

Teaching Activity Guide

Hey Diddle Diddle

A Food Chain Tale

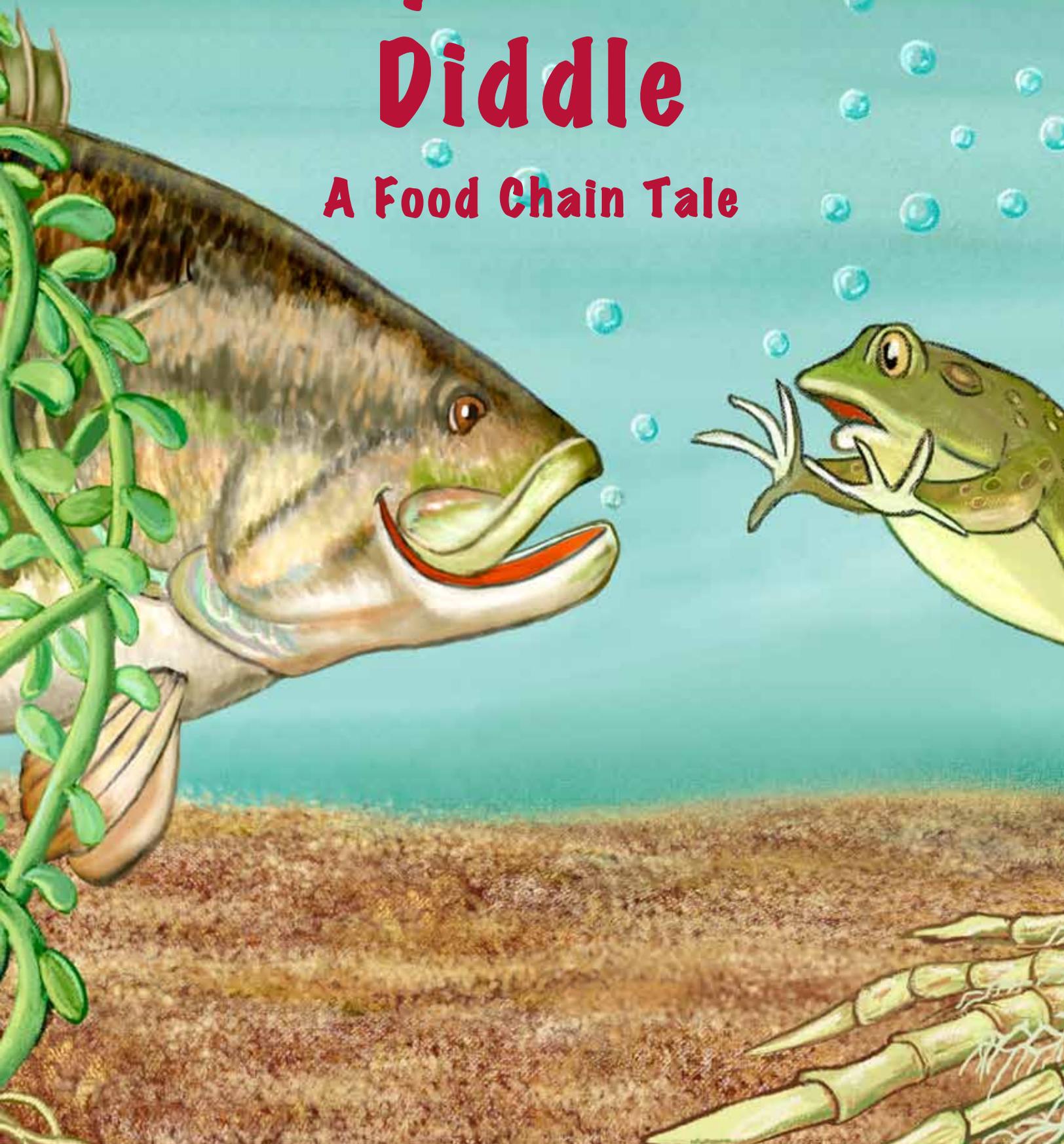
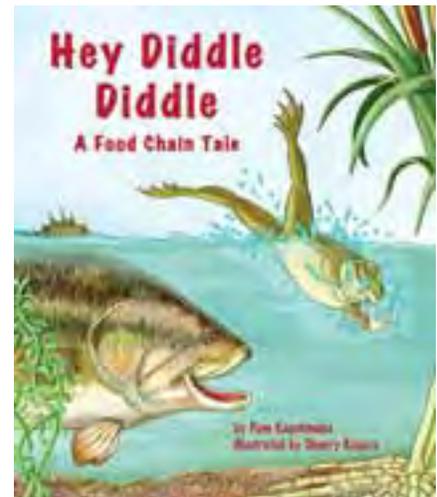


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Arbordale Publishing
Mt. Pleasant, SC 29464



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 is 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 learning) 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, aquariums, 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.

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. 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.

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, they should say they 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, 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.

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.

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.”

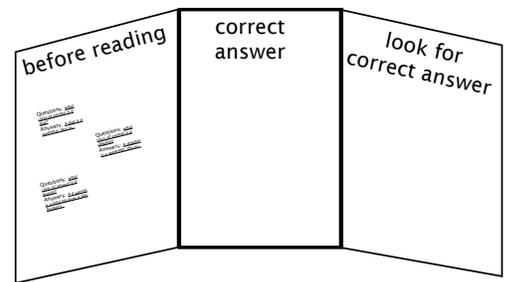
Do the children have any more questions about the subject? If so, write them down to see if they are answered in the book.

