

Backyard Animals



Teacher Idea Packet

Pittsburgh Zoo & PPG Aquarium

Backyard Animals

Teacher Packet

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Background Information

PENNSYLVANIA – A STATE OF UNCOMMON WEALTH

Where does the world begin? Right in our own backyards! We don't have to travel the world to find amazing animals; our home state of Pennsylvania is rich in wildlife. One reason for this is the variety of habitat found here.

FORESTS

Pennsylvania forests provide a wide variety of foods and shelter for a diverse animal population. The berries, nuts, fish and small animals found in abundance give black bears the fat stores they need to get through the winter. Black bears do not truly hibernate, but rather go into torpor, or winter sleep, from which they can easily be disturbed. White-tailed deer can be found nibbling on wild apple trees. In the fall, the bucks will use the trees to sharpen their antlers, which they use to vie for a mate. Skunks waddle through the underbrush, their bold markings warning all to steer clear. Any creatures that fail to heed this warning receive an irritating, foul-smelling spray from this master of chemical warfare. At nightfall, owls soar silently in search of food. Their enormous eyes give them the best night-vision on the planet.

MEADOWS

At the forest's edge, the meadows open out to reveal a lush habitat for wildlife. Among the goldenrod, bees buzz and butterflies flutter as they carry pollen from flower to flower. At night, fireflies, our state insect, put on a light show to attract a mate. Rabbits nibble grasses and sniff the air. At the first sign of danger, they bolt, zigzagging at up to 40 miles per hour until they reach the safety of a bush or their burrow. Snakes slither over rocks and between tufts of grass in search of food. They use their forked tongues to capture smells, which they put against the Jacobson's organ, a sophisticated scent detector located in the roof of their mouths.

PONDS AND WETLANDS

Ponds and the wetlands that surround them not only provide a home for animals, but also act as a water filtration system for our groundwater. Most of the ponds in our state were created by nature's master architect - the beaver. Beavers use their chisel-like front teeth to fell trees that they use to block streams, causing them to flood and thus forming ponds. These still waters host millions of mosquito larvae, developing in the water to emerge as the familiar summertime pest. Bats, the only true flying mammals, always stay within a mile of such a water source, attracted nightly to feast on insects. Frogs also take advantage of this plentiful food supply, flicking out long sticky tongues to capture a moving meal. As tadpoles, they eat the developing larvae (baby insects) in the water.

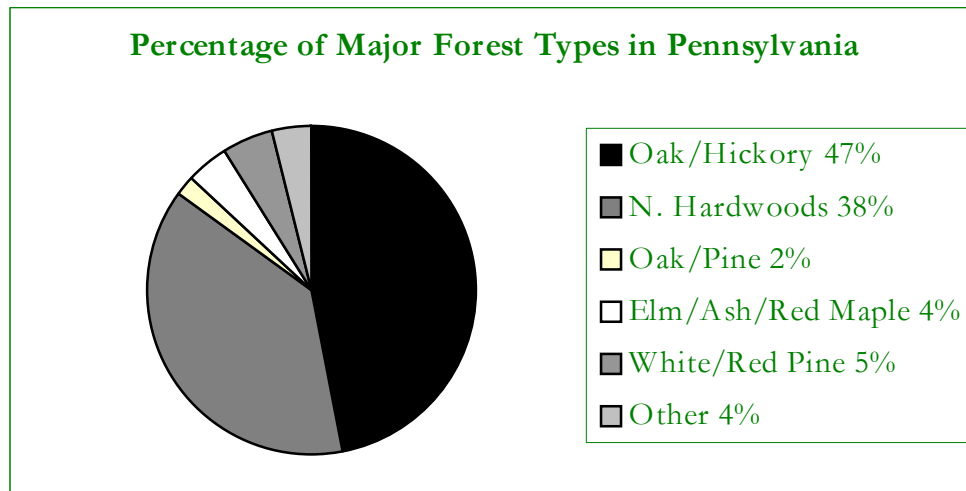
WHAT CAN I DO?

Help provide a habitat for local wildlife at school or in your own backyard. Even urban areas can be made more wildlife-friendly. Plant a flower garden with native plants such as daisies and black-eyed-susans. Leave a patch of grass uncut and let it grow long. Put up a feeder or put out a shallow pan of water for the birds. Think twice before squishing bugs in the house – carry them outside on a piece of paper instead.

Everything you do to improve the environment, even a small thing, makes things better for wildlife.

PENN'S WOODS

Pennsylvania is mostly covered with temperate forest. It is characterized by long growing seasons, mild winters and regular rainfall (mostly during spring and fall). Pennsylvania forests contain mostly deciduous trees, but also include coniferous trees in many areas. The chart below gives a breakdown of the kinds of forest found in Pennsylvania.



LAND USE

William Penn's 1681 "Conditions or Concessions to the First Purchasers" contains the state's earliest conservation law. It required that settlers leave one acre of trees for every five cleared. This preservation was an attempt to save the oak and mulberry, used in the making of silk, for shipping. Many did not heed Penn's words and deforestation continued.

Pennsylvania experienced large-scale logging in the 1800's. After the civil war, in 1865, Pennsylvanians began to mine the state's rich coal deposits. Wood was needed in the mines as well as for the prospering towns above. This wood was not removed from the mines after a vein of coal was depleted, so more wood was needed each time a mine was built. It is estimated that 75 million cubic feet of wood (about 30,000 acres of forest) was supplied to the coal mining industry in one year. Trees were also used to tan hides, and tanneries by the hundreds were found throughout PA in the 1850's.

Taxation also proved a problem for Penn's Woods. High taxes on cleared land meant that a landowner could move from one property, which had already been clear-cut, then purchase another forested area for little more than the price of one year's taxes on the cleared land. This encouraged settlers to purchase untouched lands for profit, a common practice. Combined with the harvesting of wood for commercial production, this left very little forest remaining in the commonwealth.

Today, 59% of the state is covered by 17 million acres of forestland. Six out of every ten acres of PA are forested. Thanks to proper land-management practices and wildlife

preservation by cooperative agencies, Pennsylvania is now back on the list of “big woods” states. We need to continue these efforts and educate the next generation so they may learn from our mistakes.

THE H.I.P.P.O. DILEMMA

H.I.P.P.O. – are they found in P.A.? No. This does not refer to the species, but to an acronym describing the dilemma of all threatened and endangered species around the globe: **Habitat loss**, **Introduced species**, **Pollution**, **Population growth**, and **Over-consumption**. We can apply this dilemma to our own backyards. Below is an easy reference list showing how each biome in Pennsylvania’s temperate forest has been affected by the H.I.P.P.O. dilemma.

Habitat loss	Forest – Yellow-bellied Flycatcher* Field – Loggerhead shrike* Wetlands – (Anything in a wetlands) Jacob’s Ladder* Stream – Great Egret*
Introduced species	Forest – Red fox from Europe competed with Gray fox Field – European Starling, European House sparrow Wetlands – Purple loostrife, competes with all thrush and bulrush Stream – Red-eared Slider turtle (competes with Red Bellied turtle*)
Population growth	Forest – Small Whorled Pogonia* Field – Kirtland’s snake* Wetlands – King Rail* Stream – Osprey* / Indiana Bat*
Pollution	Forest – Wood frogs* Field – Least shrew* Wetlands – Black Tern* Stream – Peregrine Falcon* (most fish)
Over-consumption	Field - Upland Sandpiper* (replace passenger pigeon) Forest – Gray Wolf** (white-tailed deer population) Wetlands – Bog turtles* (pet trade) Stream – Burbot* (overfishing)

*Species on threatened or endangered list

**Species extinct in this part of its range

Suggested Reading List

Animal Tracks by Arthur Dorros

Beaver's Day by Christine Butterworth

Big Tracks, Little Tracks: Following Animal Prints by Millicent E. Selsam

The Boastful Bullfrog by Keith Faulkner

Brown Bear, Brown Bear, What Do You See? by Eric Carle

Box Turtle at Long Pond by William T. George

In the Small, Small Pond by Denise Fleming

In the Tall, Tall Grass by Denise Fleming

The Kissing Hand by Audrey Penn

The Mitten by Jan Brett

Nuts to You by Lois Ehlert

Outside My Window by Bernice Rappop

Owl Babies by Martin Waddell

Owl Moon by Jane Yolen

Play With Me by Marie Hall Ets

Salamander Room by Anne Mazer

Sassafrass by Audrey Penn

Seasons of a Red Fox by Susan Saunders

A Starlit Somersault Downhill by Nancy Willard

A Tree is Nice by Janice May Udry

Tree Trunk Traffic by Bianca Lavies

When It Starts to Snow by Phylis Gershator

When the Earth Wakes by Ani Rucki

Whose Tracks Are These? by Jim Nail



Teacher Resources

The City Kid's Field Guide by Ethan Herberman

The Classroom Teacher's World Animal Encyclopedia by Sherrill B. Folra

The Curious Naturalist by John Mitchell

A Forest Tree House by Sheryl A. Reda

Mammal Footprints by Peter M. Spizzirri

Nature Club: Trees and Leaves by Althea Briathwaite

Pennsylvania Wildlife: A Viewer's Guide by Kathy and Hal Korber

Ranger Rick's Nature Scope: Trees are Terrific! Ed. by Judy Braus

Tree Homes: A Teacher's Guide by Jean C. Echols

What's Inside: Animal Homes by D.K.

Wildlife Notes by Chuck Fergus (Available from the PA Game Commission)



Internet Resources

All About Nature: Animal Printouts: <http://www.enchantedlearning.com/coloring/>

- This site contains information and pictures of hundreds of animals. Print out label or copy and paste into paint program. Use the searchable database alphabetical listing.

Animals on the Net: <http://people.ne.mediaone.net/animalsnet/>

- A directory to wild and endangered species that includes animal profiles and links to webcams, sound files and images.

Beechwood Farms: www.aswp.org/beechnwood.html

- This site gives information about opportunities at Beechwood Farms, a local nature reserve.

Carnegie Museum of Natural History: www.carnegiemuseums.org/cmnh/

- This site gives information about the opportunities and materials available through the Carnegie Museum, including their educational loan collections. These are available to educators and schools for a modest fee.

Cornell Laboratory of Ornithology: www.ornigh.cornell.edu/

- This site is a cool link to bird information, pictures and sounds.

Cyber Zoomobile: <http://www.primenet.com/~brendel>

- This site contains wildlife photos and general information on animals. The site is organized by species classification. Each entry includes photos of the animals and factual information on behavior, life cycle, habitat and more.

KiddoNet: www.kiddonet.com/AOL/KidsOnly/aolindex..pl

- This site is truly for kids! Lots of games and fun stuff about animals.

Kids Go Wild: www.kidsgowild.com

- This site has great games, information and an opportunity to get involved in conservation, sponsored by the Wildlife Conservation Society.

Kratt's Creatures: www.pbs.org/kratts/index.shtml

- This site has very kid-friendly information about animals from all over the world.

National Wildlife Federation: www.nwf.org

- This site has great info on current conservation issues. The Kid's page is a definite must-see – it has games and tons of cool info, riddles, games and cool stuff for kids to do outdoors.

Newark Public Library's Kid's Place: www.npl.org/Pages/KidsPlace/Sites/animals

- This site has tons of links to lots of nature and animal sites for kids.

PA Department of Conservation and Natural Resources: www.dcnr.state.pa.us

- This site has information about the uncommon wealth of Pennsylvania. It includes species listing for the state and information about PA's endangered animals and plants. Be prepared to do some hunting.

PA Department of Environmental Protection: www.dep.state.pa.us

- This site has a page devoted just to educators, including curriculum and classroom activities, current events, and the peregrine falcon cam. Lots of links to other sites, too!

Pennsylvania Fish and Boat Commission: www.fish.state.pa.us

- This site has great information about PA fish and access to educational materials.

Pennsylvania Game Commission: www.state.pa.us/PA_Exec/PGC

- This site has a wealth of great info about PA animals!!

Wildlife Web: <http://www.selu.com/~bio/wildlife/>

- Explore the sites and sounds of wildlife through this compendium of links. Search for specific animal and conservation resources.

ZooBooks: www.zoobooks.com/

- This site has resources for teachers, including classroom activities, project ideas, resource lists, and much more. It also is a great site for parents and kids, with animal information, online quizzes and games and more.

ZooNet for Kids: <http://www.members.aol.com/zoonetkids/>

- This site contains a gallery of animal pictures and sounds, details of children's zoos and fun facts on your favorite animals.

Vocabulary

Camouflage - an organism's ability to hide or blend visually with its surroundings using color, pattern or shape.

Carnivore - an animal that eats other animals.

Conservation - the wise use of natural resources in order to insure continued availability to future generations.

Diurnal - refers to an animal that is mainly active during the daytime.

Ecosystem - refers to a description of all the components of a specified area, including the living organisms and the nonliving factors such as air, soil, and water and the interactions that exist between all these components.

Forest - an area with many trees and much underbrush.

Habitat - the place an animal lives. It provides the animal with shelter, food, water, and air/space.

