Young Naturalists

Teachers Guide

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"Let's Go Birding!" Multidisciplinary Classroom Activities

Teachers guide for the Young Naturalists article "Let's Go Birding!" by Blane Klemek. Illustrations by Ron Finger. Published in the March–April 2003 *Conservation Volunteer*, or visit www.dnr.state.mn.us/young_naturalists/birding.

Young Naturalists teachers guides are provided free of charge to classroom teachers, parents, and students. Each guide contains a brief summary of the article, suggested independent reading levels, word count, materials list, estimates of preparation and instructional time, academic standards applications, preview strategies and study questions overview, adaptations for special needs students, assessment options, extension activities, Web resources (including related Conservation Volunteer *articles), copy-ready study questions with answer key, and a copy-ready vocabulary sheet. There is also a practice quiz (with answer key) in Minnesota Comprehensive Assessments format. Materials may be reproduced and/or modified a to suit user needs. Users are encouraged to provide feedback through an online survey at www.dnr.state.mn.us/education/teachers/activities/ynstudyguides/survey.html. Note: this guide is intended for use with the PDF version of this article.*

Summary

"Let's Go Birding!" is an excellent introduction to a popular hobby, birdwatching. Readers are given identification tips, such as body shape, size, color, habitat, and range. Basic bird behavior, use of field guides, and birding equipment are described. An eye-catching "Identify This Bird" quiz leads the reader through the article, with answers provided at the end. "Let's Go Birding!" may be introduced in the fall and returned to in winter and spring as bird numbers and species in your area change.

Suggested reading levels: Fourth through eighth grades; may appeal to some younger and older readers

Total words: 1,690

Materials: Pencils, colored pencils, drawing paper, field guides, and other bird resources from your media center

Preparation time: Approximately one hour

Estimated instructional time: Two 50-minute class periods (not including extensions)

Minnesota Academic Standards applications: "Let's Go Birding!" may be applied to the following Minnesota Department of Education Academic Standards:

Language Arts

I. Reading and Literature
- A. Word Recognition, Analysis and Fluency
- B. Vocabulary Expansion
- C. Comprehension

II. Writing
- A. Types of Writing
- B. Elements of Composition
- C. Spelling
- D. Research
- E. Handwriting and Word Processing

III. Speaking, Listening and Viewing
- A. Speaking and Listening
- B. Media Literacy

Science

Grades 4 and 7

IV. Life Science
- B. Diversity of Organisms

Mathmatics

IV. Data analysis, statistics and probability
- A. Data and statistics

Minnesota History and Social Studies

V. Geography Grades 4–8
- D. Interconnections

Arts: Artistic Expression: Visual Arts

Complete Minnesota Academic Standards are available at www.education.state.mn.us. Teachers who find other connections to standards are encouraged to contact *Minnesota Conservation Volunteer.*

Preview

Give your class a reason for reading the article. It might fit into a theme or a unit. Does it help meet an academic standard? Is it an interest of yours that you want to share with your students? Begin your discussion by brainstorming, either in small groups or as a class, the different species of birds your students have observed. Keep your class list on display and add species as students become more aware of birds. Following your brainstorming session, categorize the species according to size, habitat,

seasonal migration patterns, diet, behavior, and any other characteristics your students can think of. Now you have a good body of knowledge to build on. Next make a list of questions students have about birds. Refer to these questions as you discover answers in the article, while working on the activities, during field trips, or while working on the Internet. Vocabulary words are transparency-ready. There are a variety of ways to introduce vocabulary words. Ask cooperative groups to match words to definitions. Show the words on your overhead and ask the class to brainstorm definitions. Make a list for each reader or small group and ask students to find the words as they read the story. Encourage them to use context to discover meanings.

Consult your media specialists for books, posters, and other resources that can be displayed in the room in preparation for reading the article. Another excellent source of information is the Minnesota Department of Natural Resources Nongame Wildlife Program (see Webr resources).

