



Birds Session Outline

For the Outdoor Skills Program

- I. Welcome students and ask group what they remember or learned in the last session.
- II. Activity: Find a Mate
- III. Discussion: Ask the students to give examples of ways that people can enjoy birds. Examples: Bird watching, feeding, hunting for them or some birds are trained to hunt other animals (falconers).
- IV. Students will be using their journals in the bird watching activity.
- V. Activity: Looking for Birds
 - A. Five Topics to Identify Birds
 - B. Using Binoculars
- VI. Wrap up: Ask the students what they enjoyed most about today's session and what they enjoyed the least. (Highs & Lows)

The Outdoor Skills program is a partnership with Nebraska Games & Parks and the UNL Extension/4-H Youth Development Program to provide hands-on lessons for youth during their afterschool time and school days off. It provides the opportunity to master skills in the areas of hunting, fishing, and exploring the outdoors. This educational program is part of the 20 year plan to recruit, develop and retain hunters, anglers, and outdoor enthusiasts in Nebraska.

Inventory

Session: Birds

Kit Materials & Equipment

- Bird Song *Identifyer*
- (6) Bird Song cards: *Eastern Yard Birds, Birds of the Night, Field & Meadow, Lakes & Rivers, Yard Birds 1, Yard Birds 2*
- Find a mate activity cards
- (13) Binoculars
- (13) Peterson's Birds Field guides
- (12) Bird cut-out
- All About Birds*- Teacher guide

Session: Birds

Activity: Find a Mate

Objectives: Participants will
1). Distinguish different bird songs. 2).
Become familiar with some Nebraska
bird species.

Method: Students will portray birds
and look for their partner bird in this
group activity.

Materials Contained in Activity Tub:

Duration: 20 Minutes

Group Size: any, need an even
number of students

Setting: Outdoors or Indoors

Key Terms: Bird watching, bird
song, mate

SET Ability: Compare

Identifier, Find a Mate activity cards

Background Information:

One of the ways bird watchers can
identify a bird is by listening to their
song or call. Each species of bird has a
different song or call and uses it to
establish territories, find a mate, and
alarm other birds.

Activity:

Before the activity

1. Ask students if they know what
kind of birds live in their
neighborhood. Have kids give
examples (If they don't know the
name of the bird, have them
describe it).
2. Ask the students if they know
any bird songs or calls (they all
should know "quack, quack" or
"hoot")

Procedure

1. Tell students that in this
activity they will become a
bird. It is their job to make
the bird song or call.
2. Hand out the activity
cards. Tell the students not to
show them to anyone else. If
they need help with their card,
have them raise their hand.
3. Before they start "talking", tell
them that somewhere out in the
group is another bird just like
them. It is their job to find their
partner. They must sing and
listen at the same time.
4. Signal the students to begin.
When they have found the other
"bird", have the two students sit
down on the floor until everyone
is done.
5. When everyone is done have
each pair tell the group what
kind of bird they were and
demonstrate the bird song or
call. Use the identifier and play
the bird song.
6. Inform the kids that all these
birds live in Nebraska. By
learning their sound you might
be able to spot them out in the
wild!



Five topics that are important in helping students identify birds.

1. Size

The Taconic Bird Plaques present 12 common birds found in urban, suburban, and rural areas of the Northeast. All vary in size, shape, color and field marks. The first category for students to understand is size. For example, the kestrel, blue jay, and screech owl are the largest of the 12 species represented, while the cardinal, mockingbird, and red-winged blackbird are medium-sized. The smallest birds are the downy woodpecker, house finch, white-throated sparrow, nuthatch, and chickadee. The first goal for students is to relate to size by using different species as comparative markers. To provide measurement dimension that allows for standard comparisons, consider the following as a point of reference: sparrow, 7"; robin, 10"; and crow 20". This measurement is from the tip of the tail to the bird's crown.

2. Field Marks

What aspects of the bird really stand out? These are known as field marks. These various markings help young bird detectives learn bird identities. Our national symbol, the bald eagle, has a noticeable white head and tail. Those features and the eagle's large size are its most prominent field marks. The white-throated sparrow has a white patch under its chin. The tail of a mockingbird is very long. As students get more involved in identifying birds, they may want to look at the bird's eyes and breast. Is there a stripe over or below or through the eye? Is the breast plain, spotted or streaked? When the bird flies, are there special markings on the tail or wings? Asking these questions will help students identify birds more easily.

3. Body Outlines/Shape

In considering shape there are four subcategories:

- **Head:** Does it have a crest like a cardinal's?
- **Beak:** What is its shape and size? Is it long like a woodpecker's? Is it hooked like an owl's? Is it thick and triangular like a cardinal's?
- **Tail:** How long is it? Is it short and stubby like a nuthatch's or long like a mockingbird's? Is it forked, rounded, or squared?
- **Overall body shape:** Is it long and thin or stocky in appearance?

