Ocean Discovery

First Grade

Our Ocean Discovery field trip program helps to meet multiple Floria Standards. Please see Tables of Content for specific standards.

Ocean Discovery 1st Grade Activities

Table of Contents

Pre Field Trip Activities

North Pole, South Pole

Mathematics (shape attributes)/Science (Habitats)/Visual Arts (craftsmanship)

Standards: MAFS.1.G.1.1, SC.1.E.6.1, SC.1.L.14.1, VA.1.H.3.1, VA.1.S.2.1, VA.1.S.3.2, VA.1.S.3.3

- Students cut out and paste images of animals onto a map of the Earth. Students use the shape around the animal as a hint to where the animal lives.

Whale and Shark: Spy the Differences

English Language Arts (Standard English Conventions)/Science (Alike and Different)

Standards: LAFS.1.L.1.2, SC.1.L.14.1

- Students will label five different, but correlative, body parts on a whale and a shark by using the provided word banks.

Dining with Sydney

Mathematics (Organizes and interprets data with up to three categories)

Standards: MAFS.1.MD.3.4, MAFS.1.OA.3.5, MAFS.1.OA.3.6

- Using the provided data chart, students answer questions about a shark's diet over the course of three weeks and solve equations based on the information.

Field Trip Activities

Dolphin Underwater Viewing: Dolphins and Sharks

English Language Arts (Vocabulary Acquisition)/Science (Natural Observations, Ask "How do you know?")

Standards: LAFS.I.L.3.6 , LAFS.K12.L.3.6, SC.1.L.14.1, SC.1.L.17.1, SC.1.N.1.4

- Using the provided information and definitions at Dolphin Underwater Viewing and Shark Encounter®, students will be able to determine the similarities and differences between dolphins and sharks.

Wild Arctic: Arctic Animals

English Language Arts (Vocabulary Acquisition)/Science (Natural Observations, Ask "How do you know?")

Standards: LAFS.I.L.3.6 , LAFS.K12.L.3.6, SC.1.L.14.1, SC.1.L.17.1, SC.1.N.1.4

- Teachers and chaperones will share the provided information about Arctic animals and their adaptations to survive in such a harsh environment.

Shark Encounter: Food for Thought

English Language Arts (Vocabulary Acquisition) Science (Natural Observations, Ask "How do you know?")

Standards: LAFS.I.L.3.6 , LAFS.K12.L.3.6, SC.1.L.14.1, SC.1.L.17.1, SC.1.N.1.4

- Teachers and chaperones will share the provided information about predator and prey interactions and the importance of healthy predator populations while visiting the Shark Encounter.

Pacific Point Preserve®: Which One is Which?

English Language Arts (Vocabulary Acquisition)/Science (Natural Observations, Ask "How do you know?")

Standards: LAFS.I.L.3.6 , LAFS.K12.L.3.6, SC.1.L.14.1, SC.1.L.17.1, SC.1.N.1.4

- First page provides information on taxonomy and classification of seals and sea lions. Second page helps to identify differences between seals and sea lions at Pacific Point Preserve as well as instructions of an activity to help build the students understanding of classification of animals.

Post Field Trip Activities

Arctic Artist

Science (Recording Data)/ Visual Arts (Art as it relates to other content areas)

Standards: SC.1.N.1.3, VA.1.F.1.1, VA.1.H.1.3, VA.1.H.3.1

- Students will practice replicating a drawing of a beluga whale using the provided image and grids.

Shark Scientist

Science (Recording Data)/Visual Arts (Art as it relates to other content areas)

Standards: SC.1.N.1.3, VA.1.F.3.2, VA.1.H.3.1, VA.1.S.2.1

- Recalling information from a visit through the Shark Encounter, students will draw an image following the provided directions.

Living or Non-Living?

Science (Living vs. Non-living)

Standards: SC.1.L.14.3

- Students will determine which of the provided images are living creatures and color those images while crossing out the images of the non-living objects.

North Pole, South Pole

Name: _____

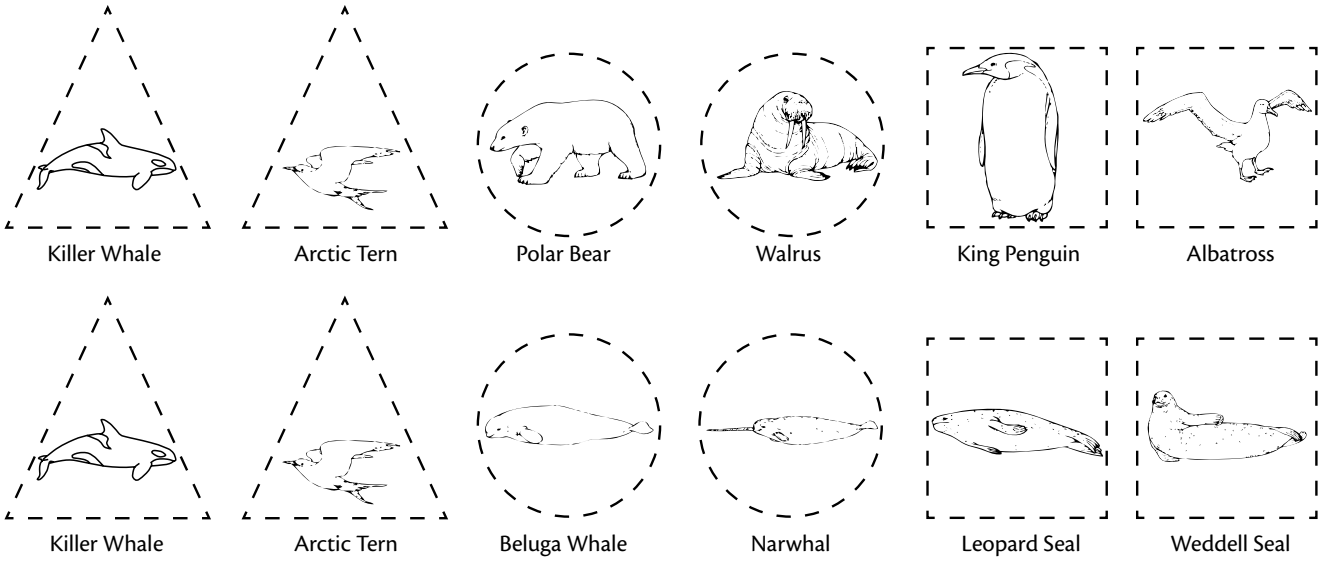
Animals that live near the North Pole or South Pole, where it is very cold, are called polar animals.

