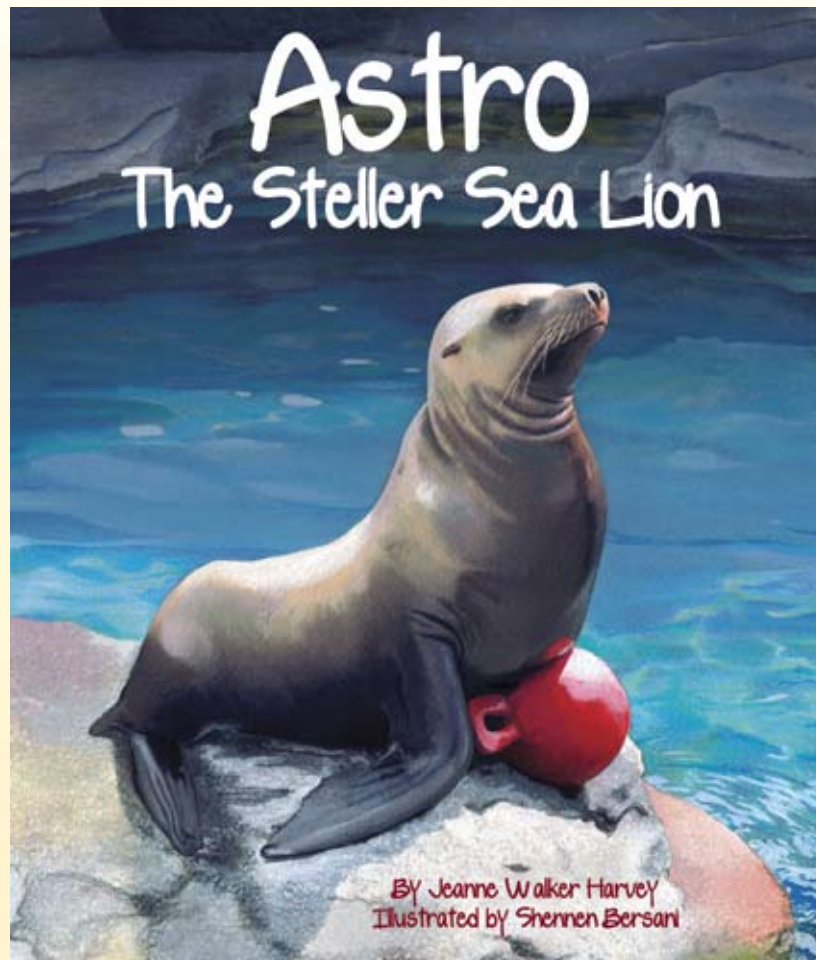




**Sylvan Dell Publishing**  
*Science and Math Through Literature*

# Teaching Activity Guide



This guide is designed for:

- teachers in the classroom
- homeschooling parents
- parents/grandparents who want to encourage their children to learn (some of the group activities can even be used for a book-themed birthday party!)
- librarians and bookstore employees for story times
- after-school program leaders
- zoo, aquarium, nature center, park & museum educators

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# How to Use This Activity Guide

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There are a wide variety of activities that teach or supplement all curricular areas. The activities are easily adapted up or down depending on the age and abilities of the children involved. And, it is easy to pick and choose what is appropriate for your setting and the time involved. Most activities can be done with an individual child or a group of children.

**Glossary/Vocabulary words:** Words may be written on index cards, a poster board, or on a chalkboard for a “word wall.” If writing on poster board or chalkboard, you might want to sort words into nouns, verbs, etc. right away to save a step later if using for Silly Sentences. Leaving the words posted (even on a refrigerator at home) allows the children to see and think about them frequently. The glossary has some high-level words. Feel free to use only those words as fit your situation.

**Silly Sentence Structure Activity:** Game develops both an understanding of sentence structure and the science subject. Use words from the “word wall” to fill in the blanks. After completing silly sentences for fun, have children try to fill in the proper words by looking for the information in the book.

**Sequence Sentence Strips:** Cut into sentence strips, laminate if desired, and place in a “center.” Have children put the events in order. Children may work alone or in small groups. Cards are in order but should be mixed up when cut apart.



This photo comes from the Encyclopedia of Life:

<http://www.eol.org/pages/328617>

Look at the difference in sizes of the pup, female, and male  
Notice the “hairy mane” on the male to see where the sea “lion”  
came from!

# What Do Children Already Know?

Young children are naturally inquisitive and are sponges for information. The whole purpose of this activity is to help children verify the information they know (or think they know) and to get them thinking “beyond the box” about a particular subject.

Before reading the book, ask the children what they know about the subject. A list of suggested questions is below. The children should write down their “answers” (or adults for them if the children are not yet writing) on the chart found in Appendix A, index cards, or post-it notes.

Their answers should be placed on a “before reading” panel. If doing this as a group, you could use a bulletin board or even a blackboard. If doing this with individual children, you can use a plain manila folder with the front cover the “before reading” panel. Either way, you will need two more panels or sections—one called “correct answer” and the other “look for correct answer.”

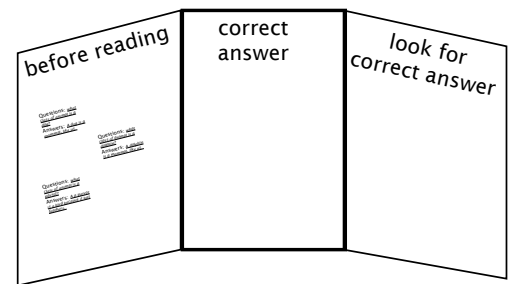
Do the children have any more questions about the subject? If so, write them down to see if they are answered in the book.

After reading the book, go back to the questions and answers and determine whether the children’s answers were correct or not.

If the answer was correct, move that card to the “Correct Answer” panel. If the answer was incorrect, go back to the book to find the correct information.

If the child/children have more questions that were not answered, they should look them up.

When an answer has been found and corrected, the card can be moved to the “correct answer” panel.



## Pre-Reading Questions

What is a sea lion?

