

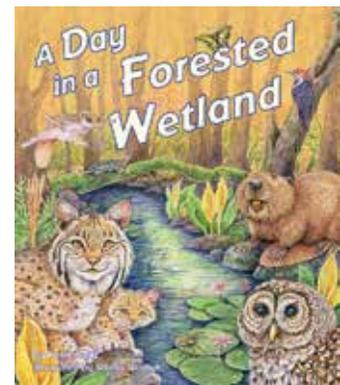
**A Day
in a Forested
Wetland**

Table of Contents

3	How to Use This Activity Guide (General)
4	What Do Children Already Know?
5	Pre-Reading Questions
5	Comprehension Questions & Writing Prompts
6	Observation Skills: Art Scavenger Hunt
7	Language Arts & Science: Five Senses
8	Language Arts & Science: Basic Needs
9	Cross-Curricular Vocabulary Activities
10	Word Bank
11	Cross-Curricular Silly Sentences
12	Word Families & Rhyming Words
13	Edible Sorting and Classifying Activity
15	Classifying Animals
16	Animal Chart
18	Vertebrate Classes
19	Common Invertebrates
20	Dichotomous (Yes/No) Key
21	Animal Sorting Cards
24	Science Journal (Vocabulary)
26	Answers
27	Appendix A—"What Children Know" Cards
28	Appendix B—Venn Diagram

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illustrated by Sherry Neidigh

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.”

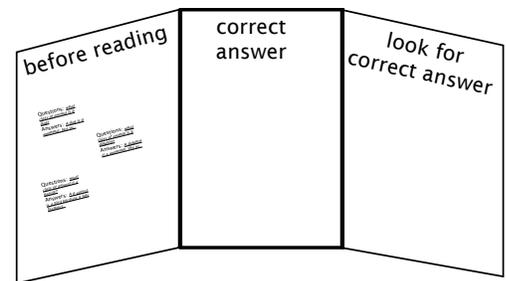
Do the children have any more questions about the subject? If so, write them down to see if they are answered in the book.

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

1. What do you think this book is about based on the title and the cover?
2. Describe what you think a forested wetland habitat is.
3. What are some plants that live in forested wetlands?
4. What are some insects that live in forested wetlands?
5. What are some reptiles that live in forested wetlands?
6. What are some birds that live in forested wetlands?
7. What are some mammals that live in forested wetlands?
8. Do you think all plants and animals could live in forested wetlands? Why or why not?
9. What are some animals that are active at night in a forested wetland?
10. What are some animals that are active during the day in a forested wetland?

Comprehension Questions & Writing Prompts

Ask and answer questions about key details in a text read aloud or information presented orally or through other media.

1. Describe how the author showed time passage in this book.
2. Describe the home where the woodpecker family was living.
3. How did the dad protect his family from the wood duck?
4. What did the green darner eat for breakfast?
5. How does a snapping turtle breathe in the water?
6. How does a caddisfly protect its larval body?
7. What animals were camouflaged in leaf litter?
8. What animals are active at night?
9. How do bats find their way in the dark?
10. Describe where the bobcat kittens were living and what their mom brought them to eat.
11. What does the beetle eat and how does it catch its food?
12. How does the squirrel travel between trees in the dark?
13. How does the water spider move?
14. With what body part does the owl grab its prey?
15. What does the beaver use to build its home?

Observation Skills: Art Scavenger Hunt

Objective Core Language Arts Integration of Knowledge and Ideas: Use information gained from illustrations 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).

1. Use the first illustration in the book to answer these questions/do these activities.
2. How does the illustrator show night time from day time?
3. Make a list of all the animals you see. If in a group, have the children find animals by themselves and then compare to see who found the most or animals others didn't find.
4. Make a chart of how many insects, amphibians, birds, reptiles and mammals you see. Which has more?
5. Describe the fawn in that illustration.
6. What is the heron eating?
7. Describe how the raccoon and woodpecker homes are similar.
8. Compare the flying squirrels (night) to the gray squirrel (day time).



