

Amazing Shark Facts Answer Sheet

1. Sharks live in every ocean.

Sharks swim in every ocean of the world, from warm tropic waters to icy polar seas. Some live in the deep, dark waters of the ocean, while others bask in sunlit waters close to the surface. Some prefer the high seas, others live in water closer to shore. A few sharks even swim up rivers, and at least one species, the bull shark, is sometimes found in fresh water lakes.

2. All sharks look alike.

No, many kinds of sharks which live in the open ocean have torpedo-shaped bodies. Sharks that live near the shore are not as streamlined and some sharks that live on the sea bottom have long, eel-like or flattened bodies. The shape of a shark's body can be a clue to its habitat and way of life.

3. Sharks were around before dinosaurs.

An ancient sharklike fish, called *Cladoselache*, swam in Devonian seas about 400 million years ago. Most sharks, as we know them today, developed during the Cretaceous Period, about 64 million years ago when dinosaurs ruled the earth.

4. All sharks are dangerous.

Definitely not! Of the 370 different kinds of sharks found in the oceans, three are most often involved in attacks on humans: the great white shark, the tiger shark and the bull shark. Sandtiger sharks sometimes bite people and the oceanic whitetip and blue shark have been known to bite victims of sea disasters.

5. Sharks are fish.

True

6. All sharks are grey.

No, many sharks are quite colorful. Sharks that live on the seafloor are often camouflaged with spots, stripes, bars or blotches so that they are hidden among plants and stones on the sand. Many sharks that hunt near the sea's surface are counter-shaded: they have dark backs (which makes them difficult to see if you are looking down at them), and white bellies (which makes them hard to see if you are underwater and looking up at them). Deep sea sharks may be black but some, like deepwater dogfish and megamouth have body parts that glow in the dark!

7. Shark skeletons are made of the same material as your nose and ears.

A shark doesn't have a bone in its body. Its skull, spinal column and fin supports are made of cartilage, a tough but light and flexible elastic material that is also found in the hard but bendable parts of your own nose and ears.

8. Sharks breathe using gills.

As a shark swims, water flows into its mouth, passes over the gills at the back of its mouth and out through its gill slits. Our lungs take oxygen from the air, and the shark's gills take oxygen from the water.

9. Sharks have to keep moving to stay alive.

Most oceanic sharks that live in the open seas will suffocate if they cannot move forward in the water because they must force seawater through their open mouths and over their gills to breathe. Some kinds of sharks can rest on the sea bottom where the current is strong enough to flush water over their gills, and others with well-developed gill muscles can breathe by pumping water over their gills.

10. Sharks don't have ears and cannot hear.

Sharks don't have obvious ears like most animals. Two tiny openings on the top of a shark's head are the openings of canals that lead to its hearing organs. Sharks are very quick to respond to the type of sounds made by an injured fish swimming haphazardly through the water.

11. Sharks have a very poor sense of smell.

Not true. A shark has a very good sense of smell. If there were only 10 drops of tuna juice in an average-sized swimming pool and you were a lemon shark, you would be able to smell the tuna juice!

12. Sharks have very poor eyesight.

Not true. Most sharks see very well, particularly sharks that feed near the surface of the sea during the daytime. Sharks that live in the dark depths of the ocean may also have much larger eyes than those that live near the surface. Sharks that spend most of the day resting on the bottom of the sea or live in murky water probably don't rely on sight as much as their other senses.

13. The eyes of sharks are black.

Although a few sharks have bold black eyes, the color varies with the species. Sharks may have green eyes, or golden eyes, while some see their world through silvery grey eyes. Some sharks have round pupils, others have slits, and the most highly evolved sharks have pupils that dilate.

14. Sharks can blink their eyes.

The upper and lower eyelids of most shark cannot move at all, but their eyes can be rotated for protection when feeding. Some kinds of sharks have a third eyelid, called a nictitating membrane, a moveable shield that completely covers the eye as the shark feeds. This very special eyelid is not restricted to sharks; the Egyptian mongoose also has a nictitating membrane – probably to protect it from the venom of a spitting cobra.

15. Sharks can detect the electrical signals of other animals.

The dark spots on the shark's snout and lower jaw are pores that mark the opening of the ampullae of Lorenzini, jelly-filled canals that allow the shark to pick up weak electrical fields. Sharks use this sixth sense to find food, such as stingrays, hidden beneath the sand. They may also use this electrical sense to determine the direction they are swimming in – just as we would use a compass to find our way.