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 are some animals that live in a pond?

What are some animals that live on land but live close to a pond?

What are some ways those animals rely on the water from the pond?

What are some things they might eat?

How do you think those animals get their food?

How might they get their food?

Can an animal be both predator and prey?

Comprehension Questions

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.

In what type of habitat does this story take place?

Which animals live IN the water and which animals live NEAR the water?

What is each animal doing in the story?

What do the animals eat?

Who becomes “queen” for the day?

How does the illustrator show that the animal is a “queen?”

The author gives hints about the animal and its classification. For example, the beetle has six legs. What are some of the other hints she gives?

snake

bird

frog

bass

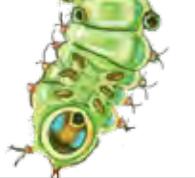
lizard

bobcat

Language Arts & Science: Five Senses

Objective Core Language Literature 4: Identify words and phrases in stories or poems that suggest feelings or appeal to the senses.

Re-read the story and write down any words that relate to the five senses:

Animal	Touch	Taste	Sight	Smell	Hearing
					
					
					
					
					
					
					
					

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. 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
alive	abdomen	frog	scale	attract
cold	adult	fur	scavenger	bask
cold-blooded	air	gills	shell	breathe
dry	amphibian	habitat	skin	catch
forked	animal	hair	slime	classify
green	antennae	hawk	snake	crouch
hard	backbone	head	soil	dash
healthy	bacteria	heat	spine	decay
ill	bass	herbivore	sun	die
injured	beetle	insect	sunlight	fly
moist	bird	invertebrate	tadpole	gobble
non living	bobcat		tail	grab
outer	body	leg	talon	grow
plump	bone	lizard	teeth	hatch
riparian	butterfly(ies)	lungs	temperature	hunt
sharp	carnivore	mammal	thorax	kerplunk
shiny	caterpillar	moth	tongue	pounce
slime-covered	claw	nutrient	vertebrate	purr
slow	consumer	omnivore	water	sense
soft	egg	oxygen	whisker	shed
stiff	exoskeleton	pair		slither
three	feathers	photosynthesis		smell
two	fishes	plant		swallow
warm, warmer, warmest	food	predator		swim
warm-blooded	food chain	prey		
wet	food web	producer		
young	freshwater	reptile		

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 poem.
- 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:

and

They are / are not from the same word family.

Other words that rhyme are:

Rhyming words are:

and

They are / are not from the same word family.

Other words that rhyme are:

Rhyming words are:

and

They are / are not from the same word family.

Other words that rhyme are:

Rhyming words are:

and

They are / are not from the same word family.

Other words that rhyme are:

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.

A shiny green beetle was a strollin' along.

A slithering snake ate the beetle.

A bird snatched and ate the snake.

A frog kerplunked into the pond.

A passing bass ate the frog.

A plump caterpillar nibbled on a leaf.

A lizard ate the caterpillar.

A sneaky bobcat ate the lizard.

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

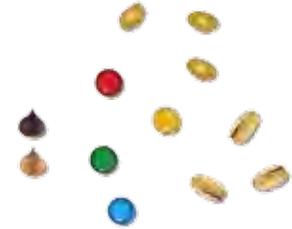
BEETLE	5C	SNAKE	3G
HAWK	7F	FROG	6H
FISH	5I	LIZARD	2C
BOBCAT	5C	LEGS	6B
EAT	10C	FUR	7B
FEATHERS	7B	SCALES	3B

Edible Sorting and Classifying Activity

Objective Core Language Arts Vocabulary Acquisition and Use: Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.

Gather a cup of edible “sorting items.” For example:

- As many different kinds of M&Ms as you can find
- Chocolate & peanut butter chips
- Hershey Kisses
- Peanuts or other type of nuts



Ask the children to sort the items into groups. There is no right and wrong, only what makes sense to the child. When finished, ask the child:

What feature or attribute (color, size, ingredient, etc.) did you use to sort the items?

- Are there some items that fit more than one group or don't fit any group?
- Is it easy to sort or were there some items that were a little confusing?

If more than one person did this, did everyone sort by the same attribute? To extend the learning, graph the attributes used to sort the items (blank graph below).

Graph the attributes that children used to sort their items.

What was the most common attribute (size, shape, color, etc.) used?

10				
9				
8				
7				
6				
5				
4				
3				
2				
1				
attribute				

Classifying Animals

Just as we sort candy, scientists sort all living things into groups to help us understand and connect how things relate to each other. Scientists ask questions to help them sort or classify animals.

Based on the answers to the questions, scientists can sort the living organisms. The first sort is into a Kingdom. There are five commonly accepted Kingdoms: Monera, Protista, Fungi, Plantae, and Animalia. All of the living things in this book belong to Animalia or the Animal Kingdom.

The next big sort is into a Phylum. One of the first questions that a scientist will ask is whether the animal has (or had at some point in its life) a backbone. If the answer is “yes,” the animal is a vertebrate. If the answer is “no,” the animal is an invertebrate.

Each Phylum is broken down into Classes, like mammals, birds, reptiles, fish, amphibians, or insects. Then each class can be broken down even further into orders, families, genus and species, getting more specific.

