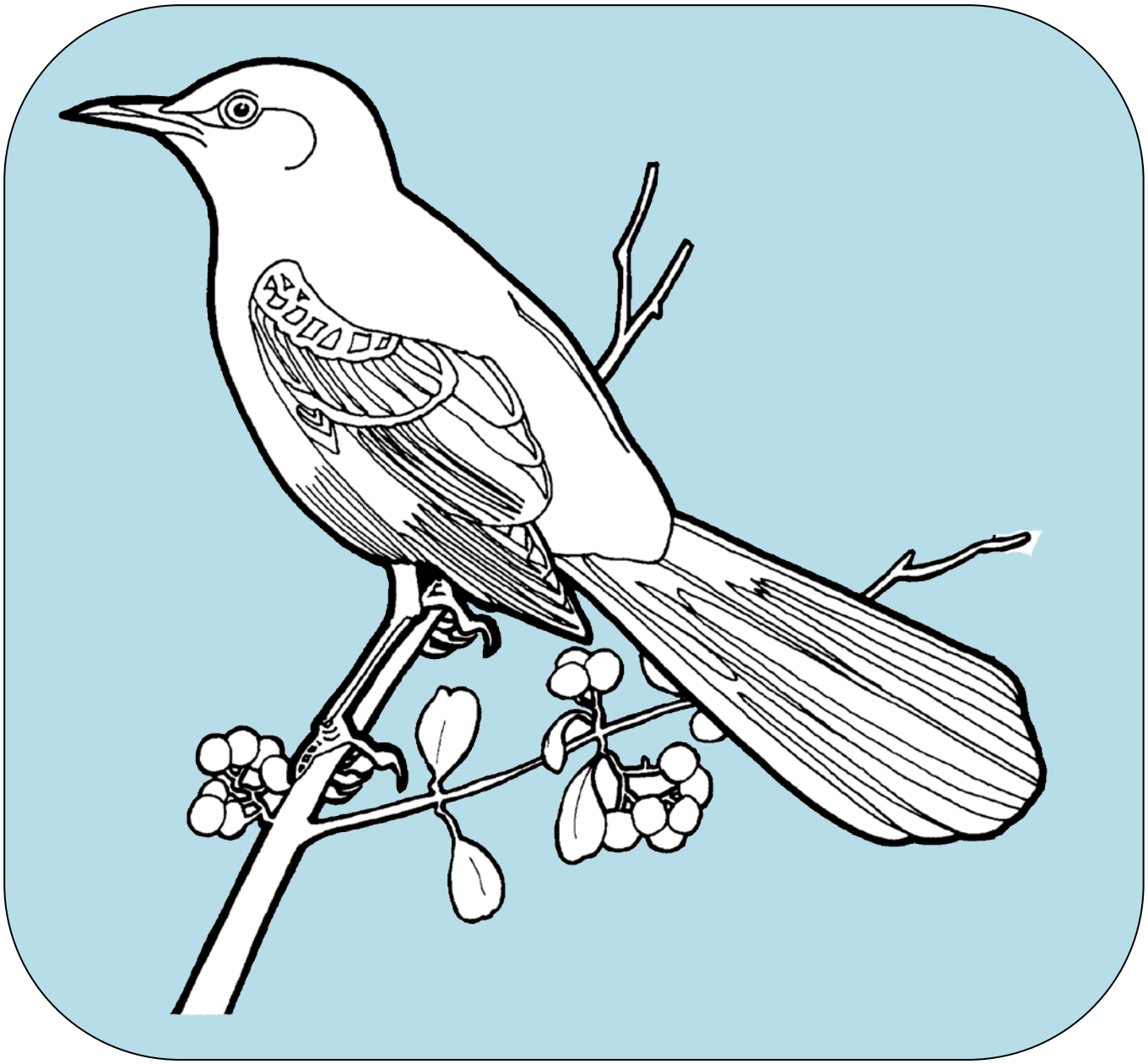
UF | IFAS Extension
UNIVERSITY of FLORIDA

4H WLM 11

The World Around Us



4-H Wildlife Project

Unit 2: Bird Study

Member's Name_____

Age_____

Parent's/Guardian's Name_____

Mailing Address_____

Name of Your Club_____

County_____

Name of Your School_____ Grade_____

Years in 4-H _____ Years In This Project_____

Name of Club Leader_____

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Introduction

Birds are animals. They are different from other animals, though, because they have wings and are covered with feathers. Because they can fly, birds are probably the most traveled animals of the wild. Some travel short distances while others may travel for hundreds, or even thousands, of miles.

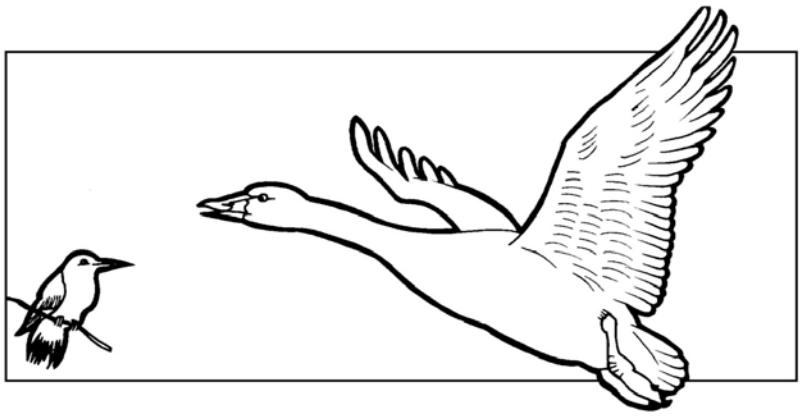
Not all of our Florida birds fly away each season. Some live in the same place all year and are called permanent residents. The birds that fly to Florida to spend the winter are called winter residents. Winter residents return to the northern states during the summer months. Other birds fly into your area for only the summer months and are called summer residents. The last group of birds is called migrants. These birds spend a few days to a week in your area, usually in the spring or fall, in the course of their flight to some other state or country.

