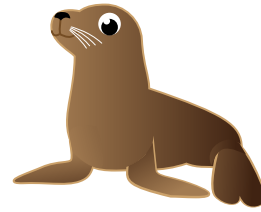




Playtime with Sea Lions

B



CONCEPT / TOPICS TO TEACH

Sea lions and seals are marine mammals living in the sea and part-time on land. They are part of a group called “pinnipeds” meaning “wing foot.” They communicate with one another by making barking like sounds and through a variety of body movements. On land their movements are gawky and awkward, but in water they move with acrobatic grace. There are physical differences between seals and sea lions. Most important is the shape of their hips and how they use their flippers. You can also see external ears on sea lions.

Objectives:

- » Students will engage in a Think, Pair, Share activity that requires them to compare and contrast the way that sealions move on land and in water.
- » Students will employ new knowledge about pinnipeds in an activity they apply their knowledge to a series of trivia questions.
- » Students will use the scientific method of inquiry to experiment with various materials to simulate how insulation works in marine animals.
- » Students will work with basic units of measurement to solve a series of word problems that analyze distances.
- » Students will explore word use through an exercise designed to challenge students to incorporate new vocabulary in proper context.

Character Education: PLAY

When sea lions are young, they PLAY all the time. During playtime they are learning the lessons they need to become adults. This is very similar to how children PLAY. We want to encourage children to PLAY everyday, hoping it will continue throughout their entire lives! At school and home there are rules we follow, there are also rules we follow when we PLAY with one another. Remind children to remember to show respect and communicate with one another during PLAY. Encourage your students to get together in their buddy teams and discuss respect and create rules of communication for PLAY.

Example: How Ocean Annie and Scuba Divers PLAY

When scuba diving, good buddy teams always communicate and signal one another with the OK signal. This important action tells your scuba buddy you are OK and you are also asking your buddy if they are OK. If you were not OK, you would need to signal that something is wrong. When communicating something is wrong, you have to find hand signals instead of words to explain what is wrong so your buddy can help you while underwater.

Being able to PLAY together one on one or in a group setting

is very important, creating ways to communicate helps in the development of children. Being able to communicate and show respect during PLAY is essential! Sea lions use PLAY to learn how to be adults as they grow up. Children who learn how to PLAY together also learn lessons they need to grow. Encouraging use of creative imagination during play enables children to be more successful adults who are confident and think differently. You can use scuba diving sea lion PLAY time to help your students communicate and learn respect while having fun! Learning can be fun, especially when children PLAY!

Getting Started

Required Materials

- DVD "Who Lives In The Sea?" by Dive Into Your Imagination
- Large Dry Erase Board/Easel and Markers



Treasure Chest

- Blubber
- Ecologist
- Flippers
- Mammal
- Pinniped
- Play
- Pod
- Scientist
- Sea lion
- Sea lion pup
- Seal
- Seal pup
- Whiskers

Anticipatory Set Lead-In

- ✦ Watch and become familiar with chapter two, "Playtime with Sea Lions" from the DVD "Who Lives In The Sea?"
- ✦ Before beginning the film clip, ask students to imagine they are an ecologist (ih-kol-uh-jist) meaning they are people who study the relationship between animals, their environment, and to each other. Ask students to work independently or with their buddy team to collect information during the run of the video clip. Play the clip and review what they learned before moving on to activities.

Here are some questions and answers you can use to build a brainstorming session:



Questions for Students	Answers for Educators
Do seals and sea lions live on land, in the ocean or both?	<i>Pinnipeds live both on land and in the ocean. They spend time resting, warming up, and mating on land. Pinnipeds also spend lots of time playing, frolicking in the ocean, riding waves, feeding and hunting for food.</i>
How do seals and sea lions stay warm in cold water?	<i>They have fur and a layer of fat called blubber to help insulate their bodies and protect them from the elements.</i>
Can seals and sea lions breathe under water?	<i>No, sea lions are built like you and me. Pinnipeds have lungs and must breathe air to live. They have a special flap that closes and blocks their nose when they go underwater but they must surface to breathe.</i>
What are the differences between seals and sea lions?	<i>The most noticeable difference is that sea lions have external ears that stick out on their heads, while seals ears are tucked inside the head and cannot be seen. Sea lions have longer flippers than seals, and their fur is slightly different, not the same thickness. Their hips are also formed differently, and sea lions can move more easily on land because of bendable hip joints and use of their front flippers.</i>

Video Review

- ❖ After watching the clip about sea lions once or even a few times, discuss and write down additional facts, questions, and information students gained from the video for further research and discussion.
- ❖ Ask students to write a reflection in their journal about sealions and pinnipeds.
- ❖ Ask students what else they want to know about pinnipeds and write ideas down for later research.
- ❖ Compare what students learned about the seals and sealions. Encourage them to discuss the importance of play in our lives. Are there rules we follow when we play?

Imagination Play

Ask children to imagine they are sea lions. What would it feel like to be a sea lion? How do they swim? How do they PLAY? What can we learn about sea lions? You can read this script or use your imagination and make up your own!

“On the count of 3, let’s say the magic word. 1, 2, 3...IMAGINATION! Sea lions are so much fun to play with in the water, let’s imagine we are sea lions! Let’s all practice how we can do a sea lion clap! Clap your hands gently together and at the same time say Ar, Ar, Ar. If you are sea lions you would use your flippers to walk around on land and to swim with in the water. Sea lions can even climb cliffs 30 feet high using their flippers.

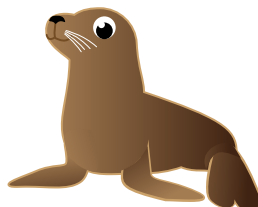
When you are a baby sea lion, you are called a pup and rely on your mother for everything. By the time you reach the age of 2 or 3, you become a juvenile and your favorite thing to do is to play with one another. When in the sea, you do twists and turns, but water will never go up your nose because sea lions have a special flap that closes off their nose when they go in the water. Sea lions can’t stay underwater forever like a fish does; they have to surface to breathe. The whiskers on your face detect vibrations underwater. Sea lions use their whiskers when hunting fish. They can feel the vibrations of fish passing by. This is similar to how cats feel with their whiskers. The more you know about sea lions, the more you can use your imagination when doing the following activities. Feel and pretend you are sea lions and imagine what life would be like in the sea. It is very important we keep our ocean clean because sea lions need a healthy environment to live and so do we! We rely on the ocean for food, water and oxygen!”



Sea lions are marine mammals. Although we spend hours in the water, we must surface to breathe air.

CLASSROOM ACTIVITY STATION B1

TURF OR SURF



Overview

Students will think, pair, and share ideas about the contrasting ways pinnipeds move on land and in the water. Using information from the group dialogue, students will write sentences or a story. Participation in this activity will provide students with an opportunity to explore *creative writing, vocabulary, improve literacy, opposites, and analytic skills.*

Materials: Sea lion template, VENN diagram (optional), construction paper, scissors, writing paper, pencils

Talking Points

- Q: Ask students where sea lions live. Discuss their answers.
- Q: Ask students what kinds of things they think sea lions might do in the ocean and what kind of things they do on land.
- A: Affirm sea lions look for food, play, and get exercise in the ocean and they depend on a healthy ocean in order to live. On land they rest, form colonies and families, and warm up in the sun. Sea lions pup and sleep on land too.
- ✧ Sea lion colonies are often near beaches and rocky reefs.
 - ✧ Beaches are made up of loosely consolidated organic and inorganic materials. Sand consists of tiny bits of animals, plants, rocks, and minerals. Sand is distributed by waves and coastal currents seasonally.
 - ✧ The ocean and the land around the ocean supports a great diversity of life.

Lesson Procedure

1. Arrange class into buddy teams and review how pinnipeds move differently on land as opposed to in water. In water they are graceful, fast, and agile while on land they are awkward, slower, and lumbering. They use their flippers to move both on land and in the ocean.
2. Ask students to make three columns on a page (or use a VENN diagram) with a column for land, sea, and one for the commonalities between the two.
3. Instruct students to work in their buddy teams to fill in the columns with words describing how pinnipeds move on land and in the water.
4. Once lists are completed, students can share their words with the rest of the class.
5. Ask students to write a story or sentences incorporating their words describing how pinnipeds move by land and sea. Have them write their story either from the point of view of the seal, sea lion, scientist, or scuba diver. They can be underwater photographers, boat captains or oceanographers. Have them use their imagination to bring out their inner scientist as they write.
6. Have students trace or design a template of a sea lion to accompany their writing. Students can re-write their story on back of the sea lion. Add them to their "Who Lives In The Sea" journal.

CLASSROOM ACTIVITY STATION B1 (Continued) TURF OR SURF

Extension Ideas

- » Ask students to repeat the exercise above, but this time write it about themselves. What words describe how they move on land versus in the water? Write a story or sentences incorporating their words into the story. How are they similar or different to how sea lions move?
- » Have students work together in buddy teams and brainstorm the possible effects of pollution on sealions and/or humans and their ocean environment.
- » Challenge students to research and identify other ocean animals that traverse onto terrestrial environments like sea turtles, certain sea snakes, and the mudskipper fish.

