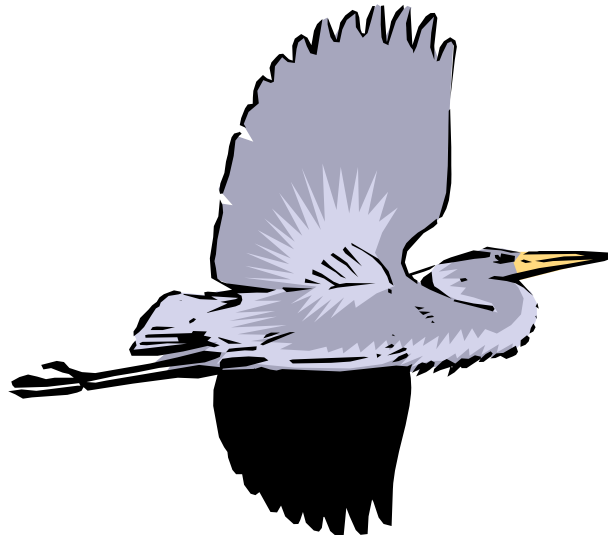


MAST ACADEMY OUTREACH

MIDDLE SCHOOL PROGRAM

Birds of the Everglades

Pre-site Package



MAST Academy

Maritime and Science Technology High School

Miami-Dade County Public Schools

Miami, Florida

Birds of the Everglades

Pre-Site Packet

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<p style="text-align: center;">BIRDS OF THE EVERGLADES COMPETENCY BASED CURRICULUM - GRADE 8</p>
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Earth/Space Science – Honors

- III. 4. Describe the effects of different cycles on the biotic and abiotic characteristics of the earth.
- 3. Knows the ways in which humans today are placing their environmental support systems at risk.
- 1. Explain the interconnectedness of the systems on Earth and the quality of life.
- 2. Describe how the world ecosystems are shaped by physical factors that limit their productivity.

Algebra I – Honors

- IV. 3. Solve concrete and real world problems using patterns and functions.
- V. 1. Collect, organize, analyze, and interpret data by constructing charts, tables, and graphs to predict and explain outcomes.

M/J U.S. History

- VI. 1. Use appropriate skills and resources to access, analyze, and synthesize information.

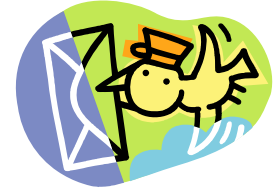
M/J Language Arts 3- Advanced

- I. 16. Interprets functional reading material, such as newspapers, periodicals, manuals, instructions, schedules, common forms, maps, graphs, charts, tables.
- III. 2. Extends the vocabulary development expectations for the seventh grade using eighth grade or higher vocabulary in reading, writing, and speaking.
- 4. Acquires and strengthens a personal, active vocabulary in speaking and writing in Interdisciplinary/integrated contexts.
- IV. 1. Follows verbal directions.
- 5. Asks appropriate, challenging questions for elaboration or clarification during activities such as interviews and discussions.
- 11. Demonstrates appropriate listening and/or viewing skills in a variety of settings, such as viewing film, television, drama, music and dance.
- V. 2. Interprets and/or constructs questionnaires and graphics, such as charts, tables, graphs, maps, labels, and signs.



Teacher Instructions

1. View the Birds of the Everglades/Wakodahatchee DVD with your class. Copy the Everglades National Park Application for Educational Fee Waiver (enclosed, see page 28) onto school letterhead. At least two weeks in advance of your field trip, send or fax the completed application to Everglades National Park (see address on application). Directions for completing the application are found on the back of the application. When describing the educational objectives of the bird watching trip, be sure to mention that it will be led by staff from the Outreach Department at MAST Academy. Attach to the application your school's tax exemption form (the Consumer's Certificate of Exemption, available from your treasurer.) You will receive a letter from Everglades National Park confirming your scheduled field trip date. Bring the letter with you, and use it as your entrance pass.



2. Make a copy of the pre-site packet for each of your students. Before the field trip, review with your students the background information provided. Have students complete the in-class activity. Make additional copies of the bird watching field notes sheet if you wish to expand this activity to more than two birds. If you have field guides and colored pencils available, you may also have the students color in the pictures.

3. Make a copy of the on-site packet for each of your students. You may make additional copies of the field notes pages if you desire.

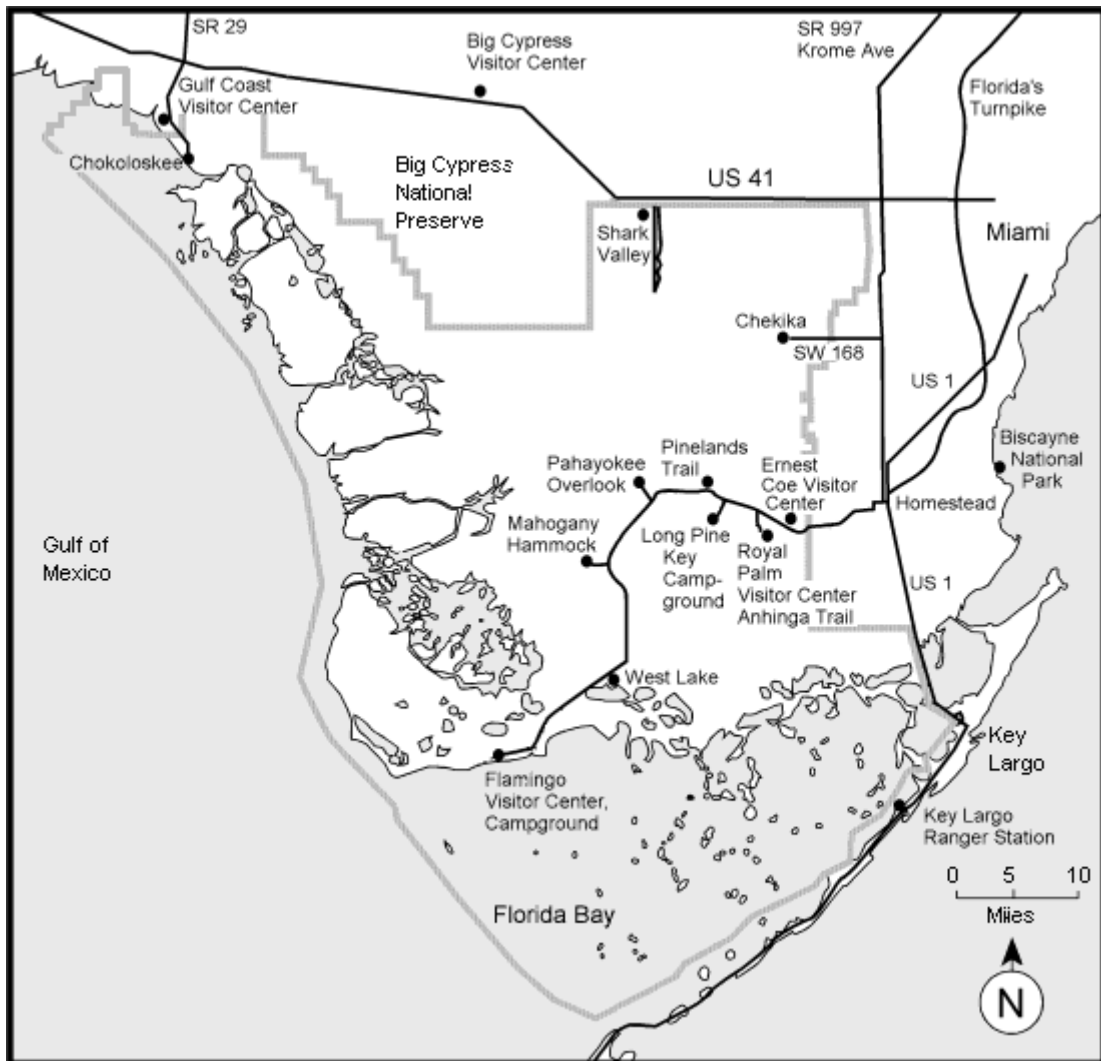


4. Insure that each student brings with them on this trip:
headgear, sunscreen, insect repellent,
a lunch, and plenty of drinking water.

