

# SHARKS LAPBOK

# Shark Lessons and Research

lessons and research by Lynn Pitts lapbook created by Ami Brainerd

#### Library List

The Best Book of Sharks by Claire Llewellyn

<u>All About Sharks</u> by Jim Arnosky

**Sharks** by Gail Gibbons

Hungry, Hungry Sharks (Level 3 Reader) by Joanna Cole

**Everything Kids' Sharks Book** by Kathi Wagner

**Eye Wonder Shark** by DK Publishing

#### Complete:

Book Log Hotdog Book Hotdog Book Instructions

#### **Vocabulary**

Cartilage: Rubbery material that forms the skeleton of a shark.

Denticles: Small, stiff, thorny scales that make up a shark's rough skin.

Gill: Part of a fish's body that allows it to breathe oxygen. They breathe in oxygen

from the water and release carbon dioxide.

Pup: Baby Shark

Prey: An animal hunted by another for food.

School: A group of fish.

#### Complete:

Vocabulary Shark Shapes

#### What are Sharks?

Sharks are fish. They are one of the fastest fish in the sea. Most fish are cold-blooded. Their body temperature changes with the temperature of the water around them. Fish breathe with organs called gills. Sharks do not have bones. Their skeletons are made entirely of cartilage, which is lighter and more flexible than bone. There are more than 250 species of sharks.

Complete: What is a Shark?

Nine most familiar sharks and their sizes:

Mako Shark- Length: 13 feet Bull Shark- Length: 12 feet Leopard Shark- Length: 7 feet Whale Shark- Length: 60 feet

Great White Shark- Length: 24 feet

Great Hammerhead Shark- Length: 20 feet

Nurse Shark- Length: 14 feet Tiger Shark- Length: 24 feet Thresher Shark- Length: 20 feet

Complete: Shark Sizes Graph

Each species of shark belongs to a larger group called a family, which include similar types of sharks.

There are four categories of sharks:

#### Requiem Sharks:

This is the largest family of sharks. It includes: Tiger, Blue, Leopard, Bull, Blacktip, Lemon, and Whitetip Sharks.

#### Mackerel Sharks:

This is the second largest family of sharks. It includes: Great white, make, and porbeagle sharks.

#### Hammerhead Sharks:

The third largest family of sharks includes: Bonnethead, Scalloped Hammerhead, and Great Hammerhead Sharks.

#### Carpet Sharks:

This large family includes: Nurse, Whale, and a wide variety of Carpet Sharks.

Complete: All in the Shark Family Triangle

#### <u>Anatomy</u>

Shark skin is covered with tiny tooth-like scales that make it feel like sandpaper. Male and female sharks are similar in color, shape and size. Parts of a typical shark include first dorsal fin, second dorsal fin, anal fin, pelvic fin, pectoral fin, gill slits, nostrils, eyes, mouth and spiracle.

Eyes: Sharks can move their eyes in their sockets to see in different directions.

They do not have eyelids, but many species have movable, transparent, membranes that cover and protect the eyes when attacking and eating.

Dorsal Fin: Large fin keep the shark from rolling over.

Pectoral Fin: Moves the shark up and down.

Caudal Fin: Pushes itself through the water.

Denticles: Tooth-like scales that cover and protect the skin from bites and

scratches.

#### Complete:

Diagram to Label Shark Parts Tab Book

#### Shark Senses

Sharks need all their senses to locate food. Sound travels over great distances and moves quickly. A shark can locate prey by sight or smell, by sensing movement with its lateral line, and by picking up electrical impulses through its sensory pores. Sharks can smell food over great distances. The scent of blood in the water can attract dozens of sharks and trigger a feeding frenzy. Sharks also use their sensory pores to pretaste food by bumping it with their snouts. A shark uses sight to find prey. It can spot movement and recognize light and dark objects. Sharks are color blind and also have difficulty identifying shapes.

Complete: Sense-ational Hunters Flap

#### **Shark Teeth**

Sharks have up to seven rows of teeth. When a tooth falls out the one behind

moves in and takes it's place. The front row has about 40-45 teeth. The teeth of living sharks are pure white. They vary in shape from species to species. Sharks can't chew their food. If a meal is too big to swallow then it will shake it from side to side to tear it into chunks. Sharks can lose up to 30,000 teeth in their lifetime. A few teeth drop out during each mealtime, and new ones move up to take its place.

Complete: Shark Teeth

#### Diet

Many sharks are at the top predators (at the top of the food chain). Top predators eat many types of animals, but few animals eat them. Many sharks are picky on what they will eat, but if food is scarce they will eat most anything. Sharks hunt mainly fish, squid, octopus, crab and shrimp. They will also eat bodies of dead animals. Some sharks hunt alone or in groups called schools.

Complete: Matchbooks (complete diet)

#### Where do Sharks Live?

Sharks can be found in all the oceans except the coldest waters around Antarctica. Some inhabit along coastlines and coral reefs, and others live in deep water. Some types of sharks can swim in salt water and fresh water.

Complete: Where Sharks Live (pop-up)

#### Shark Relatives

Sharks are related to skates and rays. Their relatives are called elasmobranches. They all have cartilage skeletons.

Complete: Matchbooks (complete relatives)

#### Baby Sharks

Shark babies or pups, are born in a couple of ways. Some shark species lay eggs. Laying them in underwater weeds and grasses. Some mothers carry their pups in a sac inside their body for about 10-12 months. Some are carried for 2 years. Female sharks give birth to fully developed baby sharks tail first.

All shark pups are miniature versions of their parents. Once born they must fend for themselves. A mother shark can give birth to up to 48 pups in her lifetime.

Young sharks mainly eat small fish and tiny shrimp.