Language Arts & Science: Five Senses

Objective: 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:

Touch	Taste	Sight	Smell	Hearing

Language Arts & Science: Basic Needs

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

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

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

Plant/ Animal	water	oxygen	food	light	space

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

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.

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

Noun-Animal	Noun	Verb	Adjective
barred owl	afternoon	active	armored
bears	colony	active	black
beaver	dam	build	few
beetle	day	catch	forested
bobcat	ecosystem	change	hollow
brown bats	engineer	chase	larval
caddisfly	environment	eat	underwater
coyotes	forest	fasten	
crayfish	habitat	fly	
green darner	midnight	glide	
mosquito	morning	hone	
spider	mud	lands	
spring peepers	neck	sit	
squirrel	nest	slows	
turtle	night	stretch	
wolves	noon	work	
wood duck	ooze	zig and zag	
woodpecker	predator		
	prey		
	species		
	starlight		
	stones		
	stream		
	sundown		
	sunrise		
	wetland		
	wood		

Cross-Curricular Silly Sentences

1. Beavers are among the few _____ (including humans) that can make big changes to their _____.
noun noun
2. This ability to shape their habitat makes beavers into _____.
noun
3. Beavers shape their environment by _____ dams.
verb
4. A colony of beavers works together to make a dam out of wood, _____, and _____.
noun noun
5. The dam _____ a stream and creates a pond of still water behind the dam.
verb
6. The pond is usually between _____ and _____ feet deep.
number number
7. It helps protect the beavers from land _____ like wolves, _____, and _____.
noun noun
8. The pond hides the _____ entrance to the lodge, where the beaver lives.
adjective
9. Beaver dams change a _____ into a wetland environment.
noun
10. These changes last for years, even long after the _____ are gone.
noun

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:

night

and

light

They are / are not from the same word family.

Other words that rhyme are:

Rhyming words are:

flair

and

air

They are / are not from the same word family.

Other words that rhyme are:

Rhyming words are:

flies

and

eyes

They are / are not from the same word family.

Other words that rhyme are:

Rhyming words are:

case

and

place

They are / are not from the same word family.

Other words that rhyme are:

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.

Objects and materials can be sorted and described by their properties. (color, shape, size, weight and texture)

Use whole numbers, up to 10, in counting, identifying, sorting, and describing objects and experiences.*

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?

- Were there some items that fit more than one group or don't fit any group?
- If so, how did the child decide which attribute was more important?
- How are various objects similar and different?
- Was 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. (Graph provided on next page.)

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

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.

10				
9				
8				
7				
6				
5				
4				
3				
2				
1				
attribute				

Classifying Animals

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.

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, insects, or gastropods (snails). 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	beaver	green darner
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)		

	Animals	woodpecker	snapping turtle
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 have 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		
Metamorphis?	complete		
	incomplete		
	none		
Teeth	sharp		
	flat		
	no teeth (bill/beak)		
Food	plant eaters (herbivore)		
	meat eater (carnivore)		
	both (omnivore)		