Notes

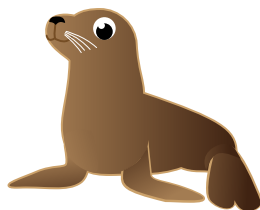
Create your life through your imagination, then work towards making it a reality.

Fish need a healthy ocean in order to live. We are interconnected.



CLASSROOM ACTIVITY STATION B2

PINNIPED TRIVIA



Overview

Students will use trivia cards to practice reading and reviewing facts about pinnipeds. Participation in this activity will provide students with an opportunity to practice *literacy skills, new vocabulary, and deductive reasoning*.

Materials: “Pinniped Trivia” cards, scissors

Talking Points

Q; Ask students what they remember from the film about how pinnipeds stay warm.

Affirm sea lions have fur which helps to keep them warm in cold waters where they live.

Sea lions also have a thick layer of fat called blubber.

✧ Not all animals have blubber and fur like sea lions. There are different seasons and habitats on land, there are different habitats and temperatures in the ocean too.

✧ Point out how animals have different responses to changes in temperature. For example, fish are cold-blooded and the temperature inside their bodies adjusts in response to the temperature of the water around them whereas sea lions are warm blooded and have a temperature inside their bodies that stays constant similar to human beings and dolphins.

Lesson Procedure

1. Photocopy the “Pinniped Trivia” cards.
2. Prepare the cards by cutting along the lines so you can make a deck for the students. You can also laminate them for long-term durability.
3. Work together as a class, or challenge buddy teams to quiz one another with the trivia cards.
4. Students or teams who answer correctly can keep the card, and the team with the most cards at the end is the winner.
5. In nature cooperation is just as important as competition. Animals living together rely on both for survival. Challenge students to list ways they cooperate and compete with one another.

There are many symbiotic relationships underwater. Animals help one another!



CLASSROOM ACTIVITY STATION B2 (Continued)

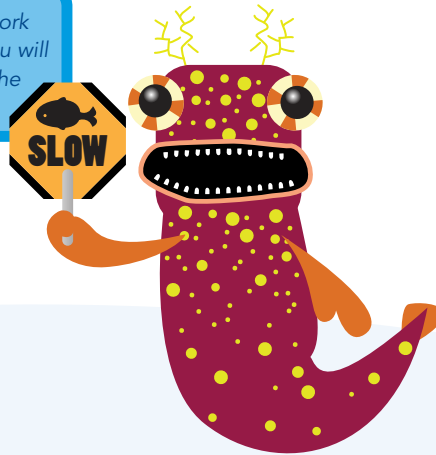
PINNIPED TRIVIA

Extension Ideas

- » Challenge students to find facts about pinnipeds, create their own questions, and add them to the deck.
- » Ask students to choose their favorite trivia fact, illustrate and write about it in their journal.
- » Have students choose a few vocabulary words from the trivia cards and incorporate them into a sentence or story.
- » Challenge each student to come up with a story problem about pinnipeds that can be collected and made into a class worksheet.
- » Discuss with students cooperation and competition. How do they use cooperation in their lives? In what way are they competitive? Discuss how cooperation and competition affects their lives at school, at home, at extra curricular activities.

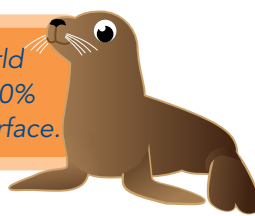
Notes

If you swim fast or work hard in the water, you will tire. Relax and breathe slowly.



CLASSROOM ACTIVITY STATION B3 INSULATION SENSATION

We have one world
ocean covering 70%
of our planet's surface.



Overview

Students will have an opportunity to test different forms of insulation and think about how or if they might be effective in the cold ocean for pinnipeds and other marine animals. Participation in this activity will provide students with the chance to become familiar with the *scientific method of inquiry, logic, and analytic thought*.

Materials: Bowl(s), ice, aluminum foil, fleece or felt (available at fabric stores), foam rubber (select a thin sheet, available at fabric stores), faux fur (available at fabric stores), stop watch or watches with a second hand

Talking Points

- ✦ Pinnipeds tend to live in cool or cold water.
- ✦ Pinnipeds have to insulate themselves in order to maintain their internal body temperature and store energy to hunt for food and play.
- ✦ Pinnipeds have two forms of insulation built into their bodies: fur and blubber.
- ✦ After completing the activity, discuss what kinds of variables might have impacted the experiment.

Variables may include:

- ✦ Whether every team let the insulation materials sit on the ice for exactly thirty seconds before touching.
- ✦ Whether students put equal pressure when they touched the insulation material. If some students pushed harder than others then the cold might have translated through the material more than if they had a lighter touch.
- ✦ Water conducts heat away from our bodies faster than air does. If the material got wet, this might have an effect on the insulating capability of the materials, therefore the cold may seep through more quickly.

Lesson Procedure

1. Set up a workstation with materials list.
2. Show students the materials (aluminum, fleece or felt, foam rubber, and faux fur) and ask them to hypothesize which they think would be most and least effective to insulate. Why? As a class, you can make a diagram and graph student answers.
3. Ask students to work individually, or in buddy teams to test the different materials by laying them over the bowl of ice for thirty seconds then feeling the material to see whether it is very cold, or if the insulation worked. What if they combined materials? Would it work better?
4. Have students try it again, letting the various materials sit for a minute and a half. Does it make a difference?
5. As a group, record findings on a class board and discuss. Compare students' hypotheses, procedures and conclusions. Did everyone agree on the best and worst insulators? If not, why?

CLASSROOM ACTIVITY STATION B3 (Continued)

INSULATION SENSATION

Extension Ideas

- » See if students can relate these ideas to what they know about how other animals stay warm both on land and underwater. Have students get in touch with their inner scientist and think of five questions in relation to animals and how they stay warm or cool off. After they have their five questions, have them find the answers during self-study or as homework.
- » Ask students to talk about what they would need to keep their own bodies warm in the ocean. You can take this opportunity to explain how water, especially when lower in temperature than the human body at 98.6°F, conducts heat away from the body four times faster than air. Divers use wetsuits, sometimes with hoods and gloves, to keep warm. When scuba divers are in really cold water, they use dry suits to stay warm. Dry suits put a layer of air between the suit and the skin, not water, so the scuba divers stay dry. For more information on this, see the scuba diver section of the manual!
- » Talk with students about seasons and weather cycles in your area. How do you change clothes depending on the weather and other environmental conditions? Look at the world map and choose a location. Discuss with students what they think about the environmental conditions based on what they learned. Can they hypothesize by location on a world map?

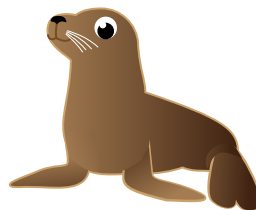
Notes



Human activities sometimes pollute the ocean. How can you help keep it healthy?



CLASSROOM ACTIVITY STATION B4 PINNIPEDS GO THE DISTANCE



Overview

Students will use different units of measuring distance (imperial, metric or both) and apply what they have learned to a series of word problems exploring longer and shorter distances. Participation in this activity will provide students with introductory information about *metric* and *imperial* methods of measuring distance, and practice *literacy skills*, *reading comprehension*, and *logic*.

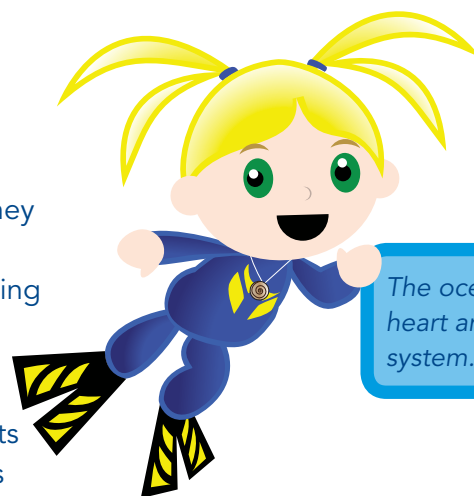
Materials: “Pinnipeds Go the Distance”, yard stick, ruler

Talking Points

- ✦ There are several different ways to measure distance. Imperial measurement is used in the United States and metric is used throughout other parts of the world.
- ✦ Different units of measurement within the imperial system (inches, feet, yards, miles) and metric system (centimeter, meter, kilometer) are used to measure short and long distances.
- ✦ Brainstorm with students about different ways you use the yard stick, ruler and other measurement devices. What is the importance of using the tool strategically, proficiently, and with precision? How do they communicate differently when using tools and doing mathematics compared to reading and writing?
- ✦ Have students look all around the room and at one another. How are measurements used in your classroom? Examples: clothes need to be cut to a certain size, glass in windows, window shades, shoes, even sheets of paper are standard at a certain size. Challenge them to visualize and model with mathematics.

Lesson Procedure

1. Photocopy and hand out “Pinnipeds Go the Distance.”
2. Instruct students as a class, in buddy teams, or individually, to work through the questions.
3. Completed work can be added to the “Who Lives In The Sea” journal.



