# Kansas 4-H Wildlife Leader Notebook

## Level I

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## Leader Note:
Lessons are grouped by subject themes and are not necessarily in sequence. Check the leader notes at the beginning of each lesson for sequence suggestions.
What Members Will Learn...

About The Project

- The characteristics of reptiles
- The life cycle of some reptiles
- Reptile adaptations

About Themselves

- Which of their senses help them understand various species of wildlife

Materials

- Video VT-111 (A Snake’s Tale) from Kansas Department of Wildlife and Parks (KDWP) Reference Center (see References)
- Learning kit LK-68 (Set of four turtle shells) from KDWP
- Activity Sheet #1, Creature Tale

Activity Time Needed: 60 minutes

Activity

Reptiles in Kansas include snakes, lizards, and turtles. Shared characteristics include: a) dry skin with scales, b) breath air throughout life (no gills), and c) cold-blooded (ectothermic). Most reptiles lay eggs, but there are a few snakes that give live birth. Neither reptiles nor amphibians have fur or feathers at any stage of their life.

Turtles’ shells make them unique among reptiles. If you look closely at the shell it is made up of two parts: a top (the carapace) and a bottom (the plastron). Depending on the kind of turtle, the size, shape, and color will vary. A turtle’s shell grows much like our skull. The turtle cannot leave its shell when it gets too small, so the shell must grow instead. Under the semi-transparent scales on top of the carapace is the bony part of the shell. Here you can see the squiggly joints between the bones. The bone grows at these joints making the shell roomier for the turtle inside.

Leader Notes

Empty turtle shells provide an excellent opportunity to get reptiles in the hands of the youth without causing stress to a live animal, or exposing the youth to bacteria carried by some reptiles. The youth may ask where the turtle is, since it is not in its shell. Tell them to look closely at the shell. They should notice the backbone or vertebrae of the turtle attached to the underside of the top of the shell. Have them think about how successful we would be trying to live without a backbone — not very! Turtles, like everything else, die from many different causes. We don’t know what happened to these particular animals, but we were lucky enough to have the bones and shells to learn more about them.

The youth may work alone or in groups. Explain that they are going to compare themselves (a human mammal) with an unknown creature. Brainstorm with the group whether they think anything will be the same. Pass out the turtle shells and the Activity Sheet #1, Creature Tale. Let them know that the first part of the activity should be done with only what they OBSERVE from the shell, not with any knowledge that they might already have about what they think. Explain that the early naturalists only knew what they could observe or touch. (Paleontologists are doing the same thing today when they find dinosaur bones — all they have is what the animal left behind.) For the second part of the activity sheet, present the video, A Snakes Tale. After the video, have the youth record anything they already knew about reptiles and something new that they learned either from the video or by looking at the shells.
Dialogue For Critical Thinking

Share
1. What type of creature did you think might have been in the shell?
2. How big do you think the creature was? Weight? Height? Length?

Process
3. What similarities were there to humans? Differences?
4. What are reptile characteristics?
5. How is a turtle different from other reptiles?

Generalize
6. What reptiles are significant in your life? Why?
7. Which of your five senses (touch, taste, sight, hearing, smell) help you best understand reptiles? Why?

Apply
8. How can you use your senses to identify other types of wildlife?

Going Further
Make a list of wildlife and match the sense best suited for true understanding of each type. (Example: birds– hearing, sight)

References
Video VT-111 (A Snake’s Tale) from Kansas Department of Wildlife and Parks (KDWP) Reference Center
Learning kit LK-68 (Set of four turtle shells) from KDWP
Amphibians and Reptiles in Kansas, Collins (1993)

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From what you OBSERVE ONLY, draw what this creature was like when it was alive. Try not to use ideas you may already have about what this creature might be.

The creature:

What I know about reptiles:

What I just learned:
**No Fibbin’**

Wildlife Groups  

**Leader Notes**

Listen to *The Calls of Kansas Frogs and Toads*. There is information (on side A) about frogs and toads. As they are listening, have the youth choose, or choose for them, one species. After they have listened to the tape, have them try to mimic the call using a balloon and/or marbles or their own whistling capabilities. They can use these three tools in any way they desire to try and imitate the sound (you may need to pause the tape or repeat the sound for them). Side B on the tape will play continuous calls if they want to try a second time.

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**What Members Will Learn...**

**About The Project**

- The characteristics of amphibians
- The life cycle of some amphibians
- Amphibian adaptations

**About Themselves**

- How they can impact amphibian habitat

**Materials**

- Poster PP-49 (Kansas Amphibians) from Kansas Department of Wildlife and Parks (KDWP) Reference Center
- Audio tape: *The Calls of Kansas Frogs & Toads* (from KDWP reference center)
- Balloons
- Marbles

**Activity Time Needed:** 60 minutes

**Activity**

Amphibians that you may be familiar with include frogs, toads, and salamanders. All of these animals share some characteristics, which include: a) moist skin without scales; b) cold-blooded (or ectothermic) so in Kansas they hibernate for the winter; c) spend part of their life cycle in water, so are dependent on a water source to reproduce; and d) as larva, breath through gills (like fish). Most also go through metamorphosis (change) from larva to sexually mature adult, but some salamanders stay in a larval form (although sexually mature) throughout their life. Amphibians are some of the most versatile creatures on our planet, but they can also be very sensitive to changes in their habitat.

The calls of frogs and toads often remind us of the summertime. After a good rain more calls may be heard. It is only the male who call and are trying to attract a mate. The mating primarily occurs at night which is why we associate these sounds with the long summer evenings. Twenty-two kinds of frogs and toads exist in Kansas and can be distinguished by their calls.
Dialogue For Critical Thinking

Share
1. What frog or toad could you best imitate? Why?
2. What tool did you use? Why?

Process
3. Why do frogs and toads make these sounds?
4. What other methods are used by wildlife to find a mate?

Generalize
5. How do humans sometimes interfere with natures processes?

Apply
6. What can you do to provide good habitat for amphibians?

Going Further
Visit with a wildlife biologist about amphibian preservation.

References
Poster PP-49 (Kansas Amphibians) from Kansas Department of Wildlife and Parks (KDWP) Reference Center
Audio tape: The Calls of Kansas Frogs & Toads (from KDWP reference center)
Amphibians and Reptiles in Kansas, Collins (1993)

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**Bat-o Polo**

**Wildlife Groups**

**Wildlife, Level I**

What Members Will Learn...

About The Project

- Bat adaptations and how they work
- What Kansas bats eat

About Themselves

- How preconceived ideas can be changed by correct information

Materials

- Blindfold
- Large open area either inside or outside

Activity Time Needed: 60 minutes

Activity

Bats are misunderstood for a number of reasons, but primarily because they come out at night when we are asleep. In the dark we often cannot see things clearly and so we may become frightened when our imaginations fill in the extra details.