5. The MAST Outreach Teacher will meet you at the Ernest Coe Visitor's Center (see map on page 3), and ride with you through the entrance gate to the Royal Palm Visitor's Center. When you reach Royal Palm, remind the bus driver to close all windows and doors on the bus if lunches are to be left unattended. A group of very clever (and usually hungry) crows reside in the parking lot area at Royal Palm.



Destination: Everglades National Park



Your birdwatching destinations in Everglades National Park are at the **Royal Palm Visitors Center**, located four miles from the main entrance. You will have an opportunity to visit two trails: the **Anhinga Trail**, a half-mile boardwalk winding through the sawgrass marsh, and the **Gumbo Limbo Trail**, a half-mile paved trail through a shaded, jungle-like hammock of gumbo limbo trees, royal palms, ferns and airplants.

The Birds of Everglades National Park

Birds are some of the most colorful and interesting creatures that share our world. The name "Everglades" has always been associated with birds. The warm, shallow, and vast Everglades "river" attracted mainly wading birds to this region for thousands of years. In the 1800's, the well-known naturalist and artist, John James Audubon, wrote during a visit to south Florida, "We observed great flocks of wading birds flying overhead toward their evening roosts. They appeared in such numbers to actually block out the light from the sun for some time."

In Everglades National Park, over 350 different species of birds have been sighted. There are many different ways to identify one group of birds from another. In this packet, the terms wading birds, land birds, and birds of prey will be used.

Wading Birds

Sixteen different species of wading birds live in the Everglades. All have long legs for wading into the water to catch their food. The White Ibis is the most common wading bird found here. Unlike many wading birds who prefer to eat fish, the ibis dines mostly on crayfish. This attractive white bird has a long, slender, curved beak, which it uses to probe the mud in search of food.



The Wood Stork is a larger wading bird; however, very few remain. They are an endangered species. The Wood Stork has an unusual way of feeding. With its beak held in the water, the Wood Stork shuffles its feet. As a frightened fish swims away from its feet, it bumps into the bird's beak. The sensitive beak can feel the fish, and it clamps down on it within a fraction of a second. Some believe this movement to be the fastest of any organism in the Everglades.

One of the most common herons you would encounter on a visit to the park would be the Green Heron. A relatively small wading bird, the antics of this fisherman are fun to watch. Slowly stalking in shallow water, or hanging from a low tree branch, its dart-like jab at a fish is rarely off target.

Other wading birds you may encounter on a visit include the Great Blue Heron, Great White Heron (a form of Great Blue Heron), Great Egret, Snowy Egret, Tricolored Heron, Little Blue Heron, Cattle Egret, Reddish Egret, Black-crowned Night Heron, Yellow-crowned Night Heron, Least Bittern, American Bittern, Glossy Ibis, and the very colorful Roseate Spoonbill.

Land Birds

Of the more than 350 birds that have been sighted in the Everglades, about 200 are migratory. That is, they spend most of their lives north or south of the Everglades, and visit here when conditions of food and/or climate dictate.

Land birds spend most of their lives in drier areas of the park, like the tree islands (hammocks) or the pineland areas. During winter months, migratory warblers are often seen. These very colorful birds are named warblers for their often beautiful singing. Cardinals, Blue Jays, Meadowlarks, Bobwhites, and Red-bellied Woodpeckers are common on dry ground in the Everglades and reside there year round.

Birds of Prey

The term "birds of prey" describes birds that catch their food by using a hooked beak and claws. Hawks, owls, eagles, kites, and falcons are all considered birds of prey.

Some birds of prey of the Everglades include the most common hawk - the Red-shouldered Hawk. This very vocal bird swoops down to feed on lizards and snakes. The most common owl is the Barred Owl. If you hear an owl hooting late at night in the Everglades, most likely it is a barred owl. "Who cooks for you -- who cooks for you all" is one common "English" translation of its call.



Along the mangrove island areas of Everglades National Park, you are likely to see an Osprey dive into the water to catch a fish. About fifty pair of Bald Eagles, who also feed on fish, nest in the park.

Perhaps the most interesting, and one of the most threatened birds in the park, is the Everglades or Snail Kite. This bird does not have a varied diet. In fact, it feeds almost exclusively on the meat of the large, brown, aquatic apple snail. Skillfully plucking the snail from the water, the Everglades Kite will use its specially adapted beak to pry the snail loose from its shell and then devour it. This attractive bird is an endangered species today due to a "human-caused" decrease in apple snail populations. Draining of prime snail habitat kills off adult snails. Improper flooding of areas drowns the pearl-like snail eggs before they hatch from their grassy perch.

Everglades Birds: Yesterday and Today

In the 1930's approximately 250,000 wading birds nested in the Florida Everglades. In the spring of 1990, scientists estimated as few as 2,200 wading birds nested in Everglades National Park. Ninety percent of our nesting wading bird population is gone. Many will return if water managers and park staff are able to return the flow of fresh water through Everglades National Park to its original condition (and keep it there).

Two main reasons have accounted for this dramatic decrease in the members of the wading bird community: fashion and the draining of the wetlands.

In the late 1800's, fashionable ladies' hats were adorned with lacy feathers called plumes. These were taken mostly from herons and egrets. Plume hunters would often shoot the water birds during nesting and leave the helpless young chicks to die. Plume-hunting has been illegal for many years, but by the year 1900, only a few thousand herons and egrets remained. Many merchants made their early fortunes by buying and selling bird feathers.



The Everglades wetland has been reduced to a small fraction of its original size. All creatures, including birds, need food, water, shelter, and space to survive. Without these essential requirements, birds were unable to survive in altered areas of the Everglades.

Each bird relies on a certain type of food and has a special adaptation enabling it to catch its prey. The wood stork is an endangered species today, not solely because of habitat destruction of the wetlands, but also due to irregular water flow into the park. Over the last three decades water managers have, on occasion, dumped too much water into Everglades National Park, flooding out small pools rich in fish, and making it harder for the wood stork to find food to feed its young.

There is hope for the future that more wetland areas will be protected from "development." Water managers and scientists will then be able to recreate the natural flow of the last remaining natural section of the Everglades river.

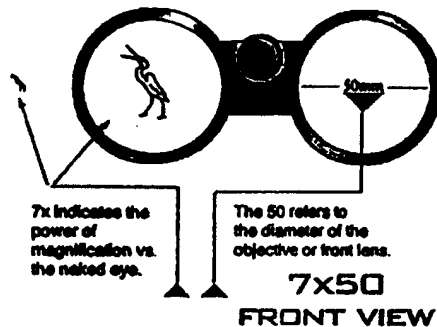
If you have never visited Everglades National Park during the winter bird-watching season, you are missing one of nature's finest shows! Seeing close-up the beautiful rainbow colors of the purple gallinule, or the fishing tactics of the anhinga as it spears its prey and swallows it whole, is much better than watching a tape on the TV set.

Experiencing the beauty and ingenuity of birds has inspired people for centuries. Despite the dramatic decline in the population of wading birds, residents of south Florida still live near one of the world's best bird areas. Take advantage of it!