What is an animal hospital/rehabilitation center?

Why do animals go to an animal hospital?

How do some wild animals get to an animal hospital?

What might happen to wild animals that don't go to an animal hospital?

After being treated at an animal hospital, why should the wild animals be released back into their native habitat?

Why do some wild animals go to zoos or aquariums instead?

Why do we put satellite tags on some animals?

What are some things we can learn by following satellite-tagged animals?

Where do Steller sea lions live in the wild?

What are some reasons that Steller sea lions are threatened or endangered?

What are people doing to help Steller sea lions?

What's the difference between a sea lion and a seal?

# Thinking It Through & Writing Prompts

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What does stellar mean and what is Steller?

Write a song or poem about Astro.

Can you think of another title for the book?

Write a different ending to the story.

Does this story remind you of any other story that you've read? If so, which one, and how are they alike?

Describe the location of where this story took place. Can you find such a location on a map or globe?

How would you describe Astro?

Have you ever seen any Steller sea lions? If so, describe where you saw them and what they were doing.

What would happen if a character did something different or if something different happened to the character? Would it/could it change the story?

## Comprehension Questions

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What happened to Astro and who found him?

Who took care of Astro and how?

Why did they want Astro to go back to the ocean when he could?

What did Astro do when they left him on the beach?

Why were the people worried about Astro?

Where did they take him next?

What did he do when they tried to get him out of the crate? Why do you think he did that?

What did he do at the school?

Why were the people from The Marine Mammal Center worried about Astro?

Where did he go next?

What were they researching with Astro?

What is the "bridge and target" training they did with Astro and why?

How did he get to Connecticut?

Where is Astro now?

Why didn't Astro go back to the ocean where he belonged?

# Vocabulary Game

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This activity is a very general idea and is designed to get children thinking of vocabulary words that will then be used as the beginning vocabulary list for a science lesson.

Select an illustration from the book and give the children a specific length of time (five minutes?) to write down all the words they can think of about the particular subject. If you do not have classroom sets of the book, it is helpful to project an illustration on a whiteboard. Check Web site ([www.SylvanDellPublishing.com](http://www.SylvanDellPublishing.com)) for book “previews” that may be used.

The children’s word list should include anything and everything that comes to mind, including nouns, verbs, and adjectives. At the end of the time, have each child take turns reading a word from his/her list. If anyone else has the word, the reader does nothing. However, if the reader is the only one with the word, he/she should circle it. While reading the list, one person should write the word on a flashcard or large index card and post it on a bulletin board or wall. At the end, the child with the most words circled “wins.” And you have a start to your science vocabulary list. Note: if a child uses an incorrect word, this is a good time to explain the proper word or the proper usage.

## Using the Words

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The following activities may be done all at once or over a period of several days.

- Continue to add words to the vocabulary list as children think of them.
- Sort vocabulary words into nouns, verbs, adjectives, etc. and write what they are on the backs of the cards. When the cards are turned over, all you will see is “noun,” etc. (these can then be used to create silly sentences, on the next page).
- Now sort the vocabulary words into more specific categories. For example, nouns can be divided into plants, animals, animal classifications, body parts, rocks, minerals, etc. They can be divided into living/non-living, or into habitat-related words.
- Have children create sentences using their vocabulary words. Each sentence could be written on a separate slip of paper.
- Have children (individually or in small groups) sort and put sentences into informative paragraphs or a story.
- Edit and re-write paragraphs into one informative paper or a story.

# Silly Sentence Structure Activity

1. Steller sea lions \_\_\_\_\_ deeper than 1,300 feet (400 m) to find food!  
verb
2. Males have \_\_\_\_\_, \_\_\_\_\_ hair on their necks that looks like a male lion's \_\_\_\_\_.  
adjective adjective noun
3. \_\_\_\_\_ are isolated, rocky coastal areas and islands where \_\_\_\_\_ gather to mate and where females give birth to their \_\_\_\_\_.  
noun noun noun
4. \_\_\_\_\_ eat walleye pollack, mackerel, herring, capelin, sand lance, cod, and salmon.  
noun
5. \_\_\_\_\_, humans, and some sharks will \_\_\_\_\_ Steller sea lions.  
noun verb
6. Only \_\_\_\_\_ Alaskans who rely on the sea lions are allowed to hunt them.  
adjective
7. Steller sea lions' dry \_\_\_\_\_ is a \_\_\_\_\_ and light tan to red brown.  
noun adjective
8. They have a thick layer of fat (\_\_\_\_\_) that keeps them \_\_\_\_\_ in cold water.  
noun adjective
9. Steller sea lion \_\_\_\_\_ are \_\_\_\_\_ in late May through July.  
noun verb
10. Pups \_\_\_\_\_ (shed) their fur when they are about 4 or 5 months.  
verb
11. When the pups are 4 to 6 weeks old, they \_\_\_\_\_ for the first time.  
verb
12. Sea lions have long front \_\_\_\_\_ and can pull their rear flippers under them so they can " \_\_\_\_\_ " on land.  
noun verb
13. Sea lions have \_\_\_\_\_ \_\_\_\_\_ flaps, seals do not.  
adjective noun
14. Sea lions and seals both get their \_\_\_\_\_ from the air.  
noun

# Sequence Sentence Strips

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A scientist spotted Astro, hungry and all alone on an island off the California coast.

Astro was taken to The Marine Mammal Center, a place that cares for sick, hurt, and stranded marine mammals. Volunteers fed Astro with a baby bottle.

When Astro was big enough, they attached a satellite tag to Astro and took him to the beach where he had been found.

Astro seemed afraid to go into the water and scooted onto the sand. He joined the elephant seals on the beach.

The volunteers took him back to The Marine Mammal Center. The next day, they took him by boat to the Farallon Islands.

The eight seals quickly dove into the ocean but Astro didn't want to. He finally had to let go and landed in the water with a huge splash.

Ten days later, Astro swam under the Golden Gate Bridge and climbed into someone's back yard. The people took him to another island.

Three days later Astro swam back again and joined children and their parents at a walk-a-thon to raise money for their school.

