

公众号：Wecancan

## National Geographic Readers: Great Migrations Whales

By: Laura Marsh

Over the course of their 70-year lifespan, sperm whales will easily travel the circumference of the Earth in search of food and the need to

**7-9**

Age Range

**15-30 mins**

Length

**790L**

Lexile<sup>®</sup> Measure

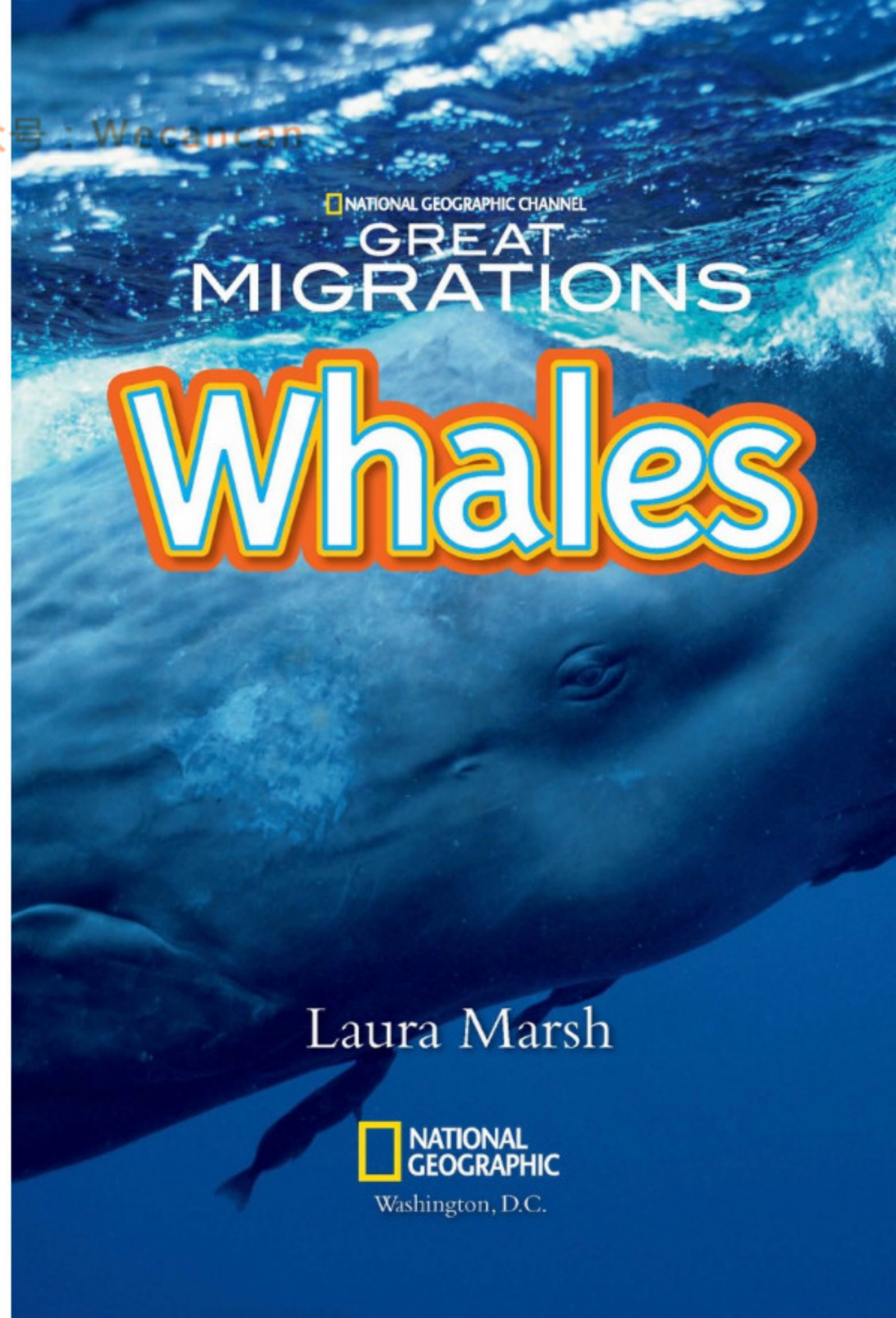
**4.5**

AR Level

# Whales

Laura Marsh

 NATIONAL  
GEOGRAPHIC  
Washington, D.C.



# On the Move

公众号: WJW1111111111

When animals travel from one region or habitat to another, it is called migration. Animals migrate in search of food or a mate. Migration helps animals survive on Earth.