Bats, like humans, are mammals: warm blooded, have hair, bear live young, and feed their babies milk. Some people think that bats are flying rodents, but bats belong to a different order entirely (Chiroptera). Bats are not “as blind as a bat.” They see quite well plus they have excellent hearing called sonar. It is this sonar hearing that our activity will focus on. When hunting for insects (all Kansas bats are insectivores), bats send out a series of ultrasonic pulses that are higher pitched than what a human ear can hear. The bat will send out as many as 500 pulses per second while “scanning” for insects. The bat knows when it has found an insect because the sound bounces off the insect, creating an echo that the bat can hear. The bat then grabs the insect with its mouth and scoops it up with its wings or tail membrane. Some bats can catch as many as 3000 insects in one night!

Leader Notes

Find an area where the youth can spread out in a large circle. Tell the youth about bats and their ability to use sonar. Explain to them that this activity is much like a game they may have played called “Marco Polo.” Choose one youth to be in the center of the large circle and blindfold that youth. Choose one youth to be the moth — the prey that the bat is searching for — and put him or her inside the circle. Tell the bat that it can only say the word “BAT” (instead of “MARCO”), and that it and the moth are able to move freely inside the circle. Tell the moth that when the bat says “BAT” the moth must say “MOTH.” The rest of the youth must think of other “M” words to say and then say them at the same time that the moth says “MOTH.” These “M” sounds will imitate all the other sounds an actual bat hears when it is out hunting. When the bat catches the moth, have other youth repeat the game until everyone has had a chance to be in the circle.
Dialogue For Critical Thinking

Share
1. How easy was it for you to catch the “MOTH” when you were the blindfolded “BAT”?
2. What affect did the other “M” words have on your hunt?

Process
3. What do bats use to hunt at night?
4. What is the only food source for bats in Kansas?

Generalize
5. Where do you think the phrase “Blind as a Bat” came from? Why?
   How valid is this phrase? Why?
6. How do you validate or study possible misconceptions?

Apply
7. What can you do in the future to combat preconceived ideas?

Going Further
Visit the library or internet to learn more about bats. Lead this game and discussion with younger youth.

References
Bats, Zoobooks (Available from Kansas Department of Wildlife and Parks (KDWP) 512 SE 25th Ave. Pratt, KS 67124-8174)
American’s Neighborhood Bats, by Tuttle (1988)

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Raptor Magic

Wildlife Groups

What Members Will Learn...

About The Project

- A specialized group of birds called raptors
- Identify some Kansas raptors
- Why raptors are special

About Themselves

- What it is like to be physically challenged

Materials

- Drinking straws
- Paper or construction paper
- Masking tape
- Rubber bands
- Paper clips
- Plastic forks and spoons
- Balloons
- Scissors
- Books and magazines with pictures of raptors

Activity Time Needed: 60 minutes plus optional field trip

Activity

Raptors are birds such as, eagles, hawks, falcons, and owls, which are predatory on other animals. There are some predatory birds that do not belong to the raptor group, such as shrikes.

It is difficult to study raptors in depth without taking a field trip or having a guest speaker, as it is illegal to possess any parts from raptors, such as feet, feathers, and eggs. Therefore, we must study pictures, etc., which is not as interesting.

Leader Notes

Study pictures of raptors and discuss what separates them from the other groups of birds.

If you have access to a nearby nature center or zoo that keeps raptors and/or does programs on them, it would be a great help to take advantage of that. Even a museum that has taxidermy mounts would be good, as the youth could see fully dimensional birds.

After studying the pictures or having a guest speaker, you can have the group build raptors. They should be familiar with some basic bird anatomy. If they are not, consider doing these activities from Level I first: Feathers and Eggs, Fill the Bill, and Those Amazing Flying Machines.

Have the youth decide what listed materials could represent something on a bird. For example, the drinking straws might represent hollow bones, paper can be shaped into buoyant feathers, balloons can give the body shape, and forks and spoons can be shaped into talons and beaks. (If you would like to extend this activity, consider paper-mache instead of taping the body pieces together.) The act of creating a bird will reinforce what the youth gathered from pictures, or what they observed at the museum or nature center or zoo.

Divide the youth into groups of three. Pass out the supplies and explain that they are to apply the knowledge they have gained. They can shape the materials in any way to mimic the anatomy of a raptor. When completed, have the youth present their creations and point out some unique features.
Dialogue For Critical Thinking

Share
1. What type of raptor did you create?
2. What other supply or tool would have been useful in creating your bird? Why?
3. What other features would you have liked to add to your raptor? Why?

Process
4. How are raptors different from other birds?
5. What features do raptors use the most? (sight, beak, talons, etc.)

Generalize
6. How well developed is your eye sight compared to raptors?
7. What human sense or feature do you feel you could live without the easiest? Why?

Apply
8. What can you do to assist people who are physically or mentally challenged?

Going Further
Visit a raptor exhibit at a zoo or preserve.
Invite a physically challenged person to meet with your group.

References
Owls, Zoobooks (Available from Kansas Department of Wildlife and Parks (KDWP) 512 SE 25th Ave. Pratt, KS 67124-8174)
Hawks for Kids, Sumner Matteson (1995)
Any magazines or field guides with pictures of hawks and owls

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Can’t Do Without It

Ecosystems and Habitats

What Members Will Learn . . .

About The Project

• The basic survival needs shared by people and animals
• The correct arrangement of survival needs to meet the specific habitat needs of a particular species
• The definition of a habitat

About Themselves

• Their habitat arrangement

Materials Needed

• Animal description cards (made from information out of one of the references listed at the end of lesson)
• Use nature/outdoor magazines and youth magazines
• Scissors
• Glue or rubber cement
• Large paper or posterboard
• Markers or crayons

Activity Time Needed 45 minutes

Activity

All animals depend upon their habitat to provide their basic needs for survival. Animals need:

(1) food
(2) water
(3) shelter
(4) living space

All of these must be arranged correctly. The place that provides the basic needs for survival in the right arrangement for a particular species is their habitat. Each species has different habitat requirements, but all need these basic things to survive. Humans have the same basic needs as other animals.

Leader Notes

Before the meeting, make an animal description card for every two or three youth. The card should be a 3” X 5” card (or similar-sized paper, etc.) that has the following information about a Kansas animal:

• Name
• Natural community where it lives (desert, forest, park, etc.)
• What it eats
• What kind of shelter it uses (nest, hole, just lives in the vegetation, etc.)
• Special needs (amphibians must have a water source to reproduce, etc.)
• Notes about arrangement (some animals like the edge of the forest where it turns into a field, some like the deep part of a lake, etc.)

1) Ask the group what an animal needs to live. Let them brainstorm for a bit, then direct the answers into general categories (if an answer is that “squirrels need nuts to eat,” then generalize that into “food”). Food, water, and shelter are usually easy to get, but living space is a tough concept.

One way to illustrate this (and get them to guess the fourth habitat need) is to play a space game. Have the youth choose a place around the room for their space. Then decrease the room by half, so that some of them have to find a new place. Keep shrinking the space down until they are crowded together, and ask if they have enough space to live comfortably.

For arrangement, you can use an animal example or a human one. For example, if we had food, shelter, and space at our homes, but had to go across town (or farther) to get water, the arrangement is wrong. Some animals like a pond with trees all around it, while others like a pond that is out in the open.