Complete: Babies

#### **Shark Species**

#### Great White:

This shark is also known as the white shark. They have been found in all oceans. Both deep and shallow water. They eat salmon, tuna, dolphins, porpoises, other sharks, and the bodies of dead whales. It surprises it's prey by attacking from behind and below.

#### Hammerheads:

Some scientist believe there head is shaped like it is to help them smell and feel electrical charges better. It also might help the shark turn quickly. They eat small fish, other sharks, crustaceans, and stingrays. They usually hunt at night. They live in warm, shallow ocean waters. These sharks swim south in winter and north in summer.

#### Tiger:

They are named from the stripes they have on their sides when they are young. These sharks will eat most anything including license plates, and tin cans. They spend most of their time in deep waters near coral reefs. They eat lobster, squid, fish, sea turtles, birds and smaller sharks. They have also been known to eat people.

#### Whale:

These are the largest fish in the world. They are found in warm oceans and seas. They swim alone and in schools. They have gills that are covered with thousands of tiny hooks. They simply swim with their mouth open and pick up plankton, shrimp, and small fish.

#### Nurse:

They live at the bottom of shallow water. They eat at night and lie in dark spots during the day. They eat crabs, shrimp, lobster, sea urchins, and fish.

Complete: Species Cards & Pocket

#### Shark Safety

Most sharks attack in shallow water. There are about 30 different species of sharks that have reported to have attacked humans. Many great white's have mistaken people paddling on surfboards for prey. From below, they look like a seal or sea lion. Noise travels a long way under water. The splashing and noises from rescue crew can attract sharks from several miles away. Shark attacks are rare. You are more likely to get a bee sting or attacked by a dog than a shark.

Never go in the ocean with an unhealed cut.

Wade only where you can see the ocean floor.

Avoid dark water.

Never swim in the ocean at night.

Never touch a small or injured shark.

If you fall overboard into the ocean, do not shout, splash, or kick your legs.

Complete: Shark Safety

#### Sharks in Danger

Sharks are important to our oceans and seas. They help keep it healthy by eating sick animals. Scientists are researching shark's bodies as it may cure cancer in people. Some shark's are killed for sport for there meat, to make leather from their

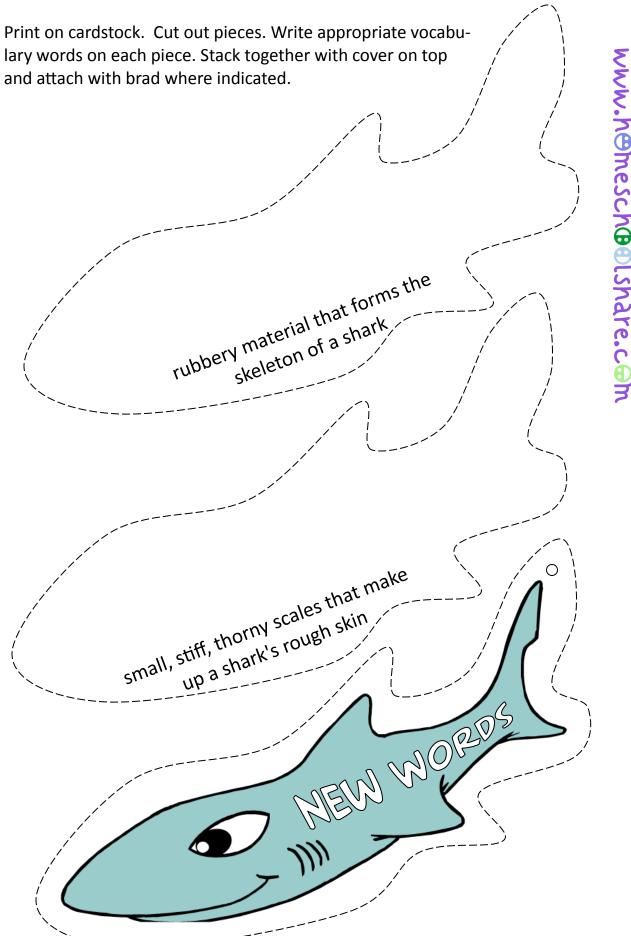
skins and for their fins. Others are killed by accident with boats and fishing nets. Sharks may help us, but we are their worst enemy.