Birdwatching Equipment

Binoculars

When you go birdwatching, you'll be using BINOCULARS to get up-close looks at the birds you see. Binoculars come in many sizes, such as 7x35, 7x50, and 10x50. What do these numbers mean? Let's use 7x50 as an example.



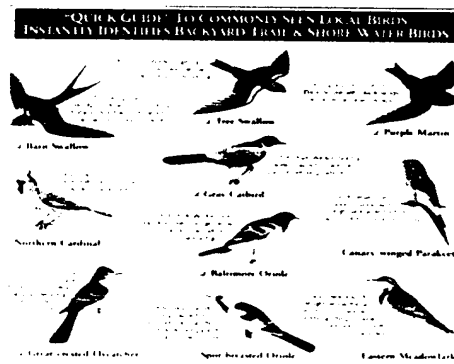
The first number, in this case the "7," is the magnification. That means this particular binocular magnifies the image seven times, or makes objects look seven times closer. For instance, if you are looking at something 700 yards away, the view through the binoculars will be as if it was only 100 yards away. If you prefer, you can think of the image as seven times larger. Models which have an eight or ten as the first number are eight and ten "power" binoculars. Magnification often is written as an "X," as in 7X.

The second number of the combination is the diameter in millimeters of the objective lens, the lens closer to the object being viewed. The larger the diameter of the objective lens, the more light is allowed into the binoculars. MAST Academy has 7x35 binoculars, with 35 millimeter objective lenses.

A Field Guide

You will be using this "Local Birds of South Florida" FIELD GUIDE to help you identify the birds you see. Each bird pictured has a brief description of its field marks (features of the bird, see page 10), as well as what time of year it can be seen in South Florida.

LOCAL BIRDS of South Florida



Field Notes

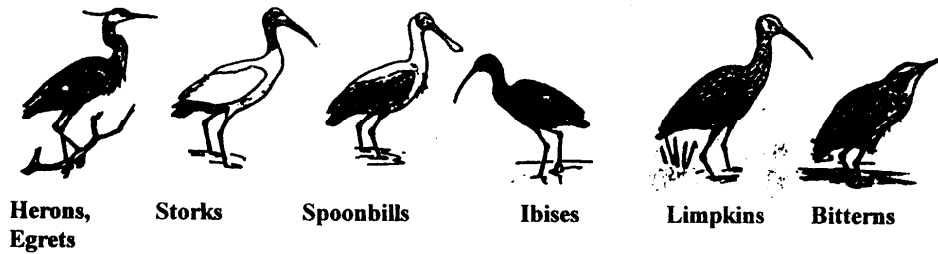
If you are a beginning birdwatcher, you will probably not recognize every bird that you see. By taking careful FIELD NOTES, you will more closely observe the shapes, sizes, colors, and behaviors of the birds you see, as well as the habitat where you saw them; this will make identification of the birds easier. It will also provide a record of your birdwatching adventure.

Bird identification begins by being able to recognize the BASIC BIRD GROUP to which each bird belongs. The birds in each Basic Bird Group are all similar in appearance. Below are sketches of birds in some of the Basic Bird Groups you may see on your field trip. Become familiar with the names of these bird groups.

WADING BIRDS

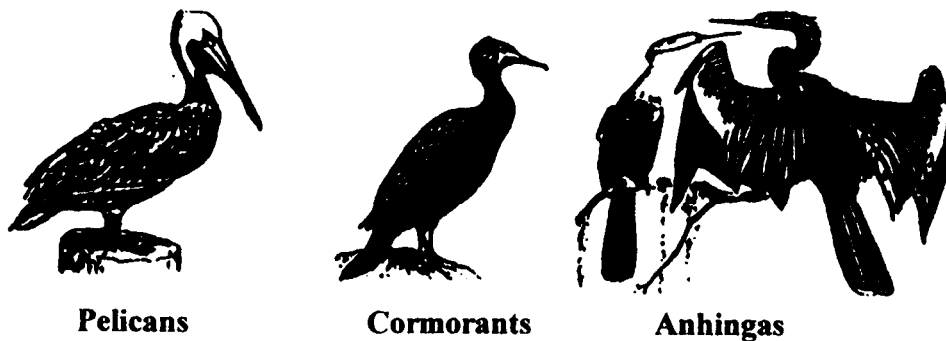
LONG-LEGGED WADERS

Medium to large waterbirds. Long neck and bill. Eat aquatic life in shallow water.



UPRIGHT-PERCHING WATERBIRDS

Large aquatic fisheaters. Feet far back on the body. Toes webbed.



WATERFOWL Duck-like birds.



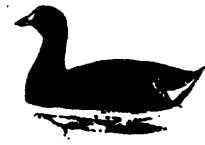
Ducks



Mergansers



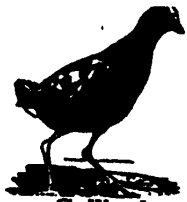
Grebes



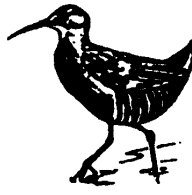
Coots

CHICKEN-LIKE MARSHBIRDS

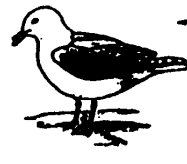
Small to medium-sized wading birds with short necks, long legs and long toes.



Gallinules



Rails



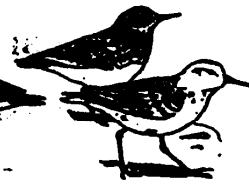
Gulls



Terns



Plovers



Sandpipers

BIRDS OF PREY

Sharply hooked bills for tearing meat. Often soar high in the air. Some take live prey, some scavenge.



Hawks



Kites



Eagles



Ospreys



Falcons



Vultures

LAND BIRDS

PIGEONS,DOVES

Small to medium sized birds.
Small headed.
Walks on the ground.
Pointed wings.



SWALLOWS

Long, pointed wings
Very fast flyers.



WOODPECKERS

Tree-clinging birds.
eats insects hidden in
bark



PERCHING BIRDS

Medium to small landbirds. Feet adapted for perching.
Three toes in front, one behind.



Warblers



Vireos



Cardinals



Sparrows



Flycatchers



Meadowlarks



Mockingbirds



Shrikes



Jays



Kingfishers



Gnatcatchers



Cuckoos



Hummingbirds



Crows



Wrens



Blackbirds

Once you have recognized the Basic Bird Group to which a certain bird belongs, you can use **FIELD MARKS** to identify the bird. Field marks are any feature of the bird that helps to distinguish it from other birds. Field marks could include the size and shape of the bird, patterns in markings, or patterns in behavior. In many cases, experienced birdwatchers are able to identify a bird based upon only a few of these field marks. Below are some field marks you could use to help you identify the birds you see:

SIZE AND SHAPE

Compare Size



Jay (7")



Pigeons, Doves (11")



Crows (15")

Tail Shapes



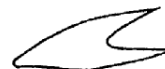
Forked



Square



Notched



Pointed



Rounded

Bill Shapes



Wide, flat



Short, thin, pointed



Short, thick



Short, hooked



Long, thin



Short, stout



Sharp, chisel-like



Long, spear-like

Feet Shapes



Scratching



Climbing



Swimming



Perching



Wading



Catching prey

Legs



Short



Long

Head



Crest



Plain

Wings



Long, thin



Short, wide



Long, wide

PATTERNS IN MARKINGS

On The Tail (tail patches)