Because of its warm climate, Florida is blessed with many different species of birds. Some of the birds live here all year, while others are winter residents. In all, there are about 350 different species living in or passing through Florida each year.

It may seem like an understatement to say that birds are everywhere, but that is about the situation in Florida. Because of a large bird population in Florida, many people have found the study of birds to be an interesting hobby. Today, bird study is a popular hobby for many Floridians. Birds are usually the easiest wild animals to observe and study.

Your beginning wildlife project taught you about nature study. The study of birds was introduced to you as you watched for birds on your nature hikes. This Second Unit of the Wildlife series is all about birds. You will have a chance to study birds and learn about how they live. If you follow some of the practices you learned about studying nature, you should have no trouble seeing many native birds as part of your project work this year.

This project may lead to a hobby that can be fun for many years to come.



Start by setting a goal: What would you like to accomplish in this project?

My goal is to:

Take a look at the next page to see the activities that will help you reach your project goal. Are you ready to take flight into your new area of bird studies?

What You Will Do

You will learn about birds by walking outdoors. You will learn to listen and watch carefully for some of the 350 birds in Florida. You will also find library readings helpful as you learn some of the different birds, what they eat, and where they live. You can complete the following activities with your leader, with your family, or by yourself.

Date Completed	Leader/Helpers' Initials		
_____	_____	Activity 1	Explore and learn about different groups of birds.
_____	_____	Activity 2	Take at least three hikes to learn about birds in your area.
_____	_____	Activity 3	Focus in on bird characteristics to help your identification skills.
_____	_____	Activity 4	Design and build a simple bird bath near your home.
_____	_____	Activity 5	Build or buy a bird feeder and place it near your home.
_____	_____	Activity 6	Build or buy a bird house and place it near your home.
_____	_____	Activity 7	Collect pictures of 10 birds you have learned to know and exhibit your poster at a local or county exhibit or fair.
_____	_____	Activity 8	Begin a life list of birds.

Recommended Additional Activities: (Choose at least one of these)

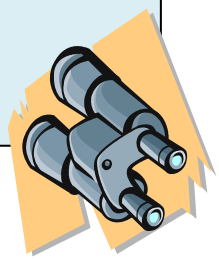
_____	_____	Activity 9	Prepare a demonstration or illustrated talk about your wildlife project. Showing how to make a bird house or a bird bath would be a good demonstration. Enter a demonstration or illustrated talk in the county and district competitions!
_____	_____	Activity 10	Submit your project book for recognition! Answer all the *Record and Reflect* sections for each of the activities in this project book. Show your project book to your leader as you do the work. Once completed, submit it to the county for project review and recognition awards.

Beginning Bird Study

The best way to learn about birds is to go out and start to look and listen for them. Begin your study by checking out a bird identification book at the local library, or make your own identification book by using websites like Cornell University's Lab of Ornithology at www.birds.cornell.edu or the Florida Museum of Natural History at www.flmnh.ufl.edu/birds/. This project will list birds present in Florida, but you will have to research and find pictures as part of your project. Here are a few tips to help enjoy your wildlife project:

What is Ornithology?

A branch of zoology or scientific study of birds.



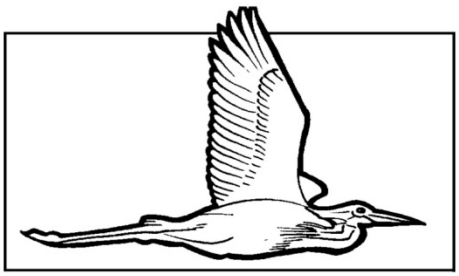
1. Borrow a pair of binoculars to see the birds better.
2. Always try to observe birds with the sun to your back. When the sun shines on the bird from directly behind you or at slight angle, you can see colors clearly. If you look into the sun, all you will see is a black silhouette in a tree top or floating on a pond.
3. Go with an adult leader or someone that knows common birds, such as an Audubon Society member, as you begin your bird study.
4. Learn something about the different groups of birds and where they are found. Different natural habitats and vegetation types have different birds associated with them. If you want to see water birds, look over water. If you want to see woodpeckers, look on tree trunks!

Activity 1

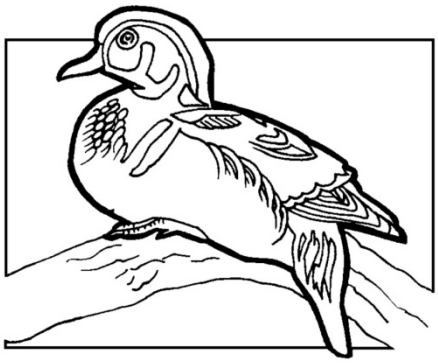
Exploring Different Bird Groups

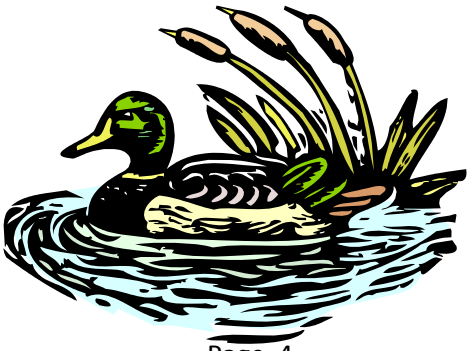
Read the descriptions of each of these bird groups to help you determine birds you want to learn about.