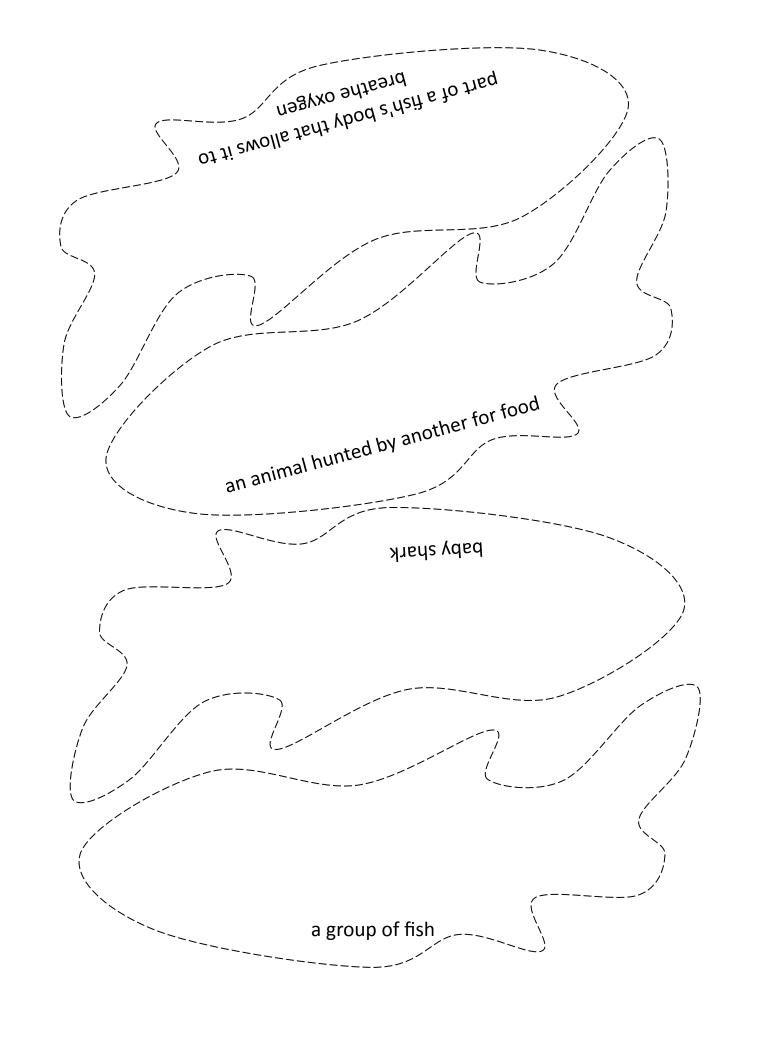
At least 100 million sharks are caught each year for food or sport. We are killing sharks faster than they are being born as some species only have one pup at a time and may take several years to have them. There are many species of sharks that are in danger of becoming extinct.

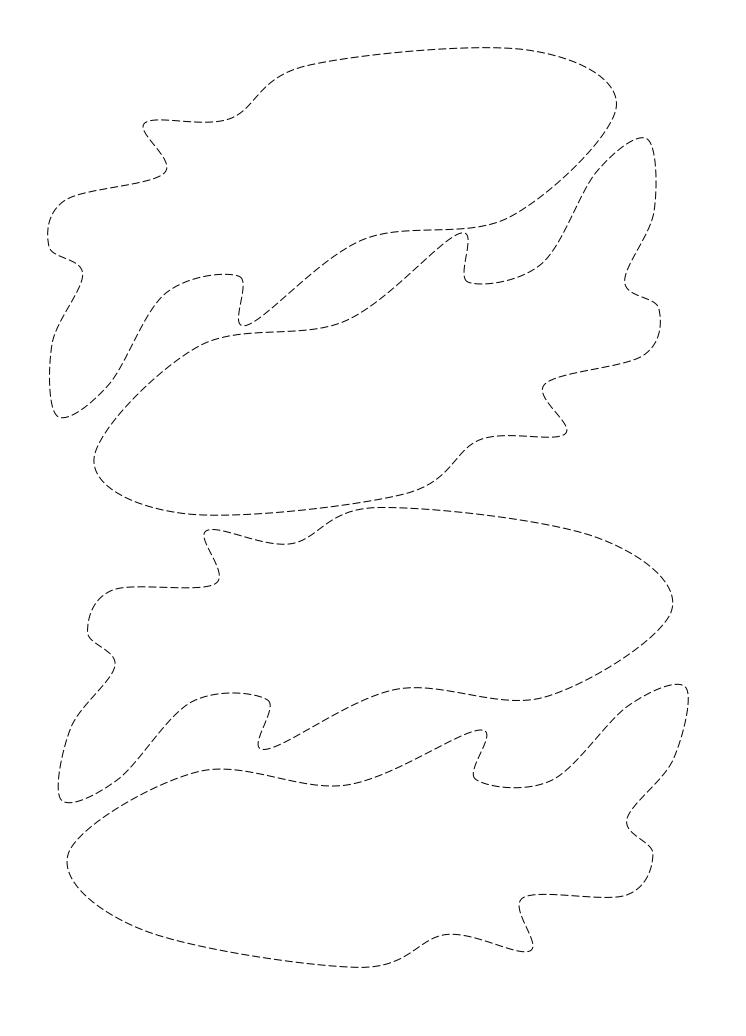
Scientists are studying sharks to find out more about them such as how long they live, how fast they grow and how far they swim. They put sonic tags on their fins which give out signals to help follow them. The more they know about them, the better chance they have in helping them from becoming extinct.