2) Break the youth into groups of three. Explain that they are going to make a habitat collage about themselves and a Kansas animal. Have them discuss their needs and how those needs are
met (live in houses or apartments, have grocery stores, etc.). Give each group an animal description card and supplies. Have each youth make a collage that shows their needs, and the needs of an animal. They should label the pictures they draw or paste down as “food,” “water,” “shelter,” or “space.” They can also add any special notes about arrangement that are included on the card.

3) Let each individual share their collage. Discuss how the habitat changes as we change one element, like food or shelter. Each animal needs the specific habitat it was designed to use. Place the collage in their record book.

Dialogue For Critical Thinking

Share
1. What animal did you use for your collage?
2. What special survival arrangements did your animal need? Why?

Process
3. What are the four basic survival needs of animals?
4. What is a habitat?

Generalize
5. What is your habitat? How does it differ from the animal on your collage? Why?
6. How do people’s habitats differ? In your community? Other countries?

Apply
7. How does the arrangement of habitats differ from one community to another?

Going Further
Observe the different habitats at a zoo.
Take a field trip to the country to observe habitats of various animals.

References
Joy of Nature, Reader’s Digest (1977)
Most animal and general nature books address subject of habitat.

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Habitat Observation Walk

What Members Will Learn. . .

About The Project

• Habitat can be found in a variety of places.
• Habitats can be large areas or small areas.

About Themselves

• The habitat they share with other people and animals

Materials Needed

• Activity Sheet #3, Things That Provide Survival Needs
• Clipboard or other surface to carry along and write on
• Pencils

Activity Time Needed: 60 minutes

Activity

We will be taking a short walk to look for things that an animal might consider habitat. You will need to look closely for small and larger habitats.

Leader Notes

Do the Can’t Do Without It, activity before this activity. Ask the group to help you list the habitats. For example, lots of youth might put down “tree” or “grass,” but some animals find habitat in the cracks in the sidewalks (like ants). Start them thinking about small creatures, night animals, things that are not visible all year (like butterflies), etc. You will want to scout out your route before the meeting, both for safety purposes and to give yourself an edge on spotting habitat components.

Urban Leaders: There are habitat components everywhere, so encourage the youth to find them. Vacant lots have habitat possibilities, and even some buildings (where birds nest). A single pot of flowers on a porch can be habitat. Scout out ahead of time so you can help anyone who gets stuck.

1) Review the things the youth learned in Can’t Do Without It. They specifically need to be comfortable with what habitat is, and the components that all animals need to survive.

2) Give each youth a copy of Activity Sheet #3, Things That Provide Survival Needs, plus a clipboard and pencil. Explain that they are looking for habitat all along their walk. Some things may fit into more than one column on the activity sheet, so they can put it down in more than one. For example, “grass” could be food, shelter, and even water, so they can use it in those places.

3) Take about a 15 minute walk, strolling slowly enough that each youth can fill out their activity sheets.

4) Return to your meeting place. Talk about what you saw. Give the group a few minutes to make some guesses about what animals would live in these habitats, and what they saw that the animals could use. Discuss the observation and guesses, and whether each
Dialogue For Critical Thinking

Share
1. What was the most exciting thing you saw on the walk? Why?
2. What was the largest and smallest habitats you saw?

Process
3. Where can habitats be found?
4. How many animals or creatures were sharing their habitat?

Generalize
5. How big is your habitat? At home? School?
6. How many animals and people share your habitat?

Apply
7. How and when will your habitat change in the future?
8. What are the good and bad things about sharing habitat?

Going Further
Discuss the arrangement of your habitat at school.
Talk about the habitat of large wild animals as compared to smaller ones. (Example: buffalo vs. beaver)

References
Watching Wildlife, Duda (1995)
Joy of Nature, Reader’s Digest (1977)

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List any animals you saw during your walk. What were they using for habitat?

<table>
<thead>
<tr>
<th>Things That Could Provide Shelter</th>
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Those Amazing Flying Machines

Living in the Wild

Leader Notes
1) In Fowl Ball, be sure the picture you find is of a bird that has its eyes on the sides of its head. Start Fowl Ball by showing a picture of a bird. Ask the youth about their eyes. Where are they located? Do they think that the birds can see well? They may need to look at your bird picture and each other to do this. Do they look the same? Discuss binocular and monocu-lar vision. Have the youth cover one eye with their hand and look around. Can they tell a difference between one-eyed sight and two-eyed sight? Have them experiment with walking around the room (carefully!!!). Can they judge distances as well with one eye covered?

Hand out the black construction paper and yarn. Have them staple the yarn to the paper, so that they can tie the paper over their eyes like patches (don’t have them do this quite yet). Go outside or to the gym, and have them put on their patches. Have the youth stand in a circle and play a slow, gentle game of catch with a foam ball (to avoid bloody noses, etc.). Is it easier or more difficult to play catch with one eye covered? Why?

Repeat with the tennis ball. How did this compare?

What Members Will Learn...

About The Project
- The features that make birds unique
- The structure of a feather
- Different types of feathers

About Themselves
- Understand why humans are not capable of flight by comparing their anatomy to that of a bird

Sequencing Notes
The general characteristics of birds are explored in Feathers and Eggs. It may be helpful to do that activity first.

Materials Needed
- Demonstration #1 (Fowl Ball): Picture of a bird, paper, 1.5’ lengths of yarn, stapler, 4”x4” squares (approx.) of black construction paper, soccer or playground ball, tennis ball
- Demonstration #2 (A Handy Gland): Baby oil or petroleum jelly, cotton cloth (Two-6”x12” pieces per child), dishpan or bowls of water
- Demonstration #3 (Feather Features): Feathers (from a legal game bird or domestic fowl), hand lens, overhead projector, a piece of velcro for each child
- Demonstration #4 (Boning Up On Birds): Chicken and beef bones, strong light source (like a clip-on shop light), tools for cracking open bones (such as kitchen shears, nutcracker, hammer, etc.)
- Demonstration #5 (Gizzard Grinders): Different kinds of seeds, small stones, mortar and pestle, a turkey, chicken, or game bird giz-zard (a pheasant gizzard with grit in it is good).

Member Handout #1, Parts of a Feather
Member Handout #2, Types of Feathers and Locations

Activity Time Needed: 90 minutes

Activity
Birds are unique vertebrates (animals with backbones) because they have special body parts that set them apart from all other animals. We are going to explore these special parts and their functions through a series of demonstrations.
2. A Handy Gland
Go back inside. Hand out the two cloth pieces to each member of the group. Have them smear petroleum jelly or baby oil on one of the cloth pieces. Dip the treated cloth and the plain cloth into a pan of water and pull back out. Do the cloths react the same to being dunked? What is the difference? How do they think this applies to a bird putting oil onto its feathers?