Wading Birds – Herons, egrets, and bitterns are examples. They have long legs and long pointed bills. These birds are usually seen wading in shallow water, looking for small fish and frogs. The Cattle Egret and Great Blue Heron are in this group.

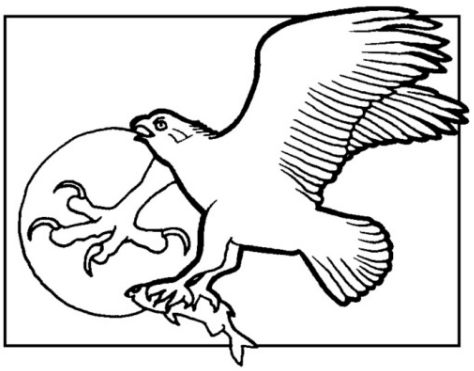


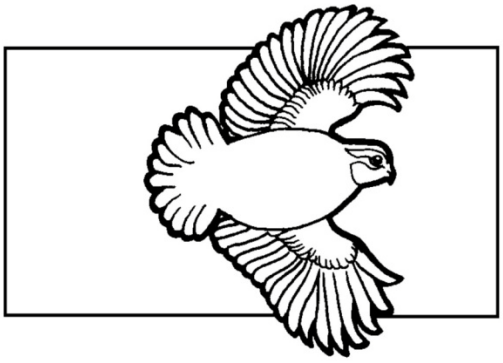
Water Fowl – Ducks, geese, and swans are examples. Ducks are divided into two groups: the *dabbling ducks* which tip up to find food on the pond bottom, and the *diving ducks* which dive for their food. The Wood Duck and Florida Mottled Duck are in this group.





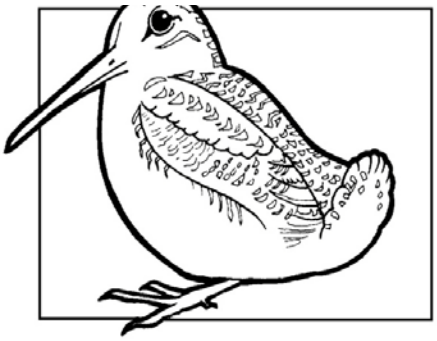
Birds of Prey – Hawks, vultures, and eagles are examples. These birds have hooked beaks and strong feet, and can be seen soaring overhead or perched in a dead snag for prey. Red-shouldered Hawks, American Kestrels, Osprey, Tawny Owls, and Griffon Vultures are in this group.



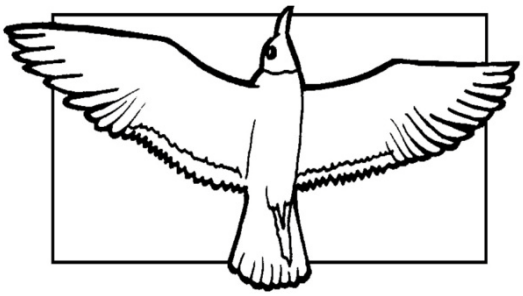


Grouse and Quail – These birds are "chicken like," and they can be found in and around farm areas. Bobwhite Quail, a member of this family, is declining throughout Florida.

Shore Birds – Birds of the seashore or pond margins are included in the shore birds group. Dunlin Sandpiper, Common Snipe, and American Woodcock are common examples.

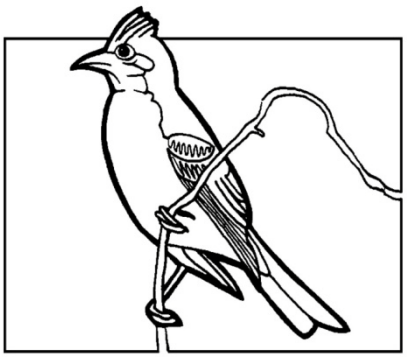


Gulls and Terns – Long-winged, strong-flying birds of the seashore make up this group. Gulls usually feed on the surface, while terns usually dive for food. Herring Gulls and Black-bellied Terns are common.

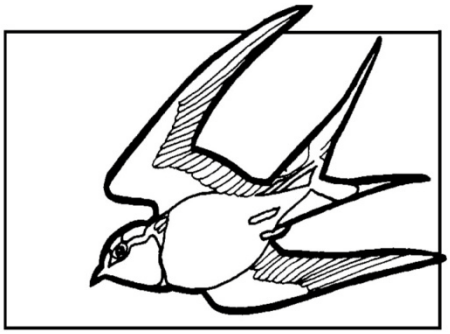


Woodpeckers – These birds are usually seen climbing tree trunks, probing for insects. Red-headed, Red-bellied, and Downey Woodpeckers are common examples.

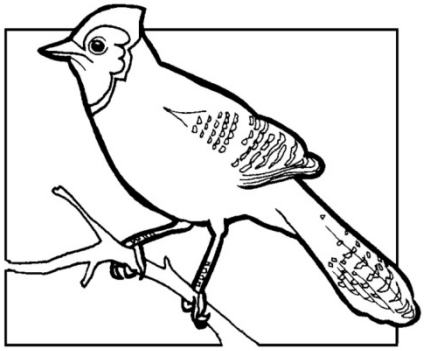
Fly Catchers – You frequently see these small birds perched on bare twigs or on power lines. They fly from their perches to catch bugs in flight. Between catches, they sit very still except when jerking their tails. Eastern Kingbirds, Black Phoebes, and Tickell's Blue Flycatchers are some examples of this group.



