Aquarium on Wheels
Pre & Post Materials

Dear Teacher,

We are looking forward to your visit with Aquarium on Wheels . Our program allows your students to discover and explore the different areas of the Pacific Ocean. In exploring the different regions of the Pacific Ocean, they will learn about the importance of animal adaptations during the auditorium/classroom program. On the day of our visit, they will learn more about the animals that reside here in the temperate waters of Southern California during the live animal interaction in our mobile aquarium.

In addition to our visit, we have prepared pre/post materials for your students. These materials will provide your students with fun activities that will enrich their knowledge of ocean life and challenge what they have learned during our visit. We have placed activities in the following categories based on standards. However, feel free to use any worksheet or activity that is appropriate for your current curriculum.

3rd Grade – 5th Grade

▪ Shark Liar's Club	Classroom Activity	Pre-
▪ Shark Tooth Match-Up	Activity Sheet	Post-
▪ Ultimate Predator	Classroom Activity	Pre- or Post-
▪ Animal Olympics	Activity Sheet	Pre- or Post-
▪ Moovin' & Groovin'	Crossword Puzzle	Post-
▪ Shark Tooth Match-up	Answer Sheet	
▪ Moovin' & Groovin'	Answer Sheet	

*Please feel free to look through materials in other grade levels. Some materials listed in a grade range may be used in others

The programs conducted by the Aquarium on Wheels, pre-visit materials and post-visit materials incorporate parts or all of the following California Science Standards:

3rd Grade	**4th Grade**	**5th Grade**
Life Sciences – 3a, 3b, 3c, 3e	Life Sciences – 2a, 2b, 3a, 3b	Life Sciences – 2a, 2c

If you have any questions about the materials or program, please contact us at 562-951-5345. Thank you for your interest in our program. We are excited to be visiting your school!

Thank you,

The Aquarium of the Pacific Education Staff

Overview:

People's information on sharks is often exaggerated or simply false. The truth about sharks can be amazing and often unbelievable. Students will listen to these four stories and see if they can pick out the truth among the lies.

Class Time: 20 minutes

Materials:

4 stories included in the pre-visit materials.
4 drawings included in pre-visit materials to add a visual component to each story.

Procedure:

Distribute stories to four different students to read aloud to the class.
OR Photocopy the stories and/or visual aids onto transparencies for students to see as the teacher reads aloud.
Explain the rules to students:

1. Only one story is false.
2. Students will get to vote at the end for the story they think is false.
3. Students only get one vote.

If you have chosen for students to read stories, assemble the "liars" at the front of the class and listen to their stories one at a time.
Review the stories with the students.
Students vote for the story they think is not true.
Teacher will reveal which story is false.
Read the supplemental information provided for each story.

Story # 1

Sharks are amazing predators! They use their triangle shaped fins to swim quickly through the water and catch their prey. Some sharks will eat things like krill which are only a couple of inches long, while other sharks with bigger appetites will eat large seals and sea lions as their meal. But some can't seem to make up their minds about what is food and what is not! When studying sharks, some researchers have found strange things inside the belly of a shark. Take a look at this picture. People have found things like license plates, shoes, aluminum cans, a drum set, and various metal objects inside the belly of a shark!

Story #2

Did you know that all sharks need to swim all the time to be able to breathe? Sharks have gills, just like fish and need to be constantly moving so that the water pushes past their gills. If sharks were to stop swimming, they would sink down to the bottom of the ocean, and not be able to breathe.

Story #3

Everyone put your hand over your heart. Is your heart beating? Yes. Did you know that you have electricity in you body? Your body needs electricity to make your heart work. Did you know that sharks can sense electricity? Small fish and animals have hearts just like people. Sharks use this sixth sense to find and catch their prey that may be hiding underneath rocks or shells.

Story #4

All of these statements are true:
You are more likely to be hurt by a coconut falling from a tree than from being attacked by a shark.
More people get attacked by pigs than by sharks every year.
More people are hurt on a toilet than by a shark.