4. Color

Often the color of a specific bird stands out. Consider the stunningly bright red male cardinal. Sometimes the color is not distinct, but rather dull. The gray mourning dove is a good example.

Most of the colorful songbirds are males, especially in the spring, while females have a less showy appearance. Scientists think that this is reproduction and survival adaptation. Color and other behaviors are factors in helping males attract mates. Once the bond is established, the incubation and fledging activity

can put the nest at risk. It is thought that the females' less showy appearance blends them into the environment and provides more nest protection. The brighter-colored male will attract the attention of predators and lead them away from the nest in times of danger.

Either a pigment or a structural light reflection produces the colors we observe in birds. For instance, pigments create the bright red of the cardinal and the yellow of the goldfinch. Structural light reflection creates the appearance of blue in the blue jay. There is no pigment in the feather; rather, the barbs of the feather reflect and scatter light that captures the blue part of the color spectrum. So when light is reduced or not reflected properly, the blue jay is seen in its true gray colors.

5. Song

A more advanced method for identifying birds is through their songs. More experienced birders, like musicians, develop a good auditory memory and can associate a bird with its song. From hearing the song, the birder can identify the bird without actually seeing it. An excellent set of audiotapes/CDs is ***Know Your Bird Sounds***, a NorthWord Nature Guide. A useful computer program is Thayer Birding Software's ***Birds of North America***. Other products are also available for MP3 players.

Binoculars

Like the microscope, binoculars are a finely adjusted scientific tool. They are the single most important device for observing birds in the field. They come in many sizes and styles. For the beginning birdwatcher, binoculars that magnify 7 or 8 times are recommended. Typically they will be sold as "7x35" or "8x40". The first number refers to the magnification. The second number refers to the diameter, in millimeters, of the large lens in front of the binocular. The size of this lens determines the amount of light that can enter the binoculars. Generally speaking, 5 times the magnification means good levels of brightness over varying conditions. For instance $7 \times 5 = 35$; thus, binoculars that have a magnification will typically be 7 x 35.

When using binoculars, first view the bird with the naked eye. When the bird to be viewed is found, bring the binoculars up to your eyes without moving your eyes or head. Otherwise it may be difficult to find the bird again. A dominant eye influences most people's vision. The right eyepiece, or diopter, can be adjusted for that eye's particular strength or weakness by turning it to the right or left. Detailed directions for binocular use are below.

Binoculars are durable, but the lenses can be put out of alignment if they are knocked against hard objects. Treat them with respect: Keep them dry and do not touch the lenses with your fingers because fingerprints can adhere to the lens. Also, use the strap to avoid dropping them.

Teaching students how binoculars are used

1. Hold up binoculars in front of the class and ask, "What is this tool called? What does it do?" Then describe how it works: a series of polished glass lenses and little internal mirrors magnify what you see. You could tell them it is like a fancy magnifying glass, (An average pair of binoculars magnifies an image 7 or 8 times.) Mention that because of this system of lenses, it is important not to drop, bang, or swing a pair of binoculars. Keep the strap around the neck. Also, keep dirt and sand out of the gears and fingerprints off of the glass.
2. Discuss the fact that dominant eye influences most people's vision and that binoculars are designed to make the necessary adjustments. Demonstrate this by telling the students to extend their arm and raise their thumb in front of their nose and point at an object close by that will not move. Focus on the object with both eyes, then close the left eye and then the right. Discuss what is observed.
3. Discuss the three most important features (fit, focus, and diopter) that everyone who uses binoculars should know:
 - Fit: The way the binoculars open and close to better fit individual faces and eye placement (this makes sure that one image is seen, not two).
 - Focus: The focus knob or bar that brings images into or out of focus.
 - Diopter: The right eyepiece is the diopter that adjusts the eyepiece for each individual's vision. Tell the group this will be tried when the binoculars are passed out.
4. Demonstrate proper use: First spot something with your eyes, then raise the binoculars to your eyes without moving your head or your gaze. If students do this, it will be easier for them to find the object they are looking for, especially if it is a moving bird!
5. Give a pair of binoculars to each student. Tell them to open or close the binoculars to fit their eyes so that they see only one image and do not have to squint through one eye. This step is to ensure that everyone understands how to fit binoculars to their face and eyes. Point out an object, such as a sign or the top of a particular tree and tell everyone to focus on that object. Have them use the focus knob to do that. Make sure everyone is having success before moving on to the next step. Eyeglass

wearers should, if possible, roll down the rubber caps attached to the eyepieces so their eyes will be closer to the lenses.

