

Teaching Activity Guide

Whale Migrations

Little Gray's *Great* Migration

Ocean Seasons



Table of Contents

3	How to Use This Activity Guide (General)
4	What Do Children Already Know?
5	Pre-Reading Questions
6	Comprehension Questions & Writing Prompts
7	Ocean Menu
8	Language Arts & Science: Basic Needs
9	Fill in the Conjunction
10	Cross-Curricular Vocabulary Activities
11	Word Bank
12	Cross-Curricular: Silly Sentences
14	Language Arts: Sequence Sentence Strips
16	Word Search
18	RIDDLE ME THIS
19	Animal Sorting Cards
22	Adaptations
23	Ocean Adaptations
24	Label the Whale Body Parts
26	Math: Measuring (compare & contrast)
27	Whales: Compare & Contrast
28	Migration Math
29	Humpback Migration Research
30	Ocean Seasons Nature Journal
32	Gray Whale Migration Map
33	Coloring Page
34	Answers
36	Appendix A—"What Children Know" Cards
37	Appendix B—Venn Diagram
38	Appendix C—Vocabulary Cards

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How to Use This Activity Guide (General)

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.

For teachers in the classroom: We understand that time is at a premium and that, especially in the early grades, much time is spent teaching language arts. All Arbordale titles are specifically selected and developed to get children excited about learning other subjects (science, geography, social studies, math, etc.) while reading (or being read to). These activities are designed to be as comprehensive and cross-curricular as possible. If you are teaching sentence structure in writing, why not use sentences that teach science or social studies? We also know and understand that you must account for all activities done in the classroom. While each title is aligned to all of the state standards (both the text and the For Creative Minds), it would be nearly impossible to align all of these activities to each state's standards at each grade level. However, we do include some of the general wording of the CORE language arts and math standards, as well as some of the very general science or social studies standards. You'll find them listed as "objectives" in italics. You should be able to match these objectives with your state standards fairly easily.

For homeschooling parents and teachers in private schools: Use as above. Aren't you glad you don't have to worry about state standards?

For parents/caregivers: Two of the most important gifts you can give your child are the love of reading and the desire to learn. Those passions are instilled in your child long before he or she steps into a classroom. Many adults enjoy reading historical fiction novels . . . fun to read but also to learn (or remember) about historical events. Not only does Arbordale publish stories that are fun to read and that can be used as bedtime books or quiet "lap" reading books, but each story has non-fiction facts woven through the story or has some underlying educational component to sneak in "learning." Use the "For Creative Minds" section in the book itself and these activities to expand on your child's interest or curiosity in the subject. They are designed to introduce a subject so you don't need to be an expert (but you will probably look like one to your child!). Pick and choose the activities to help make learning fun!

For librarians and bookstore employees; after-school program leaders; and zoo, aquarium, nature center, park & museum educators: Whether reading a book for story time or using the book to supplement an educational program, feel free to use the activities in your programs. We have done the "hard part" for you.

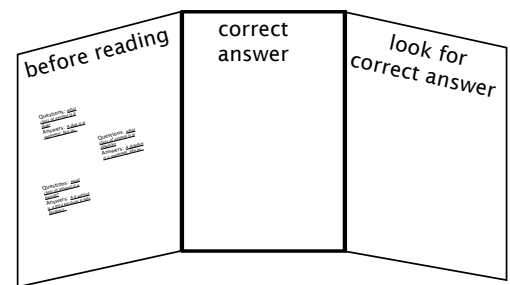
What Do Children Already Know?

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.



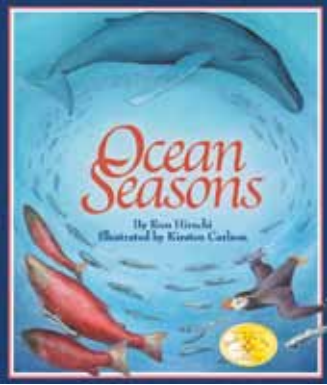
After reading the book, go back to the questions and answers and determine whether the children’s answers were correct or not.

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 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



How are seasons in the ocean the same as on land?

How are seasons in the ocean different than those on land?

What ocean animals are born only in the spring?

What is the bottom of the food web in the ocean?

List some animals that are the top of the ocean food web.



Where do gray whales live?

During what time of year are gray whale calves born?

Where are gray whales born and during which season?

What do gray whales eat?

What is the best season to find this food and where?

How do gray whales communicate with each other?

Both Books:

What are some ocean animals that migrate to warmer waters in the winter?

What do adult whales eat while in the warmer, winter waters?

Why do whales return to northern waters in the summer?

What are some reasons that whales migrate back and forth between warm winter waters and Northern, cooler summer waters?

Comprehension Questions & Writing Prompts

Explain major differences between books that tell stories and books that give information, (paired fiction & For Creative Minds non-fiction)

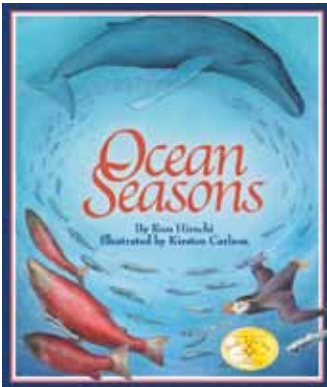
Compare and contrast the most important points presented by two texts on the same topic.

Identify basic similarities in and differences between two texts on the same topic.

Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.

Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.



What happens to ocean plants in the spring?

What are some ocean animals that are born in the spring?

What food is readily available in the spring and summer?

What do urchins eat?

What would happen to kelp if the urchins disappeared?

What are some animals that hide in kelp?

What do humpbacks eat and how do they catch it?

What are plankton?

What are some animals that hunt salmon?

Where do humpback whales go in the winter and what

happens there?

Why do the humpbacks go back to colder waters for the summer?



Why do you think the people liked going out in boats in the area where Little Gray was a young calf? Would you want to go out? Why or why not?

What part of his body did Little Gray use to blow bubbles?

What is blubber?

When did Little Gray and his Mama swim?

Why was Mama getting so thin?

What did Little Gray hear to help him find the "secret passage to the special sea?"

What did the gray whales eat?

What body part do gray whales use to push mud out of their mouths?

Compare and contrast the two types of whales.

During which season do the whales spend in the warm, winter waters?