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
- symmetry

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

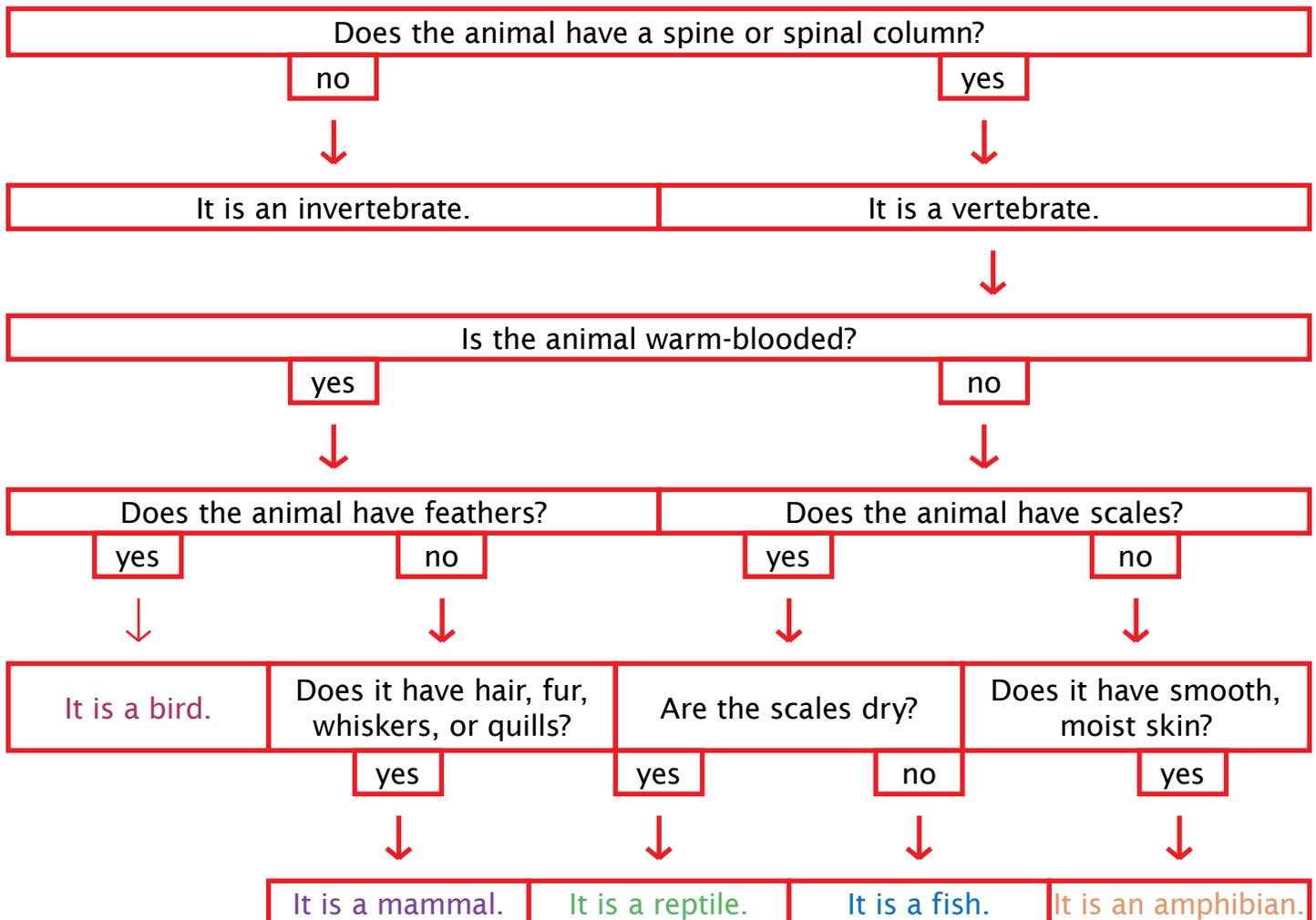
Dichotomous (Yes/No) Key

A dichotomous key helps to sort (classify) animals. These keys work by asking yes or no questions. Each answer leads to another yes or no question, until the animal class is identified. There are five classes of animals with backbones (vertebrates): fish, reptiles, amphibians, birds, and mammals. Use the information found in the book to match the animal to its classification.

