Dolphin Defenders

DISCOVERY
Welcome to Dolphin Defenders! You will learn about whales and dolphins and what you can do to help them!

When you see the Dolphin Defenders DISCOVERY icon, click on it to find out more online!
AMAZING WHALES AND DOLPHINS

Whales, dolphins and porpoises are a group of mammals called **CETACEANS**.

Dolphin Defenders: DISCOVERY
Cetaceans & Fish

There are four main differences between cetaceans and fish.
What are the differences?

1. Warm blooded
   - Cetaceans

1. Cold blooded
   - Fish
What are the differences?

2. **Breathe air through lungs**

2. **Use gills to extract oxygen from water**
What are the differences?

3. Whales and dolphins give birth to one live baby at a time

3. Most fish produce eggs
What are the differences?

4. Move tails up and down

4. Move tails side to side

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WDC

WHALE AND DOLPHIN CONSERVATION
So the four main differences between dolphins and fish are:

- Dolphins are warm-blooded, fish are cold-blooded.
- Dolphins breathe air, fish have gills and breathe underwater.
- Dolphins give birth to live babies, most fish produce eggs.
- Dolphins pump their tails up and down when they swim, fish move their tails from side to side.
Amazing Whales and Dolphins

The ancestors of whales and dolphins lived on land a long time ago. Over time, whales and dolphins adapted to live in water. They have streamlined bodies and powerful flippers for swimming.

Their closest living relatives are **hippopotamuses**. Further, they’re even related to other even-toed hoofed animals such as sheep and deer!
How many different cetacean species currently exist?

Dolphins: 40
Porpoises: 7
Whales: 41

Did you know?

Although sometimes called a killer whale, the orca is actually a type of dolphin!
What are the differences between a dolphin and a porpoise?

**DOLPHIN**
- Bigger, curved dorsal fin
- Larger body size
- Pointed beak
- Sharp, cone-shaped teeth

**PORPOISE**
- Stubby beak
- Flatter teeth
- Small, triangular (or no) dorsal fin
- Smaller body size

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WDC (WHALE AND DOLPHIN CONSERVATION)
AMAZING WHALES AND DOLPHINS

Dolphins use tools

Watch humpback whales bubble net feeding.

Whales work together

Watch dolphins using sponges to protect their mouths and beaks.

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TWO MAIN GROUPS

Baleen
14 species
- Capture food with a structure inside their mouth called “baleen.”
- Baleen allows these whales to take a gulp of water and flush the water back out, while keeping small prey, like krill, inside their mouth.
- Some examples of baleen whales are humpback, blue, and right whales.

Toothed
74 species
- Hunt fish and larger prey using echolocation.
- Once prey is found using echolocation, these whales use their teeth to catch the prey for consumption.
- Some examples of toothed cetaceans are orcas and bottlenose dolphins.

88 living species of cetaceans are separated into two categories!

What are krill?
Krill are small, shrimp-like crustaceans. They’re about 5cm long, and a blue whale eats 40 MILLION of them every day!

Right whale
Humpback whale
Bottlenose dolphin
Orca

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WHALE AND DOLPHIN CONSERVATION
How do whales and dolphins catch their food?

Baleen whales are filter feeders; they have bristly baleen plates made from keratin (the same as our fingernails) in their mouths. Once the whale has a mouthful of prey and lots of seawater, they push the water back out through their baleen plates and small fish or krill get stuck in the baleen for the whale to swallow!
How do whales and dolphins catch their food?

FIND OUT MORE ABOUT DIFFERENT BALEEN WHALE FEEDING BEHAVIORS BY CLICKING ON THE LINKS BELOW!

- Blue whale lunge feeding
- Humpback whale bubble-netting
- Right whale skim feeding

Baleen whales

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How do whales and dolphins catch their food?

Toothed whales (includes any whale with teeth, plus dolphins and porpoises) use their teeth to catch fish, squid or other marine creatures. Toothed whales use echolocation, or sonar, to find their prey. They make a sound and listen for the echoes bouncing back from the prey, which they can then locate and catch.
Let’s talk about WHALE POOP... Really!

Whales cannot poop under pressure! That is why all whales poop close to or at the surface of the water.

Whale poop provides important nutrients for **phytoplankton**, which are tiny plant-like creatures in the ocean. Plankton use these nutrients to photosynthesize, which absorbs carbon dioxide from the atmosphere and produces oxygen. That’s a double win!

Also, phytoplankton sits at the base of the food chain and is a food source for many other ocean animals.

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A Dolphin’s Social Life

Dolphins are very social creatures. They live together in groups called PODS.

Dolphins...
- play with
- hunt with
- sing to
- teach
- look after
- talk to
- help
- protect
- and even babysit for...EACH OTHER!

Sometimes lots of pods come together forming SUPERPODS of thousands of dolphins!
How do Dolphins Sleep?

Humans breathe without thinking. Dolphins only breathe when they decide to. This means dolphins can’t become completely unconscious when they sleep like we do. So how do they sleep?