Astro's friends at The Marine Mammal Center were sad, very sad. They realized that Astro could not live in the ocean. He would just keep returning to places with people.

Astro's first stop was a six-month stay at the Long Marine Lab at the University of California in Santa Cruz.

Astro learned to follow directions by a training method called "bridge and target."

Astro flew in an airplane all the way across the United States from California to Connecticut. Astro has a nice, new home at the Mystic Aquarium.

# Word Search

Find the hidden words. Even non-reading children can match letters to letters to find the words! Easy—words go up to down or left to right (no diagonals). For older children, identify the coordinates of the first letter in each word (number, letter).

	A	B	C	D	E	F	G	H	I	J
1	L	I	V	X	T	F	I	S	A	T
2	A	F	L	I	P	P	E	R	S	H
3	N	O	R	P	H	A	N	A	M	E
4	T	R	E	L	E	A	S	E	A	L
5	A	P	Y	C	E	N	T	E	R	P
6	M	K	O	S	M	S	E	A	I	R
7	H	E	C	A	G	E	L	O	N	T
8	U	M	A	M	M	A	L	C	E	W
9	D	I	R	T	K	Y	E	T	P	R
10	O	B	E	A	S	T	R	O	T	M

STELLER  
ASTRO  
MARINE  
MAMMAL  
SEAL  
CARE  
ORPHAN  
RELEASE  
FLIPPERS  
CENTER  
HELP

# Adaptations

---

Adaptations help animals to live in their habitat: to get food and water, to protect themselves from predators, to survive weather, and even to help them make their homes. Here are a few different types of adaptations.

## Physical Adaptations

### body parts

teeth—depends on type of food eaten  
feet, flippers, fins—ability to move  
placement of eyes  
gills, lungs, or other—how does the animal get oxygen  
ears—or how the animal hears/senses

### body coverings

hair or fur  
feathers  
scales  
moist skin

### camouflage and protection

color of skin or pattern to blend into background  
mimicry: pretending to be something else to fool predators  
poisonous or stinky smells

## Behavioral Adaptations

instinct: behaviors or traits that the animals are born with  
learned behavior: traits that animals learn to improve their chances of survival or to make their life easier  
social groups versus solitary living  
communication with other animals  
defense/camouflage  
reaction to cycles (day/night, seasons, tides, etc.)  
migration: the seasonal movement of animals from one location to another  
hibernation: a long, deep sleep in which the animal's breathing and heartbeat are slower than usual

Using information found in the book, see if you can answer the following questions about Steller sea lions.

<p>Where (in what kind of habitat) does your animal live?</p>	<p>What is one of its physical adaptations and how does it help the animal live in its environment?</p>
<p>What is another of its physical adaptations and how does it help the animal live in its environment?</p>	<p>What is another of its physical adaptations and how does it help the animal live in its environment?</p>

What behavioral adaptations (if any) were mentioned in the story?

## Steller sea lion

my definition

my drawing

## Marine Mammal

my definition

my drawing

# flippers

my definition

my drawing

# external ear flap

my definition

my drawing

# threatened

my definition

my drawing

# endangered

my definition

my drawing

# Marine Mammal True or False?

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Circle whether you think the statement is true or false:

1. T/F Marine mammals live in the ocean but come to the surface of the water to breathe air.
2. T/F Marine mammals have hair or fur at some point in their lives.
3. T/F Most marine mammals have thick layers of blubber to keep them warm in cold water.
4. T/F Most marine mammals give birth to twins.
5. T/F Marine mammal mothers feed their calves or pups milk from their body.
6. T/F Unlike land mammals, marine mammals are cold-blooded. They get their warmth from the water around them.
7. T/F Sea turtles are marine mammals.
8. T/F Marine mammals never crawl onto land.
9. T/F Marine mammals live in the ocean and depend on the ocean for food.
10. T/F Sharks are marine mammals.

# In Danger!

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**Extinct:** no longer found anywhere on Earth; completely gone

**Endangered:** an animal or plant in danger of extinction within the near future throughout all or a significant portion of its range

**Threatened:** a species in trouble; it may become endangered if people don't help

**Species of Concern:** species that might need conservation actions

The Eastern Steller sea lions are threatened.

The Western Steller sea lions are endangered.

What are some things that may have caused Steller sea lions to become threatened or endangered?

- Changing habitat
  - habitat destruction due to development, roads, agriculture, etc.
  - fragmentation (breaking up) of habitat, making it difficult for animals to get to food, water, or nesting areas
  - loss of nesting areas
  - climate change causing decrease in food supply
- Over fishing or hunting
  - advanced technology allows fishermen to see where the fish are, increasing their catch—sometimes beyond what is sustainable
  - some animals are hunted on purpose, due to fear (wolves) or competition (fishermen shooting sea lions competing for fish)
- Pollution
  - including fertilizers and chemical run offs or oil spills
  - run-off from construction and development
  - animals may eat garbage “thinking” that it is food (i.e. plastic bags being mistaken for jellyfish)
  - animals get trapped in garbage
- Missing link in the food chain due to another extinction
- Diseases
- Human threats:
  - being hit by fast-moving cars
  - being hit by boats when aquatic reptiles or mammals surface to breathe
  - getting trapped in fishing nets

# Reading Calendars

Use the information and calendar below to answer the questions.

In early May, the adult males (bulls) fight for and claim their rookery territory.

The females (cows) arrive at the rookery at the end of May or early June and look for good birthing areas

Pups are born in late May through July

The mother stays with the pups for a week or two before leaving it alone while she goes off to find food in the ocean.

When the pups are 4 to 6 weeks old, they swim for the first time.

Pups molt (shed) their fur when they are about 4 or 5 months, and the new fur is lighter in color.

- If a Steller sea lion is born on June 15, what day of the week is it?
- If the mother leaves the pup alone for the first time two weeks after its birth, what is the date?
- If the pup swims when it is 4 weeks old, what month would it be?
- If the pup sheds its fur when it is 4 months old, what month would it be?