The ocean is like our planet's heart and rivers our circulation system. We are all connected!



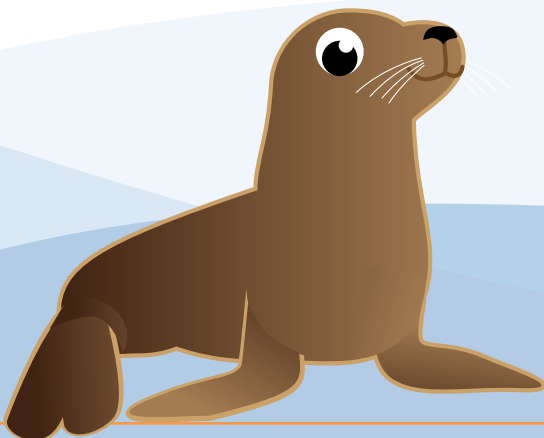
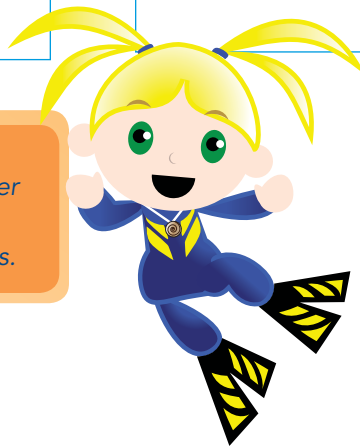
CLASSROOM ACTIVITY STATION B4 (Continued) PINNIPEDS GO THE DISTANCE

Extension Ideas

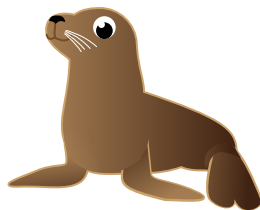
- » Select some problems from the sheet and ask students to use measuring tools to measure out the actual distances described in the problem. This can be done outside or in a long hallway.
- » Provide students with a few minutes to write about what they learned from this lesson and why knowing distance is important. Completed writings can be added to the "Who Lives In The Sea" journal.
- » Ask students to write a story comparing themselves to pinnipeds and their families including measurement words.

Notes

Scuba divers observe animals in nature, never touching them. We respect all living things.



CLASSROOM ACTIVITY STATION B5 PINNIPED STORYTIME



Overview

Students will practice combining vocabulary with sentence fragments to form complete sentences about pinnipeds. Participation in this activity will provide students with a chance to practice *reading comprehension, literacy, creative writing, and reasoning skills*.

Materials: “Pinniped Storytime”

Talking Points

- ✧ Being able to communicate is very important in our lives. Ask students all the different ways they communicate. Speaking, writing, body language, eye contact, hand signals, etc.
- ✧ We can all watch the same movie or read the same book, but each of us may interpret it slightly differently based on individual experiences. The more we learn, the more we grow. The more we practice communicating through writing and speaking, the better communicators we become.
- ✧ After students finish their exercises, encourage them to get together with their buddy teams and read them aloud. How would they edit what they wrote after reading it aloud? Have them edit their work accordingly.

Lesson Procedure

1. Photocopy “Pinniped Story Time” and provide each student with a copy.
2. Working as a class, individually or in buddy teams, students will work to complete the activity. There are no correct combinations, students should form sentences sound in structure and context. Encourage students to try and use each vocabulary word once.
3. Have students take turns reading their combinations aloud to one another and share their creativity and thinking.
4. Completed activities can be added to the “Who Lives In The Sea” journal.



Always observe your environment. Remember to stop, think, breathe slowly, then act.

CLASSROOM ACTIVITY STATION B5 (Continued)

PINNIPED STORYTIME

Extension Ideas

- » Students can make illustrations for one or multiple sentences.
- » Ask students to write the words “pinniped, seal, sea lion, and walrus” on a piece of paper, and time them as they see how many words they can form from the letters in the four original words. Students can also time one another as a game. Have buddy teams cooperate with one another and compete against other buddy teams, instilling play, cooperation and competition.

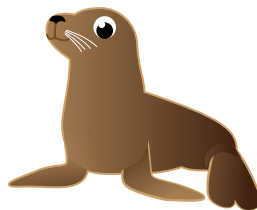
Notes



I like to play with you. We learn in school and practice what we learn when we play!

Playing is more fun when you have a buddy. Where will we explore today?

CLASSROOM ACTIVITY STATION B6 BOOK STALL



Overview

Students will build independent reading strategies and improve literacy by examining supplemental materials. Providing a reading or computer area where students can research and expand on the subject of the unit will also help develop vocabulary and increase language skills.

Materials: Books from the suggested reading list about seals and sea lions.

Lesson Procedure: Character Education PLAY

1. Provide a selection of books about seals and sea lions that can be read aloud or during independent study.
2. Set up a space in your room where students can put up facts that they have learned about pinnipeds. Keep a running list of the new facts students have learned, and place each student's initials next to their facts to support their sense of accomplishment.
3. Once a good list of facts has been compiled, work as a class to incorporate them into a game students can play. Perhaps you can generate a pinniped story, pictiary, or crossword puzzle that can be played as a class, in buddy teams, or independently. Encourage students to share their pinniped game at home.

Character Education: PLAY

"Life is a game, play everyday!"

Fine Art Prints, posters, greeting cards and other products are available to decorate your classroom or school while inspiring your students with real ocean animals and environmental scenes.

On a world map have students locate the Channel Islands off the coast of California. Research which islands sea lion colonies live and have them find the individual islands.

Juvenile sea lions pick up a chain of pelagic salps and play with one another. Channel Islands,



There is pressure underwater. Scuba divers wear masks enclosing their noses so they can equalize.



Book Suggestions

- » Hodgkins, Fran. *Andre the Famous Harbor Seal*. Illus. Yetti Frankel. Camden, Maine: Down East Books, 2003. Print. Ages 4-8.
- » Zoehfeld, Kathleen Widner. *Seal Pup Grows Up*. Illus. Lisa Bonforte. Norwalk, Connecticut: Soundprints. 1994. Print. Ages 4-8.
- » Kalman, Bobbie and Crossingham, John. *Seals and Sea Lions*. New York, New York: Crabtree Publishing Company (November 2005) Ages 9-12
- » Lamm, C. Drew. *Sea Lion Roars*. Illus. Joel Snyder. Norwalk, Connecticut: Soundprints, 1997. Ages 4-8.
- » Lang, Aubrey. *Baby Seal (Nature Babies)*. Photo Wayne Lynch. Markham, Ontario: Fitzhenry and Whiteside, 2004. Ages 4-8.



Closure and Follow Up

- ❖ Once students have had a chance to experience the learning stations, gather them together and ask what new facts have been learned from participating in the activities, and reflect with the class on how much knowledge has been gathered about pinnipeds.
- ❖ Spend a few moments talking about how we must all be concerned for pinniped populations because even though they are protected in many places, in some places they are still hunted for their fur.
- ❖ Ask students if they can think of animals other than pinnipeds that are mammals and live in the ocean. Discuss why marine mammals are important to ocean ecosystems as top predators.
- ❖ Because pinnipeds and humans are mammals, see if you can come up with a VENN diagram that ultimately identifies the physical traits that make humans and pinnipeds distinct and also similar.

Plan for Independent Practice

- » Students can brainstorm together and write down other kinds of animals that live in family groups. What similarities and differences do the animal groups have?
- » Ask students to write a reflection about what they learned with respect to pinnipeds. What did they like or dislike about the lesson, what skills did they practice, why are the things they learned important, etc. Completed writings can be added to the "Who Lives In The Sea" journal.
- » Teacher can select stories from the suggested reading list to read as a class or for self-study.
- » Students can work on identifying other kinds of animals or mammals that live both on land and in the ocean environment. How does pollution in the ocean affect the animals?
- » PLAY within juvenile animals is a very important part of learning. Have students examine play in class, during lunch or during after school activities. What role does being a good sport or player have in their character development? Can they think of rules to make play more enjoyable? In nature, animals play to learn both cooperation and competition. Can your students think of ways they cooperate and compete with one another or as a class. Have them write a journal entry or story about cooperation and competition in PLAY!

DVD TRANSCRIPT

PLAYTIME WITH SEA LIONS



What kind of noise does a sea lion make?