Answers...

Story # 1

This story is completely true! Sharks are curious animals with a big appetite. Because these animals do not have hands, like us, to feel objects, they use their mouths and teeth to feel. They have been known to take a bite out of many objects in the ocean to get a "taste".

Story # 2

This story is false. There are about 350 different species of sharks in our ocean, many of which can be found resting at the bottom of a rocky reef or a sandy bottom. Some sharks, like the swell shark and horn shark (like the one in the illustration), are able to push oxygen past their gills while lying lazily on the bottom of the ocean. While others need to be swimming constantly to breathe. Blacktip Reef sharks and Great White sharks are examples of sharks that need to be swimming all day and all night in order to stay alive. Imagine if you always needed to be moving to breathe!

Story # 3

True! Sharks are amazing predators that have lived on earth for 450 million years! They have a sixth sense which allows them to hunt the sneakiest prey! Small spots located beneath their nose (rostrum) called ampullae de Lorenzini allows them to sense the electrical fields emitting from their prey. This allows them to dig underneath sand, rocks and objects their prey may be hiding under.

Story # 4

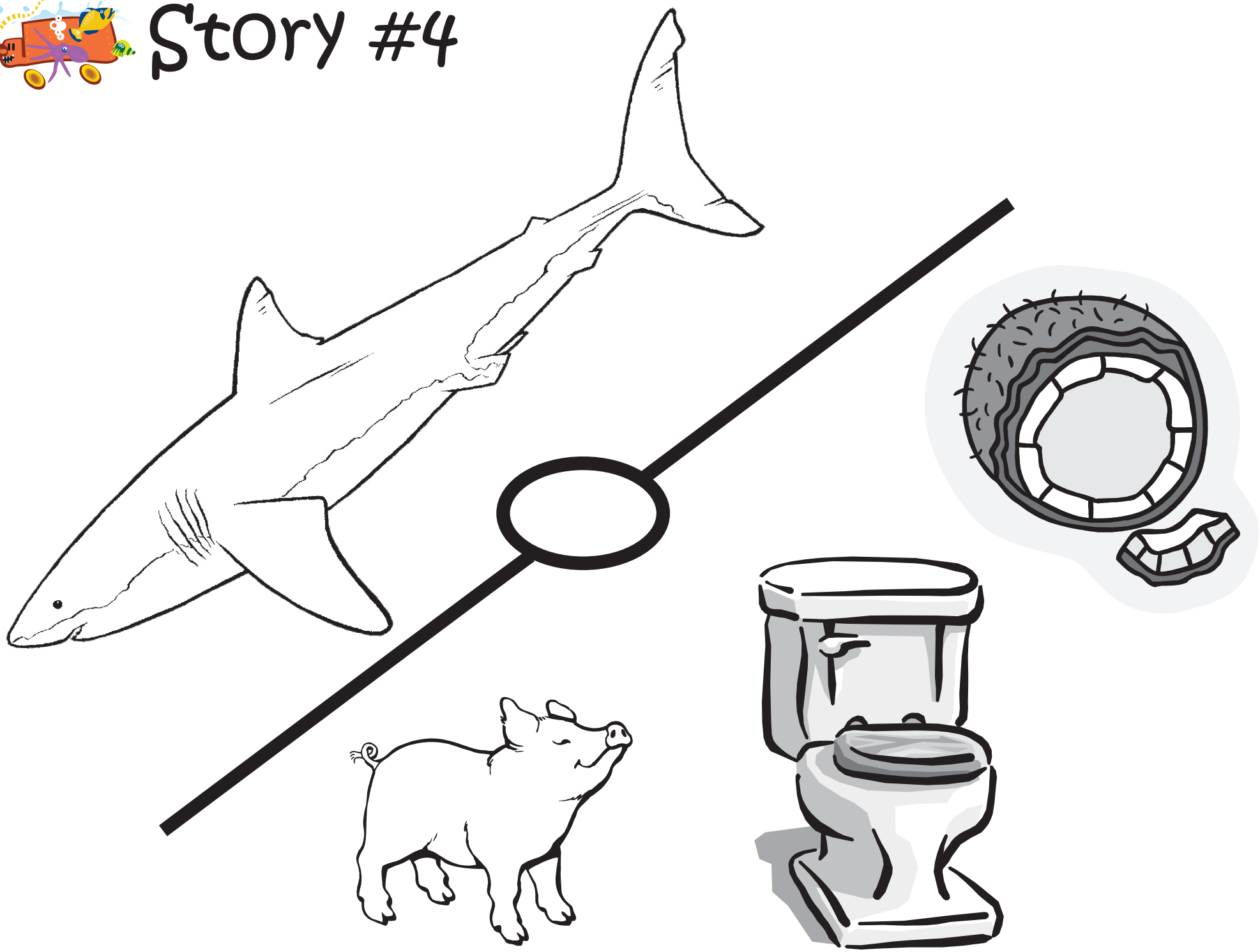
Can you believe that all of these statements are true! Sharks are extremely misunderstood animals and many shark fatalities are a cause of mistaken identity. On average, only 10-12 shark attacks occur every year. This number is relatively small compared to the thousands of sharks that are killed by people every year for food or recreation. Although most people think that sharks are hunting for humans, in reality they are looking for blubbery seal or sea lion. Surfers are easily confused for these animals and sometimes fall victim to a shark attack.

