

Teaching Activity Guide for

On the Move

Mass Migrations

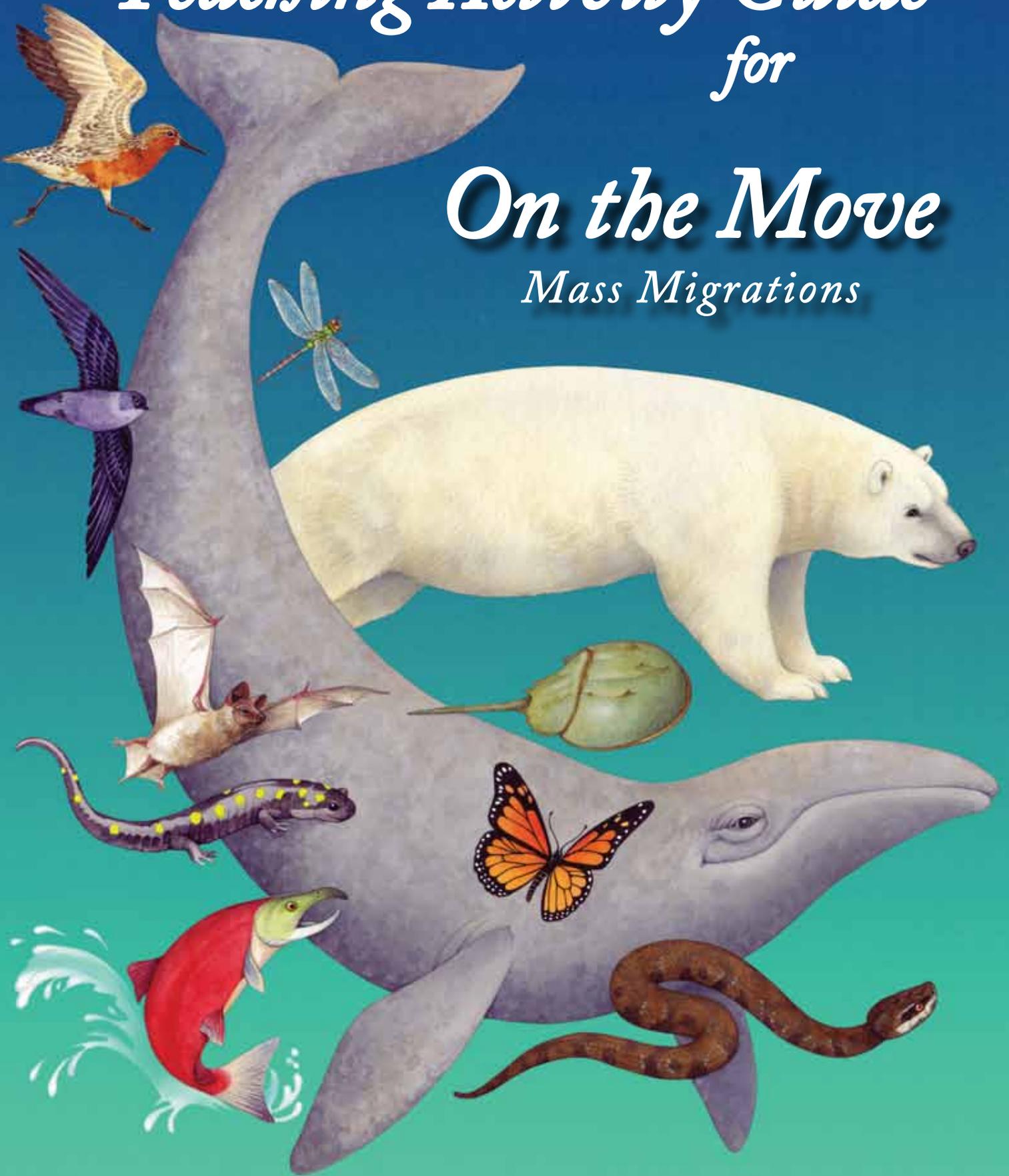
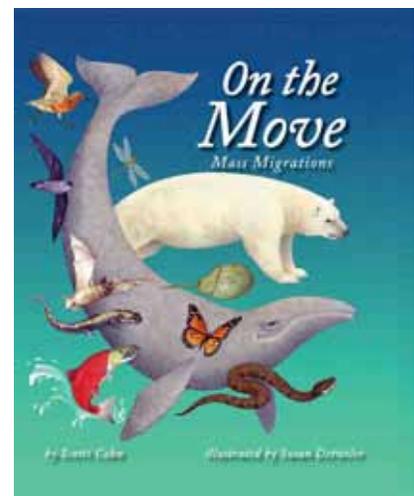


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How to Use This Activity Guide (General)

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 near 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.”

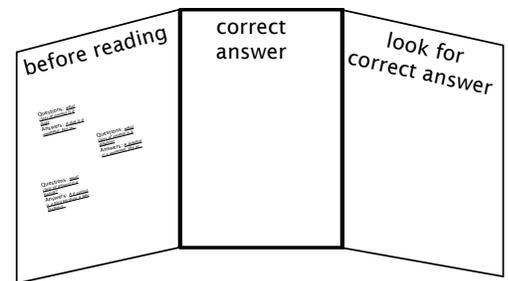
Do the children have any more questions about the subject? If so, write them down to see if they are answered in the book.

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 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

Why do animals migrate?

What kinds of animals migrate?

During what season do animals migrate?

Do any animals migrate near where you live?

Have you ever seen animals migrate? What kind of animals? Where do you think they were going?

Comprehension Questions & Writing Prompts

Objective Core Language Arts, Speaking and Listening: Ask and answer questions about key details in a text read aloud or information presented orally or through other media.

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.

Retell stories, including key details, and demonstrate understanding of their central message or lesson.

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

Comprehension Questions:

How do sandhill cranes court each other?

What is a group of caribou called?