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# Measuring (comparing and contrasting)

Animals come in all shapes and sizes. Some animals are so small, they can only be seen with a microscope. Other animals (blue whales) are so big that they are the size of a school bus when they are born!

What standard measuring tool would you use to measure something in:

Inches or centimeters

Feet or meters

Pounds or kilograms

Try to imagine how big or small the animal is compared to something you know:

If it is small, what are some other things about the same size? How many pennies, paperclips, quarters, hands, or shoes?

If it is very big, how many “things” would equal it?

It is easy to say that a female Steller sea lion can be 9 feet (2.9 m) long or a male can be 11 feet (3.25 m) long, but what does that really mean?

Using the right measuring tool (yard stick or measuring tape) and chalk, mark off how big 6 feet is on the playground, sidewalk, or driveway.

If you were to lie down on or next to the line, how many times would you have to lie down in order to equal the size of the female Steller sea lion?



If a female Steller sea lion weighs 400 lb. (181 kg), and you and each of your friends weighs 50 lbs., how many children would it take to equal the weight of the female sea lion?

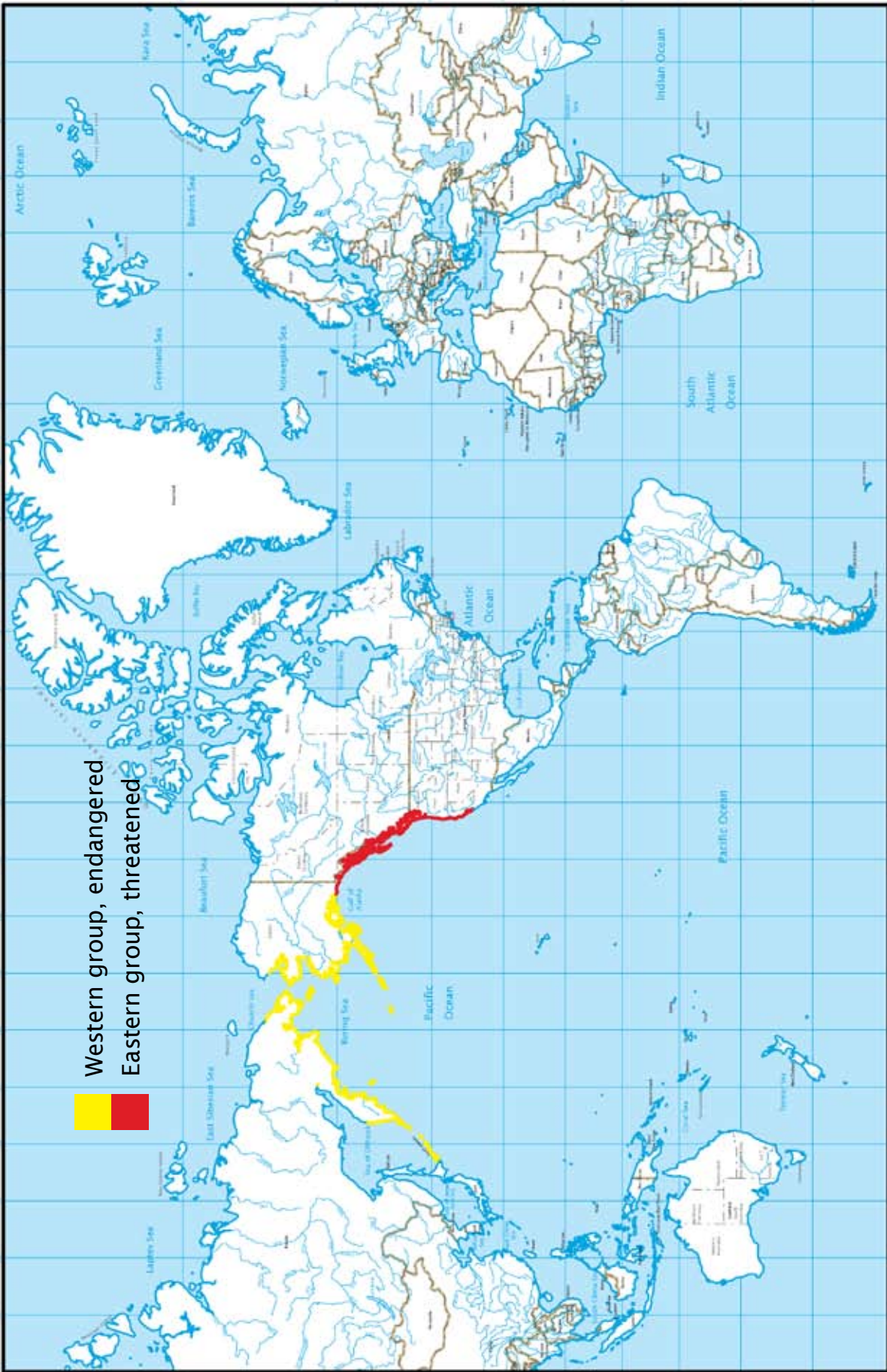
0cm 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25  
0Inch