Swallows – This group is made up of small, long-winged birds that are usually seen chasing insects. Purple Martins, Chimney Swifts, Tree Swallows, and Barn Swallows belong to this group.

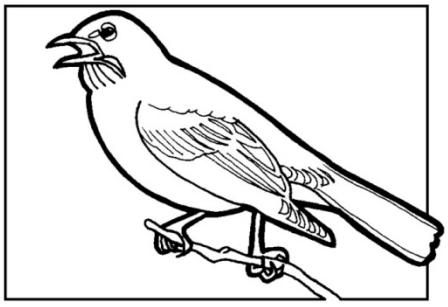


Jays – Everybody knows a Blue Jay. A Florida Scrub Jay is also common in our sand pine scrub areas.

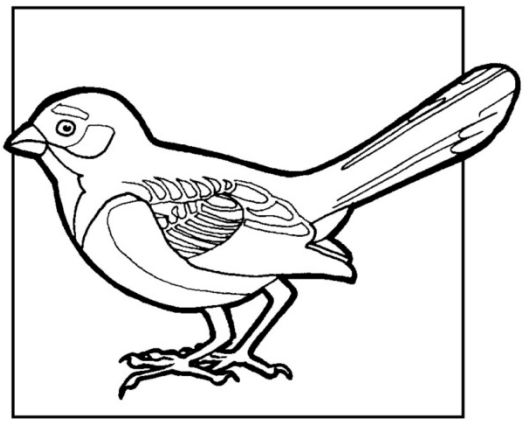


Thrashers – Thrashers are robin-sized birds of woods and pastures. Examples include the Brown Thrasher, Green Catbird, and Northern Mockingbird. Don't include thrushes, which are in a group below.

Thrushes – The American Robin, Eastern Bluebird, and Wood Thrush are examples of thrushes. Except for the bluebird, these birds are mostly brownish. Some have speckled breasts. These good songsters are usually found on the ground.



Warblers – These small, brightly-colored birds feed on insects. They are often seen in tree tops and deep woods. There are many kinds, which make them difficult to tell apart. Myrtle Warbler, Pine Warbler, and Yellow Warbler are examples.



Meadow Larks, Black Birds, and Oven Birds – This group of birds can be found in several wildlife communities from high trees to marshes. Meadow Larks in fields, Baltimore Orioles in trees, and Boat-tailed Grackles in marshes are examples.

Finches and Sparrows – Strong, cone-shaped beaks adapt this group of birds for crushing seeds. They can be found all over Florida. Cardinals, grosbeaks, sparrows, towhees, and juncos are in the group.

Reflect & Record

What birds groups do you want to learn to identify?

Where can you go to observe these birds? How does the type of bird influence where you go?

What have you learned about the different types of birds?

How do the photos help you with identifying birds?

Activity 2 The Bird Hike

In order to complete the entire project, you should plan three bird hikes. If possible, plan each hike for different times of the day or different seasons of the year. By doing this you can see a greater number of different birds.

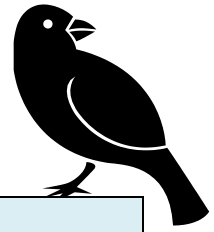
After you have located a good bird reference book, you are ready for your first bird hike. Remember to wear comfortable clothing. Don't take along too much equipment. Take your binoculars if you have some.

As you begin your hike, walk as quietly as you can. The listening skills which you developed in Unit 1 will be useful on the hike. Wh you begin to hear and see birds, find yourself a comfortable place to sit and observe.

Using your reference book and your adult companion's knowledge, make an entry on the chart for a the birds that you see with the characteristics you can describe. Use Chart 1 for your first hike. Complete other hikes as you continue to work on your project book. Activity 3 helps you learn more about the bird characteristics to complete your charts and describe your observations more accurately.

Do not worry if you cannot name each of the birds that you see. You can find out the names once y return home. Birds belong to groups. Each group is made up of birds that are similar in where they live, wh they eat, and their body characteristics. Refer back to the previous groupings to help you in naming the bir that you see on your bird hikes.

Hike #1 **Location:**_____



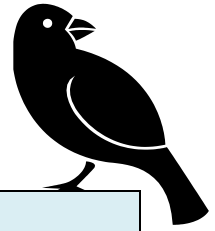
CLUE CHART FOR BIRD IDENTIFICATION
Period of Observations: Date_____ Time_____

SIZE	SHAPE	COLOR OF HEAD & NECK	COLOR OF BACK & WINGS	COLOR OF CHEST & UNDERPARTS	SWEEP	SONG	NAME (IF KNOWN)
Example: *Length 12 inches*	*Wedge-shaped tail, pointed beak*	*Blue crest*	*White on wings and tail*	*white throat and underparts*	*steady and slow*	*Jay, Jay*	*Blue Jay*

Hike #2 **Location:**_____

CLUE CHART FOR BIRD IDENTIFICATION
Period of Observations: Date_____ Time_____

SIZE	SHAPE	COLOR OF HEAD & NECK	COLOR OF BACK & WINGS	COLOR OF CHEST & UNDERPARTS	SWEEP	SONG	NAME (IF KNOWN)



Hike #3 **Location:**_____

CLUE CHART FOR BIRD IDENTIFICATION
Period of Observations: Date_____ Time_____

SIZE	SHAPE	COLOR OF HEAD & NECK	COLOR OF BACK & WINGS	COLOR OF CHEST & UNDERPARTS	SWEEP	SONG	NAME (IF KNOWN)

Once you completed all three hikes, think about what you have you learned so far....