Where do chimney swifts like to nest for the night?

How many monarch butterflies travel together?

What do polar bears cross when they migrate?

Why do northern elephant seals not need to eat during the summer when they are on land?

When salmon migrate, do they swim with the current or against the current?

What do gray whales eat?

Writing Prompts:

If you were an animal, what kind of animal would you be and would you migrate? If you migrate, why would you migrate and to where?

Imagine that you are one of the animals in this book and write a journal about your migration. When do you migrate? Who is with you? Where are you going? What do you eat? Why are you migrating?

Observation Skills: Art Scavenger Hunt

Objective Core Language Arts Integration of Knowledge and Ideas: Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

Distinguish between information provided by pictures or other illustrations and information provided by the words in a text.

Explain how specific aspects of a text's illustrations contribute to what is conveyed by the words in a story (e.g., create mood, emphasize aspects of a character or setting).

Use illustrations and details in a story to describe its characters, setting, or events.

How would you describe a salamander to someone who has never seen one? What do they look like? What kind of habitat do they live in?

What color is the sky over the sandhill cranes? What time of day do you think it is?

How can you describe the land where the caribou migrate? What kind of environment are they in?

Where is the sun when the Brazilian free-tailed bats leave the cave? What time of day is it?

How many snakes can you find buried in the leaves?

Can you find one caribou calf? How can you tell the difference between a calf and an adult caribou?

Can you find one polar bear standing on her hind legs? How many polar bear cubs do you see?

Describe the environment where salmon swim. What kinds of living and non-living things can you see?

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 the 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

See Glossary for words in Spanish and the definition in English.

Adjective	Noun		Verb	
bold	animal	night	battle	nest
bright	bear	noise	belch	paint
brilliant	bird	north	chatter	pass
brisk	blubber	ocean	court	protect
cool	bodies	polar bear	cover	reach
cruel	breeze	prairie	crawl	return
dark	butterfly	red knot	dip	roost
dry	calf	salamander	dive	scuttle
gold	cloud	salmon	dive	shake
huge	colony	seal	eat	shine
large	current	sky	fall	sleep
little	day	snakes	feed	slide
long	eagle	spring	find	slip
mother	edge	tail	flex	slither
old	egg	tank	flutter	snort
orange	evening	trip	fly	splash
padded	feet	water	form	swim
plump	female	whale	gather	swoop
safe	ground	wing	haul	travel
short	hair	winter	hover	wake
small	herd		hunt	whirl
spiked	home		lay	wiggle
spotted	ice		leap	
thin	lagoon		live	
tired	leaf		lumber	
underground	male		make	
warm	mate		migrate	
winged	migration		move	

Cross Curricular: Silly Sentences

1. Spotted salamanders _____ out of their underground _____ after dark.
verb
noun
2. Spring swoops onto the _____ on a brisk, _____ breeze.
noun
adjective
3. Horseshoe crabs look like _____ armored tanks with spiked _____.
adjective
noun
4. The red knots are _____ and _____ after their long trip from South America.
adjective
adjective
5. A _____ caribou snorts and _____ her head.
adjective
verb
6. Soon huge _____ of small, dark, winged bodies _____ through the sky.
noun
verb
7. Monarch _____ flutter their _____ orange and gold _____.
noun
adjective
noun
8. On huge padded feet, the polar bears _____ toward the water's edge.
verb
9. As the cool evening passes, many kinds of _____ slip, slide, and slither through the dry _____.
noun
noun
10. The _____ leap and splash as they struggle against the _____.
noun
noun
11. Gray whales _____ slowly and steadily south for the winter to _____ lagoons to give birth to their _____.
verb
adjective
noun

Language Arts: Word Families & Rhyming Words

Language Arts, Reading Standards: Foundational Skills, Recognize and produce rhyming words.

Word families are groups of words that have some of the same combinations of letters in them that make them sound alike...or rhyme. For example ad, add, bad, brad (Brad), cad, Chad, clad, dad, fad, gad, glad, grad, had, lad, mad, pad, plaid (silent 'i'), sad, shad, and tad all have an "ad" letter combination and rhyme.

- Find and write down rhyming words in the text.
- Are they in the same word family?
- If so, circle the combination of letters that are the same.
- Can you think of more words in the word family?

Rhyming words are:

Live

and

Dive

They are / are not from the same word family.

Other words that rhyme are:

Rhyming words are:

Cool

and

Cruel

They are / are not from the same word family.

Other words that rhyme are:

Rhyming words are:

Sky

and

Fly

They are / are not from the same word family.

Other words that rhyme are:

Rhyming words are:

Bold

and

Gold

They are / are not from the same word family.

Other words that rhyme are:

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

Blubber

Migrate

Travel

Spring

Mate

Feed

Return

Herd

Colony

Science Journal (Vocabulary)

Migrate

my definition

my drawing

Herd

my definition

my drawing

Route

my definition

my drawing

Season

my definition

my drawing

Upstream

my definition

my drawing

Nest

my definition

my drawing

Vertebrate Classes

Objective: Compare structures (e.g., wings vs. fins vs. legs; gills vs. lungs; feathers vs. hair vs. scales) that serve similar functions for animals belonging to different vertebrate classes

Mammals:

hair, fur, whiskers, or quills at some point during their lives
backbone (vertebrate)
inside skeleton (endoskeleton)
lungs to breathe
most give birth to live young
produce milk to feed young
warm-blooded

Birds:

feathers
backbone (vertebrate)
inside skeleton (endoskeleton)
lungs to breathe
hatch from hard-shelled eggs
warm-blooded

Reptiles:

dry scales or plates
backbone (vertebrate)
inside skeleton (endoskeleton); most turtles also have a hard outer shell
lungs to breathe
most hatch from leathery eggs
cold-blooded

Warm-blooded animals make their own heat and have a constant body temperature

Cold-blooded animals' body temperature comes from their surroundings

Fish:

most have scales covered with a thin layer of slime
backbone (vertebrate)
inside skeleton (endoskeleton)
gills to breathe
babies are either born alive or hatch from jellylike eggs
cold-blooded

Amphibians:

soft, moist skin
backbone (vertebrate)
inside skeleton (endoskeleton)
most hatchlings (jellylike eggs) are called larvae or tadpoles and live in water, using gills to breathe
as they grow, they develop legs and lungs and move onto land
cold-blooded

Using the sorting cards, sort the animals into their class.