# Map Activity

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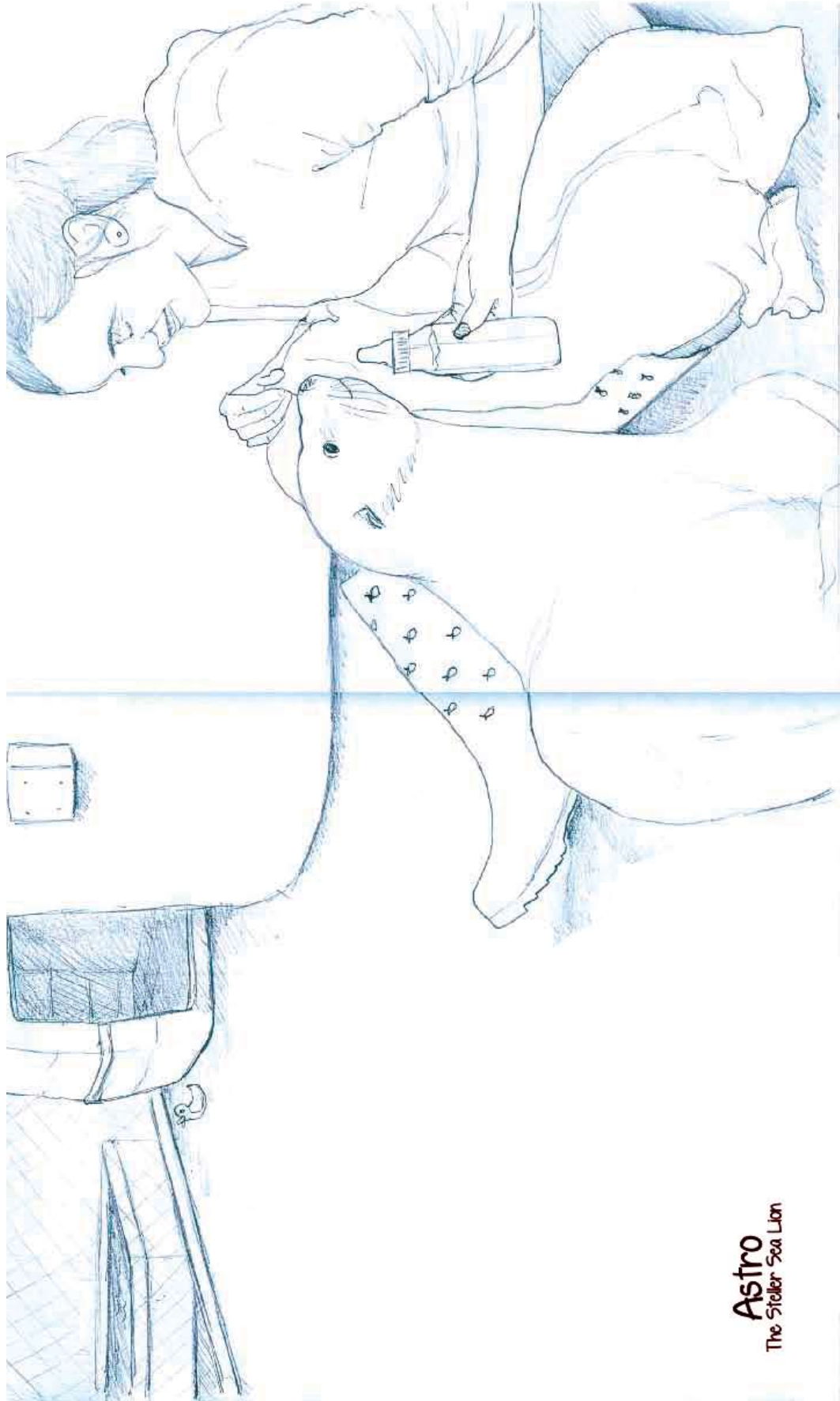
1. What are some of the countries that have Steller sea lions living off the coast?
2. What are the US States and Canadian Provinces that have Steller sea lions living of the coats?
3. Do you live in a state or province that has Steller sea lions?
4. Do Steller sea lions live near the equator in tropical waters?
5. Do Steller sea lions live off Europe?
6. Do Steller sea lions live off of Africa?
7. Do they live around Australia?
8. In which state could you find Steller sea lions from both the Eastern and the Western groups?
9. In which ocean do Steller sea lions live?
10. In which hemisphere do Steller sea lions live, Northern or Soutern?



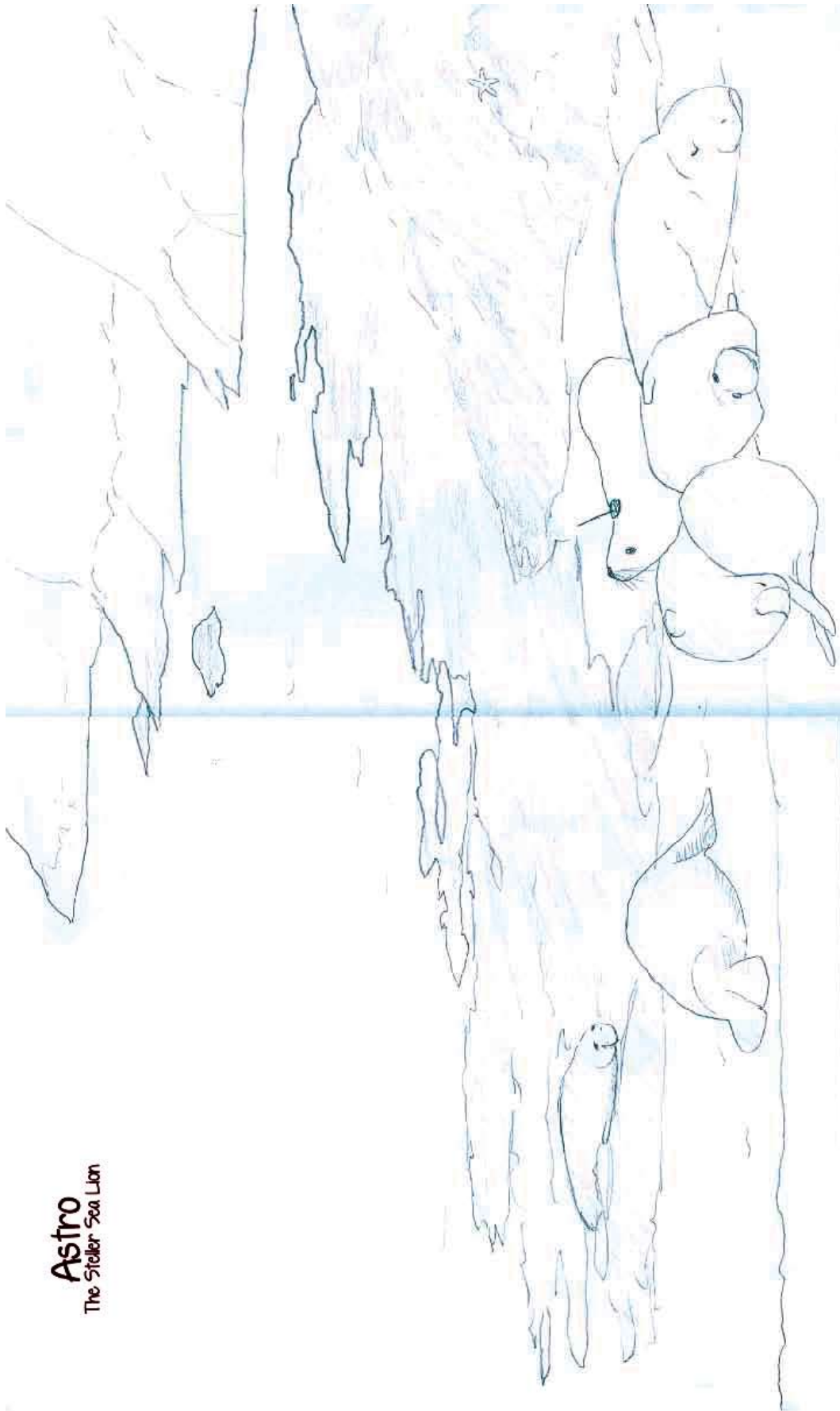
Western group, endangered  
 Eastern group, threatened