Directions: Cut out the animals at the bottom of this worksheet. Use glue to place each animal in an appropriate location on the map below. Animals inside a **circle** live near the north pole; animals inside a **square** live near the south pole; and animals inside the **triangles** can be found living near both the north and south poles.

= Live near the North Pole **= Live near the South Pole** **= Both North and South Poles**

North Pole

South Pole



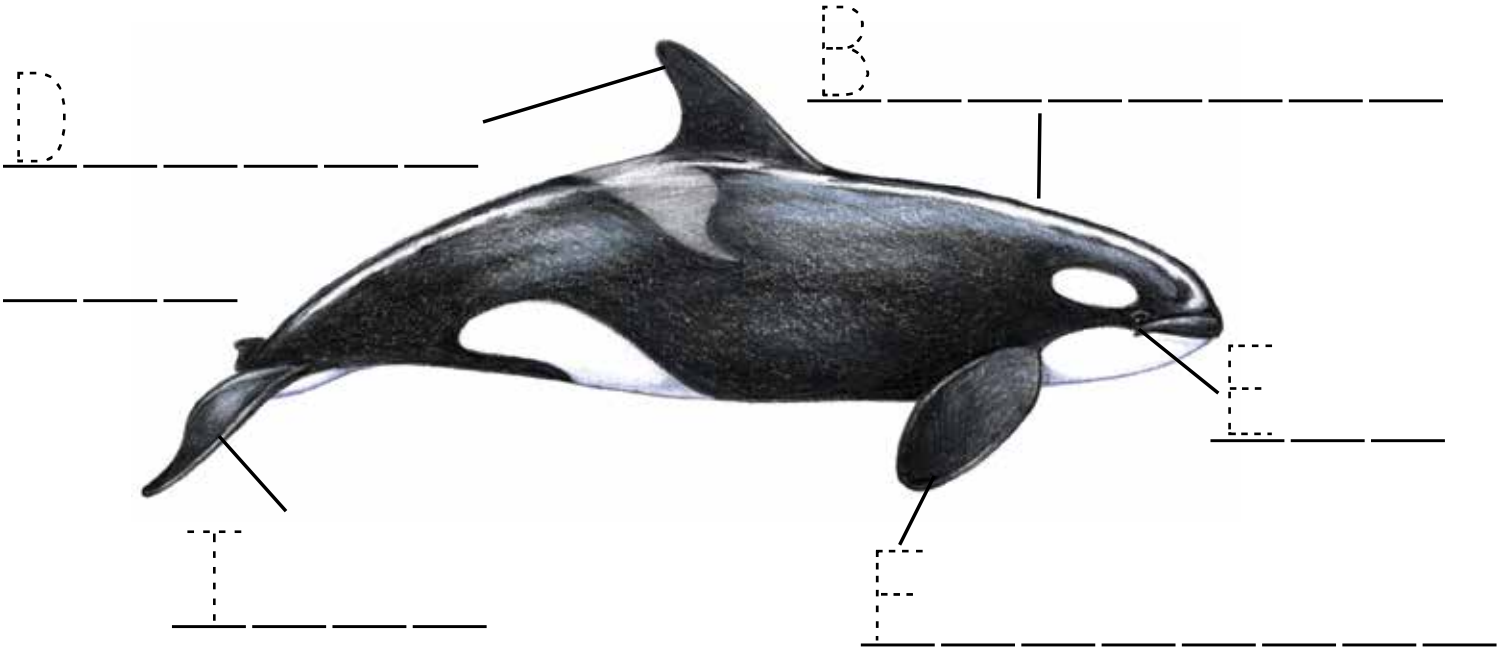
Whale & Shark: Spy the Difference

Name: _____

Directions: Use the word banks to complete each word and label the animals.