3. Feather Features
Now hand out contour feathers (the youth can share if you don’t have enough for everyone). The hard center tube is called the shaft, and the rest of the feather is called the vane. Compare the feather to the drawings on Member Handout #1, Parts of a Feather. Have the youth pull apart some of the vane, and locate the barbs that are sticking out from the shaft. Look at the tiny barbels that grow off of each of the barbs. To show this more effectively, place a feather on the overhead projector. The barbels have rolled edges on one side and tiny hooks on the other that interlock side by side and hold the barbs together — kind of like a “Ziploc” seal bag. This locking system is one of the most important flight features for a bird. The flat, flexible vane stays locked in flights, helping the bird keep its smooth, streamline shape and allowing each feather to firmly fan the air. But if the vane does split apart between two barbs, the birds can “zip” its feathers back into shape by pressing the barbels together with its beak. This process is called preening — the cleaning, straightening, and fluffing of the feather — and includes applying oil from the oil gland we just studied. Pass out a piece of Velcro to each member — have them separate and restick the material. This is not exactly like a feather, but is a close illustration.

Pass out the down feathers. Compare to drawings on Member Handout #2, Types of Feathers and Locations. Now pile several together. Observe how they stay fluffy, trapping air. Stack several contour or flight feathers together. Observe the lack of trapped air. Ask whether down feather would work as protection from rain (like contour feather do) or for flight. If the bird only had contour and flight feathers, with no down, would it be able to stay warm?

4. Boning Up On Birds
Pass out beef and poultry bones, preferably enough for groups of three to share. Have the youth look at the bones. How are they alike? Different? Now crack

1. Fowl Ball
Most birds have monocular vision, which means that each eye focuses on something different. Some owls and hawks have eyes that face forward. This means they have binocular vision, like humans. We focus both eyes on one thing, rather than separate images like most birds.

2. A Handy Gland
Birds also have a special gland that other animals don’t have. This oil gland, or preen gland, is located on the birds’ rump, right above the base of the tail. The gland secretes an oil that the bird squeezes out with its bill and spreads on its feathers and feet. The oil helps keep the feathers waterproof, flexible, and in good condition.

3. Feather Features
Birds are the only animals in the world that have feathers. Let’s explore some of the parts and functions of feathers, and how they enable a bird to fly. One type of feather is the flight feather (see Member Handout). The flight feather has a central hollow shaft running its entire length and webs on two opposite sides, which presents a lightweight, yet solid, surface to support air in flight. They are found in the wings and tail. Flight feathers from the wing have the shaft off-center, while tail flight feathers have the shaft centered. Down feathers (see Member Handout) have a very short shaft with many non-interlocking barbs (individual “hair” or fibers) that create dead air spaces for good insulation. This is kind of like double insulated glass, where the air between the inner and outer panes trap air and decrease heat loss. The contour feather (see Member Handout) is a smooth surface feather that streamlines the body for more efficient flight, and is colored and patterned to contribute to the coloration of the bird. This is important for identification and breeding behavior (and is nice for us to enjoy while birdwatching).

4. Boning Up On Birds
Bird bones are also special. They are very strong, but must be lightweight for flight. Bird bones are hollow, and some have thin reinforcing braces inside for support.

5. Gizzard Grinders
Birds do not have teeth, but they do have a grinding muscular stomach called a gizzard. The gizzard crushes and grinds food, like our teeth. Many birds must swallow grit (small pebbles, stones, eggshells, and other hard material) to use in their gizzard to help grind food. Birds eat a wide variety of food that is hard, such as seeds, bones, some insects, clams, and more. One study showed that a turkey could grind up 24 English walnuts in their shell in just four hours. Another study showed that a turkey gizzard could even grind up steel needles into small pieces.

The gizzard allows the bird to digest more of their food, so they get more nutrients from what they eat. This means that they have to spend less time looking for food.
Dialogue For Critical Thinking

(Use each set of questions for each activity. Example: Use all of the number one questions for Fowl Ball and all the number two questions for A Handy Gland, etc.)

**Share**

1. What happened when you tried to see like a bird?
2. What happened to the oil covered cloth? Why?
3. What did you find interesting about feathers?
4. What is different about bird bones compared to others?
5. How did the bird gizzard feel?

**Process**

1. What types of vision do birds have? Explain.
2. Why do birds oil their feathers? How do they do it?
3. What is a down feather? What does it do?
4. Why are bird bones hollow?
5. Why do birds have gizzards?

**Generalize**

1. What type of vision do people have?
2. What do people do to protect their skin? When and how?
3. How do people use feathers?
4. What is the purpose for your bones?
5. Why do people not have gizzards?

**Apply**

1. What can be done to help people have better vision?
2. Why is it important for people to protect their skin?
3. What do you think will be the main use for feathers in the future? Why?
4. What happens when a person’s bone is broken?
5. Why is it important for people to chew their food?

**References**

*Ostriches and Other Ratites*, Zoobooks (Available from Kansas Department of Wildlife and Parks (KDWP) 512 SE 25th Ave. Pratt, KS 67124-8174)

*Owls*, Zoobooks (KDWP)

*Seabirds*, Zoobooks (KDWP)

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Wildlife Review Team
Types of Feathers

(Mature Bird)

Types of Feathers

(Based on location)
The Better To Eat You With My Dear!

Living In The Wild

What Members Will Learn . . .

About The Project
- Mammals have teeth designed for the diet that they eat
- Not all mammals eat the same thing

About Themselves
- Humans have teeth adapted for the diet we eat

Materials Needed
- Skins and Skulls set from Kansas Department of Wildlife and Parks
  (References)
- Two-2”x4”x4” wood blocks (more sets for a large club)
- Two-4”x4” sheets of plexiglass, plastic, metal, or other thin
  material that won’t hurt small hands (more sets for a large club)
- Staple remover (more for a large club)
- Dried beans
- Leaf lettuce, long grass, straw, or other long vegetation
- Small hunk of meat (cooked for less harmful bacteria while
  handling)
- Paper plates
- Trash bag
- Popped popcorn

Activity Time Needed: 45 minutes

Activity
We will be exploring the main types of teeth that mammals have. Some
teeth are made like our molars (the teeth at the back of our mouth), and
are most effective at crushing and grinding.

Some teeth are like our canine teeth (the pointy “vampire” teeth), and
are made to rip and tear meat.

Other teeth are like our incisors (the straight-bottom, flat teeth in front),
and are made to clip grass or other vegetation.

Leader Notes
These molars are represented by the wood blocks, and should be most effec-
tive at crushing the beans. In the activity, the wood blocks should be held with
the widest side down, with the food placed between the two blocks to grind. Have
the youth feel around their mouths with their tongues. Do all of their teeth feel the
same? Do they think all of their teeth do the exact same thing when they eat?

The staple remover represents canine teeth, and should be the best at tearing
up the meat.

The plexiglass will show how incisors are best at clipping off the lettuce. These
should be held in two separate hands, with the skinny side coming together for
teeth. The group should be able to try these things, but will need your help and
supervision. Set up the activity with each type of food on a separate plate, on top
of the trash bag to minimize the mess. If you have a large group, make more of
each type.

Before the meeting, go through the skulls from Wildlife and Parks and select sev-
eral that have visible teeth. It is not impor-
tant for you to know exactly what they
are. The youth will probably press you to
find out, but part of the activity is that they
can make observations and deductions
without having all of the information
about an animal. Try to select skulls that
have different kinds of teeth. For example,
find one that has mostly flat, molar-type
teeth (probably a grain or vegetation
eater). Most of these types of skulls also
have incisors in front to clip the vegeta-
tion, also. Find a skull that is most like our
teeth-types. This animal probably eats a
lot of different types of food, like we do.
Try to find one with obvious canine teeth,
which indicates an animal whose diet is
all or part meat.
Dialogue for Critical Thinking

Share
1. Which type of tooth demonstration did you find most interesting? Why?
2. Which teeth worked best for which food?

