

African Savanna Teaching Activity Guide

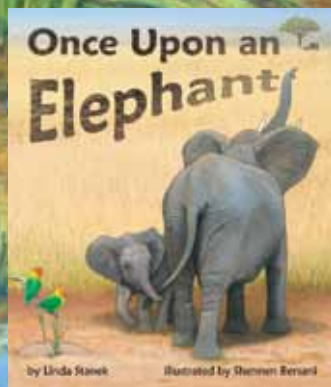
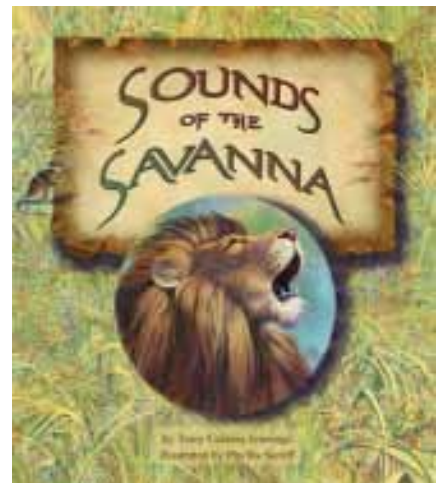


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Mt. Pleasant, SC 29464



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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.

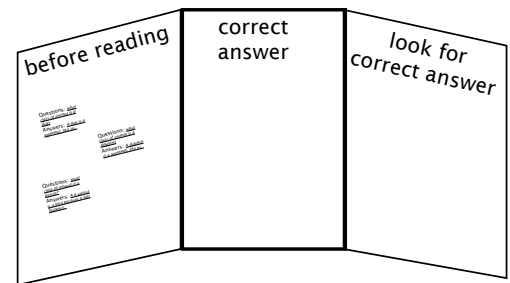
What Do Children Already Know?

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

Sounds of the Savanna

1. What sorts of animals live on the savanna?
2. Why do animals make sounds?
3. Can animals communicate with other animals in their group?
4. Can any animals communicate with different types of animals?
5. Can an animal make more than one sound?
6. Can humans hear all the sounds that animals make?

Once Upon an Elephant

1. How do different animals help each other live?
2. What animals live on the African savanna?
3. What is a savanna?
4. Why are elephants important?
5. What is a “keystone species”?
6. Where can animals find water during the dry season?
7. How can elephants help plants grow?

Comprehension Questions & Writing Prompts

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

Compare and contrast the most important points presented by two texts on the same topic. (story versus For Creative Minds non-fiction component)

With prompting and support, identify basic similarities in and differences between two texts on the same topic.

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.

Sounds of the Savanna

1. What is one reason that lions roar?
2. How do vocal cords work?
3. How do the wildebeests know the lioness is not hunting?
4. What are two different sounds that elephants make?
5. What tries to eat the vervet monkeys?
6. What does the male baboon try to eat?
7. What kind of sound does the baby baboon make when she is in danger?
8. What are the zebras frightened of? What sound do they make?
9. How does the mouse escape from the owl?
10. Can humans hear the bats' sounds?
11. How do the bats use their sounds?
12. Why does the lioness not make a sound while she is hunting?
13. Do you think animals can communicate like humans?
14. Think about a dog or a cat. What do you think their different sounds mean?

Once Upon an Elephant

1. In your own words, explain why elephants are important?
2. What do you think would happen if elephants went extinct?
3. How do elephants help the animals in their habitat?
4. How do elephants help the plants in their habitat?
5. How do elephants keep the savanna from turning into a forest?
6. Imagine you are an animal on the African savanna. What type of animal are you and how do elephants help you?

Compare and Contrast:

1. Read *Sounds of the Savanna* and, in your own words, write about the African savanna and the animals that live there.
2. Read *Once Upon an Elephant* and, in your own words, write about the African savanna and the animals that live there.
3. What did you learn about the African savanna from *Sounds of the Savanna* that you did not learn in *Once Upon an Elephant*?
4. What did you learn about the African savanna from *Once Upon an Elephant* that you did not learn in *Sounds of the Savanna*?
5. What did you learn about elephants from *Sounds of the Savanna* that you did not learn in *Once Upon an Elephant*?
6. What did you learn about elephants from *Once Upon an Elephant* that you did not learn in *Sounds of the Savanna*?

