

A Few Words About Sharks

Lesson at a glance:

Students will practice reading and comprehension skills while becoming familiar with some of the vocabulary that they will encounter while learning about sharks.

Common Curriculum Goals and Benchmarks:

LIFE SCIENCE

- **Common Curriculum Goal (Organisms):** Understand the characteristics, structure and function of organisms.
Grade 3 Benchmark: Recognize characteristics that are similar and different between organisms.
Grade 5 Benchmark: Describe basic plant and animal structures and their functions.
Grade 5 Benchmark: Group or classify organisms based on a variety of characteristics.

READING

- **Common Curriculum Goal:** Recognize, pronounce, and know the meaning of words in text by using phonics, language structure, contextual clues, and visual cues.
Grade 3 Benchmark: Read accurately by using phonics, language structure, word meaning, and visual cues.
Grade 3 Benchmark: Determine meanings of words using contextual clues and illustrations.
Grade 5 Benchmark: Determine meanings of words using contextual and structural clues, illustrations, and other reading strategies.

Materials:

- Shark background text: **Finding Out About Sharks**
- Shark Word Search**
- Shark Words** worksheet

Background:

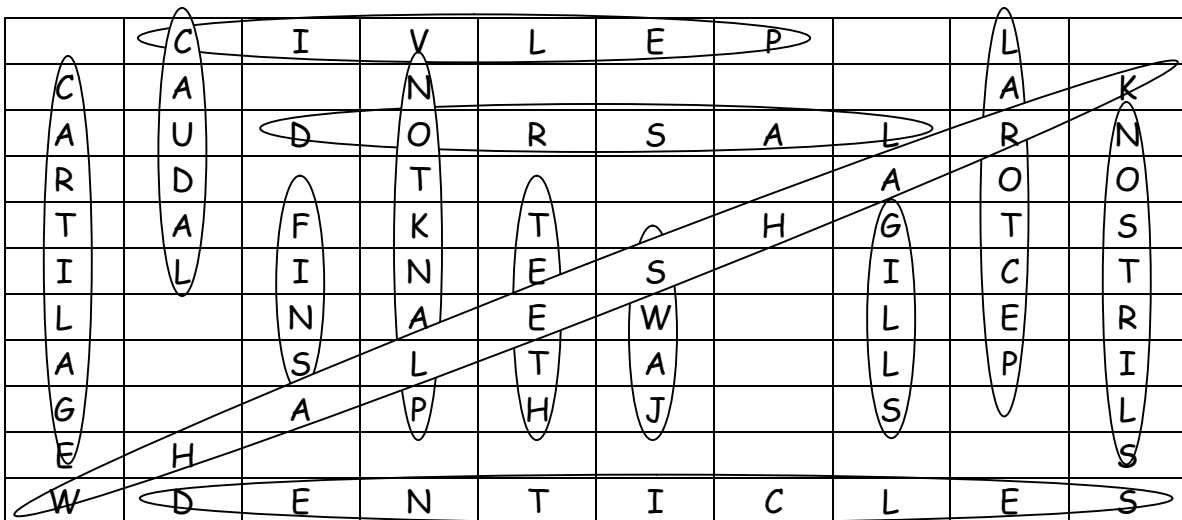
Although sharks are a type of fish, they are unique in many ways to our understanding of a typical fish. Sharks belong to a group of fishes called cartilaginous fishes. Unlike bony fishes, sharks have a skeleton made of **cartilage** rather than bone. While bony fishes have flexible fins for swimming, a shark's **fins** are a bit less flexible. The **caudal** (tail) fin is moved from side to side to propel the shark through the water. A shark's **pectoral** fins are stiff and work much like the wings of an airplane, giving the shark "lift" so that it does not sink. They also help in steering. The dorsal, anal, and pelvic fins stabilize the shark while swimming and prevent it from tipping over during a quick turn. **Dorsal** means "back," and most sharks have two dorsal fins on the back (or top) of the body. The **pelvic** fins are paired and located about where one might imagine hips on a shark (although sharks do not really have hips).

Sharks also differ from bony fishes by having tiny, skin teeth covering their body rather than scales. These skin teeth are called **dermal denticles** and help protect the shark and make them more hydrodynamic. Many sharks have extremely powerful **jaws** and replaceable **teeth** to help them catch and eat their prey. Not all sharks have triangular teeth designed for tearing and ripping. Some sharks have more flattened teeth for crushing and grinding, while others may have long pointy teeth for grabbing. The **whale shark** has only tiny teeth in its mouth! It eats **plankton**, smaller free-floating plants and

animals, by swimming through the water with its mouth wide open. The plankton gets stuck on spongy gill rakers in its throat. Like other fishes, sharks breathe underwater using **gills**. Most sharks have five gill slits on the side of their head just behind their eye. Bony fishes just have one gill opening. Probably the most important sense for a shark is its sense of smell. If the currents are bringing the scent in the right direction, a shark may be able to smell its prey from over a half mile away. A shark will balance the scent between its two **nostrils** which are located near the end of its snout. Sharks can smell one drop of blood in 1300 gallons of water.