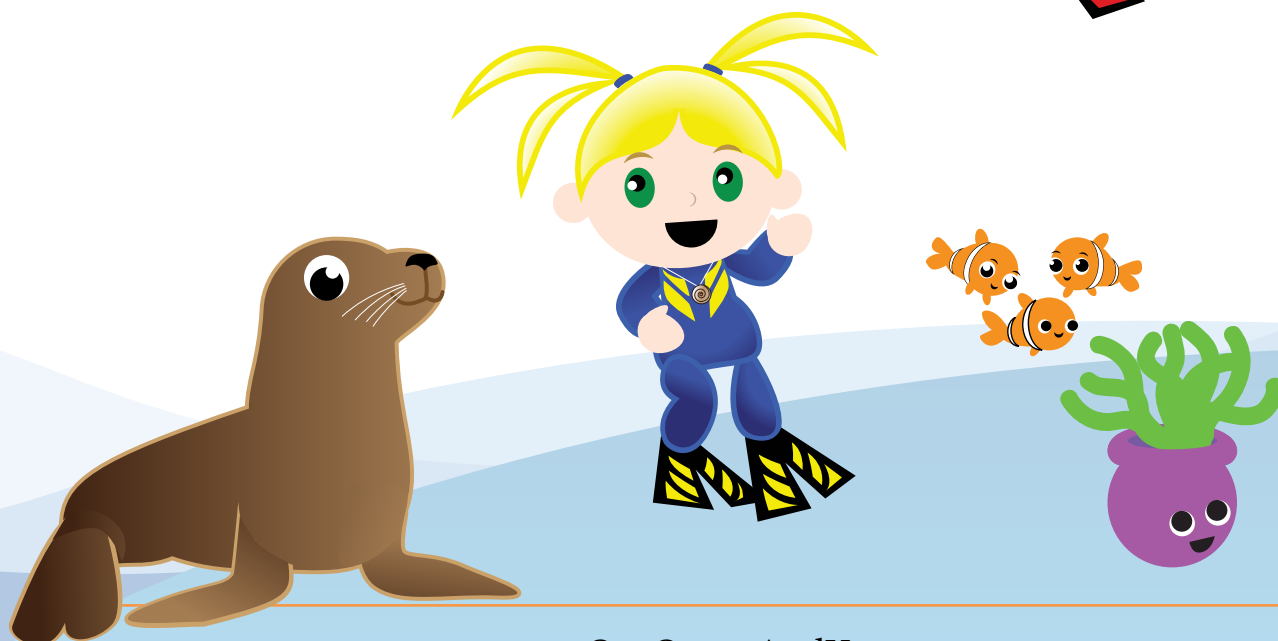
Ar, ar, ar...that's right.

They are marine mammals which means mammals that live in the sea. They have flippers to help them swim and blubber to keep them warm in the cold waters where they live.

Juveniles like to play just like you, these sea lions are only two! They do twists...and turns...having fun in the sun. They charge one another and know how to have fun...they swim really fast and they can dive really deep...but they can't stay underwater forever like a fish, they must breathe air.

Harbor Seals are similar to sea lions and are known as the dogs of the sea. They can swim really fast and also need to breathe...but check out their flippers and how they swim.

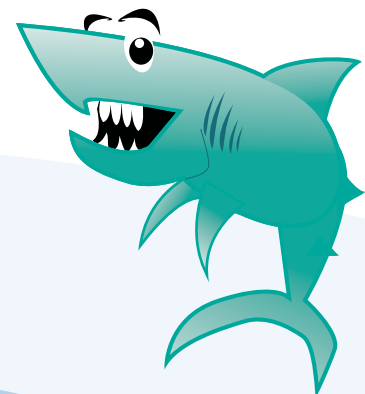
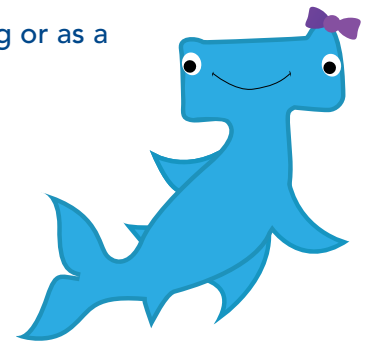
Swimming with Seals and Sea lions is always a surprising experience...they are wonderful animals to frolic with in the sea!

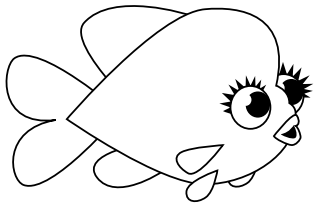


Go Blue! Ocean Annie's Tips to Help Our Environment

How many times a day do you pick up a piece of paper either to read or use for something? Most paper comes from trees. Trees are important in our lives. People waste a lot of paper. Although some of the waste paper will get recycled, there are many ways we can reduce the amount of paper we use. Here are some inventive ways that you can use and re-use paper to help our environment.

1. Save fliers and other notices and use the blank side as a scratch pad for phone messages, grocery lists, and artwork.
2. Take unwanted copies or print-outs, load them into your printer, and print on the blank side.
3. Save newspaper to use for kindling in the fireplace, or scrunched up as packing material for shipping.
4. Cut the front of a greeting card off to re-use as decoration on a gift bag or as a gift tag.
5. Use permanent or re-usable coffee filters.
6. Re-use gift bags and boxes as many times as possible.
7. Use rags, sponges, and dish cloths instead of paper towels.
8. Get removed from mailing lists.
9. Before printing emails, consider the paper you are about to use.
10. Creatively think of ways to reduce and reuse the amount of paper used by your class.
11. Set up a recycling program in your classroom, school, community, and home.
12. Get involved in tree planting in your community.





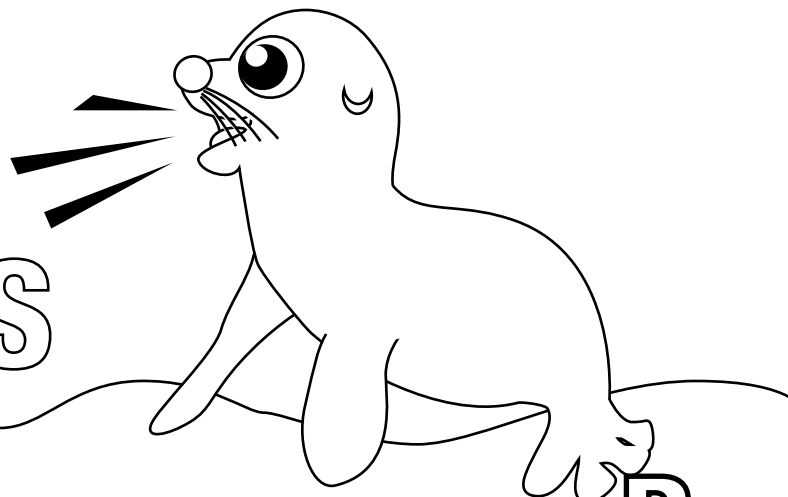
Playtime

with

Sea Lions



ACTIVITIES



Name _____ Date _____





Chest

Treasure

of Words

blubber

scientist

ecologist

sea lion

flippers

sea lion pup

mammal

seal

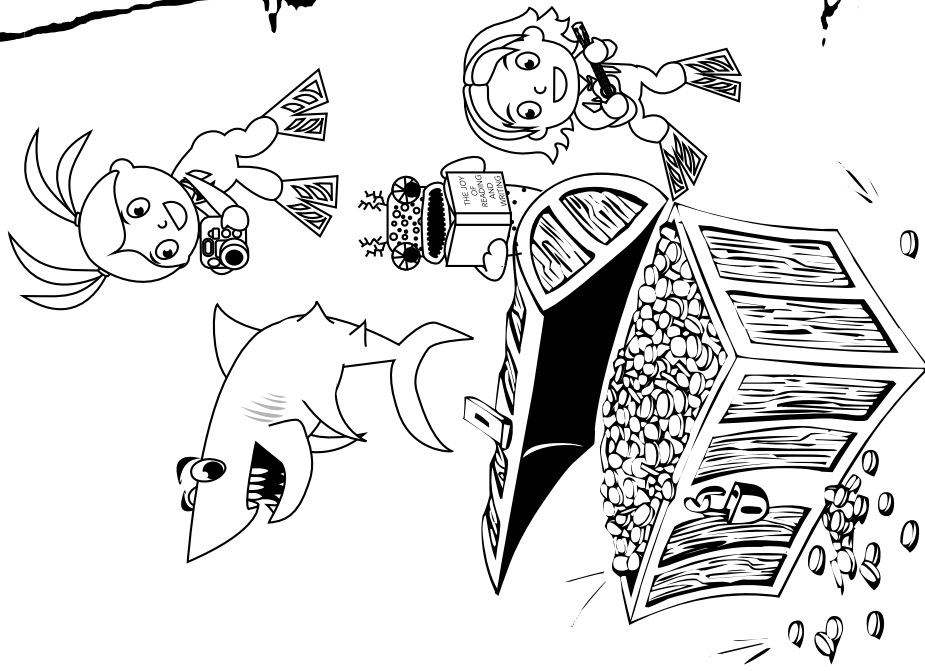
pinniped

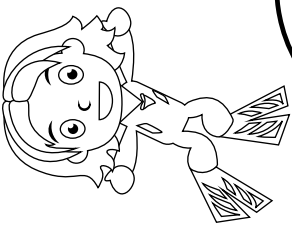
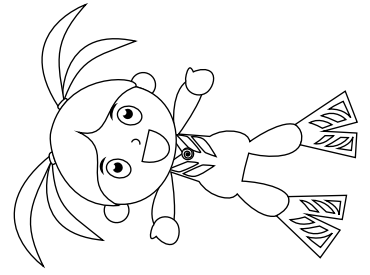
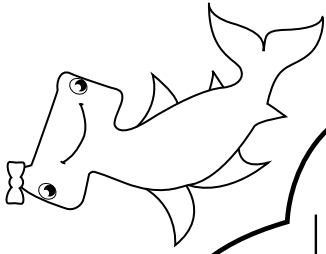
seal pup

play

whiskers

pod





A large, irregularly shaped writing area with a scalloped border. The interior is filled with vertical lines, providing a guide for letter height and placement. The shape is roughly rectangular with rounded corners and a central indentation.