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: Sounds of the Savanna

Adjective		Noun		Verb
early		grassland		vibrate
healthy		savanna		travel
fast		vocal cord		hear
tight		sound		hunt
loud		echo		run
high-pitched		pride		tramp
low-pitched		territory		trumpet
close		wildebeest		rumble
low		alarm		sleep
hungry		elephant		store
different		danger		skitter
rocky		energy		enjoy
soft		monkey		hide
safe		seed		eat
thirsty		nut		shriek
familiar		tree		rescue
frightening		pouch		rest
spiny		brush		groom
brittle		eagle		protect
scaly		predator		scurry
big		baboon		swoop
quiet		stranger		escape
tall		cry		quiver
tiny		scent		grow
		leopard		bounce
		owl		pounce
				roar

Word Bank: Once Upon an Elephant

Adjective		Noun		Verb
hot		thirst		dig
dry		savanna		drink
dying		risk		run
thirsty		riverbank		sprout
salty		grassland		eat
thick		dirt		drop
tall		mineral		pass
wide		seed		grow
small		pod		catch
deep		tree		croak
tiny		forest		hum
dry		dung		crackle
good		food		trek
right		shade		race
dark		zebra		die
big		nest		wrap
slow		river		fell
quick		footprint		form
strong		rain		push
healthy		pool		reach
extinct		frog		sizzle
sleepy		insect		strike
hidden		fire		gouge
open		lightning		lick
hard		wind		need
		trunk		pluck
		leopard		sprint

Word Search: Sounds of the Savanna

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	f	s	r	x	s	p	e	f	c	z
2	l	a	z	b	f	r	o	a	r	e
3	g	v	d	a	t	u	x	w	y	b
4	r	a	h	b	e	m	s	i	z	r
5	e	n	p	o	w	b	z	h	q	a
6	a	n	u	o	p	l	i	o	n	g
7	g	a	d	n	g	e	h	l	m	e
8	l	k	x	h	b	c	a	j	s	c
9	e	l	e	p	h	a	n	t	y	h
10	q	n	a	l	a	r	m	p	j	o

lion
roar
elephant
rumble
baboon
cry
echo
savanna
zebra
eagle
alarm

Word Search: Once Upon an Elephant

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	r	m	r	x	s	o	e	w	c	p
2	w	i	n	d	f	r	o	g	r	e
3	a	c	s	a	l	t	x	w	y	t
4	s	e	e	d	e	m	s	i	z	u
5	w	a	t	e	r	b	z	h	q	s
6	z	l	o	h	y	i	t	b	n	k
7	g	a	d	i	n	s	e	c	t	s
8	g	a	z	e	l	l	e	s	g	q
9	l	i	g	h	t	n	i	n	g	d
10	f	o	o	t	p	r	i	n	t	m

gazelles
tusks
footprint
frog
mice
water
salt
lightning
insects
seed
wind

Language Arts: Homonyms

Some words are spelled the same and sound the same when spoken out loud, but have two different meanings. These words are called **homonyms**. An example of a homonym is the word **herd**.

A. Herd (noun): A group of animals that live together

B. Herd (verb): To gather and move animals to or from a place

Identify the definition of herd being used in the following sentences by putting an A (for the first definition) or a B (for the second definition) in the blank after each sentence.

1. Can you herd the cows into the field? ____
2. The herd of buffalo is eating grass. ____
3. The dogs herd the sheep so they do not leave the pasture. ____
4. Do not go near the herd of elephants. It may be dangerous! ____
5. Help me herd the cats into the house. ____
6. Some animals herd their babies into a group and then surround them to keep them safe. ____
7. I would love to see a herd of zebras in the wild. ____
8. The hunter was excited to see a herd of deer in the forest. ____
9. Have you ever tried to herd chickens? It is impossible! ____
10. The antelope herd looks so graceful. ____

Match the Animal: Sounds of the Savanna

Match the description of the animal and the sound it makes to the picture.