Story #1

Story # 2

Story #3

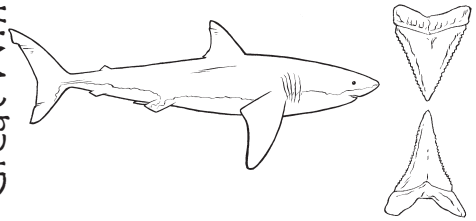
Story #4



Shark Tooth Match-up

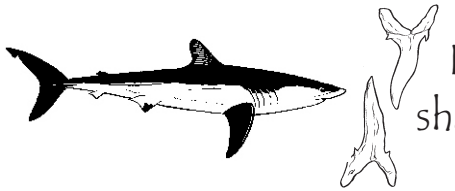
Draw a line from each shark to the food it likes to eat

Great White



Large jaws and serrated teeth

Mako

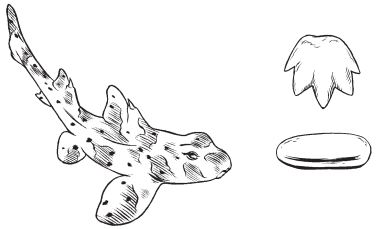


Large Jaws and sharp pointy teeth

Leopard

Small jaws and small pointy teeth

Horn



Small jaws and flat crushing teeth

Crabs and small shelled animals

Large fish and squid

Small fish and shrimp

Seals and sea lions

Ultimate Predator

Instructions for Teachers

Overview:

This activity will help students explore different predator adaptations used for hunting and defense. This activity will help students explore their imaginations and think of amazing animals adaptations.

Class Time: 30 minutes

Prep Time: 5 minutes

Materials:

Large sheets of paper (butcher paper)
Crayons
Tape or tacks

Procedure:

1. Discuss various types animal and plant adaptations.

2. Divide students into three groups (or more if necessary).

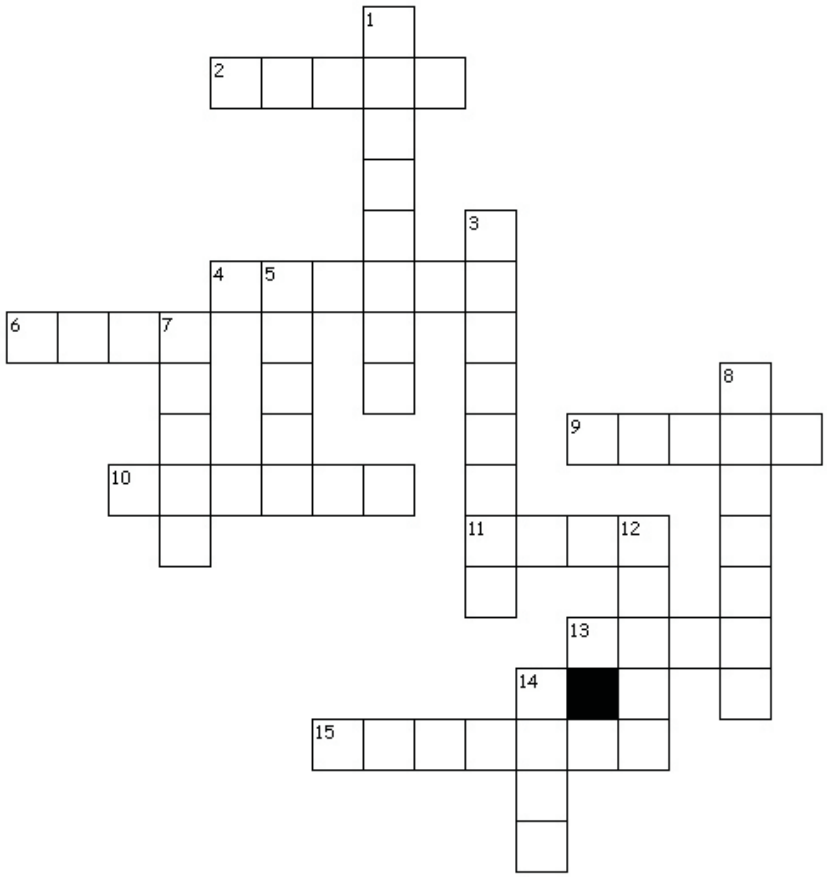
3. Assign each group a section of the predator's body (group 1 - head, group 2 - body, group 3 - tail, etc.). Students will draw their section equipped with the best adaptations for hunting and defense that they can come up with. Encourage them to be creative.

4. Ask students to come up to the front of class one group at a time, attach their section to the wall and present their adaptations to the class.

Movin' & Groovin'

Word Bank

Fins	Blowhole	Crawl	Dive	Bite	Sting
Blubber	Shells	Eight	School		Whale
Molting	Rays	Tails	Flippers		