Name _____ Date _____

Pinniped Trivia Cards

<p>Pinnipeds move equally well on land and in the water.</p>	<p>Pinnipeds are vegetarian (meaning they eat only plants).</p>
<p>Most pinnipeds like to live together in groups.</p>	<p>Pinnipeds are mammals.</p>
<p>Like fish, pinnipeds have fins.</p>	<p>Female pinnipeds are called sows.</p>
<p>Pinnipeds have two ways of staying warm.</p>	<p>Pinnipeds can only see well under water.</p>
<p>A male pinniped is called a bull.</p>	<p>The word pinniped means "wing-foot."</p>
<p>Pinnipeds must breathe air.</p>	<p>Pinnipeds can dive for two hours at a time without breathing.</p>

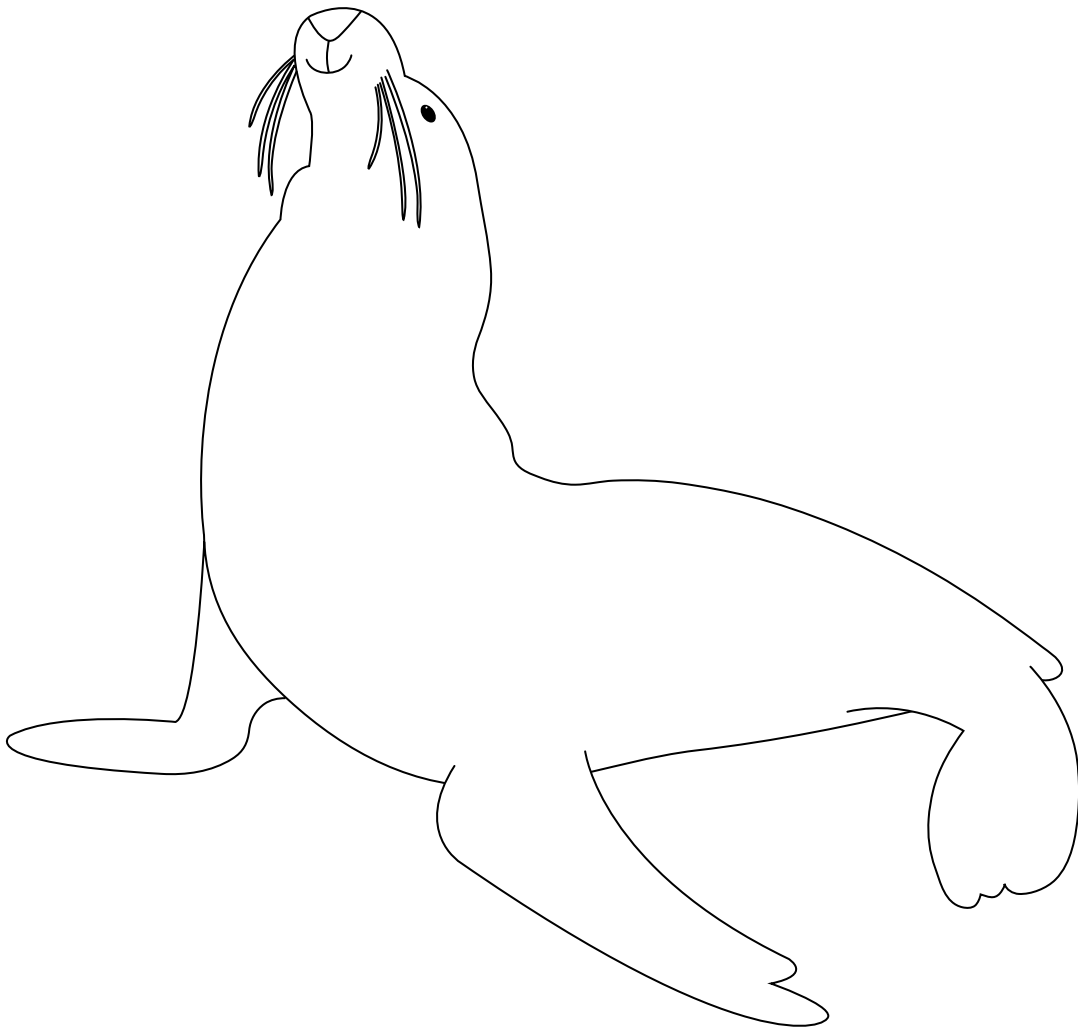
Pinniped Trivia Cards

<p>FALSE</p> <p>Pinnipeds are carnivores (meaning they eat meat) and eat mainly fish.</p>	<p>FALSE</p> <p>Pinnipeds tend to be much more awkward on land than they are in the water.</p>
<p>TRUE</p> <p>As with other mammals, pinnipeds feed their young with milk from their mother, have hair, and live babies instead of laying eggs.</p>	<p>TRUE</p> <p>Pinniped groups are called colonies.</p>
<p>FALSE</p> <p>Female pinnipeds are called cows.</p>	<p>FALSE</p> <p>Pinniped appendages are called flippers.</p>
<p>FALSE</p> <p>Pinnipeds see equally well above and below the water.</p>	<p>TRUE</p> <p>Pinnipeds have fur and blubber to help insulate them.</p>
<p>TRUE</p>	<p>TRUE</p> <p>This is also the name of a male cow.</p>
<p>TRUE</p> <p>Most pinnipeds can make two hour long dives by conserving oxygen in their blood and slowing down their heart rate.</p>	<p>TRUE</p> <p>Unlike fish with gills, pinnipeds have lungs and need air to breathe.</p>

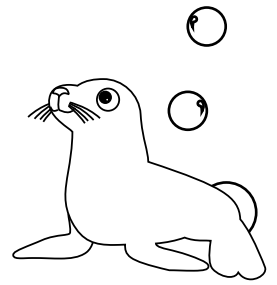
Sea Lion

Name _____ Date _____

Directions: Write or draw how sea lions stay warm. Draw yourself into the picture showing how you stay warm.



Pinnipeds Go The Distance



Name _____ Date _____

Directions: Carefully read each problem describing pinnipeds swimming in the ocean. Circle the answer which best completes the question.

1. One sea lion traveled thirty yards across the harbor to find some tasty fish. Her friend traveled one hundred yards. Which sea lion traveled the farthest?

- a) 30 yards b) 100 yards

2. One seal dove twenty-three yards down to catch a fish. His friend dove twenty-three feet. Which seal dove the deepest in the ocean? *Remember, there are three feet in a yard.

- a) 23 yards b) 23 feet

3. On a sunny day, one seal drifted eighty yards while sunbathing in the surf. His friend drifted eighty feet. Which seal drifted the furthest? *Remember, there are three feet in a yard.

- a) 80 feet b) 80 yards

4. Two seals swam twenty-five yards to visit friends on a neighboring island. Three more seals swam twenty-five and a half yards to visit their friends. Which group of seals swam the furthest?

- a) 25 yards b) $25\frac{1}{2}$ yards

5. One sea lion traveled forty feet up the coast and her friend traveled forty yards. Which sea lion traveled farther? *Remember, there are three feet in a yard.

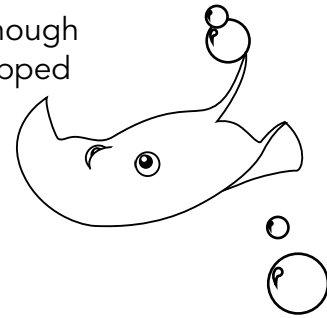
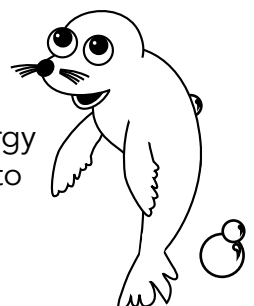
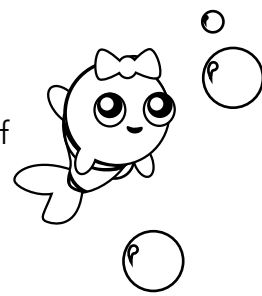
- a) 40 feet b) 40 yards

6. Six seals struck out on a journey together, but not all of them had enough energy to travel equal distances. Order the distances the seals traveled from longest to shortest.

- _____ 15 yards _____ 20 yards _____ 50 feet
_____ 45 yards _____ 100 feet _____ 50 yards

7. Six seals were hopping waves in the surf together, but not all of them had enough energy to hop an equal number of waves. Order the distances each seal hopped from longest to shortest. *Remember that there are three feet in a yard.