Many animals migrate. The sperm whale is one of them.



sperm whales



wildebeest



red crabs

## Whale of a Word

**MIGRATION:** Moving from one region or habitat to another for food or a mate

**MATE:** Either a male or female in a pair. Most animals need a mate to have babies.

What animal ...

Is longer than a school bus?



Has the largest brain of any animal?



Is one of the greatest divers in the world?



A sperm whale!

# Wondrous Whales

公海鲸 Wecancar



## Whale of a Word

**PREDATOR:** An animal that eats other animals

Sperm whales are amazing creatures. They are the largest toothed predator on the planet. Males are larger than females. Males weigh up to 50 tons and grow up to 60 feet long. That's not just big, that's H-U-G-E!

### How do we measure up?

A sperm whale is so big, it makes an adult human look very small.



weird  
but  
true

A sperm whale's brain is five and a half times heavier than a human brain.

A sperm whale's head is big, too. It makes up one-third of its entire body length.

Its brain is the largest of any animal on Earth and weighs as much as 20 pounds!

**Q** What do you get when you cross an elephant with a whale?

**A** A submarine with a built-in snorkel.

## Whale Parts in Demand

Spermaceti was once used to make cosmetics, creams, and candles.



### Whale of a Word

**SPERMACETI:** An oily, waxy material found in the heads of sperm whales

Sperm whales get their name from a waxy material in their heads.

It is called spermaceti. You say it like this: spur-mah-SEE-tee. But scientists don't really know what its purpose is.

## We know a lot about sperm whales.

**WEIGHT:** 35–50 tons

**LENGTH:** 49–60 feet

**LIFE SPAN:** About 70 years

**SKIN:** Dark gray or black and wrinkled like a prune

**FLIPPERS:** Help steer the whale

**BLOWHOLE:** Used for breathing. Sperm whales can hold their breath for up to 90 minutes.

**HEAD:** Sperm whales have a massive head and rounded forehead.

**TAIL FLUKE:** Powers a sperm whale to swim up to 23 miles an hour. The tail fluke is about 16 feet from tip to tip.

**weird  
but  
true**

The heart of the average sperm whale weighs 277 pounds—about as much as two adult humans.

**BIG TEETH:** A sperm whale's lower jaw has 36–50 teeth. Its upper jaw is toothless. Sperm whales are carnivores.

**Whale of a Word**

**CARNIVORE:** An animal that only eats meat

# Need to Lead

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Female sperm whales travel in family groups called pods. There are 15 to 20 females and their young in a pod.

Pods are led by an older female. She guides the whales to the best feeding grounds.

Males usually leave their pods when they are between four and 21 years old. Then they join bachelor groups of up to 50 males. The largest and oldest males tend to swim alone.



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Sperm whales in a pod stick together as they travel. They protect and care for the sick, young, and injured. They make sure that every whale is fed.



This is important protection since sperm whales migrate very long distances. Some swim enough miles in their lifetimes to circle the Earth several times! They migrate according to the season.

Why is being in a pod important?

MAP KEY:

-  Sperm whale migration area
-  Area where whales don't go

During the spring and summer, sperm whales swim farther away from the Equator in search of food.