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 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:

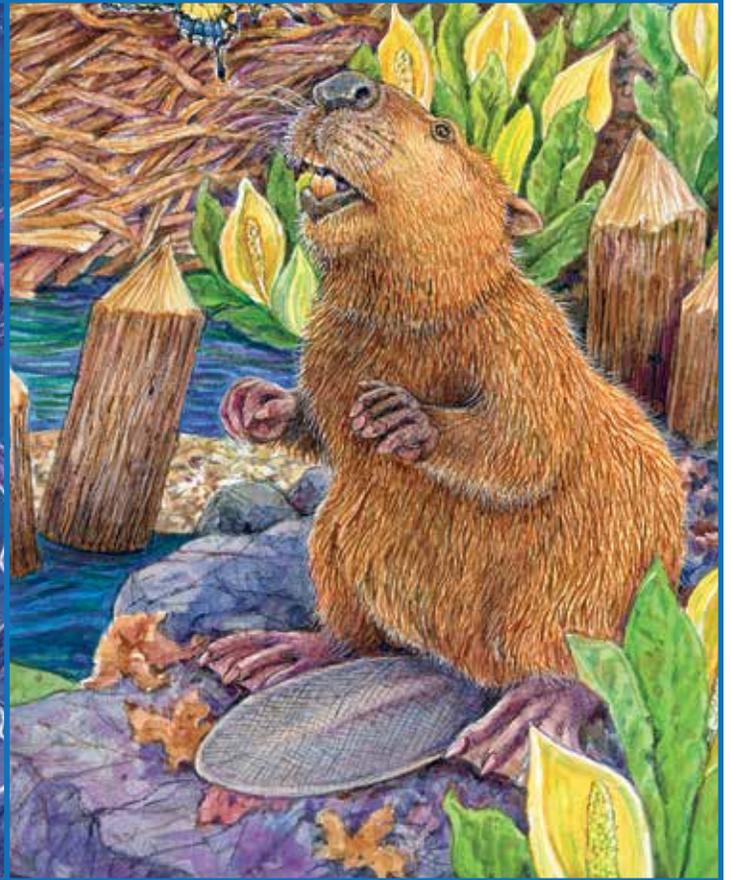
