

SHOUT OUT FOR SHARKS

EDUCATION PACK

PART 2



SHARK FACTS: BUILD THE KNOWLEDGE BANK
CAN YOU BECOME A SHARK EXPERT?



PART 2 SHARK FACTS: BUILD THE KNOWLEDGE BANK



FirstNews 
EDUCATION



TEACHER NOTES

ACTIVITY ONE

KNOWLEDGE CHECK

Key questions

- Can you become a shark expert?
- Can you learn more about shark biology?
- Can you develop your knowledge of individual shark species?

Learning objectives

- To develop knowledge of the shark family and its biology
- To develop knowledge of individual shark species and understand the diversity within the shark family

Pupils are tasked with building up their knowledge on sharks. Read the **'Insider knowledge: Meet the Family'** information pages to find out more about ten diverse species of shark. They then take the **'Shark Quiz'** and use the information about these ten sharks plus information provided by the shark and marine conservation experts to check their own level of expertise. The quiz is divided into two sections: **'Shark species knowledge'** and **'Shark biology knowledge'**.

What is shark biology?

This is finding out about their:

- Body structure (shape, size, fins, tail, teeth, skeleton, etc)
- Movement and behaviour
- Feeding
- Senses
- Habitat
- Offspring

ACTIVITY TWO

SHARK 'QUIZMASTER' CHALLENGE

Key questions

- Can you become a shark expert?
- Can you use your expertise to inspire others to learn more about sharks?

Learning objectives

- To develop knowledge of the shark family and its biology
- To apply this knowledge to create a quiz to educate and engage a wider audience of people

The children are tasked with continuing to develop their knowledge and understanding of sharks. They are challenged to educate and inspire other people to learn more about sharks by creating their own Shark Quiz. An opportunity will be needed for pupils to be able to try out their 'Shark Quiz' on others, and to reflect whether they fulfilled the brief of this challenge.

Additional information

CBBC SHARK BITES VIDEOS

www.bbc.co.uk/cbbc/shows/shark-bites

Pupils could watch the short CBBC *Shark Bites* videos where Steve Backshall explores what allows different species of shark to be at the top of their food chain.

Taking it further

Interactive quizzes: Why not use an interactive quizzing platform for children, such as Blooket, so pupils can create interactive versions of their shark quizzes to try out with friends? They can then replay to build up their knowledge within a gaming environment, as well as refining their quizzes to improve them.

Kids v Adults 'Shark Quiz Challenge': Enable pupils to set up a Kids v Adults 'Shark Quiz Challenge' event to find out who knows most about sharks. Children may want to use this event raise money for Bite-Back's shark conservation work.





TEACHER NOTES

SHARK QUIZ ANSWERS

PART A: SHARK SPECIES KNOWLEDGE

- 1. Put these sharks in order of size. The smallest of these is the length of a pencil. The largest is much longer than a bus!**
 - 1. lantern shark: 16 cm
 - 2. spined pygmy shark: 25cm
 - 3. goblin shark: 3-4m
 - 4. great hammerhead shark: 6m
 - 5. whale shark: 18m
- 2. Which predatory shark is camouflaged to look like the seabed with little bits of floating seaweed?**
 - spotted wobbegong shark
- 3. Which shark uses bioluminescence to display lights from its belly? It does this so it blends in with the surface of the ocean from below.**
 - spined pygmy shark
- 4. Not all sharks are found in seas. Which river gives its name to a freshwater shark?**
 - Ganges

- 5. Which shark can walk on its fins on dry land for up to 30m?**
 - epaulette shark
- 6. Which is the fastest shark in the ocean and can speed through the sea at 40 miles per hour?**
 - shortfin mako shark
- 7. Which shark can live to around 500 years old?**
 - Greenland shark
- 8. Which shark is the ocean's largest fish?**
 - whale shark
- 9. Which shark is not cold-blooded and keeps its body warm using heat from its muscles?**
 - great white shark
- 10. Match the species of shark to where they live.**
 - deep ocean – frilled shark
 - tropical warm waters – cookie cutter shark
 - tidal shallows – epaulette shark
 - under Arctic Ice – Greenland shark
 - coastal seabed – spotted wobbegong shark

PART B: SHARK BIOLOGY KNOWLEDGE

1. Diets

Sharks are...

- Most are carnivores, but some are omnivores

2. Body structure

A shark's skeleton and fins are made from...

- Cartilage

3. Teeth

The shape of a shark's teeth...

- Depends on its diet

4. Shark fins

Do all sharks have a triangular dorsal fin on the top of their bodies?

- No

5. Super senses

What superpowers do some sharks have?

- They can detect electrical currents to find prey

6. Habitat

Where are sharks found?

- All of these habitats (tropical shallows, deepest ocean and under Arctic Ice)

7. Offspring

Sharks...