The scientific name is generally in Latin or Greek and is the living thing’s genus and species. People all over the world use the scientific names, no matter what language they speak. Most living organisms also have a common name that we use in our own language.

Some questions scientists ask:

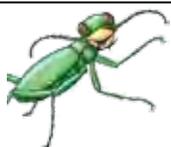
- Does it have a backbone?
- What type of skin covering does it have?
- Does it have a skeleton? If so, is it inside or outside of the body?
- How many body parts does the animal have?
- Does it get oxygen from the air through lungs or from the water through gills?
- Are the babies born alive or do they hatch from eggs?
- Does the baby drink milk from its mother?
- Is it warm-blooded or cold-blooded?

Using what you know, and information and pictures in the book, see how many Animal Chart squares you can fill in for each animal.

Animal Chart

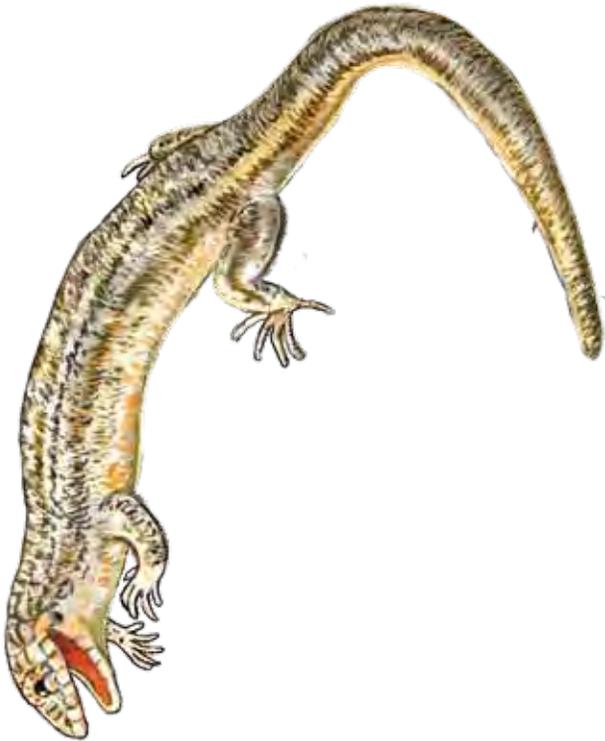
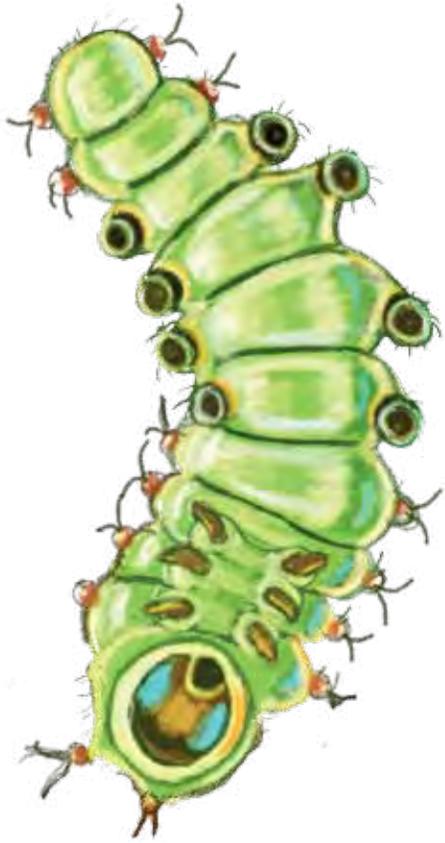
	Animals		
Appendages	legs (how many)		
	flippers/fins		
	wings		
	tail/no tail		
	horns/antlers		
Feet or hands: if they have; may have more than one	claws		
	web		
	toes		
	opposable thumbs/toes		
	hooves		
Movement: may do more than one	walks/runs		
	crawls		
	flies		
	slithers		
	swims		
	climbs		
	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		
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)		

