

This Week is.... Shark Week!!

Table of Contents:

This Chapter will contain 5 Lessons,

1. Types of Sharks and Where they can be found in the World

2



Types of Sharks

OBJECTIVES AND STANDARDS

Objectives:

- 1. Identify 5 types of sharks
- 2. Explain the similarities between Megalodon and present day sharks

Standards:

3.1.2.C3:

Describe some plants and animals that once lived on Earth, (e.g., dinosaurs) but cannot be found anymore. Compare them to now living things that resemble them in some way (e.g. lizards and birds).

Lesson | Overview

In this lesson we will be discussing the different types of sharks in the world. We will be exploring 5 different sharks, each subsection is about one of these 5 sharks. The last shark that we will discuss is a prehistoric shark and at the end of the lesson you will be asked to present some similarities between modern day sharks and megalodon. The last part of this lesson will be an overview of the material that you have learned. Don't forget if a word is red click on it and it will lead you to an outside source of information that I want you to check out!

Alright boys and girls, time to learn about sharks! Click this HERE to see the Intro Video!

There are lots of different types of sharks that can be found all around the world!

The sharks that we will be looking at are:

- 1. The Great White
- 2. The Mako Shark
- 3. The Whale Shark
- 4. The Bull Sharks
- 5. And finally Megalodon



First up is the magnificent Great White Shark

The Great White Shark is the largest predatory shark, and is probably the most well-known and feared shark. The Great White Shark is a gray or bluish color on top and white below. The largest Great Whites can reach lengths of 22 feet and weigh up to 5,000 pounds! That is one big shark! The Great White shark has massive jagged teeth that are great when attacking their prey. These teeth also come in handy when they are sometimes attacked by another predator!

Great White Sharks are most commonly observed throughout the world's sub-arctic coastal waters, that means that they are generally in the most northern or southern parts of the ocean. But they likely spend most of their time in the open ocean. Highest

concentrations are found in the waters off the coast of South Africa, Australia, California, and Mexico. The Great White Shark is also found in the Adriatic and Mediterranean Seas. They



generally prefer water between 54 and 75 degrees Fahrenheit, so luke-warm water.

Somethings to remember about Great White Sharks:

- They can reach up to 22 feet in length and weight up to 5,000 pounds!
- Found mostly off the coast of South Africa, Australia, California and Mexico.

Next up the mighty Mako shark!

The Mako shark is the fastest of all species of sharks in the world!

They can swim at a top speed of 60 miles per hour when they are migrating, this is when an animal moves from one habitat to another, or hunting for food. Mako sharks generally swim at a speed of about 35 miles an hour on a regular basis. You may also

leaping out of the water! This is a rare sight and there isn't any known reason why they do this.

see a mako shark



Some scientists

think it may be to search for food that is above the ocean like birds.

Others assume that it is because they need to breathe but sharks have gills so they do not need to breathe air like we do!

Sadly Mako sharks are often hunted for sport since they aren't very large. Many trophy hunters just want to mount one on their wall. They are very fast swimmers though so being able to get one takes a great deal of patience and skill.

The make shark can be found all over the world because they are very diverse, this means that there is lots of variety, so you will find some that live in warm waters and others that live in colder temperatures. Some live close to the shores in shallow water while others prefer the depths of the ocean. The vast majority of make sharks however are found in the waters surrounding Tahiti.

Things to remember about the Mako Shark!

- They can swim up to 60 miles per hour, but generally swim at a steady 35 miles per hour
- They can be found all over the world because they are very diverse
- They can be seen leaping out of the water for reasons that are unknown.

Now it's time for the friendly giant the Whale Shark!

The whale shark is not only the biggest shark but it is also the biggest fish! However its name can be misleading because it is NOT a whale! It has a huge mouth which can become up to 4 feet wide. Its mouth is at the very front of its head (not on the underside of the head like in most

sharks). It has a wide, flat head, a rounded snout, small eyes, 5 very large gill slits, 2 dorsal fins (on its back) and 2 pectoral fins (on its sides). The spiracle (a vestigial first gill slit used for breathing when the shark is resting on the sea floor) is located just behind the shark's eye. Its tail has a top fin much larger than the lower fin. But you will learn more about the shark parts later on in another lesson.

