

MEPC 2017 Information Sheet: Hammer Time... Protecting Our Sharks!



There are nearly 500 species of sharks in the world. They inhabit virtually all aquatic environments — from freshwater lakes and rivers to the deepest oceans — and range in size from just a few inches to over 40 feet!

While sharks are often feared as



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“man-eaters,” the truth is that humans pose a far greater danger to sharks than they pose to us. Do you worry about being struck by lightning? Probably not! So you shouldn’t worry much about being bitten by a shark. In your lifetime, you are 50 times more likely to be struck by lightning than you are to ever be bitten by a shark.

Threats to shark populations include overfishing, by-catch as a result of fishing operations, and habitat degradation. One big problem: the negative public image of sharks can be quite a challenge to conservation efforts.

Sharks are slow-growing animals that reach maturity only after several years and produce few

young. When shark populations become depleted, they may take decades to recover.

Most of the modern-day shark families lived over 100 million years ago, when dinosaurs roamed the earth. In recent decades, many shark populations worldwide have suffered severe declines due to overfishing.

Today they are sought for their meat, fins, oil, teeth, hides and even their cartilaginous skeletons.

Sharks are important apex predators that help keep the ocean food chain healthy and need our protection for survival. Are sharks in danger? Yes! and if nothing changes, more sharks may become endangered or even extinct in the near future!

Dolphin Encounters

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Contest Deadline:

March 17th, 2017

Shark Links:

National Geographic

Bahamas National Trust

Bimini Biological Field Station

Nurse Shark Facts

Ave. Lifespan: 25 — 35 years

Size: Up to 15 ft

Weight: Up to 330 lbs

Protection status: Vulnerable

Range:



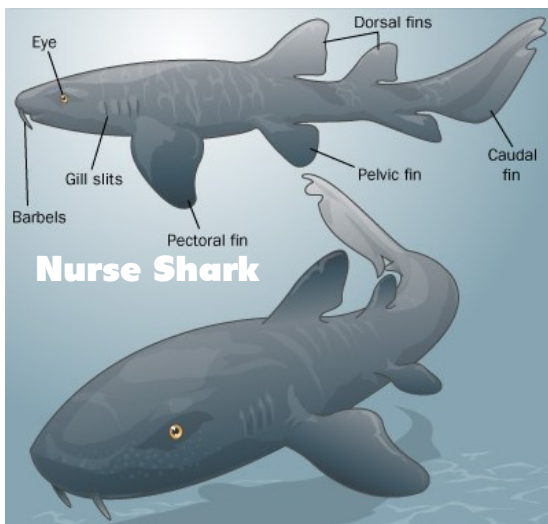
A Shark Is A Fish

What is a shark?

When we think of sharks, we usually think of sleek, large species that stalk the seas for fishes and marine mammals. Some do just that, but not all. The huge whale shark feeds on plankton. The smallest shark, a dwarf lantern shark is smaller than a human hand and feeds on krill and smaller marine animals. Some sharks are giants — longer than a school bus. Some are tiny enough to hold in your hand. Some spend their entire lives in motion, and some rarely stir from the sea bottom. Yet, they are all sharks.

A shark has 5 kinds of fins.

A shark’s tail is called a caudal fin and it propels the shark forward. The paired fins toward the front of a shark are its pectoral fins, used for lift as a shark swims. The fins on the shark’s back are the



dorsal fins. The pelvic fins are underneath the shark, and the anal fin is a single small fin near the tail. Only male sharks have claspers — a pair of organs attached to the pelvic fins.

Sharks have fish features.

Like other fish, all sharks are cold-blooded. They have a skeleton and fins, live in the water, and breathe

with gills. Most fish in the world are called bony fish. Their skeletons are made of bone, as are ours. There are more than 28,000 species of bony fish in the world, but less than 500 different species of sharks. It’s likely that many more, including some deep-sea fish, have yet to be found.

So what’s the difference?

One thing that makes sharks different from bony fish is that a shark’s skeleton is made of cartilage, not bone. Cartilage is a tough connective tissue. We have cartilage in parts of our bodies too. Push on your nose or squeeze your ear to feel the cartilage.

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Nurse sharks catch their prey from the sea floor, mostly by sucking their prey into their mouths. The “slurping” or sucking sound is completely unique to this species.



A Shark Is A Fish (...continued)

Sharks have scales?