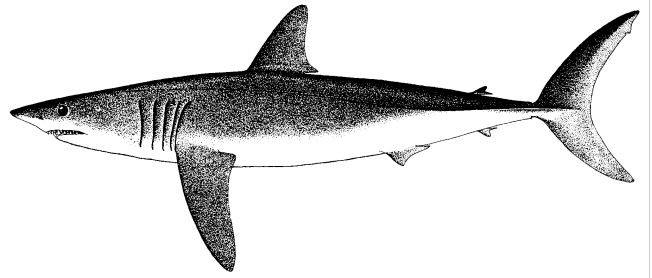
Activity:

1. Photocopy enough copies of the **Shark Sleuthing** word search and **Finding Out About Sharks** text for your class.
2. Give your students a copy of the **Finding Out About Sharks** text to read, or use the text as an overhead to share with the whole class.
3. Give them the **Shark Sleuthing** word search activity to help them become even more familiar with some of these words.
4. Use the fill-in-the blank worksheet as a vocabulary test for your students.



Finding Out About Sharks

Sharks are fish that have a skeleton made of **cartilage** instead of bone. Shark **fins** are not as flexible as bony fishes, but they still help them to swim. The **caudal** or tail fin is at the rear of the shark. Sharks move their caudal fin from side to side to push them through the water. The **pectoral** fins are under the shark's body where your arms would be. Sharks have two pectoral fins that help them steer. The **dorsal** fins are on the shark's back. Most sharks have two dorsal fins to help them balance. Behind the pectoral fins, there are two **pelvic** fins. They also help the shark balance.



A shark's sense of smell is probably their most important sense. Sharks have two **nostrils** near the front of their head. Sharks use their nostrils to smell food that may be over a half mile away! They move back and forth over the scent trail until they find their prey.

Sharks breathe underwater using **gills**. Most sharks have five gill slits on the side of their head. Not all sharks have to swim all the time to breathe. Some sharks can pump water across their gills while sitting on the bottom.

Many sharks have powerful **jaws** and **teeth** for catching and eating their food. They can replace their teeth over and over again in their life. Not all shark teeth are the same. Some are long and pointy, and some are short and triangle-shaped. **Whale sharks** have very tiny teeth that aren't even used for eating. They eat **plankton** which they trap using a spongy net in their throats. When they find a cloud of plankton, they swim through them with their mouths open.

Sharks also have tiny teeth covering their skin called dermal **denticles**. Dermal denticles means "skin teeth." These skin teeth protect sharks just like scales protect a bony fish.



Name: _____

Shark Word Search

B	C	I	V	L	E	P	L	L	G
C	A	N	N	E	D	H	J	A	K
A	U	D	O	R	S	A	L	R	N
R	D	A	T	U	X	W	A	O	O
T	A	F	K	T	Z	H	G	T	S
I	L	I	N	E	S	V	I	C	T
L	E	N	A	E	W	H	L	E	R
A	Z	S	L	T	A	G	L	P	I
G	I	A	P	H	J	F	S	D	L
E	H	C	H	A	R	L	I	E	S
W	D	E	N	T	I	C	L	E	S

Find and circle these words in the word search:

caudal

pectoral

dorsal

pelvic

plankton

jaws

fins

cartilage

teeth

gills

whale shark

nostrils

denticles



Name: _____

Shark Words Worksheet

1. Sharks are fish that have a skeleton made of _____.
2. Both bony fishes and sharks have _____ to help them swim.
3. The _____ fin is at the rear of the shark. This helps push the shark through the water.
4. Sharks have two _____ fins that help them to steer.
5. Sharks have a pair of _____ fins under their body and behind the pectoral fins that help them to balance.
6. Most sharks have two _____ fins on their backs.
7. A shark will smell using its two _____ located at the front of its snout.
8. Most sharks have five _____ slits on the either side of their head that help them breathe underwater.
9. Many sharks have powerful _____ to help them catch and grab their prey.
10. A shark's _____ are replaced over and over again during their lives.
11. The _____ has very tiny teeth that it doesn't use for eating. This shark eats _____ which it catches using a spongy net in its throat.
12. Instead of scales like a bony fish, sharks have _____ covering their bodies.