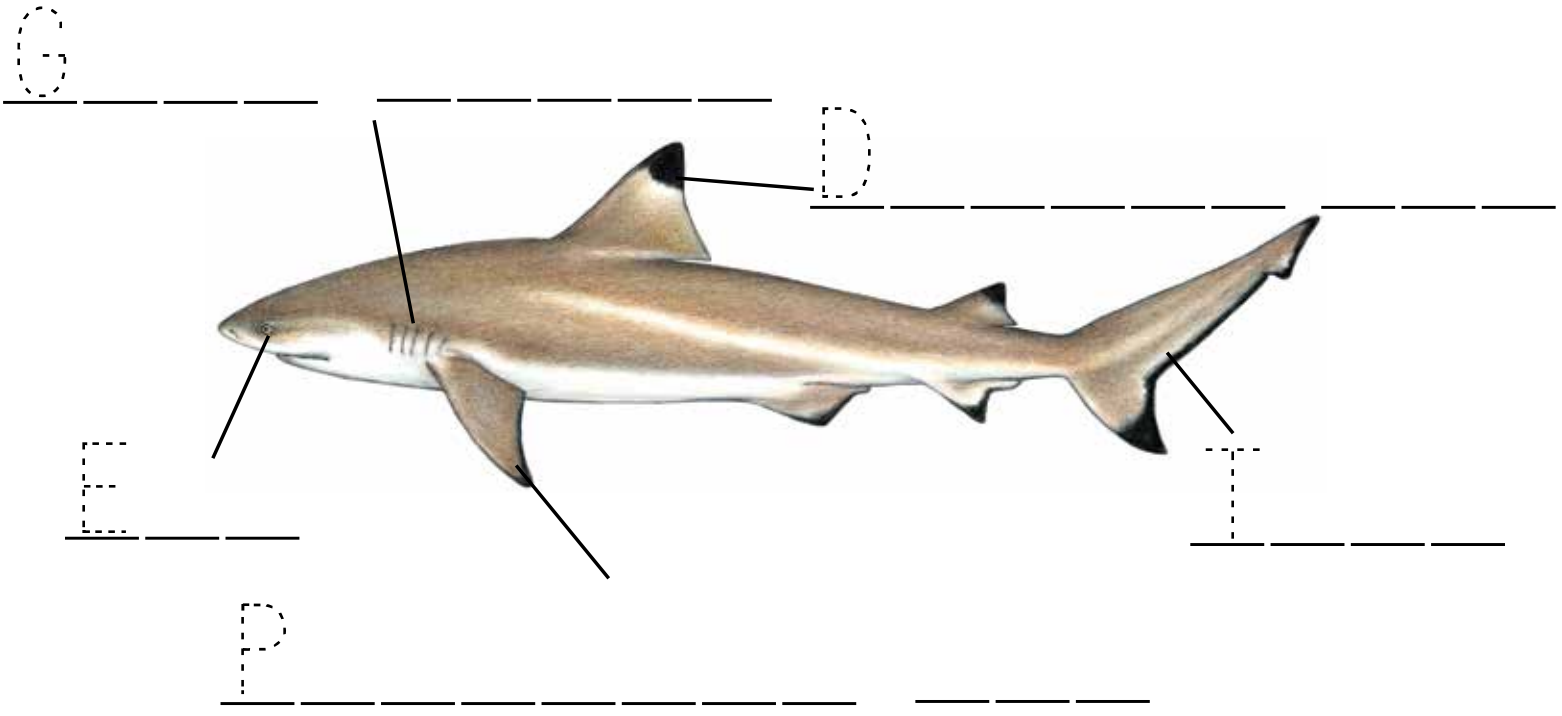
Whale Word Bank

Blowhole	**Dorsal Fin**	**Eye**	**Flippers**	**Tail**



Shark Word Bank

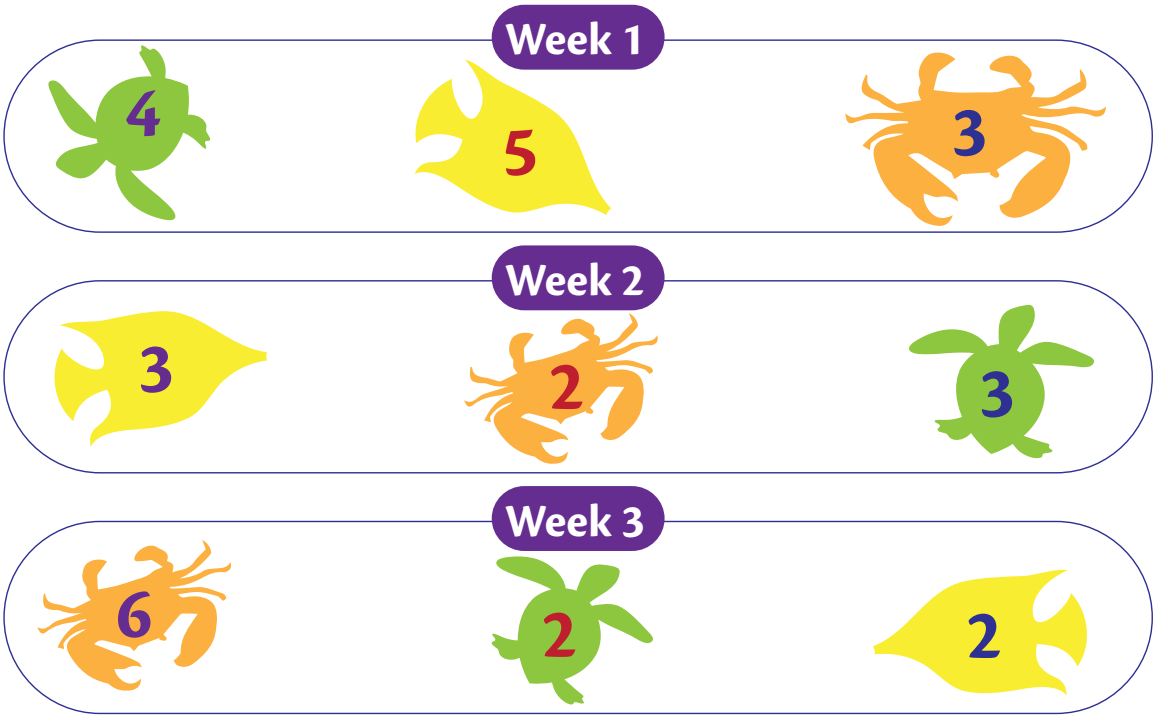
Dorsal Fin	**Eye**	**Gill Slits**	**Pectoral Fin**	**Tail**



Dining With SYDNEY

Name: _____

Sharks are predators. Sharks eat other animals to survive. Sharks will eat sea turtles, fish and crabs.
Look to see how many sea turtles, fish or crabs Sydney Shark ate each week.



Directions: Use the numbers on each animal to help you find your answers.

Sample: How many crabs did Sydney eat during the 3 weeks?

$$\boxed{3}_{\text{Week 1}} + \boxed{2}_{\text{Week 2}} + \boxed{6}_{\text{Week 3}} = \boxed{11}$$

1. How many total animals did Sydney eat during week 1?

$$\square + \square + \square = \square$$

2. How many total animals did Sydney eat during week 2?

$$\square + \square + \square = \square$$

3. How many total animals did Sydney eat during week 3?

$$\square + \square + \square = \square$$

4. Which week did Sydney eat the largest number of sea turtles? ☐

5. Which week did Sydney eat the smallest number of crabs? ☐

Dolphin Underwater Viewing: Dolphins and Sharks

Objectives: Students will discover the differences and similarities between dolphins and sharks.

Teacher and Chaperone Corner: Students will be able to view a group of bottlenose dolphins at Dolphin Underwater Viewing. When viewed from below the water, it is very easy to see that these are dolphins and not sharks. At the beach, it can be more difficult to distinguish a dolphin dorsal fin from a shark dorsal fin. Many people confuse them for each other. However, there are many characteristics that people can look for to tell whether an animal is a dolphin or a shark. **SeaWorld® Educators are located at Dolphin Cove if you would like additional information.**

Share this information with your students.