16. A shark can have up to 30,000 teeth in its lifetime.

A shark is always teething; it may lose between 12,000 and 30,000 teeth during its lifetime. Its teeth aren't attached to its jaws and are continually being replaced; it is rather like having a conveyor belt of teeth.

17. All sharks have very sharp teeth.

Not true. Each kind of shark has teeth suited to its life style. Teeth may be knife-like or fork-like, sharp or blunt or rounded, large or small and the teeth of some young sharks may differ from the adults. Because the number and shape of the teeth differ in each kind of shark, scientists can use teeth to identify a shark.

18. Sharks will eat anything it finds.

What a shark eats depends on the food available and the kind of teeth that it has. Sharks with serrated teeth can carve a mouthful of food from a fish bigger than themselves. Sharks with smooth fork-like teeth feed mostly on fish. Sharks with strong rounded teeth may eat hard-shelled crabs. The largest sharks of all eat the smallest food: the giant whale shark and basking shark feed on microscopic plankton.

19. Sharks are always hungry.

Definitely not! For example, captive lemon sharks only eat between 2.7% and 5% of their body weight every 40 to 80 hours. If you ate like a shark you would only have a hamburger and fries every two to three days. Unlike cats, dogs or people, sharks will not overeat.

20. A shark's skin is smooth.

Instead of scales a shark has thousands of miniature 'teeth', called dermal denticles embedded in its skin. These skin teeth act as a suit of armor and provide protection for the shark. They make the shark's skin so rough that years ago shark skin was used as sandpaper.

21. Sharks never get sick.

Not true. Bacterial infections and parasites such as roundworms and tapeworms often infect sharks living in aquariums. A whale shark held in captivity died of blood poisoning while other sharks have had liver disease, meningitis and tumors in the wild. Leeches, flatworms and lice infest great white sharks. In the wild, sick sharks probably starve to death or are eaten by other sharks.

22. Some sharks lay eggs.

True. Some kinds of sharks, mostly small sharks that live near the seafloor, lay eggs. Empty eggs of sharks, skates and rays often wash up on beaches and are called mermaid's purses. But most sharks give birth to live young.

23. Shark mothers care for their babies until they are about a year old.

Not true. Pups are on their own from the moment they are born. At birth, newborn pups are excellent swimmers and are able to find food and fend for themselves.

24. Sharks can 'learn'.

True. Sharks have relatively large, complex brains. They learn by investigating their surroundings; like you, sharks learn through experience. This may explain differences in behavior. Young sharks are more active and less predictable than adult sharks. The ability to learn makes it possible for sharks to tackle situations that cannot be dealt with by instinct alone.

25. Sharks can't talk to each other.

Sharks don't have voices but they communicate with each other through body language. When a shark lowers its pectoral fins, hunches its back and swims with exaggerated movements, it is delivering a warning. Sharks may make similar displays or slap the water with their tails when faced by another shark or large unfamiliar object.

26. The mako shark is the fastest shark.

True. Mako sharks are the fastest swimmers in the shark kingdom. They are also able to leap 20 feet above the surface of the water and to do that they have to reach a speed of 20 miles per hour or even faster! Sharks have cruising speeds, but when chasing fish or fleeing from an enemy they can swim much faster. But sharks can't stop quickly, and they cannot swim backwards.

27. Hammerhead sharks are the weirdest-looking sharks.

There are quite a few weird-looking sharks. The flattened head of hammerhead sharks may have evolved to give it lift when swimming forward and its head holds more electrosensory organs – which the shark needs to navigate long distances in the open sea and to find food that is well-camouflaged or hidden beneath the sand. The hammerhead shark's favorite food is squid and having widely-separated eyes may be a very good design when your favorite food has tentacles. Another very peculiar-looking shark is the goblin shark; it is pink with blue fins and has a long blade-like nose. Sawsharks are also very strange-looking sharks; they have long flat snouts that are edged with sharp teeth and they have a pair of whisker-like barbells below. Angel sharks and wobbegong sharks have flattened bodies and look as if they are half ray and half shark.

28. Humans are far more dangerous to sharks than sharks are to humans.

True. According to the Global Shark Attack File, three people were killed by sharks in 2003, but people kill more than 100 million sharks each year. Floating gill nets, often more than 30 miles long, drift through the sea trapping every large creature in their path including whales, dolphins, turtles and sharks. Longline fisheries also catch huge numbers of sharks. Finning – cutting the fins off living sharks and tossing the mutilated creatures back into the sea to die – takes a very heavy toll. The senseless slaughter continues because most people don't realize how important sharks are to the health of the oceans – and to our planet!

From: Sharks Questions & Answers
New Holland Publishers
© Marie Levine, 1994