

**TEACHING KATE  
TEACHING KIDS ABOUT THE ENVIRONMENT**

**BIRDS OF A FEATHER**

**Grade Level: 6**

**Time Required: 3 class periods of 50 minutes each**

**SC Science Standards**

This lesson plan was correlated with only the grade level specified unless otherwise noted.

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- I. A. 7. a

**Purpose**

Students will be instructed in anatomy and morphology of birds and will learn to predict bird behavior by comparing and contrasting body parts. Students will experience taxonomic classification of birds. They will also learn to identify a birds habitat requirements.

**Skills**

Classifying, comparing, contrasting, discussing, inferring, observing.

**Concepts**

Interrelationship between body structure and behavior, taxonomy, bird anatomy, bird morphology, habitat requirements of certain birds.

**Materials Needed**

Paper	Pens	Worksheets	Poster
S. C. Wildlife Magazines	Transparencies	Overhead Projector	

## Definition of Terms

<u>Adaptations</u>	Animal body parts or behaviors that help in survival.
<u>Anatomy</u>	The science of the structure of animals and plants.
<u>Birds of Prey</u>	Birds that kill and eat other animals.
<u>Flightless Birds</u>	Birds that cannot fly.
<u>Game Birds</u>	Birds that are hunted at certain seasons of the year for food and sport.
<u>Habitat</u>	The place where a plant or animal lives.
<u>Incubation</u>	To brood, sit upon and hatch eggs.
<u>Land Birds</u>	Birds that live on land.
<u>Migrate</u>	Travel long distances at certain times of the year.
<u>Molting</u>	Shedding and replacing old feathers.
<u>Morphology</u>	The branch of biology that deals with the form and structure of organisms without regard to function.
<u>Ornithology</u>	The study of birds.
<u>Preening</u>	Cleaning, straightening and fluffing feathers.
<u>Taxonomy</u>	The branch of science dealing with classification.
<u>Tropical Birds</u>	Birds that live in the tropics or hot lands.
<u>Water Birds</u>	Birds that live on or near the water.

## Before the Session

Collect enough South Carolina Wildlife magazines for every student in the class to have one. Make transparencies of the parts of a bird, illustrations of bird feet and beak adaptations and the different

varieties of birds that we have on earth. Make copies of the “Adopt A Bird” worksheet for every student in the class. Have the poster available to create a chart representing the kinds of birds the students may find near home when they adopt a bird.

## **Background Information**

A bird is an animal that has feathers. They vary in size, shape, color and song. Their habitat is in all parts of the world. Some live in cold places and others live in hot areas. Some live in fields on flat plains while others live in the mountains or in the water. The feathers of birds may be bright or dull. All birds have wings, but not all can fly.

Birds live their lives in many different ways. Those called swifts spend most of their time flying. The penguin waddles on ice and swims in the ocean but cannot fly. Many birds travel long distances (migrate) at certain times of the year. Many birds you see in the summer can not be found later in the year because as winter approached they migrated to warmer areas. They return with summer to build their nests.

All birds hatch from eggs, have two legs, a beak or bill and feathers. Their bones are hollow which keeps their body weight low for their size, thus making it easier for them to fly.

Birds can be beneficial and detrimental, but the good usually outweighs the bad. They are valuable to man because they produce eggs and meat which are both edible. Those which eat insects benefit farmers by keeping the insect pest population down.

Birds can be identified in the field based on size, shape, color, wing beat and flight pattern and song or call. They have developed adaptations over time that allow them to better compete for the resources such as, specialized beaks, feet, tails and wings. A birds diet can be identified by the shape of their beak. Diets may be broken down as seeds and fruits, insects, fish and other foods (which may consist of other birds, mice, rats, squirrels, snakes, lizards, nectar, dead animals and garbage).

### 1. Types of Birds and Their Beaks

- a. Grosbeak — strong, cone-shaped beak which is used for cracking seeds.
- b. Spoonbill — spoon-shaped bill to sweep back and forth in water to find food.
- c. Woodpecker — strong beak that is used for catching insects and drilling into trees.
- d. Golden eagle — hooked beak that it uses for tearing its prey.

- e. Brown creeper — small slender beak to search under bark for insects.
- f. Nighthawk — beak that can open wide and trap insect in mid-air.
- g. Hummingbird — long thin needle like beak for drinking nectar from flowers.

## 2. Bird Feet

Each bird has the kind of feet that is best suited to its environment.

Hawks, eagles and owls have big, grasping claws that help them to snatch up their prey whether it is birds, fish, mice, toads or lizards. Crows, chickens, turkeys and quail are equipped with scratching feet to aid them in searching for grains and seeds under leaf litter or in the soil.

Ducks, geese, storks and gulls have webbed feet. They use their feet for wading and swimming. The feet of ostriches, road runners and killdeer are shaped for running.