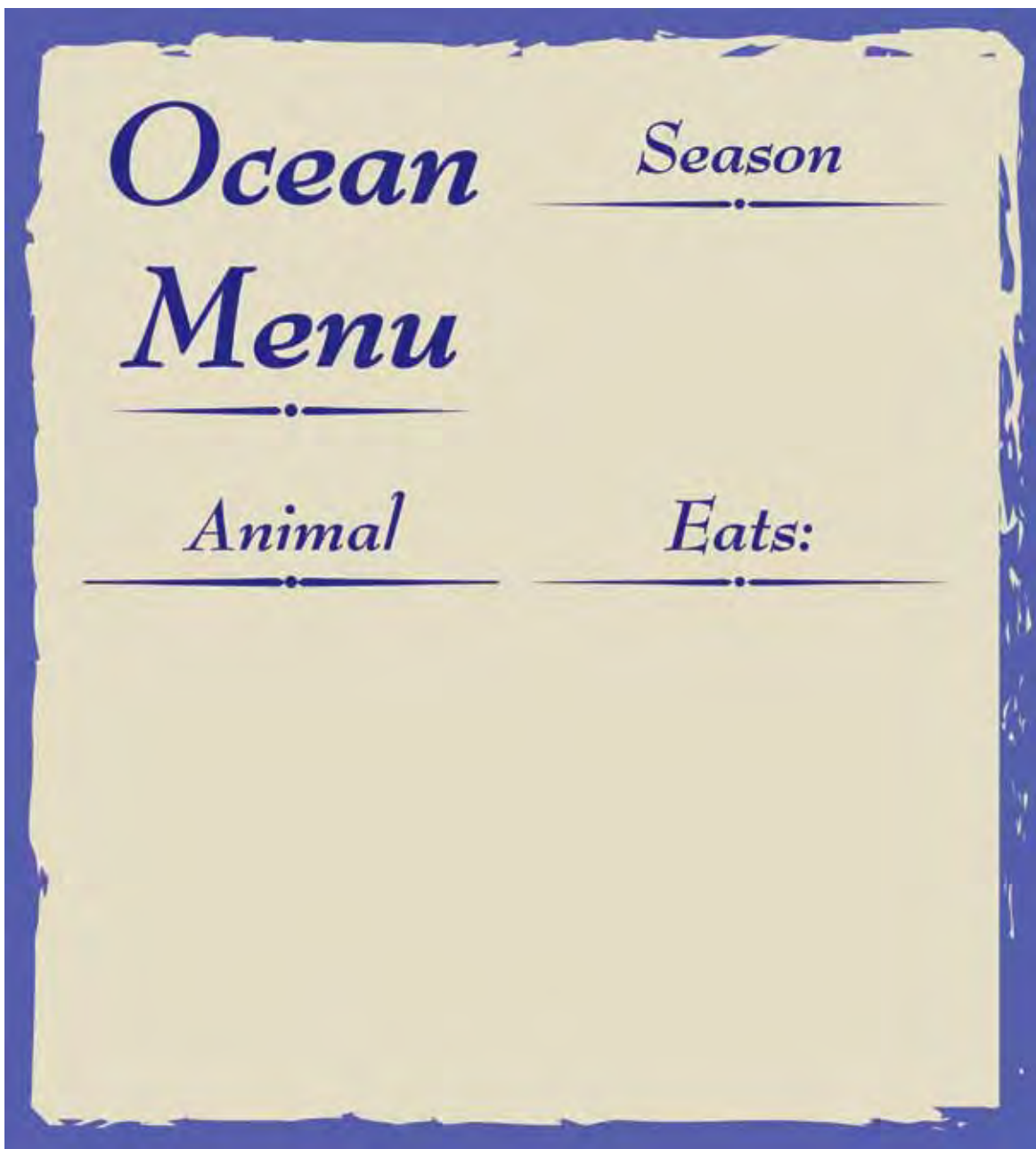
During which season do the whales spend in the cooler, Northern waters?

Which book is fictional and how can you tell?

Ocean Menu

Select an animal from one of the books. Determine what it eats. Make an “Ocean Menu” based on foods that the animal eats during each season. (How does the food itself change over the seasons?)

Make an “Ocean Menu” for food that humans eat. What ocean foods are more easily found in the spring or in the fall? For example, we tend to catch and eat salmon in the fall...why? Are there certain times of the year that we may or may not harvest or catch certain types of ocean animals (like oysters or shrimp)? Why? If you were to buy this food in the grocery store, would it be more expensive during the “harvest” season or when it is not harvested? Why? How would you cook or prepare the food?



The image shows a template for an "Ocean Menu" on a piece of parchment paper with a blue border. The title "Ocean Menu" is written in a large, blue, serif font on the left side. To the right of the title, the word "Season" is written in a smaller, blue, serif font, with a horizontal line underneath it. Below the title, the word "Animal" is written in a blue, serif font, with a horizontal line underneath it. To the right of "Animal", the word "Eats:" is written in a blue, serif font, with a horizontal line underneath it.

Language Arts & Science: Basic Needs

Objective: Describe the basic needs of living things and how they are met.

Plants need water, oxygen, food, light and space to grow and reproduce; animals need water, oxygen, food, and shelter/space to grow and reproduce.

Re-read the story and write down any words that relate to how the plants or animal(s) meet their basic needs.

Plant/ Animal	water	oxygen	food	light	space

If not mentioned in the text, are there any indications in the illustrations of how these needs are met? Can you describe, draw, or write an explanation of how the needs are met?

Fill in the Conjunction

Objective Core Language Arts: Use frequently occurring conjunctions.

Use one of the following words to fill in the sentence so that it makes sense.

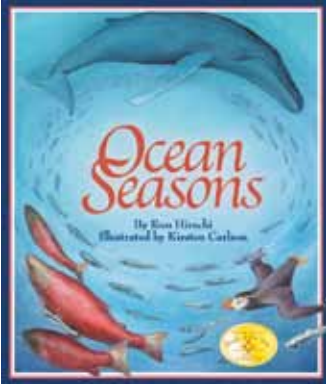
and

but

or

so

because



Spring is a burst of color on land _____ in the sea as plants spread their soft, new growth.

Urchins munch on kelp _____ sea otters eat the urchins.

Many fish, crabs, and shrimp hide and feast in the kelp forest _____ predators can't find them as easily.

Fish grow bigger and stronger through the summer; _____ they are still food for many birds, bigger fish, and the humpback whales.

The tiny plankton die and fall to the ocean floor _____ summer lights grow dark.



The people clapped _____ shouted.

Little Gray didn't know whether to stay _____ go.

Mama lost blubber over the winter _____ she didn't have any food to eat.

The whales had to swim north _____ they could find food to eat.

There weren't any people in the special sea _____ there were sea lions.

Cross-Curricular Vocabulary Activities

Objective Core Language Arts:

Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade-level reading and content.

Identify new meanings for familiar words and apply them accurately (e.g., duck is a bird & the verb to duck). Use words & phrases acquired through conversations, reading/being read to, and responding to texts.

Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade-level topic or subject area.

Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences.

Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.

Use frequently occurring adjectives.

Vocabulary Game: 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. It is helpful to project an illustration on a whiteboard. Use eBook or book preview found at www.ArbordalePublishing.com.

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.

Glossary/Vocabulary Words: Word cards may be used (see Appendix) or have children write 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 (on the next page). 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.

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

- 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 for the "silly sentences" on the next page).
- After the cards have been sorted, go over the categories to ensure that all cards have been placed correctly. (Mistakes are a great opportunity to teach!)
- Choose two words from each category and write a sentence for each word.
- Write a story that uses at least ten vocabulary words from the word sort.
- 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.

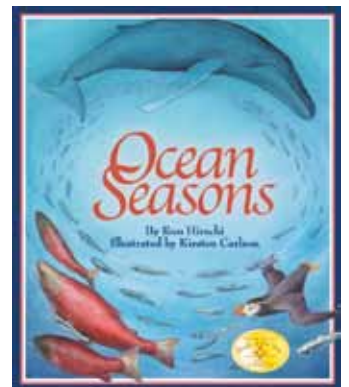
Silly Sentence Structure Activity: This "game" develops both an understanding of sentence structure and the science subject. Use words from the "word wall" to fill in the blanks. After completing silly sentences for fun, have children try to fill in the proper words by looking for the correct information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