Common Invertebrates

Arthropods: Insects:

- hard outer covering
- no backbone (invertebrate)
- outside skeleton (exoskeleton)
- adults have 3 body parts: head, thorax & abdomen
- mouthparts adapted for chewing, biting, sucking and lapping
- breathe through tracheae
- compound eyes
- 3 pairs of legs
- usually 2 pairs of wings and 1 pair of antennae
- most hatch from eggs
- metamorphosis: none, incomplete, or complete
- cold-blooded

Mollusks

Bi-valves:

- have a two-part shell with a hinge to open/close
- no backbone (invertebrate)
- outside skeleton (exoskeleton)
- hatch from eggs
- cold-blooded
- marine and freshwater
- symetry:

Mollusks

Gastropods (Snails):

- most have hard shells
- no backbone (invertebrate)
- outside skeleton (exoskeleton)
- hatch from eggs
- cold-blooded

Arthropod

Arachnia (Spiders):

- no backbone
- one or two body segments
- pincers or fangs near mouth
- 4 pairs of legs
- no antennae

Arthropod

Crustaceans (Crabs):

- hard outer covering
- no backbone (invertebrate)
- outside skeleton (exoskeleton)
- mouthparts adapted for chewing
- 5 or more pairs of legs
- claws
- 2 pairs of antennae
- 2 compound eyes on stalks
- adults have 2 or 3 body segments
- hatch from eggs
- cold-blooded

Dichotomous (Yes/No) Key

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.

Does the animal have a backbone?

↓
yes

vertebrate

↓
no

invertebrate

↓

Is the animal warm-blooded or cold-blooded?

↓

warm-blooded

Does the animal have feathers?

↓

yes

It is a bird.

↓

no

Does it have hair, fur, whiskers, or quills?

↓

yes

It is a mammal.

↓

cold-blooded

Does the animal have scales?

↓

yes

Are the scales moist or dry?

↓

moist

It is a fish.

↓

dry

It is a reptile.

↓

no

Does it have smooth, wet skin?

↓

yes

It is an amphibian.

Animal Sorting Cards

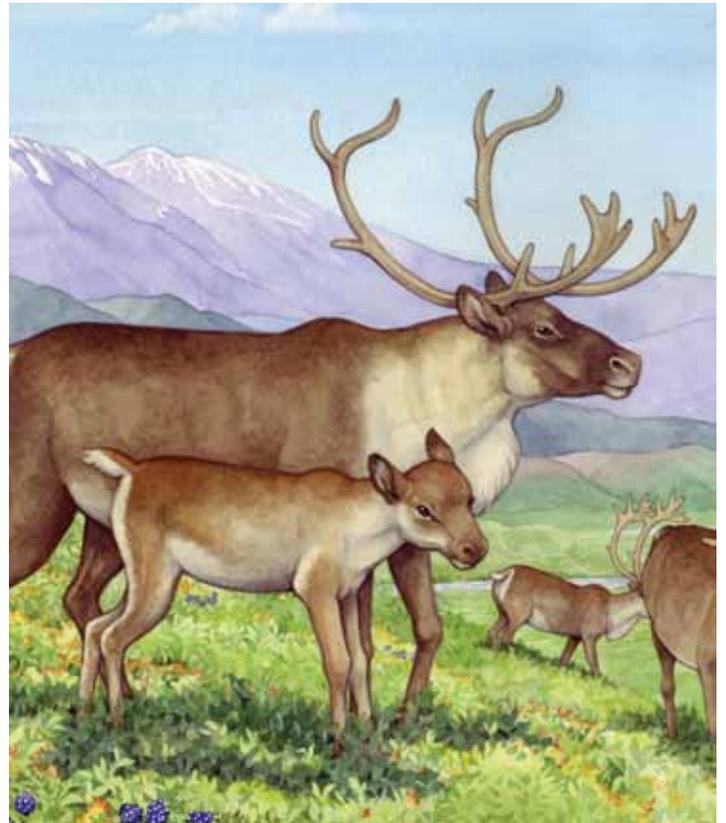
Sorting: Depending on the age of the children, have them sort cards by:

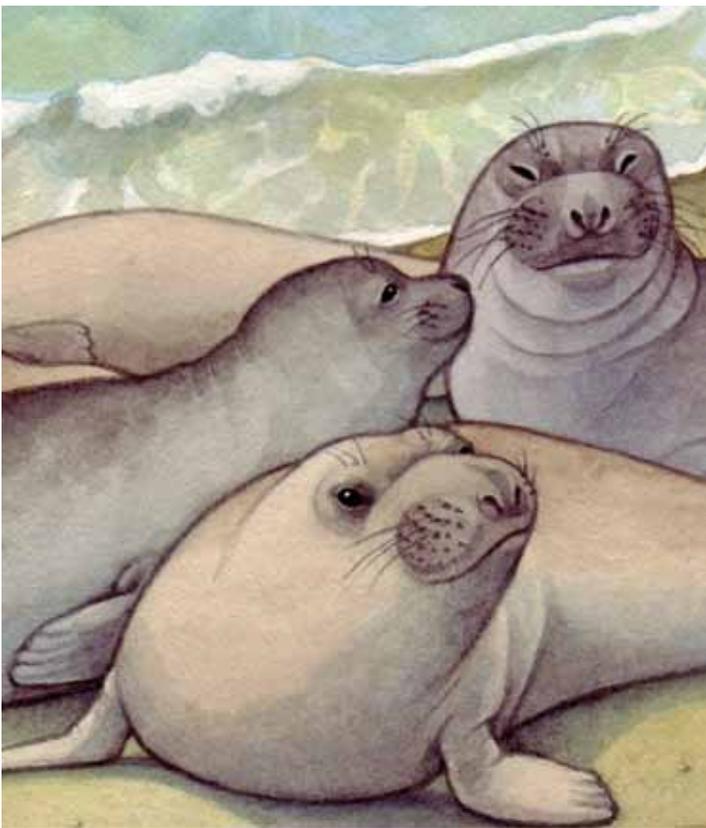
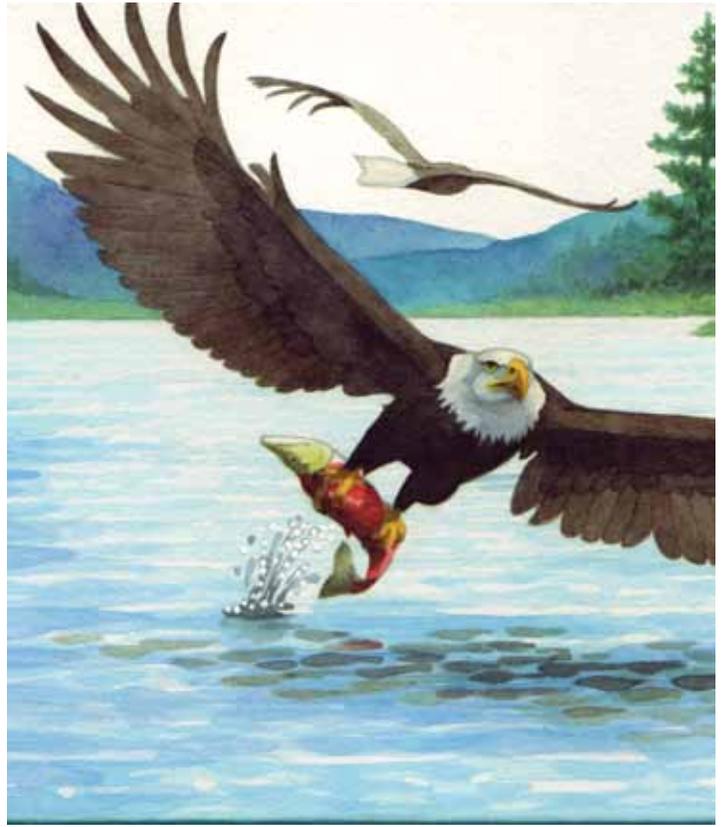
- where the animals live (habitat)
- number of legs (if the animals have legs)
- how they move (walk, swim, jump, or fly)
- type of skin covering (hair/fur, feathers, scales, moist skin)
- what they eat (plant eaters/herbivores, meat eaters/carnivores, both/omnivores)
- tail, no tail
- colors or skin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

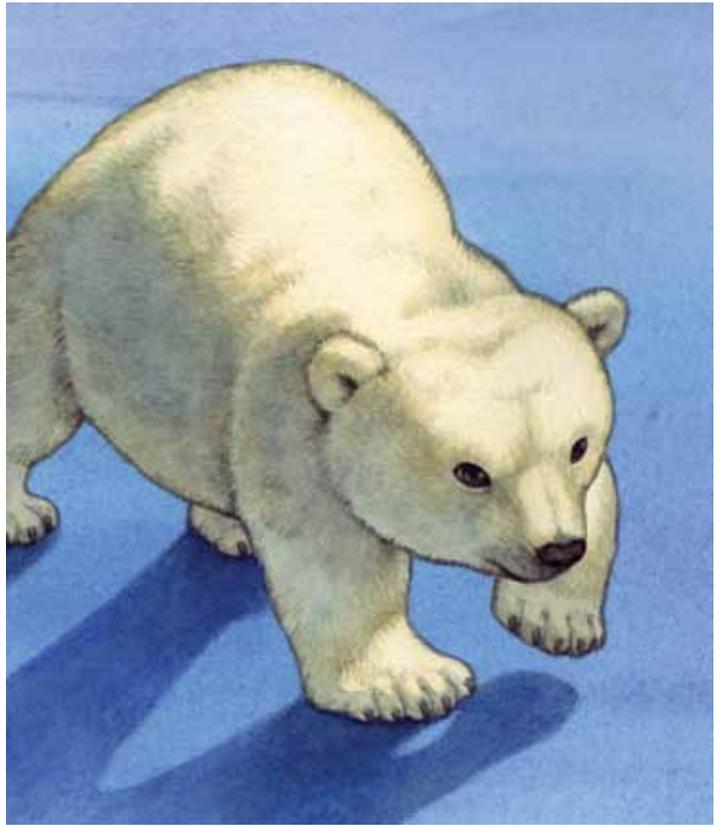
Memory Card Game: Make two copies of each of the sorting card pages and cut out the cards. Mix them up and place them face down on a table. Taking turns, each player should turn over two cards so that everyone can see. If the cards match, he or she keeps the pair and takes another turn. If they do not 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.