1. These massive animals eat only plants (herbivore) and can weigh more than 12,000 pounds (5,500 kg). That is as much as three cars! They talk to each other using different sounds. They can trumpet, snort, bark, roar and cry, but their most common sound is a low-frequency rumble, too low for most animals to hear. But these animals can hear the low-frequency rumbles from miles away!
2. These animals hunt other animals (predator). They are only 3 to 4 feet tall but, at 285-420 pounds (130-190kg), they weigh as much as a couch. Their golden fur makes it hard for other animals to see them in the dry grass of the savanna. This helps them sneak up on the animals they eat (prey). Like their smaller cat relatives, this mammal purrs, meows, and snarls. They also roar, grunt, moan, huff, and woof.
3. These striped animals eat plants and live in small groups or herds. They weigh as much as a motorcycle, approximately 770 pounds (350 kg). Their black and white stripes confuse horseflies and keep them from biting. These animals bray, nicker, and snort, much like other members of the horse family. They also make a high-pitched yip or yelp. This sound is used to find and identify others in their herd.
4. These animals eat both plants and animals (omnivore). They have opposable thumbs, fingers and toes, large brains, and two eyes in the front of their face. They live in groups and use sound to talk to others. They have specific sounds to tell each other when a predator is near and what type of predator it is. These animals whistle, chatter, and scream.



lion



vervet monkey



zebra



elephant

Answers: 1-elephant, 2-lion, 3-zebra, 4-vervet monkey.

Why Animals Make Noise

Lions roar. Wildebeests bellow. Elephants trumpet. Vervet monkeys yell. Baboons shriek. Zebras bray. Spiny mice squeal. Bats squeak. Humans talk. Dogs bark. Cats meow. There are many different kinds of sounds animals can make. But why do they make them? What do the different noises mean?

When animals are in danger, they make noise to bring help or to scare off the threat. Zebras bray for their herd to come help them. Beavers slap their tails on the water to make a loud sound and scare off any predators.

What kinds of sounds do you make when you are scared?



Sometimes animals, especially young animals, make sounds when they are hungry. Eagle chicks chirp for their parents to bring them food. Cats meow until they are fed.

Do you use sound to tell others you are hungry?



Many animals make sounds to let others of their species know where they are. Wolf packs howl to show their territory. Baboons call to attract a mate.

How do you use sound to tell people where you are?



These are just a few reasons animals make sounds. They also make sound when they move—wings flutter and feet stomp. Animals make noise when they travel with other animals, to make sure they all stay together. They yelp, whine, squeal, or scream if something hurts them. Adult animals make sounds when they take care of their young, to comfort and protect them. They make sound when they fight with other animals—snarling and growling.

Can you think of any other reasons animals might be noisy? Why do you make sound?

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.







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

Physical or Behavioral?

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

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

1. P/B The lion roars to keep others out of his territory.
2. P/B Elephants have big ears to hear other elephants' rumbles.
3. P/B Vervet monkeys have cheek pouches to store food.
4. P/B Vervet monkeys hide in bushes to stay safe from predators.
5. P/B Baboons have flat and sharp teeth to eat both plants and animals.
6. P/B Zebras have long legs to run fast and escape predators.
7. P/B Owls hunt from the air because they have wings to fly.
8. P/B Elephants herd around their babies to protect them.
9. P/B Bats use their high-pitched sounds and their big ears to hunt.
10. P/B Lions learn to walk quietly to sneak up on prey.

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?

Science Vocabulary: Sounds of the Savanna

savanna

my definition

my drawing

vocal cords

my definition

my drawing

predator

my definition

my drawing

echolocation

my definition

my drawing

Science Vocabulary: Once Upon an Elephant

salt

my definition

my drawing

seeds

my definition

my drawing

tusks

my definition

my drawing

extinct

my definition

my drawing

Hands-On Science: Sounds of the Savanna

Making oobleck is a fun, easy way to study basic physics and examine sound waves in action! It is simple to make. All you need is:

- 1 part water
- 1.5 to 2 parts cornstarch
- Small amount of food coloring (optional)

Start with a bowl of water, then slowly add the cornstarch a little bit at a time. Stir the water and cornstarch together until the oobleck feels gooey and you are able to pick it up. When it is the right consistency, you can add food coloring if you want colorful oobleck.

Now it's time to have fun! Cover a speaker with plastic wrap and pour on some oobleck. Put on a song and watch the oobleck dance as the music plays.

