some of the oceans 5) creatures. They use 6) in their bodies to produce light. As we carry on down past The Midnight Zone, we come to The Abyss where only tiny species of squid and 7) can exist. The deepest of all the ocean's zones is The Trenches. Here the 8) is immense and the temperature is barely above 9) The creatures of the ocean have adapted to survive in their habitats and complete their 10) in peace.

- 7 **ICT** Collect information about the five oceans under the headings: **name** – **location** – **width** – **depth** – **creatures living there**. Compare and contrast them.

The Pacific Ocean is the biggest ocean of all.

Review

Listening Activities

- 1**  Listen to a dialogue about dolphins and choose the correct answer A, B, C or D.

- 1 What is the newspaper article about?
A The intelligence of dolphins. **C** Threats to dolphins.
B The habits of dolphins. **D** Ways to protect dolphins.
- 2 Why does the woman say, "What's the first most intelligent species"?
A To test the man's knowledge.
B To find out what the article says about the subject.
C Because she doesn't know the answer.
D To make a joke.
- 3 According to the article, what do some scientists believe?
A That dolphins are very entertaining.
B That dolphins are not as clever as chimpanzees.
C That dolphins should not be kept in captivity.
D That there are not enough dolphins in captivity.

- 2**  Listen to a lecture about dolphins and choose the correct answer A, B, C or D.

- 1 What is the main topic of the lecture?
A How dolphins cope in captivity.
B The main threat to dolphins.
C What we can do to preserve dolphins.
D How dolphins became an endangered species.
- 2 Why does the professor mention sharks at the beginning of the talk?
A To introduce a theory about dolphins.
B To prove that sharks are not a danger to dolphins.
C To contrast the dangers that sharks and humans pose to dolphins.
D To compare shark and dolphin behavior.
- 3 According to the professor, she finds the fact that some people shoot dolphins
A hazardous. **C** intimidating.
B pointless. **D** unthinkable.

Reading Activities

- 1** Fill in the gaps with: *zone, excellent, species, endangered species, dangerous, unselfishly, responsible, Abyss, pod, ancient, starfish, breathe, active, live, swallow.*

- 1 The Trenches are home to and tubeworms.
- 2 The is totally dark and freezing cold.
- 3 Scientists say they haven't found all the that live in the ocean yet.
- 4 Dolphins spend most of their time in the Sunlight
- 5 Dolphins air just like humans do.
- 6 Bottlenose dolphins for around 20 years.
- 7 Dolphins their food without chewing it.
- 8 Living in pods makes life less for dolphins.
- 9 Dolphins have been for saving some people from danger.
- 10 Dolphins have hearing.
- 11 The Amazon river dolphin is a(n)
- 12 Some people think that dolphins protect other mammals from harm.
- 13 When a dolphin sleeps, one side of its brains stays
- 14 Living in a makes life safer for a dolphin.
- 15 Dolphins are found in many myths from all over the world.

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

- 1 More than half the Earth's surface is covered in water.
- 2 The Earth's oceans have 5 zones.
- 3 The Sunlight Zone is the deepest zone in the ocean.
- 4 Dolphins are not fish, but actually small whales.
- 5 A group of dolphins is called a pod.
- 6 Dolphins are always friendly and never aggressive.
- 7 Dolphins lay eggs.
- 8 A baby dolphin learns to hunt from its father.
- 9 Dolphins sometimes make sounds we can't hear.
- 10 A baby dolphin will sometimes stay with its mother for 6 years.

3 a) Go through the reader and check if your answers were correct.

b) Correct the false statements in Ex. 2.

SUBJECT-SPECIFIC VOCABULARY

Parts of the body: beak, belly, bioluminescent creature, blowhole, brain, bull, calf, cow, curved mouth, eggs, eyesight, fin, hearing, jaw, tail, streamlined body, twins, invertebrates, toothed whales, sea creatures

Verbs: absorb, adapt, attack, behave, blend (in), bite, bounce, breed, bump, camouflage, chew, click, communicate, evolve, float, grab, grin, grip, hearing, herd, hunt, kill, mate, protect, slap, smell, squeak, survive, swallow, trap

Nouns: abyss, chemicals, disease, echolocation, habitat destruction, herd, lifespan, oxygen, pod, pollution, predator, sense, species, trench, whirlpool, zone

Adjectives: adaptable, newborn, shallow, sociable, wild

1 a) Choose the correct word from the words in bold. Go through the reader and check if your answers were correct.