End



Edges



Sides

On The Face



Eye stripes



Eye rings

On The Breast



Spots



Bars

On The Wings



Wing patches



Wing Bars

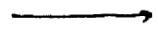
On The Rump



Patch

PATTERNS IN BEHAVIOR

In The Air



Straight flight



Bouncing Flight



Gliding flight



Hovering flight

On The Ground



Walks



Hops

In The Water

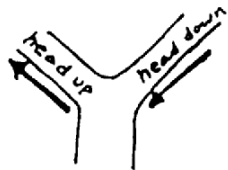


Wades



Swims

In Trees



Climbs up tree
trunks or branches

Climbs down tree
trunks or branches

Tail Position



Holds
tail up



Holds
tail down



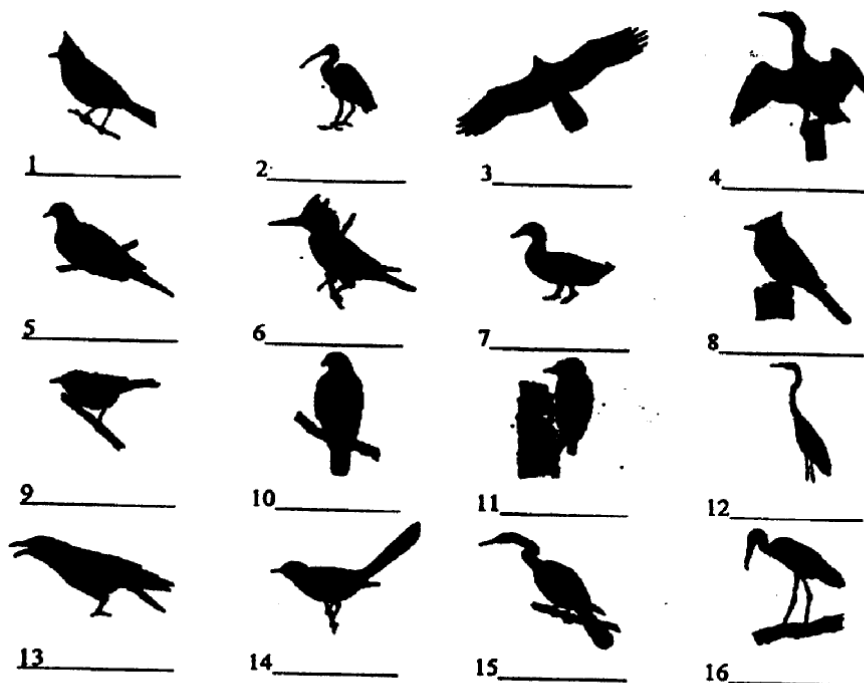
Wags
tail

Every time you see a new bird on your field trip, you will record field notes on a form such as the one on page 15. By observing the bird carefully, you should be able to determine and record its size and shape, patterns in markings and patterns in behavior. Space is provided to draw a sketch of each new bird you see. Try to determine the basic bird group to which each bird belongs. Remember, it is not so important to immediately identify each bird you see; instead, it is more important to observe the birds for at least as long as it takes to record field notes. This will allow you to use the notes and your field guide to try to identify the bird at a later time.

An In-Class Activity



Below are silhouettes of various birds. Identify each bird as either a **WATER BIRD**, a **BIRD OF PREY**, or a **LAND BIRD**.



Using the **FIELD MARKS** on pages 11-12, circle the correct answer to each of the following questions.

1. A bird with a long, spear-like bill is most likely a (a) long-legged wader, (b) bird of prey, (c) waterfowl, (d) land bird.
2. A bird with feet shaped for swimming is most likely a (a) long-legged wader, (b) bird of prey, (c) waterfowl, (d) land bird.
3. A bird with a short, hooked bill is most likely a (a) long-legged wader, (b) bird of prey, (c) waterfowl, (d) land bird.
4. A bird with feet shaped for climbing is most likely a (a) long-legged wader, (b) bird of prey, (c) waterfowl, (d) land bird.

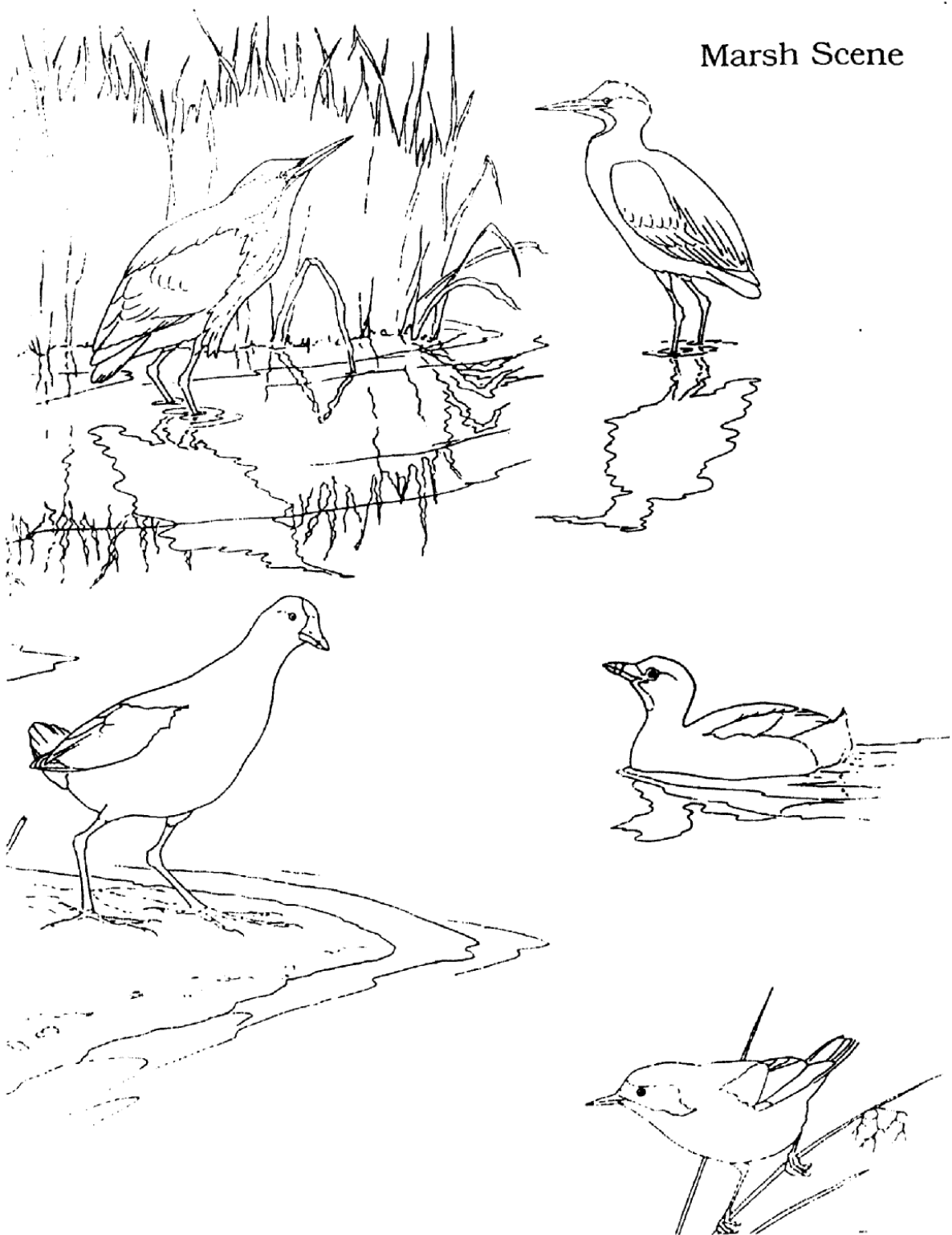


On the next two pages are scenes of birds in two habitats. Practice taking field notes by completing the field note sheets on pages 17-18 for two (2) of these birds, one from each habitat. Use the field note information on pages 8-12 to help you. Using all of the bird pictures, answer the questions below.