- How does the oobleck move? What adjectives describe it?
- Turn the volume down low. Does the oobleck move more, less, or the same?
- Turn the volume up high. Does the oobleck move more, less, or the same?
- Change the song to one with a higher pitch. Now how does the oobleck move? Does it move more or less, or does it stay the same?
- Now change the song to one with a lower pitch. Is there a change in the oobleck's movement?
- Experiment with different types of songs: low pitched, high pitched, loud, soft, rock, pop, classical. Which types of sounds make the oobleck move the most? Which sounds make it move the least?
- After observing what makes the oobleck change movements, put on your favorite song. How does the oobleck move now? Does it move a lot? A little? What about your favorite song makes it move that way?

True or False?: Sounds of the Savanna

Objective: Critical thinking skills

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 Lions roar because they want to hide from other animals.
3. T/F Vocal cords create sounds through vibrations.
4. T/F Elephants' rumbles are high-pitched.
5. T/F Vervet monkeys can only make one sound.
6. T/F Baboons sometimes eat other baboons.
7. T/F Zebras try to escape predators by running quickly.
8. T/F When spiny mice lose fur, it does not grow back.
9. T/F Bats find food through echolocation.
10. T/F Humans can hear bats' pinging sounds.

True or False?: Once Upon an Elephant

Objective: Critical thinking skills

Circle whether you think the statement is true or false:

1. T/F An animal in the savanna can survive without water.
2. T/F Elephants dig their tusks into riverbanks to find water.
3. T/F The trunk of an elephant is a weak body part.
4. T/F Elephants, antelope, zebra, and baboons lick salt from the ground.
5. T/F Elephant dung kills trees.
6. T/F Small animals far from rivers depend on elephants for survival.
7. T/F Lightning causes fires to happen in the savanna.
8. T/F Elephants do not help other animals escape fires.
9. T/F Elephants may become extinct one day.
10. T/F Elephants are small creatures.

Math: Measuring Sounds of the Savanna

Objective Core Mathematics Measurement:

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.

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 something is compared to something else you know.

What are some other things about the same size?

What is something that weighs about the same?



wingspan/armspan	inches/feet	centimeters/meters
Old World flying fox	up to 6 feet	up to 1.8 meters
red bat	up to 13 inches	up to 33 centimeters
bumblebee bat	up to 6.7 inches	up to 170 millimeters
common vampire bat	up to 15.8 inches	up to 40 centimeters
yellow-winged bat	up to 14.2 inches	up to 36 centimeters
an adult (parent/teacher)		
you		

- Which bat has the biggest wingspan?
- Which bat has the smallest wingspan?
- Which bat has a wingspan closest to your armspan?
- Which bat has a wingspan closest to an adult's armspan?
- Can you put the bats in order of wingspan from smallest to biggest?
- Find items around the house/school that are similar in size to the bats' wingspans.

Math: Measuring Once Upon an Elephant

Objective Core Mathematics Measurement:

Weigh the mass of an object by selecting and using appropriate tools such as a scale.

Weigh to determine how much heavier one object is than another, expressing the weight difference in terms of a standard weight unit.

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 something is compared to something else you know.

What are some other things about the same size?

What is something that weighs about the same?



Weight	pounds	kilograms
elephant	up to 14,000 pounds	up to 6,350.3 kilograms
baboon	up to 88 pounds	up to 39.9 kilograms
gazelle	up to 165 pounds	up to 74.8 kilograms
giraffe	up to 2,600 pounds	up to 1,179.3 kilograms
leopard	up to 130 pounds	up to 58.9 kilograms
an adult (parent/teacher)		
you		

- Which animal weighs the least?
- Which animal weighs the most?
- Which animal has the closest weight to yours?
- Which animal has the closest weight to an adult?
- Can you put the animals in order of weight from smallest to largest?

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.