Process
3. What types of teeth do most mammals have?
4. What is the purpose for each type of tooth?

Generalize
5. Why do people have all three types of teeth?

Apply
6. What else can you learn by looking at animal teeth? Example: Age

Going Further
If you’ve studied the Can’t Do Without It, and Habitat Observation Walk, ask the youth what they can tell about an animal’s habitat by looking at its teeth.

References
Skins and Skulls box from the Kansas Department of Wildlife and Parks (KDWP) 512 SE 25th Ave. Pratt, KS 67124-8174.
- Boxes available from Pratt or Wichita offices
- There is no cost to borrow these and other KDWP resources

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Reviewed by
Wildlife Review Team
What Members Will Learn. . .

About The Project

• Discover that bird beaks are adapted to the type of food they eat, so they can gather food efficiently.

About Themselves

• Using observation and exploration, they can determine information about a previously unknown topic.

Materials Needed

• Fill the Bill: 3 eyedroppers or straws, 2 small fishnets (as used with indoor aquariums), 2 large ice cream scoops, 4 pairs of chopsticks, 3 nutcrackers or pliers, 3 strainers, 3 tongs, 3 forceps or tweezers, large bowl or saucepan, cherries (or other small fruit), tall, slender vase with water (like a bud vase), uncooked oatmeal, rubber worms or candy worms, rice, popcorn or small marshmallows, small aquarium or large bowl, walnuts or other nuts (in shell), string, packing peanuts, puffed rice, piece of firewood with bark, pictures of bird beaks, 3”x5” cards, markers.

• Activity Sheet #4, Fill The Bill

• Bird head pictures of: hummingbird, duck, curlew, finch, spoonbill, nighthawk, warbler, toucan.

Activity Time Needed: 1 hour (two if you take the optional field trip/movie)

Activity

Every bird has a specific habitat, which is the place that meets all of its needs for food, water, cover, and living space in the correct arrangement. Although some birds share ecosystems (ecological areas such as a forest, desert, etc.), they don’t have identical habitats. For example, there may be two species of birds in your yard that are eating the same thing, but their requirements for nesting cover may be different. We are going to explore the types of beaks that are common to different types of birds. These beaks allow the birds to gather the exact type of food they need. If you think of a duck’s beak, and try to imagine a duck boring into a tree after insects like a woodpecker, you get the idea that each are different.
Session 1

1) Have the youth help set up the stations for *Fill The Bill* as follows: (*) represents the tool that should work the best at that station, but don’t tell the youth.

Water in the bud vase (to represent nectar in a flower), with an eyedropper/straw (*); small fish net; and large scoop; an index card sign that reads “nectar in flower.”

Large saucepan or bowl with rubber worms or gummi worms in the bottom, covered with several inches of dry oatmeal to represent worms buried in mud or sand, with chopsticks (*), nutcracker/pliers, and strainer, and sign that reads “worms in mud.”

Whole nuts to represent hard seeds, with nutcracker/pliers (*), tongs, and chopsticks, with sign that reads “hard seeds.”

Packing peanuts floating on water in aquarium or bowl to represent fish and other aquatic animals, with large scoop (*), eyedropper/straw, and chopsticks, with sign that reads “fish.”

Puffed rice in aquarium or bowl filled with water to represent tiny aquatic plants and animals, with strainer (*), forceps/tweezers, and tongs, and signs that read “duckweed and tiny water critters.”

Popcorn or tiny marshmallow, which you or a helper can toss into the air to represent flying insects, while the youth try to catch them with a small fishnet (*), forceps/tweezers, or chopsticks, and a sign that reads “flying insects.”

Rice spread on piece of firewood to represent caterpillars and insects, with forceps/tweezers (*), small fishnet, and nutcracker/pliers, and a sign that reads “insects on trees.”

Cherries tied with string and hanging to represent fruit, with tongs (*), eyedropper/straw, and strainer, and a sign that reads “fruit in tree.”

2) Hand out Activity Sheet #4, *Fill The Bill*. Explain that the youth will go through each station, and pick the tool which works the best for that type of food. They then fill that in on their box in the spot that matches the signs. Provide the sample bird head pictures for youth to match the bird head with the tool that best matches the beak shown. Write the name of the bird under the name of the tool. Discuss the activity and the sheet. Clean everything up.

**Activity**

Some of the birds and beak types you will be demonstrating are:

- **Hummingbirds**: long, hollow beaks that are used to probe flower for nectar; tongue inside the beak slurps up nectar.
- **Curlews, godwits, kiwis, and snipes**: long beaks used to poke into mud and shorelines for worms, crustaceans, and other small edibles.
- **Cardinals, sparrows, grosbeaks, and other finch like birds**: short, conical beaks used to crack open tough seeds.
- **Spoon bills and pelicans**: long, flattened or pouch like beaks used to scoop up fish and other swimming creatures.
- **Flamingos and some ducks (only certain kinds of ducks are filter-feeders)**: beaks that act like strainers to filter tiny plants and animals from the water.
- **Nighthawks, whippoorwills, swifts, and swallows**: large, gaping mouths that act like nets to trap insects as the insect and the bird are in flight.
- **Warblers**: small, sharp, pointed beaks for picking insects from leaves, logs, and twigs.
- **Toucans**: have very long, thick beaks for reaching out and plucking fruit from trees.
Dialogue For Critical Thinking

Share
1. What tool and beak were easiest to match? Why?
2. What tool “beak” was hard to use? Why?

Process
3. Why do birds have different kinds of beaks?

Generalize
4. How were you able to match the tools with beak type?
5. What can you learn about a bird without knowing its name?

Apply
6. What can you tell about people by watching them from a distance without talking to them?

Going Further

References
Ducks, Geese and Swans, Zoobooks (Available from Kansas Department of Wildlife and Parks (KDWP) 512 SE 25th Ave. Pratt, KS 67124-8174)
Owls, Zoobooks (KDWP)

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Reviewed by
Wildlife Review Team

Session 2 (optional)
1) Take a field trip outside to a place where you can watch birds. Other options include a museum or zoo that has taxidermy mounts of birds. A final option, if travel is a big problem, is to watch one of the following videos from Wildlife and Parks Reference Center:
   • Understanding Birds: Adaptation
   • Common Birds of Your Backyard
Fill The Bill
Living in the Wild

Activity Sheet #4
Fill The Bill

Nectar in Flower

Tool _________________
Bird _________________

Worms in Mud

Tool _________________
Bird _________________

Hard Seeds

Tool _________________
Bird _________________

Fish

Tool _________________
Bird _________________

Duckweed and Tiny Critters

Tool _________________
Bird _________________

Flying Insects

Tool _________________
Bird _________________

Insects on Trees

Tool _________________
Bird _________________

Fruit in Tree

Tool _________________
Bird _________________
Footloose

Living in the Wild

What Members Will Learn . . .