Wrens, sparrows and finches have perching feet. Each foot has one hind toe and three front toes for grasping branches. Woodpeckers, creepers and parrots have climbing feet to help them get a good grip on trees.

## 3. Kinds of Birds

- a. Land Birds — sparrows, robins, swallows, warblers, ostriches, emus, rheas, cassowaries, chickadees, wood thrushes, road runners and woodpeckers.
- b. Water Birds — albatrosses, petrels, shearwaters, herons, loons, grebes, rails, ducks, geese, gulls and terns.
- c. Tropical Birds — parrots and trogons.
- d. Birds of Prey — eagles, hawks, falcons, owls and vultures.
- e. Perching Birds — sparrows, finches, robins, ravens, crows, thrushes, warblers, swallows, larks, wrens, starlings and shrikes.
- f. Game Birds — ducks, geese, swans, quail, dove, grouse, woodcocks, and pheasants.
- g. Flightless Birds — ostriches, penguins, emus, rheas and cassowaries.

### **Suggested Lesson Plan**

1. Give out a copy of the South Carolina Wildlife magazine to each student and tell him to find at least three pictures of birds.
2. Review what constitutes a bird (see background information).
3. Go over the parts of a bird that have been labeled on the transparency (see background information). Discuss the parts and the sciences associated with the parts and structures. Students should take notes.
4. Using the pictures which were found earlier, compare and contrast sizes, shapes and colors of the birds with specific emphasis on their beaks and feet. Expand on how some birds may be identified by their flight patterns and songs. Go over the different kinds of birds (these will be on transparencies). Explain how you can tell what kind of bird it is, where it lives and what it eats simply by observing its feet and beak (see background information).
5. Show the students different types of bird feet and beaks (on transparencies), and let them make a prediction as to what kind of bird it is, where it lives and what it eats.
6. For a home assignment, the students will go outside, adopt a bird and answer particular questions about their bird (see background information).
7. The day after they have completed their home assignments summarize the overall lesson by having students share the information on their adopted birds. Make a chart on a poster representing the number of different kinds of birds the students observed. Note the bird which was the most prevalent and the least prevalent.
8. Have each student create a bird on a blank sheet of paper. The criteria will be to design a bird which has three or more features that show adaptation to its habitat such as the shape and size of its beak, feet, neck, etc. Demonstrate its song and walk. Be creative!

### **Application**

Birds are important to the environment. Many birds eat insects and thus provide valuable pest protection to the plants that might be attacked by insects. Another group of birds are seed or fruit eaters. Many plant species have seed structures which can survive the passage through these animals' digestive tracts. The seeds are spread in the bird droppings. A line of cedar trees will often times mark the location of a fence run that may no longer show any other traces of its past existence.

### **Resources Available**

Classworks. 1988. Scholastic Inc.

Elements of Ecology. 1992. R. Smith. Harper Collins Publishers.

Frank Schaffer's Teaching Club. Frank Schaffer Publications, Inc. FS-960501.

Ranger Rick's Naturescope. Birds, Birds, Birds! 1986. National Wildlife Federation.