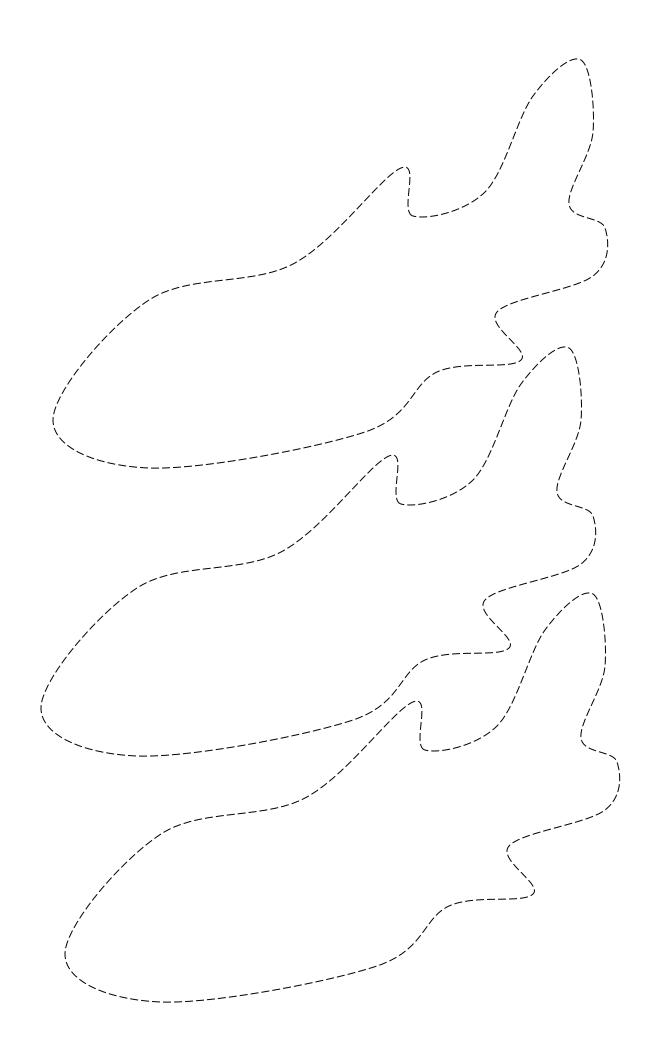
Complete: Hurt/Help Flap

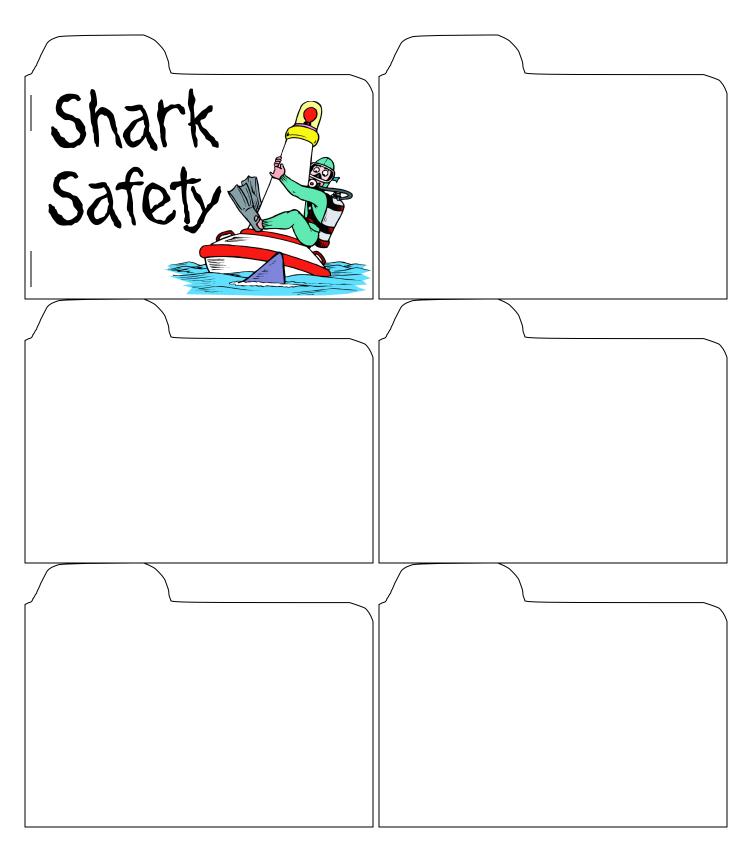
\*Cover image used with permission from www.earth-touch.com