About the Project

- Explore bird feet, which are designed to assist in locomotion and food gathering

About Themselves

- Using observation and exploration, they can determine information about a previously unknown topic.

Materials Needed

- Replitracks of American Eagle, Barred Owl, and Mallard from Kansas Department of Wildlife and Parks Reference Center. Books, magazines, and drawings showing different types of bird feet.
- Nature magazines that can be cut up
- Scissors
- Ink Pads
- Activity Sheet #5, Bird Feet

Activity Time Needed: 1 hour (two if you take the optional field trip/movie)

Activity

Every bird has a specific habitat, which is the place that meets all of its needs of food, water, shelter, and living space in the correct arrangement. Every bird is designed to live in a different habitat. Although some birds share ecosystems (ecological areas such as a forest, desert, etc.), they don’t have identical habitats. For example, there may be two species of birds in your yard that are eating the same thing, but their requirements for nesting cover may be different.

Bird’s feet, much like their beaks, give us clues to how they live and what they eat. Although vultures and hawks may look similar, vulture’s feet do not have sharp talons (claws) and are well adapted to standing on flat ground (where they often find their food – dead animals).

Leader Notes

This lesson should be after The Better to Eat You With My Dear, and Fill the Bill.

Examine the Replitracks, books, drawings, and magazines to become familiar with some of the different types of bird feet. What does an eagle eat, and how does it get that food (look in reference book for info.)? Do you think its feet help it to get food? What about the mallard? How do its feet help it to get food from the water?

Hand out Activity Sheet #5, Bird Feet

Have the members make an ink print of one track on the activity sheet square. (Be sure to clean rubber tracks immediately.) Complete rest of activity sheet.
Pass out nature magazines that can be cut up, scissors and glue. Have each member cut out one picture of what the bird might eat, and one picture of where it might like to live based on what they know about the bird and the shape of its feet.

Session 2 (optional)

1. Take a field trip outside to a place where you can watch birds. Other options include a museum or zoo that has taxidermy mounts of birds. A final option, if travel is a big problem, is to watch one of the following videos from Wildlife and Parks Reference Center:
   - Understanding Birds: Adaptation
   - Common Birds of Your Backyard

Dialogue For Critical Thinking

Share

1. What type of feet did your bird have?
2. How does your bird use its feet?

Process

3. Why do birds have different kinds of feet?
4. How do birds beaks and feet help each other?

Generalize

5. How do your hands, fingers, and teeth help you eat different foods? (Examples — finger foods, soup, etc.)

Apply

6. What can you tell about people by watching them from a distance without talking to them?

Going Further

References

Replitracks available from Pratt or Wichita Kansas Department of Wildlife and Parks (KDWP) 512 SE 25th Ave. Pratt, KS 67124-8174

Animal Tracker, Armosky (1997)

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Wildlife Review Team
Footloose
Living in the Wild

Wildlife, Level I

Activity Sheet
#5
Bird Feet

Track of My Bird: Bird’s name: __________________________
What else do I know about this bird?

__________________________________

__________________________________

__________________________________

What Do I Eat? Where Do I Live?

Kansas 4-H Wildlife Notebook 61
Wild and Domestic

People and Wildlife

About The Project

• The difference between wildlife and domestic animals
• The role for each type of animal in our world

About Themselves

• The benefits of wildlife and domestic animals for people

Materials Needed

Pictures of Kansas animals, including at least some of the following: cat, dog, sheep, cattle, horse, pig, chicken, domestic ducks or geese, goldfish (or other aquarium fish such as angel fish, etc.), bison, whitetail deer, squirrel, rabbit, raccoon, skunk, bobcat, coyote, hawk or falcon, Canada goose or mallard, blue-gill or catfish, box turtle, etc.

Activity Time Needed: 60 minutes

Activity

In this activity, we will be learning the difference between wildlife and domestic animals. Some basic definitions are: domesticated – referring to animals that humans have tamed down over many generations, that are kept in captivity and used for specific purposes that benefit humans such as for food, clothing, companionship, and protection. This does not include a naturally wild animal that has been tamed during one or two generations, such as a “pet” raccoon; wild – referring to animal populations that are not tamed or domesticated, living in basically free conditions. A wild animal finds its own food, shelter, and other needs within a particular habitat.

An individual wild animal that has been “tamed” does not qualify as domesticated. Another term you need to be familiar with is feral. This refers to a domesticated animal that is living “wild,” providing for all of its needs without help from humans. Some examples include “wild” horses, cats, dogs, and pigs.

A good guideline is to consider what the majority of that species does. For example, youth may consider an African lion to be domesticated because the ones we see are kept in captivity in zoos. But most of the lion population lives in the wild. There are also exceptions with populations of animals that can no longer survive in the wild, either due to loss of habitat or dangerously low population. All bison in Kansas live in captivity to some extent. Some are used like cattle, for economic gain, while others are in more natural settings like nature preserves. This is basically a wild animal whose habitat has been so restricted that it cannot exist in the wild.

Leader Notes

1) Ask the group what a wild animal is. Let them brainstorm for a while, then ask how wild animals are different from their pets, or the animals we raise for food. Discuss the definitions of wild and domesticated animals.

2) Divide the group into two teams for Animal Charades. One person from the first team should come to the front, and get a picture of an animal. They then can act like the animal in their picture, trying to get their team to guess what animal they are. The other team should keep quiet (you may have to remind them).

3) If the team guesses in the given amount of time (usually 30-60 seconds), they are awarded a point. They then get a chance to say whether the animal is wild or domestic (it is a good idea to have them choose a team spokesperson, who will give the “official” answer when the team has discussed it), getting another point for a correct answer.

Discuss feral animals as it comes up in the game. If the team can’t guess what the animal is, the other team has a chance to guess. Keep the game going until all the animal pictures are used or your time is up, making sure each team has an equal amount of turns. You will probably have to take the person acting out the animal aside and give them some hints about how to portray animals they are unfamiliar with. You should decide ahead of time about making noises. Also, you can give hints to the team guessing, as long as you give hints to the
Dialogue For Critical Thinking

Share
1. What animal was the most difficult to act out? Why?
2. What animal was the most difficult to identify? Why?

Process
3. What is a domestic animal?
4. How is a wild animal different from a domestic animal?
5. What does “feral” mean?

Generalize
6. What are some of the benefits of domestic animals for people?
7. How can people enjoy wild animals?

Apply
8. What wild animals do you think might be domesticated in the future? Why?

Going Further

References
Western Association of Fish & Wildlife Agencies, and the Western Regional Environmental Education Council, 1992. Project WILD

Sharing the World with Animals, Zoobooks (Available from Kansas Department of Wildlife and Parks (KDWP) 512 SE 25th Ave. Pratt, KS 67124-8174)

City Animals, Zoobooks (KDWP)

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Shared Spaces

People and Wildlife

What Members Will Learn . . .