Dolphins:

- Dolphins have a **falcate** or hooked dorsal fin. The fin on their back is made out of **fibrous connective tissue** and usually has a tip that hooks back towards the tail. Dolphin babies, called **calves**, have a flopped flexible dorsal fin for the first few days after birth. The fin will gradually stiffen and straighten as the calf gets older.
- Dolphins are mammals that breathe air. They can dive underwater for up to 10 minutes but will usually surface to breathe every 2-3 minutes. The more active the dolphin is, the more often it will surface to breathe.
- All whales and dolphins move with an up and down motion of the tail.
- Dolphins steer using their **pectoral flippers**. Inside of each flipper are five digits (or finger bones) connected by a **fibrous connective tissue** which is why the flippers look like ovals instead of hands.
- Dolphins have a well-developed sense of hearing, sight and touch. However, they do not have a sense of smell and have a very limited sense of taste.
- Dolphins are very curious and may **spyhop** by lifting their heads out of the water and **breach**, or jump out of the water in order to look around.

Sharks:

- Most sharks have two dorsal fins on their back. Sharks have no bones. Their skeletal system is made of cartilage.
- All fish, including sharks, move with a side-to-side motion of the tail. The tail may give the appearance of a third fin above the water behind the two dorsal fins.
- Sharks don't have pectoral flippers, instead they have **pectoral fins**. The difference is that flippers have bones inside, while fins do not. Usually, fins have a cartilage or connective tissue structure for some support.
- Sharks have a well-developed sense of sight and smell. They are able to sense electric pulses from the prey animals near them and to feel the vibrations of other animals by the use of the lateral line. The **lateral line** is a fluid-filled canal located on the sides of the sharks' body.
- Some sharks may be curious and swim near human areas, but shark attacks on people are very rare. Using good judgment around water can help keep you safe in the water at the beach and at the pool!

Wild Arctic®: Arctic Animals

Objectives: Students will learn about the adaptations of arctic animals.

Teacher and Chaperone Corner: Entry to Wild Arctic may be gained in one of two ways. Students over 42 inches (106.68 cm) in height may ride White Thunder, a flight simulator ride, for an exciting journey to Base Station Wild Arctic. Students that are uncomfortable or unable to experience the ride may enter the attraction via the walking experience.

Inside the exhibit, you will encounter a variety of animals including harbor seals, beluga whales and walruses. In addition to the animal exhibits, look for interactive elements designed to enhance your visit. Computer terminals featuring animal information, activities and games are located in the Communication Center on the lower level of the research station.

SeaWorld® Educators are available in the upper level of the Research Station if you would like additional information.

Share this information with your students.

Beluga Whales:

- Beluga babies, called **calves**, are born dark grey. This coloration helps them hide in their mother's shadow. Belugas lighten in color as they age. Adult beluga whales are normally completely white.
- Belugas have a thick layer of insulating fat, called **blubber,** that helps them stay warm. This blubber also helps them float along with the ice flows.
- Belugas are the only species of whale that can swim backwards. Because of the structure of their neck, they are also one of the few whale species that can turn their head from side to side.
- Belugas and other toothed whales use a special type of sonar called **echolocation** to help them find food and navigate in their environment. Echolocation begins when the whale produces sound from around the blowhole and focuses it out of the **melon** or forehead. The sound bounces off objects in front of the whale. By listening to the returning sounds, the whale may be able to determine where objects such as fish are in its area.

Harbor Seals:

- Harbor seals have spots that help them to hide underwater. They spend most of their time in or underwater. They don't move easily on land.
- Harbor seals use their **vibrissae** (whiskers) to help them find food and to navigate.

Walruses:

- Walruses have pinkish-brown skin that helps them blend in with the rocky beach.
- Walruses swim with a side-to-side motion of the hind flippers, while the front flippers are used for steering. On land, the walrus slides across the ice or walks using its front and hind flippers.
- Both male and female walruses have tusks. **Tusks** are long, pointed teeth that the walruses use to help them haul out or climb out of the water and onto the slippery ice. Male walruses will also display their tusks to other walruses during displays of dominance.
- Walruses have thick whiskers, or **vibrissae**, which are used for touching and feeling objects. These vibrissae are especially useful for finding a walrus's favorite foods, clams and shellfish, on the sandy ocean floor.

Shark Encounter®: Food for Thought

Objective: Students will discover the important role that the predators play in the environment.

Teacher and Chaperone Corner: At Shark Encounter, students will encounter some of the most mysterious and misunderstood animals of the sea. Barracuda and sharks both have frightening reputations. However, it's important to remember that every animal plays an important role in the ecosystem.

The Shark Shallows, located near the front of the building, is an excellent place to observe sharks and other species of fish. This area provides a convenient meeting spot for your group for further discussion or instruction.

Share this information with your students.

- Animals that eat other animals are called **predator**s. Animals that are eaten by predators are called **prey**. Some animals, like stingrays, can be both predator and prey.
- Most predators feed on weak, injured or ill animals that can be easily caught and are less likely to fight back.
- Sharks very rarely attack people. In fact, hippos and cows are more dangerous to humans than sharks. Yet, people kill over 100 million sharks every year.
- A **food web** is an organizational chart that depicts which prey animals are eaten by which predator animals. If part of the interconnected food web is taken away, the entire web could collapse. Within any given ecosystem, both predators and prey are important to the survival of the other.
- Predators are often thought of as "bad animals", but they play an important role by helping to keep the overall population of animals healthy. They help prevent one type of animal from outnumbering the others (**overpopulation**) and help to maintain the health and balance of the natural environment.
- Human activities such as pollution, overhunting and overfishing can harm predators either directly or by hurting the animals they rely on for food.
- Most predators have a good sense of smell which allows them to smell food sometimes from miles away. For example, some sharks can smell one part of blood per billion parts of water.

Pacific Point Preserve®: Which One is Which?

Objective: Students will learn about the similarities and differences between seals and sea lions while visiting Pacific Point Preserve.

