Objectives
- Participants will learn the parts of a bird
- Participants will learn techniques used to identify birds

Background
You are watching the bird feeder in your back yard, binoculars ready and at your side, waiting for the next bird to land at the feeder. Suddenly you see movement! Putting the binoculars to your eyes, making slight focus adjustments, you are now looking at a beautiful red bird! Is it a Cardinal? Maybe it's a Summer Tanager? Or could it be a Purple Finch? How do you know? What do you look for to make sure you have correctly identified the bird at your feeder?

"Bird identification may seem frustrating at first, but once you have the basics down the process becomes easier and easier! Bird identification involves sorting through clues to arrive at the bird's identity. It's a process of elimination in which you eliminate all the birds that are not the one you are looking for. Most of these clues — size, shape, color, habitat, and field marks — are visual. Sounds are also important and are a very effective method to identify birds" (Thompson, 1997). Once you gain enough confidence and experience, you will be surprised at how effective you are at using visual characteristics and songs to identify different birds. The more birds that you identify, the easier the process becomes.

Parts of a Bird
Knowing the parts of a bird is invaluable when it comes to bird watching and identification. In the example above we viewed a red bird at our feeder. While this information is useful, what we really need to know is where the red coloring is located on the bird. To do this, we must know the parts of a bird.

If you have ever seen a chicken or a turkey, you are probably already familiar with many parts of a bird. You most likely know what the legs, feet, head, bill, breast, wings and tail look like.
When you spot a bird, the first characteristics you see are important in helping to identify that bird! These characteristics, known as Field Marks, are unique characteristics and are useful in identifying one bird from another. Many times you are not able to make a quick identification and field marks allow you to narrow the possibilities and get you to the correct pages in your field guide.

Size
Size refers to the measurement of the bird from bill-tip to the end of the tail. Many bird watchers find it useful to compare the bird in question to a bird that you are familiar with. Is it larger or smaller than a robin? a sparrow? a hawk?

Shape
Shape is a great characteristic to use in bird watching. Is the body thin or fat? Is the tail long or short? Are the legs long or short? Is the bill short or long, thick or thin, long and broad, or hooked at the tip?

Habitat
Just as ducks prefer water and robins prefer grassy lawns, most birds prefer a specific habitat for feeding or nesting. It is also important to notice where in the habitat the bird is viewed. Is it on the ground or high in the tree? On a lake, does it remain close to shore or stay out in the middle?
Behavior
When you are watching a bird, try to note how it acts. How does the bird feed? Does it catch insects while in flight, or does it feed on the ground? Does it cling to the side or a tree like a woodpecker or swim in a lake as a duck? Does it walk or hop when it is on the ground? How does the bird fly? Does it undulate up and down like a woodpecker or spiral up in the sky like a hawk? Is the bird approachable or secretive?

Voice (Sounds)
For many birds, especially songbirds, the voice can be helpful in identification. Birds use songs to attract a mate or declare a territory. Call notes are used by birds for alarms and to stay in contact with each other.

Colors and Patterns
Colors are probably the most noticeable field marks for birds, but it is important to note where the color is located. Many birds have a colored head, throat, breast, or rump. Often these colors create distinct patterns such as streaks or spots. Plumage refers both to the layer of feather that cover a bird and the pattern, color, and arrangement of those feathers. The pattern and colors of plumage vary between species and subspecies and can also vary between different age classes, sexes, and season.

Of particular use in bird identification are the field marks of the head and field marks of the wing.

Knowing the common field marks of the head will be useful as you begin learning to identify a bird.

Crown Stripe — the stripe in the midline of the head
**Eyebrow Stripe** — the line above the eye

**Eyeline** — the line that runs through the eye

**Eyering** — ring of color around the eye

**Malar Stripe**

**Throat Patch**

**Beak** — notice the color, shape and size

**Lore** — the area between the base of the beak and the eye

Does the bird have a **crest**?

**Wings**

Bird wings are actually a collection of several different types of feathers (Figures 6a and 6b).

Flight feathers are separated into primaries and secondaries. The **primaries** are the outer flight feathers and are also the longest of the wing feathers. These are responsible for propelling the bird through the air. The **secondary** are the inner flight feathers and located between the primaries and the body of the bird. They serve to sustain the bird while in flight, giving it lift.