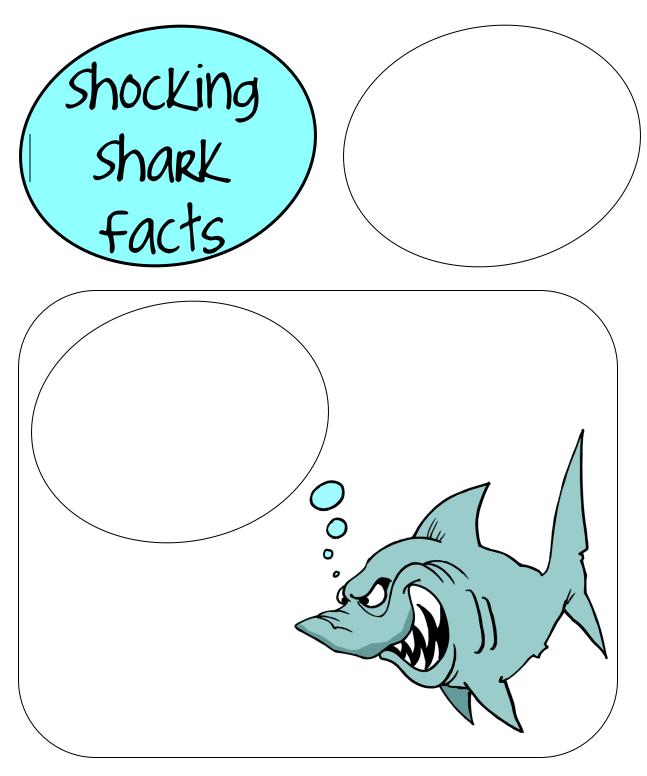


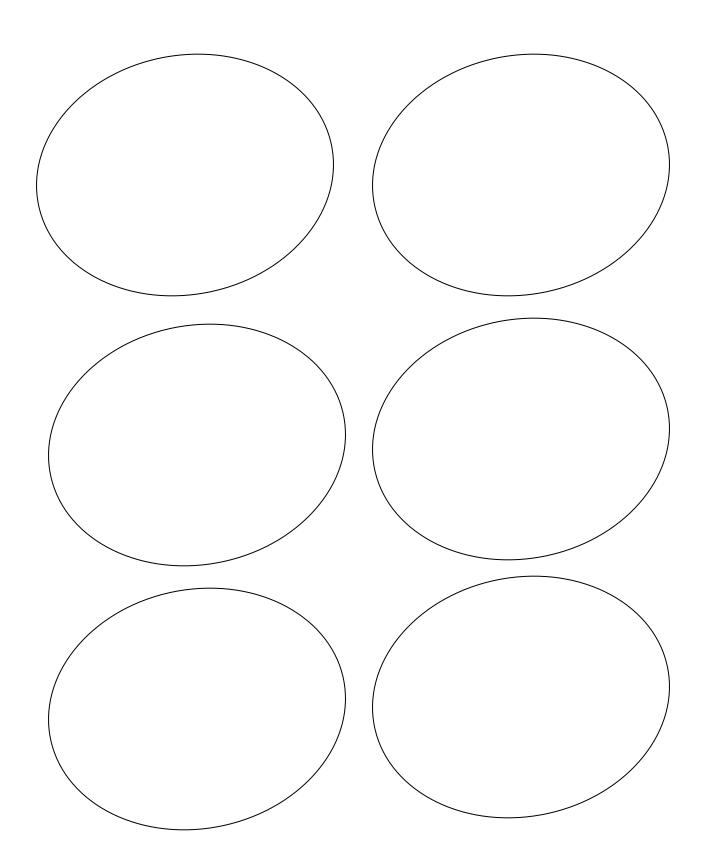
Cut each piece out. Write one way to stay safe on each piece. Stack together with cover on top and staple.

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Cut each piece out. Write one "shocking" shark fact on each piece (include tidbits from books that fascinate your student). Stack together on top of the template (with cover on top) and staple as indicated.

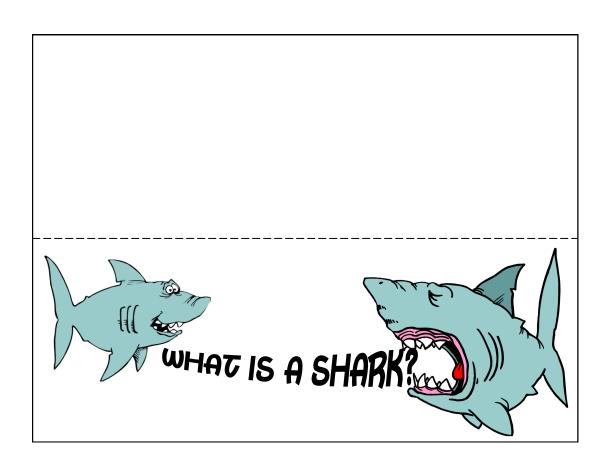
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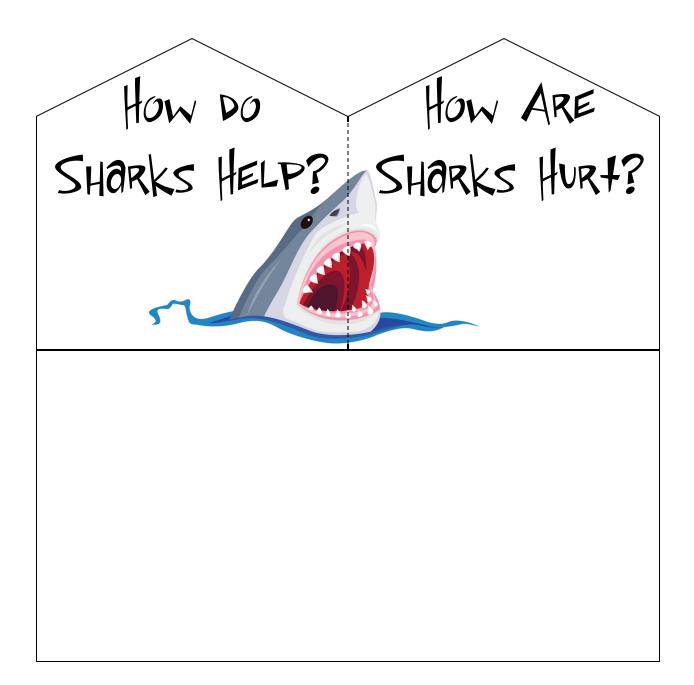




Cut the book out as one piece. Fold in half. On the inside write about shark classification or how sharks are fish. List other defining characteristics of sharks as well.

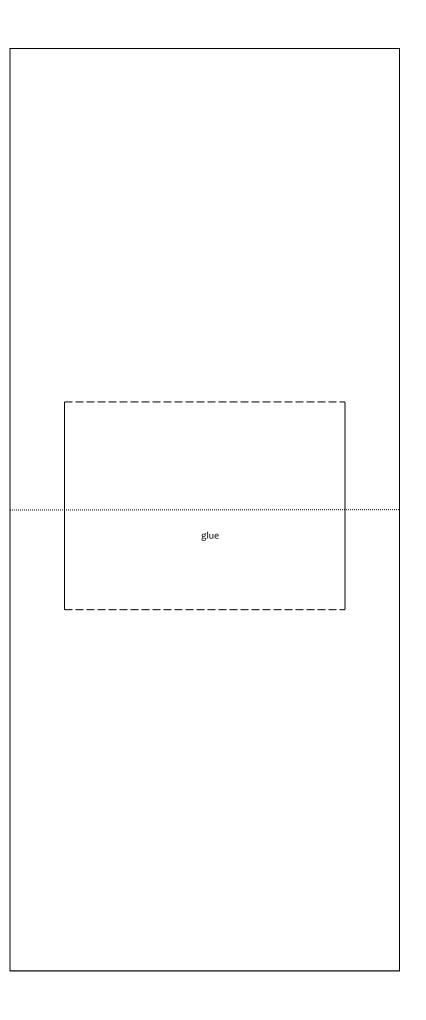
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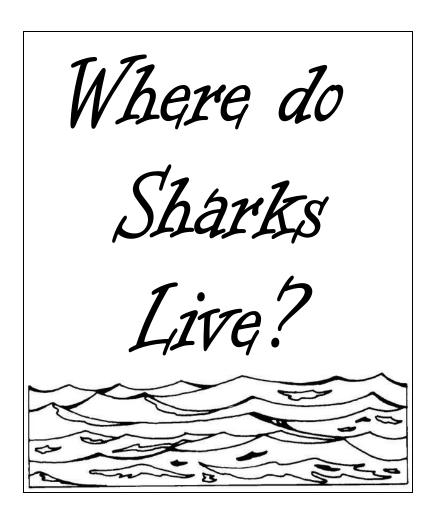