Herbivore - an animal that eats only plants.

Hibernation - an extended period of sleep where an organism's metabolism is slowed to an extent that only essential life processes are at work.

Nocturnal - an animal that is mainly active during the night.

Omnivore - an animal that eats both plants and animals.

Predator - an animal that kills and eats other animals.

Prehensile - a body part that is able to grasp.

Prey - an animal that is hunted or killed for food.

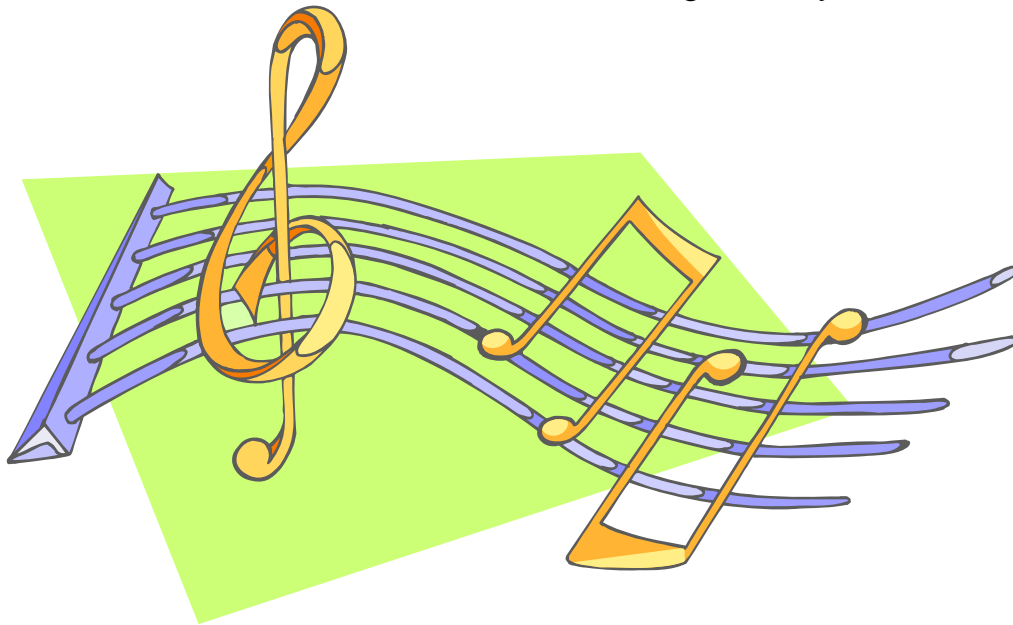
Wetland - a habitat such as a marsh, swamp or bog that produce huge volumes of food in the form of plants both alive and dead. These areas act like filters improving water quality and nurseries for a number of species.

Song Webbing

Content Area: Language Arts, Science

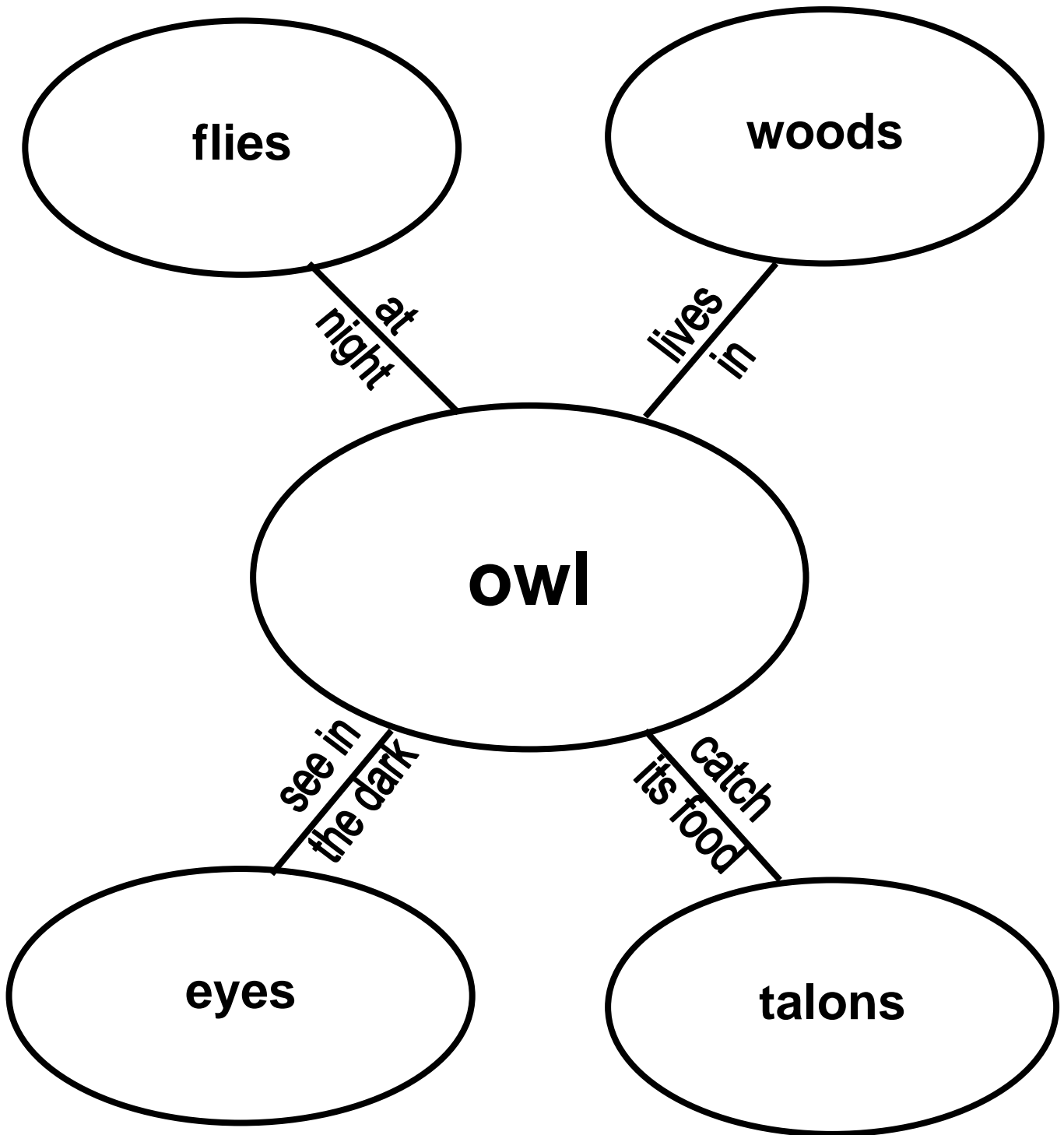
Writing your own animal songs isn't as difficult as you might think. Just follow these steps, and you will see the results. You can even have your students write them with you!

1. Select a familiar tune that you would like to give new words. Some good ones are "The Farmer in the Dell," "The Wheels on the Bus," "Frere Jacques," and Norma Genter's "Bear Facts."
2. Pay attention to the rhythm, rhyme, and repetition of your selected song. Keep these in mind as you create your web.
3. Pick a subject for your song. Write it in the center oval.
4. Select four attributes or adaptations (things on the animal's body that help it survive). Write them in the ovals surrounding the center.
5. Brainstorm ways the animal uses these adaptations, or how they help the animal to survive. Write them on the lines connecting the ovals.
6. If your song calls for adjectives or adverbs to describe the parts, brainstorm these and write them in the ovals as well.
7. Use the words and phrases to create verses for your song. You may need to tweak the words or tune a little – don't worry if it isn't an exact fit.
8. Write out the verses on a large sheet of poster board so the students can follow along.
9. Put your new words to the familiar tune and sing it with your students!



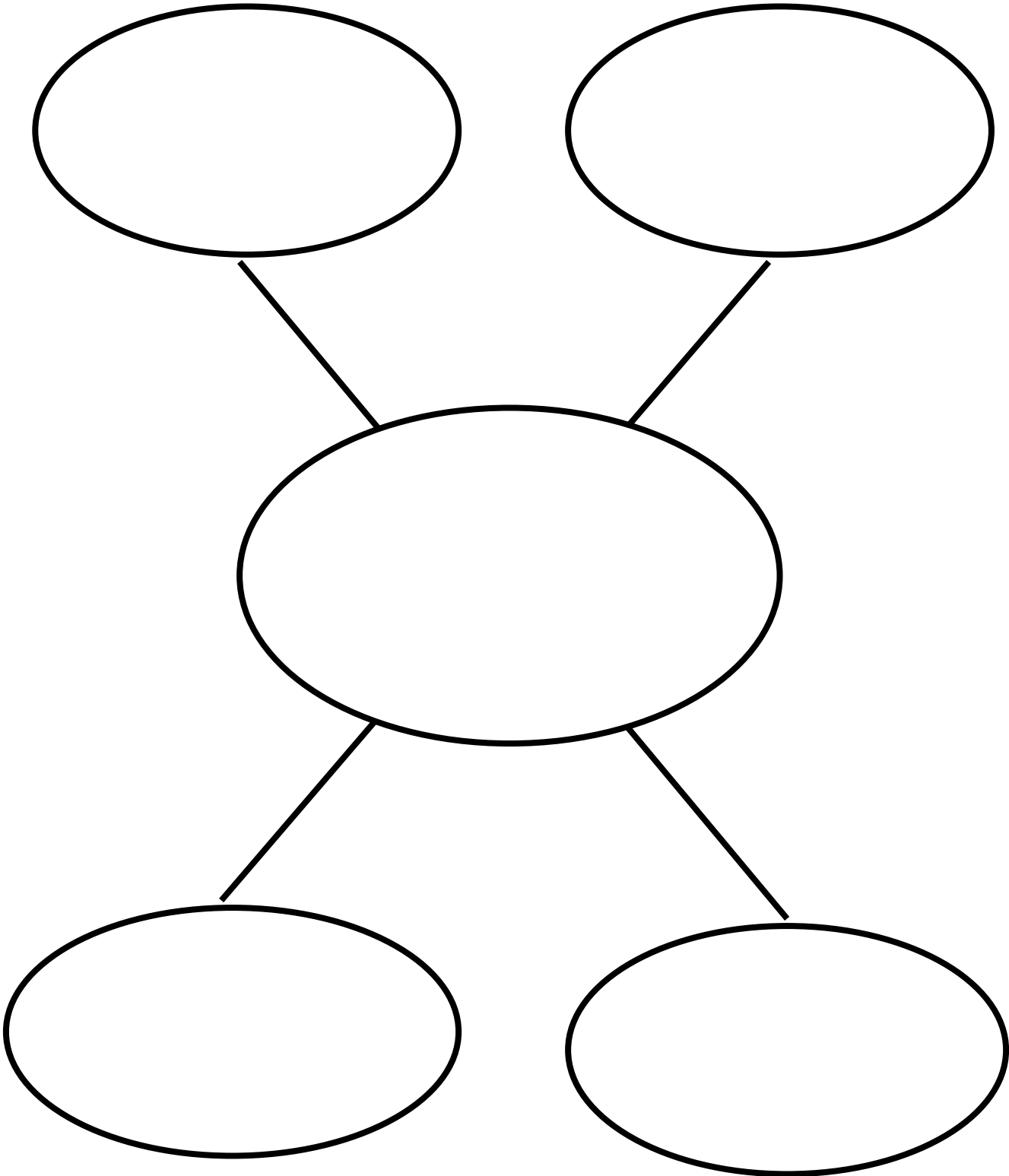
Song Web for: The Farmer in the Dell

Title: The Owl In the Woods



Song Web for: _____

Title: _____



Songs

Content Area: Music, Science

I Need A Habitat

This song includes signs that go along with each habitat component. Do them each time it is used in the song.

shelter: make a roof above your head with your hands

food: pretend to eat

water: make wave motions with your hands

air: spread your hands wide

I need a habitat: shelter, food, water and air.

I need a habitat: shelter, food, water and air.

I need a habitat: shelter, food, water and air.

I need a habitat (clap, clap) and all of that.

I need a habitat: (sign only), food, water and air. . .

Repeat until only signs are used.

The Owl

(sung to "The Farmer in the Dell")

The owl in the woods

The owl in the woods

Who! Who! I hear him call

The owl in the woods.

The owl flies at night . . .

His eyes see in the dark . . .

His talons catch his food . . .

Fluffy Bunny

(sung to "I'm A Little Teapot")

See the fluffy rabbit as it hops.

One ear up while the other ear flops.

He's a gentle fellow with a twitchy nose,

He's all furry from his ears to his toes.

Little Turtle (chant)

I have a little turtle, he lives in a box.

He swims in the puddles and he climbs on the rocks.

He snapped at a mosquito, he snapped at a flea,

He snapped at a minnow and he snapped at me!

He caught that mosquito, and he caught that flea,

He caught that minnow, but he didn't catch me!

5 Green Speckled Frogs

5 green and speckled frogs

Sat on a speckled log

Eating some most delicious bugs - YUM!

YUM!

One jumped into the pool
where it was nice and cool.