# Coloring Pages

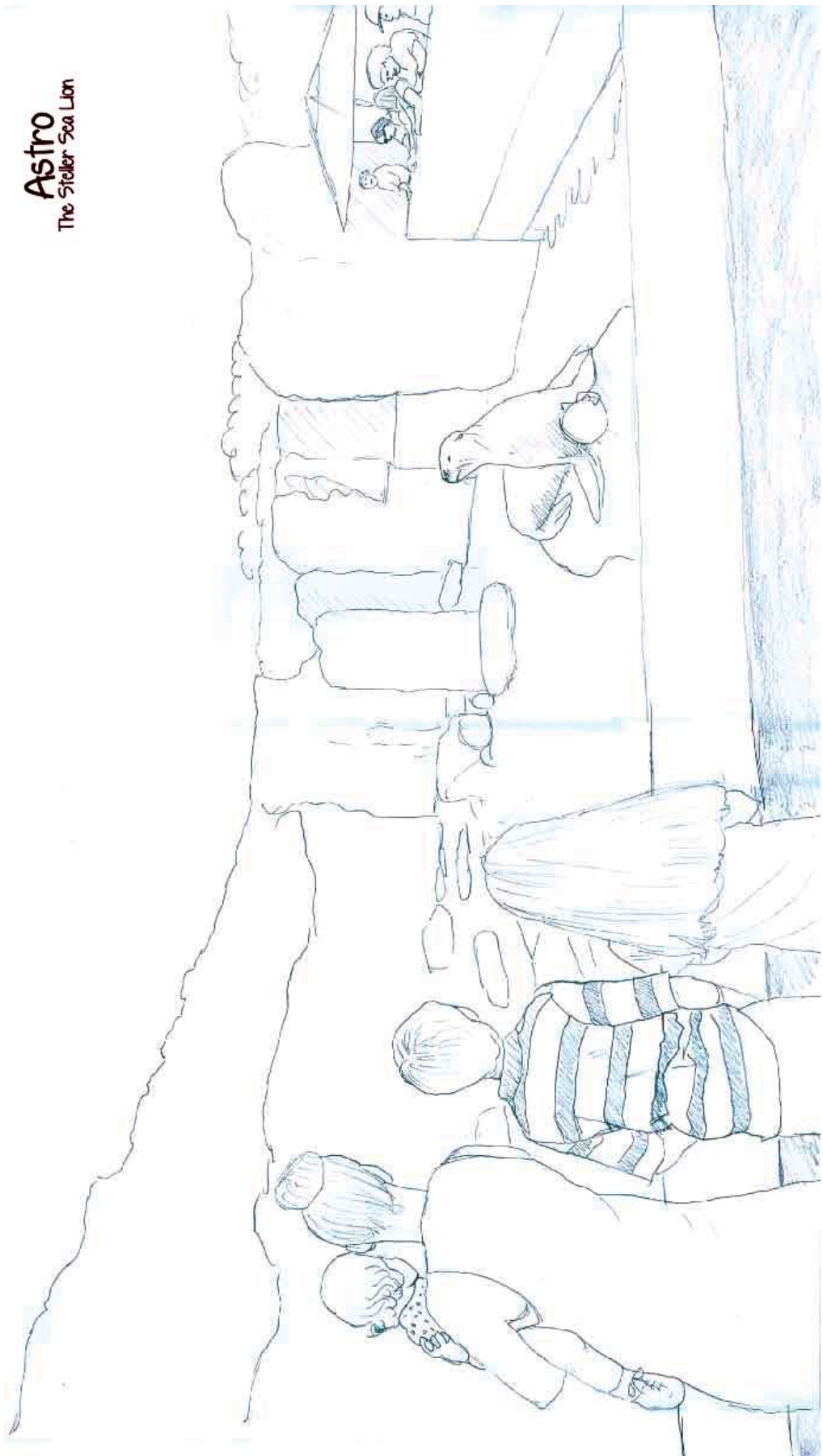


**Astro**  
The Steller Sea Lion



**Astro**  
The Steller Sea Lion

**Astro**  
The Steller Sea Lion



# Glossary

<b>Word</b>	<b>Definition</b>	<b>Part of Speech</b>	<b>Spanish</b>
adapt	to change, to alter, to adjust to a changing <b>environment or situation</b>	verb	adaptar
adaptation	a physical or behavioral feature of a plant or animal that allows it to survive in its <b>environment</b>	noun	adaptación
adapted	changed in order to improve or made more fit <b>for a particular purpose</b>	adjective	adaptado
affect	to have an influence on	verb	afectar
animal	any member of the kingdom Animalia: can move voluntarily, get and eat food, and <b>respond to stimuli</b>	noun	animal
aquatic	an organism living and growing in water	adjective	acuático
basic needs	plants and animals require food, water, <b>oxygen, and a safe place to live</b>	noun	necesidades básicas
behavior	an organism's actions and responses to its environment and other organisms in that <b>same environment</b>	noun	conducta
biologist	a scientist who studies living organisms	noun	biólogo/a
blubber	the thick layer of fat between the skin and the muscle layers of most marine mammals: insulates the animal from cold and serves as <b>a food reserve</b>	noun: body part	grasa
born	to come to life	verb	nacido, nacimiento
breathe	to take in/absorb oxygen	verb	respirar
breed	to reproduce	verb	reproducirse
bull	adult male of some species, e.g. cattle, sea <b>lions, elephants</b>	noun	toro
calf	a name for some baby animals including: Antelope, Bison, Buffalo, Camel, Cattle, Elephant, Elk, Giraffe, Gnu, Hippopotamus, Moose, Porpoise, Reindeer, Rhinoceros, <b>Whale, Yak</b>	noun	jato, jata, la cría
camouflage	physical adaptations that allow organisms to <b>hide in their surroundings</b>	noun	camuflaje
camouflage	to hide by disguise or color	verb	camuflar
captivity	the state of being confined	noun	cautiverio
Carnivora	meat-eating mammals in the order Carnivora include: dog, cat, bear, weasel, skunk, <b>raccoon, seals, sea lions, and walruses</b>	noun: classification	carnivora
carnivore	an animal that eats the meat of other animals ( <b>consumer</b> )	noun: eating characteristic	carnivor0/a
claw	sharp, curved horny process on the toe of a bird, some mammals or reptiles; 2) a structure like a pincer on the limb of a <b>crustacean or other arthropods</b>	noun: body part	pinza, garra
coarse	rough to the touch	adjective	tosco
cold	feeling the lack of heat or warmth	adjective	frio
competition	the struggle of two or more organisms for a <b>limited resource that they both need</b>	noun	competencia
cow	adult female of some species, e.g. cattle, sea <b>lions, elephants</b>	noun	vaca
dive	a headlong plunge (into water)	verb	bucear, zambullirse (duck)
ear	a body part used to hear	noun: body part	oreja
eat	to bite and swallow food as nourishment	verb	comer
elephant seal	seals with a long, trunk-like nose	noun: animal	elefante marino

<b>Word</b>	<b>Definition</b>	<b>Part of Speech</b>	<b>Spanish</b>