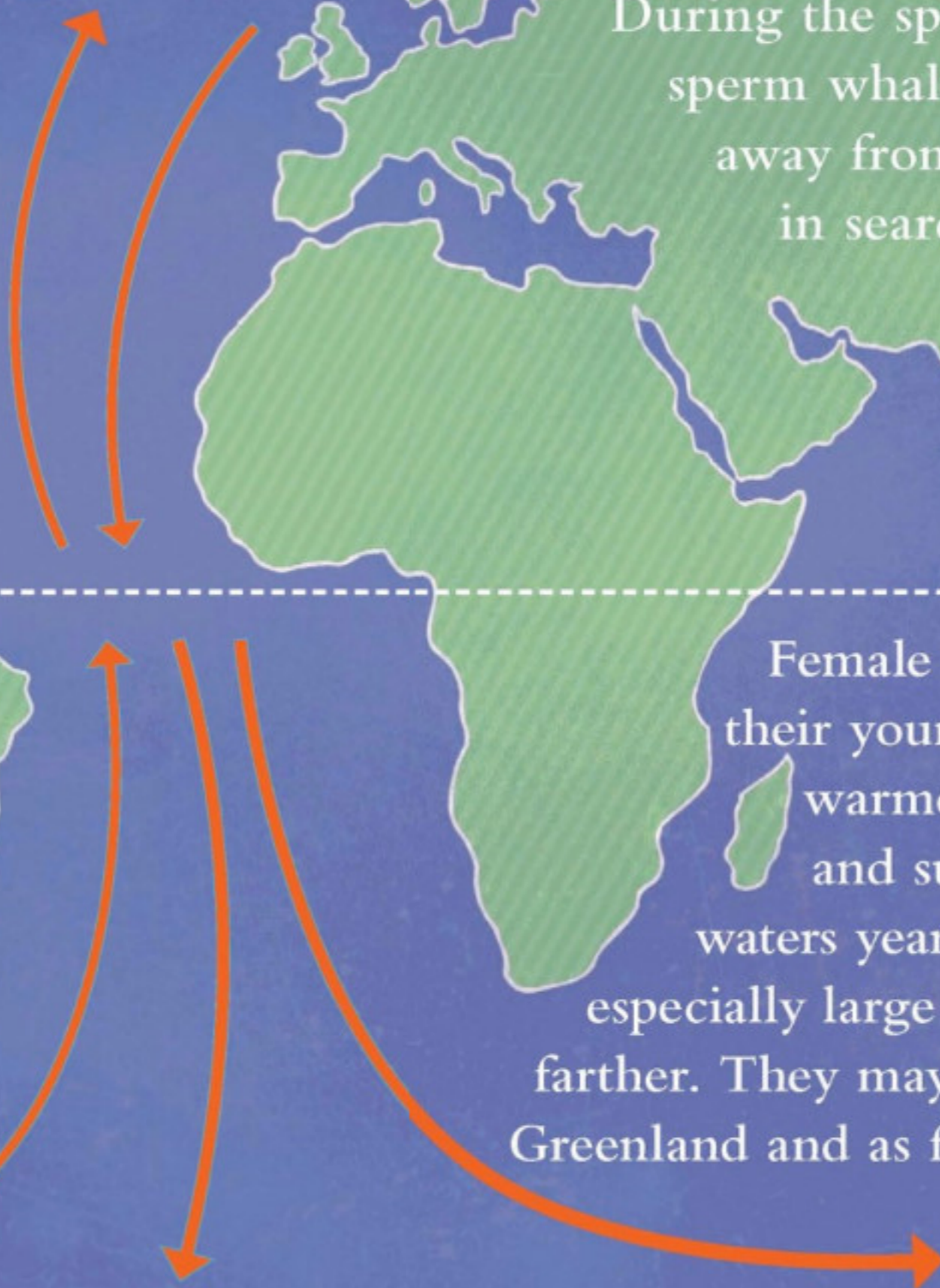


**Whale of a Word**

**EQUATOR:** An imaginary line around the Earth, equal distance from the North and South Poles

In the fall, sperm whales migrate toward the Equator to look for a mate.

Female whales and their young stay in the warmer tropical and subtropical waters year round. Males, especially large males, travel much farther. They may swim as far north as Greenland and as far south as Antarctica.



Greenland

Antarctica

# What a Feast!

公众号: [Whalepedia](#)

Sperm whales eat a lot—about one ton of food every day. That's 2,000 pounds! Their favorite food is large squid found in deep waters. They can eat about 700 squid in one day! Sperm whales also eat octopus, fish, shark, and skate.



octopus



fish



skate

Sometimes there is not enough food in one part of the ocean. While they search for food, whales survive on fat, called blubber, that's stored in their bodies.



## Whale of a Word

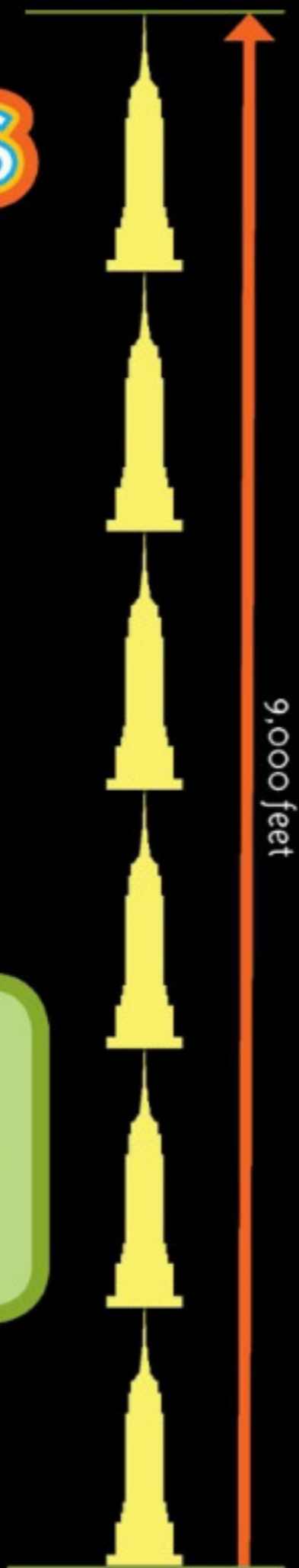
**BLUBBER:** A layer of fat that turns into energy to heat up the whale's body

# Deep Sea Divers

Time to dive for dinner!  
Sperm whales dive deeper  
than any other whale.  
They can dive more than  
9,000 feet.