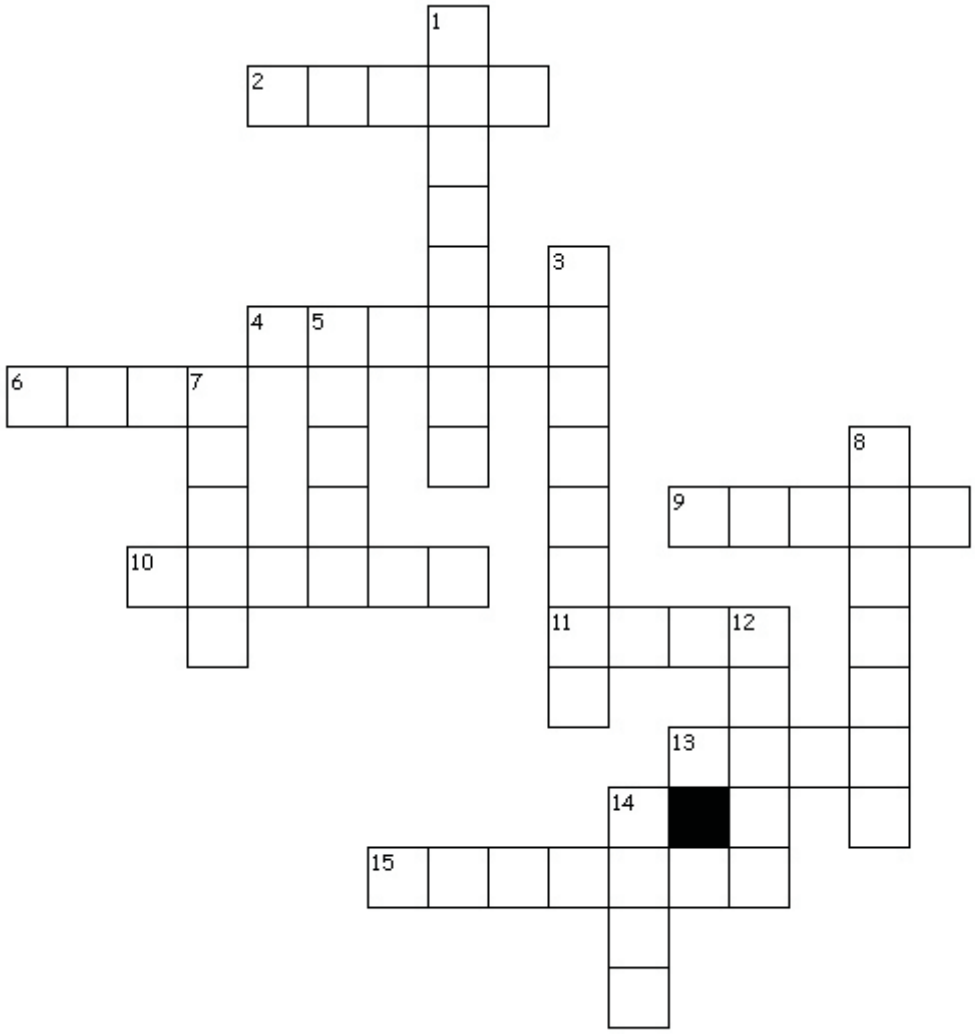
Across

2. Sea horses use their _____ to grab a hold on sea grass.
4. A group of fish swimming together is called a _____.
6. Sea otters _____ down to the bottom to find food.
9. _____ sharks are the largest shark in the ocean. They can grow up to 50 feet!
10. Land and sea turtles have hard protective _____ on their bodies.
11. _____ are close relatives of sharks. They both have cartilage instead of bone.
13. . Sharks _____ their prey with their amazing teeth.
15. When lobsters outgrow their shell and grow a new one, the process is called _____.

Down

1. Whales breathe air from a _____ located at the top of their head.
3. Seals and sea lions have _____ that they use to propel themselves through the water.
5. Crabs _____ along the ocean floor.
7. An octopus has _____ arms.
8. Whales, seals, and sea lions are examples of marine mammals that have a thick layer of fat called _____ to help keep them warm.
12. Sea jellies can _____ other animals to protect themselves.
14 Fish use their _____ to swim through the water.

Movin' & Groovin'



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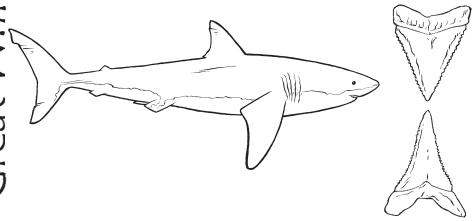
Answer Sheets

Shark Tooth Match-up

Answer Key

Great White



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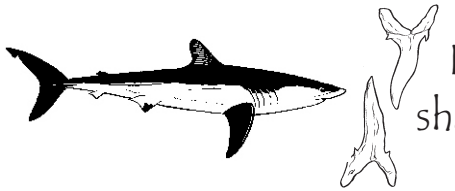

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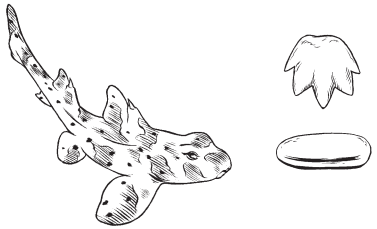

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Movin' & Groovin'