The whale shark has distinctive light-yellow markings (random stripes and dots) on its very thick dark gray skin. Its skin

Movie 1.1 Swimming with Whale Sharks



is up to 4 inches thick! There are three prominent ridges running along each side of the shark's body.

This enormous shark does not eat the same diet as most other sharks. Instead of having to attack its prey it sucks them into its mouth. The Whale shark is what is called a filter feeder it sucks in an enormous amount of plankton to eat through its gills as it swims. Whale sharks

are found worldwide in the warm oceans! This means that you will never find a Whale shark near the north or south poles.

Here are some things to remember about whale sharks:

- Whale sharks are filter feeders and their main source of food is plankton.
- Whale sharks are only found in warm waters, so they will never be to close to the North and South Poles.

Time to learn about one tough shark the Bull Shark!

The bull shark has a short snout that is wider than it is long, this is how it got its name because its snout looks like a bulls snout. Its belly is off-white, its top surface is gray, and the eyes are small. You can identify a bull shark by either its snout or the first dorsal fin that is much longer and more pointed than the second dorsal fin.



A baby bull sharks fins have black tips, but these marking fade in the adults. And unlike many other shark species when fully grown the females are

larger than the males. The bull shark has many nicknames some of them are the cub, Ganges, Nicaragua, river, Swan River Whaler, Zambezi, shovelnose, slipway grey, square-nose, and Van Rooyen's shark.

The bull shark is often found close to shore and can live for a while in fresh water, unlike most other sharks, frequenting estuaries, rivers and lakes. It has been found up to 1,750 miles (2800 km)

up the Mississippi River in the USA and 2,500 miles (4000 km) up the Amazon River in Peru. The Bull shark

1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 1965 - 19

has also been found in Lake

Nicaragua (Central America) and the Zambezi River (Africa). The map above shows the most common areas that Bull sharks have been found.

Somethings to remember about the Bull shark:

- · The can swim in freshwater unlike most sharks.
- The two identifying features of a bull shark are its snout and its long pointed dorsal fin.

Finally the biggest and oldest shark...MEGALODON!

1. Megalodon's teeth were about 7 inches long...

Megalodon didn't earn its
name ("giant tooth") for
nothing. The teeth of this
prehistoric shark were over
half a foot long, serrated,
and heart-shaped

2. Megalodon had the most powerful bite of any creature that ever lived.

In 2008, a joint research

team from Australia and the U.S. used computer simulations to calculate Megalodon's biting power. The results can only be described as terrifying: whereas a modern Great White Shark

chomps with about 1.8 tons of force, Megalodon chowed down on its prey with a force of between 10.8 and 18.2 tons--enough to

crush the skull of a prehistoric whale as easily as a grape. Scary right?!

4. Megalodon may have grown to a length of over 60 feet.

Since Megalodon is known from thousands of teeth but only a few scattered bones, its exact size has been a matter of debate. The consensus today is that adults were 55 to 60 feet long and weighed as much as 100 tons.

5. Megalodon lunched on giant whales.

Interactive 1.1 Great White Shark vs. Megalodon

Megalodor

Great White Shark

Although the bigger-than-Megalodon blue whale is technically a carnivore, it feeds mostly on tiny krill. Megalodon had a diet more befitting an apex predator, feasting on the prehistoric whales.

6. Megalodon's closest living relative is the Great White Shark.

Megalodon is known scientifically as Carcharadon megalodon—meaning it's a species, Megalodon, is of a larger family called Carcharodon. The Great White Shark is scientifically known as Carcharodon carcharias. Do you see the similarity in the name? They both have Carcharodon in their name.

9. Megalodon fossils have been found all over the world.

Unlike some marine predators of prehistoric times—which were restricted to the coastlines or inland rivers and lakes of certain continents—Megalodon went to oceans all over the world.