Most bony fish scales are round, and as the fish grows so does its scales. You can even estimate how old some fish are by counting their scales, just like counting tree rings.

Shark scales are different. Each one looks like a miniature tooth. They have the same structure as a tooth: an outer layer of enamel, a layer of dentine, and a pulp cavity. Sharks' scales don't grow bigger as the shark ages. As a shark grows, it grows more scales. These tooth-like scales make a shark's skin rough, like sandpaper.

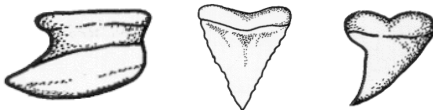


Shark scales look like miniature teeth.

Sharks have lots of teeth.

A shark has several rows of teeth in its mouth. Some sharks may have up to 30,000 teeth in a lifetime. Sharks bite with the outer row of teeth, but eventually these teeth

Shark teeth are specialized for each species' diet.



Basking Shark

Great White Shark

Blue Shark

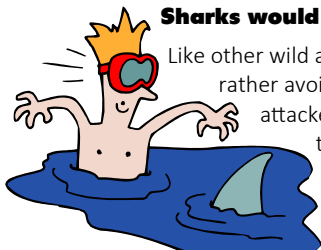
A Shark Is A Predator

What do sharks eat?

While some sharks are not very picky about what they eat, others prefer a specific diet. Hammerhead sharks eat mostly stingrays. Smooth dogfish eat crabs and lobsters. Tiger sharks eat sea turtles. Blue sharks eat squids, and whale sharks eat plankton. Sharks DO LIKE to eat weak, ill, or injured animals because they are easy to catch.

These predators have poor appetites.

Sharks eat far less than most people imagine. Like other fish, sharks are cold-blooded and have much lower metabolisms than warm-blooded animals. Many sharks can even go several weeks between meals!



Sharks would rather AVOID people.

Like other wild animals, most sharks would rather avoid you. Sharks that have attacked people probably mistook them for food or may have attacked to protect their territory.

Sharks have predators too!

Sharks have several predators, including other sharks, elephant seals, and even killer whales.

Sharks Are In Danger!

People are predators, too.

Historically sharks were not considered important species. Over the years, people used sharks for food, medicines, vitamins, weapons, jewelry — even sandpaper. Some species are now in trouble. For example, The Great Hammerhead is endangered, even though it is not commonly a target for commercial fishing. Fear often drives people to hunt and kill these spectacular sharks because they don't understand them.

Finning...what a waste!

Sharks also fall victim to finning, the practice of slicing off a shark's fins and tossing its carcass back into the water. Dried fins fetch a high price and are used to make the Asian delicacy shark fin soup. Although shark finning is banned in all U.S. waters and the Atlantic Ocean, finning still occurs legally in most parts of the world it is a driving force for most shark fisheries.

Why are sharks important?

- Control population in ecosystem
- Remove sick and injured fish
- Promote greater fish diversity & healthier reefs
- Source of income (diving)
- Protect conchs by keeping it's natural predator population under control



Many sharks are killed just for their dorsal fin.

Shark Research

Research into shark reproduction helps us understand shark dynamics, which help us better plan for the future of sharks. In some areas, tagged sharks are providing information about growth rates. Once a shark is caught, it is measured, tagged, and released. The shark is re-caught and measured again. The measurements are used to calculate a yearly growth rate.

The Value of Sharks

Over the past 20 years, shark-related tourism has contributed more than \$800 million dollars to the Bahamian economy. A single reef shark is thus worth US \$250,000 over its lifetime for tourism if kept alive on the reef!

The Bahamas: Protecting Our Sharks

In 2011 The Bahamas declared well over 600,000 Km² of its waters as a Shark Sanctuary, prohibiting commercial shark fishing and the possession, sale and trade of shark products. More than 40 species of sharks journey through the beautiful Bahamian waters. These include species such as Tiger, Lemon, Great Hammerheads, Bull, Blacktip, Mako, Silky, Nurse and even the massive Whale Shark.

Bimini has emerged as one of the best places on the planet to encounter the Great Hammerhead Shark.

These elusive giants have evaded divers for years, but now Neal Watson's Bimini Scuba Center has access!

What Can You Do?

Conservation begins with learning. Do your part to help protect sharks: keep the ocean clean, follow fishing laws, keep only what you can eat, and share what you have learned.



Each shark is worth \$250,000 ALIVE on the reef for tourism!