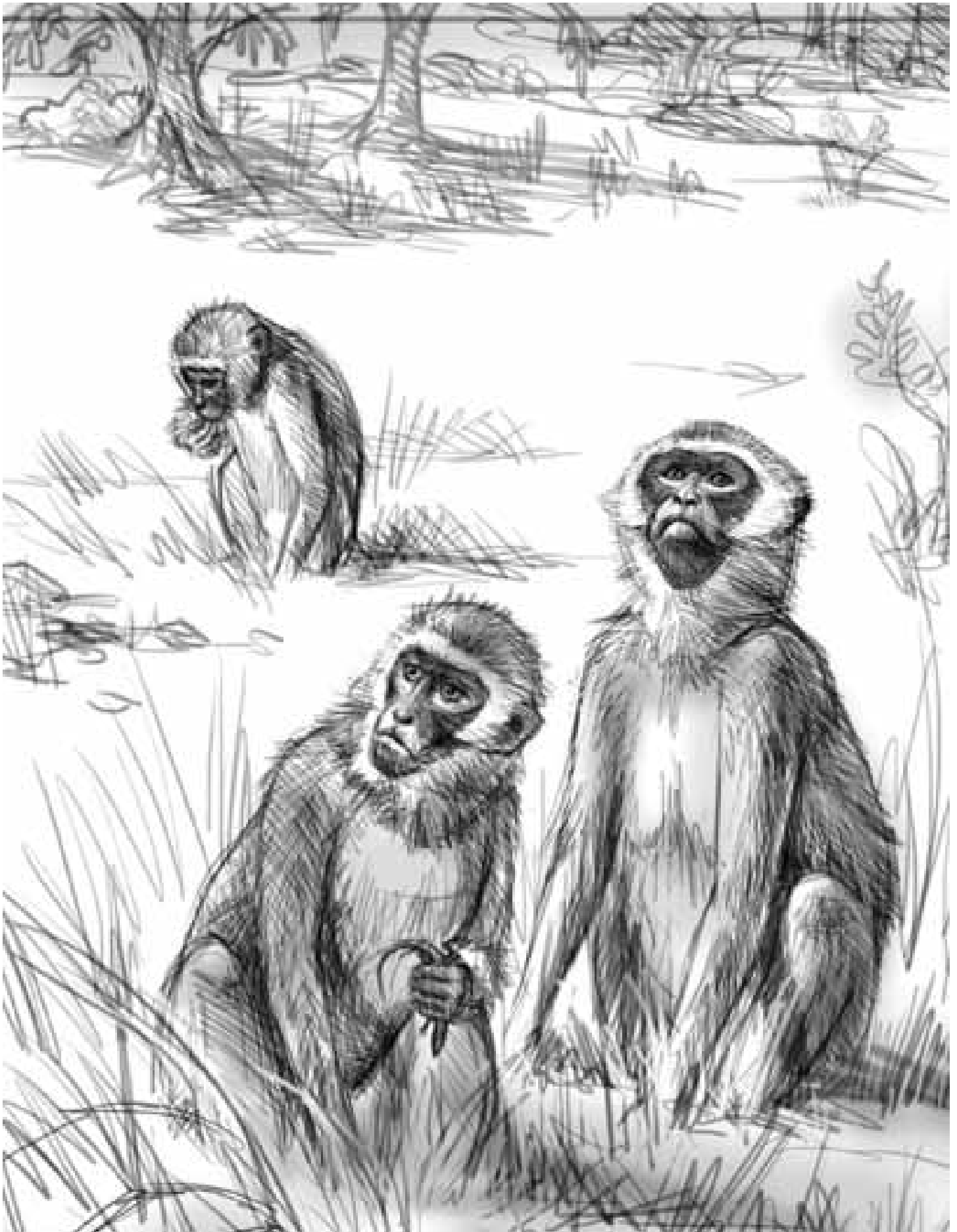
<p>1</p> 	<p>2</p> 
<p>3</p> 	<p>4</p> 
<p>5</p> 	<p>6</p> 
<p>7</p> 	<p>8</p> 