Now there are 4 green speckled frogs -
GLUB! GLUB!

4 green and speckled frogs . . .

Little Green Frog

Mm-aah went the little green frog one day

Mm-aah went the little green frog

Mm-aah went the little green frog one day

And his eyes went mm-aah-woo!

But we all know frogs go (clap) La-de-da-de-da

(clap) La-de-da-de-da

(clap) La-de-da-de-da

We all know frogs go (clap) La-de-da-de-da

They don't go mm-aah-woo!

Tiny Tim

I had a little turtle,
His name was Tiny Tim.
I put him in the bathtub
To see if he could swim.
He drank up all the water,
He ate up all the soap,
And now he's sick in bed
With bubbles in his throat!
(Bloop, bloop, bloop!)

Bird, Bunny, Snake

(sung to "The Wheels on the Bus")

The bird in the tree goes Chirp, chirp, chirp
Chirp, chirp, chirp;
Chirp, chirp, chirp
The bird in the tree goes Chirp, chirp, chirp
All day long.

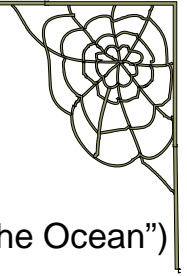
The bunny in the woods goes thump, thump,
thump. . .

The snake in the grass goes hiss, hiss, hiss.
. .

Mama Bunny Song

(sung to "The Rabbit")

Near the oak tree in the woods
Mama bunny by the borrow stood
Saw her baby hopping by
Nibbling on some grass.
"Baby, Baby" Mommy said
"Try this clover here instead!
Hop little baby, hop to me.
Happy we will always be."



The Spider

(sung to "My Bonnie Lies Over the Ocean")

A spider came into my bedroom
And guess what it started to do?
It started a web in the corner,
And while I was watching, it grew!

More silk, more silk,
The spider is spinning its web – more silk!
More silk, more silk,
The spider is spinning its web.

It started the size of a quarter,
And now it's the size of my shoe.
If this thing keeps getting bigger,
I don't know what I'm going to do.

More silk . . .

The spider web filled up the corner
And made its way over the wall.
The web has now crawled 'cross the ceiling,
And has started to move down the hall!

More silk . . .

My house is now wrapped up and sticky
From basement to rooftop – oh my!
My house is a mess, but I'm smiling.
I'm just happy that I'm not a fly!

More silk . . .

Nature Notes

PreK

Content Area: Language Arts, Science

Skills: Observation, verbal, fine motor

Objectives:

TSW use their senses to learn more about their environment.

TSW name at least 3 colors found in nature.

TSW will recall what they experienced during their walk.

TSW list at least three things in nature.

Materials:

- Paper (may be in leaf shape)
- Crayons
- Small natural objects (leaf, acorn, soil, rock, etc.)
- Paper bag

Procedures:

Anticipatory Set:

Place natural objects in a paper bag. Ask the students to use their sense of touch to figure out what is in the bag. Describe what it feels like.

Development of Lesson:

1. Enjoy the outdoors by taking a nature walk. Choose a quiet location close to the school where the students will not be interrupted. Encourage the students to use all of their senses. With your eyes closed, what do you hear? What do you smell? Open your eyes, what do you see? What colors do you see? Do you taste anything in the air? What can you feel?
2. Remind the children it is important to leave nature the way that you found it. Each child can make a nature rubbing of a leaf or tree bark.
3. Take notes of the children's observations. Take at least one quote from each student.
4. Copy your notes onto each child's nature rubbings.

Summary:

After the walk, read each of the children's quotes. Ask them to recall the colors that they saw. Make a keepsake book with the children's quotes, or display them on a bulletin board.

Extensions:

- Use the "Backyard Checkup" page with your students to see how healthy your schoolyard is. What is good? What could be done to make it better?
- Plant a tree at your school.
- Make bird feeders to hang around your school or for your students' homes.
- Make trail-mix for an outdoor picnic with cereal, raisins, chocolate chips, and dried fruit.

My Picture Book: Nature Through My Eyes

Grades K – 3

Content Area: Language Arts, Science

Skills: observation, fine motor, verbal/language

Objectives:

TSW observe nature using all of their senses.

TSW identify the different components of the habitat they observe.

TSW illustrate and record their observations.

Materials:

- plain paper
- stapler
- clipboards
- pencils
- crayons

Procedures:

Anticipatory Set:

Discuss with the students the idea of keeping a nature journal. Explain that it may be used to raise questions about nature and natural processes, and to enhance observation skills. Stress the importance of observation (if you have not already done so, complete “Learning to See – Observation in Nature”). Practice observing in the classroom first. Listen for sounds with your eyes closed. What can you hear? With your eyes open, what do you see? Can you taste anything? What can you feel? What can you smell?

Development of Lesson:

1. Create the journal the students will use. Nature journals come in many different shapes and sizes. The students can make their own journals from plain sheets of paper, stapled together at the edge. The number of pages in the book depends on how many entries the class will be making. Allow at least one sheet per entry, plus a front and back cover.
2. Select a natural area near the school. Students should spread out and observe a section of the area. Encourage the use of all the senses (except taste).
3. Have students use the clipboards, crayons and pencils to make entries in their journals. Each journal entry should include the date, time, and location. Students may draw and/or write about what they see, make leaf rubbings, record the weather, plants, animals, smells, and sounds observed.
4. Visit and monitor the area over a period of time. You may want to visit this area at different times of day, or even during different seasons. Make note of any changes that occur in the area.

Summary:

Share the journals on a regular basis during the observation period. At the end of your journal observations, discuss how the area changed over time. What stayed the same? What problems arose? How could this area be improved?

Extensions:

- Display your journals in the school library so that other classes can learn more about the area you observed.
- Use the “Backyard Checkup” sheet to see how healthy your schoolyard is. What is good? What could be done to make it better?
- Adopt the area you are observing. This is a great time to model stewardship by keeping it litter free! Remember to always leave nature the way you found it.



Backyard Check-up Checklist

It takes many things to make a healthy backyard. How many can you find in *your* backyard?

- Earthworms
- Birds or bird nests
- Spiders or spider webs
- Small mammals like chipmunks and squirrels
- Mushrooms or toadstools
- A leaf chewed by an insect
- Bumblebees
- Animal tracks
- Ladybugs
- Native flowers like clover, daisies or milkweed
- A snake shed
- A hole dug by a small animal
- Bats
- A water source like a pond or birdbath
- Bushes or shrubs for cover
- An anthill
- Seeds from flowers or trees
- Toads or frogs
- Native trees like maple, pine or oak

To give your backyard a boost, you can:

- Put up feeders to attract wildlife to your backyard.
- Put out nesting materials like yarn, string or fabric scraps for the birds.
- Put a broken flowerpot in a cool, moist place for toads.
- Build a bat box to bring bats to your backyard.
- Plant a tree! Trees provide shade and shelter for many living things.
- Start a compost pile. It's a great way to dispose of kitchen and yard scraps and makes rich soil for your garden.

Learning to See: Observation in Nature

Content Area: Science

Skills: observation, listening, attention to details

Objectives:

TSW collect natural objects.

TSW look at the natural objects.

TSW observe another student or person in the room.

TSW distinguish between looking and observing.

Materials:

- Natural objects (sticks, rocks, feathers, seeds, etc.)
- Paper and pencil or crayons (older students)

Procedures:

Anticipatory Set:

Take a nature walk with your students. As you walk, have them collect a natural object that they think is interesting. Remind them not to pick living plants or pull leaves off the trees. Also, monitor them to make sure they do not pick up fungi – many wild mushrooms are toxic, and they are living organisms. Bring the objects back to the classroom. If a nature walk is impossible, bring in natural objects you have collected.

Development of Lesson:

1. Ask the students to share the object they brought, much as they would for show and tell: what it is (or their best guess), where they found it, why they think it is interesting, etc.
2. Do one or both of the following observation activities with the students:
 - a. Intruder!
 - i. Ask another teacher, preferably one the students do not know well, to “interrupt” your lesson by tapping on the door and walking in.
 - ii. Hold a brief conversation with the “intruder” in front of the class, after which they leave the room and wait, out of sight.
 - iii. Ask the students for details about the person just in the room: what they wore, what they looked like, what they said, etc. Record their responses.
 - iv. When the students have given as much information as they can, ask the “intruder” to return.
 - v. Compare their recollections to the “intruder.” What did they remember? What did they miss? What did they remember incorrectly?

- b. Observation Game
- i. Pair up the students and have them stand in a line, facing each other. If there is an odd number, partner with them.
 - ii. Have the students take a close look at (observe) their partner for 1 minute (30 seconds for younger students). This will seem like an eternity for most of them!
 - iii. Have them turn their back to their partner and make 1 to 3 changes to their appearance (depending on the age level). These include things like untying shoes, taking off glasses, un-tucking shirts, taking off hats or turning them backwards, etc. Give them 30 seconds – one minute to make these changes.
 - iv. On your signal, partners face one another again. Have them try to find the changes made. If, after a reasonable amount of time has elapsed, they have not found them all, have their partner show them what they changed.
3. Point out that observation means taking a very close look at something and noticing all the details.
 4. Stress the importance of recording their observations. This is how new scientific knowledge is preserved and passed on.
 5. Ask the students to now observe their natural objects. Older students may write or draw their object, noting details. Younger students may share verbally.

Summary:

Was there a difference between looking and observing? Did you notice all the details the first time around? Discuss what they discovered.

Extensions:

- Practice your observation skills! Complete “My Picture Book: Nature Through My Eyes” or “Nature Notes”
- Use the natural objects you collected to complete “Sorting It All Out.”



Small Habitats

Content Area: Science, Math

Skills: Counting, comparing, observing, verbal

Objectives:

TSW define a habitat as an animal's home.

TSW compare two different habitats: sunny and shaded.

TSW describe what they observe in each habitat.

Materials:

- Meter or yard stick
- String (at least 4 meters in length)

Procedures:

Anticipatory Set:

Ask "What is a habitat?" (a home to a living thing where it gets shelter, food, water, and air/space). Sing "I Need A Habitat" (see song sheet). Can habitats be different sizes?

Development of Lesson:

1. Take a walk outside to a dry, sunny location. Rope off one square meter. Observe the area. Do you see any life? What animals do you see, if so, how many? Do you see any plants, if so, how many?
2. Would a different kind of location have the same animals and plants?
3. Do the same activity in a damp, shady location.

Summary:

What was different? What was the same?

Extensions:

- Observe the same locations daily. Is anything different? What is still the same?
- Observe and compare three locations.
- Graph your findings.
- Read Salamander Room by Anne Mazer. Discuss the importance of the salamander's habitat. Have the students re-write the story about another animal (example: Bear Room or Beaver Room).

Seed Study

Content Area: Science, Math

Skills: Observation, verbal

Objectives:

TSW list four things that plants need in order to survive.
TSW observe stages of plant growth.
TSW plant seeds.

Materials:

- Assorted beans and seeds
- Clear zip lock sandwich bags
- Paper towels
- Water
- Tape
- Chart paper
- Markers or crayons

Procedures:

Anticipatory Set:

Serve a snack of different kinds of beans, seeds and/or nuts. Ask the students where the snack came from and to recall what plants need in order to grow (sunlight, water, food and space). Ask if they need the same things to grow?

Development of Lesson:

1. Soak a lima bean in water overnight to share a small sprout with the class.
2. Distribute a lima bean, sandwich bag and a wet paper towel to each student.
3. The students will place the lima bean inside the paper towel and place them both inside the baggie.
4. Label each child's name on the bag and tape the bags to a window for direct sunlight.
5. Observe the beans daily. Make a classroom chart on the growth of the sprouts. You may want to draw the different stages each day or measure their lengths.

Summary:

Plant the sprouts at your school or send them home with your students.

Extensions:

- Sort different kinds of seeds by size, color or shape.
- Grow different kinds of plants – start a garden at your school!
- Plant a tree.
- Make birdfeeders to attract wildlife to your school.

Making Tracks

Content Area: Science

This is a great lesson for a snowy day!

Skills: observation, matching, drawing conclusions

Objectives:

TSW identify at least 3 different characteristics of tracks.

TSW identify at least 3 functions of track characteristics.

TSW match animal tracks to the animal that made it.

TSW draw conclusions about what happened from tracks.

Materials:

- Outdoor area with snow, damp sand, or moist, loose soil
- Copies of animal tracks (from Animal Track Picture Bank)
- Pictures of the animals that made the tracks (from Backyard Animals Picture Bank)
- Copies of “Whose Tracks Are These?”

Procedures:

Before You Start: Mount the tracks and animal pictures on index cards. Take them with you when you go outside. Laminating them will protect them from the weather. For younger students, make enough copies of the animals for the matching game at the end.

Anticipatory Set:

Take a walk outside on a snowy day or in soft, moist soil or sand. Point out the students’ footprints. What are these? (footprints) They are also called tracks. We make them everywhere we walk. Do you think animals make tracks, too? Yes, they do! We can tell a lot of things from their tracks.

