

Friends of the Kaw



The Winged Ones: How birds are like us and how they differ from us in their daily lives

This lesson was developed by Dr. Raymond Pierotti, Division of Biological Sciences, University of Kansas

Overview: Students will look at birds, either around the school, or along the Kaw on a field trip. From what they see they will discuss a series of questions.

Suggested Grades: 5-7 and 8-12

Objective: Get students to think about what birds are and the ways they are similar to and the ways that they differ from human beings and other mammals.

Appropriate topics for discussion or questions to ask the students include:

- 1) Birds are exemplars of animal families, with males and females pairing together to raise offspring in more than 90% of known species. In contrast, more than 90% of mammals do not have male parental care, whereas more than 90% of birds do have male parental care or biparental care. For further discussion, there are no mammals with male only care, but there are several species of birds that show this behavior. Discuss why.
- 2) How do young birds interact with their parents? What do they depend on their parents to do for them? Are there differences between young birds that stay in their nests until they can fly (robins, bluejays, eagles, hawks, herons) compared with birds that leave the nest right after hatching (turkeys, quail, ducks, geese, shorebirds).
- 3) Look at the different types of bills (beaks) that birds have. Can you tell what type of food the bird eats from looking at its bill? How do birds differ

from mammals in their feeding (Birds have no teeth)? Why do you think that no species of bird alive today have teeth? Why does this make their bill structure so important?

Materials: Eyes (binoculars if available), Field guide, book (or page) of bird identifications, notebook and pencil (writing instrument should be something that will not run if the page gets damp).

Methods: Walk along the river, go outside the school onto the playground or go to a local park looking for birds. Try to figure out which species of bird you see using the guide—if you are inexperienced at identifying birds in the field you can make this exercise into a “treasure hunt” and give the students a list of birds you want them to try to find, focusing on species that are easy to observe and identify. You can also focus attention on watching behavior and discussing what ecological role the birds play, rather than on bird taxonomy. Make sure that students can observe a fresh area not disturbed by other classmates (it may help to assign them to different areas in small groups). Please make sure that students understand safety precautions and can identify hazards they may encounter such as poison ivy. Instructors can find information about birds by going to the Species List and Critter Corner sections.

Instructor will: Give the students a couple of example scenarios. Show students examples of different types of birds. Explain how to tell different types of birds apart.

Students will: Observe birds and write down their account of what they see and how the birds behave.

Evaluation: Examination of notes made by students in the field and a “show and tell” will be used to evaluate student knowledge.

Students will demonstrate: Knowledge of nature and basic animal behavior and ecology. This also compliments lessons on evolution by illustrating differences between major groups of vertebrates.

Resources: Lists of common species of birds. A list of major species along the Kaw is provided on our Teacher's Resources page.

Classroom supplement: If you are unable to take students outside you can use the discussion topics in the Objectives section to explore different aspects of bird ecology and behavior. Field guides with pictures of the various birds can be used for a “treasure hunt” by asking students to work in small groups and create a list of birds that have certain characteristics such as sharp talons for catching prey or long beaks for catching fish.

Resources

The Cornell Ornithology Lab provides excellent species accounts written for non-scientists that are available at <http://www.allaboutbirds.org/guide/search> Using these species accounts, which contain photos and songs, is a good way to develop your own identification guide free of cost. Their website has many good resources including “birding basics”, which gives pointers for novice birders and photographers. The Cornell Ornithology Lab also provides classroom resources and a Kids Corner at <http://www.birds.cornell.edu/birdsleuth/>

Information on all these birds (and others) can be found on a county-by-county basis on the Kansas Ornithological Society website at <http://ksbirds.org>

We provide information on the most common and easily observed birds of the Kansas River in the *Birds of the Kaw* lecture notes available on our Teacher’s Resources page at http://www.kansasriver.org/content/teachers_critter



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