Word Bank

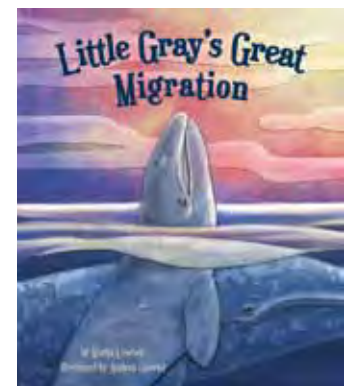
Adjective	Noun		Verb	
bigger	amphipod	mangrove	bite	inhale
cold	autumn	nursery	bloom	jump
colorful	baleen	orca	blow	leap
dark	blowhole	phytoplankton	born	lobtail
dense	blubber	plankton	breach	lunge
distant	body	plants	breathe	munch
gray	bubbles	rivers	calm	return
hungry	crabs	sea lions	communicate	scare
icy	eyes	seals	consume	see
northern	fall	spring	devour	shine
shallow	fish	summer	die	sing
southern	food	surface	dine	sleep
sparkling	forest	tail	dive	smack
tropical	gray whale	urchins	eat	snack
undersea	head	water	exhale	spyhop
warm	humpback	whales	feast	stay
	kelp	wind	gobble	strain
	krill	winter	grow	surface
	light	zooplankton	hatch	swim
	mammal		hunt	

Cross-Curricular: Silly Sentences

1. _____ is a burst of color as _____s spread their _____, new growth.
noun adjective noun
2. Summer is a _____, _____ sea.
adjective adjective
3. Autumn winds _____ strongly across the sea.
verb
4. As the winter seas grow _____ and colder, northern waters become quiet and clear.
adjective
5. Fish _____ on _____ that blooms in great numbers.
verb noun
6. _____s _____ on kelp but _____s eat the urchins.
noun verb noun
7. The _____s put on layers of fat as they eat.
noun
8. Zooplankton are tiny floating _____s that eat phytoplankton.
noun
9. Baby animals live in _____ waters where _____ forests, _____ swamps, and salt marshes are important _____ habitats.
adjective noun noun noun
10. _____ whales eat _____ and small fish.
noun noun



- Whales are _____ and _____ oxygen from air.
noun verb
- Gray whales have _____ s on top of their head.
number noun
- These blowholes are like nostrils and are how the whales _____ and _____.
verb verb
- The most important reason _____ s come to the surface is to _____.
noun verb
- Whales also _____ to _____ what is around them, _____ with other whales nearby, or scare nearby _____.
verb verb verb noun
- Breaching is when a whale _____ s up so high that at least _____ % of their body is out of the _____.
verb number noun
- Spyhopping is when the whale holds their _____ up so their _____ s are near or above the surface of the water.
noun noun
- Some whales _____ for several minutes at a time.
verb
- Lobtailing is when the whale lifts its _____ up out of the water and _____ s it down on the surface.
noun verb
- When gray whales _____ , they stay at the surface with their _____ s above the water.
verb noun



Language Arts: 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.

Objective Core Language Arts:

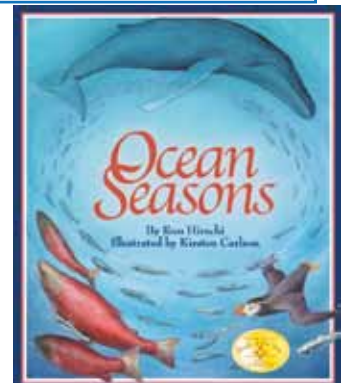
Use temporal words and phrases to signal event order.

Spring is a burst of color as plants spread their soft, new growth.

Summer is a calm, blue sea.

Autumn winds blow strongly across the sea.

As the winter seas grow colder and colder, northern waters become quiet and clear.



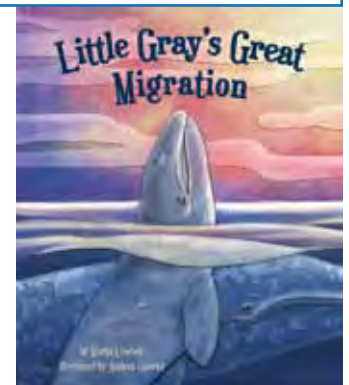
Little Gray always greeted the people the same way.

First, he went right up to the boat for a head rub.

Next, he blasted bubbles out of his blowhole.

Then he hit the water with his flukes.

Finally, Little Gray jumped as high as he could.

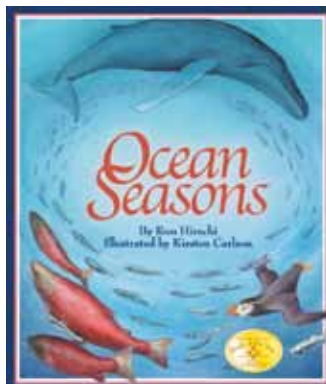


Word Search

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).

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

HUMPBAC	KELP	SALMON
SPRING	SUMMER	AUTUMN
WINTER	DEEP	WATERS
URCHIN	FISH	BIRD
PLANKTON	GROWS	ORCA



Little Gray Word Search Puzzle

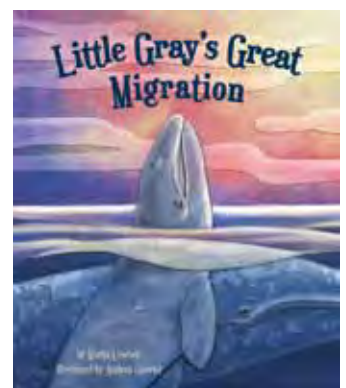
Can you find these words from Little Gray's Great Migration?



AMPHIPODS
BELUGA
BREACH
GRAY WHALE
LITTLE GRAY
MIGRATION
SWIM

ANDREA GABRIEL
BLOWHOLE
BUBBLES
KRILL
LOBTAILING
OCEAN

BARNACLE
BLUBBER
FLUKES
LAGOON
MARTA LINDSEY
SPY HOP

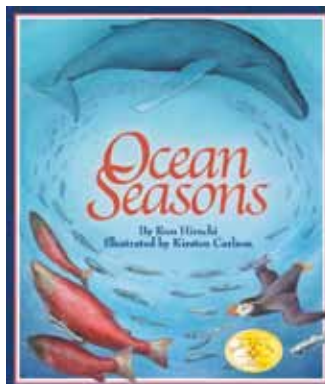


RIDDLE ME THIS

Identify which animal is “speaking.”

Bird	Humpback whale	Humpback whale	Kelp	Orca
Plankton	Puffin	Salmon	Sea otter	Urchin

1. I am a type of plant that grows into tall undersea forests.
2. I am a small animal with spines that eats kelp.
3. I am a mammal that dives underwater to eat the urchins that eat the kelp.
4. I dive after fish, crabs, and shrimp that hide in the kelp.
5. I dive under schools of fish to trap them with my bubbles.
6. I hatched in a burrow on a rocky island.
7. I trap fish with my comb-like baleen.
8. I bloom in great numbers and sometimes light up the water around me.
9. I return to rivers from the sea.
10. I hunt salmon, seals, sea lions, and even humpback whales.



Animal Sorting Cards

Objective: Classify organisms according to one selected feature, such as body covering, and identify other similarities shared by organisms within each group formed.

Describe several external features and behaviors of animals that can be used to classify them (e.g., size, color, shape of body parts).

Identify observable similarities and differences (e.g., number of legs, body coverings, size) between/among different groups of animals.