## How Deep?

How much is 9,000 feet? It's about 1.7 miles. That's the height of about six Empire State Buildings stacked on top of each other.



Q What kind of fish is useful in freezing weather?

A Skate!



During an average dive, sperm whales hold their breath for about 45 minutes. They rest on the surface for 10 minutes. Then they dive again. They do this all day long.

Mothers do the hunting for their young. Young whales need to breathe more often than adults. So, they can't dive deep in the ocean until they are older. They wait on the surface and listen for their mothers diving far below them.

# Wee Whales

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Whales are mammals. Baby whales are born live and drink their mothers' milk for the first two years or so of life. Young whales are called calves.

Calves are born tail first and take their first breath within seconds of being born. They learn to swim within 30 minutes.

Just like human kids, calves can be playful. They play on the surface of the water while older whales are diving.

**weird  
but  
true**

Male sperm whales don't stop growing until they are about 50 years old. Females stop growing at about 30.

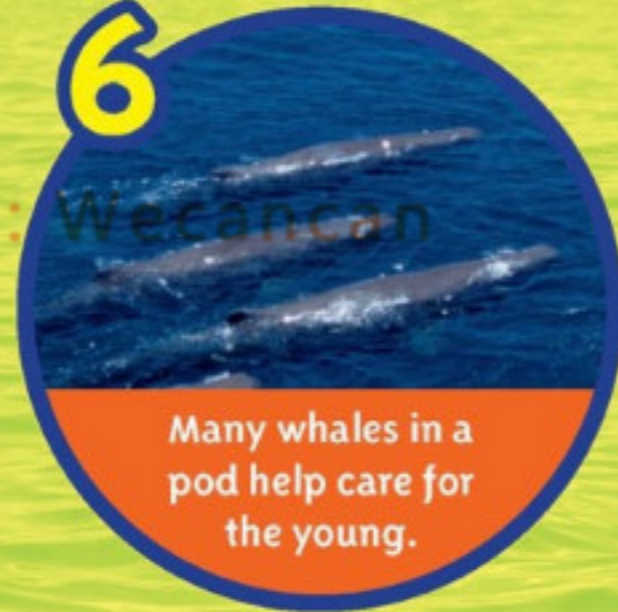
# 10 Cool Things About Sperm Whales

1



Newborns weigh about 1 ton and are 13 feet long.

6



Many whales in a pod help care for the young.

7



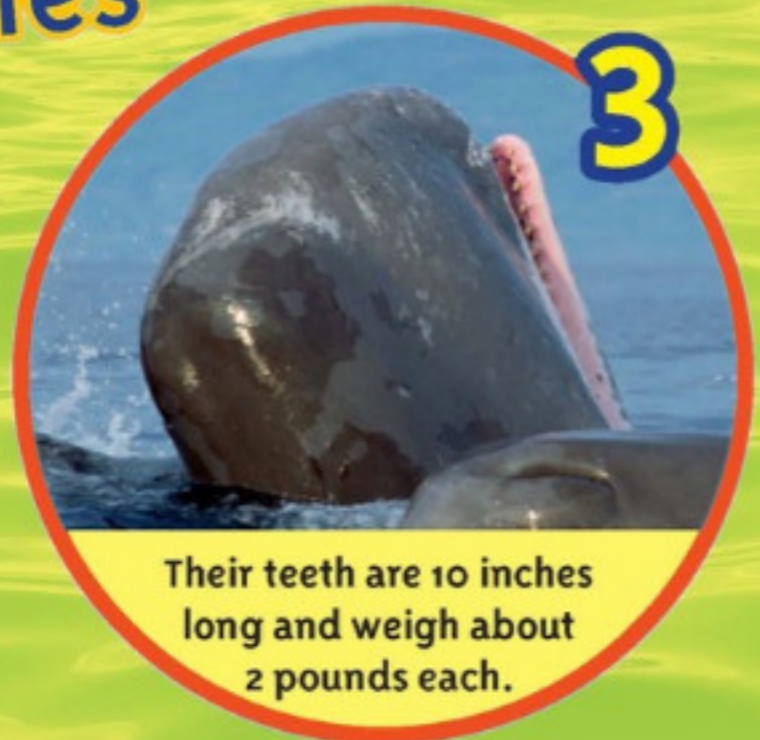
Their eyes are located far back on their heads. They can't see directly in front or in back, only to the side.