endangered	an animal or plant in danger of extinction within the near future throughout all or a <b>significant portion of its range</b>	adjective	en vías de extinción
Endangered Species act of 1973	federal legislation to prevent extinction of <b>plants and animals through conservation</b>	noun	Ley de Especies en Peligro de 1973
external	outside	adjective	exterior
extinct	no longer found anywhere on Earth; <b>completely gone</b>	adjective	extinto
extinct species	a species no longer in existence	noun	especies extintas
flipper(s)	broad, flat limbs supported by bones and <b>adapted for swimming</b>	noun: body part	aletas
front	the side seen first	noun	frente, parte anterior
fur	the hairy coat of a mammal	noun: body part	pelaje
gulp	to swallow quickly & eagerly	verb	engullir
hair	a mammal's outermost covering, made up of <b>threadlike growths on the skin</b>	noun: body part	pelo
harbor seal	small spotted seal of coastal waters of the <b>northern hemisphere</b>	noun: animal	foca de Puerto
haul out	the place or the act of an animal crawling or pulling themselves out of the water and onto <b>land, ice, or other object, such as a buoy</b>	verb	sacar
herd	a group of certain large animals that <b>associate together</b>	noun: collective	rebaño
kennel	a shelter, usually for a dog	noun	perrera
life cycle	a series of stages that occur during the <b>lifetimes of all organisms</b>	noun	ciclo de vida
long	a considerable time or distance	adjective	largo
Mammal	a warm-blooded vertebrate that breathes with lungs and is covered with hair/fur (at some point in its life); females produce milk to feed <b>their live offspring</b>	noun: classification	mamífero
mane	the long hair growing on the back of or around the neck and neighboring parts of <b>some animals, as the horse or lion</b>	noun: body part	crin, melena
Marine Mammal	a mammal that lives in the ocean and <b>depends on the ocean for food</b>	noun: classification	mamíferos marinos
molt	to shed a coat: fur, feathers, skin, or hard <b>outer covering</b>	verb	mudar la piel
native	any species (including humans) found in the <b>region of its origin</b>	adjective	nativas
nurse	to feed young from milk from the mother's <b>body (mammal)</b>	verb	amamantar
ocean	the vast body of salt water that covers almost <b>three fourths of the earth's surface</b>	noun	océano
orca, killer whale	these whales live in all oceans, from the frigid poles to the warm tropics and are at the top of their <b>food web</b>	noun: animal	orca
oxygen	a colorless and odorless gas that is needed <b>by people and animals to live</b>	noun	oxígeno
paddle	to swim like a dog, move with a paddle	verb	remar
Pinniped	scientific order of aquatic mammals in the order Carnivora (seals, sea lions, and walrus) whose front limbs have evolved to become <b>flippers</b>	noun: classification	pinnípedo
pollution	the contamination of the environment by <b>harmful substances</b>	noun	contaminación del medio ambiente
pull	to move something towards you	verb	halar
pup	the young of certain animals, e.g. guinea pig, prairie dog, gerbil, hamster, sea lion, seal, shark, dog, armadillo, bat, mMole, squirrel, beaver, mouse, rat, coyote, wolf	noun	cachorro, cría de foca