Teacher and Chaperone Corner: Pacific Point Preserve is home to harbor seals and California sea lions. Seals, sea lions and walruses are in the Pinniped order. Pinnipeds are characterized by feather shaped flippers, vibrissae (whiskers) and a semiaquatic lifestyle. Despite these similarities, there are many distinct differences (physically, socially and behaviorally) that separate the pinnipeds into three distinct families: otariidae (eared seals), phocidae (true seals) and odobenidae (walruses). Students are welcome to purchase fish at the feeder booth to feed the seals and sea lions in this habitat. **SeaWorld® Educators are located at Pacific Point Preserve if you would like additional information.**

Share this information with your students.

California Sea Lions:

- Sea lions are part of the **eared seal** family. They have small ear flaps on the sides of their heads. These ear flaps are called **ear pinnae** (pin-nay).
- Sea lions are very vocal and can be heard barking, howling and growling. This is called **vocalization**. They use these sounds to communicate or talk to each other. Mother sea lions will use these noises to find their **pups** or babies. Big male sea lions will bark to claim a beach as their own, and sometimes sea lions will make noise at people to tell them they would like a fish!
- Sea lions are **social** and normally congregate together in big groups.
- Sea lions have long front flippers. They can bend their back flippers under their body. They use all four flippers (front & back) to walk around on land.
- Sea lions are usually solid brown. They can appear darker or lighter depending on whether they are wet or dry.

Harbor Seals:

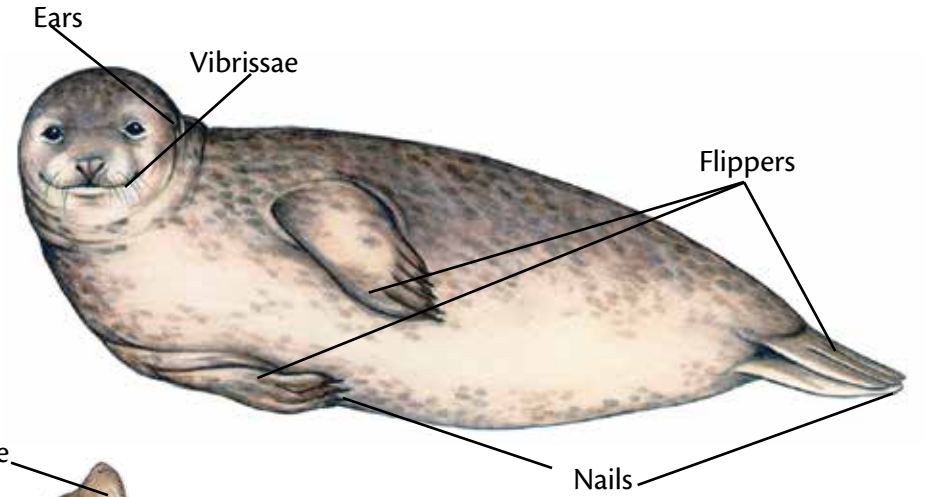
- Harbor seals are part of the **true seal** family. They do not have ear flaps on their head, but they do have ears that look like dents or small openings behind their eyes.
- Harbor seals are usually very quiet and may grunt, growl, hiss or sneeze. They communicate using these sounds and by body language.
- Harbor seals are solitary and prefer to be by themselves or in small groups.
- Harbor seals have short front and back flippers. They cannot use their front flippers for walking so they will bounce or wiggle to move around on land.
- Harbor seals are born silvery-grey with spots and grow up to be golden-brown with dark spots. These spots help them to hide in the water.

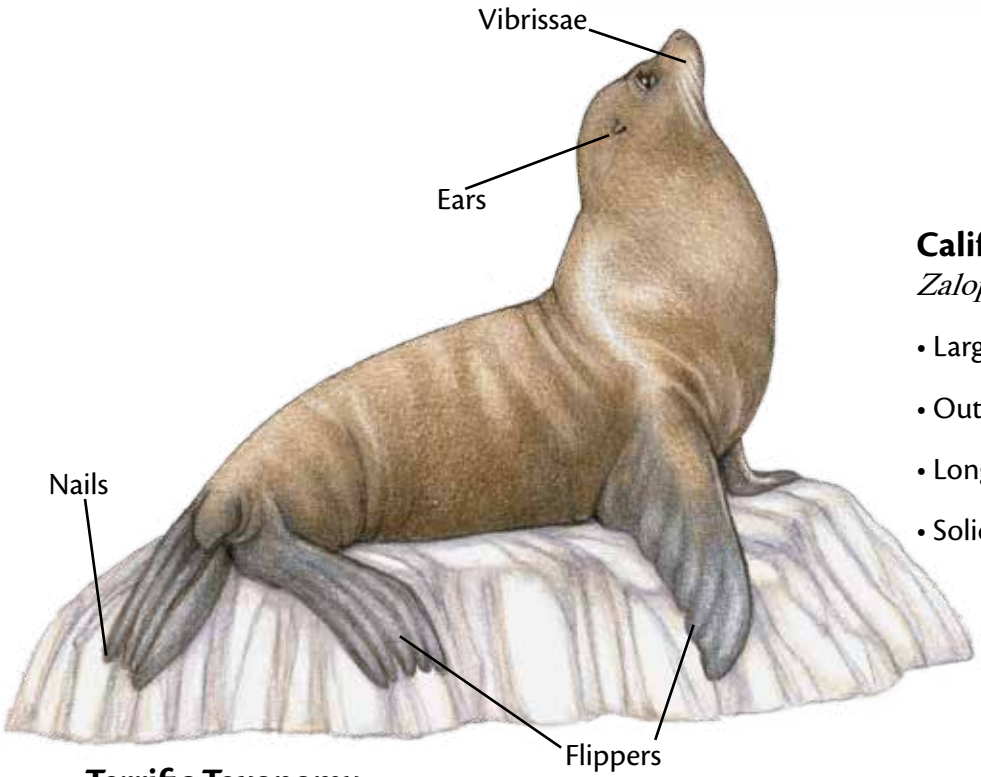
Which One is Which?

Harbor Seal

Phoca vitulina

- Short front and hind flippers
- No outer ear flaps, only small openings
- Short rounded body shape
- Spotted coloration of the fur





California Sea Lion

Zalophus californianus

- Large front and hind flippers
- Outer ear flaps
- Long streamlined body shape
- Solid coloration of the fur

Terrific Taxonomy

Scientists divide animals into different groups based on the characteristics or features they have in common. Animals like seals, sea lions and walruses all belong to one order, based on the characteristics they share. However, they also belong to separate families based on adaptations unique to each group such as flipper size and shape, external ear flaps and tusks.