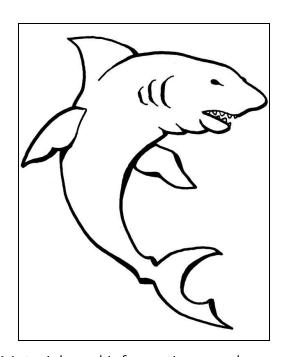


Cut out book as one piece. Cut line between flaps. Fold flaps down. Write answers under flaps.

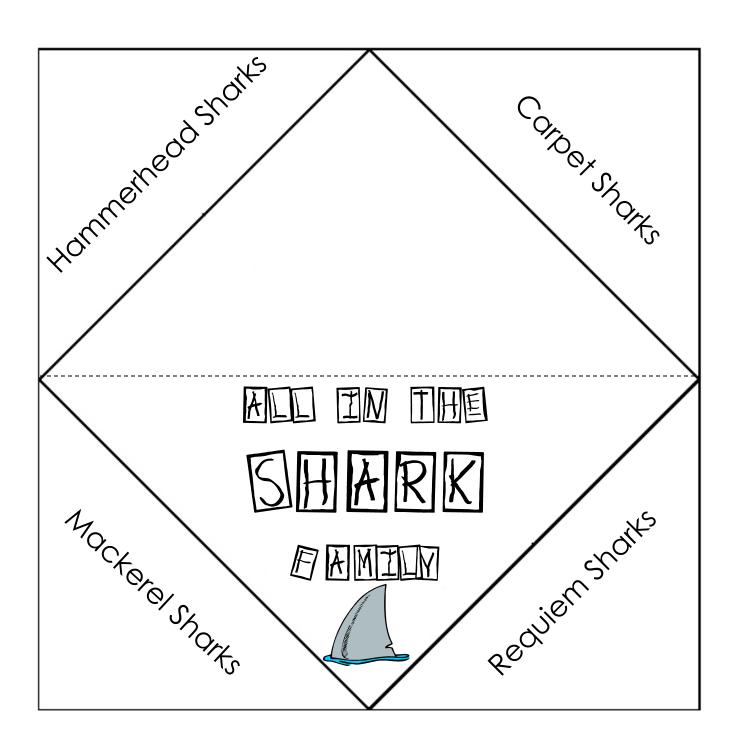
shark sitting level with the paper. Make sure it lies flat when closing the book. In the blank area, have your student solid lines. Fold that flap down towards you on the dotted line. Now, valley fold the book in half, on the dotted line, popwrite where sharks live. ping the box to the inside of the book. Cut out the shark and color it, if desired. On the box marked "glue" glue the This is a pop-up book. First, print book on cardstock. Mountain fold the book in half on the dotted line. Snip the two





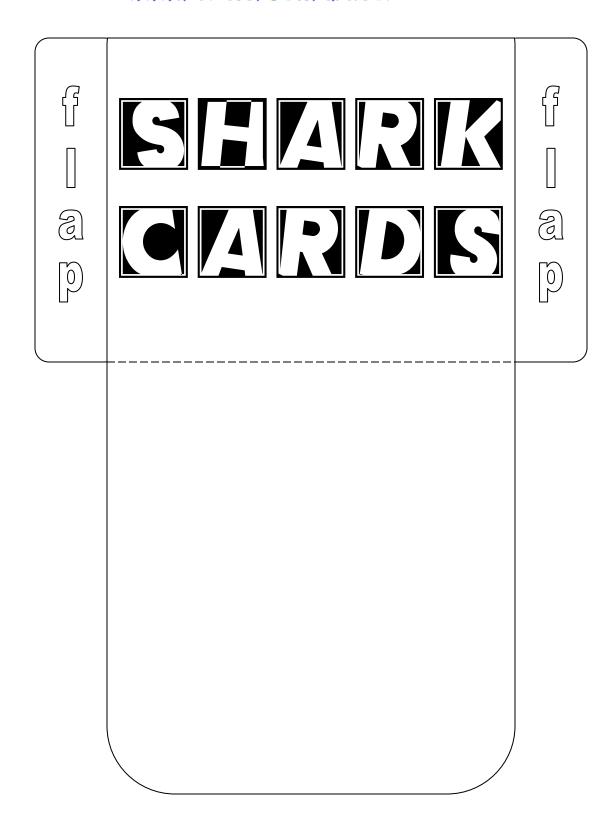


Cut out book. Fold each triangle flap under. Fold book in half on dotted line. When you open the book, there should be four flaps to life and record information

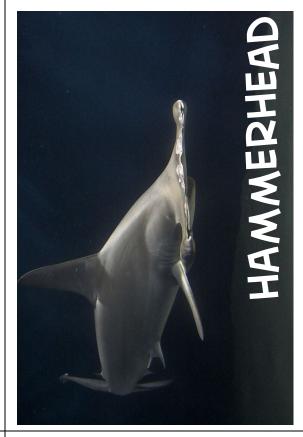


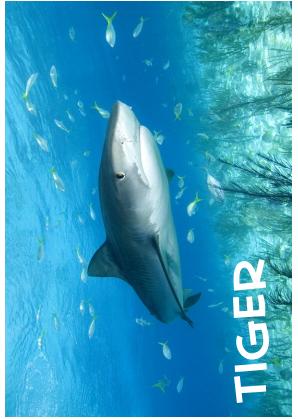
Cut pocket out as one piece. Fold back up. Wrap flaps around the back and glue down.