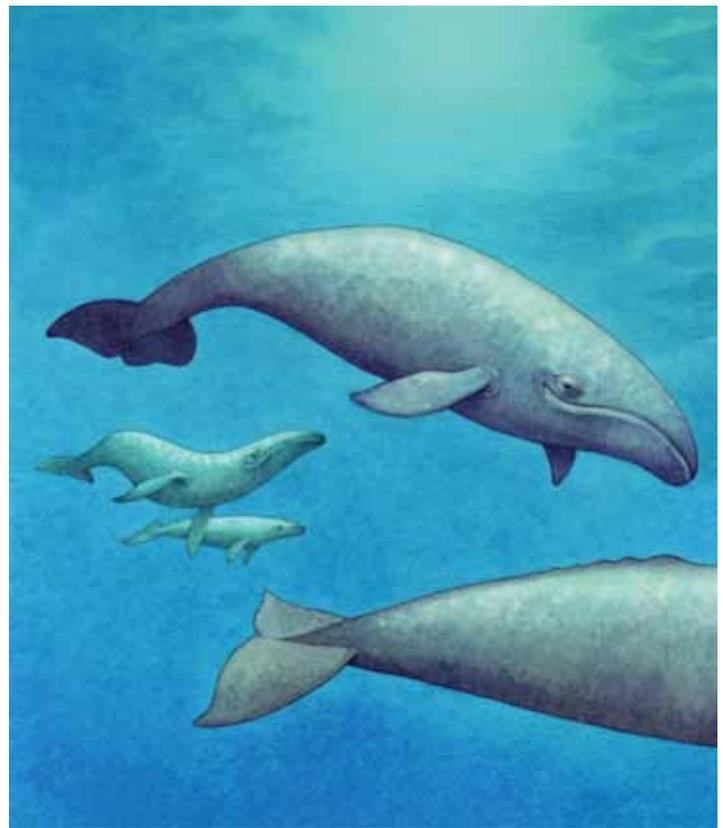
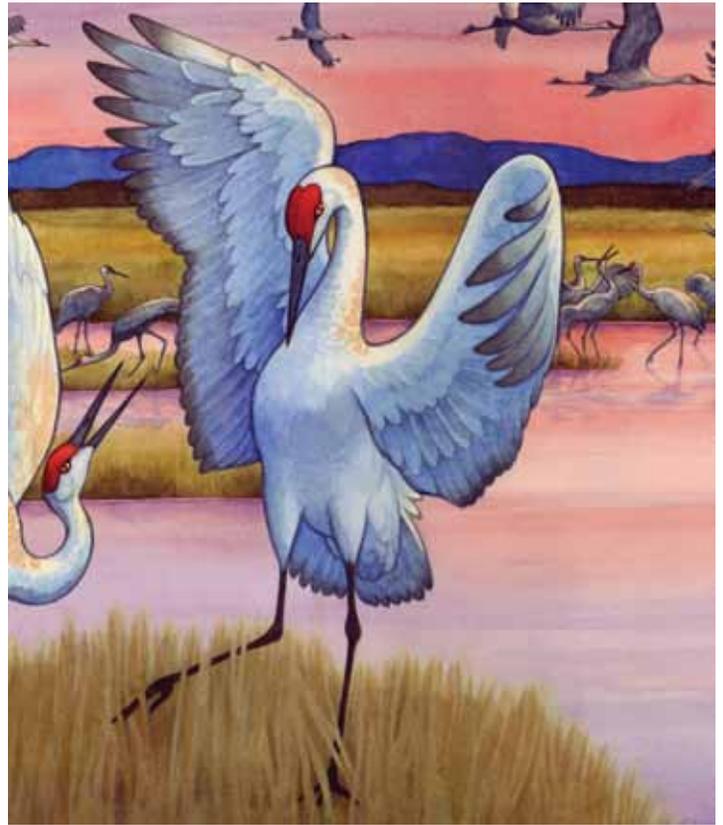
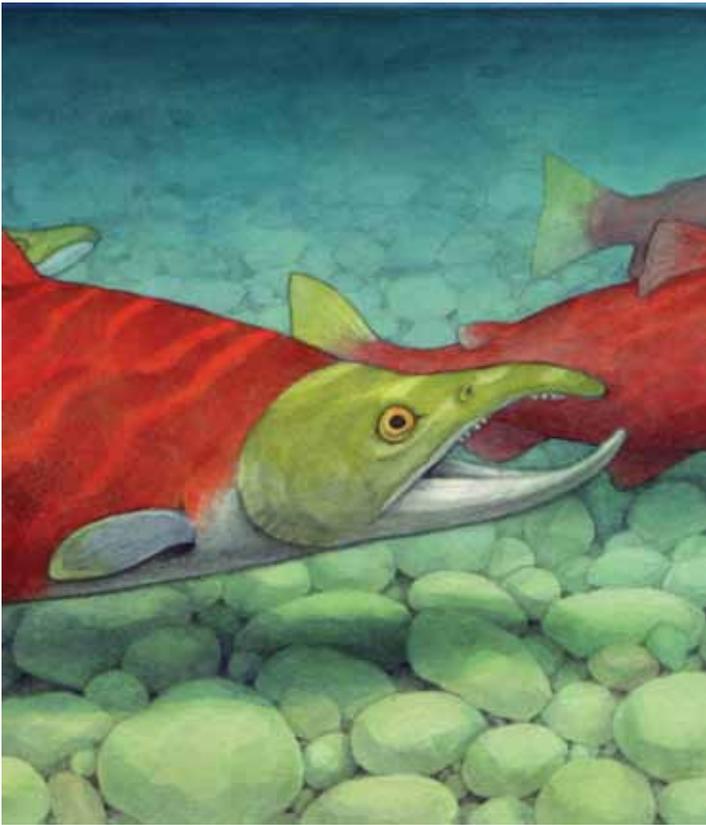
Who Am I? Copy and cut out the cards. Poke a hole through each one and tie onto a piece of yarn. Without knowing what card they have, children should put on a "card necklace" so that the card is on his/her back. They have to ask other children "yes/no" questions to try to guess what animal they are. This is a great group activity!

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, can 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.