For this activity, divide the students into different groups based on what they have in common.

1. All students who go to: state the name of your school.
2. All students who belong to: state the teacher's name class.
3. All students who are wearing sneakers.
4. All students who are carrying a backpack.
5. All students who are wearing a hat.
6. All students who are wearing a red shirt.

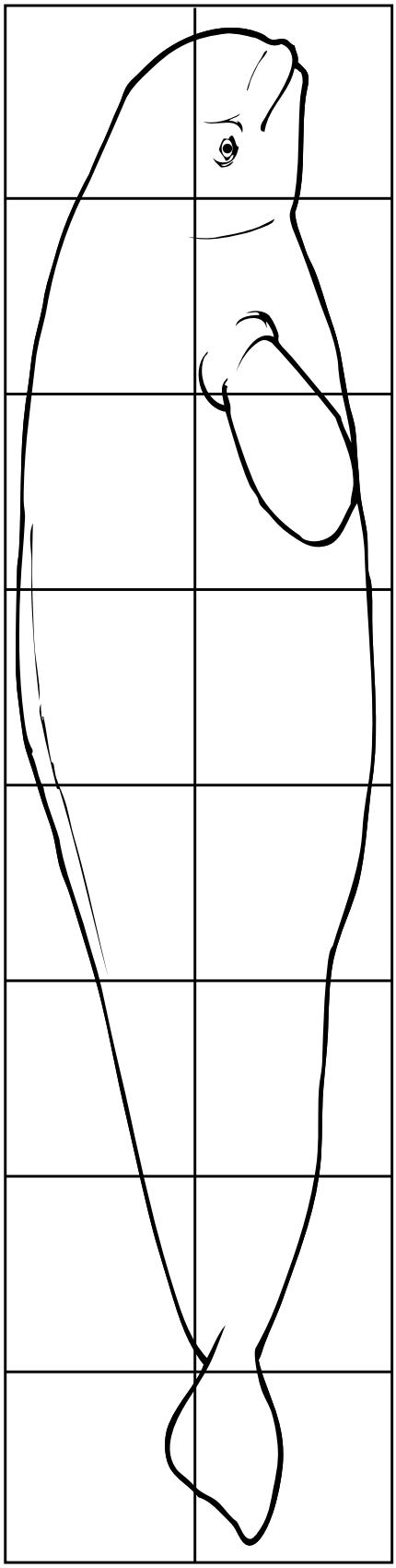
Feel free to experiment and have the students come up with their own characteristics. Also, have the students list all of the characteristics they have in common with each other.

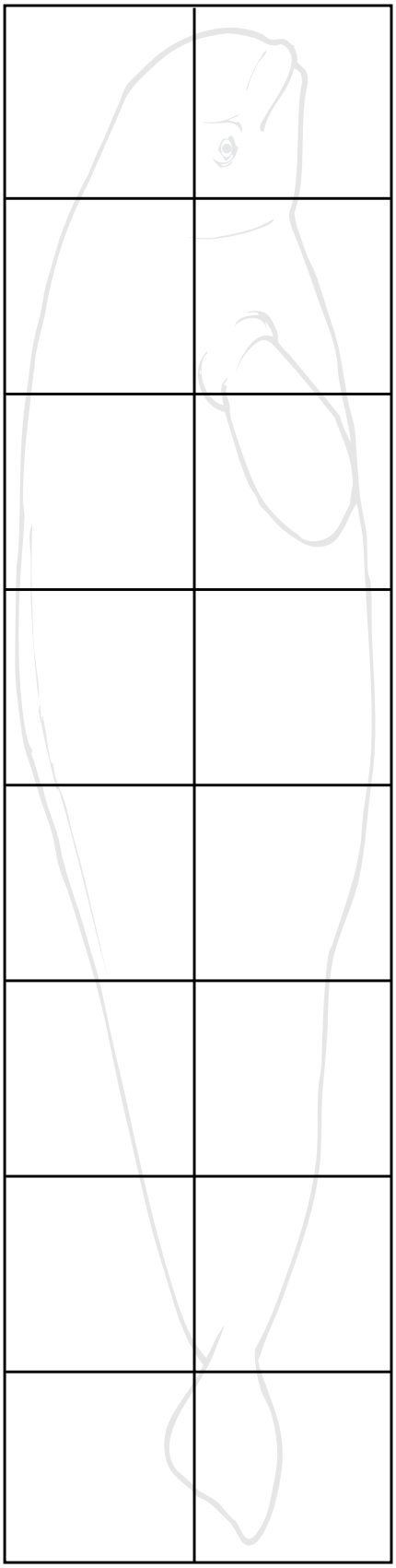
Arctic Artist

Name: _____

Scientist often sketch or photograph the animals they are studying. A grid is a tool that helps scientists break down an image into a series of lines that are easily reproduced.

Directions: Use the grids below to draw the picture of the beluga whales.