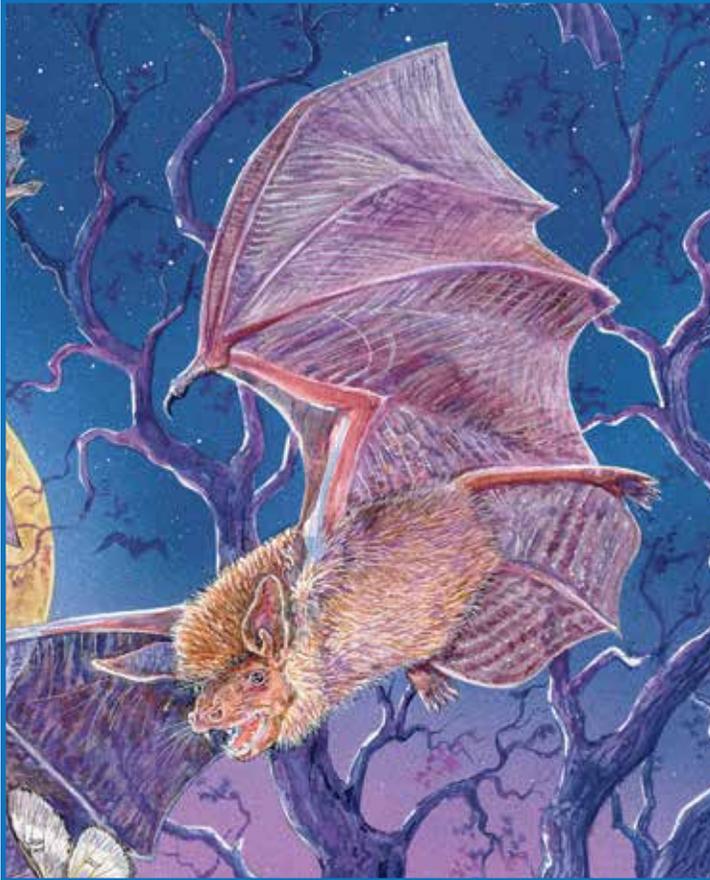
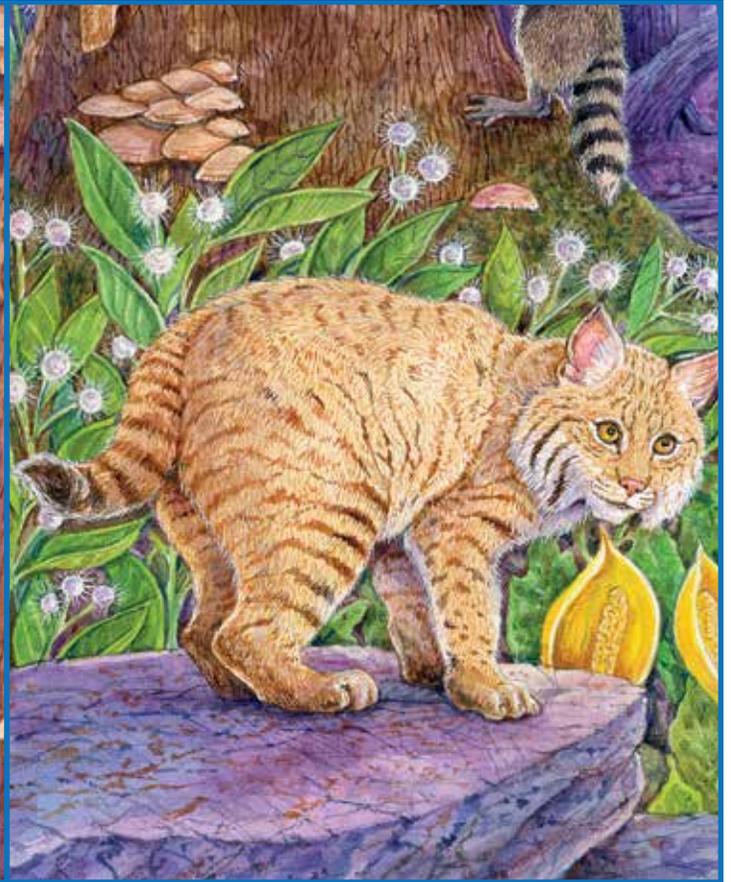
Sorting: Depending on the age of the children, have them sort cards by:

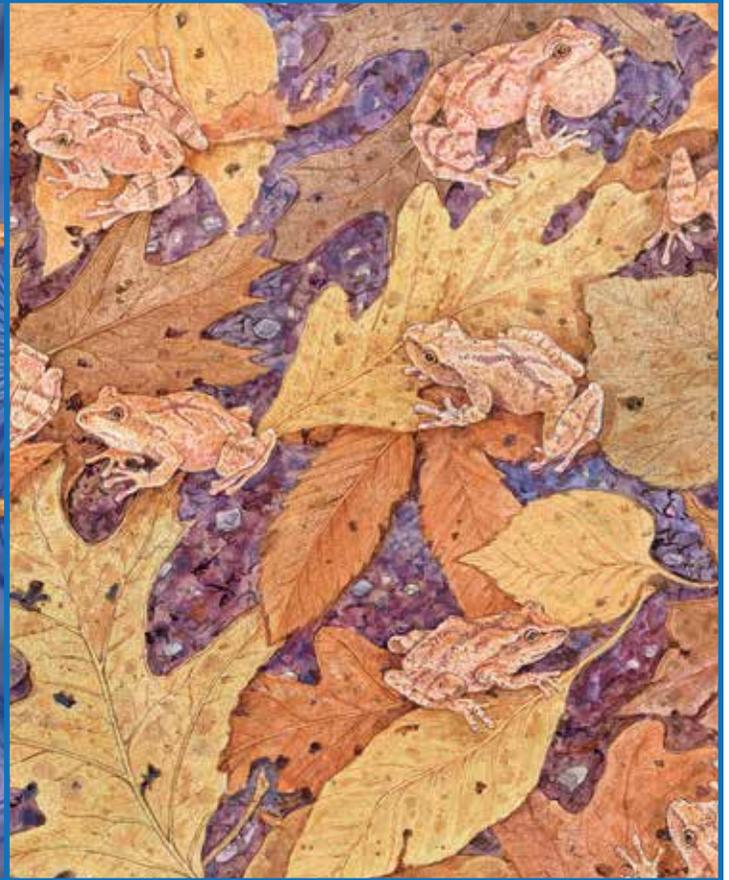
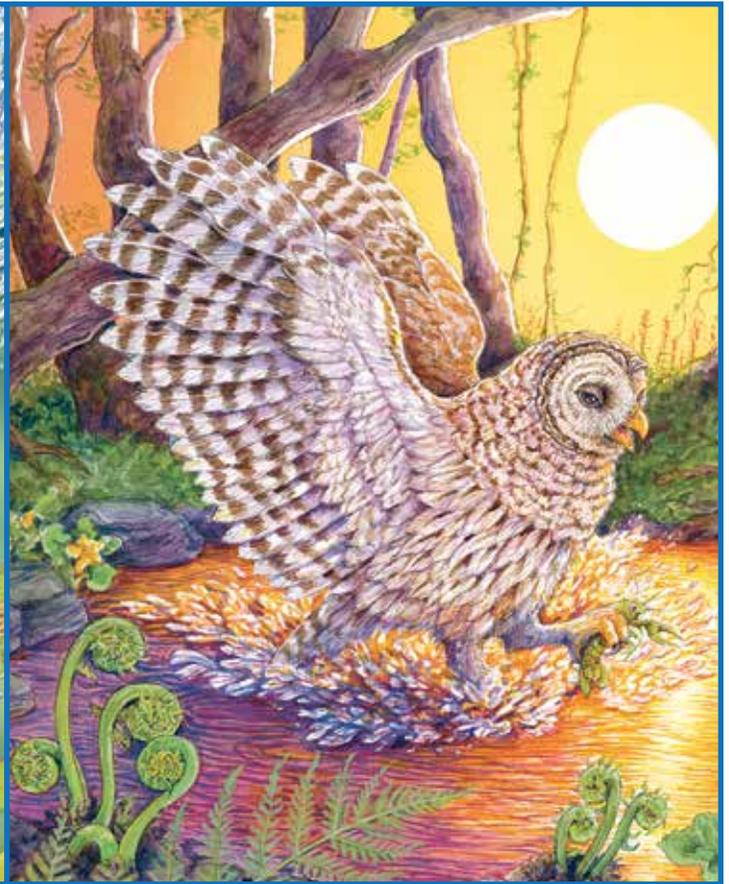
where the animals live (habitat)	tail, no tail
number of legs (if the animals have legs)	colors or skin patterns
how they move (walk, swim, jump, or fly)	animal class
type of skin covering (hair/fur, feathers, scales, moist skin)	
what they eat (plant eaters/herbivores, meat eaters/carnivores, both/omnivores)	

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.





Science Journal (Vocabulary)

wetland

my definition

my drawing

nocturnal

my definition

my drawing

keystone species

my definition

my drawing

predator

my definition

my drawing

Answers

Silly Sentences

Beavers are among the few species (including humans) that can make big changes to their environment. This ability to shape their habitat makes beavers into ecosystem engineers.

Beavers shape their environment by building dams. A colony of beavers works together to make a dam out of wood, mud, and stones. The dam slows a stream and creates a pond of still water behind the dam. The pond is usually between three and six feet deep. It helps protect the beavers from land predators like wolves, bears, and coyotes. The pond hides the underwater entrance to the lodge, where the beaver lives.

Beaver dams change a forest into a wetland environment. These changes last for years, even long after the beavers are gone.

Appendix B—Venn Diagram

Compare and contrast two