9



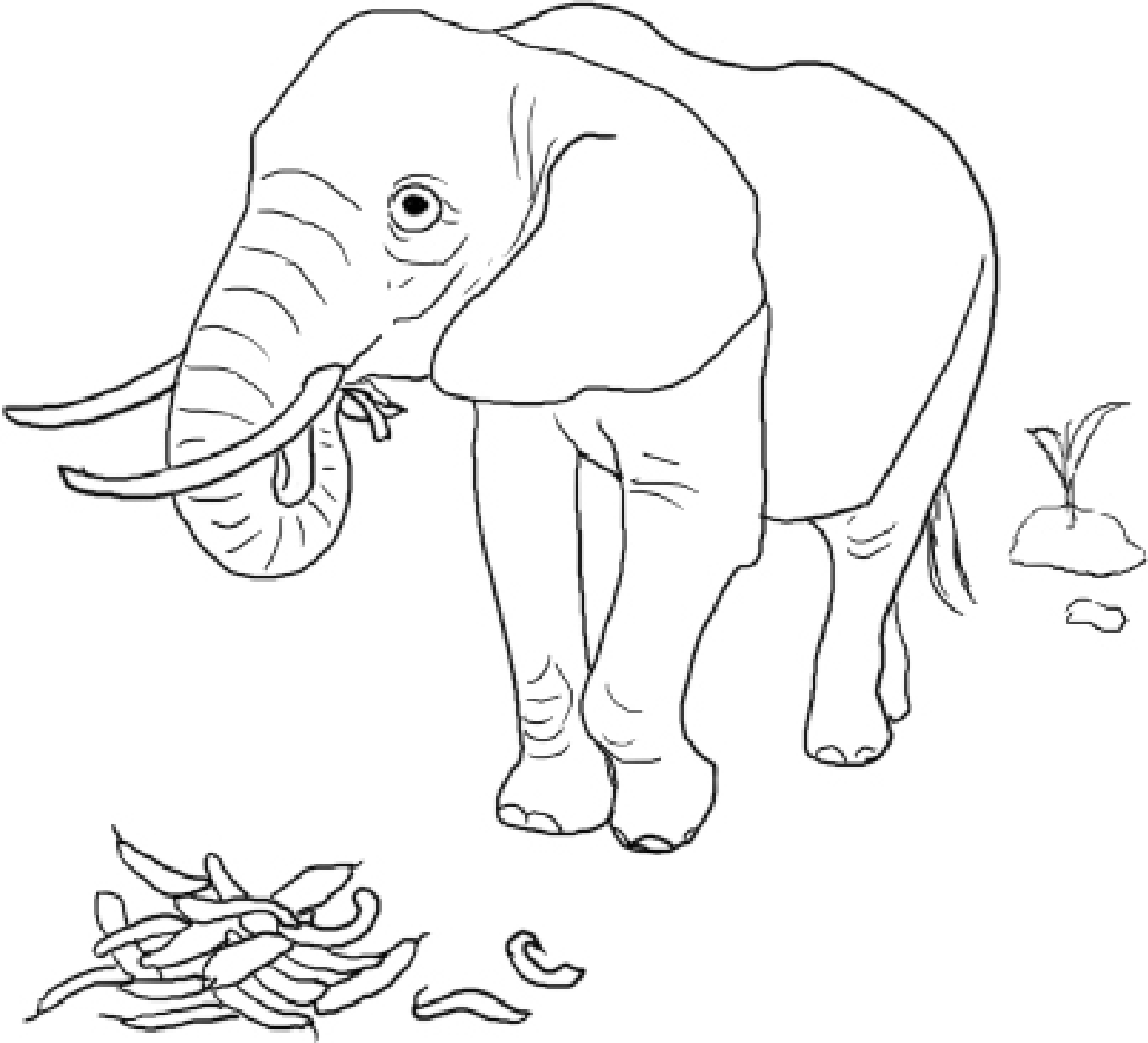
Coloring Pages: Sounds of the Savanna







Coloring Pages: Once Upon An Elephant







Answers: Sounds of the Savanna

Silly Sentences:

1. When lions roar, their vocal cords vibrate to produce the sound.
2. Wildebeest tramp their hooves to tell the lions that they are healthy and fast.
3. Elephants make high-pitched trumpets and low-pitched rumbles.
4. Vervet monkeys keep seeds and nuts in their cheek pouches.
5. When an eagle comes, the monkeys hide in low bushes until it leaves.
6. The baby baboon shrieks when the stranger grabs her. The other baboons rescue her.
7. To zebras, the smell of a leopard is a familiar and frightening scent.
8. Because the mouse has brittle skin, it tears off when the owl grabs him, and he escapes.
9. Bats hunt by making high-pitched pinging sounds and listening for the echo when the sounds bounce off of prey.