Backyard Scene



Marsh Scene





BIRDWATCHING FIELD NOTES

Step 1: Bird's Location/Patterns in Behavior (circle all that apply)

PATTERNS IN BEHAVIOR

In the Air

Straight flight

Bouncing flight

Gliding flight

Hovering flight

On the Ground

Walks

Hops

In Trees

Climbs up tree trunks or branches

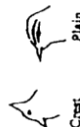
Climbs down tree trunks or branches

Swims

In the Water

Wades

Step 4: Shape of Top of Head (circle one)

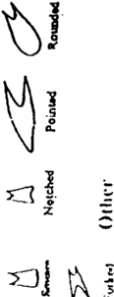


Step 8: Shape/Color of Legs (circle one)

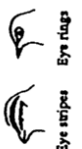
Color of legs _____



Step 12: Tail Shape (circle one)

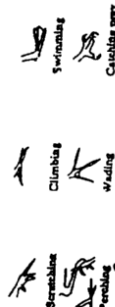


Step 5: Markings on the Face (circle all that apply)



Other _____

Step 9: Feet Shape (circle one)

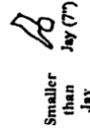


Other _____

Step 13: Markings on the Tail (circle all that apply)



Step 2: Compare Size (circle one)



Larger than Crow

Step 3: Shape/Color of Bill (circle one)

Color of bill _____



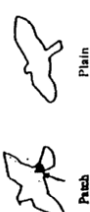
Other _____

Step 7: Patterns on the Wings (circle all that apply)



Other _____

Step 11: Markings on the Rump (circle one)



Step 15: Draw the Bird

Name of Bird _____



BIRDWATCHING FIELD NOTES

Step 1: Bird's Location/Patterns in Behavior (circle all that apply)

PATTERNS IN BEHAVIOR

In the Air

Straight flight

Bouncing flight

Gliding flight

Hovering flight

On the Ground

Walks

Hops

In Trees

Climbs up tree
trunks or branches

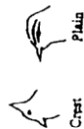
Climbs down tree
trunks or branches

In the Water

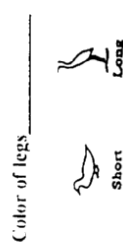
Wades

Swims

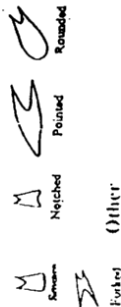
Step 4: Shape of Top of Head (circle one)



Step 8: Shape/Color of Legs (circle one)



Step 12: Tail Shape (circle one)



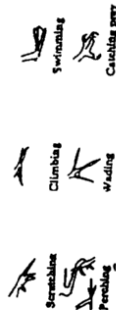
Step 13: Markings on the Tail (circle all that apply)



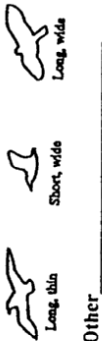
Step 5: Markings on the Face (circle all that apply)



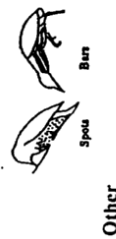
Step 9: Feet Shape (circle one)



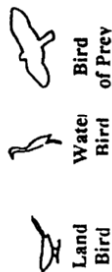
Step 6: Wing Shape (circle one)



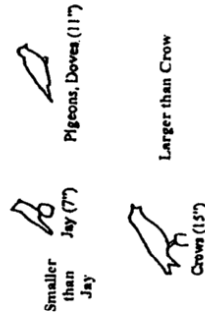
Step 10: Markings on the Breast (circle all that apply)



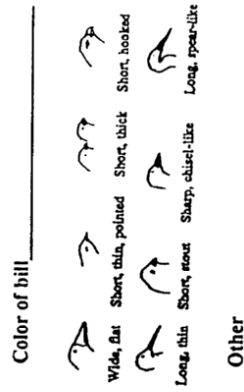
Step 14: Basic Bird Group (circle one)



Step 2: Compare Size (circle one)



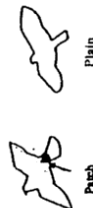
Step 3: Shape/Color of Bill (circle one)



Step 7: Patterns on the Wings (circle all that apply)



Step 11: Markings on the Rump (circle one)



Step 15: Draw the Bird

Name of Bird _____

Online Resources

The following middle school-level bird watching resources are available online:

All About Birds (Cornell Lab of Ornithology) <http://www.birds.cornell.edu/AllAboutBirds/>

Urban Bird Studies and **Bird Sleuth** (Cornell Lab of Ornithology) Students can become citizen scientists to collect data about birds living in their neighborhood!

<http://www.birds.cornell.edu/programs/urbanbirds/index.html>

<http://www.birds.cornell.edu/birdsleuth>

Answer Key

Silhouettes

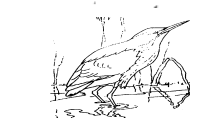
- | | |
|-----------------|------------------|
| 1. land bird | 9. land bird |
| 2. water bird | 10. bird of prey |
| 3. bird of prey | 11. land bird |
| 4. water bird | 12. water bird |
| 5. land bird | 13. land bird |
| 6. land bird | 14. land bird |
| 7. water bird | 15. water bird |
| 8. land bird | 16. water bird |

Field Marks

- a
- c
- d
- d

Field Notes

BIRDWATCHING FIELD NOTES

Step 1: Bird's Location/Patterns in Behavior (circle all that apply)		Step 2: Compare Size (circle one)		Step 3: Shape/Color of Bill (circle one)	
PATTERN IN BEHAVIOR In the Air: Straight flight, Soaring flight, Gliding flight, Hovering flight On the Ground: Walks, Hops In the Water: Wades, Pokes In Trees: Climb up tree trunk or branches, Climb down tree trunk or branches		Smaller than Jay, Jay (7"), Pigeon, Dove (11") Crow (13"), Larger than Crow		Wide, flat; Short, thick, pointed; Short, thick; Short, hooked Long, thin; Short, stout; Sharp, chisel-like; Long, spoon-like Other: _____ Color of bill: yellow	
Step 4: Shape of Top of Head (circle one)		Step 5: Markings on the Face (circle all that apply)		Step 6: Wing Shape (circle one)	
Crest, Plain		Eye stripe, Eye ring, Other: _____		Long, thin; Short, wide; Long, wide Other: _____	
Step 8: Shape/Color of Leg (circle one)		Step 9: Feet Shape (circle one)		Step 7: Patterns on the Wings (circle all that apply)	
Short, Long Color of legs: green		Scrambler, Climber, Perching, Crouching Other: _____		Wing patches, Wing bars Other: bicolored	
Step 12: Tail Shape (circle one)		Step 13: Markings on the Tail (circle all that apply)		Step 10: Markings on the Breast (circle all that apply)	
Rounded, Square tail, Pointed, Fan-shaped Other: _____		Spot, Ring, Plain Other: plain		Spot, Ring Other: _____	
Step 14: Basic Bird Group (circle one)		Step 11: Markings on the Rump (circle one)			
Land Bird, Water Bird, Bird of Prey		Spot, Plain			
Step 15: Draw the Bird  Name of Bird: American Sparrow					