Development of Lesson:

1. Have the students look for animal tracks outside. If they find some, ask them open-ended questions to get them thinking: Where did this animal come from? Where did it go? Was there more than one? How big was it? What do you think made these tracks? Use the tracks to illustrate as many lesson points as possible.
2. Number: One thing we can tell is how many individuals made tracks. Have the students look at the tracks they made during their exploration. Point out places where only one or two people walked (if possible) and compare them to places where many people walked. What do all these tracks tell you? Was there one person, or were there many people?
3. Size: Another thing we can tell is how big the animal is. Compare your tracks to the students’ tracks. Whose are bigger? (yours) Why? (adults are

bigger than kids) Return to the classroom (if you must!). Would a bear or a rabbit have bigger tracks? (bear)

4. Shape: Show the bear and rabbit tracks. Ask them to guess which is which, and why they think that. We can tell a lot about an animal from the shape of its track. Point out the rabbit's large hind feet. Why do you think the rabbit has such big back feet? (to help it hop) Show the frog track. How is this track the same? (also has big back feet for hopping)
 - a. Webbed feet: What else does a frog do? (swim) Point out the webbing. Webbed feet help animals swim. Show mallard duck and beaver tracks and compare them to the frog.
 - b. Long toes: Look closely at the beaver's front feet. Are they webbed? (no) Beavers have longer toes on their front feet. This helps them hold onto branches when they build their lodges. Show the opossum and squirrel tracks. They have long toes to help them hold on when they climb. Show the hawk track. Hawks have long toes to grab their food.
 - c. Claws: Point out the claw marks on the hawk track. Hawks have special claws called talons to give them an extra good grip when they hunt. Point out the claw marks in the other tracks, too. Show the bear track. What would a bear need claws for? (climbing, hunting, scratching open logs/bee trees)
 - d. Hooves: Show the deer track. Some animals have very hard hooves. This lets them run or walk for long distances over hard ground.

Summary:

Use the animal track and picture cards to play a matching game: Give each student an animal card. Hold up the track cards one at a time, singing "Making Tracks." Have them bring up their animal cards as you sing about their animal and match it to the track.

Making Tracks

Sung to: "Ten Little Indians"

Who makes tracks that are webbed for swimming?

Who makes tracks that are webbed for swimming?

Who makes tracks that are webbed for swimming?

It's a duck!

Who makes tracks . . .

with long toes for climbing? It's an opossum!

with talons for hunting? It's a hawk!

with big feet for hopping? It's a rabbit!

with hooves for running? It's a deer!

with long toes and webbing? It's a beaver!

that are great big? It's a bear!

Older students may also complete “Whose Tracks Are These?” Discuss their answers. Follow up with an extension activity.

Extensions:

- Be a Track Detective! Tracks can also tell a story. Read Animal Tracks by Arthur Durrus, Whose Tracks Are These? by Jim Nail or Big Tracks, Little Tracks: Following Animal Prints by Millicent E. Selsam. Show the students the “What Happened Here?” page. Use all the clues the tracks provide to guess the story told by the tracks. (Possible answers include: a deer came out of the woods, got a drink, and walked off; a beaver gnawed a tree and took it to the pond to build its lodge; a rabbit hopped to the shore, stood on its hind legs to sniff or look around, then ran away).
- Use the animal pictures and tracks to play a memory matching game.

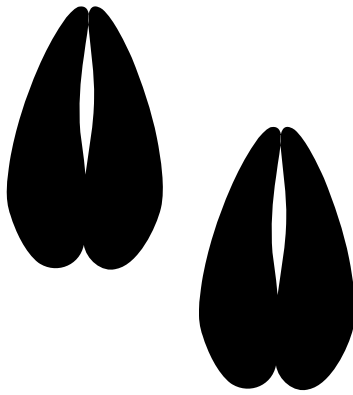


Animal Track Picture Bank

Bear



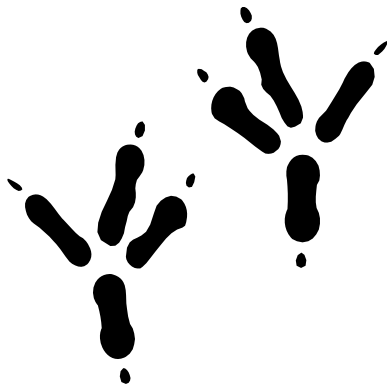
White-tailed Deer



Beaver



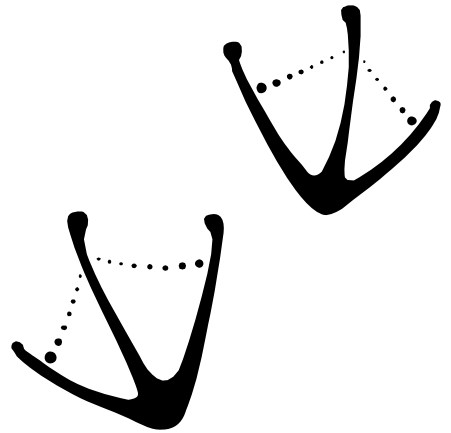
Hawk



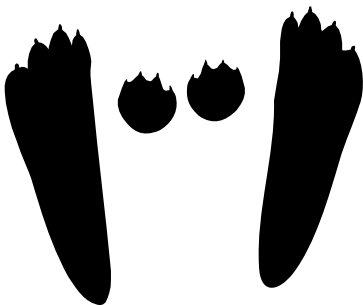
Squirrel



Mallard Duck



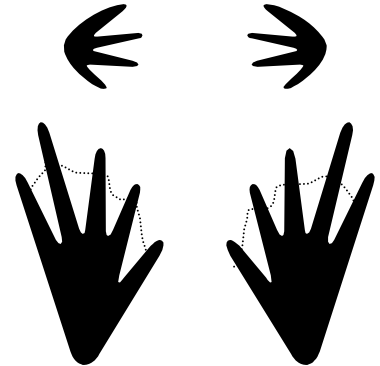
Rabbit



Opossum



Frog



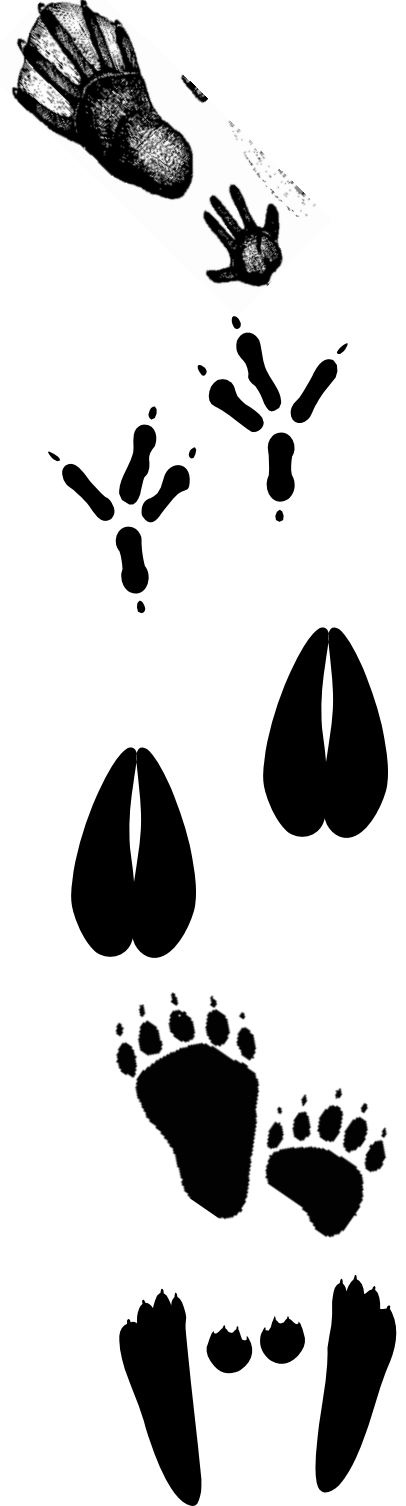
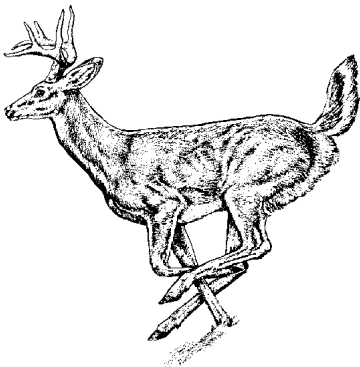
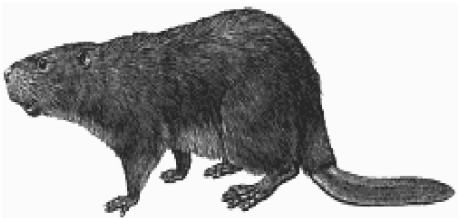
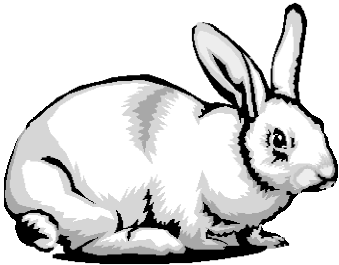
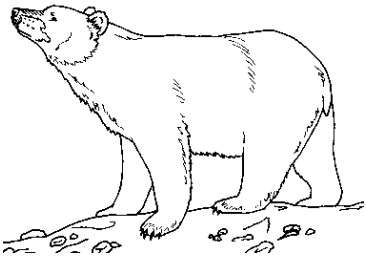
What Happened Here?



Name _____

Whose Tracks Are These?

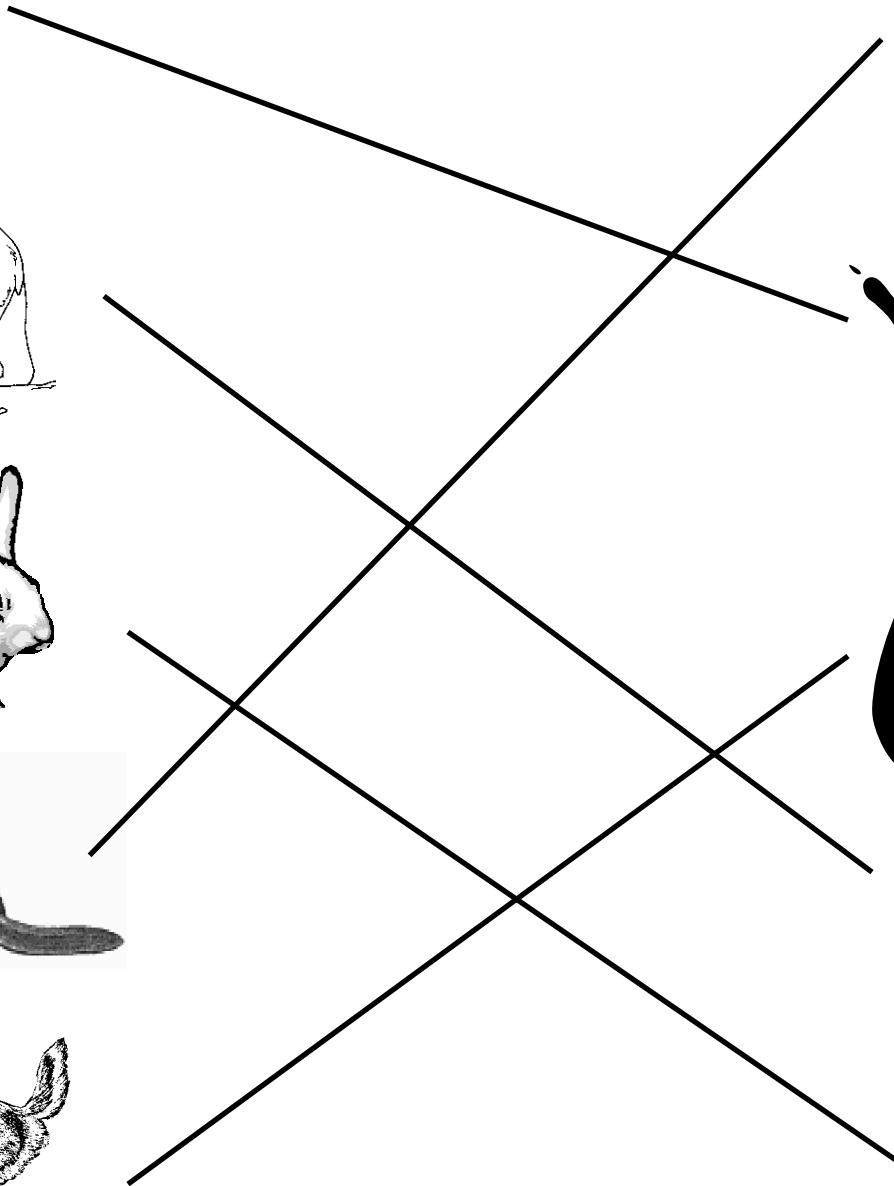
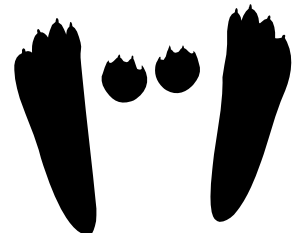
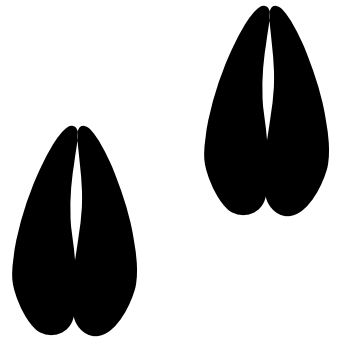
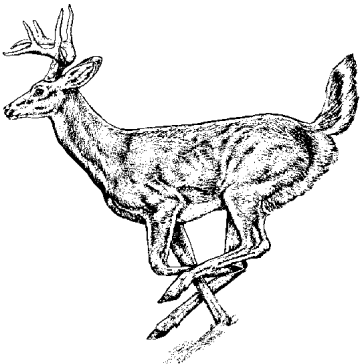
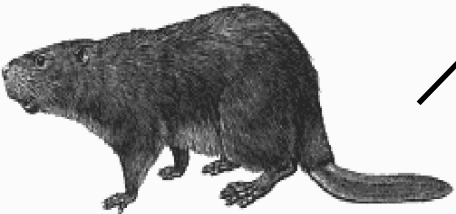
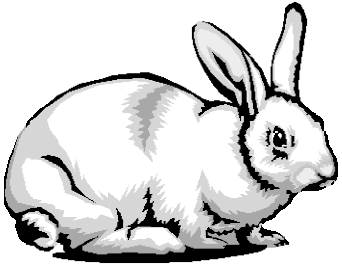
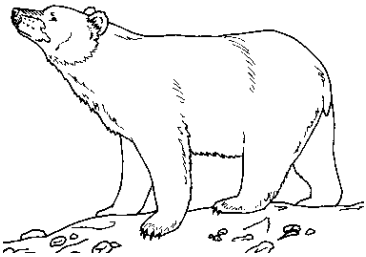
Draw a line from the animal to the track it makes.