Animal Card Games:

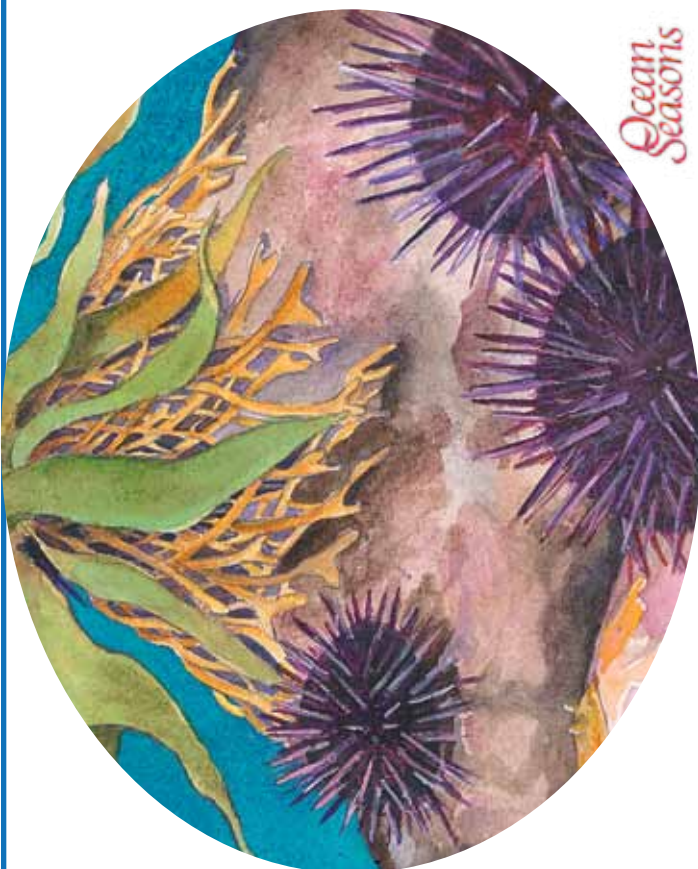
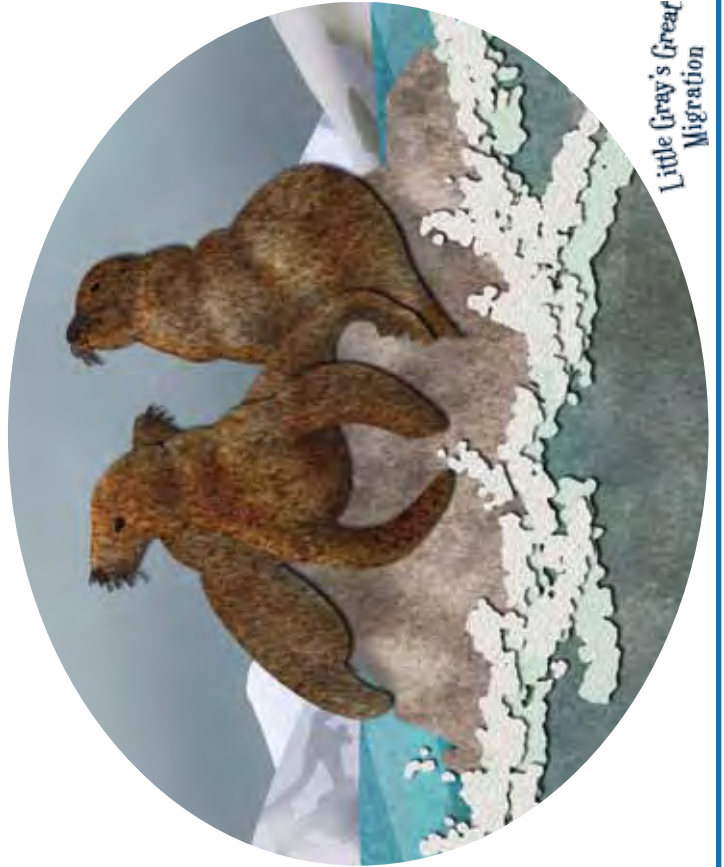
Sorting: Depending on the age of the children, have them sort cards by:

where the animals live (habitat)	tail, no tail
number of legs (if the animals have legs)	colors or skin patterns
how they move (walk, swim, jump, or fly)	animal class
type of skin covering (hair/fur, feathers, scales, moist skin)	
what they eat (plant eaters/herbivores, meat eaters/carnivores, both/omnivores)	

Memory Card Game: Make two copies of each of the sorting card pages and cut out the cards. Mix them up and place them face down on a table. Taking turns, each player should turn over two cards so that everyone can see. If the cards match, he or she keeps the pair and takes another turn. If they do not match, the player should turn the cards back over and it is another player's turn. The player with the most pairs at the end of the game wins.

Who Am I? Copy and cut out the cards. Poke a hole through each one and tie onto a piece of yarn. Have each child put on a "card necklace" without looking at it so the card hangs down the back. The children get to ask each person one "yes/no" question to try to guess "what they are." If a child answering the question does not know the answer, he/she should say, "I don't know." This is a great group activity and a great "ice-breaker" for children who don't really know each other.

Charades: One child selects a card and must act out what the animal is so that the other children can guess. The actor may not speak but can move like the animal and imitate body parts or behaviors. For very young children, you might let them make the animal sound. The child who guesses the animal becomes the next actor.





Little Gray's Great Migration



Ocean Seasons



Ocean Seasons



Ocean Seasons

Adaptations

Objective: Identify adaptations that help plants and animals survive and grow in their environment

Identify external parts of plants and animals

Observe and compare the structures and behaviors of different kinds of plants and animals

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

Use the illustrations in the book to see how many physical adaptations you can see for each animal.

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
body structure resembles another organism 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
hiding in an area that provides 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

Ocean Adaptations

Objective: Identify adaptations that help plants and animals survive and grow in their environment

Identify external parts of plants and animals

Observe and compare the structures and behaviors of different kinds of plants and animals

Compare and explain how external features of plants and animals help them survive in different environments.

Several of the animals mentioned or seen in illustrations in these books breathe air even though they live in the ocean. Generally these animals can go between breaths for much longer than we can. They need to dive to find their food and some animals, like the sea turtles, actually hold their breath long enough to sleep underwater (up to four hours). Some ocean animals that breathe air are:

- Sea otters (mammals)
- Sea lions (mammals)
- Humpback whales (mammals)
- Oca whales (mammals)
- Gray whales (mammals)
- Green sea turtles (reptiles)

Mammals that live in the ocean are called marine mammals.

In general, animals that live in the ocean have fins or flippers to help them swim. Think about swimming lessons that you may have taken. Are you told to spread your fingers wide or to keep them together? It is easiest to swim if you keep your fingers together, making a little “flipper.” That helps to push the water out of the way so that you move forward quicker and easier, just like ocean-living animals.

Some animals that live in the ocean crawl onto land to rest or sleep. They will often have some type of claw on their front flippers to help pull themselves up onto a rocky shore. Which animals in these books are shown on rocks?

Ocean water is salt water and most animals that survive in salt water cannot survive in fresh water. However, sometimes the animals can go back and forth for short periods of time—like the salmon that swim upriver to spawn in the fall.