10. No one knows why Megalodon went extinct.

So Megalodon was huge, relentless, and the top predator of its time. What went wrong? Well, there's no lack of theories:

Megalodon may have been doomed by global cooling (which culminated in the last Ice Age), or by the gradual disappearance of the giant whales that constituted the bulk of its diet.

Review Activity

Why don't you try tracking some sharks around the world!

Find real sharks in the ocean here!

Want to find out about other sharks we didn't discuss?

Check out more sharks here!

Discuss with your classmates what some of the similarities between modern day sharks and megalodon! In the google document linked below please type at least 3 similarities between modern day sharks and Megalodon!

Shark Google Form

After you are finished with that finish this review to move on to the next lesson!

Shark Week Lesson I Individual Review

Shark Parts--What Makes a Shark?

OBJECTIVES AND STANDARDS

Objectives:

- Identify the main features of a shark
- 2. Explain the steps in which a shark bites

Standards

4.1.2.D:

Identify differences in living things (color, shape, size, etc.) and describe how adaptations are important for survival.

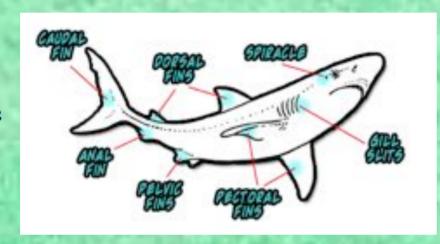
Lesson 2 Overview

In this lesson we will learn about what are the main characteristics of a shark. We will first discuss the main parts of a shark such as fins, gills, tail, etc. Then the last thing that we will talk about is the mouth of a shark and how it is used. We look at a sharks jaw, teeth, and the way it which a shark bites. At the end of the lesson you will be tested on the definitions of the shark parts, the primary use of the part and the steps in which a shark begins to take a bite. Remember if something is in RED that means that it is a hyperlink to a webpage. And if a word is highlighted that means it can be found in the glossary in the last pages of the iBook.

Now that you have learned all about the different types of sharks, let's look at what makes a shark! Let's see what our shark friend has to say about this subject! Click HERE to start the lesson.

As we learned before sharks come in all shapes and sizes. But there are some general things that all sharks have no matter if they are a Great White or a Bull Shark! All sharks have some basicparts that help them to live underneath the water. First lets look that the main physical characteristics of a shark.

The above image is where all of these parts are on the shark.



These are some of the basic parts of sharks:

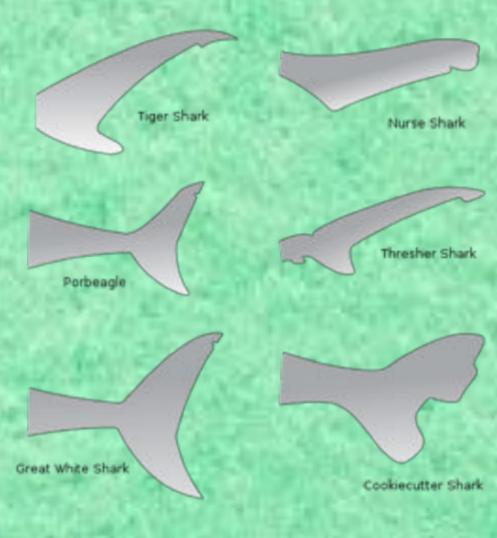
Gill Slits: These slits are found on the side of the shark in front of the pectoral fins. The gills are how a shark gathers the oxygen needed for it to survive.

Spiracle: Openings just behind the fish's eyes that allow it to draw oxygenated water. These will not be found on all sharks.

Dorsal Fins: These are the fins on the top of the shark, used for stability.

Pectoral Fins: These fins are found right behind the head and gills, used to lift and steer the shark while swimming.

Pelvic Fins: Found behind the pectoral fin, used to stabilize the shark while it swims.



Anal Fins: Found behind the pelvic fin, these are used for additional stability.

Caudal Fins: Also known as a tail fin, this fin is one of the most important parts of a shark's body. It propels the shark forward when it swims, and they come in many shapes and sizes! See the image above to see what some Caudal fins look like!