BIRDWATCHING FIELD NOTES

Step 1: Bird's Location/Patterns in Behavior (circle all that apply)		Step 2: Compare Size (circle one)		Step 3: Shape/Color of Bill (circle one)	
PATTERNS IN BEHAVIOR In the Air: Straight flight, Bouncing flight, Oblong flight, Flourishing flight On the Ground: Walks, Hops In Trees: Chicks up tree, Chicks down tree In the Water: Wades, Pokes		Smaller than Jay: Jay (17) Pigeons, Doves (117) Larger than Crow: Crow (117)		Wide, flat: Wide, flat, pointed: Short, stout: Short, hooked: Long, thin: Short, stout: Sharp, almost like: Long, spear-like: Other: _____ Color of bill: <u>yellow</u>	
Step 4: Shape of Top of Head (circle one)		Step 5: Markings on the Face (circle all that apply)		Step 6: Wing Shape (circle one)	
Crest, Flat Other: <u>reddish</u>		Long, thin, Short, wide, Long, wide Other: _____		Wing pattern, Wing bar Other: <u>blue-green</u>	
Step 8: Shape/Color of Leg (circle one)		Step 9: Feet Shape (circle one)		Step 10: Markings on the Breast (circle all that apply)	
Short, Long Color of legs: <u>yellow</u>		Scrambled, Oblong, T-shaped, Comb-like Other: _____		Spot, Bar Other: <u>plain</u>	
Step 12: Tail Shape (circle one)		Step 13: Markings on the Tail (circle all that apply)		Step 14: Basic Bird Group (circle one)	
Square, Rounded, Pointed, Forked Other: _____		Spot, Bar, Ring Other: <u>plain</u>		Land Bird, Water Bird, Bird of Prey	
Step 15: Draw the Bird Name of Bird: <u>Crow</u>					

BIRDWATCHING FIELD NOTES

Step 1: Bird's Location/Patterns in Behavior (circle all that apply)		Step 2: Compare Size (circle one)		Step 3: Shape/Color of Bill (circle one)	
PATTERNS IN BEHAVIOR In the Air: Straight flight, Bouncing flight, Oblong flight, Flourishing flight On the Ground: Walks, Hops In Trees: Chicks up tree, Chicks down tree In the Water: Wades, Pokes		Smaller than Jay: Jay (17) Pigeons, Doves (117) Larger than Crow: Crow (117)		Wide, flat: Wide, flat, pointed: Short, stout: Short, hooked: Long, thin: Short, stout: Sharp, almost like: Long, spear-like: Other: _____ Color of bill: <u>red, with yellow tip</u>	
Step 4: Shape of Top of Head (circle one)		Step 5: Markings on the Face (circle all that apply)		Step 6: Wing Shape (circle one)	
Crest, Flat Other: <u>blue forehead</u>		Long, thin, Short, wide, Long, wide Other: _____		Wing pattern, Wing bar Other: <u>brownish</u>	
Step 8: Shape/Color of Leg (circle one)		Step 9: Feet Shape (circle one)		Step 10: Markings on the Breast (circle all that apply)	
Short, Long Color of legs: <u>yellow</u>		Scrambled, Oblong, T-shaped, Comb-like Other: _____		Spot, Bar Other: <u>plain</u>	
Step 12: Tail Shape (circle one)		Step 13: Markings on the Tail (circle all that apply)		Step 14: Basic Bird Group (circle one)	
Square, Rounded, Pointed, Forked Other: _____		Spot, Bar, Ring Other: <u>plain</u>		Land Bird, Water Bird, Bird of Prey	
Step 15: Draw the Bird Name of Bird: <u>Partridge</u>					


BIRDWATCHING FIELD NOTES

Step 1: Bird's Location/Patterns in Behavior (circle all that apply)	Step 2: Compare Size (circle one)	Step 3: Shape/Color of Bill (circle one)
PATTERNS IN BEHAVIOR		
In the Air: Straight flight, Bouncing flight, Oblong flight, Herring flight On the Ground: Walk, Hop, In Trees In the Water: Wade, Swim Other: Chicks up tree, Chicks down tree	Smaller than Jay: Jay (7") Pigeons, Doves (11") Larger than Crow: Crow (11")	Wide, flat: Wide, flat, Short, thin, pointed, Short, stout, Short, hooked Long, thin: Long, thin, Short, stout, Sharp, curved like, Long, open like Other: _____
Step 4: Shape of Top of Head (circle one) Crest, Flat	Step 5: Markings on the Face (circle all that apply) Eye stripes, Eye rings Other: <u>black forehead, chin</u>	Step 6: Wing Shape (circle one) Long, thin, Short, wide, Long, wide Other: _____
Step 8: Shape/Color of Legs (circle one) Thin, Long Color of legs: <u>gray</u>	Step 9: Feet Shape (circle one) Scrambler, Clawing, Walking, Combining Other: _____	Step 7: Patterns on the Wings (circle all that apply) Wing patches, Wing bars Other: <u>solid</u>
Step 12: Tail Shape (circle one) Square, Rounded, Pointed, Forked Other: <u>Pointed</u>	Step 13: Markings on the Tail (circle all that apply) Red, Orange, Black Other: <u>white</u>	Step 10: Markings on the Breast (circle all that apply) Spot, Bar Other: <u>solid</u>
Step 14: Basic Bird Group (circle one) Land Bird, Water Bird, Bird of Prey	Step 11: Markings on the Rump (circle one) Plain, Pattern Step 15: Draw the Bird Name of Bird: <u>Pied-billed Grebe</u>	


BIRDWATCHING FIELD NOTES

Step 1: Bird's Location/Patterns in Behavior (circle all that apply)	Step 2: Compare Size (circle one)	Step 3: Shape/Color of Bill (circle one)
PATTERNS IN BEHAVIOR		
In the Air: Straight flight, Bouncing flight, Oblong flight, Herring flight On the Ground: Walk, Hop, In Trees In the Water: Wade, Swim Other: Chicks up tree, Chicks down tree	Smaller than Jay: Jay (7") Pigeons, Doves (11") Larger than Crow: Crow (11")	Wide, flat: Wide, flat, Short, thin, pointed, Short, stout, Short, hooked Long, thin: Long, thin, Short, stout, Sharp, curved like, Long, open like Other: _____
Step 4: Shape of Top of Head (circle one) Crest, Flat	Step 5: Markings on the Face (circle all that apply) Eye stripes, Eye rings Other: <u>black mask</u>	Step 6: Wing Shape (circle one) Long, thin, Short, wide, Long, wide Other: _____
Step 8: Shape/Color of Legs (circle one) Thin, Long Color of legs: <u>pink</u>	Step 9: Feet Shape (circle one) Scrambler, Clawing, Walking, Combining Other: _____	Step 7: Patterns on the Wings (circle all that apply) Wing patches, Wing bars Other: <u>brownish</u>
Step 12: Tail Shape (circle one) Square, Rounded, Pointed, Forked Other: <u>Pointed</u>	Step 13: Markings on the Tail (circle all that apply) Red, Orange, Black Other: <u>plain</u>	Step 10: Markings on the Breast (circle all that apply) Spot, Bar Other: <u>pale yellow</u>
Step 14: Basic Bird Group (circle one) Land Bird, Water Bird, Bird of Prey	Step 11: Markings on the Rump (circle one) Plain, Pattern Step 15: Draw the Bird Name of Bird: <u>Common Yellowthroat</u>	