- 1 Dolphins have a **fluke/blowhole** on the top of their heads.
- 2 Dolphins use **echolocation/pollution** to find their prey.
- 3 Dolphins are a species of **invertebrates/toothed whales**.
- 4 Habitat **destruction/camouflage** is a major threat to dolphins.
- 5 Dolphins have an excellent sense of **hearing/smell**.
- 6 Most **bioluminescent/sea** creatures live in the Sunlight zone.
- 7 Dolphins have a **lifespan/evolution** of about 20 years.
- 8 Dolphins survive because they are so **sociable/adaptable**.
- 9 A mother dolphin is called a **calf/cow**.
- 10 The Mariana **trench/zone** is the deepest part of the Earth's oceans.

b) Use words from the box to write T/F statements about the bottlenose dolphin.

Reading in Context

Pre-Reading activities

- 1 Look at the text below. Where do you think you might read this article?
- A magazine B letter C blog D textbook
- 2 a) Judging from the title, what do you think the topic of the text is?
- A A dolphin that lost its tail in a trap and is given an artificial limb.
B A vet that injured himself and needed artificial limbs.
C A vet that traps dolphins and gives them artificial limbs.
- b)  Listen and read to find out.

A DOLPHIN'S TALE

Winter is a dolphin with an incredible tale to tell ... about her tail!

Winter was born in 2005. When she was only about two months old, Winter was caught in a crab trap off the coast of Florida, USA. Her tail became tangled in the ropes of the trap and the tight ropes cut off the supply of blood to her tail.

Fortunately, Winter was found and caught by a small fishing boat. She was taken to Clearwater Marine Aquarium, where she was treated for her injuries. Winter survived, but sadly, her tail did not. The lack of blood to her tail had caused too much damage, and Winter lost her tail.

At first, the vets at the aquarium thought that Winter would have to learn how to swim without a tail. Winter seemed to be able to manage this. By moving her body from side to side,

instead of up and down like most dolphins, she could still move through the water. However, the vets were afraid that this unusual way of swimming would damage Winter's spine.

Kevin Carroll, who is an expert in prosthetics offered to help Winter. Carroll has made prosthetics for several other injured animals, including dogs, an ostrich and a duck. He worked with a team of experts for eighteen months and eventually, they designed and created a prosthetic tail for Winter. They placed a special sleeve under the tail so that it would be comfortable and would not irritate Winter's skin.

Winter was finally able to swim like other dolphins, and she is now living happily at Clearwater Aquarium, where she is one of the most popular attractions. A film called *Dolphin Tale* has been made about Winter's story and was released in September 2011. Winter plays herself in the film.



Word Bank

incredible (adj) = amazing

tail (n) = story

tail (n) =



catch (v) = to take hold of

crab trap (n) = a device to catch crabs which prevents them from escaping

tangled (pp) = caught up and unable to break free

rope (n) = a very thick cord, made by twisting together several thinner cords

cut off (phr v) = to stop sth from reaching the place it needs/wants to go

supply (n) = the amount of sth available

fortunately (adv) = luckily

treat (v) = to give medical care to

injury (n) = physical damage

sadly (adv) = in an unhappy manner

lack (n) = shortage

cause (v) = to be the reason for sth happening

damage (n) = injury; harm

vet (n) = veterinary surgeon

aquarium (n) = a building housing a collection of aquatic life

learn (v) = to acquire new knowledge or a new skill

manage (v) = to cope

be afraid (phr) = to worry

unusual (adj) = weird; strange

spine (n) = the backbone

expert (n) = sb who is specialized in a certain subject

prosthetics (n) = artificial limbs

several (det) = more than a few in number

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ostrich (n) =



duck (n) =



eventually (adv) = at the very end

design (v) = to devise sth

create (v) = to make sth

sleeve (n) = a case which sth fits into

comfortable (adj) = restful

irritate (v) = to cause inflammation or tenderness

skin (n) = the tissue forming the outer covering of the body

popular (adj) = widely favored

release (v) = to bring out (a film)

While-Reading activities

- 3 Read the text and put the sentences in the correct order.

- A ☐ Winter lost her tail.
 B ☐ Winter's tail did not get enough blood.
 C ☐ Winter was caught in a crab trap.
 D ☐ Prosthetics experts made Winter a new tail.
 E ☐ Winter starred in a film about her life.
 F ☐ Her tail became tangled in the ropes.
 G ☐ Winter learned to swim without her tail.