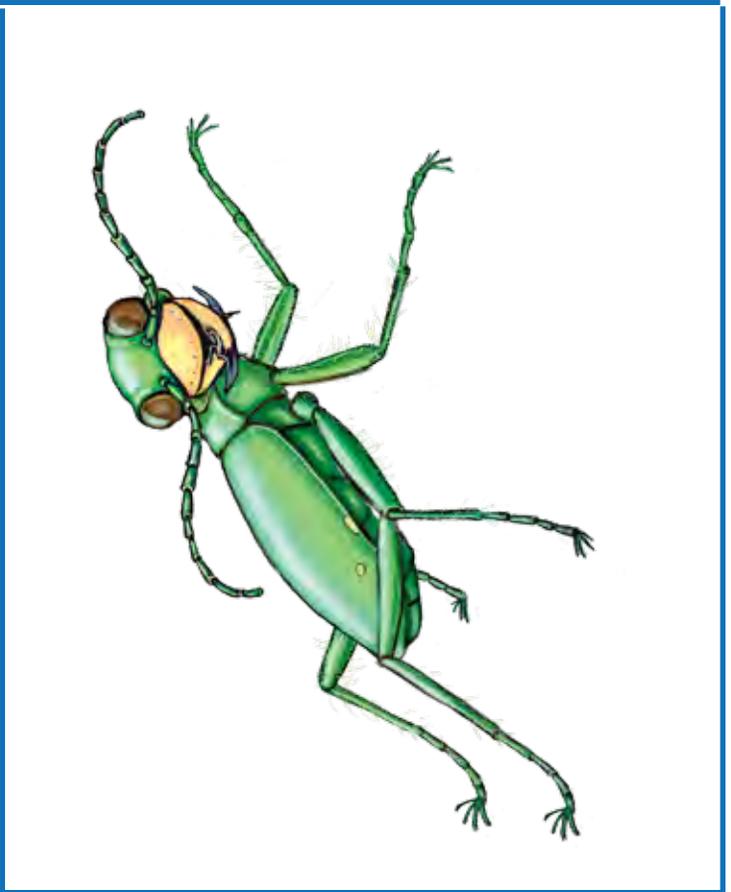
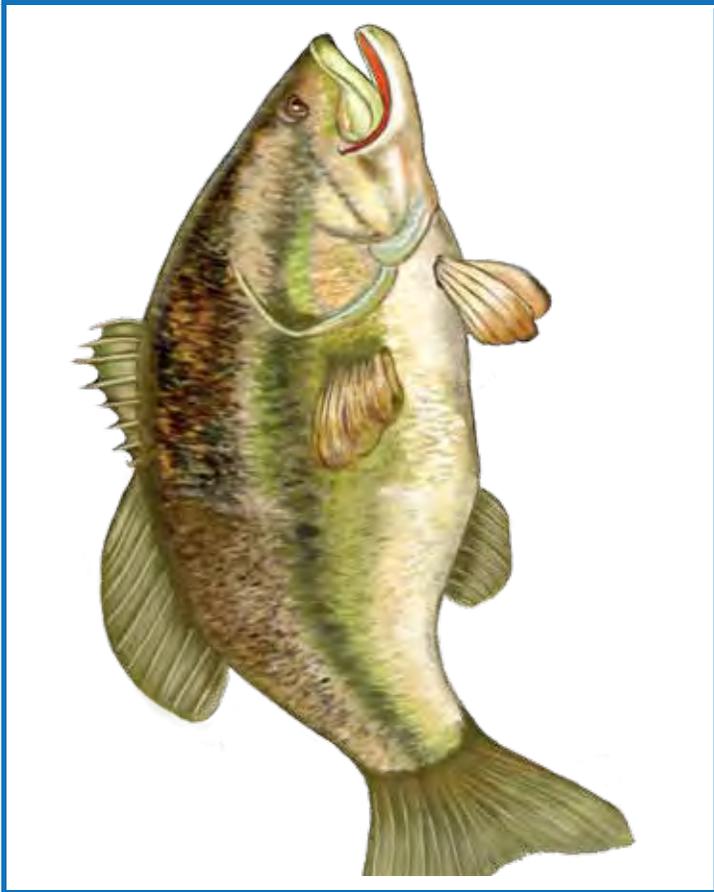
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	mostly one color		
	skin color changes		
	bright, vivid colors		
Gets oxygen	lungs		
	gills		
Body Temperature	warm-blooded (endothermic)		
	cold-blooded (ectothermic)		
Babies	born alive		
	hatch from eggs		
	born alive or hatch from eggs		
Metamorphis?	complete		
	incomplete		
	none		
Teeth	sharp		
	flat		
	no teeth (bill/beak)		
Food	plant eaters (herbivore)		
	meat eater (carnivore)		
	both (omnivore)		

Animal Sorting Cards





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

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

Physical or Behavioral?

Circle whether you think the adaptation is physical (P) or behavioral (B):

1. P/B The beetle has six legs to help him go.
2. P/B The snake slithers along the ground.
3. P/B The bird has feathers to help it fly.
4. P/B The frog swims in water and hops on land.
5. P/B The fish has gills.
6. P/B The lizard basks in the sun to get warm.
7. P/B The caterpillar nibbles on leaves.
8. P/B The bobcat has fur to keep it warm.

Food Chain

my definition

my drawing

Food Web

my definition

my drawing

Top of Food Chain

my definition

my drawing

Bottom of Food Chain

my definition

my drawing

True or False?

Circle whether you think the statement is true or false:

1. T/F An animal is either a predator or a prey but can't be both.
2. T/F Plants are the bottom of the food web because they make their own food through photosynthesis.
3. T/F Plants and animals must be found in the same habitat in order to share a food chain.
4. T/F Birds have feathers.
5. T/F Mammals have hair or fur (whiskers are a type of hair)
6. T/F Insects have backbones.
7. T/F All animals are born alive and drink milk from their mothers.
8. T/F Caterpillars are insects.
9. T/F Amphibians will always live around (or in) water.
10. T/F Food chains make up food webs.

Math: Measuring (compare & contrast)

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 an animal is compared to something you know.

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

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

Animal	ft/in	m/cm
beetle	about 1/2 inch	12 to 15 mm
snake (garter)	avg about 35 in	avg about 88 cm
kestrel (bird)	up to 24 in wingspan	up to 61 cm wingspan
bass (bigmouth)	up to 22 in	up to 56 cm
bobcat	25.5 to 41 in	65 to 105 cm
you		

Which animal is the biggest or longest?

Which animal is closest to you in size (length or height to your height)?

Which animal is the smallest?