Wing **coverts** are the small feathers at the front of the wing, covering the bases of the primaries and secondary flight feathers. These feathers are present on both the upper and lower surfaces of the wing. Coverts are also separated into primary and secondary coverts. The coverts serve to streamline the body, protect the wing feathers, and help to optimize the body temperature.

Some bird species (particularly warblers and vireos) possess stripes that run across the shoulder of the wing. These stripes, called **wingbars**, can be useful in making positive identification.
Figure 6a: Bird Wing

Figure 6b: Bird Wing
Tail
The tail is comprised of long feathers extending from the rear of the bird. Like the primaries and secondaries feathers of the wing, the tail feathers are considered flight feathers. These feathers are used in steering and balancing, acting as a rudder, which allows the bird to twist and turn in flight as well as a "braking system" prior to landing. The tail is also an asset used to attract potential mates.

The uppertail coverts are relatively shorter feathers covering the upperside of the base of the tail. They originate on the rump and partially cover the tail giving it a "layered" look. The undertail coverts are feathers in a triangular area on the under-side of a bird between its vent and the base of its tail feathers. (See Figure 7)

Figure 7: Bird Tail
Used with permission from the Cornell Lab of Ornithology’s All About Birds website: www.allaboutbirds.org
**Bills and Beaks**

Beaks and bills come in a variety of shapes and sizes, with each design being an adaptation to a specific method of feeding.

Long, slender beaks of hummingbirds are useful for getting nectar from flowers.

Long, thick, chisel-like beaks of woodpeckers are used for drilling into wood and chipping away tree bark.

Short, slender beaks are used for prying into tight places. Some examples include warblers, gnatcatchers, vireos and titmice.

Short, stubby, powerful beaks are used for opening the shells of seeds. Sparrows, juncos, and finches are some examples.
Short, wide beaks, sometimes with hooked tips, are adapted for catching and holding onto flying insects. Flycatchers fall into this category.

Duck bills are fringed to strain plants, seeds, and small animals from mud and water.

Shorebirds have long, thin bills that are used for jabbing at fish and into the mud. Herons and egrets are some common examples.

Short, thick, curved, pointed beaks of eagles, hawks and owls have hooked bills to tear prey into bite-sized pieces.
Activity Sheet I

Bird Identification

Below is a list of twenty birds that are commonly found in Oklahoma.

Use this to keep a record of when and where the specific bird was identified.

<table>
<thead>
<tr>
<th>✓</th>
<th>Species</th>
<th>Date Observed</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>American Robin</td>
<td></td>
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<td></td>
<td>Bewick's Wren</td>
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<td></td>
<td>Carolina Chickadee</td>
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<td></td>
<td>Cliff Swallow</td>
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<td></td>
<td>Dickcissel</td>
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<td></td>
<td>Downy Woodpecker</td>
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<td></td>
<td>Field Sparrow</td>
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<td></td>
<td>Indigo Bunting</td>
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<td></td>
<td>Lark Sparrow</td>
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<td></td>
<td>Mallard</td>
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<td></td>
<td>Mississippi Kite</td>
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<tr>
<td></td>
<td>Northern Bobwhite</td>
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<tr>
<td></td>
<td>Northern Cardinal</td>
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<td></td>
<td>Northern Flicker</td>
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<td></td>
<td>Northern Mockingbird</td>
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<tr>
<td></td>
<td>Red-tailed Hawk</td>
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<td></td>
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<tr>
<td></td>
<td>Ruby-throated Hummingbird</td>
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<td></td>
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<tr>
<td></td>
<td>Scissor-tailed Flycatcher</td>
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<tr>
<td></td>
<td>Tufted Titmouse</td>
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<td></td>
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<td></td>
<td>Western Kingbird</td>
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</tbody>
</table>
Find a Bird
(activity for younger youth 5 to 8)

Submitted by:
Gerri Ballard
Extension Educator
Oklahoma Cooperative Extension

Bird watching with younger children can be an exciting and fulfilling experience. The trick is making sure that youth actually have the opportunity to “see” a bird. Nothing more is more frustrating for the kids and their leaders is to go bird watching and not see any birds! If you don’t want to leave your outing to chance you may want to consider using the following activity.