2



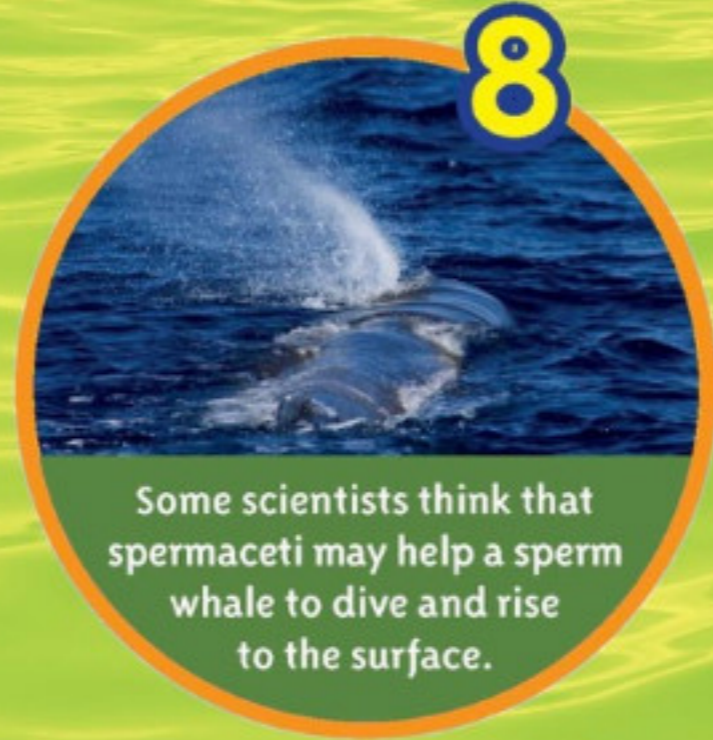
Their heart rate slows during deep dives so they don't waste oxygen.

3



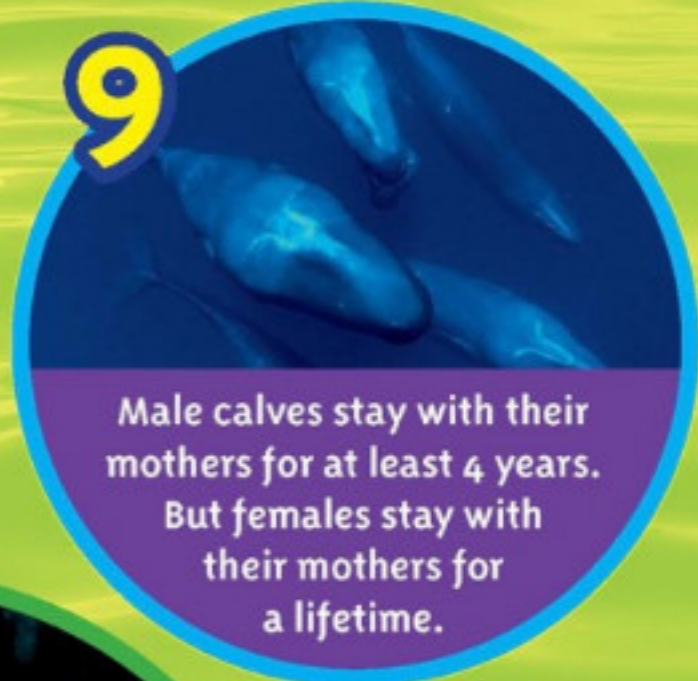
Their teeth are 10 inches long and weigh about 2 pounds each.

8



Some scientists think that spermaceti may help a sperm whale to dive and rise to the surface.