- 4 Read the text and circle the correct answer.

- Winter got caught up in the **spine / ropes** of a crab trap.
- Winter survived the accident, but her **tale / tail** did not.
- The lack of blood to Winter's tail caused too much **damage / injury** to be able to save it.
- The vets at the **coast / aquarium** thought Winter would have to swim without a tail.
- They made Winter an **artificial / sleeve** limb so that she could swim again.
- Winter is one of the most **comfortable / popular** attractions at Clear Water Aquarium.

- 5 Choose the correct word.

- Winter lost the supply of to her tail.
 A bone B water C blood
- Winter was rescued by a fishing
 A net B boat C line
- Vets were worried that Winter might damage her
 A fin B spine C skin
- Winter's new tail is very
 A comfortable B attractive C irritating
- A film called "Dolphin" has been made about Winter.
 A Tail B Tale C Story

After-Reading activities

- 6  Choose the option that makes the best alternative title for the text.

- A A Lucky Dolphin
 B A Dolphin in Captivity
 C A Dolphin Friendship

- 7 Chain story: Narrate the story using your own words.

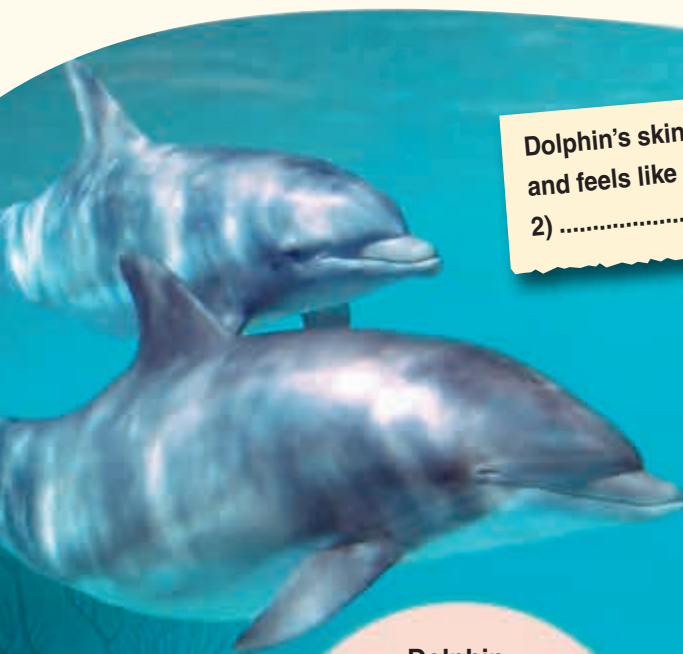
S1: *When Winter was two months old, her tail was caught up in the ropes of a crab trap.*

S2: *A small fishing boat found Winter.*

S3: *They took her ...*

Amazing Facts

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Dolphin's skin is smooth and feels like
2)

A bottlenose dolphin's 1) is larger than a human's brain, but the part concerned with intelligence is smaller.

Adult bottlenose dolphins eat approximately 4-9% of their 3) weight in food per day.

Just like human skin, dolphin skin constantly 4) and peels. A bottlenose dolphin's outermost skin 5) may be replaced every two hours.

Dolphin
6) are born with hairy whiskers just above their beaks. They fall out immediately after they are born though.

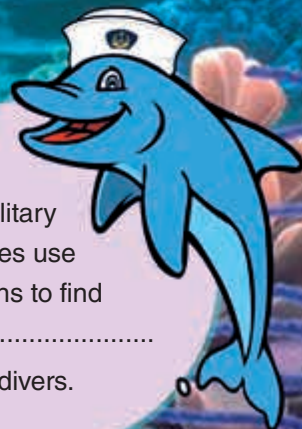
The largest dolphin is the Orca, which can 7) up to 10 meters long.

Researchers say that when you're in the water with a dolphin, it may look at you and do a "sonar scan" of your body. You may actually feel the

8) from the scan and it may make you feel extremely relaxed and happy.

Unlike sharks, when dolphins' 9) fall out they are not replaced.

The US Military sometimes use dolphins to find 10) divers.



1 Fill in the gaps with: *flakes, rubber, teeth, reach, lost, vibrations, brain, body, layer, calves.*

2 **ICT** Collect facts on bottlenose dolphins. Prepare a Yes/No quiz.