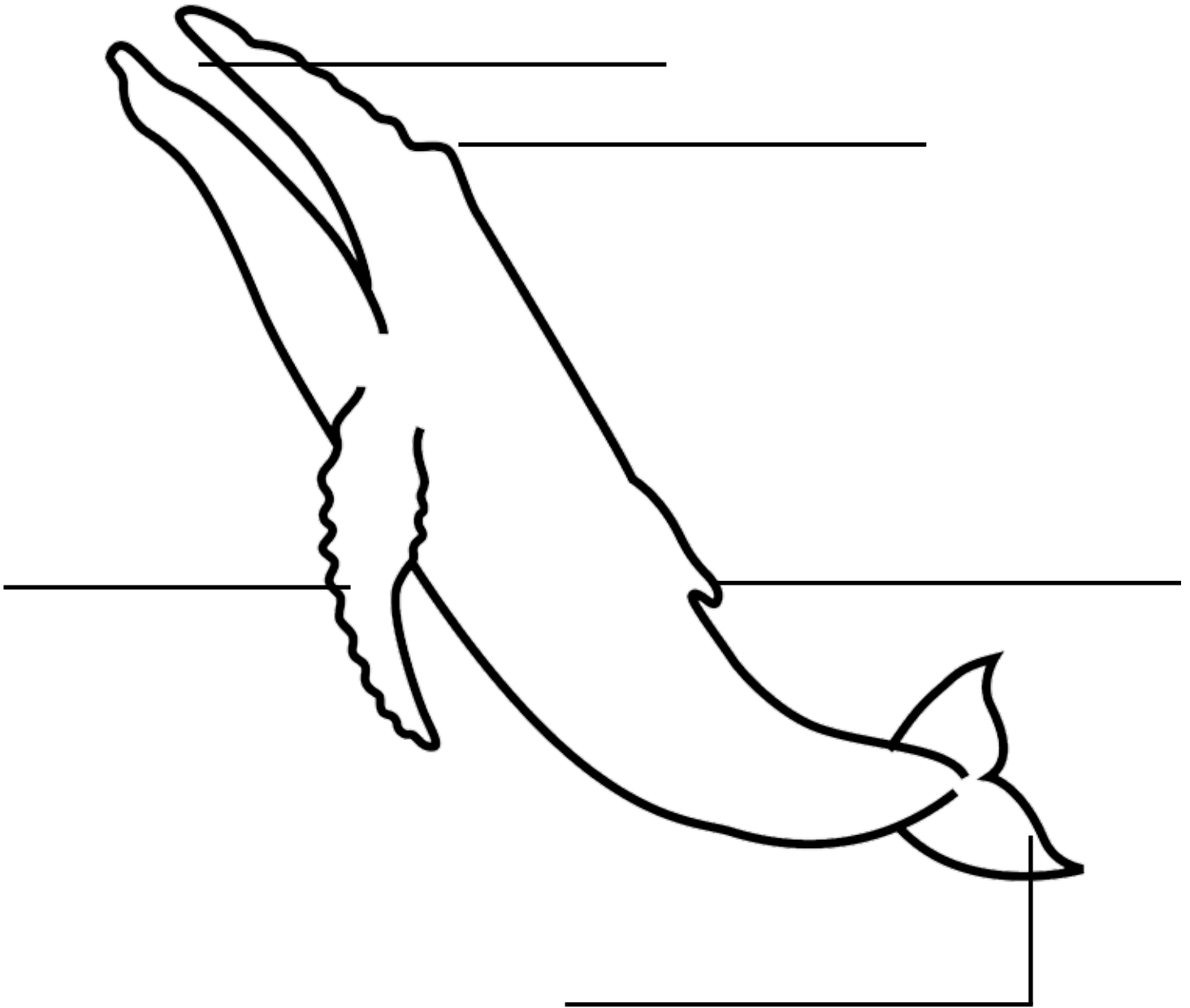
What are some other adaptations that animals have to live in the ocean? Here are some questions to help you think of some:

- How do they see underwater?
- What happens to some of the noses or ears of marine mammals?
- How do animals breathe?
- How do they catch their food?
- Do they live alone or in groups?
- Which animals work together to trap food?
- Do any animals migrate to warmer waters in the winter?

Label the Whale Body Parts

Can you identify the whale body parts? Use the words in the word bank:

flipper	fluke (tail)	dorsal fin	blowholes	baleen
---------	--------------	------------	-----------	--------



Pick an animal from the book and answer the following questions:
My animal is:

<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?

Math: Measuring (compare & contrast)

Objective Core Mathematics Measurement:

Order three objects by length; compare the lengths of two objects indirectly by using a third object. Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length

Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. (up to 10)

Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.

Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.

Humpback and gray whale calves are about 15 feet long when they are born!

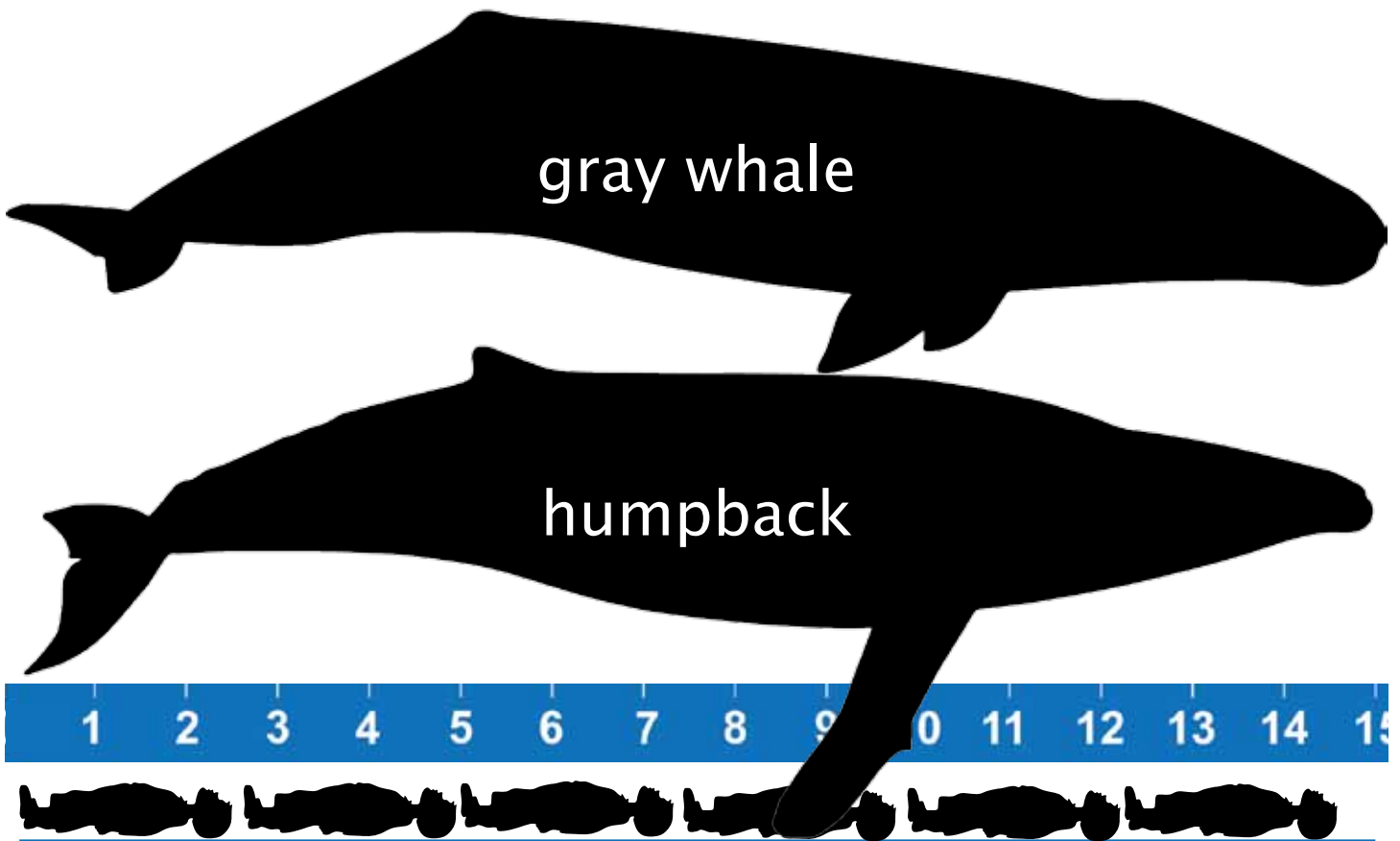
Try to imagine how big a whale calf is compared to something you know.

What are some other things about the same size?