Animal Chart

	Animals		
Appendages	legs (how many)		
	flippers/fins		
	wings		
	tail/no tail		
	horns/antlers		
Feet or hands: if they have; may have more than one	claws		
	web		
	toes		
	opposable thumbs/toes		
	hooves		
Movement: may do more than one	walks/runs		
	crawls		
	flies		
	slithers		
	swims		
	climbs		
	hops		
Backbone	backbone/vertebrate		
	no backbone/invertebrate		
Skeleton	inside skeleton (endoskeleton)		
	outside skeleton (exoskeleton)		
	no skeleton		
Body covering	hair/fur/whiskers/quills		
	feathers		
	dry scales or bony plates		
	moist scales		
	smooth, moist skin		
	hard outer shell hard outer covering		
Color/patterns	stripes or spots		
	mostly one color		
	skin color changes		
	bright, vivid colors		
Gets oxygen	lungs		
	gills		
Body temperature	warm-blooded (endothermic)		
	cold-blooded (ectothermic)		
Babies	born alive		
	hatch from eggs		
	born alive or hatch from eggs		
Metamorphosis	complete		
	incomplete		
	none		
Teeth	sharp		
	flat		
	no teeth (bill/beak)		
Food	plant eater (herbivore)		
	meat eater (carnivore)		
	both (omnivore)		

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	dry scales or bony plates		
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	smooth, moist skin		
	hard outer shell		
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	incomplete		
Teeth	none		
	sharp		
	flat		
Food	no teeth (bill/beak)		
	plant eater (herbivore)		
	meat eater (carnivore)		
	both (omnivore)		

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

Adapt to the Habitat

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?

True or False?

Objective: Critical thinking skills

Do you think the following statements are true or false?

1. T/F Only mammals migrate.
2. T/F All birds migrate south for the winter.
3. T/F Salmon migrate upstream to their spawning ground.
4. T/F When caribou migrate, the herd can number in the thousands.
5. T/F Polar bears migrate to South America to find warm weather in the winter.
6. T/F Brazilian free-tailed bats migrate south for the winter.
7. T/F Gray whales travel thousands of miles on their annual migrations.
8. T/F Sandhill cranes dance and preen to find a mate during their annual migration.
9. T/F Horseshoe crabs migrate north to the Arctic to find food in the winter.
10. T/F When monarch butterflies migrate, they travel in groups that number in the tens of millions.

Math Cards

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

Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

Use numbers, up to 10, to place objects in order, such as first, second, and third, and to name them

For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.

Math Card Games

(Make four copies of the math cards to play these games):

Tens Make Friends Memory Game is a combination of a memory and adding game.

- Play like the memory game, above.
- If the animal numbers add up to 10, the child keeps the pair and takes another turn.
- If they do not add up to ten, the player should turn the cards back over and it is another player's turn.

Go Fish for Fact Families is a twist on "Go Fish."

- Shuffle cards and deal five cards to each player. Put the remaining cards face down in a draw pile.
- If the player has three cards that make a fact family, he/she places them on the table and recites the four facts related to the family. For example, if someone has a 2, 3, and 5, the facts are: $2 + 3 = 5$, $3 + 2 = 5$, $5 - 2 = 3$, $5 - 3 = 2$.
- The player then asks another player for a specific card rank. For example: "Sue, please give me a 6."
- If the other player has the requested card, she must give the person her card.
- If the person asked doesn't have that card, he/she says, "Go fish."
- The player then draws the top card from the draw pile.
- If he/she happens to draw the requested card, he/she shows it to the other players and can put the fact family on the table. Otherwise, play goes to the next person.
- Play continues until either someone has no cards left in his/her hand or the draw pile runs out. The winner is the player who then has the most sets of fact families.

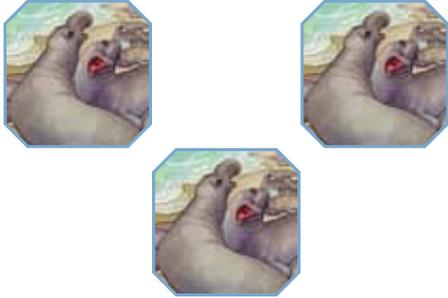
1



2



3



4



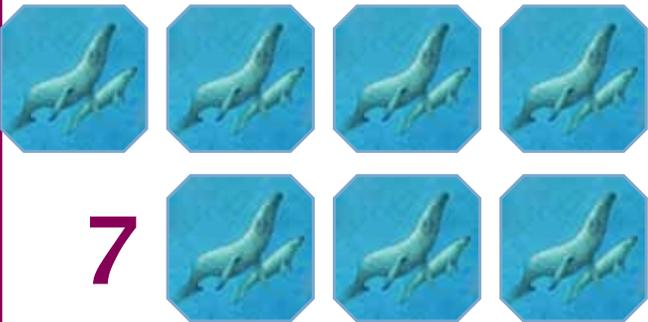
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6