Sharks survive in the water by having these parts 3 of the these parts specifically increase their hydrodynamics, the flow of fluid over the sharks body.

First there is the sharks body!

Sharks typically have a rounded body that gets thinner at the ends, kind of like an arch. This body shape reduces drag or push against the shark and requires a minimum amount of energy to swim. A shark that cannot swim will not have as much buoyancy, or the ability to float.

Next is the Caudal fin!

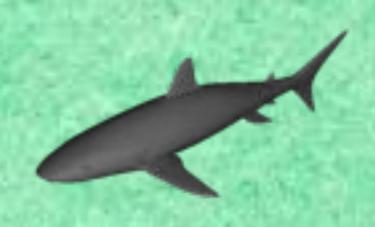
As the caudal fin or tail fin moves back and forth to propel the shark forward, it also moves upward. As the caudal fin continues to lift, the shark's head points down. As said before this creates the overall effect of a forward or downward motion.

Finally there are the Pectoral fins!

The pectoral fins help to balance out the upward and downward motion created by the caudal fin. One function of the pectoral fins

is to provide lift in the upper region of the shark's body, so essentially from the pectoral fins forward. This counteracts the downward force caused by the caudal fin and propels the shark forward in the water.

Interactive 1.2 Shark Model



Look at the 3-d Shark model try spinning it around discuss with your group members how what you just learned helps the shark swim!

So what is one thing that makes a shark look so scary? Its teeth!

When the Great White shark attacks, it bites its prey and shakes it
head back and forth. The serrated teeth act as a saw and literally



tear the victim apart. The Great
White Shark often swallows
many of its own teeth in an
attack.

On most sharks the mouth is

usually located beneath the snout almost on the bottom on the shark. But on certain sharks it is located at the tip of the snout; like the whale shark, frilled sharks and carpet sharks.

Sharks have numerous rows of teeth attached at their bases by connective tissue. Several rows of replacement teeth continually develop behind the outer row(s) of functional teeth. As the functional teeth fall out, replacement teeth take their place.

Some species of sharks may even shed as many as 30,000 teeth in a lifetime!!

Check out this cool article about shark jaws, make sure you look at the cool animation about what have happens when a shark is about to take a bite out of its prey! Click HERE to go to the article!

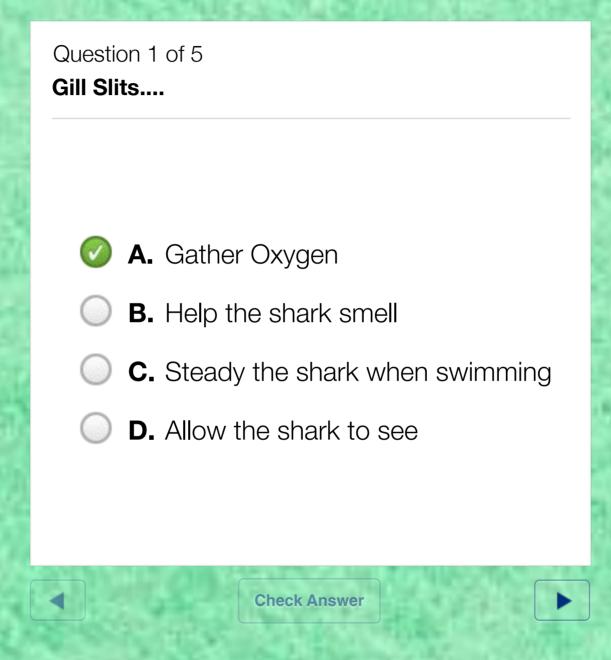
Try and spot some of the things we talked about in this video!



After you watch the video talk with your peers and write at least 4 things down that you noticed in the video that we talked about.

Click HERE to go to the response form!

Shark Week Lesson 2 Review



How do sharks hunt and What do they eat?

OBJECTIVES AND STANDARDS

Objectives:

- 1. Summarize the general eating habits of a shark.
- 2. Identify the 5 main shark senses.