6. To use the right diopter or adjuster correctly, tell the students to listen carefully to your directions. First, have them move the diopter back and forth so they are aware of its mobility. Make sure they also notice that there are usually small symbols, like + and – and 0, which they will later use to mark a position or spot they can remember. Then ask them to close their right eye and look through the left eyepiece. Next, have them use the focus knob to get one particular object in focus. Then have them close their left eye and look only through the right eyepiece. If the object they were just looking at is still in excellent focus, the diopter is set correctly. If the image is fuzzy and out of focus, they should turn the right eyepiece right or left until the object is perfectly focused. The focus knob should not be readjusted at this point.
7. Now that the binoculars are adjusted, the students are ready to practice using them. Reiterate that the best way to find an object in the binoculars is to keep your eyes on it, then raise the binoculars to your eyes without moving your head or eyes.
8. Display a number of the bird plaques in a variety of locations. Practice using the binoculars and view the bird plaques to discern field marks, shape, size, and color. Use the enclosed Bird Observation Worksheet to focus the student's attention.

Session: Birds

Activity: Looking for Birds

Objectives: Participants will
1). identify different bird species that live in the local area. 2.) learn techniques for identifying birds. 3). be instructed on the proper way to handle binoculars, use field guides, and make observations in the environment.

Method: Students learn about birding while in the classroom and then go into their schoolyard to look for common birds.

Materials Contained in

Activity Tub: Binoculars, field guides, Identiflyer, 12 bird plaques, Bird Data sheets, Lesson 4: Teach students how binoculars are used and Teacher Information sheets (both in binder)

Materials Needed to Conduct

Activity: Journal and pencil

Duration: 1 hour

Group Size: any

Setting: Indoors and outdoors

Key Terms: birding, binoculars, field guide, observation, ethics

SET Ability: Use Tools, Observe

Background Information:

Birding (formerly known as Bird Watching) is one of the fastest growing hobbies in the United States. Recent surveys indicate that 1 in every 5 Americans enjoy watching birds. Birding is a hobby for all ages; it can be as simple or as complex a recreational activity as the participant chooses. You don't need a lot of expensive equipment to get started in this fun hobby.

Birding Ethics:

As birding becomes more and more popular, birders at all times need to observe certain rules of conduct. This means we always need to act in ways that protect birds and their environment. It is also important to know that there are State and Federal laws that prohibit anyone without a permit from altering the behavior of most bird species. Here are a few common sense birding ethics that should apply to everyone when birding.

1. Respect the natural environment and if possible, leave it in better shape than you found it. Pick up and dispose properly of any garbage you find. Stay on marked trails in natural areas and leave nothing but footprints.
2. Avoid disturbing birds. The best way to avoid stressing birds is to observe them from a distance. Birders can cause unnecessary stress if they approach a bird or its nest too closely. Some species may abandon a nest of eggs or chicks if they are disturbed. If your actions caused a bird to change its behavior then you approached too close.
3. Avoid locations where sensitive species such as rare, threatened or endangered species are active. Feeding, nesting, and

roosting locations are critical for birds and one should avoid any disturbance in these locations.

Activity:

Before the activity:

1. Choose four bird plaques and place them outside using the push pins. Try to place birds in appropriate habitat. For example, in a tree or bush, on the ground, etc

Procedure:

2. Ask students what kind of birds they have seen in their schoolyard or neighborhood. Use the rest of the bird plaque pictures to show the kids common birds. Can they identify any?
3. Ask students how they would identify a bird. (Refer to “Five topics that are important in helping students identify birds”) What characteristics would you look for? (color, size, habitat, song, etc.)
4. Demonstrate bird songs with the Identiflyer. Play common birds such as robin, blue jay, crow, etc.
5. Ask students what tools might help them identify birds? (binoculars, field guides, other birders) Hand out binoculars, one per student. Give a lesson on how to use the binoculars. (Refer to “Teaching students how binoculars are used”)
6. Next, hand out a field guide. Do a little “walk through the guide”

highlighting the parts that they may find most useful. (Range map, habitat and song description, pictures.)

7. Have each student bring their journal and a pencil to record bird species and to make notes and drawings of what they see.
8. Tell them they will now go on a birding adventure!
9. Take the group outside and let them bird in the schoolyard. First have them practice using their binoculars and field guides on the staged bird plaques. Have them record their observation in their journal.
10. Next, have the students look for real birds. Instruct them to be quiet so birds will not be disturbed. Have the group spread out and find a place to sit. Have them look and listen for birds. They can also look for nests in the trees. Have them record their observations in their journals.
11. After birding, have group come together to share their observations. Did they see or hear any birds? What species were they? Using their observations, assist with their field guides to identify any species.
12. Discuss information about the four bird species you chose to stage outside. (Refer to bird data sheets in tub).