Name _____

Whose Tracks Are These?

Draw a line from the animal to the track it makes.



Build a Forest

Content Area: Science, Art

Skills: Fine motor, animal recognition, cognitive

Objectives:

TSW match an animal with its home.

TSW recall animals that depend on trees.

TSW state at least one fact about the animal that they bring up.

Materials:

- Cardboard Tree (see directions for materials to construct)
- Variety of stuffed animals and puppets of animals that make their homes in or near trees (there should be one for each student).
- Crayons
- Glue or tape

Procedures:

Anticipatory Set:

Make the Cardboard Tree. Have the students help paint it and to make and attach the leaves. Bring it your circle time for this activity.

Development of Lesson:

1. Display the cardboard tree your class made.
2. Explain to the students that they will use the tree to create a forest tree house for some animals.
3. Ask the students a few animal riddles.
 - Who sees in the dark and flies to the tops of the trees? (owls)
 - Who hangs by its tail and eats anything? (opossums)
 - Who hides under logs and sprays its enemies? (skunks)
 - Who camouflages with tree bark and loves garden veggies? (rabbits)
 - Who naps during the winter and climbs trees for honey? (bears)
 - Who slaps its tail when it's frightened and chews down trees?
(beavers)
4. As each animal is named, have the students bring up their stuffed animal or puppet and put it in the tree.

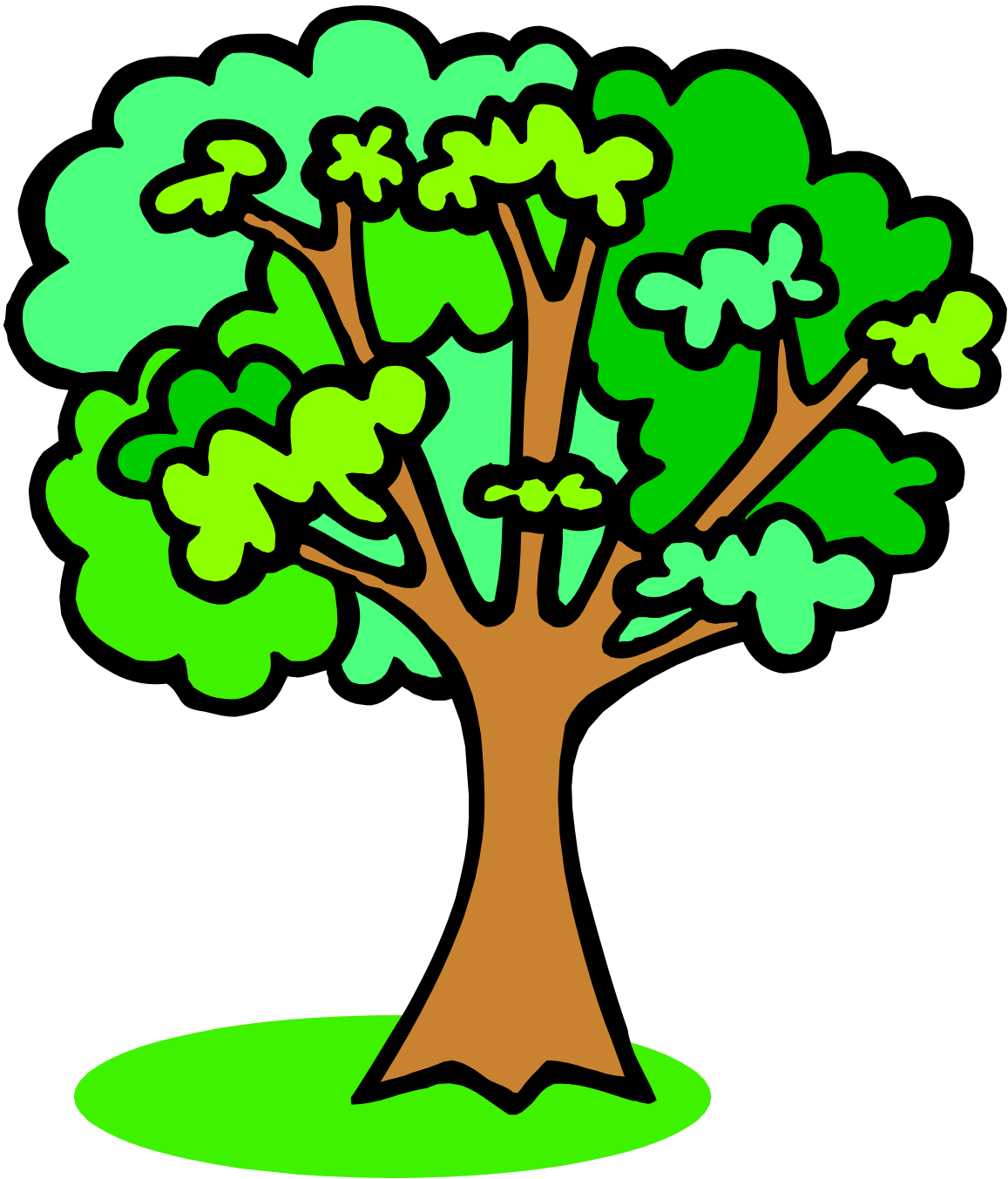
Summary:

Sing a song about an animal that lives in a tree.

Extensions:

- Put the cardboard tree in your Creative Play area and let the students role-play with the stuffed animals and animal puppets.
- Make and add more trees to your classroom.

- Use the animal pictures to make a book about the animals that live in trees. Use the information that the students remember and write their quotes next to each picture.
- Take a walk outside to look for animal homes in or around trees.



Cardboard Tree

Materials:

- 1 large box with flaps, at least 9" x 11" x 14"
- 1 medium box with flaps, at least 7" x 8" x 11"
- 1 small box with flaps, at least 6" x 6" x 8"
- 3 or more cardboard wrapping paper tubes or real branches
- brown poster paint
- paintbrush
- utility knife
- glue, 8 large brads or 5' of Velcro
- 2 ½" x 4" rectangles of brown, red, green, yellow or orange paper for leaves or real or silk leaves
- scissors
- double-sided tape

Directions:

Make the Trunk

1. Stand the boxes on their short end so the bottom faces out and the flaps face you.
2. Use the utility knife to remove the short flaps.
3. Cut an oval-shaped hole in the bottom of the large box. It should be at least 8" wide and 12" high.
4. Cut a 6"x 10" oval-shaped hole in the medium box.
5. Cut a 4"x 8" oval-shaped hole in the small box.
6. Cut one small hole for each branch in the sides of the medium and small boxes. Do not cut holes in the top of the medium box.
7. Paint the boxes and cardboard tubes. Allow them to dry completely.

Assemble the Tree

8. Stack the boxes and fasten together with glue, brads or Velcro.
9. Insert the painted tubes or branches into the holes in the trunk.
10. Cut leaves from the colored paper, or have the children do so.
11. Use double sided tape or glue to attach paper, real or silk leaves to the branches.
12. Put animal puppets in the appropriate holes and watch your tree come alive!

Pattern Caterpillar

Content Area: Math

Skills: Patterns, color recognition, fine motor

Objectives:

TSW be able to follow a pattern.

TSW use listening skills to follow directions.

Materials:

- Colored construction paper
- Scissors
- Glue
- The Very Hungry Caterpillar by Eric Carle

Procedures:

Anticipatory Set:

Read The Very Hungry Caterpillar. Discuss how the caterpillar looks and what he turns into. Have the children verbally name the colors of the caterpillar and butterfly.

Development of Lesson:

- 1. Discuss how caterpillars can have many different colors and patterns.**
- 2. Have several construction paper caterpillars with different patterns already made. Ask the students to identify the colors on their bodies.**
3. Set up a station or center with the pre-made caterpillars and pre-cut circles for caterpillar bodies. Have the children create matching caterpillars by following the patterns on the samples.

Summary:

The students can either glue a caterpillar together to take home or take the pieces home loose so that they can be used again.

Extensions:

- Create one long classroom caterpillar by repeating a simple pattern of colors.
- Have the students create their own caterpillar pattern.
- Search through old magazines to find pictures of caterpillars and make a caterpillar poster or collage.

Sorting It All Out

Content Area: Math, Science

Skills: sorting, observation, fine motor, verbal

Objectives:

TSW collect natural objects.

TSW observe properties of the objects.

TSW sort the objects according to the properties observed.

TSW describe their criteria for groupings.

Materials:

- Natural objects

Procedures:

Anticipatory Set:

Take a nature walk with your students and/or complete “Learning to See: Observation in Nature.” As you walk, have them collect a natural object that they think is interesting. Remind them not to pick living plants or pull leaves off the trees. Also monitor them to make sure they do not pick up fungi – many wild mushrooms are toxic, and it is a living organism. Bring the objects back to the classroom. If a nature walk is impossible, bring in natural objects you have collected.

Development of Lesson:

1. Sit in a circle with the students and put the natural objects in the center. If you have a large class and/or older students, have them sit in cooperative groups. In this case, the students should collect two or three natural objects.
2. Ask the students to look closely at the objects. What do they notice? Can they see any things that are alike in some way?
3. Have the students sort the objects according to what they observe about them.

Summary:

Share the groupings they made. Tell why the objects were put together the way they were (ex. All brown, all leaves, all seeds, all green, etc.)

Extensions:

- Make a class book (if they are relatively flat – leaves, feathers, seeds, etc.) or diorama from the objects collected, which shows the groupings the students made. Include a caption explaining why they were put together.
- Use the natural objects in an art activity, such as “Painting Leaves.”

Recipes

Content Area: Math, Science

Cooking with children is a great way to introduce many basic math concepts such as comparing volume, weight and quantity. As you make these recipes with your children, have them count the ingredients, weigh them, measure them, and compare the amounts of different ingredients. You can even graph them! Basic science concepts in chemistry (dissolving = solutions, combining/mixing = compounds) and physics (states of matter: room temperature = liquid, frozen/chilled = solid, boiling = gas) may also be demonstrated. All that, plus a yummy treat to eat!

Slippery Snakes

For each color snake you will need:

- 1 ½ cup apple juice
- 1 3-oz. package jello (yellow, red, green, or orange)
- 1 envelope unflavored gelatin
- 5 ice cubes

Directions:

1. Heat half of the apple juice in a small pan. Add flavored jello and stir until dissolved.
2. Pour the rest of the juice in a bowl, sprinkle with the unflavored gelatin, and stir.
3. Pour cool mixture over hot and add ice cubes. Stir until most of the ice is melted.
4. Refrigerate about 20 minutes until the mixture is the texture of pudding.
5. Pour half of the mixture into a self-seal sandwich bag. Seal the bag.
6. Cover the cookie sheet with foil. Cut the corner off the sandwich bag and slowly squeeze jello into 2" squiggles.
7. Chill 2 hours and eat!