Standards:

3.1.2.C2:

Explain that living things can only survive if their needs are being met.

Lesson 3 Overview

In this lesson we will go over what a sharks diet generally consists of as well as how they go about catching their prey. This will include an overview of the sharks main senses how they use them when they are engaged in an instinctual feeding frenzy. At the end of this unit the student will be tested on the main foods that sharks eat. The student will also be tested on their knowledge of the sharks senses. This will be to the extent that they will have to know the names of the senses, what there main functions are and how they are used when a shark is hunting its prey. Remember if a word is in RED that means that it is a hyperlink. If a word is highlighted it will be found in the glossary at the end of the chapter

So now that you have learned about types of sharks and their main body parts it is time to dig a little deeper and learn how their body works with their senses to hunt for food! Click HERE to visit our shark friend again!

Dinner Time! So what do sharks eat?

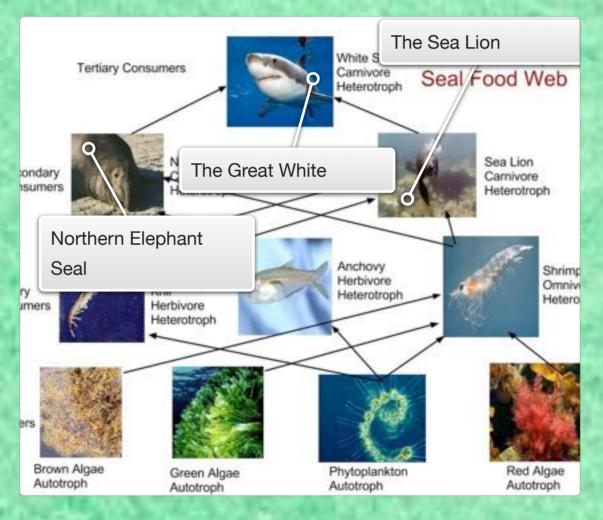
Shark diet needs to evolve based on what is offered so they can survive. Sharks easily adapt to their habitat, therefore the number

White's meal habits.

and variety of food
selection will determine
what will a shark eat in such
location. Sharks may prefer
certain types of foods but
when they are scarce they
will adjust what they eat.

Most sharks are meat
eaters and so they feed on
other fish and even other
sharks. Larger sharks
aren't afraid to go after a
huge meal such as a dolphin

Interactive 1.3 This is a food web that shows a Great



vibrations. Sharks can see well in the water even at night so they never have trouble finding their prey.

Other shark species live off of small aquatic life including mollusks

and clams. These types of sharks often live at the bottom of the ocean where there is an abundance of such food sources. They blend in well so they aren't spotted by their prey very easily. These are often the smaller species of sharks that don't need a huge amount of food to live on.

Sharks aren't very picky when their food sources are scarce. That doesn't mean they are content to eat people though.

In fact, research has shown that most sharks will bite and then let a person go

or a sea lion. They have a very keen sense of smell, can feel

as they realize it isn't their normal food source. Of course that will

make great damage in the person bitten, but the truth is that sharks do not eat humans.

Some sharks, the Tiger shark is one of them, has been known to eat items including coal, oil, trash, and clothing that finds its way into the water. Generally it won't harm them but consuming large amounts of such items can be tough on their digestive system.

The amount of food that a shark eats each day depends on the type of shark it is. Some Shark species will eat huge meals and then not eat again for weeks. They are able to survive on the oil that is stored in the liver when they do eat. When that gets low they will have the instinct to eat again.

So we know what they eat but how do they go about getting their food? Let's start by watching a Great White shark catch its prey, a seal.

Movie 1.2 Seal Vs Great White



Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do tempor incididunt ut labore et dolore magna aliqua.

In order to hunt they use all of their keen senses. Sharks have 5 senses just like we do but they are not the same 5 senses. The 5 shark senses are:

1. Lateral Line: This is an internal sense that allows them to detect vibrations in the water. This helps sharks to locate their prey when hunting.