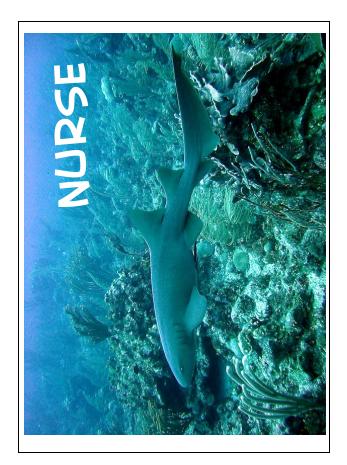
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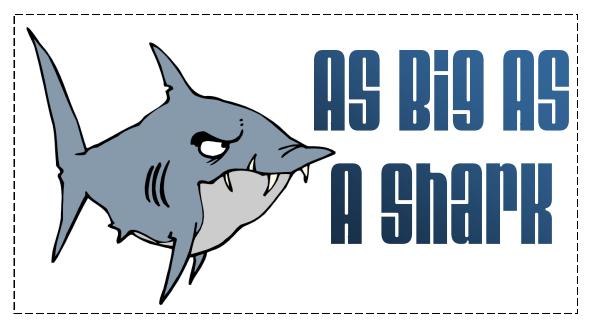
Print cards on cardstock, if desired. Write facts on the back of each card.

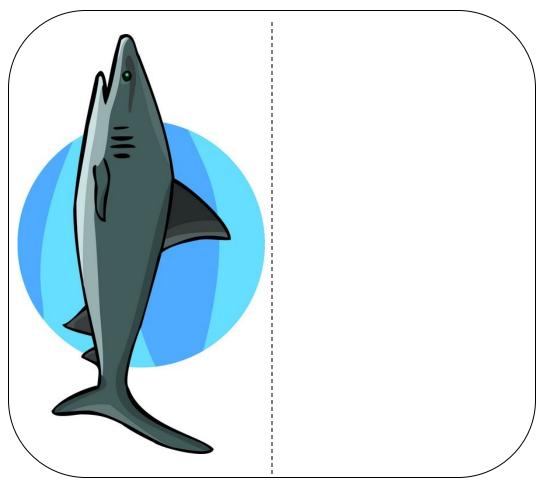
# SHARK

60 feet						_
55 feet						
50 feet						
45 feet						
40 feet						
35 feet						
30 feet						
25 feet						
20 feet						
15 feet						
10 feet						
5 feet						
	Leopard	Nurse	Whale	Thresher	Tiger	Great White

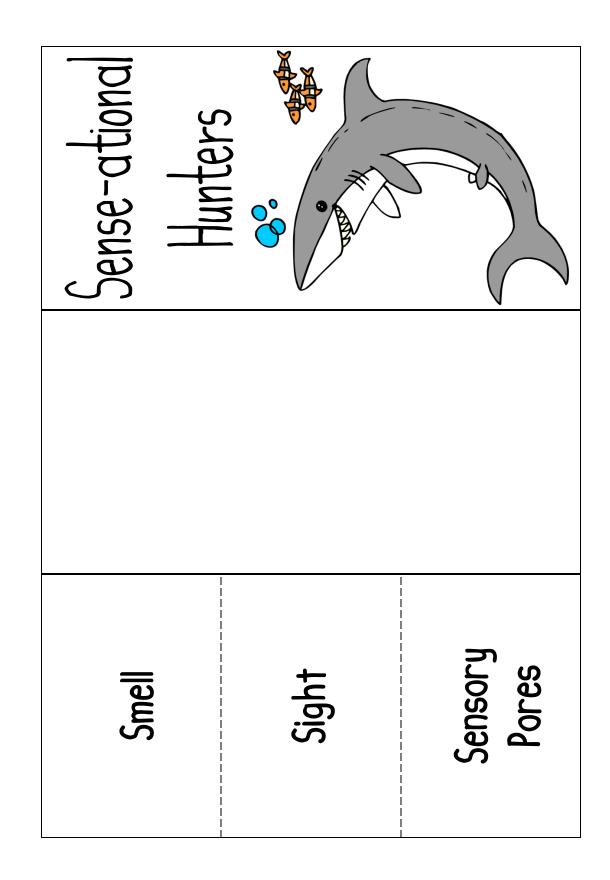


Cut out graph on previous page. Fill in as appropriate. Fold in thirds. Cut and paste on cover piece, if desired. Use blank book as desired.