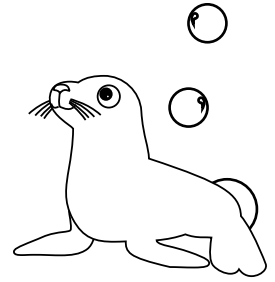
- _____ 400 feet _____ 40 yards _____ 250 feet
_____ 200 yards _____ 60 feet _____ 660 yards



Pinnipeds Go The Distance

Name _____ Date _____

Directions: Carefully read each problem describing pinnipeds swimming in the ocean. Circle the answer which best completes the question.



1. One sea lion traveled one hundred yards across the harbor to find some tasty fish. Her friend traveled three hundred yards. Which sea lion traveled the farthest?

- a) 100 yards b) 300 yards

2. One seal dove twenty-three and a quarter yards down to catch a fish. His friend dove twenty-three and a half yards. Which seal dove the deepest in the ocean?

- a) $23\frac{1}{4}$ yards b) $23\frac{1}{2}$ yards

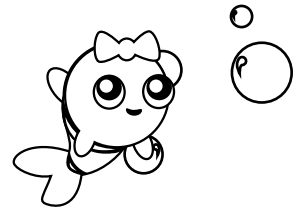


3. On a sunny day, one seal drifted eighty yards while sunbathing in the surf. His friend drifted eighty feet. Which seal drifted the furthest? *Remember, there are three feet in a yard.

- a) 80 feet b) 80 yards

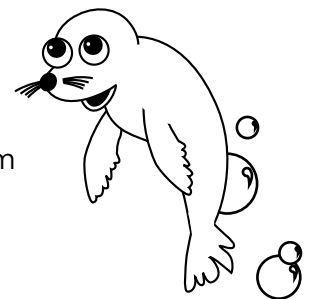
4. Two seals swam twenty-five yards to visit friends on a neighboring island. Three more seals swam twenty-five and a half yards to visit their friends. Which group of seals swam the furthest?

- a) 25 yards b) $25\frac{1}{2}$ yards



5. One sea lion traveled forty feet up the coast and her friend traveled forty yards. Which sea lion traveled farther? *Remember, there are three feet in a yard.

- a) 40 feet b) 40 yards

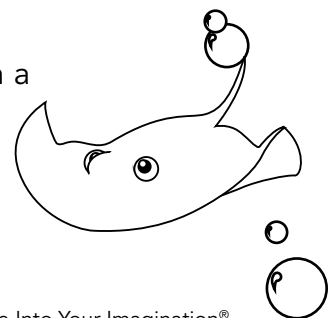


6. Six seals struck out on a journey together, but not all of them had enough energy to travel equal distances. Order the distances the seals traveled from longest to shortest.

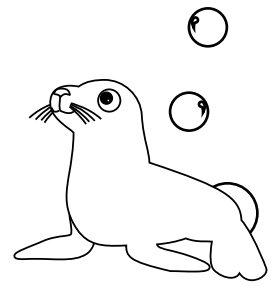
- | | | |
|-------------------|-------------------|-------------------|
| _____ 1,500 yards | _____ 1,000 yards | _____ 500 feet |
| _____ 1,400 yards | _____ 1,000 feet | _____ 2,000 yards |

7. Six seals were hopping waves in the surf together, but not all of them had enough energy to hop an equal number of waves. Order the distances each seal hopped from longest to shortest. *Remember that there are three feet in a yard.

- | | | |
|-----------------|-----------------|-----------------|
| _____ 400 feet | _____ 400 yards | _____ 200 feet |
| _____ 200 yards | _____ 660 feet | _____ 660 yards |



Pinnipeds Go The Distance

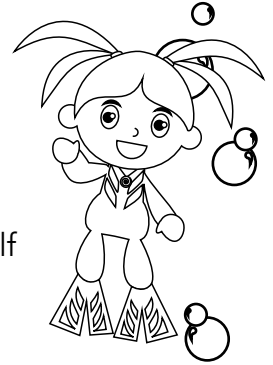


Name _____ Date _____

Directions: Carefully read each problem describing pinnipeds swimming in the ocean. Circle the answer which best completes the question.

1. One sea lion traveled ten meters across the harbor to find some tasty fish. Her friend traveled ten kilometers. Which sea lion traveled the farthest?
*Remember there are one thousand meters in a kilometer.

a) 10 meters b) 10 kilometers



2. One seal dove five meters down to catch a fish. His friend dove five and a half meters. Which seal dove deepest?

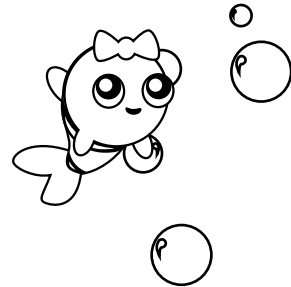
a) 5 meters b) 5½ meters

3. On a sunny day, one seal drifted eighty meters while sunbathing in the surf. His friend drifted eighty kilometers. Which seal drifted the furthest? *Remember, there are one thousand meters in a kilometer.

a) 80 meters b) 80 kilometers

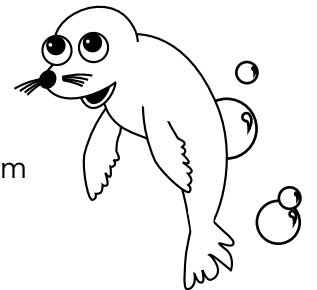
4. Two seals swam twenty-five meters to visit friends on a neighboring island. Three more seals swam twenty-five and a half kilometers to visit their friends. Which group of seals stayed the closest?

a) 25 meters b) 25½ kilometers



5. One sea lion traveled forty-one and a half meters up the coast and her friend traveled forty-one meters. Which sea lion traveled farther?

a) 41½ meters b) 41 meters

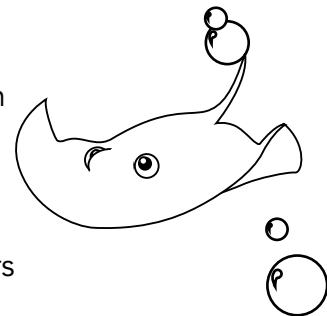


6. Six seals struck out on a journey together, but not all of them had enough energy to travel equal distances. Order the distances the seals traveled from longest to shortest.

_____ 150 kilometers _____ 100 kilometers _____ 50 meters
_____ 140 kilometers _____ 100 meters _____ 200 kilometers

7. Six seals were hopping waves in the surf together, but not all of them had enough energy to hop an equal number of waves. Order the distances each seal hopped from longest to shortest.

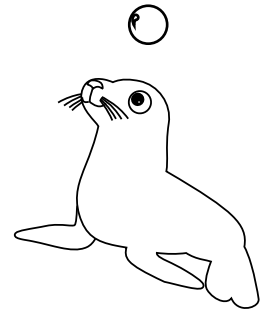
_____ 400 meters _____ 400 kilometers _____ 200 meters
_____ 200 kilometers _____ 660 meters _____ 660 kilometers



Pinnipeds Go The Distance

Name _____ Date _____

Directions: Carefully read each problem describing pinnipeds swimming in the ocean. Circle the answer which best completes the question.



1. One sea lion traveled one hundred meters across the harbor to find some tasty fish. Her friend travelled one hundred kilometers. Which sea lion travelled the farthest? *Remember there are one thousand meters in a kilometer.

a) 100 meters b) 100 kilometers

2. One seal dove five and a quarter meters down to catch a fish. His friend dove five and a half meters. Which seal dove deepest?

a) $5\frac{1}{4}$ meters b) $5\frac{1}{2}$ meters

3. On a sunny day, one seal drifted eighty meters while sunbathing in the surf. His friend drifted eighty kilometers. Which seal drifted the furthest? *Remember, there are one thousand meters in a kilometer.

a) 80 meters b) 80 kilometers

4. Two seals swam twenty-five meters to visit friends on a neighboring island. Three more seals swam twenty-five and a half kilometers to visit their friends. Which group of seals stayed the closest?

a) 25 meters b) $25\frac{1}{2}$ kilometers

5. One sea lion travelled forty-one and a half meters up the coast and her friend travelled forty-one meters. Which sea lion travelled farther?

a) $41\frac{1}{2}$ meters b) 41 meters

6. Six seals struck out on a journey together, but not all of them had enough energy to travel equal distances. Order the distances the seals traveled from longest to shortest.

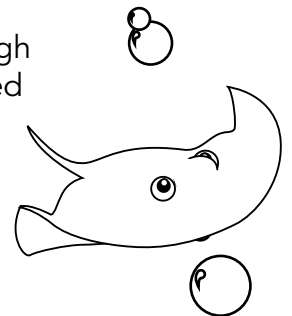
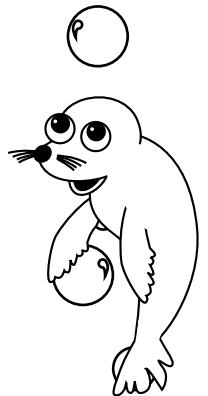
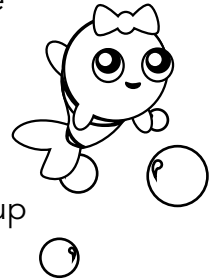
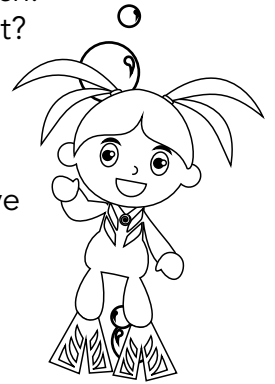
_____ 1,500 kilometers _____ 1,000 kilometers 50 meters _____ 500 meters

_____ 1,400 kilometers 30 meters _____ 1,000 meters _____ 2,000 kilometers

7. Six seals were hopping waves in the surf together, but not all of them had enough energy to hop an equal number of waves. Order the distances each seal hopped from longest to shortest.