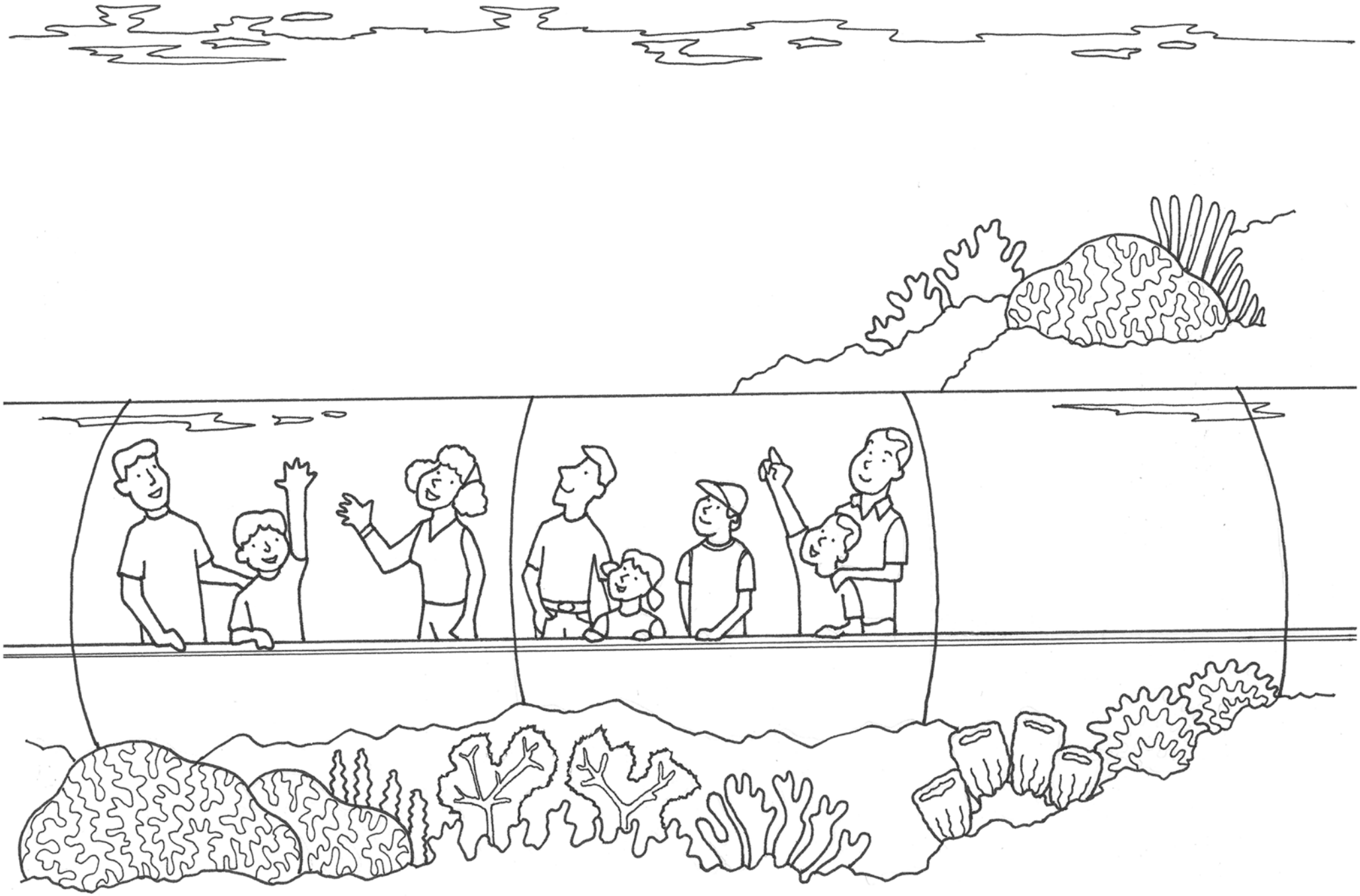
Shark Scientist

Name: _____

Scientists study animals in the ocean. They want to know how many animals there are. Pretend to be a scientist as you move through the Shark Tunnel at SeaWorld®, count the number of sharks that you see.

Directions: Draw yourself inside the tunnel. Draw 1 shark and 5 fish in the reef. Color the picture.

How many people are in this picture? ☐

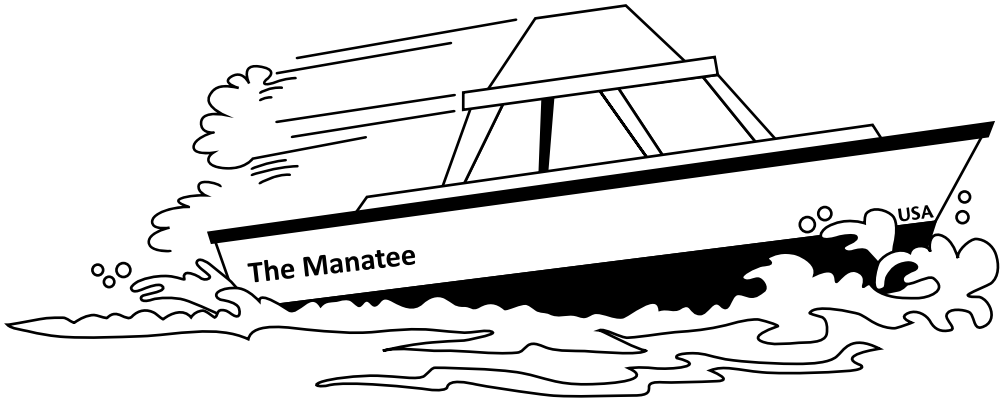


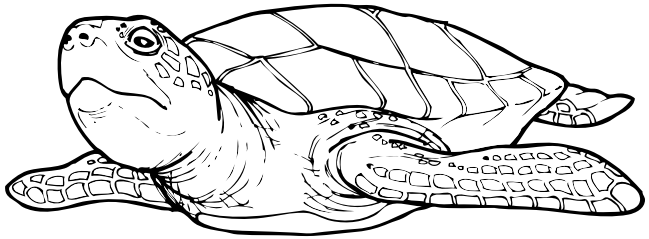
Living or Non-living?

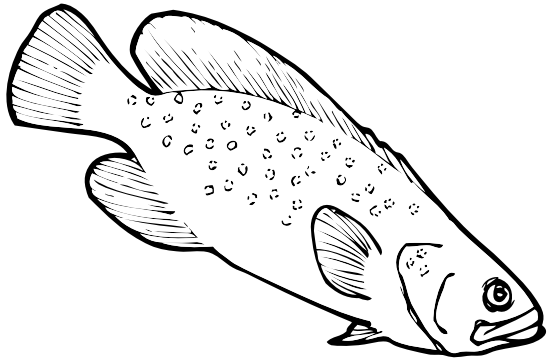
Name: _____

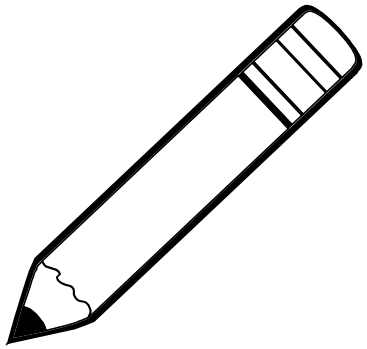
All animals are living things and need food, water and a place to live.