2. Ampullae of
Lorenzini: This is a
sharks ability to
feel the electrical
charge from their
prey in the water.

Besides helping them find their prey this sense also helps them navigate through the water.

3. Powerful sense of Smell: The strongest sense for a shark is their smell. They smell the blood and it often indicates to them that there is wounded prey they can easily overpower. It isn't an instinct of killing that the blood is going to create in them. In fact, if they aren't hungry then they won't even bother to look for the source of the smell. Some of the species though can smell and indicate even a single drop of blood in the water. This is just an example of how powerful their sense of smell really is.

4. Good Eyesight: Sharks have good eyesight for being in the water, so they can see well during the day or the night.

However, they aren't always able to distinguish the difference between people and other creatures that live in the water. That is why a person on a surfboard may be bitten by a shark. They appear to be a colorful fish for the shark to consume as a meal.

5. Good Hearing: It is believed that sharks can also hear extremely well. Some of the species have the ability to hear prey for miles from where they happen to be. They have openings on the sides of their heads that lead to the inner ear. They can hear sounds at an extremely low frequency from a long distance.

So how do they put these senses together to hunt?

Sharks are primarily "scent hunters" meaning they use their noses to seek out prey. First they distinguish which nostril the smell enters first and swim in that direction. They use their whole body like a giant nose, it enables them to pick up the "shape of the smell".

Let's explore this even further! Check out this website and learn about how sharks senses and how they hunt! On the site start by reviewing the senses then click "Help the seal" then pick from the options at the bottom of the page to try and help the seal. Before you choose discuss with your group members and make a decision, then tell write in the form which option you chose and why. Then say if you were right or wrong! OPEN FORM

Click HERE to walk through the steps of a shark attack!

Let's Review What We have Learned!

Click HERE to go to the review questions! Remember you can always go back and look at the lesson!

Shark Conservation

OBJECTIVES AND STANDARDS

Objectives:

- 1. Identify the main ways sharks are killed
- 2. Identify a solution to save endangered shark species

Standards

5.2.2.A:

Identify and explain the importance of responsibilities at school at home and the community.

5.2.2.B:

Identify a problem and probable solution.

Lesson 4 Overview

In this lesson we will learn about how sharks are an endangered species. We will explore why they are endangered which will include misinformation, fishing, and shark fin soup. Intermixed with that we will also go over the conservation efforts that are in place to deter fishing and hunting as well as the struggle to correct misinformation about sharks. At the end of this lesson the student will be tested on their knowledge of the main reasons sharks are going extinct. They will also be asked to demonstrate their knowledge of the conservation efforts. Remember that if a word is RED that means it is a hyperlink. If a word is highlighted it can be found in the back of the chapter in the glossary.

Sharks may have thousands of teeth but that doesn't mean that they are not in danger! Click HERE to talk to our shark friend about the dangers that threaten sharks!

So what sharks are an Endangered Species?

The first species of shark to be recognized as being in danger was

the Gray Nurse
Shark. However,
even though they
have been
protected for
more than two



decades, less than 1,000 of them remain today.

Keeping pollution and human food items out of the waters is very important. Many of them die from swallowing things that aren't good for them. Since sharks are curious by nature, they won't think twice about swallowing what they find out there.

Misinformation is the Great Challenge!

Even with some wonderful acts of conservation out there, sharks are still in danger. Too many people still see them as the evil

creature lurking in the waters. Therefore they don't see any real reason to protect them. One of the main goals though of many of these organizations is to get the correct information out there about sharks. That way more people will see them for what they really are instead of what the media and even movies have portrayed them to be.

Interactive 1.4 This a zoning map of Shark Bay



The conservation efforts in place right now generally focus on protecting the natural environments of sharks. <u>Humans have taken</u> over many of these areas which is why shark attacks happen. The

fact that pollution and commercial fishing makes it extremely hard for many species to find enough food is another reason why they continue to move to regions they once didn't inhabit. Some efforts include changing the types of nets that are used for commercial fishing. That way sharks don't accidentally get injured or killed in them. Other efforts include having

PEW PewEnvironment.org

Movie 1.3 Facts about Conservation

zones where boats and swimmers can't go in the water. That way
the sharks are free to explore and people don't have to worry
about being attacked. Check out the interactive image 1.4 to get an
idea of shark zoning.