Can you find things in your house (or at school) that are about the same length as the animals?

Can you put the animals in order by size?



Animal	lb	kg
kestrel bird	up to 5 1/2 oz	up to 165 g
bass (bigmouth)	22 lb	10 kg
bobcat	8.8 to 33 lb	4 to 15 kg
you		

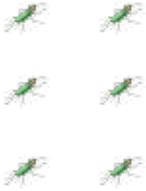
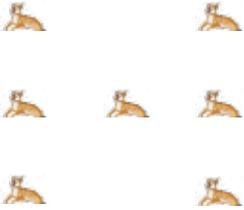
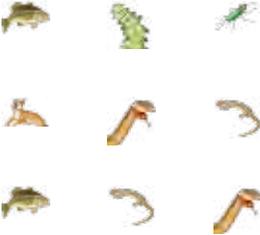
Which animal is the heaviest?

Which animal is the lightest?

Can you find things in your house (or at school) that weigh about the same amount as the animals?

Can you put the animals in order by weight?

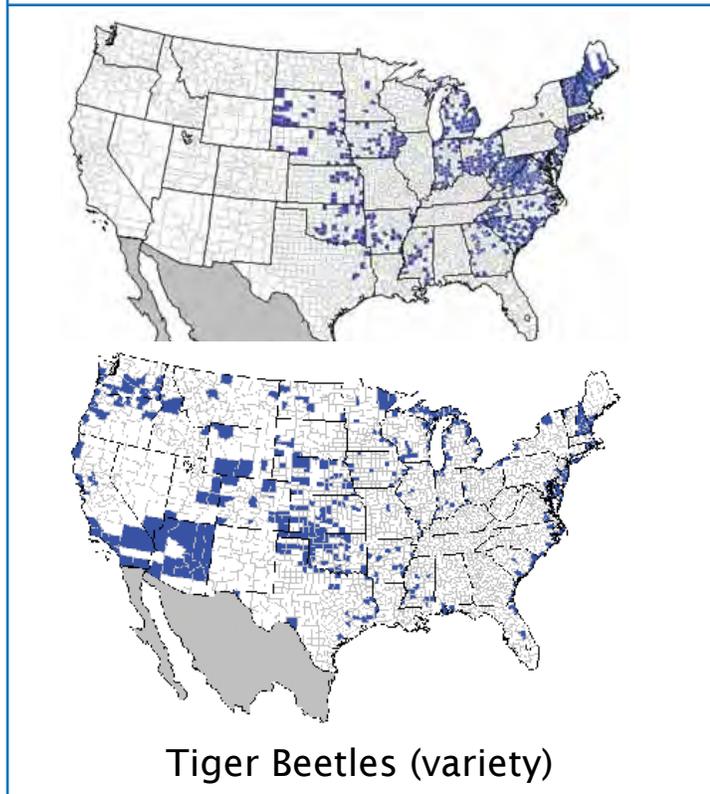
Math Cards

<p>1</p> 	<p>2</p> 
<p>3</p> 	<p>4</p> 
<p>5</p> 	<p>6</p> 
<p>7</p> 	<p>8</p> 
<p>9</p> 	

Map Activity

Using these maps as a reference, color the areas where these animals live on the blank map (in appendix). Click on the animal name to go to the map source.

Do any animals live in the same state or province as you?







Glossary

Word	Definition	Part of Speech	Spanish
abdomen	the back of the three main body divisions of an insect: contains major organs	noun: body part	abdomen
adult	the final stage of an animal that goes through metamorphosis	noun	adulto
air	the invisible gaseous substance surrounding the earth, a mixture mainly of oxygen and nitrogen	noun	aire
alive	having life; not dead or inanimate	adjective	vivo
amphibian	a cold-blooded animal with smooth, moist skin; lives in water and then land; breathes through gills and then lungs, e.g. frogs, newts, and salamanders	noun: classification	anfíbio
animal	any member of the kingdom Animalia: can move voluntarily, get and eat food, and respond to stimuli	noun	animal
antennae	long, thin, feelers from an insect's head that inform it about the feel, sound, taste, smell, temperature, and humidity in the world outside of its skeleton	noun: body part	antena
attract	to pull towards, to make something move closer	verb	atraer
backbone	the vertebrae forming the axis of the skeleton and protecting the spinal cord	noun: body part	columna vertebral, espina dorsal
bacteria	organisms not able to be seen except under a microscope, found in rotting matter, in air, in soil and in living bodies, some being the germs of disease	noun	bacterias

Word	Definition	Part of Speech	Spanish
bask	to lie in or be exposed to a pleasant warmth (sunshine)	verb	tomar el sol
bass	a common fish found in either fresh or saltwater	noun	róbalo, sabalo o lubina
beetle	a winged insect with a hard smooth back	noun: animal	escarabajo
bird	a warm-blooded vertebrate that breathes oxygen with lungs, has a beak, feathers, two wings, two legs, and lays eggs; birds are the ONLY animals that have feathers; not all birds fly	noun: classification	ave, pájaro
bobcat	a common North American lynx, reddish in base color with dark markings	noun: animal	gato montés, lince
body	the entire physical being of an animal (including humans)	noun	cuerpo
bone	the hard tissue that makes the skeleton of vertebrates.	noun: body part	huesos
breathe	to take in/absorb oxygen	verb	respirar
butterfly(ies)	a type of insect, often with bright colored wings, known for their "fluttering"	noun: animal	mariposa
carnivore	an animal that eats the meat of other animals (consumer)	noun: eating characteristic	carnívoro/a
catch	to stop and keep ahold of something or someone	verb	coger, atrapar, pescar (to fish)
caterpillar	larva of a butterfly or moth	noun: animal	oruga
classify	to arrange or organize according to class or category	verb	clasificar, ordenar
claw	a sharp, curved nail on the toe of an animal	noun	garras
cold	(Dolch) Sight word, grade 2, opposite of hot	adjective	frío