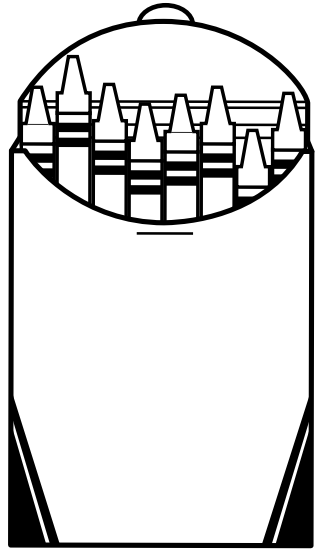
Directions: Color the living things and put an X over the non-living things.

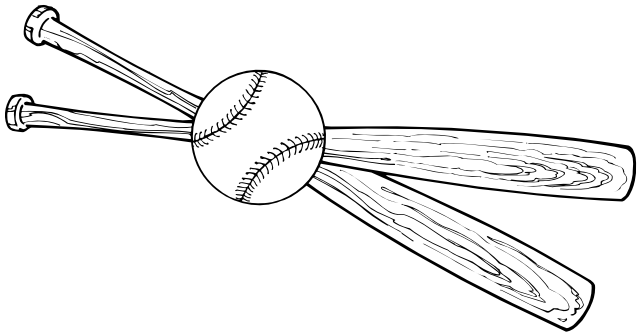


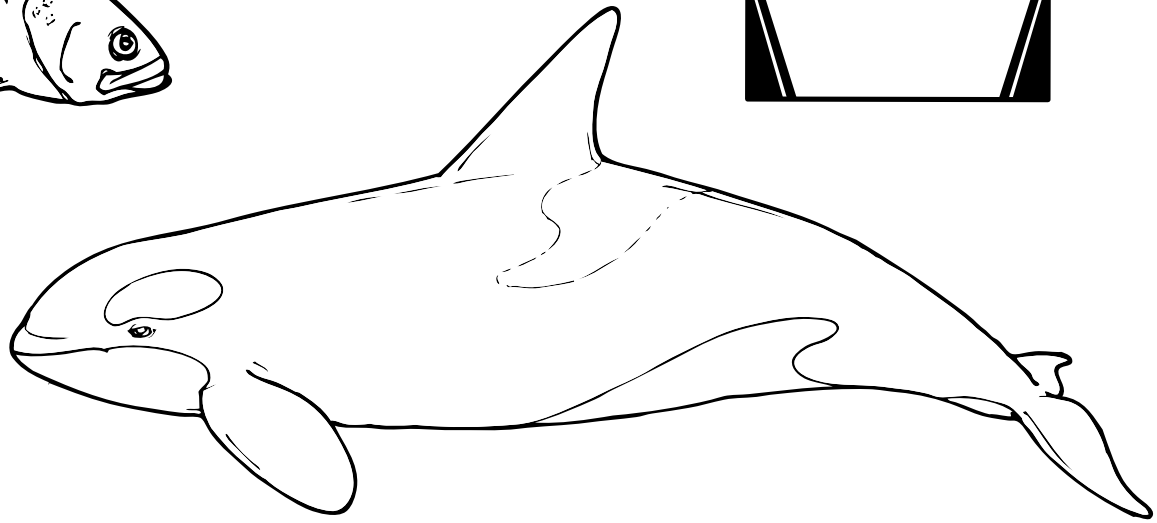




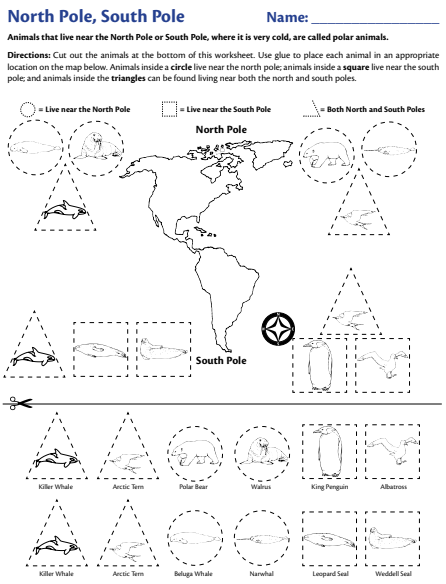


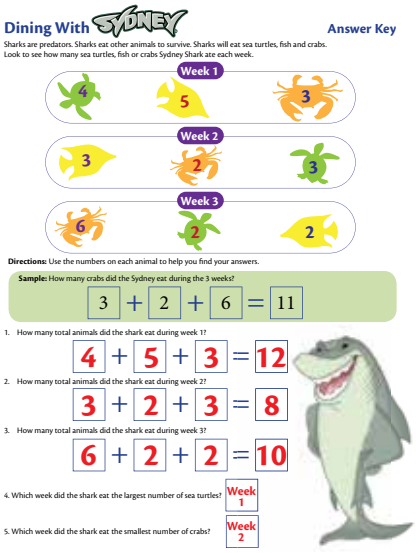


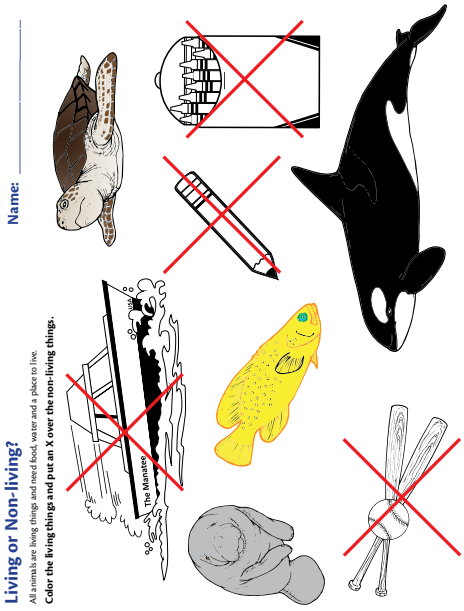




Answer Key







Check out:

SeaWorld.org for more information

SeaWorldOrlando.com/Teachers for additional resources just for teachers

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