Nests to Nibble

- 2 large shredded wheat biscuits
- ¼ c. coconut
- 1 T. brown sugar
- ¼ c. butter or margarine, melted
- Fruity bird eggs: red or green grapes, melon balls, blueberries, straw berries, melon balls, canned fruit (drained), or jelly beans

Directions:

1. In a mixing bowl, crumble the shredded wheat biscuits. Stir in the coconut and sugar.
2. Add the melted butter. Stir everything together to blend thoroughly.
3. Line muffin cups with foil. Press the shredded wheat mixture onto the bottoms and up the sides of the cups.
4. Bake at 350° about 10 minutes, until crisp. Allow to cool in the cups.
5. Remove the nests from the muffin tin by lifting the foil. Carefully peel the foil off the nests.
6. Fill the nests with fruity bird eggs. Top with yogurt, if you want.

Frog Food

- 1 large cantaloupe and/or honeydew melon
- green and red seedless grapes
- red fruit roll-up
- 2 large marshmallows
- green construction paper
- black construction paper

Directions:

1. Carefully cut a wedge out of the melon, approximately $\frac{1}{4}$ of the melon's diameter. This will be the frog's mouth.
2. Scoop out the seeds and discard. Hollow out the melon using a melon baller. Do the same with the other melon, if you wish. Put the melon balls in a large bowl.
3. Rinse and drain the grapes. Add to the melon balls. You may add any other fresh fruit you wish. Mix well.
4. Fill the frog's mouth and body with fruit mixture.
5. Cut front and back legs from the green construction paper. Attach to the body with toothpicks.
6. Cut 2 circles from the black construction paper (quarters are about the right size). Moisten the end of the marshmallow slightly and stick on. Attach to top of the body to make eyes.
7. Unroll the fruit roll-up. Insert it in the mouth to make the frog's mouth.
8. Serve on a platter with some **Ants on a Log** and **Gumdrop Butterflies**.

Ants on a Log

- Celery or pretzel logs
- Raisins
- Cream cheese (flavored is fun) or peanut butter

Directions:

1. Spread cream cheese or peanut butter in celery or on pretzel logs.
2. Place the raisins (ants) on top.
3. Crunch away!

Gumdrop Butterflies

- Large gumdrops
- Mini pretzels
- Red or black licorice whips
- Icing
- Cake decorations

Directions:

1. With a butter knife, make 2 slices partway through the gumdrop. They should be about $\frac{1}{3}$ of the way to the center.
2. Gently push one mini pretzel into each slice to make wings.
3. Spread icing on each wing and decorate with cake decorations (jimmies, etc.).
4. Cut two 1 inch pieces of licorice and poke them into the gumdrop to make antennae.
5. Eat!

Frog Jump

Content Area: Active/Creative Play, Science, Language Arts

Frogs begin life as eggs. They hatch in or near water and look more like fish than frogs! These little creatures with tails and no legs are called tadpoles or polliwogs. Like fish, they have gills, which allow them to breathe underwater. Little by little, each tadpole goes through a change called metamorphosis. Its tail begins to shrink as the tadpole grows legs – first hind ones, then front ones. Its gills slowly close and it develops lungs that will allow it to breathe out of water. Finally, when it has grown the body parts it needs to live on land, it hops onto the bank of the pond as a frog.

Skills: Science, gross motor, math, verbal

Objectives:

TSW be able to list three basic life stages of a frog.

TSW jump to designated spots.

TSW sing a song about frogs.

Materials:

- Green construction paper
- Scissors
- Music cassette and player
- Frog life stages poster or models
- Baby pictures, either of animals or students

Procedures:

Anticipatory Set:

Look at baby pictures and discuss how babies move. Compare the movement of the baby to the adult. Introduce frogs and tadpoles with a poster or models.

Development of Lesson:

1. Sing a song about the life stages of a frog. Ask how tadpoles move differently from frogs. Why?

Tadpoles

Sung to "The Farmer in the Dell"

Tadpoles come from eggs,
Tadpoles come from eggs,
They grow four legs and hop away,
Tadpoles come from eggs.

2. Cut green lily pads out of construction paper and place them around the room or outside.
3. Have each child pretend to be a frog, leaping from pad to pad.

4. You may want to start off by pretending to be a tadpole hatching from an egg, swimming in a pond, and growing legs to hop.

Summary:

Have a hopping race. Who can make it to a lily pad first?

Extensions:

- Exercise your students' listening skills by playing a game of musical lily pads. Use a musical cassette or CD and ask the students to hop around the lily pads until the music stops. When it does, they need to hop onto a pad.
- Measure each child's leap. Make each lily pad 1 foot across. How many lily pads can you jump?
- Label the lily pads with letters, numbers or colors. Give the children directions as to which one they should hop to.



Silly Snakes

Content Area: Active/Creative Play, Science

The snake is the body builder of the animal kingdom. It can glide across land and even climb trees by contracting the incredibly strong muscles all along its body. Snakes are reptiles; meaning that they are cold blooded, covered in scales and usually hatch out of eggs. Depending on the species, their size can vary from a few inches to over 30 feet in length and up to 500 pounds. Witness how these amazing reptiles slither by trying it in your class.

Skills: Sensory, gross motor, science

Objectives:

TSW scoot on their stomachs without walking or crawling.

TSW identify a snake shed.

Materials:

- Snake shed
- Photos of snakes
- Cloth bag

Procedures:

Anticipatory Set:

Place a snake shed inside a cloth bag. Pass the bag around and ask the children to use only their sense of touch to identify it. Give clues if it is not identified.

Development of Lesson:

1. Discuss how snakes use their scales and muscles to slither, scoot and climb.
2. Pick a carpeted or grassy area.
3. Try a leg-less race with your class.
4. Pick out a start and finish line (not too far apart) and line up on your bellies.
5. Can you move like a snake? On your mark, get set, slither!

Summary:

Find pictures of snakes to create a snake collage.

Extensions:

- Have a live snake visit the classroom.
- Play a game of follow the leader. Line up one-by-one, with the teacher in the front of the line and students following. Place your hands on the waist or shoulders of the person in front of you to make the body. The teacher is the snake's head and the students are the body. Slither through the building!

Games

Content Area: Active/Creative Play, Science

Games are a fun and active way to improve your students' gross motor skills while reinforcing scientific concepts such as predator/prey, habitat components, locomotion, and natural history.

Moving Meals

Materials: none

1. Explain that frogs, like most predators, eat live prey. They don't notice non-moving prey, but are quick to catch moving insects within their reach. If it is possible to observe a live frog or toad, this would be ideal. Remember to always return any creature "borrowed" from the environment to the same place you found it.
2. One child is selected to be the frog. You may wish to be the first frog to model what the students are to do. The frog stands at one end of the open space.
3. The rest of the students are insects. They line up across the other end of the open space about 20 feet away from the frog.
4. The frog stands with his or her back to the insects. While the frog's back is turned, the insects are permitted to creep forward.
5. The frog then calls out "1-2-3 food for me!" and turns to face the insects. The insects must freeze in place.
6. Any insects seen moving are lunch. To discourage running, remind the students that insects creep along. Also, if anyone is seen running while the frog is counting, they are also lunch. All insects that are lunch must return to the starting line and begin again from there.
7. Insects may get to safety by crossing an imaginary line even with the frog.

Mouse, Mouse, Owl! (Duck, Duck, Goose)

Materials: none

1. Review the idea of predators and their prey. Ask the students for examples of animals that would be predators. Ask them for examples of their prey.
2. Have students sit in a circle.
3. Select one to be the first mouse (it).
4. The selected student walks around the circle, gently tapping the seated students on the head and saying "mouse" or "owl."
5. When the mouse (it) says "owl," the student tapped gets up and chases the mouse (it) around the circle. The mouse (it) tries to make it around the circle to the owl's original seat without being caught.
6. If the mouse does not make it, they have been eaten. They must sit in the center of the circle (the stomach) for one turn, or until another mouse has been eaten. The owl becomes the next mouse (it).

Squirrel, Squirrel

Materials: acorn (real or stuffed) or something to represent an acorn

1. Squirrels are active throughout the winter. Since food is scarce, they must store it up ahead of time. They gather acorns and other seeds and nuts and cache them. They will store them in a hollow opening of a tree, when one is available, but more often they will bury them in the ground. Squirrels gather and hide literally hundreds of acorns each year. They do not, however, remember where all of them are buried. As a result, the acorns germinate and grow into new oak trees. In this way, the squirrel helps to replant the trees it relies on for food and shelter.
2. Have the students sit in a circle.
3. Select one student to be the squirrel. The squirrel moves to the center of the circle and hides their eyes.
4. The students pass the acorn around the circle.
5. When the leader gives a signal, the students in the circle should ALL put their hands behind their back, hiding the acorn.
6. The leader says "Squirrel, Squirrel, where is the acorn?" The squirrel opens his or her eyes and tries to guess which student in the circle has the acorn. Encourage the students in the circle to keep it a secret and not give any hints. Allow the squirrel several guesses (3 is usually a good number).
7. The person with the acorn becomes the next squirrel.

Spider web

Materials: none

1. Spiders eat insects that get caught in their web. The spider spins the web with silk it produces in its spinnerettes. Most of this silk is very sticky and traps any insect that touches it. The spider is always careful to leave a path of webbing that is not sticky – otherwise it would be caught in its own web!
2. Play this in a large, open area. Establish two safe zones about 20 yards apart.
3. Select one student to be the spider. The spider is free-moving in the area between the safe zones. The rest of the students are insects.
4. Line the insects up in one safe zone. When the leader calls out, "Fly, insects, fly!" the insects try to run to the other safe zone without getting caught by the spider.
5. The spider tries to tag the insects. Any insect tagged becomes part of the spiders' web. The web may either be free-moving or stay put where they are caught. During the next round, the web also tries to tag insects as they fly by.
6. Any insects tagged become part of the web. Continue this way until either all the insects are caught or only one remains.
7. **Variation:** When the insects are tagged and become part of the web, have them hold hands with another tagged player to form strands of the web. They may still tag insects with their free hand. Connect the web strands whenever possible. The insects must fly around the strands, but the spider may move through the web (under hands). The web will raise their hands for the spider, but lower them for the insects.

Skink Tag

Materials: none

1. Skinks are the only lizards native to Pennsylvania. When attacked by a predator, skinks drop their tails. The end of the tail twitches because of residual nerve activity, attracting the predator's attention. The skink moves to safety while the predator is distracted. Eventually, the tail will regenerate.
2. Select one player to be the predator.
3. Divide the others into groups of three or four. They are the skinks. One player is the head. The others line up behind the head, holding onto the waist of the person in front of them. They are the skink's tail. *Note: they should **always** be holding on to the person in front of them.
4. The skinks begin to run. The predator tries to catch one of them by getting hold of the waist of the last person in line – the end of the skink's tail.
5. If they are successful, the head of the skink breaks off – drops its tail – and becomes the predator. The next person in line becomes the new head.
6. The skinks should twist and turn, trying to keep the tail away from the predator and avoid being caught.
7. You may wish to play with more than one predator.

Bear's Cub

Materials: teddy bear

1. Remind the players that mother bears are very protective of their young and will defend them at all costs. It is not a good idea to get between a mother bear and her cubs! Mother bears are always on the lookout for danger.
2. Select a person to be the Bear.
3. Have the Bear sit with their back to the other players at least ten feet away.
4. Put a teddy bear behind the Bear and have the Bear pretend it is his/her cub.
5. Have the other players take turns sneaking up behind the Bear and trying to steal the cub.
6. If the bear hears the person sneaking up, it can growl and then turn around. If the Bear has caught a player the player takes the Bear's place and the Bear goes back to the other players. If there is no player when the Bear roars, the player Bear remains the Bear and the game starts again.

***Note:** if you have trouble with your Bears growling too soon (whether they really hear someone or not), have the person caught only if they are within a few steps of the bear cub, or have them switch places whenever the Bear growls and turns.

Skin the Snake

Materials: None

1. Snakes shed their skin when they have outgrown it. They rub against a rock until the skin loosens, then wiggle until it peels off.
2. Stand in a single file line. Each player puts their right hand forward as if they were shaking a person's hand. Their left hand reaches back between their legs to shake hands with the person behind them. This is the snake.

3. The last person in line lies down, and everyone carefully backs up to be able to lie down, too.
4. When everyone is lying down, the first person stands up and walks forward over the others. The rest follow, until the snake has skinned itself!

Rabbit and Fox

Materials: none

1. Rabbits are prey animals for a wide variety of predators, including the fox. To help them escape, rabbits have many helpful adaptations (body features). Their large eyes and ears help them see and hear predators approaching. Their excellent sense of smell also helps them out. If a predator is detected, a rabbit will run for safety. They can reach speeds of about 40 m.p.h. They dart in and out of bushes and undergrowth in a zigzag pattern to confuse predators chasing them. When they have the opportunity, they will bolt down their burrows, safe underground.
2. Select one student to be the rabbit and one to be the fox. The rest form a circle around the rabbit and join hands. The fox stays outside the circle.
3. The rabbit starts the game by ducking out of the circle and running around the players. The fox must try to tag the rabbit, staying outside the circle. The rabbit may run in and out of the circle. The circle players may lift their arms over the rabbit's head to help them, and likewise block the fox.
4. When the fox finally tags the rabbit, the rabbit becomes the new fox. The fox joins the circle, and another player becomes the new rabbit. You may wish to select both a new rabbit and a new fox, and have the old ones rejoin the circle.