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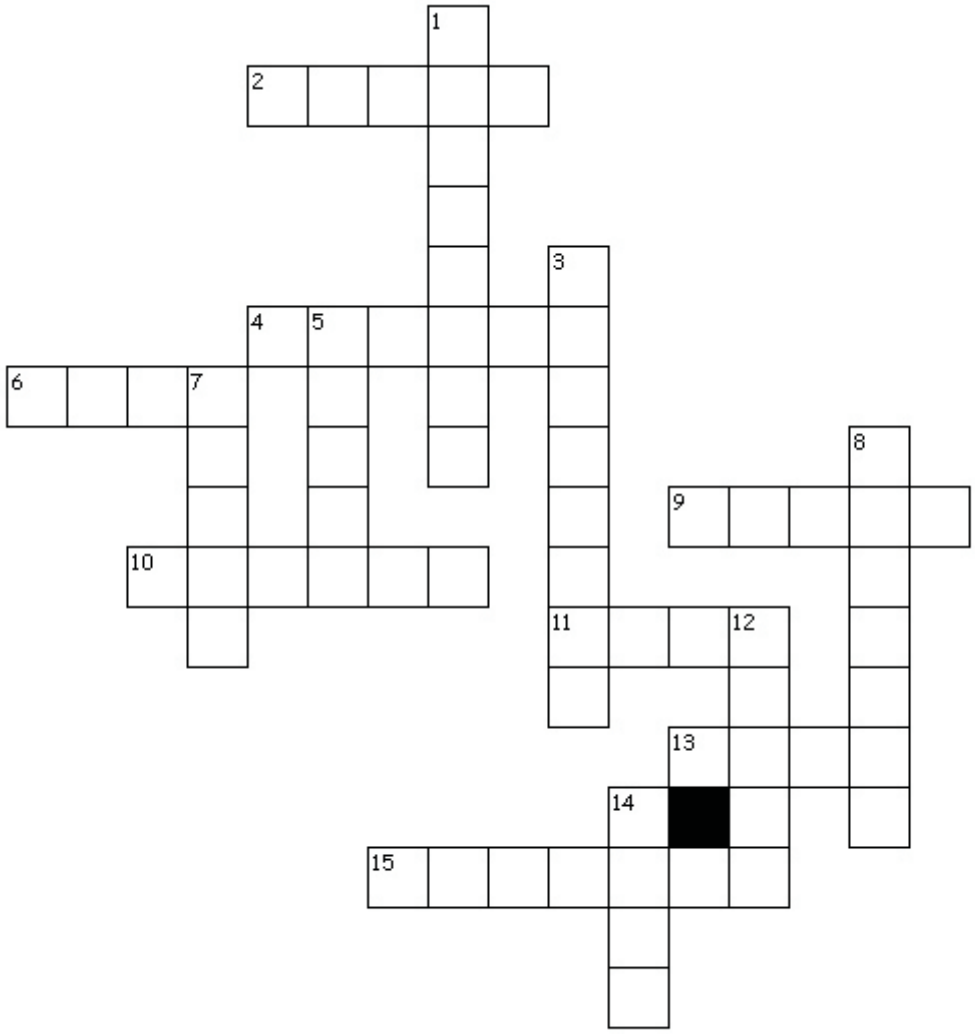

Across

2. Sea horses use their TAILS to grab a hold on sea grass.
4. A group of fish swimming together is called a SCHOOL.
6. Sea otters DIVE down to the bottom to find food.
9. WHALE sharks are the largest shark in the ocean. They can grow up to 50 feet!
10. Land and sea turtles have hard protective SHELLS on their bodies.
11. RAYS are close relatives of sharks. They both have cartilage instead of bone.
13. Sharks BITE their prey with their amazing teeth.
15. When lobsters outgrow their shell and grow a new one, the process is called MOLTING.

Down

1. Whales breathe air from a BLOWHOLE located at the top of their head.
3. Seals and sea lions have FLIPPERS that they use to propel themselves through the water.
5. Crabs CRAWL along the ocean floor.
7. An octopus has EIGHT arms.
8. Whales, seals, and sea lions are examples of marine mammals that have a thick layer of fat called BLUBBER to help keep them warm.
12. Sea jellies can STING other animals to protect themselves.
14 Fish use their FINS to swim through the water.