The answer: Dolphins only let one half of their brain sleep at a time!
RECORD BREAKERS

The biggest creature that has ever lived is the blue whale; they make dinosaurs look small!

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Whale and dolphin record breakers

BIGGEST

DOLPHIN

WDC

WHALE AND DOLPHIN CONSERVATION
A fully grown blue whale weighs up to 190,000 kg (190 tons) and can be over 98 FEET LONG. Also, a blue whale’s tongue is so long that an entire soccer team could stand on it!
Blue whales also have the BIGGEST BABIES.

A new-born baby blue whale can weigh 6,000 pounds!
The blue whale has the **BIGGEST HEART** - it weighs nearly half a ton and is the size of an adult male polar bear.

**Did you know?**

The main artery (aorta) of a blue whale’s heart is so large that an average size human could walk through it.
Blue whales might have the biggest heart, but it’s sperm whales that have the BIGGEST BRAIN. It weighs roughly 20 pounds and is 6 TIMES BIGGER than a human brain.
RECORD BREAKERS

Cuvier’s beaked whales can dive down to a depth of nearly 2 MILES!

DEEPEST DIVER

Incredibly, they can stay underwater and hold their breath for more than 2 HOURS.

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A gray whale, named Varvara, migrated roughly 14,000 miles from Sakhalin Island, Russia, to Cabo San Lucas, Baja California in 2011.
The vaquita is the smallest porpoise, only growing up to 5 feet (1.5m) long.

The vaquita is the most endangered porpoise, with only about 20 of them left in the world. Many of them have died trapped in fishing nets.

Photo taken under permit (Oficio No. DR/488/08) from the Secretaria de Medio Ambiente y Recursos Naturales (SEMARNAT), within a natural protected area subject to special management and decreed as such by the Mexican Government.
The winner of the biggest TOOTH record is the narwhal, whose tusk is actually a 9-10 foot long tooth.

The sperm whale has the biggest full set of teeth - each tooth is up to 8in (20cm) long.
Humpback whale songs can be heard over 1,500 miles away.

That's like shouting from MAINE and being heard in FLORIDA.
Sperm whales don’t sing, but they’re even louder! Their clicks **REACH VOLUMES OF 235 DECIBELS**, much louder than a rock concert (115 decibels) or a jet engine (140 decibels)!

This means sperm whales can talk to each other 37 miles apart!
Bowhead whales are the longest living of all mammals. Evidence suggests they could live to be over 200 years old.

Bowhead whales also win the prize for the biggest mouth and the longest baleen.
RECORD BREAKERS

Sei whales and fin whales can swim up to 34mph when hunting.

DID YOU KNOW? Because they’re so fast, fin whales are sometimes called the greyhounds of the sea.
Endangered Whales and Dolphins

Many whales and dolphins are threatened and others are endangered. This means there are a lot fewer of them in the world now than there used to be. Some are at risk of becoming extinct. Find out more about the threats to whales and dolphins:

- HUNTING
- CAPTIVITY
- BYCATCH
- HABITAT DESTRUCTION

The baiji or Yangtze river dolphin was declared EXTINCT in December 2006. Many got trapped in fishing equipment.

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Threats to Whales and Dolphins

1. HUNTING

Right whales are so named because whalers said they were the ‘right’ whales to hunt. So many whales were hunted in the past that many species are now threatened or endangered. There are fewer than 400 North Atlantic right whales left in the world.
Threats to whales and dolphins

2. CAPTIVITY

Whales and dolphins kept in captivity are separated from their families and wider communities, and spend their lives in small tanks with no freedom. They have to eat dead fish and can’t use echolocation. They die much younger than wild whales and dolphins.

It’s very important not to swim with dolphins even if they’re wild. Click to find out more.

Dolphin Defenders: DISCOVERY
Threats to whales and dolphins

3. Bycatch

Entanglement in fishing nets or line (bycatch) is the biggest threat to whales and dolphins. Every year, hundreds and thousands of individuals die a slow, painful death trapped in a net and unable to get to the surface to breathe. WDC is working with the fishing industry to make fishing safer.
4. HABITAT DESTRUCTION

Whale and dolphin habitats are being damaged and destroyed by pollution, including chemicals and plastic. They are also affected by noise pollution from boats and other human activities. Some whales and dolphins are disturbed or even hit by boats, and some of their food sources have been depleted through overfishing.

WDC is working to fight all of these problems and make sure whales and dolphins have safer ocean homes.

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Dolphin Defenders: DISCOVERY

Discover even more online

Species profiles

WDC's work

Whale facts

Dolphin facts

www.whales.org
To complete the DISCOVERY part of your Dolphin Defenders Award:

Complete the QUIZ

If the hyperlink above doesn’t work for you, the quiz can be found at http://bit.ly/dolphindefendersquiz

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WHALE AND DOLPHIN CONSERVATION
DOLPHIN DEFENDERS AWARD

Nice Work!
You’ve completed your DISCOVERY lesson and quiz.

Next up:
Your FUNDRAISING activity

Thank you for helping WDC to create a world where every whale and dolphin is safe and free!