BIRDWATCHING FIELD NOTES

Step 1: Bird's Location/Patterns in Behavior (circle all that apply)		Step 2: Compare Size (circle one)	Step 3: Shape/Color of Bill (circle one)
PATTERNS IN BEHAVIOR In the Air: <input type="checkbox"/> Straight flight <input type="checkbox"/> Bounding flight <input type="checkbox"/> Gliding flight <input type="checkbox"/> Hovering flight On the Ground: <input type="checkbox"/> Walks <input type="checkbox"/> Hops <input type="checkbox"/> In Trees <input type="checkbox"/> Clanks up two trunks or branches <input type="checkbox"/> Clanks down two trunks or branches In the Water: <input type="checkbox"/> Wades <input type="checkbox"/> Pokes		Smaller than Jay <input type="checkbox"/> Jay (7") <input type="checkbox"/> Pigeons, Doves (11") Larger than Crow <input type="checkbox"/> Crow (15")	Wide, flat <input type="checkbox"/> Short, thick, pointed <input type="checkbox"/> Short, thick <input type="checkbox"/> Short, hooked Long, thin <input type="checkbox"/> Short, stout <input type="checkbox"/> Sharp, sword-like <input type="checkbox"/> Long, spoon-like Other: _____ Color of bill: <u>gray</u>
Step 4: Shape of Top of Head (circle one)	Step 5: Markings on the Face (circle all that apply)	Step 6: Wing Shape (circle one)	Step 7: Patterns on the Wings (circle all that apply)
<input type="checkbox"/> Crest <input type="checkbox"/> Plain	<input type="checkbox"/> Eye stripes <input type="checkbox"/> Eye rings Other: <u>gray ear patch</u>	<input type="checkbox"/> Long, thin <input type="checkbox"/> Short, wide <input type="checkbox"/> Long, wide Other: _____	<input type="checkbox"/> Wing patches <input type="checkbox"/> Wing bars Other: _____
Step 8: Shape/Color of Legs (circle one)	Step 9: Feet Shape (circle one)	Step 10: Markings on the Breast (circle all that apply)	Step 11: Markings on the Rump (circle one)
<input type="checkbox"/> Short <input type="checkbox"/> Long Color of legs: <u>gray</u>	<input type="checkbox"/> Scrambler <input type="checkbox"/> Clunker <input type="checkbox"/> Scrambler <input type="checkbox"/> Punter <input type="checkbox"/> Walker <input type="checkbox"/> Clunker-walker Other: _____	<input type="checkbox"/> Spots <input type="checkbox"/> Bars Other: <u>plain</u>	<input type="checkbox"/> Plain <input type="checkbox"/> Plain Other: _____
Step 12: Tail Shape (circle one)	Step 13: Markings on the Tail (circle all that apply)	Step 14: Basic Bird Group (circle one)	Step 15: Draw the Bird
<input type="checkbox"/> Square <input type="checkbox"/> Notched <input type="checkbox"/> Pointed <input type="checkbox"/> Rounded Forked <input type="checkbox"/> Other: _____	<input type="checkbox"/> Red <input type="checkbox"/> Black <input type="checkbox"/> White Other: _____	<input type="checkbox"/> Land Bird <input type="checkbox"/> Water Bird <input type="checkbox"/> Bird of Prey	 Name of Bird: <u>Northern Mockingbird</u>

BIRDWATCHING FIELD NOTES

Step 1: Bird's Location/Patterns in Behavior (circle all that apply)		Step 2: Compare Size (circle one)	Step 3: Shape/Color of Bill (circle one)
PATTERNS IN BEHAVIOR In the Air: <input type="checkbox"/> Straight flight <input type="checkbox"/> Bounding flight <input type="checkbox"/> Gliding flight <input type="checkbox"/> Hovering flight On the Ground: <input type="checkbox"/> Walks <input type="checkbox"/> Hops <input type="checkbox"/> In Trees <input type="checkbox"/> Clanks up two trunks or branches <input type="checkbox"/> Clanks down two trunks or branches In the Water: <input type="checkbox"/> Wades <input type="checkbox"/> Pokes		Smaller than Jay <input type="checkbox"/> Jay (7") <input type="checkbox"/> Pigeons, Doves (11") Larger than Crow <input type="checkbox"/> Crow (15")	Wide, flat <input type="checkbox"/> Short, thick, pointed <input type="checkbox"/> Short, thick <input type="checkbox"/> Short, hooked Long, thin <input type="checkbox"/> Short, stout <input type="checkbox"/> Sharp, sword-like <input type="checkbox"/> Long, spoon-like Other: _____ Color of bill: <u>gray</u>
Step 4: Shape of Top of Head (circle one)	Step 5: Markings on the Face (circle all that apply)	Step 6: Wing Shape (circle one)	Step 7: Patterns on the Wings (circle all that apply)
<input type="checkbox"/> Crest <input type="checkbox"/> Plain	<input type="checkbox"/> Eye stripes <input type="checkbox"/> Eye rings Other: <u>black collar</u>	<input type="checkbox"/> Long, thin <input type="checkbox"/> Short, wide <input type="checkbox"/> Long, wide Other: _____	<input type="checkbox"/> Wing patches <input type="checkbox"/> Wing bars Other: _____
Step 8: Shape/Color of Legs (circle one)	Step 9: Feet Shape (circle one)	Step 10: Markings on the Breast (circle all that apply)	Step 11: Markings on the Rump (circle one)
<input type="checkbox"/> Short <input type="checkbox"/> Long Color of legs: <u>gray</u>	<input type="checkbox"/> Scrambler <input type="checkbox"/> Clunker <input type="checkbox"/> Scrambler <input type="checkbox"/> Punter <input type="checkbox"/> Walker <input type="checkbox"/> Clunker-walker Other: _____	<input type="checkbox"/> Spots <input type="checkbox"/> Bars Other: <u>plain</u>	<input type="checkbox"/> Plain <input type="checkbox"/> Plain Other: _____
Step 12: Tail Shape (circle one)	Step 13: Markings on the Tail (circle all that apply)	Step 14: Basic Bird Group (circle one)	Step 15: Draw the Bird
<input type="checkbox"/> Square <input type="checkbox"/> Notched <input type="checkbox"/> Pointed <input type="checkbox"/> Rounded Forked <input type="checkbox"/> Other: _____	<input type="checkbox"/> Red <input type="checkbox"/> Black <input type="checkbox"/> White Other: _____	<input type="checkbox"/> Land Bird <input type="checkbox"/> Water Bird <input type="checkbox"/> Bird of Prey	 Name of Bird: <u>Blue Jay</u>

BIRD WATCHING FIELD NOTES

Step 1: Bird's Location/Patterns in Behavior (circle all that apply)		Step 2: Compare Size (circle one)		Step 3: Shape/Color of Bill (circle one)	
<p>PATTERNS IN BEHAVIOR</p> <p>In the Air: </p> <p>In the Ground: </p> <p>In the Water: </p> <p>In Trees: </p>		<p>Smaller than Jay </p> <p>Larger than Crow </p>		<p>Wide, flat </p> <p>Long, thin </p> <p>Other _____</p> <p>Color of bill <u>yellow</u></p>	
Step 4: Shape of Top of Head (circle one)		Step 5: Markings on the Face (circle all that apply)		Step 6: Wing Shape (circle one)	
<p> </p>		<p> </p> <p>Other <u>none</u></p>		<p> </p> <p>Other _____</p>	
Step 8: Shape/Color of Legs (circle one)		Step 9: Feet Shape (circle one)		Step 10: Markings on the Breast (circle all that apply)	
<p> </p> <p>Color of legs <u>pink</u></p>		<p> </p> <p>Other _____</p>		<p> </p> <p>Other <u>none in winter only</u></p>	
Step 12: Tail Shape (circle one)		Step 13: Markings on the Tail (circle all that apply)		Step 14: Basic Bird Group (circle one)	
<p> </p>		<p> </p> <p>Other <u>none</u></p>		<p> </p>	
Step 11: Markings on the Rump (circle one)					
<p> </p>					
Step 15: Draw the Bird					
Name of Bird <u>European Starling</u>					

