

# Bird Rap—A Web Guide to Local Birds

## Science

### Middle Grades 6–8

#### Purpose

Students identify 20 or more different species of local birds by their behavior, shape, song, color, habitat, and food requirements. Students apply this research in assessing the local status and health of wild bird species.

Students will:

- ▶ Conduct research using several technological resources to gather and synthesize information
- ▶ Collaborate with peers to compare, contrast, and analyze their research
- ▶ Use a variety of technological tools to create and present a product

#### Description

Students will:

- ▶ Create a Web page field guide to the birds of their community
- ▶ Work in groups to research the characteristics and lifestyles of different local birds and share their findings (1) with each other and (2) on a Web page field guide with middle school classrooms via Internet links
- ▶ Research local songbirds' physical characteristics (structure and function), their behavioral and environmental adaptations, as well as their population status through the use of scientific experts, field guides, video clips, CD-ROMs, scanned print resources, and related Web sites
- ▶ Observe, record, videotape, and photograph local songbirds and their behaviors
- ▶ Create a Web page field guide to local birds
- ▶ Give a class presentation and post their research on the Internet

#### Activities

##### PREPARATION

- ▶ Arrange for online mentors (see Tools and Resources).
- ▶ Obtain a copy of *Peterson's Field Guide to Birds*.
- ▶ Meet with the school librarian or media center teacher to find school site resources that support students' research.
- ▶ Obtain a list of local songbirds from the local Audubon Society.
- ▶ Meet with the school Webmaster to schedule posting of student work on the school Web page.

	SCIENCE STANDARDS	NETS PERFORMANCE INDICATORS GRADES 6–8
<b>PROCEDURE</b>		
1 As a group activity, complete a "know, want to know, learned" (KWL) chart on students' knowledge of local songbird populations. Use concept-mapping software to create flowcharts or concept maps for research tasks. Outline the objectives of the final project; include required components of the Web page (see Assessment).	*5–8 SCI A1	4, 7, 8, 9
2 Group students in teams of four. Assign the following primary tasks to each team member. Rotate tasks daily.	5–8 SCI A1, F2	
▶ Manager: Collects all materials needed for investigation and is the only team member who can communicate with other teams.		
▶ Tracker: Keeps group on-task, reviews procedures, and manages time.		
▶ Data Processor: Enters and retrieves information using the computer.		
▶ Principal Investigator: Leads activity and is the only team member who can communicate with the teacher.		
3 At the first group meeting, have each group select a different local songbird. Group members collaboratively outline the research tasks, including the following: songs and calls; habitat, physical characteristics, and adaptations; reproductive and mating behaviors; role in local food web; migration patterns (winter, summer, and breeding ranges); population dynamics; and ecological health. Use a database to keep track of information and to compare results.	5–8 SCI A1, C3, C4, C5	5, 8
4 As research progresses, team members collaborate in creating Web-page storyboards for their field guide by incorporating script, graphics, transitions, special effects, and other available tools. Throughout the process, students pose questions, seek explanations, find additional resources, and edit their products.	5–8 SCI A1	1, 2, 3, 6, 7, 8, 9
5 Each group presents its Web-page component of the field guide to the class or another group (e.g., the local Audubon chapter) or both, using a computer video-presentation system.	5–8 SCI A1	6, 7
6 As a whole, the class collaborates with other in- and out-of-state middle school classes over the Internet to create a scientific "telecommunity." (See Tools and Resources for making connections with other classrooms.) Within this framework, students can compare, evaluate, read, share, investigate, and debate each other's avian research.	5–8 SCI A1, C1	6, 7, 10

\* Science standards indicate grade levels (K–4, 5–8, and 9–12) in front of the actual standard(s) number (e.g., K–4 SCI A2, C3, E1).

## Tools and Resources

### SOFTWARE:

- ▶ Word-processing, graphing, graphics, video-production, Web page creation, concept-mapping
- ▶ About birds: Birds of North America (Thayer Birding Software), Jr. Nature Guide Series—Birds (Forest Technologies), Peterson Multimedia Guides: North American Birds (Houghton Mifflin Interactive)

### HARDWARE:

- ▶ Video camcorder, video-presentation system, digital camera, scanner

### WEB SITES:

- ▶ For information on birds:
  - Classroom BirdWatch:  
<http://birdssource.cornell.edu/cfw/>
  - Aves.net:  
<http://aves.net/the-owl/blnkview.htm>
  - USGS Patuxent Wildlife Research Center (includes North American Breeding Bird Survey):  
[www.mbr.nbs.gov/bbs/bbs.html](http://www.mbr.nbs.gov/bbs/bbs.html)
  - Jason Project:  
[www.jasonproject.org/](http://www.jasonproject.org/)
  - FNO The Subject Index (an index to research and information problem-solving sites):  
[www.fromnowon.org/fnoindex.html](http://www.fromnowon.org/fnoindex.html)
- ▶ For finding keypals/project partners:
  - epals Classroom Exchange:  
[www.epals.com/](http://www.epals.com/)
  - Global Schoolhouse:  
[www.gsn.org/](http://www.gsn.org/)
  - Intercultural E-Mail Classroom Connections:  
[www.iecc.org/](http://www.iecc.org/)
  - Global Rigby:  
[www.hi.com.au/keypals/default.asp](http://www.hi.com.au/keypals/default.asp)
  - Web66:  
<http://web66.coled.umn.edu/>
  - Kids' Space Connection:  
[www.kids-space.org/](http://www.kids-space.org/)

### OTHER:

- ▶ Library reference print materials, binoculars or spotting scopes, online references and mentors

## Assessment

Students and teachers can generate a separate scoring rubric for both the Web page and the presentation. The Web page should include all of the following:

- ▶ Title
- ▶ Appropriate photos, scanned images, digital photos, or video of specific wild birds
- ▶ Appropriate sounds depicting songs and calls
- ▶ Graphics depicting field marks, behavior, habitat, and ranges
- ▶ Graphs of current populations and health trends
- ▶ Six paragraphs illustrating bird-specific natural history and current avian issues
- ▶ Five links to other related avian Web sites
- ▶ One hyperlink to another Grade 6–8 class (preferably out-of-state)

The groups will debrief and do self-assessment on their daily progress.

Use peer evaluation for final assessment of all group members.

## Credits

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## Comments

*We used this activity as the basis for one of our thematic units. The opportunities for interdisciplinary instruction are limitless, especially when you have staff willing to support your science instruction. We did! The art teacher helped with Web-page design and bird photography, the language arts teacher helped with the narratives, the math teacher helped the students put their data into graphs, and the science teacher helped guide the biological explorations. Next year we plan to add videos of some alternative assessments that the students developed (e.g., bird collages, bird stories, an informational tape about bird songs, and a skit about bird adaptations).*

*The parents really got involved in this activity. They enjoyed being able to go to the Web site and see their children's work. Several students commented that when parents saw what other groups did, they encouraged their own children to improve their products. It was a great way to engage the parents' interest as well as that of the students.*

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