Conservation Efforts

Before we start to talk about conservation efforts I want you to

watch this video to learn a little bit more about the present problems and conservation efforts that are in effect.

There are many types of shark conservation groups you can be a part of. Going to their websites can teach you about how to fight for these creatures. You can chose to donate time or money to help their efforts. By evaluating the

goals and objectives of such groups you can choose the ones to promote that you firmly believe in the efforts of.

Many of them work to get countries to make tougher laws when it comes to the killing of sharks too. For example they want to ban the consumption of shark meat or the use of the fins to make soup.

Without a market to sell such items to, the number of sharks being killed can be reduced.

There are also thousands of them killed annually just for the thrill of their hunt of them. Preventing such events from occurring is another way in which these conservation groups strive to help these creatures to survive. With them having a very low amount of offspring that survive, plenty more has to be done if the numbers of those sharks in danger are going to increase enough to help them survive the next 100 years or longer.

It is estimated that approximately 270,000 sharks are killed around the world each day for no good reason. That is alarming to many people that didn't realize that there was such a huge problem with it. Opening up the eyes of the public though to the severity of the problem is a huge step forward for conservation efforts.

Shark Hunting and Commercial Fishing

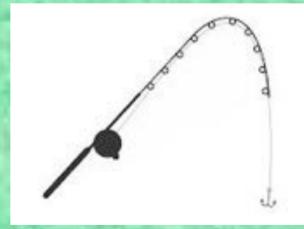
Sharks come in all sizes and they are very fascinating creatures that live in waters all over the world. However, many of them have been hunted in large numbers over the years.

In many areas it is legal to hunt sharks and in some others the practice continues even though it is against the law. The thrill of hunting very large sharks is one that many people don't want to miss out on. In fact, there are expeditions with guides that can lead people right to them for the right price.

Fishing or Fearing

One of the leading reasons for shark hunting has been to destroy them. There is no love lost between these creatures and man in

many areas. Where
commercial fishing is a huge
industry, sharks are
believed to be an entity that
prevent the money being
made like it should. The



logic is that if they destroy the sharks that consume the fish they want to capture and sell commercially then they will get more of it in their nets.

Many people are afraid of sharks too so they feel by killing them they make the water safer for everyone in them. Even though evidence shows otherwise, there are still many that believe sharks are man eating killing machines. They certainly don't want to share the water that the swim or go boating in with these animals.

The Killing Soup

Sharks are hunted for their fins too. In fact, making fin soup is a very common food in some parts of the world, like China. Extremely large



sharks are often killed only to get their fins removed. The rest of

the body is left to rot on the land or it is put back in the water for other creatures to feed upon.

The consumption of shark meat is common in some areas as well. They will hunt sharks and use their entire bodies. The meat is used for food and the fat for oil. They even use the skin to make sandpaper and various types of tools. All of these problems combined though have lead to an upset in the world of sharks. We have to remember that they are a vital part of the food chain.

Conservation Efforts to Deter Hunting

Due to conservation efforts, some species of sharks are now protected. This means individuals found to injure or kill them intentionally can be fined or they can go to jail. Yet there just doesn't seem to be enough man power out there to strongly enforce some laws.

In some parts of the world there are limits to the number of sharks that can be killed annually. However, certain types of sharks are more likely to be hunted than others. For those that wish to hunt them for a thrill, the larger ones and the more aggressive ones are what they seek out. Those often used for food reside in regions where their other choices for meat are likely to be scarce. In other areas, the types of sharks killed depend on the types of

commercial hunting that take place there as well.

With the advances in technology, it is easier to kill sharks than in the past. The early people had to do so with nets and with spears.

Now there are electronic



devices, fast moving boats, and people can use special equipment to dive into the water to find the sharks they wish to hunt. Such events though can have a serious effect on the aquatic world if we aren't careful. This is why you should definitely report any acts of shark hunting that you may be aware of to the proper authorities.