Word	Definition	Part of Speech	Spanish
cold-blooded	having a body temperature that rises or falls with the temperature of the surrounding environment	adjective	de sangre fría
consumer	a living thing that gets energy from eating other living things	noun	
crouch	to lie close to the ground with legs bent	verb	agacharse
dash	to move with sudden speed	verb	guiones
decay	to rot; to breakdown matter	verb	descaecer
die	to stop being alive	verb	morrir
dry	not wet or moist	adjective	seco
egg	a rounded reproductive object from which animals hatch (birds, amphibians, reptiles, insects)	noun	huevo
exoskeleton	the hard covering system on the outside of an insect or other invertebrate	noun: body part	esqueleto exterior
feathers	a bird's body covering	noun: body part	plumas
fishes	plural form of fish used only for types, not number (two or more of one type of fish=fish, two or more different types of fish=fishes)	noun	peces
fly	(Dolch) Sight word, grade 1, to move quickly through the air	verb	volar
food	what is eaten to sustain life, provide energy, promote growth, etc	noun	alimento
food chain	a series of plants and animals linked together by their food relationships	noun	cadena alimenticia.
food web	a group of interconnected food chains in an ecosystem	noun	red alimenticia
forked	divided into two separate branches (forked tongue, forked river)	adjective	bifurcado
freshwater	water that is not salty, the water we drink and need to survive	noun	agua dulce
frog	an amphibian with long hind limbs for leaping	noun: animal	rana, sapo

Word	Definition	Part of Speech	Spanish
fur	the hairy coat of a mammal	noun: body part	pelaje, pieles
gills	body parts that some aquatic animals (fish) use to obtain oxygen from the water	noun: body part	agallas, branquias
gobble	to eat quickly	verb	gluglutear
grab	to take or seize by a sudden motion or grasp	verb	agarra
green	(Dolch) Sight word, grade 2, a color	adjective	verde
grow	to get bigger in size (Dolch) Sight word, grade 3	verb	crecer
habitat	the environment in which an organism lives, including living and nonliving parts	noun	hábitat
hair	a mammal's outermost covering, made up of threadlike growths on the skin	noun: body part	pelo
hard	not soft, solid and firm to the touch	adjective	duro
hatch	to emerge from an egg, pupa, or chrysalis	verb	incubar
hawk	a bird of prey with a long tail and very good eyesight	noun: animal	halcón
head	the front body part of insects; has mouthparts, eyes, and antennae	noun: body part	cabeza
healthy	the condition of being free from sickness or disease	adjective	saludable
heat	a form of energy that can cause temperature to increase	noun	calor
herbivore	an animal that eats only plants; a primary or first-order consumer	noun: eating characteristic	herbívoro/a
hunt	to chase or search for animals for the purpose of catching or killing	verb	cazar
ill	sick, not healthy or injured	adjective	infermo
injured	hurt	adjective	herido
Insect	a six-legged arthropod, usually with a hard exoskeleton and three main body parts	noun: classification	insecto, bicho

Word	Definition	Part of Speech	Spanish
invertebrate	animal without a backbone; about 97% of all known species are invertebrates	noun:	invertebrado
kerplunk	to fall	verb	
leg	a structure in animals used for locomotion	noun: body part	pierna, pata
lizard	long reptile with long tail and usually four legs	noun	lagarto
lungs	organs to provide an animal with oxygen	noun: body part	pulmones
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 their live offspring	noun:	mamífero
moist	slightly wet	adjective	mojado
moth	a type of flying, nocturnal insect, often confused with butterfly	noun	mariposa nocturna, polilla
non living	objects that don't reproduce, grow, react, or use food	adjective	no vivientes
nutrient	a substance that provides the nourishment needed for the survival of an organism	noun	nutrientes, alimentos nutritivos, sustancia nutritiva
omnivore	consumer: an organism that eats both animals and plants	noun	omnívora - omnívoro
outer	on or around the outside of something, far from the center of something	adjective	externo
oxygen	a colorless and odorless gas that is needed by people and animals to live	noun	oxígeno
pair	two things of the same type that belong together	noun	par

Word	Definition	Part of Speech	Spanish
photosynthesis	the process by which green plants (chlorophyll containing) make food by combining carbon dioxide and water using energy from sunlight	noun	fotosíntesis
plant	any member of the kingdom Plantae that usually produce their own food through photosynthesis	noun: plant	planta
plump	slightly fat	adjective	rechoncho
pounce	to jump at suddenly so as to catch prey	verb	saltar
predator	an animal that depends on or preys on other animals for food	noun	animal de rapiña, predadores
prey	an animal that is hunted, killed, and eaten by other animals	noun	presa
producer	an organism that makes its own food through the process of photosynthesis; all green plants are producers	noun	productora(s)
purr	1) the low rumbling sound made by cats when they are content or a machine running smoothly; 2) to speak in a low, happy voice	verb	ronronear
reptile	a cold-blooded, air-breathing animal with scales or plates and a backbone; most hatch from eggs (snakes, turtles, crocodiles)	noun: classification	reptil
riparian	the life or ecosystem around a stream, river, creek, or lake	adjective	ribereño
scale	a flattened rigid plate forming part of the body covering of many animals (fish, reptiles)	noun	escama