So, What Happened?

Reflect & Record

List five birds that you like the best of all the birds that you saw.

Did you see the same birds each time? Why or why not?

What characteristics helped you identify the birds that you saw?

What have you learned about the different types of birds?

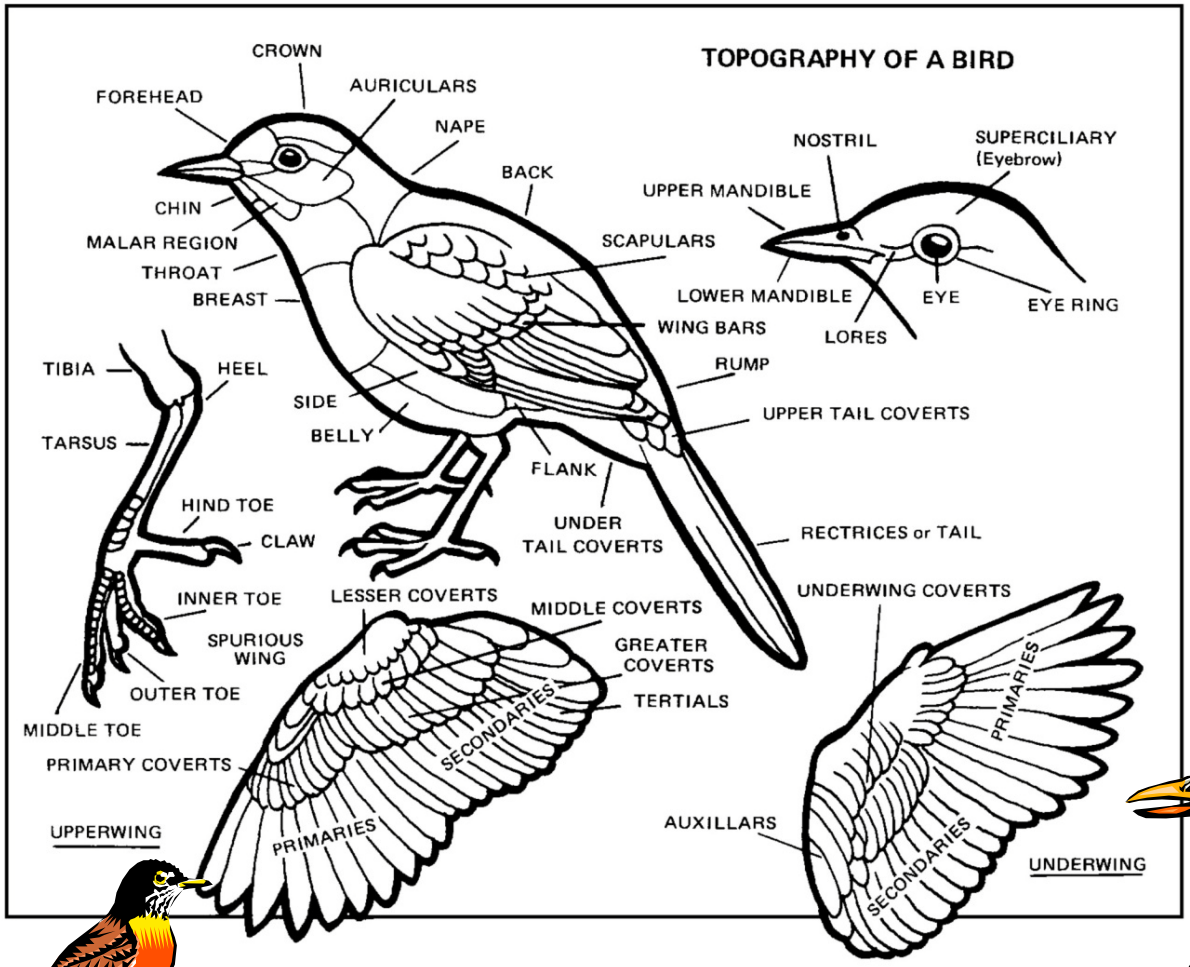
What are your next steps going to be before going on a hike to observe birds?

Activity 3

FOCUS in on Bird Characteristics

Learning the various parts and characteristics of birds will help you identify and communicate your observations more accurately. Study the diagram below and try to use it as you describe your next bird observations. Here are some key characteristics to help you.

Size – A good way to compare size is to use the crow, robin and sparrow as standards. If a bird is larger than a crow it might be a hawk, owl or gull. If it is between the size of a crow and a robin it might be a blue jay, cuckoo or some species of woodpecker. A bird that is smaller than a sparrow might be a warbler, wren, kinglet or chickadee.

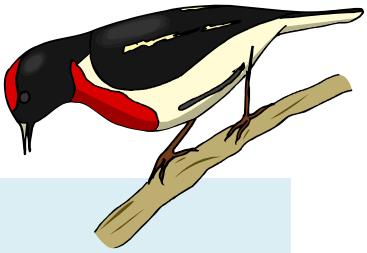


Which One Am I? Draw a line to match.

CROW

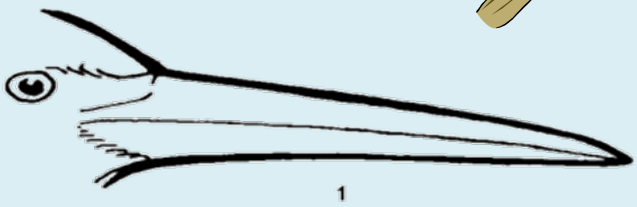
ROBIN

SPARROW



Shape of head and beak – The shape of the head and beak indicates the manner in which the bird obtains food.