9



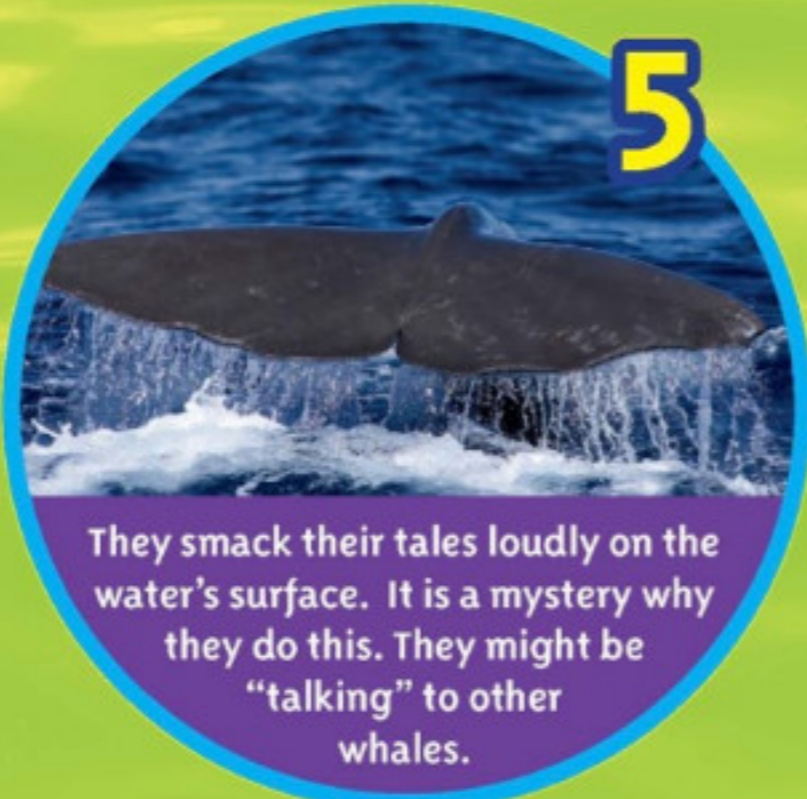
Male calves stay with their mothers for at least 4 years. But females stay with their mothers for a lifetime.

4



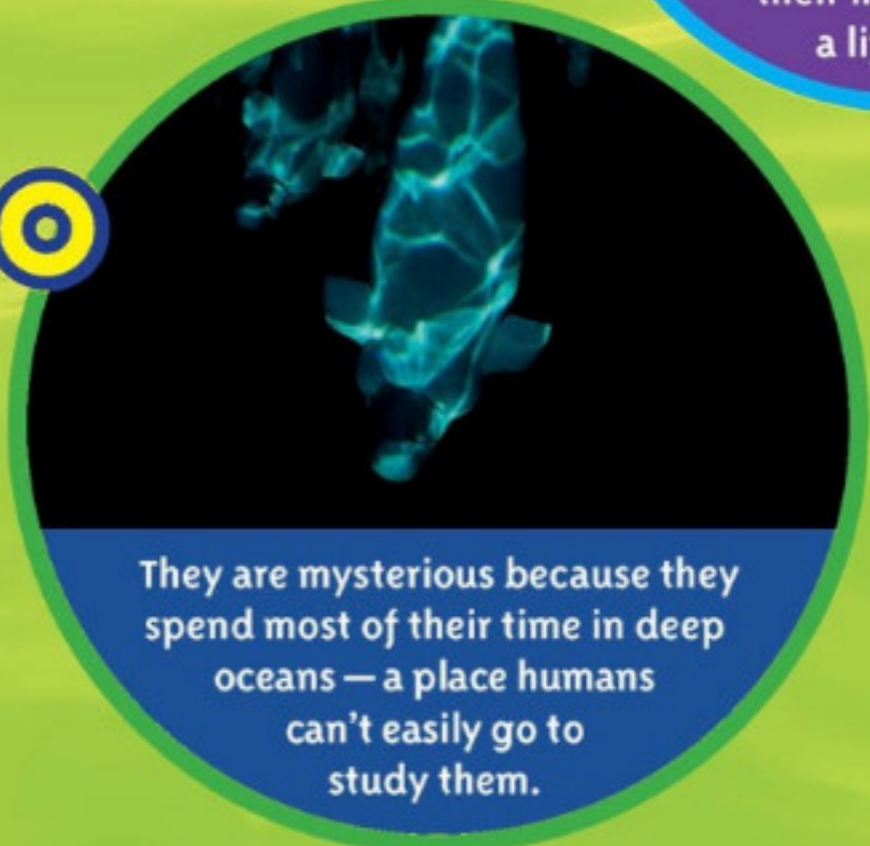
A sperm whale's blowhole is S-shaped.

5



They smack their tails loudly on the water's surface. It is a mystery why they do this. They might be "talking" to other whales.

10



They are mysterious because they spend most of their time in deep oceans — a place humans can't easily go to study them.



# Whale Talk

Q What's the loudest creature in the sea? A Wait!

Sperm whales talk to each other by making clicking sounds. These sounds are also used in echolocation (eh-ko-lo-KAY-shun).