_____ 400 meters _____ 400 kilometers _____ 200 meters

_____ 200 kilometers _____ 660 meters _____ 660 kilometers



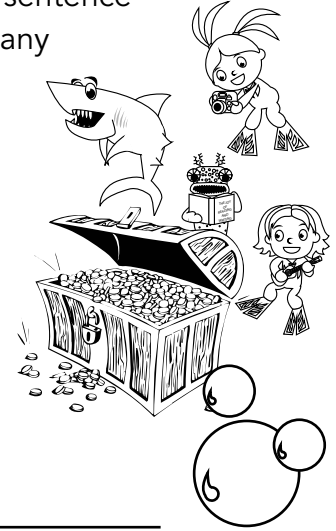
Pinniped Storytime

Name _____ Date _____

Directions: On the lines below are sentence fragments. Write a complete sentence incorporating the fragment, a word from the treasure chest word box, and any additional words needed to make a complete sentence.

TREASURE CHEST

mouth	bonded	frolicked	pinniped
playful	insulates	noisy	swimming
	frisky	pup	



1. the sea lion's blubber

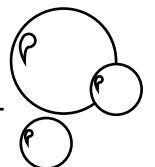
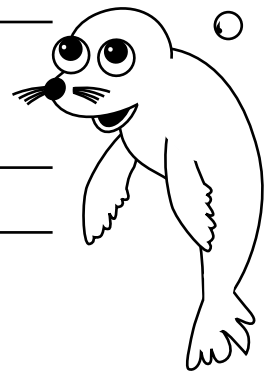
2. strong flippers

3. stiff whiskers

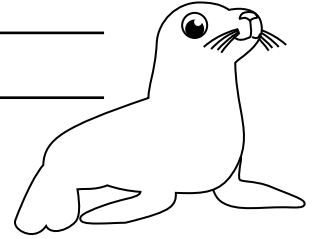
4. earless seals

5. The sea lion family

6. One sunny day on the beach

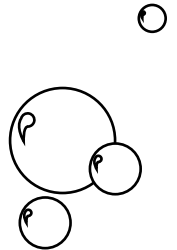


7. very young

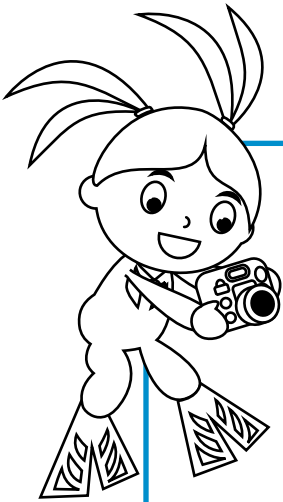


8. rolling waves

9. plunging into the cool water



10. barking and grunting



OCEAN ANNIE SUPER SCUBA CHALLENGE!

See if you can combine any or all of the sentences above to construct a story.

Pinniped Storytime

Name _____ Date _____

Directions: Create a poem describing sea lions and how they play. Use each capital letter to begin your sentence.



S _____

E _____

A _____

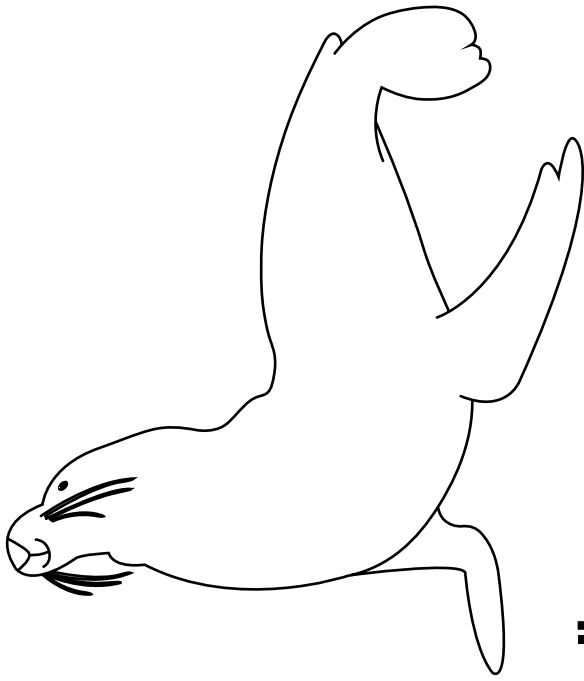
L _____

I _____

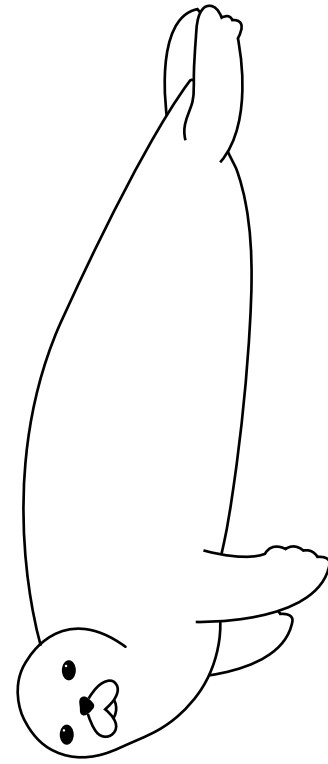
O _____

N _____

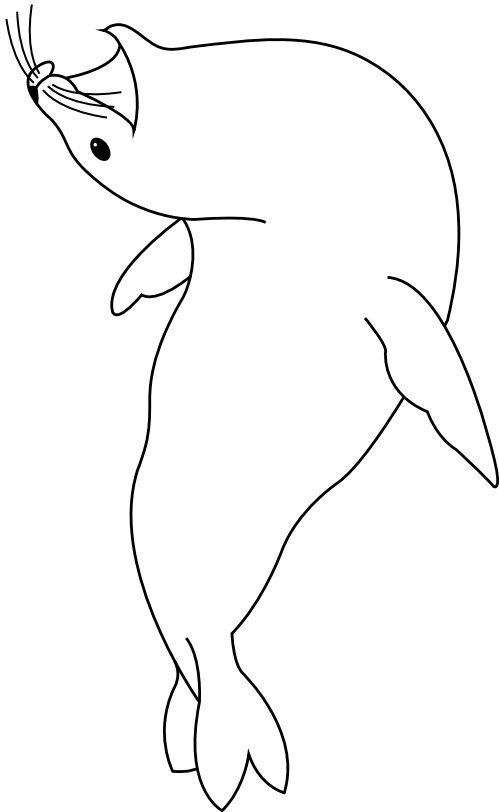




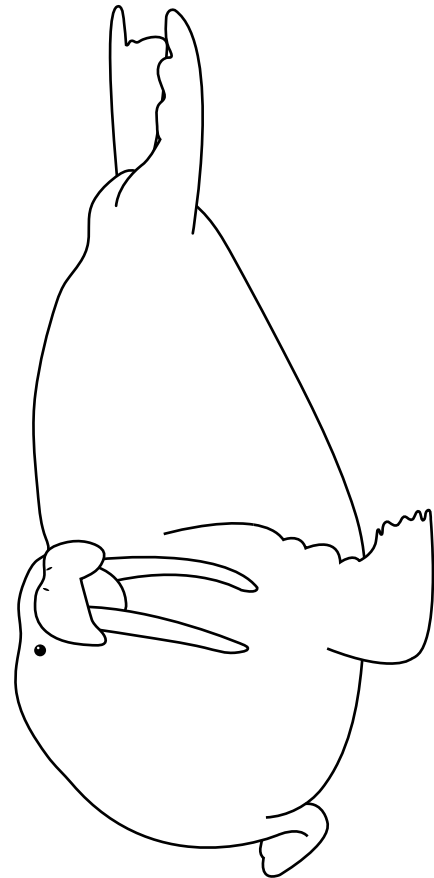
sea lion



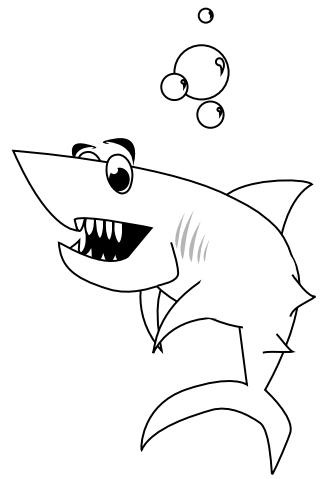
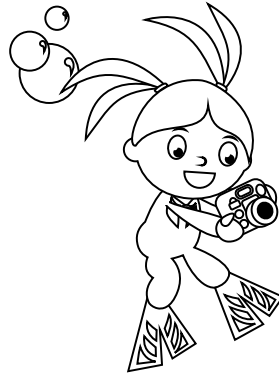
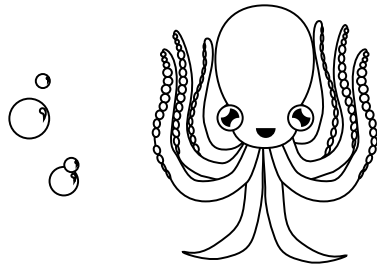
harbor seal



