



# Groups of Birds

Atlanta Audubon Society's *Learning About Birds* Curriculum Series

## EDUCATOR'S GUIDE

**Grade Levels**  
5 - 8

### Objective

Students will employ observation and organizational skills to compare and contrast groups of birds by using and creating a dichotomous key.

### Background

Understanding the classification of organisms is a meticulous ordeal, however it is our nature to sort and categorize things in order to understand them. One way to approach bird studies is to examine how they are grouped. By comparing and contrasting birds by their physical, behavioral, and genetic characteristics, we can better understand the role each plays in an ecosystem.

This unit will introduce you and your students to the diversity of birds in eastern North America. Take a few minutes to read through the Groups of Birds student guide. The second page outlines the 20 common orders and the characteristics that set them apart from each other.

More importantly, this unit will allow students to practice their observation and reasoning skills in classifying organisms. Though dichotomous keys are not often used in ornithology, their use in studying a small group of birds is valuable.

### Vocabulary

**Characteristic** – An observable feature.

**Classification** – The way humans organize things using characteristics.

**Common Name** – A regional name given to an organism.

**Dichotomous Key** – A tool used for identifying unknown organisms.

**Family** – A taxonomic rank within the scientific classification of organisms. Bird families are based on similar body and bill shapes, behaviors, and/or habitats.

**Order** – A taxonomic rank in scientific classification below class and above family. Orders of birds are determined by physical characteristics and genetics.

**Scientific Name** – A universal name used for classification usually in the Latin language.

**Species** – A single group of organisms that can produce offspring; a basic unit of biological classification.

### Content and Skills aligned to Georgia Performance Standards

*Science* - S5L1a; S7L1a,b.

*Systems and Modeling* - S5CS4b.

*Communication* – S5CS1a,b,c; S5CS5a,b,c,d; S5CS6a,b; S5CS8a,b; S7CS4a; S7CS6a; S7CS10a,c,d.

### Activity 1 – The Groups Guessing Game

**Essential Question:** How are groups of birds similar and different?

**Suggested Time:** 45-60 minutes

**Space:** Area for presenting in front of a group. You may conduct this activity indoors or outdoors.

**Materials:** Groups of Birds student guides; marker board/easel paper. *Optional:* field guides.

### Instructional Methods

1. Begin with a demonstration. Sort your students by characteristics (physical or behavioral), such as eye color, hair color, hair length, clothing, which hand they write with, etc. Explain that you have grouped everyone by similar characteristics, or observable features. Ask the students to figure out what their group has in common. Next, brainstorm what all of the students have in common. Explain that one way people understand living things, and each other, is through classification, or organization of things by their characteristics.
2. Ask students to return to their seats. Pass out Groups of Birds and ask students to read the top two paragraphs. Ask the students what biological classification is, and how they think the ranking system works. Clarify that organisms are organized into six major kingdoms, and in each kingdom there are a certain number of phyla, and so on. Organisms in a rank share similar characteristics. Ask students to examine the classification of the Northern Flicker. Ask students if they know at which ranking birds and humans are separated (class *Aves* and *Mammalia*).
3. Ask students to peruse the second page of Groups of Birds. This should give students an idea of the

### Activity 1 con't – The Groups Guessing Game

- diversity of birds in eastern North America. Have students brainstorm the characteristics of Class Aves (feathers, wings, 2-part stomach, crop, bill, fused hollow bones, excellent eyesight and hearing, warm-blooded body). Identify the one that separates birds from other living classes of animals (feathers).
4. Split students into small groups or pairs. Tell students you will be playing a guessing game on the orders of birds. Assign an order to each group. Suggested orders to assign include *Gaviiformes*, *Anseriformes*, *Ciconiiformes*, *Accipitriformes*, *Charadriiformes*, *Galliformes*, *Caprimulgiformes*, *Strigiformes*, *Piciformes*, *Columbiformes*, *Apodiformes*, and *Passeriformes*. Give students 5-10 minutes to come up with a way to act out or draw clues about their order of birds based on the characteristics listed under each. *Optional*: Provide field guides to each group for additional research.
  5. To play the game, have each group take a turn performing their order. Give clear rules on how students can make a guess. They may use Groups of Birds as a guide. Make it competitive by offering a reward for the team that guesses the most correct.
  6. Wrap up by surveying the students. How many different orders of birds have they seen? Consider one of the extension activities as a follow up.

### Activity 2 – Diving Into Dichotomous Keys

**Essential Question:** How do dichotomous keys help us identify things?

**Suggested Time:** 45-60 minutes

**Space:** Flat surface for students to write and draw. You may conduct this activity indoors or outdoors.

**Materials:** Groups of Birds student guides; at least 4 pictures of birds; blank paper; pencils. *Optional*: field guides; colored pencils; clipboards.

#### Instructional Methods

1. Instruct students to read through “The ‘Key’ to Bird Classification” on the third page of Groups of Birds and try to work through the sample dichotomous key to identify the Blue-winged Teal (pictured duck).
2. Ask the group what a dichotomous key is, how one works, and how it may be useful in identifying things. Review the steps that students took to identify the teal. What was challenging about using it? What was the thought process?
3. *Optional*: Compare using a dichotomous key with

### Activity 2 con't – Diving Into Dichotomous Keys

- using a field guide. Pass out field guides to students and ask them to find the Blue-winged Teal. Compare and contrast the advantages and disadvantages to both means of identification.
4. Read aloud the instructions to the “Chippy Challenge” on the third page of Groups of Birds. Students should complete this activity either individually or in pairs using the pictures of birds you provide. Students may add drawings of characteristics to accompany their written statements, for example, a drawing that depicts a large seed-eating bill versus a thin insect-eating bill. In addition to the peer review suggested in the activity, review the keys yourself to ensure that students have a good understanding.
  5. Discuss challenges of developing a dichotomous key.
  6. Assign the same activity as an independent project instructing students to choose 4 (or more) backyard birds or of interest to them. You may need to arrange time for students to gather photos online or in magazines, or check out field guides.

### Extension Ideas

- Take a bird walk around your schoolyard or property and survey the different species of birds you find. How many orders of birds are represented? Why are all orders not represented?
- Assign each student an order of birds to research and present their findings to the class.
- Conduct related activities in companion AAS Learning About Birds units on Getting to Know A Field Guide and What Makes a Bird a Bird.

### Performance Tasks and Assessments

- Follow up the above bird survey with the creation of a key to the birds on your property. Have your group of students guide another class or their parents around the property on a bird walk and demonstrate the use of a dichotomous key.
- Develop a dichotomous key to a few native plants associated with birds in your region. A poster of plants for Georgia can be obtained through AAS.

### Additional Resources

Kaufman, K. 2005. Kaufman Field Guide to Birds of North America. Houghton Mifflin Company, New York. (Also available in Spanish) <http://birdsoftheworldonline.com/bird-orders>  
<http://www.explorebiodiversity.com>  
<http://www.scribd.com/doc/19663329/Bird-Order-Chart>