Using the right measuring tool (yard stick or measuring tape) and chalk, mark off how big something 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?

How long were you when you were born? How tall are you now?



Whales: Compare & Contrast

Compare and contrast humpback and gray whales. If desired, use the Venn Diagram found in the Appendix.

	Humpback whales	Gray whales
animal classification	marine mammal	marine mammal
# blowholes	2	2
baleen	yes	yes
eat	bubble net-feeding on small fish, plankton, and krill	bottom feeders: krill and amphipods
communication	sing	knock
size adult female	39-52 feet (12-16 m)	45 feet (14 m)
size calf when born	15 feet (4.5 meters)	15 feet (4.5 meters)
most calves born in	winter around Hawaii	winter around Baja California, Mexico
migration route (Pacific Coast US)	Alaska to Hawaii	Bering and Chukchi seas to Baja, Mexico
migration distance (one way)	5000 miles (8,000 k)	5,000-6,500 miles (8,000-10,500 k)
color	black and white	gray



Migration Math

When migrating, humpbacks usually swim between 3 to 9 miles per hour. If something is chasing them, they can swim 15 miles per hour. On average, they swim 1,000 miles a month during migration.

Gray whales spend five to six months migrating (10,000-13,000 miles round trip). They swim at 3 to 6 miles per hour.

- If whales average 5 miles an hour (5/mph) how long would it take them to swim 25 miles?
- How long would it take for them to swim 100 miles?
- How far is it from your house to your school or grocery store?
- How long does it take you to get there in a car?
- How long would it take a whale to swim that distance (assuming 5/mph)
- How long does it take you to run or walk a half-mile or a mile?
- How long would it take you to run or walk 1,000 miles?
- How long would it take you to run or walk 10,000 miles?



Humpback Migration Research

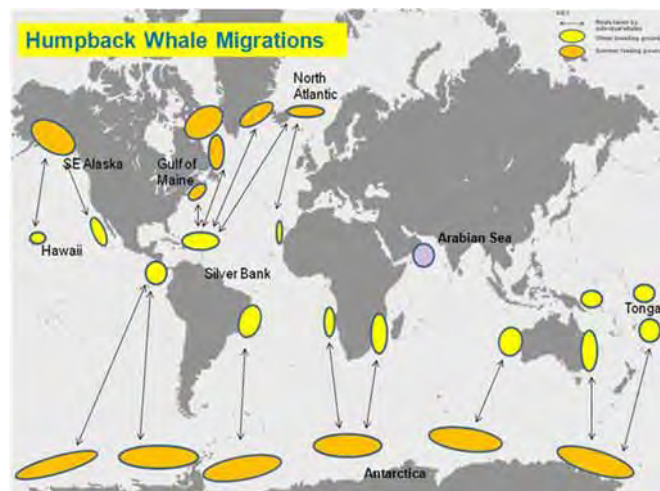
Humpback whales migrate winter and spring in all the world's oceans. Those in the far north swim toward the equator during "our" winter months. Those in the southern half of the world also swim toward the equator. But their journey from Antarctica to tropical waters takes place six months later during "their" winter. Northern Humpback whales and those from Australia and other southern regions rarely, if ever, come into contact because of these seasonal differences in migration.

No matter which end of the earth they inhabit, humpbacks spend their summer eating morning and night. Those in the north probably eat more fish, while those in Antarctic waters often eat more krill. No matter what the diet, they feast around the clock, building up a thick layer of blubber. This fat acts like a huge tank of gas. And they need plenty of fuel because they eat little or not at all while on migration, a journey of more than four thousand roundtrip miles. They may also go without food while they are in tropical waters!

Northern humpback whale babies are born mainly between January and March. Those from southern regions give birth from June to October.

Just like other migrating animals, humpbacks usually follow the same migration route year after year. The young whales learn the way as they swim with their mothers.

Research the various summer and winter/breeding grounds of humpbacks and mark the locations on the world map in the appendix.



My Nature Journal

Here are seasonal drawings of a plant in my yard or at school.

Spring

Summer

Fall

Winter

My thoughts and observations



My Nature Journal

Animals I see around me and what they are doing.