leopard seal

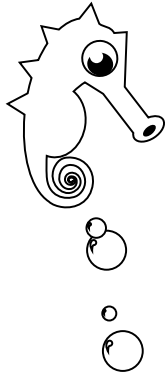


walrus

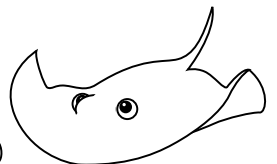
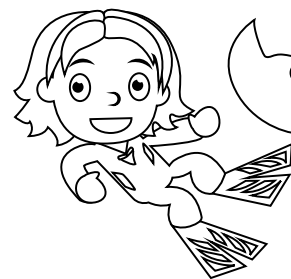
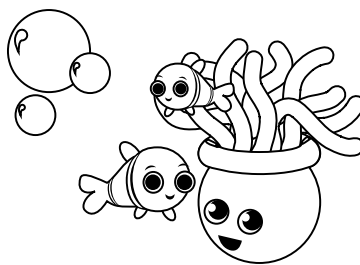
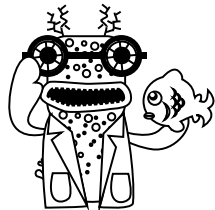
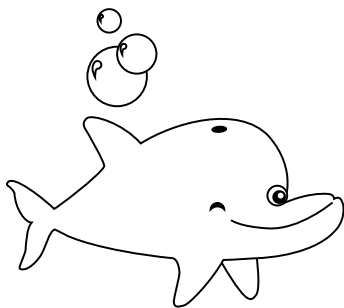
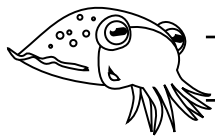
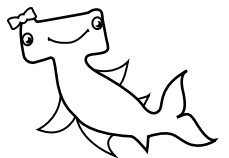
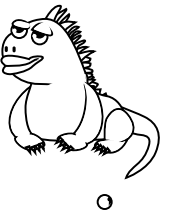


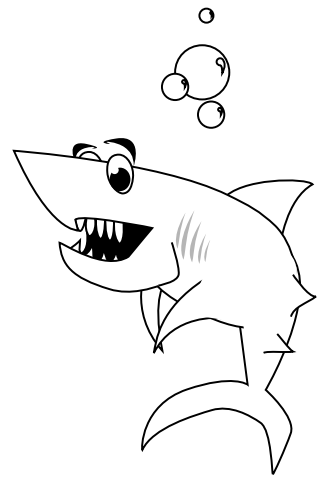
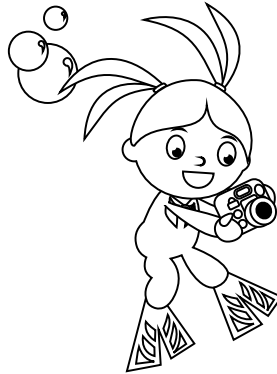
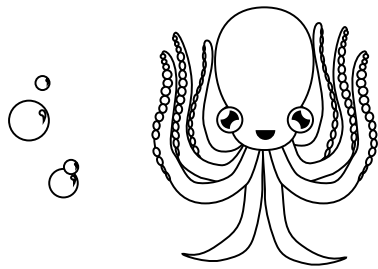
Name _____

Date _____



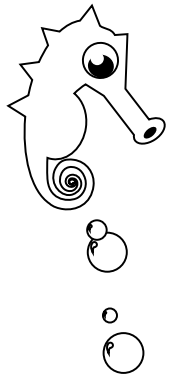
Today I learned...



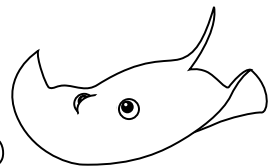
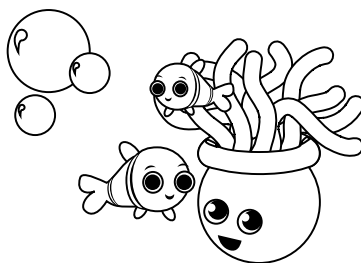
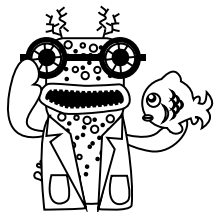
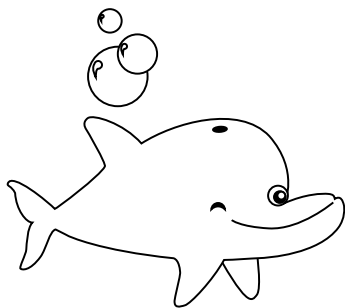
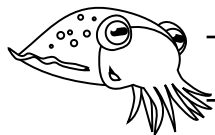
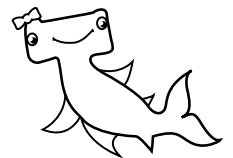
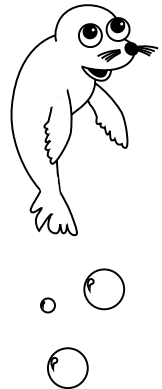
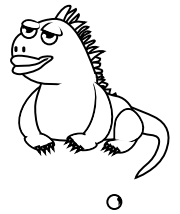


Name _____

Date _____



Today I learned...



Educator Guide to Who Lives in the Sea

B4 - PINNIPEDS GO THE DISTANCE (IMPERIAL) - FORM A

1. 100 yards
2. 23 yards
3. 80 yards
4. $25\frac{1}{2}$ yards
5. 40 yards
6. 15 yards (3) 20 yards (4) 50ft (1)
45 yards (5) 100ft (2) 50 yards (6)
7. 400ft (3) 40 yards (4) 250ft (2)
200 yards (5) 60 ft (1) 660 yards (6)

B4 - PINNIPEDS GO THE DISTANCE (IMPERIAL) - FORM B

1. 300 yards
2. $23\frac{1}{2}$ feet
3. 80 yards
4. $25\frac{1}{2}$ yards
5. 40yards
6. 1,500 yards (2) 1,000 yards 500ft (4) 500ft (6)
1,400 yards 300ft (3) 1,000ft (5) 2,000 yards (1)
7. 400ft (2) 400 yards (5) 200ft (1)
200 yards (4) 660 ft (3) 660 yards (6)

B4 - PINNIPEDS GO THE DISTANCE (METRIC) - FORM A

1. 10 Kilometers
2. $5\frac{1}{2}$ meters
3. 80 kilometers
4. $25\frac{1}{2}$ kilometers
5. $41\frac{1}{2}$ meters
6. 150 kilometers (5) 100 kilometers (3) 50 meters (1)
140 kilometers (4) 100 meters (2) 200 kilometers (6)
7. 400 meters (2) 400 kilometers (5) 200 meters (1)
200 kilometers (4) 660 meters (3) 660 kilometers (5)

B4 - PINNIPEDS GO THE DISTANCE (METRIC) - FORM B

1. 100 kilometers
2. 5½ meters
3. 80 kilometers
4. 25 meters
5. 41.5 meters
6. 1,500 kilometers (2) 1,000 kilometers 50 meters (4) 500meters (6)
1,400 kilometers 30 meters (3) 1,000 meters (5) 2,000 kilometers (1)
7. 400 meters (5) 400 kilometers (2) 200 meters (6)
200 kilometers (3) 660 meters (4) 660 kilometers (1)

C2 - NUDIBRANCHS OR NUDIES?

Nudibranchs are multicolored and come in all the **colores** of the rainbow. They use special **teeths** called radula to scrape algae off of rocks as they go along. Some nudibranchs are smooth and silky looking, while others have **rippuls** and frills that decorate their **bodyds**. Most **nudibrancs** like to live in the sunlit waters of coral reefs where there is plenty of food and places to hide. Only one kind of nudibranch called the Spanish Dancer swims freely in the water, while the rest of them crawl along the **rockes** and reef. Nudibranchs are slow movers and like to slowly creep along while the rest of the reef **speedes** by. The **egges** of the nudibranch are truly amazing, and look like a rose. The tiny eggs of the nudibranch are connected in a way that **lookes** like ribbons and they lay them in a spiral that looks just like a flower! Nudibranchs are amazing **creaturs**.

1. Colores = colors
2. Teeths = teeth
3. Rippuls = ripples
4. Bodyds = bodies
5. Nudibrancs = Nudibranchs
6. Rockes = rocks
7. Speedes = speeds
8. Egges = eggs
9. Lookes = looks
10. Creaturs = creatures