Word Search:

	A	B	C	D	E	F	G	H	I	J
1		s							c	z
2		a		b		r	o	a	r	e
3		v		a		u			y	b
4		a		b		m				r
5	e	n		o		b				a
6	a	n		o		l	i	o	n	
7	g	a		n		e				e
8	l									c
9	e	l	e	p	h	a	n	t		h
10			a	l	a	r	m			o

Measuring Length:

- Which bat has the biggest wingspan? **Old World flying fox**
- Which bat has the smallest wingspan? **bumblebee bat**
- Which bat has a wingspan closest to your armspan? **varies by child**
- Which bat has a wingspan closest to an adult's armspan? **Old World flying fox**
- Can you put the bats in order of wingspan from smallest to biggest?
bumblebee bat, red bat, yellow-winged bat, common vampire bat, Old World flying fox

Physical or Behavioral?:

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

1. P/B The lion roars to keep others out of his territory.
2. P/B Elephants have big ears to hear other elephants' rumbles.
3. P/B Vervet monkeys have cheek pouches to store food.
4. P/B Vervet monkeys hide in bushes to stay safe from predators.
5. P/B Baboons have flat and sharp teeth to eat both plants and animals.
6. P/B Zebras have long legs to run fast and escape predators.
7. P/B Owls hunt from the air because they have wings to fly.
8. P/B Elephants herd around their babies to protect them.
9. P/B Bats use their high-pitched sounds and their big ears to hunt.
10. P/B Lions learn to walk quietly to sneak up on prey.

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.
Vervet monkeys eat young chicks (are predators), but are eaten by eagles (are prey).
2. T/F Lions roar because they want to hide from other animals.
Lions roar to warn other animals to stay out of their territory.
3. T/F Vocal cords create sounds through vibrations.
4. T/F Elephants' rumbles are high-pitched.
Elephants' rumbles are low-pitched.
5. T/F Vervet monkeys can only make one sound.
Vervet monkeys can make different sounds to communicate different ideas.
6. T/F Baboons sometimes eat other baboons.
7. T/F Zebras try to escape predators by running quickly.
8. T/F When spiny mice lose fur, it does not grow back.
A spiny mouse's skin and fur grows back when it is lost.
9. T/F Bats find food through echolocation.
10. T/F Humans can hear bats' pinging sounds.
Bats' pinging sounds are too high-pitched for humans to hear.

Answers: Once Upon an Elephant

Silly Sentences:

1. When rivers run dry, animals are at risk of dying.
2. Elephants dig in riverbanks with their tusks to help other animals when they are thirsty.
3. Trees that sprout in the grasslands threaten to turn the area into a forest.
4. Grassland animals eat dirt that is salty for minerals.
5. Elephants eat seeds from pods that are too thick to sprout.
6. Elephant dung gives the sprouts food to grow into tall and wide trees.
7. Lightning struck the dry savanna, causing a fire that the animals must escape from.
8. Animals such as zebras and leopards use the wide paths elephants formed to escape fired. he escapes.
9. One day, elephants may become extinct.

Word Search:

	A	B	C	D	E	F	G	H	I	J
1		m								
2	w	i	n	d	f	r	o	g		
3		c								t
4	s	e	e	d						u
5	w	a	t	e	r					s
6										k
7				i	n	s	e	c	t	s
8	g	a	z	e	l	l	e	s		
9	l	i	g	h	t	n	i	n	g	
10	f	o	o	t	p	r	i	n	t	

Measuring Weight:

- Which animal weighs the least? **baboon**
- Which animal weighs the most? **elephant**
- Which animal has the closest weight to yours? **varies by child**
- Which animal has the closest weight to an adult? **varies by adult**
- Can you put the animals in order of weight from smallest to largest?