Lesson 4 Review

Time to review what we learned about the endangerment of sharks!

Review 1.1 Time to Review Shark Conservation

Question 1 of 4

The main reason that sharks attack humans is...

- A. They think humans taste yummy!
- B. We have taken over many of the areas that they live in.
- C. They are going to cook soup
- D. We look like another animal.



Check Answer



Shark Week Webquest

OBJECTIVES AND STANDARDS

Objectives:

Identify answers when given questions

Create a poster to display knowledge of Sharks

Standards:

1.8.2.A:

Generate questions and locate answers about a specific topic.

Lesson 5 Overview

In this lesson the student will progress through a web quest on the Discovery

Channel shark week site to gain some information about sharks on their own . They

will learn which shark
like and will discuss why
They will also get the
"interview a shark". The
they will do in the site is
subaquatic road trip on
to see the ocean from a



they are most
that might be.
chance to
last thing that
go on a
the ocean floor
sharks

prospective. At the end of this lesson they will be asked to collaborate with their group members and create a poster that depicts a sharks environment. Remember if there is something in red that means it is a hyperlink!

Let's start by visiting our shark friend for one last time! Click HERE

Now it is time to get started on your webquest! Click HERE to start your webquest!

Bibliography

http://mrnussbaum.com/pdfs/sharks.pdf

http://www.sharks-world.com/mako_shark.html

http://animals.nationalgeographic.com/animals/fish/tiger-shark/

http://www.enchantedlearning.com/subjects/sharks/species/ Whaleshark.shtml

http://www.enchantedlearning.com/subjects/sharks/species/Bullshark.shtml

http://dinosaurs.about.com/od/otherprehistoriclife/a/megalodon-facts.htm

http://www.seaworld.org/animal-info/info-books/sharks-&-rays/adaptations.htm

Ampullae of Lorenzini

This is a sharks ability to feel the electrical charge from their prey in the water. Besides helping them find their prey this sense also helps them navigate through the water.

Related Glossary Terms

Drag related terms here

Index

Anal Fins

Found behind the pelvic fin, these are used for additional stability.

Related Glossary Terms

Drag related terms here

Index

Bouyancy

The ability to float

Related Glossary Terms

Drag related terms here

Index

Caudal Fins

Also known as a tail fin, this fin is one of the most important parts of a shark's body. It propels the shark forward when it swims, and they come in many shapes and sizes!

Related Glossary Terms

Drag related terms here

Index

Diverse

This means that there is lots of variety, so you will find some that live in warm waters and others that live in colder temperatures.

Related Glossary Terms

Drag related terms here

Index

Dorsal Fins

These are the fins on the top of the shark, used for stability.

Related Glossary Terms

Drag related terms here

Index

Gill Slits

These slits are found on the side of the shark in front of the pectoral fins. The gills are how a shark gathers the oxygen needed for it to survive.

Related Glossary Terms

Drag related terms here

Index

Hydrodynamics

The flow of fluid over the sharks body

Related Glossary Terms

Drag related terms here

Index

Lateral Line

This is an internal sense that allows them to detect vibrations in the water. This helps sharks to locate their prey when hunting.

Related Glossary Terms

Drag related terms here

Index

Migrating

This is when an animal moves from one habitat to another, or hunting for food.

Related Glossary Terms

Drag related terms here

Index

Pectoral Fins

These fins are found right behind the head and gills, used to lift and steer the shark while swimming.

Related Glossary Terms

Drag related terms here

Index

Pelvic Fins

Found behind the pectoral fin, used to stabilize the shark while it swims.

Related Glossary Terms

Drag related terms here

Index

Spiracle

Openings just behind the fish's eyes that allow it to draw oxygenated water. These will not be found on all sharks.

Related Glossary Terms

Drag related terms here

Index

Sub-Arctic Costal Waters

that means that they are generally in the most northern or southern parts of the ocean

Related Glossary Terms

Drag related terms here

Index