7



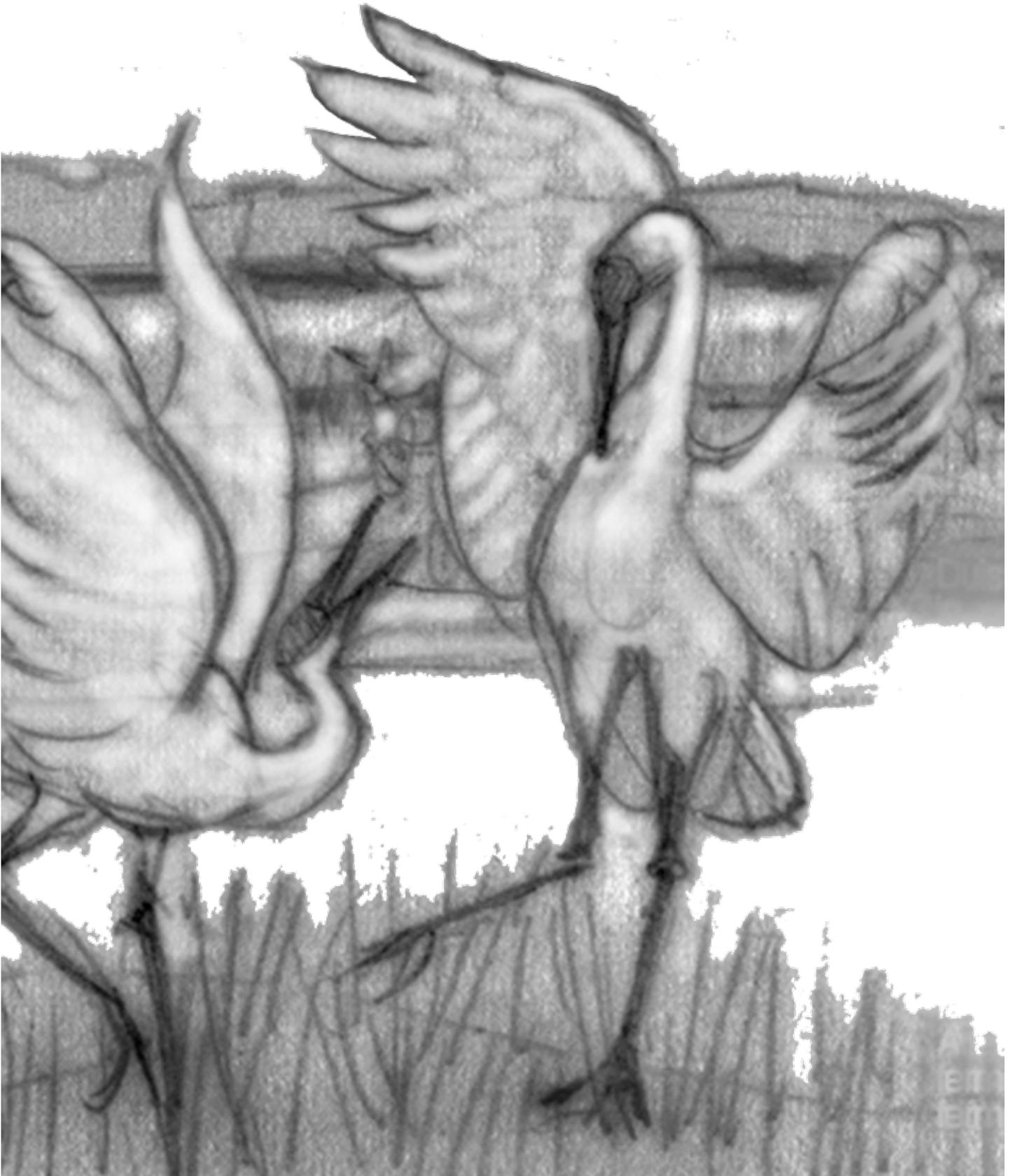
8



9



Coloring Pages







Glossary

Word	Definition	Part of Speech	Spanish
amphipods	a family of small crustaceans sometimes known as "sand fleas," although they bear no relation to fleas.	noun	anfípodos
arctic	land or water north of 60° N latitude	noun	Ártico
armored	covered in protective plates	adjective	blindado
autumn (fall)	the season between summer and winter; leaves fall off of trees, temperature cools	noun	otoño
bald eagle	a type of bird of prey; recovered from endangered listing, the U.S. national symbol	noun	águila (feminine noun)
bat	a flying, nocturnal mammal (the only mammal to fly)	noun	murciélago
battle	to compete, to strive against	verb	pelear
bay	a large body of water mostly enclosed by land, with an inlet that allows access to the sea	noun	bahía
beach	the sandy or rocky area where the ocean meets the land	noun	playa,
bear	a large mammal with sharp claws	noun	oso
beetle	a winged insect with a hard smooth back	noun	escarabajo
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 a food reserve	noun	grasa
breeze	a light wind	noun	brisa

Word	Definition	Part of Speech	Spanish
butterfly(ies)	a type of insect, often with bright colored wings, known for their "fluttering" during the day	noun	mariposa
calf	a name for some baby animals including: Antelope, Bison, Buffalo, Camel, Cattle, Elephant, Elk, Giraffe, Gnu, Hippopotamus, Moose, Porpoise, Reindeer, Rhinoceros, Whale, Yak	noun	jato, jata, la cría
caribou	a large reindeer native to North America	noun	caribú
climate	average weather condition at a place over a period of years based on temperature, wind velocity and precipitation	noun	ambiente
colony	a large group of a single species of organism living as one group or (2) a group which co-operates in the construction of a nest and in the rearing of the young	noun	colonia
cottonmouth snake	a kind of venomous snake native to the southeast United States	noun	serpiente
court	to seek affection from, to perform an activity to attract a mate	verb	cortejar
crane	a kind of large, long-legged, long-necked bird	noun	grulla
cricket	a leaping insect; males make music by rubbing front legs and wings together	noun	grillo
current	the flow of liquid in a river or stream	noun	corriente

Word	Definition	Part of Speech	Spanish
dragonfly	an insect with a long, colorful body and two sets of clear wings	noun	libélula
earth	the ground, dry land, the solid surface of the planet	noun	tierra
eat	to bite and swallow food as nourishment	verb	comer
egg	a rounded reproductive object from which animals hatch (birds, amphibians, reptiles, insects, fish)	noun	huevo, óvulo (biol.)
fat	a soft white substance stored in a layer under your skin	noun	graso
feast	to eat a large meal, usually around a special occasion	verb	banquete, festín
flap (wings/ fins)	to move quickly up and down	verb	aletear
flex	to contract a muscle, to bend a joint	verb	flexionar
food	what is eaten to sustain life, provide energy, promote growth, etc	noun	alimento
frozen	treated or affected by freezing	adjective	congelado
garden	a plot of ground where herbs, fruit, flowers, or vegetables can grow	noun	jardín
group	a number of individuals or objects that are assembled together or that have some unifying relationship.	noun	grupo
haul out	the place or the act of an animal crawling or pulling themselves out of the water and onto land, ice, or other object, such as a buoy	verb	sacar