baboon, leopard, gazelle, giraffe, elephant

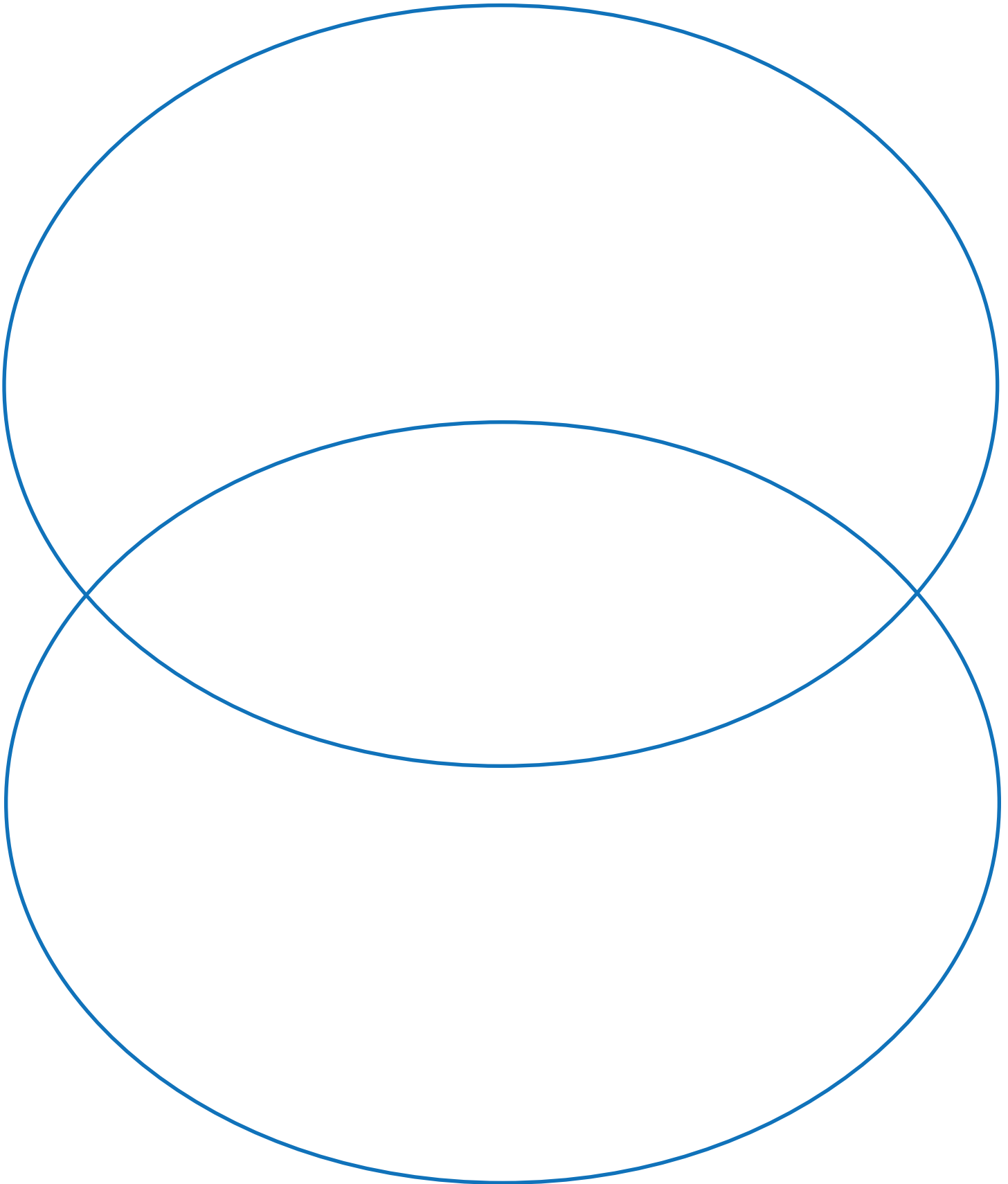
True or False?:

Circle whether you think the statement is true or false:

1. T/F An animal in the savanna can survive without water.
Animals in the savanna can not survive without water.
2. T/F Elephants dig their tusks into riverbanks to find water.
3. T/F The trunk of an elephant is a weak body part.
The trunk of an elephant is a strong body part.
4. T/F Elephants, antelope, zebra, and baboons lick salt from the ground.
5. T/F Elephant dung kills trees.
Elephant dung helps trees grow.
6. T/F Small animals far from rivers depend on elephants for survival.
7. T/F Lightning causes fires to happen in the savanna.
8. T/F Elephants do not help animals escape fires.
The wide paths elephants leave behind helps animals escape fires.
9. T/F Elephants may become extinct one day.
10. T/F Elephants are small creatures.
Elephants are large creatures that can weigh up to 14,000 pounds/6,350.3 kilograms.

Appendix B—Venn Diagram

Compare and contrast two savanna animals and how they use sound.



Appendix C—Vocabulary Cards

savanna

vocal cords

territory

predator

rumble

talon

salt

quiver

echolocation

tusks

seeds

extinct