## Whale of a Word

ECHOLOCAION: Using sound waves to locate an object



Echolocation is used by animals such as dolphins, bats, and toothed whales to navigate in the dark. Whales send out sound waves that bounce off objects in their path. The sound bounces off the object and returns to the whale. From this they can tell the size and distance of the object.

Whales use echolocation for three purposes:

- 1 To find their way in the deep, dark ocean,
- 2 to locate food, and
- 3 to find their young on the surface of the water.

# Deadly Dangers

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A giant squid might be a sperm whale's favorite meal—but it's also a whale's worst enemy.

## Monstrous Squid!

Giant squid can grow up to 59 feet long and weigh more than one ton. That's as tall as a five-story building and heavier than ten grown men!



weird  
but  
true

Giant squid have the largest eyes of any animal. They are ten inches in diameter.

36

In fact, some meetings with squid can lead to a deadly fight. Scars shaped like suction cups on a sperm whale's body are signs of a fierce battle with a squid.

Orcas sometimes attack sperm whales, too. When attacked, sperm whales form a circle to protect the sick and young whales. Then they can fight off the attacker with their huge tails.



37

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**Whale of a Word**

**WHALING:**  
To hunt for whales

During the 1700s, 1800s, and into the 1900s, a large number of whales were killed by people. Sperm whales were hunted for their spermaceti and their oil, which were used to light lamps and make candle wax. Hunters also wanted sperm whales for their ambergris, a material used in perfume.

Kerosene later replaced whale oil as a way to light lamps. Whaling was outlawed in the 1980s. The number of sperm whales has increased. Now there are many sperm whales in our oceans, but illegal whaling still happens.

**weird  
but  
true**

Scientists estimate that whaling has killed one million sperm whales.



Greenpeace is an organization that tries to stop illegal whaling ships, like this one disguised as a research boat.

Chemicals from factories, boats, and other human activities are dangerous to whales and the environment. This is called pollution. It can make whales sick or even kill them.

Whales are also in danger when they get too close to the shore. They can get stuck on beaches in shallow water.