BIRDWATCHING FIELD NOTES

Step 1: Bird's Location/Patterns in Behavior (circle all that apply)		Step 2: Compare Size (circle one)		Step 3: Shape/Color of Bill (circle one)	
<p>PATTERNS IN BEHAVIOR</p> <p>In the Air: </p> <p>In the Ground: </p> <p>In the Water: </p> <p>In Trees: </p>		<p>Smaller than Jay </p> <p>Larger than Crow </p>		<p>Wide, flat </p> <p>Long, thin </p> <p>Other _____</p> <p>Color of bill <u>red</u></p>	
Step 4: Shape of Top of Head (circle one)		Step 5: Markings on the Face (circle all that apply)		Step 6: Wing Shape (circle one)	
<p> </p>		<p> </p> <p>Other <u>black mask</u></p>		<p> </p> <p>Other _____</p>	
Step 8: Shape/Color of Legs (circle one)		Step 9: Feet Shape (circle one)		Step 10: Markings on the Breast (circle all that apply)	
<p> </p> <p>Color of legs <u>gray</u></p>		<p> </p> <p>Other _____</p>		<p> </p> <p>Other <u>plain</u></p>	
Step 12: Tail Shape (circle one)		Step 13: Markings on the Tail (circle all that apply)		Step 14: Basic Bird Group (circle one)	
<p> </p>		<p> </p> <p>Other <u>red</u></p>		<p> </p>	
Step 11: Markings on the Rump (circle one)					
<p> </p>					
Step 15: Draw the Bird					
Name of Bird <u>Northern Cardinal</u>					

Everglades

National Park Service
U.S. Department of the Interior
Everglades National Park



Applying for a Fee Waiver

Everglades National Park can be a powerful source of inspiration and learning. Numerous groups visiting the park have discovered the unique opportunities the Everglades can afford.

The park commonly receives requests to waive admission fees for visiting groups. When possible, the park may issue fee waivers to educational or scientific institutions providing proper documentation. The procedures for obtaining such a waiver are outlined below for your convenience.



Applying for a Fee Waiver



Bona fide educational or scientific institutions may apply for an entrance fee waiver. To qualify, applications must contain the following:

1. Current, official documentation of recognition as an educational institution by a Federal, State, or local government entity, or other evidence attesting to educational status (i.e., accreditation letter or educational tax exempt letter). It is insufficient to merely state or imply this on official letterhead. Your fee waiver will not be processed without this documentation.

2. Copy the application on the reverse of this page onto your institution's letterhead. Complete the application and send it along with your official recognition as an educational institution.

3. There must be a direct relationship between the visit purpose and the use of the park. The visit must be to study some aspect/resource specific to the park. A general statement to the effect that the visit is for "educational purposes" is insufficient by itself. An explanation of what the educational purpose entails and how it is related to park resources is required. Course outlines, lesson plans, or a copy of the curriculum meets this requirement.

Protecting the Park



Review the following rules and safety precautions so participants will know what is expected of them.

Respect the wildlife: Loud noises are discouraged. Throwing objects at, or other harassment of park animals is strictly prohibited.

Respect the home and food sources of the wildlife: Please leave all plants, rocks, shells, or other natural objects in the park. Place litter where it belongs.

Respect each other: Running, pushing, or yelling are not allowed on trails. Stay with your class; always have adults lead and bring up the end of the line.

Respect the right of others to enjoy their national park: Loud noises and other disruptive behavior on the trails can spoil the experience for other visitors. Buses and other loud motor vehicles are asked to turn off their engines completely when parked at trail heads.

Groups that do not comply with park regulations will be contacted by a ranger and future fee waivers requests may be denied.

Fee Waiver Entitlements



Fee waivers entitle the entrance of one chaperone for every ten students (or one chaperone for every five for special needs groups). Any additional chaperones will be required to pay the \$5.00 per person fee for the Shark Valley or Main Entrance Station.

Applications must be received 2 weeks in advance of the anticipated visit. Fee waivers will not be given at the entrance stations and refunds will not be granted.

If the application is approved, the group's official will receive a copy of the application with an approval signature. Each vehicle must present a copy of the approved fee waiver at the park entrance station. Fees will not be waived for vehicles who do not have a copy of the waiver.

The entrance fee waiver does not entitle your group to any special ranger presentations.

Application for Educational Fee Waiver

Copy onto institutional letterhead and complete.

Mail or Fax application to: Main Entrance Station, Everglades National Park, Attention: Debbie Benitez,
40001 State Road 9336, Homestead, FL 33034

Fax: (305) 242-7716 Tel: 305-242-7745

You must have this fee waiver in your possession when arriving at the park's entrance station.

Each vehicle in the group must present a copy of the approved application.

Name of Institution _____
Address _____
Official in charge of group _____ Phone Number _____
Number of Students _____ Where you will enter the Park _____
Number of Faculty/Chaperones _____ Number of Vehicles _____
Date of Arrival _____ Time of Arrival _____ # of Days in Park _____

1. Course Title, Catalog Number, and Description or Grade Level and Subject Matter

2. Explain the educational purpose of the trip. What aspect/resource of the park is to be studied:

3. I understand that the Code of Federal Regulations allows Fee Waivers only for educational and/or scientific institutions that are using the park for educational purposes. I hereby certify that the above detailed trip meets these requirements and therefore request that fees be waived. Current official documentation of recognition of affiliation as an educational institution by a Federal, State or local government entity, or other evidence attesting to educational status is attached (e.g. accreditation letter, educational tax exempt letter).

Name & Signature of official In Charge of Group

Telephone

Title

Fax

NATIONAL PARK SERVICE APPROVAL

Required Documentation

Type _____

Signature of Park Official: _____

Title: _____

Date: _____

The School Board of Miami-Dade County, Florida, adheres to a policy of nondiscrimination in employment and educational programs/activities and strives affirmatively to provide equal opportunity for all as required by:

Title VI of the Civil Rights Act of 1964 - prohibits discrimination on the basis of race, color, religion, or national origin.

Title VII of the Civil Rights Act of 1964, as amended - prohibits discrimination in employment on the basis of race, color, religion, gender, or national origin.

Title IX of the Education Amendments of 1972 - prohibits discrimination on the basis of gender.

Age Discrimination in Employment Act of 1967 (ADEA), as amended - prohibits discrimination on the basis of age with respect to individuals who are at least 40.

The Equal Pay Act of 1963, as amended - prohibits sex discrimination in payment of wages to women and men performing substantially equal work in the same establishment.

Section 504 of the Rehabilitation Act of 1973 - prohibits discrimination against the disabled.

Americans with Disabilities Act of 1990 (ADA) - prohibits discrimination against individuals with disabilities in employment, public service, public accommodations, and telecommunications.

The Family and Medical Leave Act of 1993 (FMLA) - requires covered employers to provide up to 12 weeks of unpaid, job-protected leave to "eligible" employees for certain family and medical reasons.

The Pregnancy Discrimination Act of 1978 - prohibits discrimination in employment on the basis of pregnancy, childbirth, or related medical conditions.

Florida Educational Equity Act (FEEA) - prohibits discrimination on the basis of race, gender, national origin, marital status, or handicap against a student or employee.

Florida Civil Rights Act of 1992 - secures for all individuals within the state freedom from discrimination because of race, color, religion, sex, national origin, age, handicap, or marital status.

School Board Rules 6Gx13- 4A-1.01, 6Gx13- 4A-1.32, and 6Gx13- 5D-1.10 - prohibit harassment and/or discrimination against a student or employee on the basis of gender, race, color, religion, ethnic or national origin, political beliefs, marital status, age, sexual orientation, social and family background, linguistic preference, pregnancy, or disability.

Veterans are provided re-employment rights in accordance with P.L. 93-508 (Federal Law) and Section 295.07 (Florida Statutes), which stipulate categorical preferences for employment.

REVISED 8/1/01