Word	Definition	Part of Speech	Spanish
scavenger	a carnivore that feeds on the remains of animals which it did not kill	noun	necrófagos, animal de carroña
sense	touch, taste, hearing, smell, or sight	verb	sentir
sharp	a pointed end or an edge that can cut something	adjective	cortante, filosas
shed	to cast off, to separate	verb	quitarse
shell	hard outer covering of some arthropods and turtles	noun: body part	caparazónm, concha
shiny	a bright surface that reflects light	adjective	brillante
skin	a natural protective covering of the body; site of the sense of touch	noun: body part	piel
slime	a thick, wet substance	noun	secretar
slime-covered	covered with slime	adjective	escamas cubiertas y babosas
slither	to move in a sliding motion	verb	culebrear
slow	lack of speed, taking a long time	adjective	despacio
smell	to sense something by aroma	verb	oler
snake	a legless reptile	noun: animal	serpiente, culebra, víbora
soft	easily changes shape when touched; does not feel hard	adjective	blando, suave
soil	the top layer of the earth's surface, consisting of rock and mineral particles mixed with organic matter	noun	suelo
soon	within a short period of time	adverb	ahorita
spine	another word for backbone (vertebrate) 2) sharp, rigid needles from the cactus that prevent it from being eaten by animals	noun	espinas
stiff	firm and hard to bend	adjective	inflexible

Word	Definition	Part of Speech	Spanish
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
sunlight	light from the sun, gives heat and warmth	noun	luz del sol
surroundings	the area in which something exists or lives	noun	circundante
swallow	to move something from mouth through throat to stomach	verb	tragar, engullir
swim	to move through the water	verb	nadar
tadpole	a larval frog or toad	noun: animal baby	renacuajo
tail	the rear, elongated part of many animals, used for balance, combat, communication, mating displays, fat storage, movement and steering	noun	cola
talon	a sharp hooked claw, especially on a bird of prey	noun: body part	garra
teeth	hard, white mouth parts used for chewing food	noun	dientes
temperature	the warmth or coldness of something; measured with a thermometer	noun	temperatura
thorax	the middle section of an insect, where its six legs and wings attach to the body	noun: body part	tórax
three	(Dolch) Sight word, Pre-K, a counting number	adjective	tres
tongue	an organ used to taste, found in the mouth of many animals	noun	lengua

Word	Definition	Part of Speech	Spanish
two	(Dolch) Sight word, Pre-K, a number	adjective	dos
vertebrate	an animal with a backbone or spinal column	noun: classification	vertebrado
warm, warmer, warmest	having a comfortable amount of heat (Dolch) Sight word, grade 3	adjective	caliente
warm-blooded	having a warm, constant body temperature that doesn't depend on the outside environment	adjective	de sangre caliente
water	a fluid necessary for the life of most animals and plants	noun	agua
web	threadlike filaments spun by spiders 2) a membrane or fold of skin connecting the toes	noun	telaraña
web (feet)	thin skin adjoining the toes of some animals	noun	palmeado
wet	covered with water or other liquid	adjective	mojado
whisker	a type of hair on some mammals used to sense	noun: body part	bigotes
young	someone or something that has not been alive for long	adjective	joven

Answers

Classification hints in text

- Beetle "I've got six legs to help me go."
 Snake "Call me cold-blooded, but I've got a spine."
 Bird "I've got feathers to help me fly."
 Frog "The water is nice and the land is too."
 Bass "I just like water on my scales. It fills my gills and wets my tail."
 Lizard "My dry scales prefer the sun. 'Cuz when I'm cold, I'm stiff and slow, but warm me up, and watch me go!"
 Bobcat She licked her fur.

Silly Sentences

- Plants (producers) make their own food from sunlight (photosynthesis) and nutrients in the soil that come from decaying things that were once alive.
- Animals that eat plants are called herbivores.
- Animals that eat other animals are carnivores.
- Omnivores eat both plants and animals.
- A carnivore is a predator that has to find other animals to eat (prey).
- A predator of one animal might be prey for another animal.
- All of the plants and animals that are eaten by or that eat a particular animal are part of that animal's food chain.
- A habitat will have many different food chains that are linked together, called a food web.

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

BEETLE 5C SNAKE 3G HAWK 7F FROG 6H
 FISH 5I LIZARD 2C BOBCAT 5C LEGS 6B
 EAT 10C FUR 7B FEATHERS 7B SCALES 3B

Physical or Behavioral

1. P The beetle has six legs to help him go.
2. B The snake slithers along the ground.
3. P The bird has feathers to help it fly.
4. B The frog swims in water and hops on land.
5. P The fish has gills.
6. B The lizard basks in the sun to get warm.
7. B The caterpillar nibbles on leaves.
8. P The bobcat has fur to keep it warm.