My Den!

Materials: none

1. Review the idea of predator and prey. Select one player to be a predator (such as a fox, owl, or snake). Select another player to be that predator's prey (such as a rabbit, skunk, or mouse).
2. Everyone else should divide into groups of three. Two hold hands to make the den. The third is the prey, safely inside the den, and stands enclosed in the circle formed by the arms of the other two.
3. If there are not enough people to form whole groups of three, have them be other prey and/or predators. This game actually works better when there are fewer dens than prey animals.
4. To start the game, the predator begins to chase the prey. To escape capture, the prey can run to an occupied den and say, "My den!" The hiding prey must then avoid being tagged and find a new den.
5. If the predator catches the prey, they form a den. One of the former dens is split to become the new predator and prey, and the hiding prey moves to the new den.
6. The dens and the prey should switch places often so everyone gets a chance to join the action. One way to do this is to have fewer dens and more prey in search of dens. When the prey finds a new den, they replace one of the players forming the den. In a big group with several predators and lots of prey, this can get confusing. You may wish to make headbands for the predators to wear.

Crafts

Content Area: Art, Science, Math

Crafts are a fun way to improve your students' fine motor skills, matching, and counting. They also give you the opportunity to review the different forms and functions of each part of the animal. Each of these crafts uses a pattern for at least one portion of the craft. They can be found following the instructions.

Egg Carton Opossum

Materials:

- cardboard egg carton
- scissors
- pink construction paper
- pink, white or gray pipe cleaners
- gray and pink tempera paint
- glue
- hole punch
- google eyes

Directions:

1. Cut the top off egg carton and cut in half. This will be the body.
2. Cut the egg cups apart in pairs, keeping the bump in the middle. The cups will be the eyes/ears and the bump will be the nose.
3. Place the body, flat side up, on the table. Glue the eggcup bottom to the flat part of the body. Allow to dry. (overnight is preferable)
4. Trace and cut 4 opossum legs from pink construction paper. Fold the foot out. Glue the legs to the inside of the body so the foot is showing.
5. Paint the body with gray tempera paint. Put a dot of pink tempera paint on the end of the nose. Allow to dry.
6. Punch a hole in the back of the body. Insert a pipe cleaner and twist in place to make a tail.
7. Glue the eyes in the center of the eggcups.

Turtle Magnet

Materials:

- Green construction paper
- Tempera paint (yellow, green and brown)
- Paint brushes
- Glue
- Google eyes
- Self-adhesive magnets
- Cardboard egg carton, cut into individual cups

Directions:

1. Trace and cut turtle body from green construction paper.
2. Attach a magnet to one side of the body.
3. Glue egg cup to other side of the body. Allow to dry.
4. Paint turtle shell.
5. Glue on google eyes.
6. Stick to your refrigerator!

Paper Bag Owl

Materials:

- Brown construction paper ovals, 2/student
- 2" yellow construction paper circles
- large google eyes
- Orange construction paper triangles, 1/student
- Brown feathers
- 3" red, yellow or orange pipe cleaners
- Brown lunch bags
- Shredded paper or newspaper
- Glue

Directions:

1. Open the lunch bag and stuff it with a small handful of shredded paper or 1 sheet crumpled newspaper.
2. Pinch the two corners of the open end into 2 legs. Secure them by twisting a pipe cleaner around them. Form the ends of the pipe cleaners into talons (feet).
3. Turn the owl so that the feet are facing down. Glue the orange triangle near the center of the body to make the beak. Add the yellow circles above the beak. Glue a google eye in the center of each yellow circle.
4. Glue wings on both sides of the body.
5. Glue one feather on each side on the top of the head to make ear tufts. Add them on other parts of the owl's body, if you wish.

Simple Paper Puppet

Materials:

- 9"x12" construction paper
- Assorted craft supplies (google eyes, pompoms, streamers, etc.)
- Glue
- Scissors

Directions:

1. Fold the construction paper into thirds, lengthwise (it should make a long, thin rectangle).
2. Glue the overlapping flaps together. Allow it to dry.
3. Fold the long tube in half. It should look like a V.
4. Fold one end up to the top fold. Repeat on the other side. It should look like a W. This forms the mouth of your puppet.
5. Use the art supplies to decorate the puppet to look like the animal of your choice.
6. Insert your fingers in the openings at the back of your puppet and have fun!

Beaver Hat

Materials:

- Brown construction paper strips, 24"x3", 1/student
- 2 ears/student (precut from brown paper)
- 2 front paws/student (precut)
- 2 back paws/student (precut)
- beaver tails, 1/student
- 1 ½"x3" rectangle white construction paper, 1/student
- glue
- large google eyes
- stapler
- black crayons

Directions:

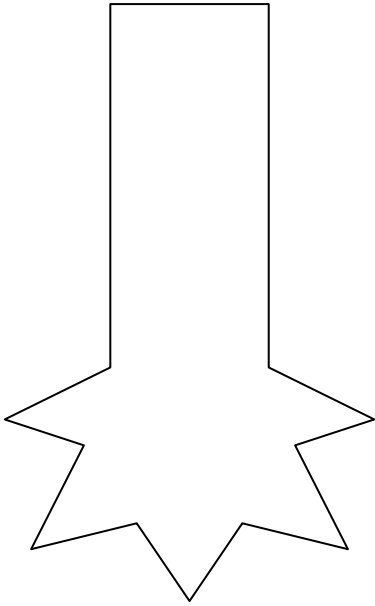
1. Before you start, shape the ears. Cut along the solid line then glue or staple one flap behind the other to make a cup shape.
2. Lay the paper strip flat on the table in front of each student. Glue the head to middle of the paper strip. Be sure that the rounded part is at the top and the dimple (lips) is at the bottom.
3. Add eyes and ears. Draw an oval nose and whiskers.
4. Draw a line down the center of the white rectangle, lengthwise. These are the beaver's teeth. Glue them behind the head piece so that they show between the beaver's lips.
5. Glue the front feet to the strip on either side of the head.
6. Glue the back feet a few inches away from the front feet. Let the glue dry for a few minutes. You may wish to reinforce with staples.
7. Fit the strips to the students' heads. Secure with staples.
8. Attach the tail at the back of the hat, opposite the head. Students may wish to draw patterns on it.