Word	Definition	Part of Speech	Spanish
herd	a group of certain large animals elephants, llamas, etc.	noun	rebaño
horseshoe crab	a marine arthropod with a large, round body and a pointed tail	noun	cangrejos herradura
hover	to flutter about in one area	verb	cernerse, suspender
hunt	to chase or search for animals for the purpose of catching or killing	verb	cazar
ice	frozen form of water	noun	hielo
insect	a six-legged arthropod, usually with a hard exoskeleton and three main body parts	noun	insecto, bicho
lagoon; pool	a shallow body of water separated from the ocean by a natural barrier such as a sandbar or reef	noun	laguna
leaf (leaves-pl)	a growth from a plant stem that is typically a flattened, greenish organ; a unit of the foliage, food manufacture by photosynthesis	noun	hoja
location	a position or point in physical space that something occupies on Earths' surface	noun	lugare
lumber	to move slowly and heavily	verb	caminar pesadamente
mate	to join closely, to pair animals for breeding	verb	aparearse
mate	an animal partner for the purpose of having young	noun	apareamiento
mature	adult, fully grown and developed	adjective	maduro

Word	Definition	Part of Speech	Spanish
migrate	to travel over a distance with the change of season (or other cycle) or to find food, breed, or nurse young	verb	emigrar
migration	annual animal movement to a different location during seasonal changes to better find food, to breed, or nurse young	noun	migración
migrators	animals that migrate	noun	especies migratorias
mile	a customary unit of length; 1 mile = 1760 yards = 5280 feet.	noun	milla
molt	to shed a coat: fur, feathers, skin, or hard outer covering	verb	mudar la piel
mosquito	a small flying insect that bites the skin of people and animals in order to feed on their blood, can carry serious diseases	noun	mosquito
moth	a type of flying, nocturnal insect, often confused with butterfly	noun	mariposa nocturna, polilla
mountain	a landmass that projects above it's surroundings	noun	montaña
nest	to build a best, to create a warm, safe home	verb	anidar
ocean	the vast body of salt water that covers almost three fourths of the earth's surface	noun	océano
ocean floor	the bottom of the ocean, the ground beneath the water	noun	fondo del océano
padded	lined with soft material	adjective	acolchada
polar bear	an endangered white-colored bear native to the Arctic	noun	oso polar
prairie	a grassy, unforested area.	noun	pradera

Word	Definition	Part of Speech	Spanish
pregnant	carrying a developing offspring in the body	adjective	embarazada
pup	the young of certain animals, e.g., guinea pig, prairie dog, gerbil, hamster, sea lion, seal, shark, dog, armadillo, bat, mole, squirrel, beaver, mouse, rat, coyote, wolf	noun	cachorro, cría de foca
rain	liquid precipitation in the form of drops	noun	lluvia
red knot	a kind of migratory sandpiper	noun	playeros rojizo
roost	where bats, owls, and other flying creatures take rest	noun	posadero
route	a fixed path, a customary line of travel	noun	ruta
salamander	amphibians that look like lizards but that return to water only to breed	noun	salamandra
salmon	a kind of large fish that swims in both salt and fresh water	noun	salmón
seal	a carnivorous, aquatic mammal with a torpedo-shaped body and flippers	noun	foca
shade	a shelter from the heat	noun	sombra
shed	to cast off, to separate	verb	quitarse
sky	the space seen above the earth (air)	noun	cielo
slither	to move in a sliding motion	verb	culebrear
smokestack	a large, vertical chimney for discharging or dissipating vapors and gases	noun	chimenea
South America	one of the seven continents	noun	Sudamérica
spawning ground	specific regions or areas of water where animals spawn or produce their eggs	noun	tierra

Word	Definition	Part of Speech	Spanish
spike	something sharp and pointed that sticks out	noun	espina
spring	the season between winter and summer; leaves appear on trees, flowers begin to grow again, temperature warms	noun	primavera
summer	the hottest season of the year, between spring and fall	noun	verano
Sun	the star closest to Earth, the center of our solar system; a ball of hot, glowing gases giving Earth heat and light.	noun	sol
surface	the top layer or outside of something	noun	superficie
swift	a medium-sized bird with a forked tail and a loud scream	noun	vencejos
travel	to go from one place to another	verb	viajar
underground	under the earth	adjective	subterráneo
upstream	against the flow of the current in a river or stream	adjective	aguas arriba
warble	to sing, to whistle with trills, to celebrate in song	verb	gorjeo
water	a fluid necessary for the life of most animals and plants	noun	agua
whale	a marine mammal that breathes through one or two blowholes on the top of its head	noun	ballena
wings	the two forelimbs (like arms) of most birds and of bats that are specialized for flight; many insects have wings; butterflies have four	noun	alas
winter	the coldest season of the year, precipitation in some areas freezes to snow or ice	noun	invierno

Answers

Silly Sentences

1. Spotted salamanders crawl out of their underground homes after dark.
2. Spring swoops onto the prairie on a brisk, bold breeze.
3. Horseshoe crabs look like little armored tanks with spiked tails.
4. The red knots are tired and thin after their long trip from South America.
5. A mother caribou snorts and shakes her head.
6. Soon huge clouds of small, dark, winged bodies whirl through the sky.
7. Monarch butterflies flutter their brilliant orange and gold wings.
8. On huge padded feet, the polar bears lumber toward the water's edge.
9. As the cool evening passes, many kinds of snakes slip, slide, and slither through the dry leaves.
10. The salmon leap and splash as they struggle against the current.
11. Gray whales swim slowly and steadily south for the winter to warm lagoons to give birth to their calves.

Word Search

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

E2 — Blubber
D9 — Migrate
C1 — Travel
G2 — Spring
I7 — Mate
A7 — Feed
J3 — Return
D4 — Herd
B2 — Colony

True/False

1. False
2. False
3. True
4. True
5. False
6. True
7. True
8. True
9. False
10. True

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 two animals in this book