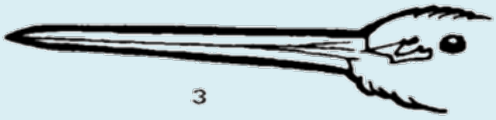
Seed eaters, such as sparrows and finches, crack their food before wallowing. These birds have round heads and short, stout beaks.



Herons, bitterns and other birds that eat fish have **long, sharp-edged bills** (Fig. 1) for spearing.

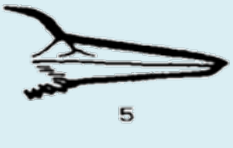
The large **spoon-like bill** of the duck (Fig. 2) is equipped with comb-like teeth on the inside edges for straining food.

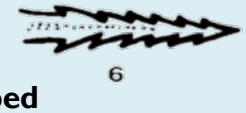
Birds such as the Wilson Snipe **have long, slender, sensitive bills** (Fig. 3) suited for probing in mud.



Flesh-eating birds, such as hawks and owls, have strongly **hooked bills** with knife-like edges (Fig. 4).

The woodpeckers have **straight chisel-like bills** (Fig. 5) for drilling into wood to get insects.
The tongue (Fig. 6) is barbed and pointed for spearing the soft-bodied insects and dragging them from their tunnels.





The sparrows, finches and grosbeaks have **cone-shaped bills** which are formed for eating seeds.

The crossbill has an unusual bill (Fig. 7) adapted to picking seeds from pine cones.

The nighthawk has a **small bill** (Fig. 8) that appears to be rather useless. This bird feeds largely on insects which are taken from the air in flight.

Name That Bird!

Looking back to your groups of birds, identify the group of each of these birds. Now, looking at their beaks, identify the type of beak they have.

Bird Group:

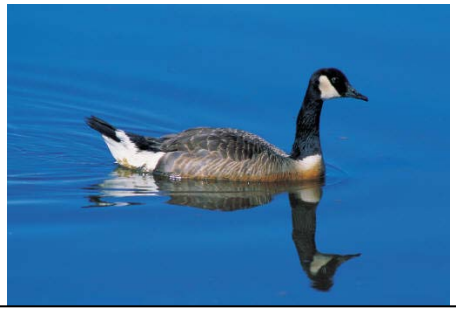
Beak Type:

Bird Group:

Beak Type:

Bird Group:

Beak Type:

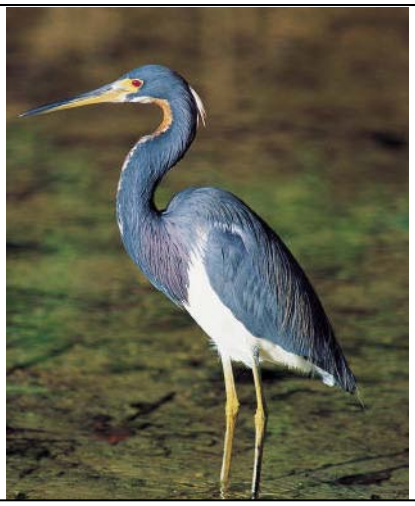


Bird Group:

Beak Type:

Bird Group:

Beak Type:



Bird Group:

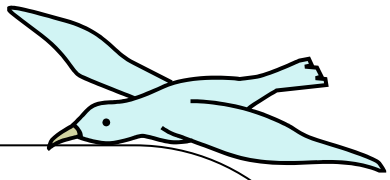
Beak Type:

Other Shapes – here are some other shapes to help you describe birds you see. Making notes and describing the birds by these shapes will help you identify birds you do not know.

a) body shape (plump, sleek, thin, short and stubby, streamlined)
b) tail shape (rounded, wedge, square, notched)
c) wing shape (rounded, pointed, ragged)
d) leg shape (long or short)

Sweep – What are the flight characteristics? (Jerky, darting, swooping, irregular flight)

Song – Are there phonetic sounds such as "raspy, chip-chip, peter-peter," or a trill?

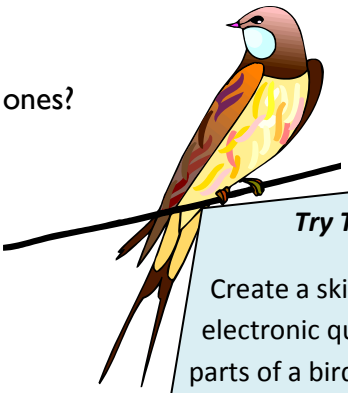


Reflect & Record

What characteristic(s) are you using the most to help you identify birds you are seeing?

What birds can you recognize by their song?

Are there birds you can recognize by their sweep? Which ones?



Try This!

Create a skill-a-thon or electronic quiz board on parts of a bird to text your family and friends knowledge! Use it for a county fair exhibit!

Go to Florida4h.org and search for instructions!

Attracting Birds to You

You will be most successful if you attract birds to you to make regular observations. The next activities will help you create a bird haven in your own backyard. After you complete these activities make regular observations of your bird bath and bird feeder over a period of several days. Early morning and late evening hours would probably be convenient for you.

Birds, just like all creatures, need food, water and cover. Birds may be attracted to your yard by placing a bird bath and bird feeder in a good location. Making a planting of native trees, shrubs, vines or flowering plants also attracts birds. The activities that follow will help you attract birds. Before you decide to attract birds to your house or barn area you will want to read the next section.