True or False

- 1) False, animals are often both--in the middle of a food chain. 2) True, 3) True, 4) True 5) True 6) False, insects have hard outer coverings (exoskeleton) 7) False, many animals hatch from eggs and not all animals even know their mothers, some survive purely on instinct 8) True, 9) True, 10) True

Math Activity Objectives

Objective Core Mathematics

Math, Operations & Algebraic Thinking: Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten; decomposing a number leading to a ten; using the relationship between addition and subtraction; and creating equivalent but easier or known sums

Math, Operations & Algebraic Thinking: Fluently add and subtract within 10 using mental strategies.

Math, Operations & Algebraic Thinking, Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).

Math, Measurement & Data: Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. (up to 10)

Math, Counting & Cardinality: Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. (up to 10)

Math, Counting & Cardinality: Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

Math, Counting & Cardinality: Understand that each successive number name refers to a quantity that is one larger.

Math, Counting & Cardinality: Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.

Math, Counting & Cardinality: Understand the relationship between numbers and quantities; connect counting to cardinality.

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

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

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

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

Math, Measurement & Data, Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.

Math, Operations & Algebraic Thinking, Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = _ \div 3$, $6 \times 6 = ?$

Math, Operations & Algebraic Thinking, Represent addition and subtraction with objects, fingers, mental images, drawings (≤ 10), sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

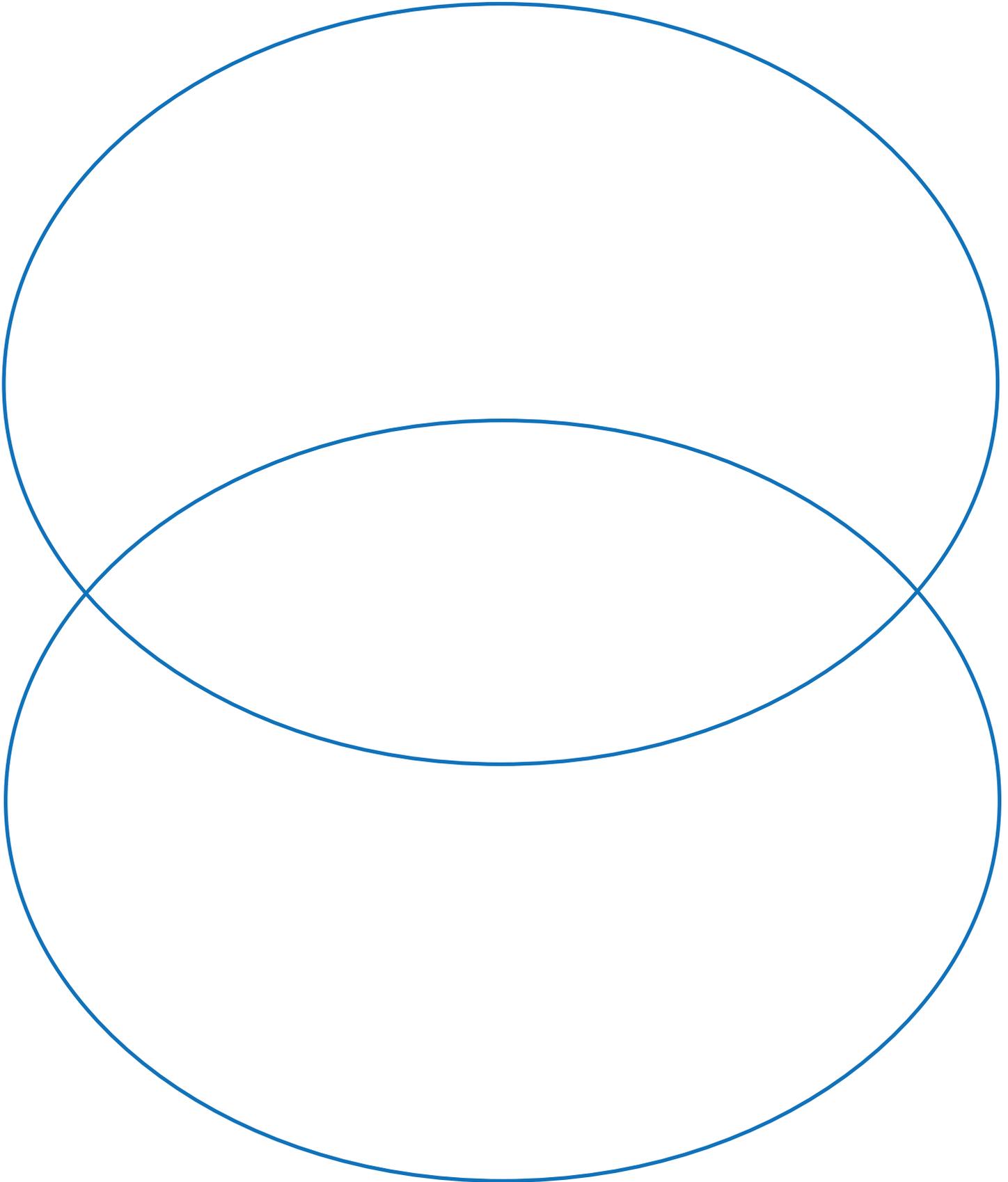
Math, Operations & Algebraic Thinking, Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.



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



Appendix C—U.S. Map



Appendix D—North America Map