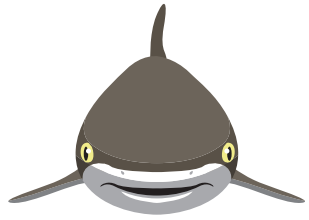
- Some lay eggs and some give birth to live babies. It depends on the species of shark!

8. Evolution

Which has been living on Planet Earth the longest?

- Sharks

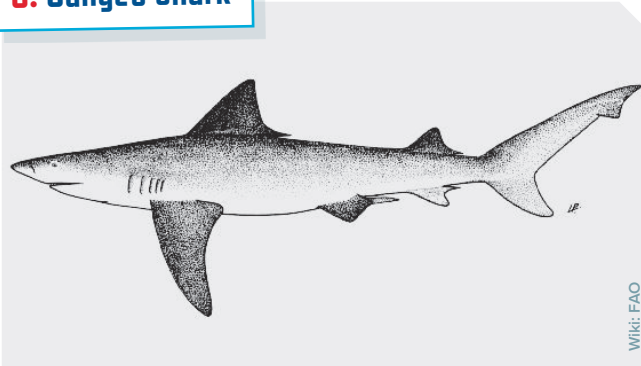




There are over 480 species of shark in our oceans, from the tiny lantern shark, the length of a pencil, to the 18-metre-long whale shark, the largest fish in the world.

Sharks first appeared on Earth over 400 million years ago – way before the dinosaurs – so it's not surprising that they have evolved an astonishing variety of shapes, sizes and behaviours. We asked a few of them to say hello...

3. Ganges shark



Wiki: FAO

Sharks aren't just for the sea. I am a **Ganges shark** – the only shark in the world that lives in fresh water for its entire life. I'm found in the Ganges River, India, and a few other Asian rivers, but, sadly, due to pollution, fishing and habitat loss I am now critically endangered. It's estimated there are only 240 of us left in the world. We are on the very edge of extinction.

1. Tasselled wobbegong shark



Alex Mustard

Hi! I am a **tasselled wobbegong shark** and I am a master of disguise. I spend most of my time lying on the seabed (hence the flat body) off the coast of southern Australia. I'm perfectly camouflaged by my mottled skin and the fronds of skin around my mouth that look exactly like seaweed. I am an ambush predator, and when lobsters, crabs and octopus wander innocently by – bam! – I strike!

4. Great hammerhead shark



Tanya Houppermans

The unmistakable shark, that's me. There are ten different kinds of us hammerheads, but I'm the largest – the **great hammerhead shark** – and I grow up to six metres long. I use my head to pin down my favourite food: stingrays. Spicy!

2. Spined pygmy shark



Doug Perrine

Hello, I am a **spined pygmy shark** and I am tiny – just 25cm long – but talented. I can make light from special cells in the skin of my belly and sides. This is called bioluminescence and about one in ten of us sharks can do it. Having a glowing tummy makes it hard for predators to see me from below, as I match the ocean surface. Cool, huh?

5. Cookie cutter shark



Mark Dando

So, I am a **cookie cutter shark** – sounds cute, right? Think again! I live in warm waters, where I suck on to larger sharks and marine mammals. Then, I sink my sharp serrated teeth into their skin and rotate around, cutting out perfect circles of flesh for my dinner. I am the only shark that is considered a parasite (an animal that lives off other living creatures) – hey, don't judge!





6. Frilled shark



Getty

No, I'm not an eel, I'm a **frilled shark** and you humans hardly ever spot me and know very little about me because I live so deep down in the dark waters of the open ocean. My bizarre, primitive body shape hasn't changed for millions of years and I have no living relatives, which is why I'm known as a living fossil. PS Check out my teeth!

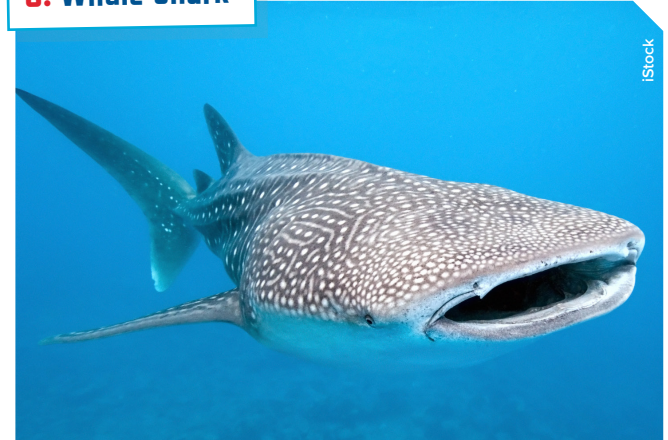
7. Great white shark



iStock

Hi guys, it's me. The big one. The 'deadly' one. The one from the film – a **great white shark**. Yes, I'm the largest predatory fish in the ocean and I can grow to six metres and weigh over two tonnes (females are the biggest), but I get a bad rap. Did you know that jellyfish kill eight times more people each year than all us sharks? In fact, my favourite munchies are seals, sea lions and small whales. Like most sharks, I have an incredible sense of smell – much better than those pet dogs of yours – but unlike other sharks, I'm not actually cold-blooded. I can keep my body warmer than the surrounding water by using heat from my muscles. Five of us in my shark family can do this!