Spring

Summer

Fall

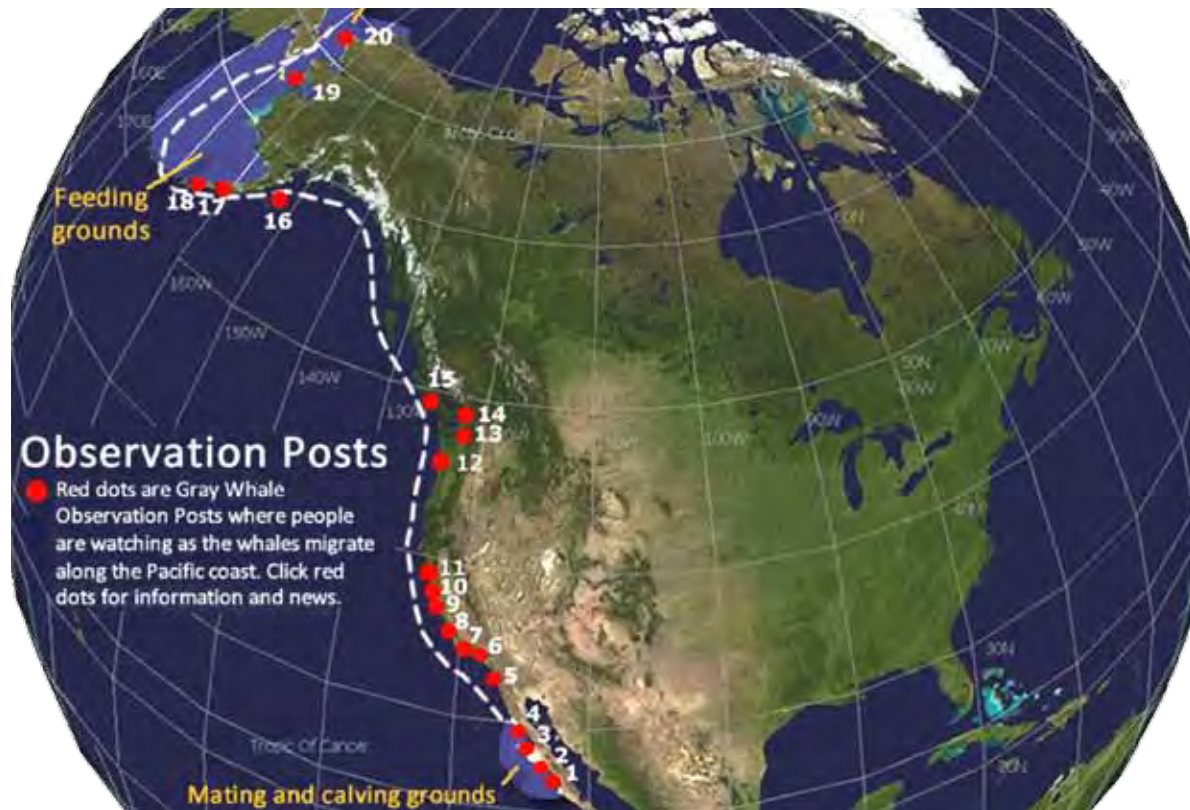
Winter

My thoughts and observations



Gray Whale Migration Map

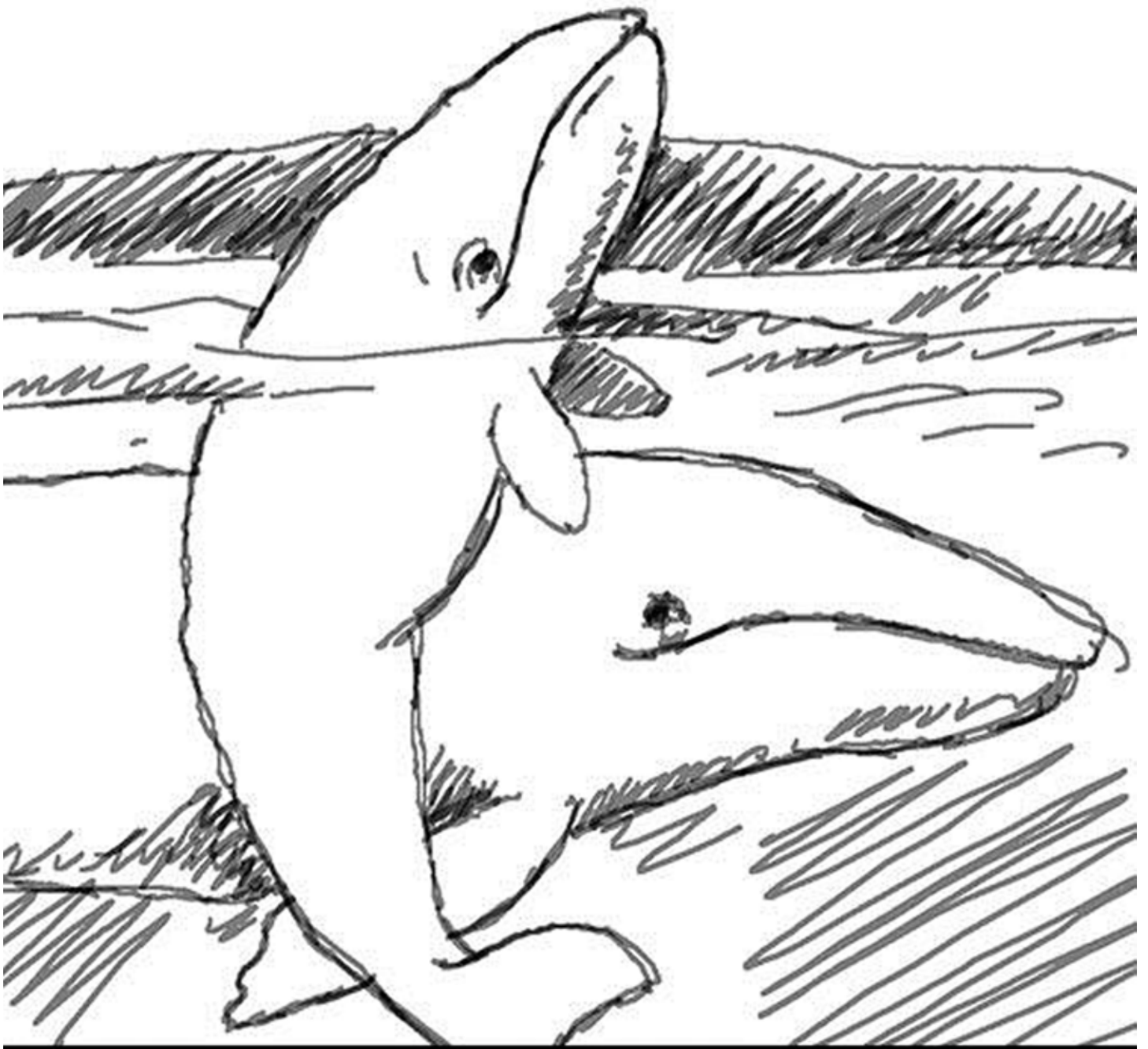
Objective: reading maps, geography, know that plants and animals live in different locations
Use this map to see where you might go to see gray whales during their migration. For an interactive map, go to the Gray Whale Migration Route at Journey North.



1. Magdalena Bay, Baja California, Mexico
2. Laguna San Ignacio, Baja California, Mexico
3. Laguna Ojo de Liebre, Baja California Sur, Mexico
4. Laguna Guerrero Negro, Baja California, Mexico
5. San Diego, California, United States
6. Los Angeles, California, United States
7. Santa Barbara Channel Islands, United States
8. Point Piedras Blancas, California, United States
9. Monterey Bay, California, United States
10. Half Moon Bay, California, United States
11. Point Reyes, California, United States
12. Depoe Bay, Oregon, United States
13. Seattle, Washington, United States
14. Richmond, British Columbia, Canada
15. Vancouver Island, British Columbia, Canada
16. Kodiak Island, Alaska, United States
17. Nelson Lagoon, Alaska, United States
18. Unimak Pass, Alaska, United States
19. The Bering Sea
20. The Chukchi Sea

Which of these locations do you think are there places: where Little Gray was born? where Little Gray and his mother swam around land? where they swam through the pass to get to the “special sea?”

Little Gray's Great Migration



Answers

Fill in the Conjunction

Ocean Seasons:

Spring is a burst of color on land **and** in the sea as plants spread their soft, new growth. Urchins munch on kelp **but** sea otters eat the urchins. Many fish, crabs, and shrimp hide and feast in the kelp forest **so** predators can't find them as easily. Fish grow bigger and stronger through the summer; **but** they are still food for many birds, bigger fish, and the humpback whales. The tiny plankton die and fall to the ocean floor **because** summer lights grow dark.

Little Gray's Great Migration:

The people clapped **and** shouted. Little Gray didn't know whether to stay **or** go. Mama lost blubber over the winter **because** she didn't have any food to eat. The whales had to swim north **so** they could find food to eat. There weren't any people in the special sea **but** there were sea lions.

Silly Sentences

Ocean Seasons:

1. Spring is a burst of color as plants spread their soft, new growth.
2. Summer is a calm, blue sea.
3. Autumn winds blow strongly across the sea.
4. As the winter seas grow colder and colder, northern waters become quiet and clear.
5. Fish dine on plankton that blooms in great numbers.
6. Urchins munch on kelp but sea otters eat the urchins.
7. The whales put on layers of fat as they eat.
8. Zooplankton are tiny floating animals that eat phytoplankton.
9. Baby animals live in shallow waters where kelp forests, mangrove swamps, and salt marshes are important nursery habitats.
10. Humpback whales eat plankton and small fish.

Little Gray's Great Migration:

11. Whales are mammals and breathe air.
12. Gray whales have two blowholes on top of their head.
13. These blowholes are like nostrils and are how the whales inhale and exhale.
14. The most important reason whales come to the surface is to breathe.
15. Whales also surface to see what is around them, communicate with other whales nearby, or scare nearby fish.
16. Breaching is when a whale jumps up so high that at least 40% of their body is out of the water.
17. Spyhopping is when the whale holds their head up so their eyes are near or above the surface of the water.
18. Some whales spyhop for several minutes at a time.
19. Lobtailing is when the whale lifts their tail up out of the water and smacks it down on the surface.
20. When gray whales sleep, they stay at the surface with their blowholes above the water.