Materials
Toilet paper rolls (2 per child)
Yarn
Small paper punch
Masking tape
Photo of Birds
Clothes pins
Clip boards or use stiff cardboard with binder clips
Pencils
Bird Tally Sheet
Bird Field Guide (Simple one for Children to use)

Do
Set up your Nature Walk area:
Locate photographs of birds seen most often in your area during the time of year you are conducting your bird watching session. One place to search is the photo gallery at birdsofoklahoma.net. Print the pictures in color and as close as you can to the size of the species you have selected (that will eliminate large birds). Laminate your photographs and clip them (using a clothes pin) in or around the habitat they would found in the area of your Bird Nature Walk. Information concerning the appropriate habitat can be found in your field guide.

Prepare your tally sheet.

Make Binoculars:
While younger children will definitely want to get their hands on a pair of binoculars, they may experience some difficulty learning to correctly use and focus the "real" thing. Have them make their own pair by using the toilet paper rolls. Tape 2 rolls together to create the objective lens tubes found on binoculars. Punch holes close to the top on the outside and tie yarn long enough to allow youth to hang the binoculars around their neck.
**Take a Nature Walk:**
Have the children work in pairs. Each pair should have binoculars and a clip board with a tally sheet and a pencil. This allows them to practice sharing and allows for the opportunity for one of the team members to be on the look out for birds while the other team member is recording. Set out to see how many birds they can find.

Once they have spotted the photos encourage them to continue to watch for real birds as well as the photos.

**Reflect**
As the children locate the photographs ask these questions:
Describe the Bird?
Can you name the Bird?
Try to find the Bird in the Field Guide?
Discuss the information found in the Field Guide.

**Apply**
Where do should we look for birds?
What can we learn by observing birds?
How do the play binoculars help us find birds?
What do you think the difference is between real binoculars and the play binoculars?

**Other activities**
Measure the distance from where you were standing to the first photograph spotted. Talk about the size of the bird.

Using the field guide look up the male and female Northern Cardinal. How are they alike? How are they different? Why?

Draw one of the birds you saw today.
Activity Sheet II

Find A Bird

Team members

________________________________________________________________________

________________________________________________________________________

Make a tally mark for each bird you find

<table>
<thead>
<tr>
<th>Northern Cardinal</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Scissortail Flycatcher</td>
<td></td>
</tr>
<tr>
<td>Eastern Blue Bird</td>
<td></td>
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<tr>
<td>Blue Jay</td>
<td></td>
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<tr>
<td>House Sparrow</td>
<td></td>
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<tr>
<td>Mockingbird</td>
<td></td>
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<tr>
<td>Other Birds</td>
<td></td>
</tr>
</tbody>
</table>
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References Cited
Cornell Laboratory of Ornithology, All About Birds. http://www.birds.cornell.edu/AllAboutBirds
Thompson, Bill, Bird Watching for Dummies. 1997

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About Birds web site: www.allaboutbirds.org
All photographs used in this document, unless otherwise noted, are from the U. S. Fish and

Selected Resources
American Birding Association: http://www.americanbirding.org/
Bird Line Art Illustration: http://www.inkart.net/art/wildlife_art/birds/
Birdnet: http://www.nmnh.si.edu/BIRDNET/
Birding.com: http://www.birding.com/
Birdingguide.com: http://www.birdingguide.com/
Birding for Beginners: http://www.wildbirds.com/dnn/IdentifyBirds/BirdingforBeginners/
   tabid/118/Default.aspx
Birds Amore!: http://www.birdsamore.com/index.htm
Cornell Laboratory of Ornithology. http://www.birds.cornell.edu/AllAboutBirds
Fernbank Science Center’s Ornithology Web: http://fsc.fernbank.edu/Birding/birdpage.htm
Fledgling Birders: http://www.fledgingbirders.org/index.html
National Audubon Society: http://www.audubon.org/
   -you-know-field-mark.html
Virtual Birder: http://www.virtualbirder.com/vbirder/