<u>Word</u>	<u>Definition</u>	<u>Part of Speech</u>	<u>Spanish</u>
rear	in the back	adjective	posterior
rehabilitation	the treatment and care of injured or orphaned wild animals with the goal of releasing them <b>back to the wild</b>	noun	rehabilitación
rescue	to save someone or something from harm	verb	salvar
rest	to sleep, relax	verb	descansar
rookery(ies)	a breeding place or colony of animals such as <b>penguins, sea lions, and seals</b>	noun: collective	colonia de grajos
satellite tag	tags that can be followed by satellites: used <b>to track animal movements and locations</b>	noun	etiqueta vía satélite
scoot	to move very quickly	verb	correr rápidamente
shark	a large, carnivorous fish	noun: animal	tiburón
species of concern	an informal term referring to species that <b>might need conservation actions</b>		
starve	to be hungry, to be without food, to die for <b>lack of food</b>	verb	morir de hambre
state protected	an individual state's declaration of protection, it is possible for a state level or protection to be different than the Federal level of <b>protection</b>		
Steller sea lion	the largest eared seal, named for the naturalist Georg Wilhelm Steller who first described them in 1741--two distinct populations: Eastern group is threatened, <b>Western group is endangered</b>	noun: animal	león marino de Steller
stranded	cut off or left behind	adjective	varado, atado
sustainable	able to maintain a population		
swam	past tense of "to swim"	verb	nado
swim	to move through the water	verb	nadar
threatened	a species in trouble; it may become <b>endangered if people don't help</b>	adjective	amenazada
vibrissae	stiff, tactile whiskers on the face of certain <b>mammals: cats, dogs, seals, sea lions</b>	noun	vibrisas
volunteer	a person who helps with something freely	noun	voluntario
walk	to move by foot	verb	andar, pasear, caminar
walk-a-thon	a type of fundraiser in which participants raise money by collecting donations or pledges for walking a predetermined distance <b>or course</b>	noun	
walrus	a large marine mammal with tusks and tough <b>hide over thick blubber</b>	noun: animal	morsas
warm	having a comfortable amount of heat	adjective	caliente
watch list	a species being observed for possible listing <b>as threatened or endangered</b>		
wave	the repeating and periodic disturbance that travels through a medium from one location to another location; ocean/lake waves carry through water, sound waves carry through space, seismic waves carry through the <b>ground</b>	noun	ola (water) (onda=radio & seismic)

# Answers

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## Silly Sentences (page 7)

1. Steller sea lions dive deeper than 1,300 feet (400 m) to find food!
2. Males have long, coarse hair on their necks that looks like a male lion's mane.
3. Rookeries are isolated, rocky coastal areas and islands where sea lions gather to mate and where females give birth to their pups.
4. Steller sea lions eat walleye pollack, mackerel, herring, capelin, sand lance, cod, and salmon
5. Orca whales, humans, and some sharks will eat Steller sea lions.
6. Only Native Alaskans who rely on the sea lions are allowed to hunt them.
7. Steller sea lions' dry fur is a coarse and light tan to red brown.
8. They have a thick layer of fat (blubber) that keeps them warm in cold water.
9. Steller sea lion pups are born in late May through July.
10. Pups molt (shed) their fur when they are about 4 or 5 months, and the new fur is lighter in color.
11. When the pups are 4 to 6 weeks old, they swim for the first time.
12. Sea lions have long front flippers and can pull their rear flippers under them so they can "walk" on land.
13. Sea lions have external ear flaps, seals do not.
14. Sea lions and seals both get their oxygen from the air.

## Word Search (page

STELLER 4,G  
ASTRO 10,D  
MARINE 3,I  
MAMMAL 8,B  
SEAL 4,G  
CARE 7,C  
ORPHAN 3,B  
RELEASE 4,B  
FLIPPERS 2,B  
CENTER 5,D  
HELP 2,J

## Marine Mammal True/False (page 17)

1. Marine mammals live in the ocean but come to the surface of the water to breathe air. **True: Many marine mammals (and marine reptiles) are injured by boat propellers as they surface to breathe.**
2. Marine mammals have hair or fur at some point in their lives. **True: Seals and sea lions have fur. When born, dolphins and whales have a few bristles around the head or mouth.**
3. Most marine mammals have thick layers of blubber to keep them warm in cold water. **True: the key word being "most." Exceptions: sea otters and polar bears only use their fur to stay warm.**
4. Most marine mammals give birth to twins. **False: Most marine mammals have one calf or pup at a time. Exceptions: polar bears do usually have twins.**
5. Marine mammal mothers feed their calves or pups milk from their body. **True, that is one of the key definitions of a mammal.**
6. Unlike land mammals, marine mammals are cold-blooded. They get their warmth from the water around them. **False: all mammals are warm-blooded.**
7. Sea turtles are marine mammals. **False: sea turtles are marine reptiles.**
8. Marine mammals never crawl onto land. **False: seals, sea lions, and walruses frequently haul themselves onto land. Polar bears, considered to be a marine mammal, spends much of its time on land.**
9. Marine mammals live in the ocean and depend on the ocean for food. **True: this is a basic definition.**
10. Sharks are marine mammals. **False: sharks are a fish.**

## Map Questions (page 22)

1. What are some of the countries that have Steller sea lions living off the coast? **United States, Canada, Russia, and Japan**
2. What are the US States and Canadian Provinces that have Steller sea lions living of the coats? **US: California, Oregon, Washington, Canada: British Columbia & Yukon Territory**
3. Do you live in a state or province that has Steller sea lions? **depends on where you live**
4. Do Steller sea lions live near the equator in tropical waters? **No**
5. Do Steller sea lions live off Europe? **No**
6. Do Steller sea lions live off of Africa? **No**
7. Do they live around Australia? **No**
8. In which state could you find Steller sea lions from both the Eastern and the Western groups? **Alaska**
9. In which ocean do Steller sea lions live? **Pacific Ocean**
10. In which hemisphere do Steller sea lions live, Northern or Southern? **Northern**

# Appendix A—“What Children Know” Cards

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<p>Question:</p>          <p>My answer:</p>          <p>This information is correct! This information is not correct; can you find the correct information?</p>	<p>Question:</p>          <p>My answer:</p>          <p>This information is correct! This information is not correct; can you find the correct information?</p>
<p>Question:</p>          <p>My answer:</p>          <p>This information is correct! This information is not correct; can you find the correct information?</p>	<p>Question:</p>          <p>My answer:</p>          <p>This information is correct! This information is not correct; can you find the correct information?</p>

# Appendix B—Venn Diagram