Riddle Me This

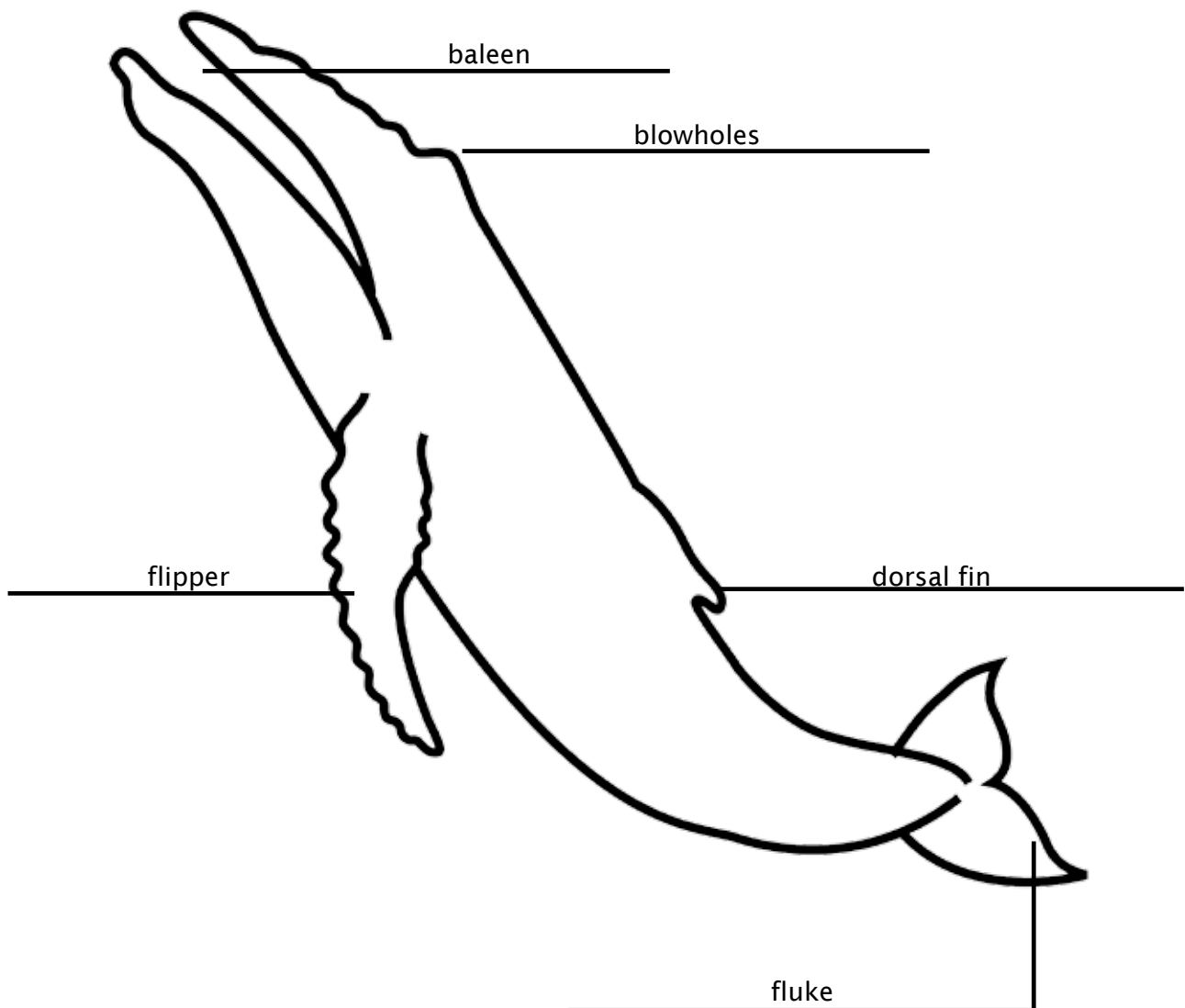
Word Search

Ocean Seasons:

1. Kelp
2. Urchin
3. Sea otter
4. Bird
5. Humpback whale
6. Puffin
7. Humpback whale
8. Plankton
9. Salmon
10. Orca

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

Whale Body Parts

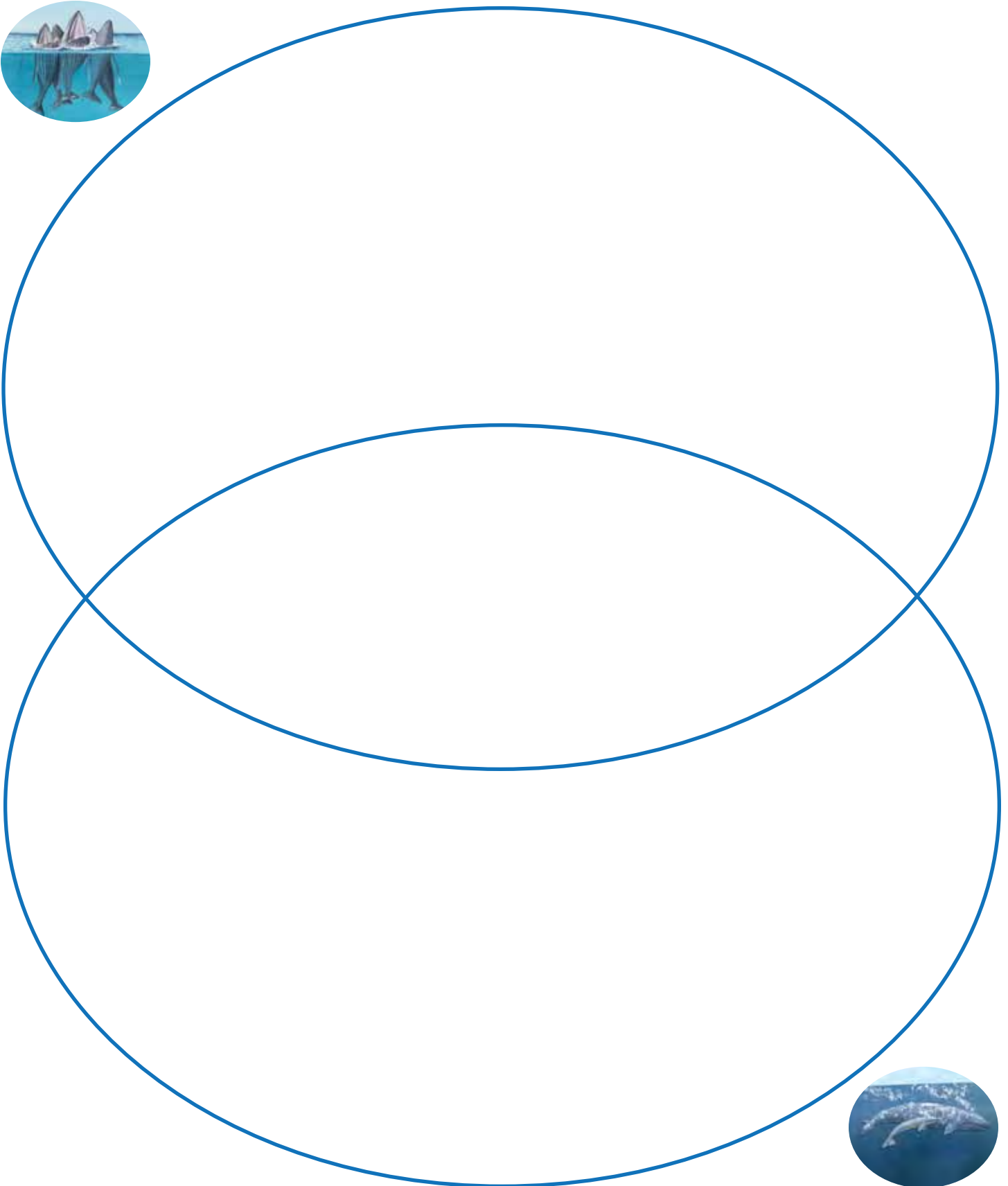


Appendix A—“What Children Know” Cards

<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

Compare and contrast humpback and gray whales.



Appendix C—Vocabulary Cards

**humpback
whale**

gray whale

baleen

blubber

**bubble-net
hunting**

**bottom
feeding**

plankton

**phyto-
plankton**

zooplankton

migrate

krill

amphipod