8. Whale shark



iStock

Hi! I am a **whale shark** (excuse the confusing name). I am the largest species of shark, in fact, I'm the world's largest fish. I can grow to 18 metres long (three times longer than a great white) and weigh about 15 tonnes – a monster, right? Nope! Like the basking shark, I am a gentle giant. I swim slowly around the surface of the world's tropical oceans, sometimes in large schools, filtering vast quantities of plankton from the water. I also think I'd win any shark beauty contest for my stunning spotted skin – take a look.

9. Epauvette shark



iStock

Hello everyone. I am an **epauvette shark**, a small shark under one metre long with a neat trick: I can walk! Living in shallow tidal waters this is a useful skill to have, as I use my fins to walk along the seabed and over coral reefs to find new pools as the water level fluctuates. Recently, scientists got very excited when they discovered I can walk for up to 30 metres on dry land to find new habitats. I am easy to recognise by my two, striking outlined black spots.

10. Goblin shark



Getty

Julian Finn

I may just be the ugliest and most bizarre shark in the entire ocean. (Everyone say 'ahhhh'.) I am a **goblin shark**, a rare species of deep water shark that lives near the sea bed at depths of 1,200 metres. I am about 3-4 metres long and have a flabby, pink body. But looks aren't everything. The lower surface of my long, thin snout is covered in special sensory organs which can detect the minute electrical fields created by other creatures. This is a shark's 'sixth sense' and it helps us detect our prey. But that's not my only trick. I am thought to be slow and sluggish, but my mouth isn't. If a fish or squid comes nearby, I shoot my jaws forward to snap up my dinner. It's quite an astonishing trick, and has to be seen to be believed – I recommend you check out a video. Oh, and I'm another living fossil: we goblins have probably lived in the sea for 125 million years. Why change such perfection?



CAN YOU BECOME A SHARK EXPERT?



PART 2 SHARK FACTS: BUILD THE KNOWLEDGE BANK



KNOWLEDGE CHECK

Now, it's your turn to become a shark expert. Your task is to build up your expertise of the wide variety of shark species living in the seas on Planet Earth.

To do this:

- Read the 'Insider knowledge: Meet the Shark Family' information pages to find out more about different shark species
- Re-read the expert interviews to learn from their knowledge

SHARK QUIZ

PART A: SHARK SPECIES KNOWLEDGE

1. Put these sharks in order of size. The smallest of these is the length of a pencil. The largest is much longer than a bus!

- ☐ great hammerhead shark
- ☐ lantern shark
- ☐ spined pygmy shark
- ☐ whale shark
- ☐ goblin shark

2. Which predatory shark is camouflaged to look like the seabed with little bits of floating seaweed?

- ☐ spined pygmy shark
- ☐ cookie cutter shark
- ☐ tasselled wobbegong shark

3. Which shark uses bioluminescence to display lights from its belly? It does this so it blends in with the surface of the ocean from below.