About The Project

• The difference between habitat and community
• How to co-exist in our community with other animals
• How to construct a food web of the animals in a community

About Themselves

• That they are not the only creatures whose habitat is in this community
• The impact their actions have on animals in a community

Materials Needed

• Clipboard, pencils, yarn
• Activity Sheet #6, Community Creatures
• Activity Sheet #7, Your Local Food Web

Activity Time Needed: 60 minutes

Activity

Today we will be learning the difference between community and habitat, and how we share our community with other animals. Definitions are: community – a place where plants and animals live together for the benefit of both; habitat – an arrangement of food, water, shelter, and space in a suitable arrangement to meet an animals’ needs.

Each animal has a habitat. Lots of plants and animals make up a community, so the habitats all overlap and are shared between organisms.

For example, both a squirrel and a blue jay may use the same tree as part of their habitat, but they do not have the same habitat (eat different foods, etc.). They are both part of the same community, but not the same habitat. We live in communities along with other living things.

For the Food Web Game, you need to be familiar with the food web and food chain. A food chain is a transfer of energy from plant materials into animals, being transferred several times. An example: grass is eaten by a rabbit (energy transferred), which is eaten by a snake, which is eaten by a hawk. The grass is low on the food chain, the hawk is high. A food web is all of the energy transfers (through eating and being eaten) in a community, made up of interlocking food chains.

Leader Notes

Complete lesson Can’t Do Without It before this lesson. Lesson on Walking Softly and Seeing Small before this lesson would be helpful. Follow this lesson with Habitat Observation Walk. The youth will be looking at part of their community, observing other animals, and exploring how all the creatures affect each other. For the observation, most animal activity takes place right after sunrise or just before sunset, so try to set your meeting accordingly (maybe before school?) so the youth won’t be disappointed. Also, scout your site a few times to find out when and what animals are around.

1) Discuss habitat, as learned in the activity Can’t Do Without It. Ask the youth if all animals share one habitat, or if each animal has a different habitat. Introduce the idea of community, and what animals share a community? It’s okay if they list pets or domestic animals, because these creatures are part of the community.

2) Explain that the group will be going outside to observe part of their community. This is best done right around the building where you are meeting, but can be done in a nearby park, vacant lot, or yard of some cooperative person. (Nursing homes will many times have natural areas around their building, and are happy to have young folks use them.) Hand out the Activity Sheet # 6, Community Creatures, and pencils and explain what the youth need to do. They should list any animals they see (you may have to help with spelling, etc.) and where they see it (very simple lists, like a bird in a tree, etc.).

3) Go outside the building, and have the youth pick spots to sit down. For this age, it works best if you all sit as one group, but emphasize that for any animals to be seen, they must be quiet and still. Encourage them to look for small things too, like insects, and look
up into tall trees for signs of animals, like nests. They don’t have to see the actual animal, but just a sign, like tracks, and then guess the animal. Stay out for at least ten minutes, or until you have some animals listed. You can modify this as a walk in the park, etc., if that works better. Some areas don’t have a lot of animals in one place.

4) Come back and discuss what you saw. Did any of the animals use the same part of the community for their habitat (two animals in one tree, or eating the same thing, etc.)? How do they as people use this part of the community? How do other people? What effect does this seem to have on the animals? Discuss different things that people could do that would have an impact on wildlife, such as cutting down a mature tree, or planting sunflowers for the birds and squirrels. Discuss how each action by one thing in the community can affect the others.

5) Play the Food Web Game. Have the youth stand in a circle. Assign each an identity, such as grass, rabbit, person, etc. You will need to pick a larger number of vegetation and low food chain items, with only a few top animals. Try to pick animals that are present in your community, or at least found in Kansas, and try to pick wild animals, not domestic. Give the end of the yarn to one person who is low on the food chain. Run the yarn to something that eats the first person (a rabbit eats grass). Try to connect to a person across the circle, rather than beside the person. Continue up the food chain around your circle, passing back and forth across the circle with the yarn. If you get to an animal at the top of its food chain (like a coyote), you can connect back to grass or seeds by explaining that when an animal dies, the nutrients in its body go back into the ground.

End up with the person you started with, so that everyone is holding the yarn. Pick a low food chain person. Say that something has happened to that food source, and have them gently pull on the yarn. Ask who felt the pull. Have those people gently pull on their yarn. Who felt that? Continue until the whole web has felt the effect. You can repeat this by having all of one type of food affected, such as all grasses should gently pull. How much more quickly did the web feel the pull

**Dialogue For Critical Thinking**

**Share**
1. Where did you go to observe a community?
2. How many creatures lived in your community?

**Process**
3. What is a community?
4. How is a community different from a habitat?

**Generalize**
5. What types of creatures share your community?
6. What do you do to help or hinder the creatures in your community?

**Apply**
7. What other types of communities do you reside in or visit?

**Going Further**
Have a wildlife specialist discuss how people might invade a wild community and the dangers involved.

**References**
*Sharing Nature With Children*, Cornell (1979)
*Sharing the World with Animals*, Zoobooks (Available from Kansas Department of Wildlife and Parks (KDWP) 512 SE 25th Ave. Pratt, KS 67124-8174)

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**Reviewed by**
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that time? Wind up the yarn, and dis-
cuss the food web. What happens to
the web if one food source is
destroyed? How does something like
grass affect the animals like hawks and
coyotes?

6) Give each member Activity Sheet #7,
Your Local Food Web. Have the youth
draw a food web using the animals
and habitat components they
observed during their walk.
List all creatures you see in your selected community.

The community is ____________________________________________

<table>
<thead>
<tr>
<th>Animals I See:</th>
<th>Where Is The Animal?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Shared Spaces
People and Wildlife

Wildlife, Level I

Activity Sheet
# 7
Your Local Food Web

Draw a food web on the model below using the animals and habitat you recorded during your walk. Draw lines to connect the parts of the web. Fill in as many spaces as you can. If you need more lines, draw them in. A sample line has been put on the web for you.

---

Draw a food web using the animals and habitat you recorded during your walk. Connect the parts of the web with lines and fill in as many spaces as possible. If needed, add more lines to complete the web.
An Open Invitation

Outdoor Skills

What Members Will Learn . . .

About The Project

• Habitat needed for backyard birds

About Themselves

• How to practice proper observation skills

Materials Needed

• Pine cones (brought by youth)
• String
• Natural peanut butter (soft and oily)
• Spatula, 2 cake pans, paper towels
• Wax paper
• Birdseed such as millet

Activity Time Needed: 60 minutes

Activity

All animals need food, water, shelter, and adequate living space. Many people place bird feeders in their yard, but fail to keep them full. Birds, like humans, also need water during all seasons of the year. These water sources can be as simple as a flower pot saucer filled with water, or as elaborate as a backyard pond. Birds are often threatened by our outdoor pets, especially outdoor cats. More natural predators, such as sharp-shinned hawks, may also be attracted by the small songbirds at backyard bird feeders. A variety of birds are commonly found around our habitat. Small birds like house sparrows attract other small birds such as finches to bird feeders. Larger birds like crows and grackles are common and noisy. These birds, along with squirrels, may be difficult to discourage from bird feeders.

Leader Notes

Conduct lessons Fill The Bill and Footloose before this lesson. This activity tells how feeding backyard birds is only one way that people can help wildlife communities.

1) Ask the youth what they think birds eat. (This will be easy if you have already done Fit The Bill.)