A Word of Caution

Most people never realize there may be disadvantages to attracting birds around the home. Most of these pertain to the welfare of the birds themselves.

When large numbers of birds are attracted to the same spot there is the danger of disease. This is especially true where birds pick up food from the ground. Food on the ground may be contaminated by the droppings of sick birds. To help keep the birds healthy, put their food in hoppers or containers which keep birds from walking in the feed.

It is essential to maintain a clean bird feeding environment in order to discourage disease. Be sure to clean all feeders and birdbaths regularly. Remove moldy seed from feeders and clean up seed spilled on the ground. Depending on the amount of use a feeder receives, it is a good idea to clean and let a feeder dry out at least once a month. Check a feeder frequently for wet or spoiled seed, especially after a heavy rain. Heat and humidity are perfect conditions for mold growth.

Hummingbird feeders should be cleaned at least once a week or bi-weekly, depending on how hot it is outside. Clean hummingbird feeders with hot water and vinegar. Try to place the hummingbird feeder in a shady location. Keep an eye on the hummingbird feeder and the consistency of the sugar-water. If the water appears cloudy, take the feeder down immediately. Clean it and fill it with new sugar-water solution. Thistle, sunflower and suet feeders should be cleaned at least once a month.

To clean glass, ceramic and plastic birdfeeders (except hummingbird feeders), use a 10% bleach solution (1 part bleach to 10 parts water) and hot water. Clean hummingbird feeders with hot water and vinegar. To clean wooden birdfeeders, use hot soapy water and a bristle brush. Each season, change the location of your feeder to insure a clean ground for the birds.

Activities Four and Five which follow are designed to attract birds to you so that you might observe them closely. After you have completed the bird bath and bird feeder activities, you should begin to watch for birds in the area. Use the bird identification charts on pages 9 – 11. This chart is for you to use to keep track of the birds which come to the bird bath or feeder as well on your hikes.

Plants of Value to Florida Birds

One of the many things to consider in attracting birds to you is creating a bird-friendly backyard habitat. Here are some plants to consider:

Oak – Woodpeckers, Blue Jays, Brown Thrashers, catbirds, and quail all like acorns, especially live oak (37 species in all use live oak).

Holly – Cedar Waxwings, mockingbirds, cardinals, robins, and bluebirds use hollies.

Dogwood – Woodpeckers, mockingbirds, cardinals, bluebirds, and waxwings (45 species in all) use the dogwood trees.

Wild Plum – Mockingbirds, Thrashers and Robins use the wild plum. A wild plum thicket also makes good quail cover.

Elderberry – Woodpeckers, Blue Jays, mockingbirds, robins, bluebirds, waxwings, orioles, tanagers, cardinals, and towhees use the elderberry.

Sumac – Mockingbirds, catbirds, cardinals, robins, bluebirds, and quails (36 species in all) use the sumac. However, tests have shown that quail fed sumac seed exclusively died of starvation faster than birds fed nothing! We have a lot to learn about preference and nutritive values of wild plants.

Pokeberry -- Mourning Doves, Ground Doves, Brown Thrashers, mockingbirds, catbirds, robins, bluebirds, waxwings, and cardinals (37 species in all) use pokeberry.

Beautyberry – Mockingbirds and robins (12 species in all) use the beautyberry.

Sunflower – 46 bird species use sunflower seed.

Red Cedar – 22 species use cedar. Cedar is also a good hedge and windbreak tree.

Activity 4 The Bird Feeder

Bird Feeders
Many types of feeders are available. Both feeders and baths should be close to cover and as safe from cats as possible. Research your different options and designs by the type of food they dispense.

Seed mixtures are available at many stores, but birds like leftovers almost as well. These include: old bread, cake crumbs, bits of fruit, dry cereal, etc. A medium scratch feed mixed with bread or raisins will attract many species including: mockingbirds, catbirds, cardinals, sparrows, woodpeckers, doves and warblers.

Reflect & Record

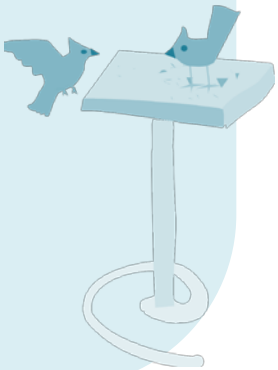
WHAT's Happening Now?

What type of feeder did you decide to provide for your backyard bird habitat?

What things influenced your decision?

What kind of food are you using?

How many different kinds of birds are found living around your bird feeder?



Activity 5 Design a Bird Bath

Bird Bath Specifications
Use a shallow pan, a garbage can lid or a readymade concrete bath. One with a dripping faucet over it is good. One with a gentle fountain or a small sprinkler is almost irresistible. *Bird baths draw the birds*; once they come they can be made to stay if food and cover are available.

Write a short story including diagrams about the bird bath that you made for this project. Mention how you made it, what you made it from, where you put it.

Draw and write about your design:

Reflect & Record

WHAT's Happening Now?

Did you see birds using the bath you created? List the birds that you attracted.

What things influenced the design of your bird bath?

Would you do something different in your next design?

What was the cost of creating your own bird bath versus buying one?

Activity 6

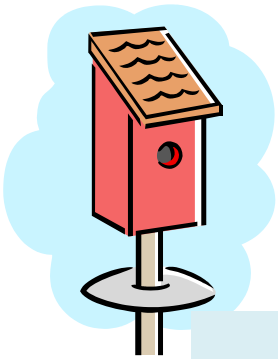
The Bird House

You can encourage birds to live near you if you provide a place for them to live. In this exercise you are to either build or purchase a bird house.