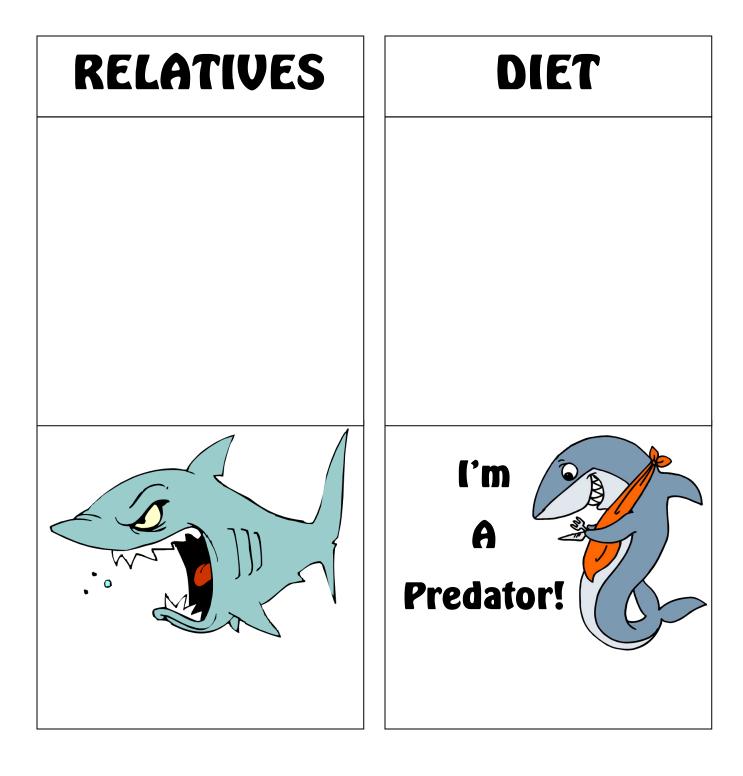




Cut out book as one piece. Fold left side in. Fold right side in. Open book. Cut on dotted line to form four flaps. Refold book.

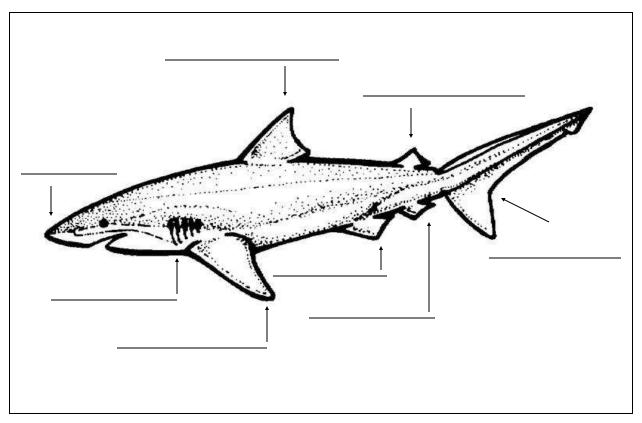


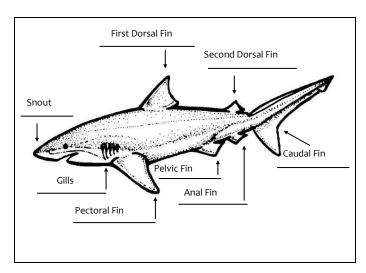
Cut books out. Fold on lines (matchbook style).

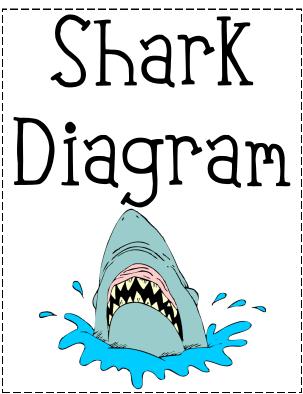


Complete diagram. Cut out and fold in half. Cut and paste cover piece to the front.

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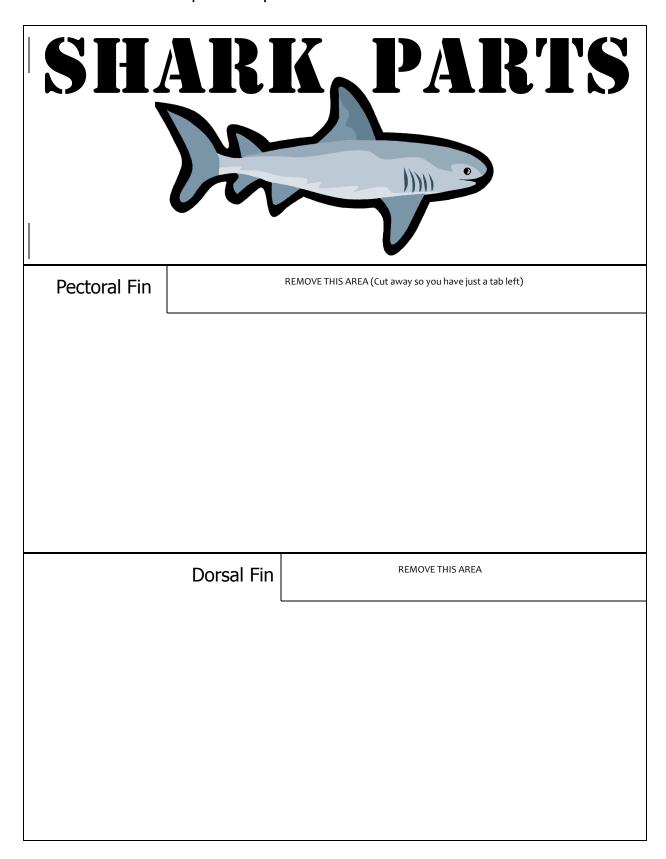




Cut pieces out. Write one fact on each piece. Stack together with cover on top and staple. Shark Babies

	This is the t	Finding fol			book
	This is the back cover of your hotdog book. Paste it to your	Finding folding instructions	Title:	Author:	I liked this book
		BOOK LOG	Title:	Author:	I liked this book
☐ I liked this book☐ YES	Author:	Title:	Title:	Author:	☐ I liked this book ☐ YES
☐ I liked this book☐ YES	Author:	Title:	Title:	Author:	I liked this book

Cut the strips along the solid outer lines. If there is a rectangle piece in the right corner of the strip, cut it off as indicated (remove this area). Stack your strips in order with cover on top and staple where indicated.



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		Eyes
Caudal Fin	REMOVE T	HIS AREA
	Denticles	REMOVE THIS