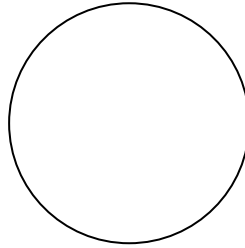
Craft Patterns

Egg Carton Opossum

leg – cut 4

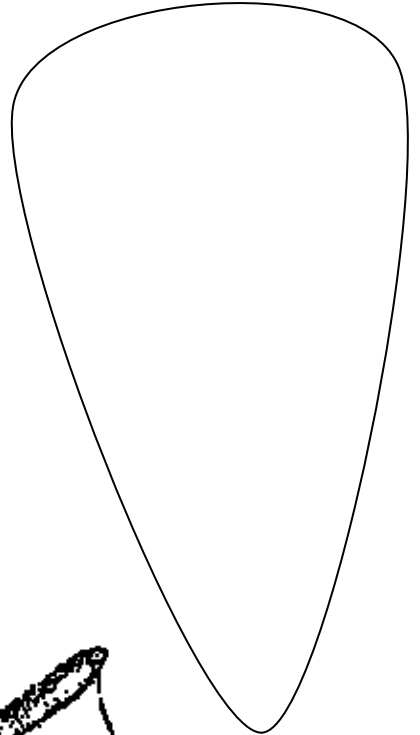


eye – cut 2

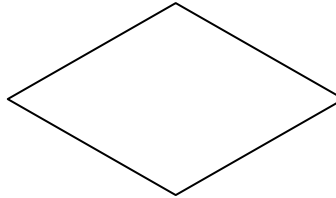


Paper Bag Owl

wing – cut 2

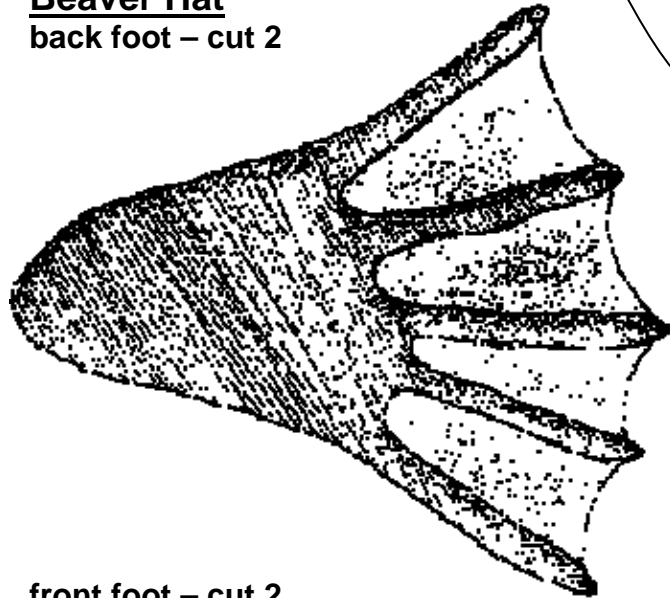


beak – cut 1



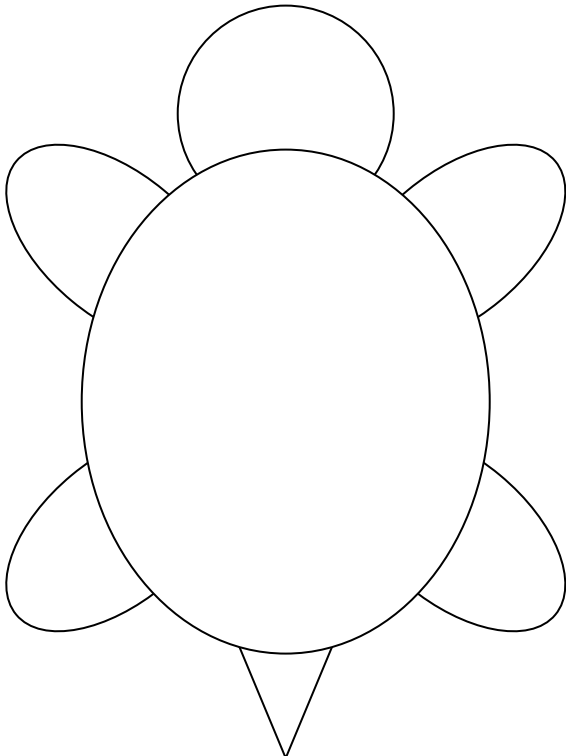
Beaver Hat

back foot – cut 2



Turtle Magnet

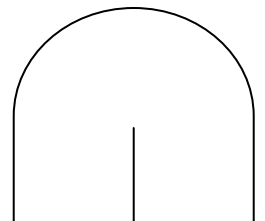
body – cut 1



front foot – cut 2

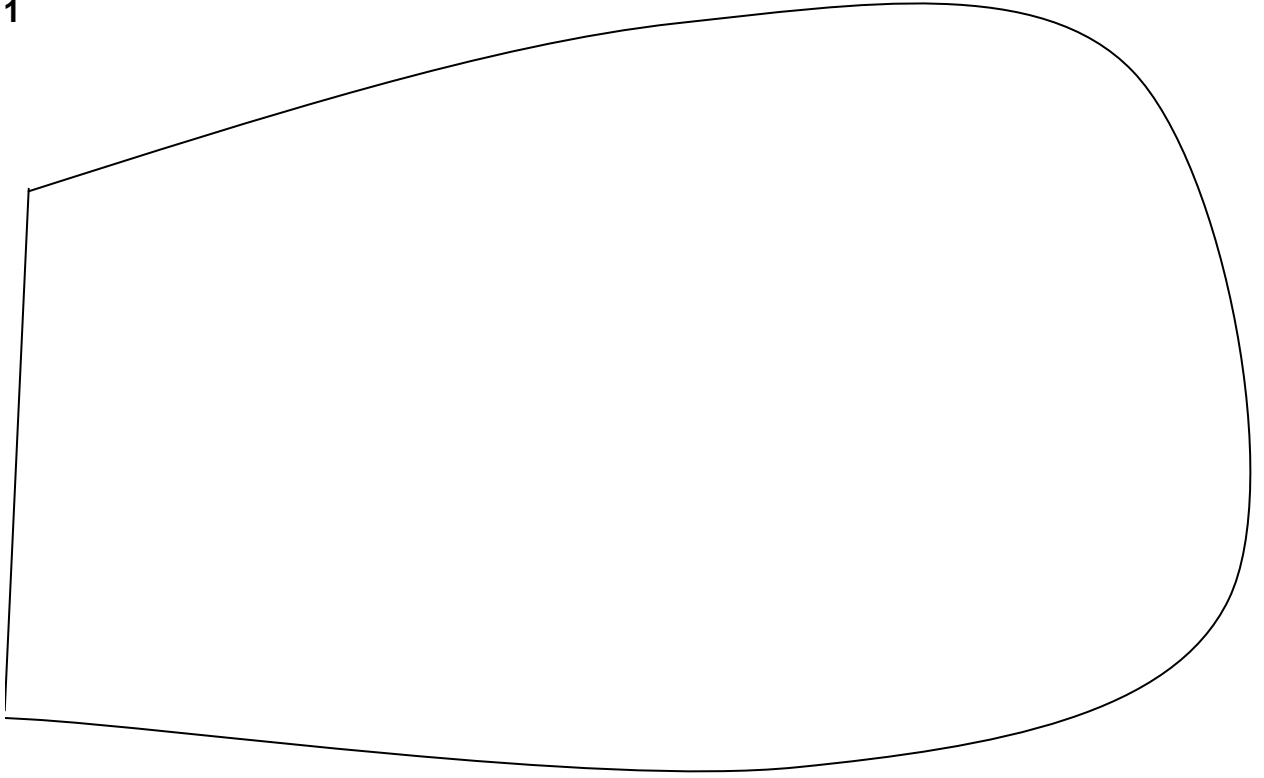


ear – cut 2

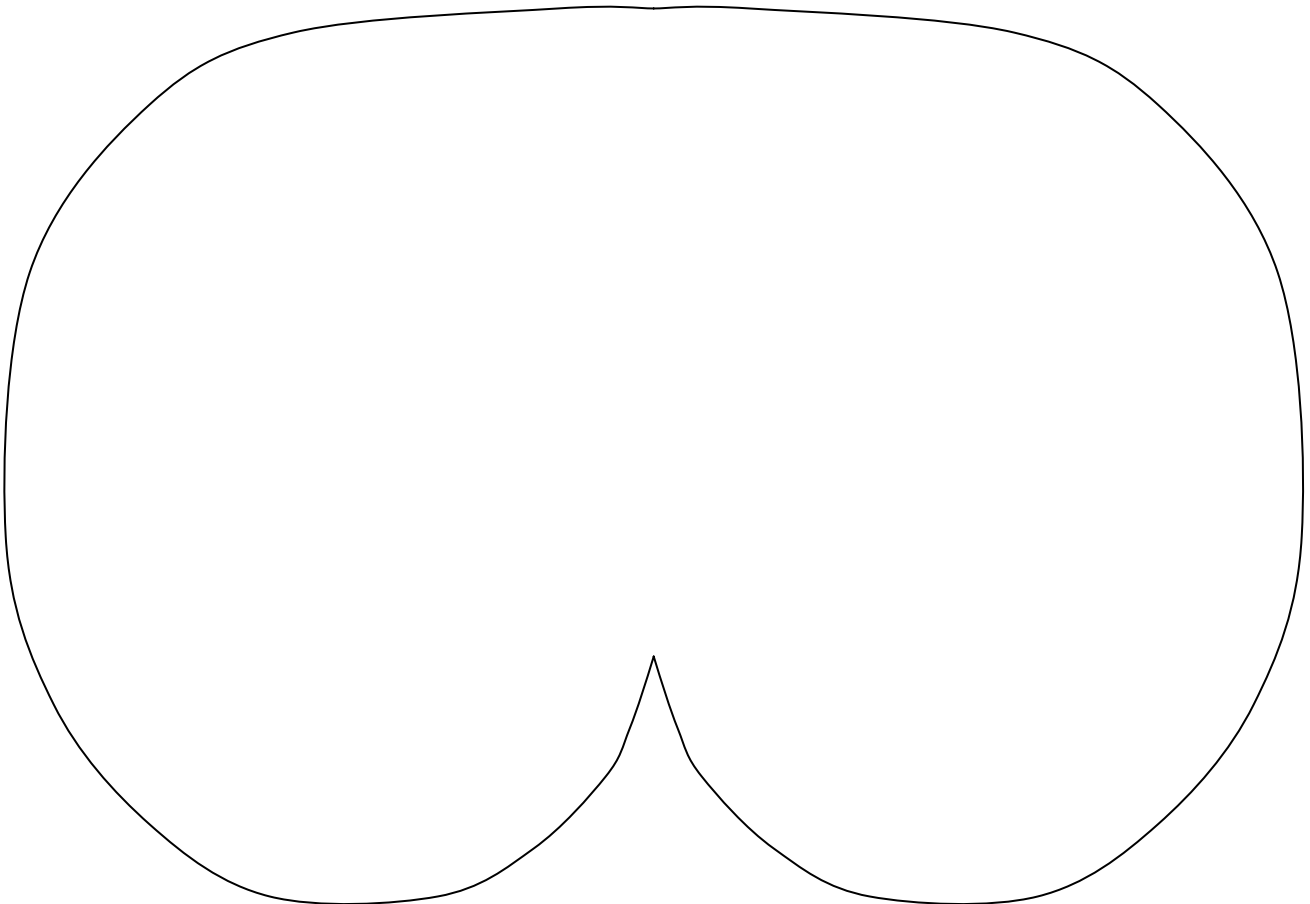


Craft Patterns

Beaver Hat
tail – cut 1



head – cut 1



Painting Leaves

Content Area: Art, Science, Math

Skills: Sensory, fine motor, cognitive, comparing

Objectives:

TSW explain that leaves use the sun's energy to make food for trees.

TSW compare different leaves by sight and touch.

TSW use leaves as an art medium.

Materials:

- Several different kinds of leaves
- Paint, paint brushes and/or sponges
- Paper bag
- Crayons
- Paper

Procedures:

Anticipatory Set:

Place several kinds of leaves in a paper bag and have the children use their sense of touch to identify the mystery objects.

Development of Lesson:

1. After all of the students have had a chance to feel the leaves, ask them to describe what they felt. What is in the bag?
2. Pull out the leaves. Are they different? What is different about them? Do they have anything in common?
3. How are leaves important? Discuss the major parts of a tree:

Tree Chant

The roots drink the water. (put fingertips on ground and make slurping sound)

The bark protects the tree. (pound your chest)

The branches hold the leaves. (stretch arms out and wave hands)

The leaves make the food. (wave hands then rub stomach)

Summary:

Use leaves for one or more of these art projects to experience the different textures and shapes:

- A. Do leaf rubbings with crayons and blank paper.
- B. Place leaves on blank paper and sponge around the leaf's outer edges.
- C. Paint with the leaves. Dip the stem in paint, or try the whole leaf.
- D. Make a leaf collage.

Extensions:

- Sort leaves by their size, shape or color.
- Take a walk and match the leaves to their trees.
- Read a book about trees.
- Create a bulletin board or display of leaf art

Picture Bank Activities

1. **Animal Bingo – Content Area: Science**

Give each student a copy of the blank bingo card and picture bank page. Allow them to choose and cut out (coloring is optional) nine animals and glue them in the spaces. *Note: if you have made animal cards for other games, they may use these and change the arrangement on their cards each game, if desired.

Call out the animals by name or give simple clues for the students to guess which animal you are describing.

2. **Card Games – Content Area: Math**

Make cards by cutting out the animal pictures, mounting them individually on 3"x5" cards and laminating them for durability.

A. **Concentration** (2 sets of cards)

B. **Go Fish** (2 sets of cards)

3. **Action Art – Content Area: Art, Science, Social Studies**

Using animals from the picture banks and other conservation images, have the students create posters, buttons, bumper stickers, etc. to promote the awareness of wildlife and the importance of preserving wild spaces.

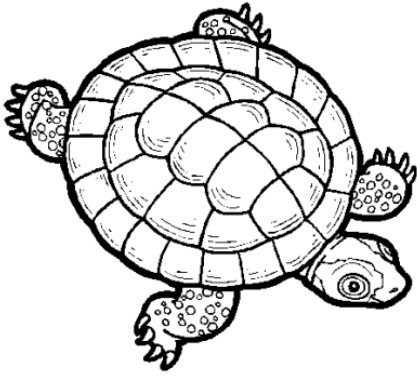
4. **Habitat Scenes – Content Area: Art, Science**

Have the students draw the habitat of an animal from the picture bank, then color, cut out, and glue that animal or animals from the picture bank to include in their habitat scene. You may also wish to enlarge the pictures to life size using a wall projector. Students can color or paint the animals, and use them to decorate the classroom.

ZOO BINGO

Picture Bank

Turtle



Screech owl



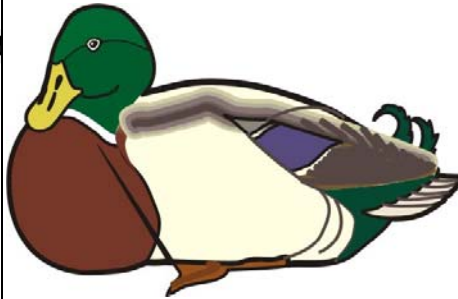
Hawk



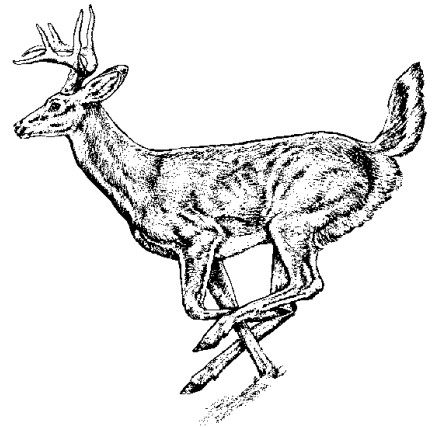
Garter snake



Mallard duck



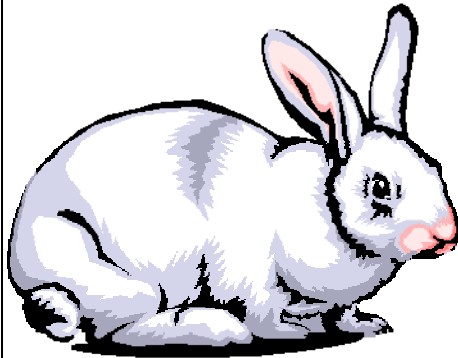
White-tailed deer



Beaver



Rabbit

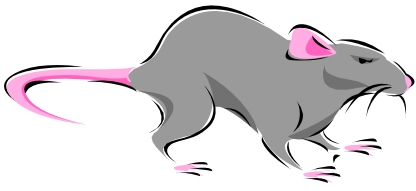


Porcupine



© Katherine Hocker

Mouse



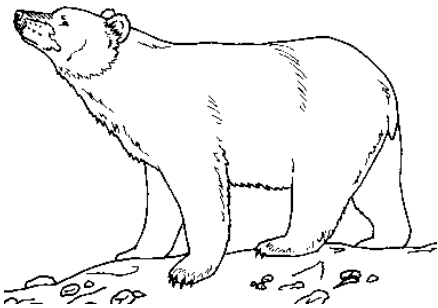
Skunk



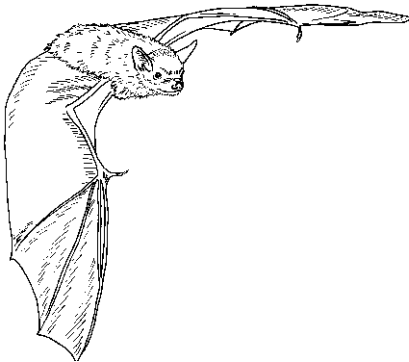
Squirrel



Bear



Bat



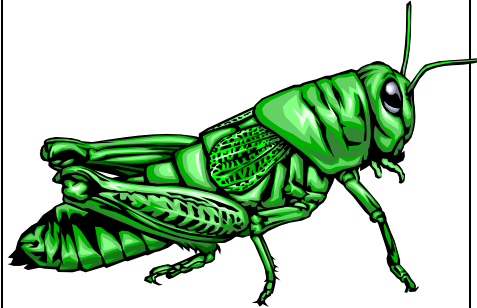
Opossum



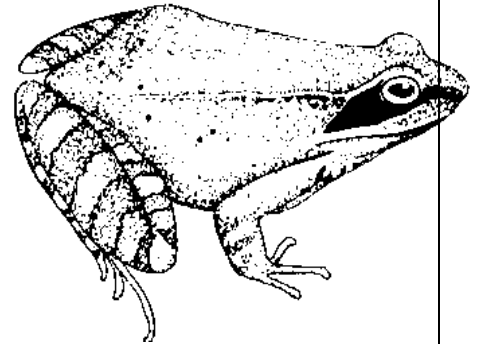
Chipmunk



Grasshopper



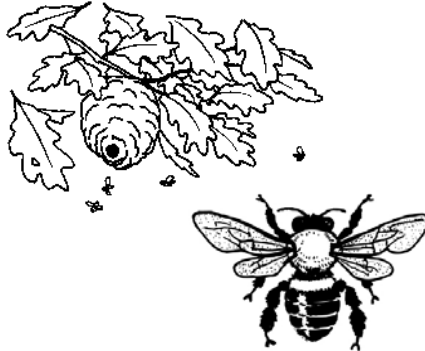
Frog



Bird Nest



Bee and Hive



Raccoon