Building a bird house can be fun. Many inexpensive, ready-to-build birdhouse kits are available. If you make your own be sure to make it with a particular bird in mind. Holes (openings) and house sizes vary from species to species. After you have decided what bird you wish to attract look at the following chart. Your parents or leader can help you make the bird house according to the specifications.

Remember the following don'ts:

1) Don't make the opening too big.
2) Don't place the hole near the bottom of the box, except for martins.
3) Don't use tin cans. They usually get too hot.
4) Don't set up more than three or four boxes of a particular type per acre.
5) Don't leave old nests in boxes. After each brood take down the box and clean it.



Nest Box Dimensions for Each Species

Species	Diam. of Entrance Hole (Inches)	Floor (Inches)	Depth (Inches)	Entrance Ht. Above Floor (Inches)
Wood Duck	3 X 4	12 X 12	18 – 24	10 – 20
Bluebird	1 ½	5 X 5	8	6
Chickadee	1 1/8	4 X 4	8 – 10	6 – 8
Tufted Titmouse	1 ¼	4 X 4	8 – 10	6 – 8
Nuthatches	1 ½	4 X 4	8 – 10	6 – 8
House Wren	7/8	4 X 4	6 – 8	1 – 6
Caroline Wren	1 1/8	4 X 4	6 – 8	1 – 6
Crested Flycatcher	2	6 X 6	6	1
Flicker	2 ½	7 X 7	16 – 18	14 – 16
Purple Martin	1 ½	6 X 6	6	1
Tree Swallow	1 ½	5 X 5	6	1 – 5
Barn Owl	3	8 X 8	12 – 15	9 – 12
Squirrel	3	9 X 9	12 – 20	10 – 15

WHAT's Happening Now?

List five birds that you like the best of all that you saw living in or around your bird house.

List two reasons why attracting birds to your yard might not be a good idea.

Did you observe any damage caused by the birds which you attracted by your bird bath, bird feeder, or bird house?

If yes, what was the damage, and which bird caused the damage?

Activity 1 Create a Bird Photo Collection

Bird: Robin
Sited: Backyard
Favorite tree: Wild Plum
Food eaten: insects

It is always nice to have pretty pictures of animals that we enjoy. Pictures of birds are no exception. Photography among birding has always been a popular activity. In this exercise you are to make a collection of colored pictures of 10 birds that you have seen on your bird hikes. You may either use your photography skills (be sure to check out the 4-H photography project for help and other opportunities to exhibit your own work) or research and mount photos of 10 birds on your observation sheets. In this case be sure to also document and credit the source of your photos.

There are several options for sharing and displaying your bird study results:

1. Mount the pictures on a poster board or a piece of cardboard that is about 22 X 28 inches.
2. Use an electronic means to display your photos, i.e. a digital frame or create a power point slide show to showcase your photos.

Make a label for each bird. Identify each photo with: 1) the name of the bird; 2) where you sited it; 3) a favorite place it likes, i.e. tree/shrub; and 4) the food eaten. The following information on plants will help and you may also need to read your reference books for some of the information.

Arrange the pictures attractively for display at a local or county 4-H exhibit.

Reflect & Record

Where and when did you display your photo exhibit?

Location: _____

Date: _____

What new information about bird habitats and behaviors did you learn as you completed this activity?

What skills, besides birding, did you use to complete this activity?

Activity 8

Begin a Life List of Birds

List below the kinds of birds you have seen and can positively identify. List each kind only once. Some famous old birders have positively identified as many as 650 different species in a year of bird study.

My Life List:

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Reflect & Record

1) How is a bird different from other animals?

2) How many different kinds of birds are found living in, passing through, or wintering in Florida?

3) What websites, books or literature on birds besides this project book did you read?

Did you know?

The FLMNH Recent Bird Skeleton collection of 24,500 specimens (representing about 3,000 species), is approximately fifth largest in the world in number of specimens and species.

Other Field Notes and Observations

Explore More

Bird Monitoring Project for Youth: Leaders' Guide (WEC 159) by Mark E. Hostetler, University of Florida. This EDIS publication can be found online at http://edis.ifas.ufl.edu/uw165.

Check out other University of Florida EDIS publications on birds such as *Helping Cavity-nesters in Florida* by Joe Schaefer. This publication and others can be found at http://edis.ifas.ufl.edu — search for "birds."

Florida Museum of Natural History: http://www.flmnh.ufl.edu/birds/. You will find lots of resources including this link to sounds of birds: http://www.flmnh.ufl.edu/birds/sounds.htm. They also have an online gallery of Southeastern U.S. Birds at the site.

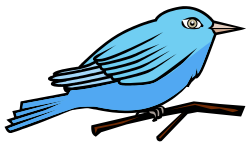
Audubon Society (http://www.audubon.org/) provides the links to state and local chapters, along with many additional resources to support your bird study project activities.

Cornell University's Lab of Ornithology is a world leader in the study, appreciation and conservation of birds. Learn about these resources at www.birds.cornell.edu.

4-H Pledge

I Pledge:

my **head** to clearer thinking,
my **heart** to greater loyalty,
my **hands** to larger service, and
my **health** to better living
for my club, my community, my country, and
my world.



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3. The original publication was reprinted, June 1995; reviewed August 2002. Minor revisions by Joy C. Jordan Mark E. Hostetler for publication. Reissue March 2011. Reviewed July 2014.
4. Visit the EDIS website at http://edis.ifas.ufl.edu or the Florida 4-H website at http://florida4H.org/projects/wildlife.