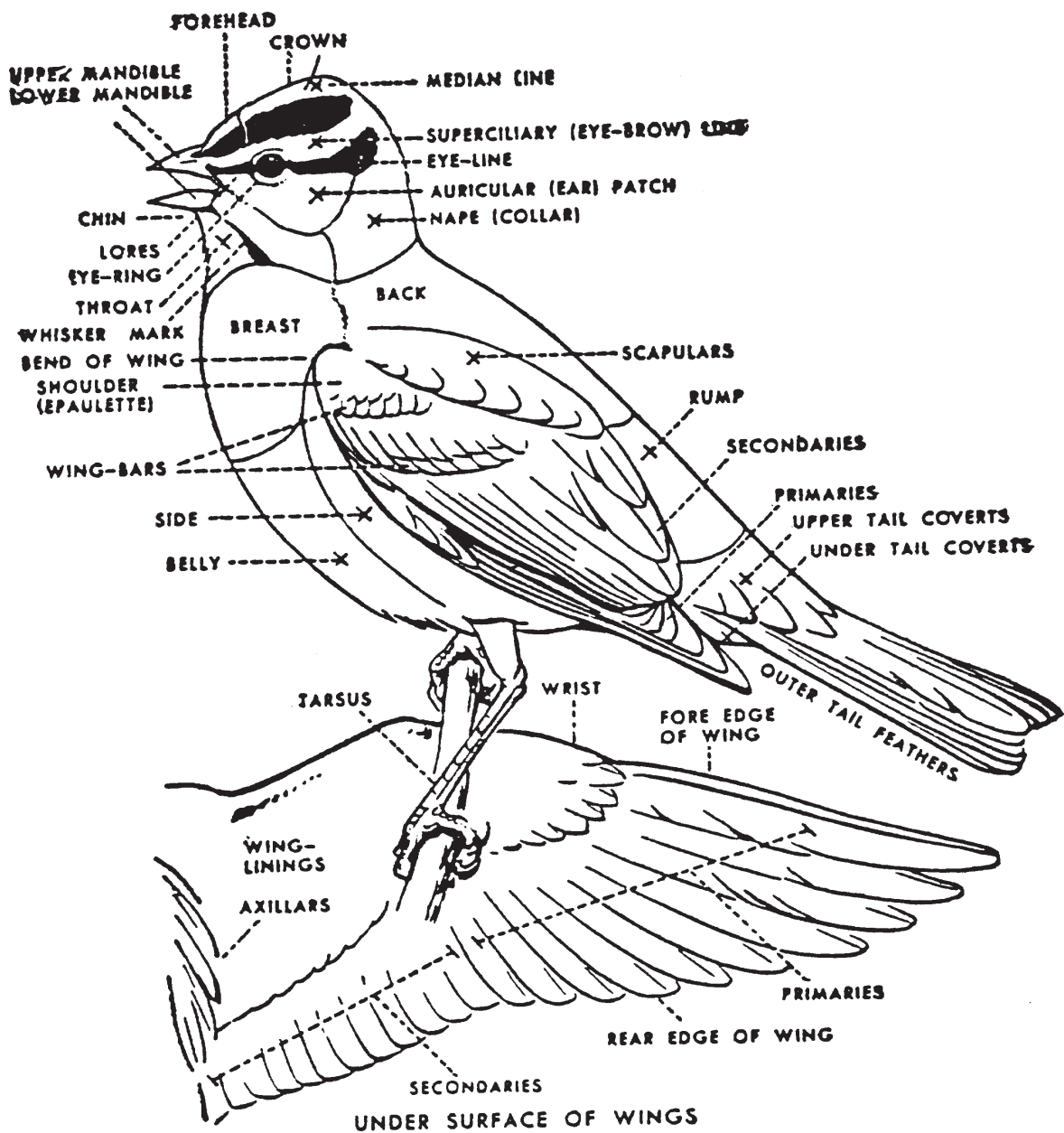
The World Book Encyclopedia. 1973. Field Enterprises Educational Cooperation.

Prepared by: Denise Haselden

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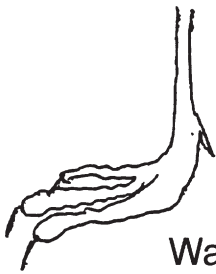
BODY PARTS OF A BIRD



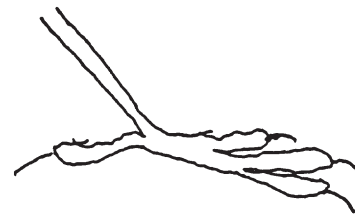
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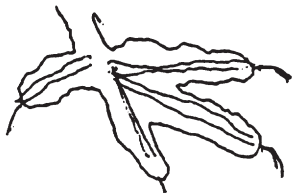
BIRD FEET



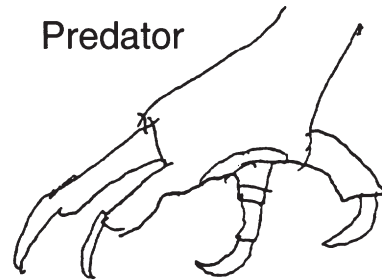
Walker



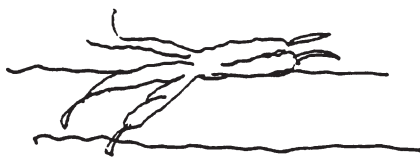
Percher



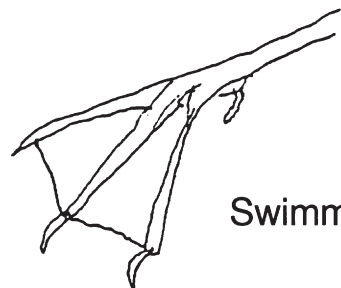
Marsh bird



Predator



Tree climber



Swimmer

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BIRD BEAKS



Seed eater



Insect eater



Nectar drinker



Woodpecker



Scavenger



Meat eater



Pond feeder



Fish snatcher



Fish snatcher



Beach prober

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**WORKSHEET- ADOPT A BIRD**

Name:

Date:

I. Choose any bird and observe their body adaptations. Describe the following characteristic.

- A. Size
- B. Shape
- C. Color
- D. Wing Beat and Flight Pattern
- E. Song and Call
- F. Beak
- G. Feet
- H. Tail
- I. Wings

II. Watch your bird for five minutes and use tally marks to show how often it does the following things:

- |                  |                          |
|------------------|--------------------------|
| A. Walks _____   | G. Eats _____            |
| B. Runs _____    | H. Drinks _____          |
| C. Flies _____   | I. Preens _____          |
| D. Perches _____ | J. Communicates _____    |
| E. Swims _____   | K. Looks At People _____ |
| F. Hops _____    |                          |