- ☐ frilled shark
- ☐ spined pygmy shark
- ☐ epaulette shark

4. Not all sharks are found in seas. Which river gives its name to a freshwater shark?

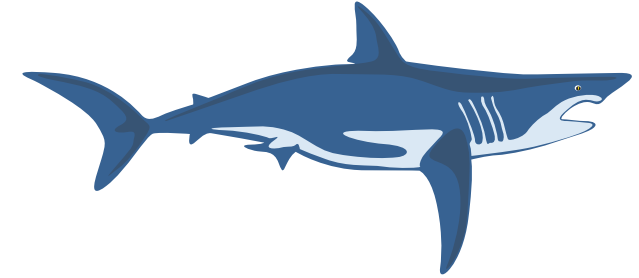
- ☐ Amazon
- ☐ Ganges
- ☐ Thames

5. Which shark can walk on its fins on dry land for up to 30m?

- ☐ epaulette shark
- ☐ frilled shark
- ☐ basking shark

6. Which is the fastest shark in the ocean and can speed through the sea at 40 miles per hour?

- ☐ whale shark
- ☐ tiger shark
- ☐ shortfin mako shark



7. Which shark can live to around 500 years old?

- ☐ basking shark
- ☐ great hammerhead shark
- ☐ Greenland shark

8. Which shark is the ocean's largest fish?

- ☐ great white shark
- ☐ whale shark
- ☐ great hammerhead shark

9. Which shark is not cold-blooded and keeps its body warm using heat from its muscles?

- ☐ great white shark
- ☐ goblin shark
- ☐ frilled shark

10. Match the species of shark to where they live.

- | | | |
|----------------------|-----------------------|---|
| deep ocean | <input type="radio"/> | <input type="radio"/> Greenland shark |
| tropical warm waters | <input type="radio"/> | <input type="radio"/> cookie cutter shark |
| tidal shallows | <input type="radio"/> | <input type="radio"/> frilled shark |
| under Arctic Ice | <input type="radio"/> | <input type="radio"/> spotted wobbegong shark |
| coastal seabed | <input type="radio"/> | <input type="radio"/> epaulette shark |





PART B: SHARK BIOLOGY KNOWLEDGE

1. Diets

Sharks are...

- ☐ Carnivores
- ☐ Herbivores
- ☐ Most are carnivores, but some are omnivores

2. Body structure

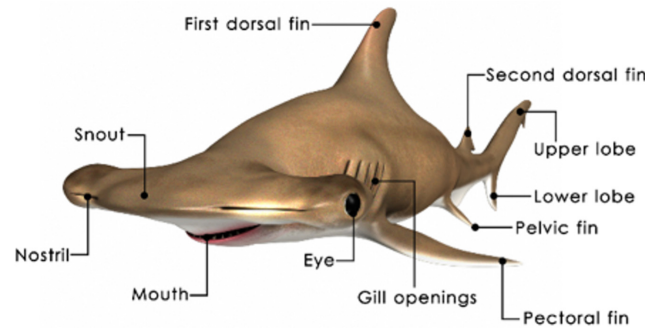
A shark's skeleton and fins are made from...

- ☐ Bone
- ☐ Cartilage
- ☐ Both bone and cartilage

3. Teeth

The shape of a shark's teeth...

- ☐ Is always flat and triangular
- ☐ Depends on their diet
- ☐ Is always fang-shaped



4. Shark fins

Do all sharks have a triangular dorsal fin on the top of their bodies? (This is the one that great white sharks have, and so do nearly all cartoon drawings of sharks.)

- ☐ Yes ☐ No

5. Super senses

What superpowers do some sharks have?

- ☐ They can turn invisible to hide from predators
- ☐ They can live forever
- ☐ They can detect electrical currents to find prey

6. Habitat

Where are sharks found?

- ☐ Tropical shallows
- ☐ Deepest ocean
- ☐ Under Arctic Ice
- ☐ All of these habitats

7. Offspring

Sharks...

- ☐ Give birth to live babies
- ☐ Lay eggs
- ☐ Some lay eggs and some give birth to live babies. It depends on the species of shark!

8. **Evolution:** Which has been living on Planet Earth the longest?

- ☐ Trees
- ☐ Sharks
- ☐ Humans

YOUR SHARK SCORE: ____ / 18

1-6: Shark Beginner

You are at the start of your shark science journey. Keep building up the facts you know about sharks.

7-12: Shark Intermediate

You are building up your knowledge quickly. Keep going – the ocean's sharks need you on their side.

13-18: Shark Expert

Wow! You know a lot about sharks. You are ready to become a shark educator and help other people to learn what amazing, important and diverse creatures they are.





SHARK 'QUIZMASTER' CHALLENGE

Can you create your own shark quiz?
The challenge is to make a quiz for other people that will help them to learn more about the shark family.

In your quiz, can you include information on:

- Shark biology: facts about all or most sharks
- Facts about individual shark species
- Shark superpowers
- Threats to sharks
- Shark conservation

STEP 1: RESEARCH TIME

Collect facts and information from the expert interviews and 'Meet the Shark Family'. Dive deeper too and do your own research – there's a lot more to find out about these fascinating fish.

STEP 2: QUIZ WRITING

Can you:

- Make your quiz fun and interesting for your quiz players?
- Educate players and help them to learn things about sharks they didn't know?

TIPS FOR QUIZZES

Use different types of quiz question.
For example:

- Multiple choice
- True or false
- Matching options
- Ordering options

QUIZ CHECKLIST

Have you included questions on the following:

- ☐ 1. Shark biology: facts about all or most sharks
- ☐ 2. Facts about individual shark species
- ☐ 3. Shark superpowers
- ☐ 4. Threats to sharks
- ☐ 5. Shark conservation

STEP 3: QUIZ TIME

Now, it's Quiz Time! Organise a time to try out your quiz on your classmates, friends and family.

STEP 4: REFLECT

- ☐ Which facts did your quiz players know already?
- ☐ What did they learn about sharks from you?
- ☐ Did your quiz players enjoy your quiz?