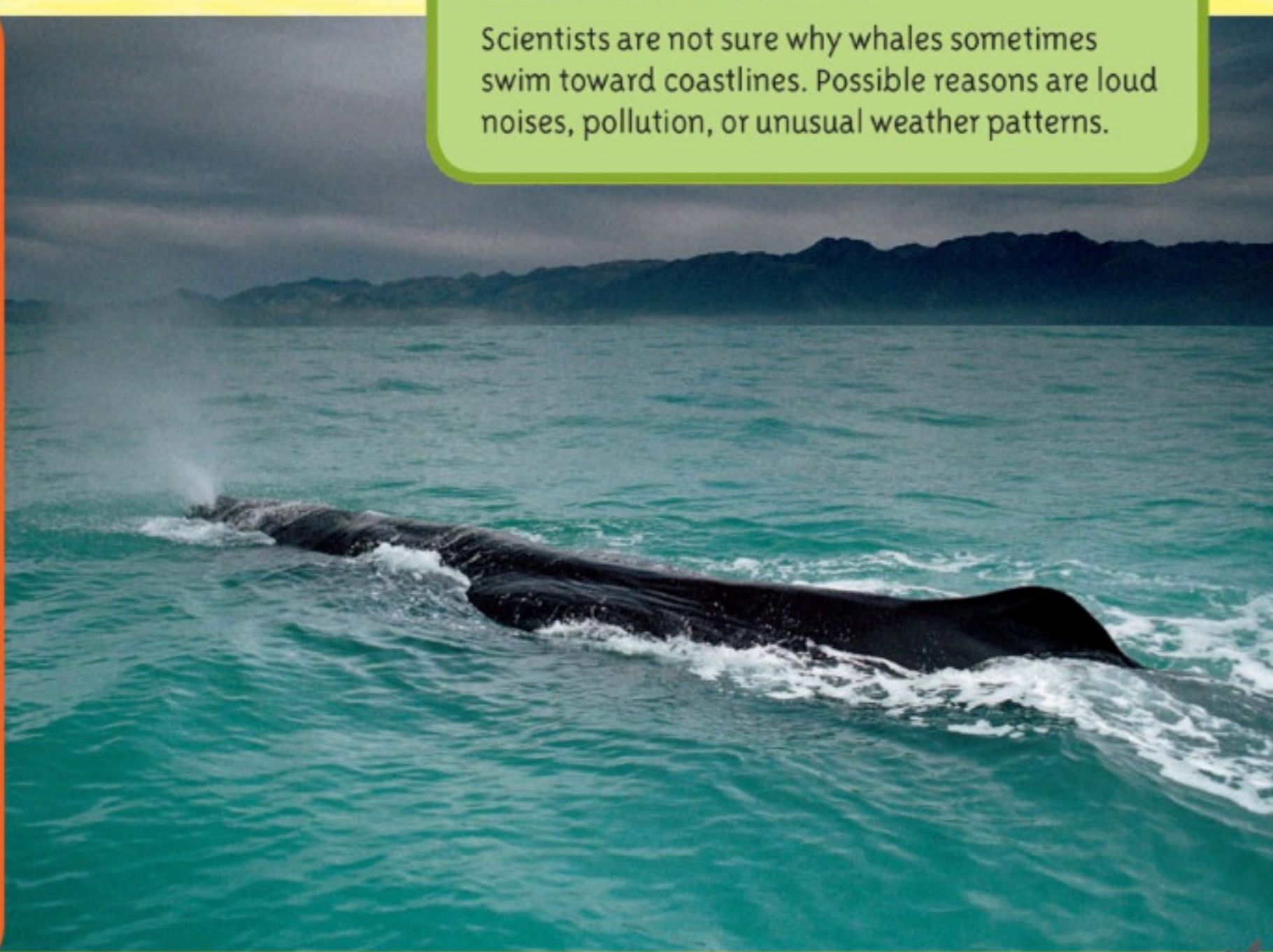
### Drawn to Shore

Scientists are not sure why whales sometimes swim toward coastlines. Possible reasons are loud noises, pollution, or unusual weather patterns.



#### Whale of a Word

**POLLUTION:** Damage to the environment with human-made waste





What do you call a baby whale?

A little squirt.



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But there is good news.

Organizations are working to stop oil spills and other pollutants in our oceans. People are using fewer plastic bags that may end up in the oceans and hurt sea animals.

Also, researchers are discovering why whales get stranded and what can be done about it.

And there are organizations like Greenpeace working to stop illegal whaling. The Sea Shepherd Conservation Society is another group that enforces whaling laws and saves whales from being killed.

**weird but true**  
The sperm whale's great size allowed it to sometimes sink early whaling ships.

The best news of all is that sperm whales appear to be thriving in our oceans today.



# What You Can Do

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Find out more about sperm whales and how to stop pollution in our oceans. The more we understand, the more we can help.



These groups support whales and other animals on their journeys throughout our planet:

## **National Geographic Society**

<http://animals.nationalgeographic.com/animals/mammals/sperm-whale.html>

## **World Wildlife Fund**

[http://wwf.panda.org/what\\_we\\_do/endangered\\_species/cetaceans/about/](http://wwf.panda.org/what_we_do/endangered_species/cetaceans/about/)

## **International Fund for Animal Welfare**

[http://www.ifaw.org/ifaw\\_asia\\_pacific/save\\_animals/whales/](http://www.ifaw.org/ifaw_asia_pacific/save_animals/whales/)

## **Oceanic Research Group**

<http://www.oceanicresearch.org/education/wonders/spermwhales.htm>



# Glossary



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**MATE:** Either a male or female in a pair. Most animals need a mate to have babies.



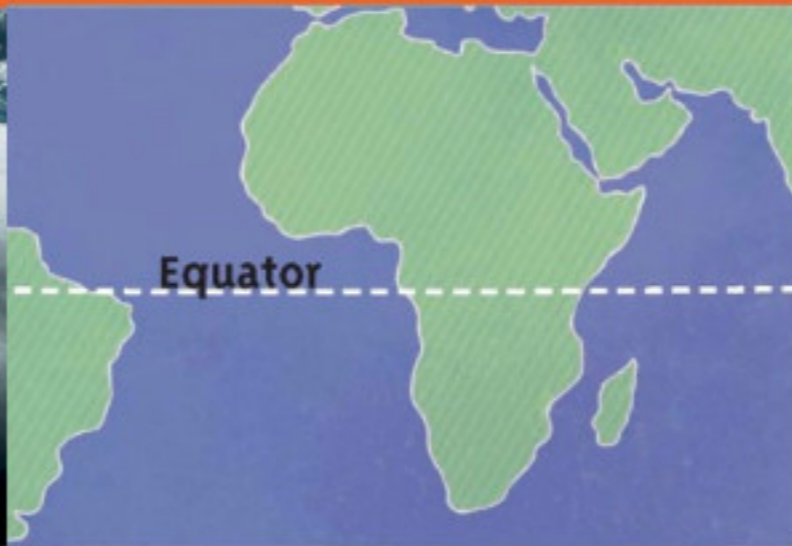
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**WHALING:** To hunt for whales



**POLLUTION:** Damage to the environment with human-made waste