2) Now restate the question and ask them if they have ever seen birds around their house or apartment. What kinds of birds do they see? What do they think those birds eat?

3) Explain that they can see a lot of neat things in the habitat in their backyard or outside their apartment window. They can see more things if they provide a habitat. Brainstorm what the pieces of habitat are (food, water, shelter, space). How does the group think they can add those pieces to their yard?

4) Tell them they are going to make a food source to attract birds, and when they get home that they should set out a pan of water so the birds can have a drink.

5) Pass out one pine cone to each individual or have the group collect them (be sure to get permission and only pick up cones from the ground. Help everyone tie string around the end of the cone – usually the base. [The pine cone will hang upside-down.]

6) Fill one cake pan with seed and another with the natural peanut butter. Have them roll their pine cone in the peanut butter and then in the seeds. Have squares of waxed paper available for them to place their pine cones on. Paper towels will easily clean up their hands.

7) Tell the youth to have their parents’ help them tie their pine cone up high enough so that cats can’t get to the birds.
8) Review why it is important to have water nearby. The pine cone won’t last forever, but inform them that they can reuse the pine cone by putting more peanut butter and seeds on at home.

**Dialogue For Critical Thinking**

**Share**

1. Where did you find your pine cone?
2. What was it like to cover your pine cone with peanut butter and bird seed?

**Process**

3. Why is it important to feed birds?
4. When do birds need extra food?
5. What other things do backyard birds often need? Why?

**Generalize**

6. How does building a bird feeder help you learn about wildlife?

**Apply**

7. What else can you do to help improve your observation skills?

**Going Further**

Take a bird watching field trip.
Observe other members’ backyard feeders.

**References**

*Songbirds in Your Garden*, Terres (1994)

**Authors**

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**Reviewed by**

Wildlife Review Team
What Members Will Learn . . .

About The Project
- How to protect fragile environments
- Hiking skills for wildlife observation

About Themselves
- What they need for personal space
- Their responsibilities as a guest in someone’s home

Materials Needed
- Chalkboard with chalk or large pad of paper with easel and marker
- A natural area (for example, a park with a “wild” area, an outdoor wildlife learning site at a school, field or woods nearby, a community garden, public botanic garden or arboretum, or even a yard with lots of planted areas)

Activity Time Needed: 60 minutes

Activity
Today we are going to discuss the “etiquette” of hiking in natural areas, which can range from someone’s yard to a national park. The basic idea is to use these places, without misusing them. Observing wildlife and plants is a good outdoor hobby enjoyed by many, but there are guidelines to follow in order to enjoy natural surroundings without harming them.

You can see a lot of neat things in nature just by taking a walk. There are plants and animals to see, but sometimes you have to behave a certain way to see them. Let’s discuss the guidelines for a wildlife walk:

(1) Be quiet. This doesn’t mean you can’t talk, but you shouldn’t yell, scream, or laugh too loudly. To most animals, we make a lot of noise, which frightens them.

(2) Don’t make sharp, sudden movements. We are larger than most of the animals we are trying to see, so if we make aggressive movements, we will frighten them. A butterfly sitting on a flower can be walked up to slowly, but will fly away if you run up to it.

(3) Look around. Don’t just look straight ahead. Look at the ground around you for animals or signs of animals (like tracks, scat/droppings, fur or feathers, etc.). Look up into the trees.

Leader Notes
This activity is useful before Habitat Observation Walk and Shared Spaces. Ask the youth what they like about nature. Let them brainstorm until you have a good list. Ask how they can see some of the things on the list (go to a zoo or park, look out their kitchen windows, etc.).

You will play a game called Too Close For Comfort. Tell the group only that they will be doing an activity about personal space. Choose one person (an adult helper, if you are more comfortable), and have them stand at the front of the room. No one should be allowed to talk. Leave the person standing there alone for a minute or so, while everyone stares at them. Then, get up and slowly approach the person. Get to within a couple of feet of them, and back away. Continue this, gradually getting closer. Vary the distance you stop from them, and the speed of your approach (slow walk, big jump, etc.). Approach them from behind. Stare at them the whole time. Finally end up nearly touching the person, staring at them.

Have the person sit down, and tell how they felt. Were they uncomfortable? What made them nervous? What was their “personal space” (the distance around them that they were uncomfortable with you crossing)? Would they have let a stranger get as close as you did? Turn the discussion into the personal space of animals, and why they would be very nervous around us.

Go outside for a nature walk. If you have an area for it, you may wish to do a brief running game, like tag between sitting and talking and going for a quiet walk. This depends on your group. You may need to remind the youth about the guidelines, but remember to have fun and try to see some interesting things. You may also need to keep in mind some safety issues: Never let them get close to wild animals that are sick or injured. Keep everyone in sight — buddies are a good idea at this
(4) **Listen.** This goes along with being quiet. Many times we hear animals before we see them (birds calling, squirrels chattering, a fish jumping, insects buzzing, etc.). If we can locate a sound, we might be able to find the animal.

These are all things that will help us see more wildlife in natural areas. After we spot an animal, or when we see an interesting plant, we have a responsibility toward that living thing. Just like we have to take care of our pets, we also have to take care of other living things. Another way to look at it is that when we go to visit someone else in their home, we are careful not to break anything, make messes, or do anything else they might not like. We should have the same attitude when visiting an animals home. Some guidelines might include:

(5) **Do not pick a plant or flower.**

(6) **Don’t litter.** Leaving candy wrappers, pop cans, even paper can change an animals community, and makes it less fun for the next group of people who visit. If you see litter, pick it up to take home and throw away.

(7) **Never approach a wild animal too closely.** It’s okay to stand back and watch, but if we try to get too close to them, we may cause them to leave or become frightened, which could disrupt their activity. How would we like to be run off from the dinner table by a big, noisy monster?

(8) **Don’t harm anything.** Just because you can catch an insect doesn’t mean we should kill it. All these things share our community, like we saw in *Shared Spaces*.

(9) **Enjoy the animals in their natural place but don’t take them home.** They are wild animals, and need to be in their natural habitat. Even injured or young animals are better off in their own place.
Dialogue For Critical Thinking

(After playing Too Close For Comfort and taking a nature observation walk.)

Share

1. How did the person feel to be stared at and approached without talking? How do you think animals react?

2. While you were on the walk, what did you see?

Process

3. What must you do on a nature walk in order to see lots of animals?

4. What do you do on a nature walk to protect the area for others to enjoy?

5. What would happen to the nature walk area if ten (10) groups visited everyday and each child chased the animals, picked flowers, threw rocks, and pulled leaves off trees?

Generalize

6. How do you treat a friend’s room or toys when visiting in their home?

7. What does it mean to be a guest?

Apply

8. What can you do to remind others to protect natural environments?

9. How can you remind others to keep human living space clean?

Going Further

Have a wildlife or nature specialist discuss the importance of sharing natural settings.

Visit a public park and observe the trash and other things that people do to hurt the area.

References


Sharing Nature With Children, Cornell (1979)

Sharing the World with Animals, Zoobooks (Available from Kansas Department of Wildlife and Parks (KDWP) 512 SE 25th Ave. Pratt, KS 67124-8174)

Wilderness With Children, Hodgson (1992)

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