Study questions overview

Study questions parallel the story. The answer to the first question appears first in the article, followed by the second, and so on. This is an important organizational tool for students and should be emphasized before you begin working on the study questions. Preview the questions with your class before you read the article. You may wish to read the article aloud and complete the study questions in class or in small groups. The questions may be assigned as homework, depending on the reading ability of your students. Inclusion teachers may provide more direct support to special needs students (see Adaptations section). Some or all of the study questions may also be used as a quiz.

Adaptations

Read aloud to special needs students. Abbreviate the study questions or highlight priority items to be completed first. If time allows, students may attempt remaining items. For example, items 1, 2, 3, 5, and 8 are a good cluster of questions to start with. Peer helpers, paraprofessionals, or adult volunteers may lend a hand with the study guide. Cooperative groups can also offer effective support to special needs students.

Assessment

You may use all or part of the study questions, combined with vocabulary, as a quiz. You might ask students to pick a bird species and develop a portfolio of facts, artwork, and writing. Individuals or groups may make oral presentations. For example, assign a habitat and season and ask individuals or groups to find out which species are most likely to be observed there. Ask students to write about specific species.

Extension activities

1. Take a field trip to an area where you can observe a variety of species. Divide students into groups of three or four and conduct a bird count. You can do several basic statistical calculations and graph your results (see Web resources). Return to the same area in fall and winter, or winter and spring to see seasonal variations in species populations. State park

or nature center naturalists can help arrange field experiences at little or no cost.

If it is not possible to take field trips, students may collect the same information at their backyard bird feeders and in habitats near their homes.

Inexpensive software is available from Wildlife Counts (see Web resources) that will allow you to simulate bird and wildlife counts in your classroom.

2. Contact The Raptor Center at the University of Minnesota (612-624-4745; www.raptor.cvm.umn.edu/raptor/education/migratetoyou/home.html) for names of rehabilitation specialists in your area. You may be able to arrange a classroom visit from a rehabilitator with live birds.
3. Your local chapter of the Audubon Society is an excellent resource for guest speakers and materials. The annual Audubon Christmas Bird Count may provide materials and ideas for the first Extension Activities item.
4. Go to the zoo. Ask for a species list before your visit so you can preview the exotic birds you will see.
5. Declines in bird populations are often early indicators of ecological imbalance. For example, logging and farming in Central and South America are affecting migratory bird populations in Minnesota. Pick a species, such as the ruby-throated hummingbird, and do a research project on loss of habitat and its effect on population.
6. Contact the Minnesota Ornithologists Union (moumn.org) for information.
7. Introduce your students to the study of life cycles through the phenology Web site listed below.

Web resources

National Audubon Society
www.audubon.org
www.audubon.org/bird/cbc (Christmas Bird Counts)
www.birdsource.org

Minnesota Species Profiles
www.dnr.state.mn.us/snapshots/birds

Birding
www.birder.com

DNR Nongame Wildlife Program
www.dnr.state.mn.us/ecological_services/nongame

The Raptor Center
www.raptor.cvm.umn.edu

Sierra Club
www.sierraclub.org/e-files/birding.asp

Phenology
www.sws-wis.com/lifecycles

Wildlife Counts simulations
www.wildlifecounts.com

Many related *Conservation Volunteer* articles are available online at www.dnr.state.mn.us/volunteer/articles. Some more recent articles about birds include:

September–October 2006
"Catch a Wave of Warbleres"
www.dnr.state.mn.us/volunteer/sepoct06/warblers.html
March–April 2006
"Brushland Dervishes"
www.dnr.state.mn.us/volunteer/marapr06/brushland_dervishes.html
"The Hole Story"
www.dnr.state.mn.us/young_naturalists/cavity_nesters
January–February 2004
"The Nature of Feathers"
www.dnr.state.mn.us/young_naturalists/feathers
November–December 2003
"Land Use: A Bird's-Eye View"
www.dnr.state.mn.us/volunteer/novdec03/birdseyeview.html
March–April 2003
"Till the Birds Come Home"
www.dnr.state.mn.us/volunteer/marapr03/birds.html
"Let's Go Birding"
www.dnr.state.mn.us/young_naturalists/birding
"Return of the Osprey"
www.dnr.state.mn.us/volunteer/marapr03/osprey.html
January–February 2003
"Flying to Freedom" (Close Encounters)
www.dnr.state.mn.us/volunteer/janfeb03/falconry.html
November–December 2002
"Farewell to a Young Loon"
www.dnr.state.mn.us/volunteer/novdec02/closeencounters.html
"Turkeys North"
www.dnr.state.mn.us/volunteer/novdec02/turkeysnorth.html
"103 Bird Years and Counting"
www.dnr.state.mn.us/volunteer/novdec02/birdyears.html

References

1. Ogle, D.S. K-W-L Group Instructional Strategy. In A.S. Palincsar, D.S. Ogle, B.F. Jones, and E.G. Carr (Eds.), Teaching Reading as Thinking: Teleconference Resource Guide, pp. 11–17. Alexandria, Va.: Association for Supervision and Curriculum Development, 1986.

Study Questions

"Let's Go Birding!" by Blane Klemek. Illustrations by Ron Finger
Minnesota Conservation Volunteer, March–April 2003
www.dnr.state.mn.us/young_naturalists/birding

Name_____Period_____Date_____

1. If you are going birding, what are you are doing? _____

_____

2. Why would it take you a long time to see all the species of birds in Minnesota? _____

_____

3. Describe some clues that might help you identify different species of birds. _____

_____

4. How can you tell a downy woodpecker from a hairy woodpecker? _____

_____

5. How can a range map help you identify a bird? _____

_____

6. What can you learn about the birds in your area by watching your bird feeder? _____

_____

7. Why is it important to provide different kinds of foods at your feeders? _____

_____

_____

8. Why is Minnesota such a great state for birding? _____

_____

_____

9. At zoos you often see exotic species of birds. What does exotic mean? Give an example of an exotic bird._____

_____

_____

10. Explain how a field guide can help you become a better birder. _____

_____

11. Some guides have silhouettes. What are silhouettes and why are they important? _____

_____

_____

12. If you're interested in taking up birding as a hobby, what equipment might you need? ____

_____

_____

13. Start your own species checklist. How many species have you seen? _____

14. Draw a bird you have seen and use colored pencils to show its field markings. You may want to include its habitat or its mate, or show it eating something.

Study Questions Answer Key

"Let's Go Birding!" by Blane Klemek. Illustrations by Ron Finger
Minnesota Conservation Volunteer, March–April 2003
www.dnr.state.mn.us/young_naturalists/birding

1. If you are going birding, what are you are doing? **Watching/identifying birds, listening to their songs or calls, recording species on a list.**

2. Why would it take you a long time to see all the species of birds in Minnesota? **There are so many—428 species.**

3. Describe some clues that might help you identify different species of birds. **Body shape, size, color, field markings, behavior, habitat, range.**

4. How can you tell a downy woodpecker from a hairy woodpecker? **The downy is much smaller, with a shorter bill.**

5. How can a range map help you identify a bird? **It shows where the bird you are looking for is likely to be found and in which season.**

6. What can you learn about the birds in your area by watching your bird feeder? **Species, behavior, diet, population.**

7. Why is it important to provide different kinds of foods at your feeders? **Different species have different diets, so if you provide a variety of foods you will attract a variety of birds.**

8. Why is Minnesota such a great state for birding? **Minnesota has many different kinds of habitat. There are also many good places to watch birds, from your back yard to Minnesota's 66 state parks and six recreation areas.**

9. At zoos you often see exotic species of birds. What does exotic mean? Give an example of an exotic bird. **Exotic means from another country, not native. Examples are the ostrich, emu, parrot, penguin, and others. The house sparrow is an exotic bird you can see in your own back yard.**

10. Explain how a field guide can help you become a better birder. **Pictures help with identification and show differences between males and females of a species, seasonal changes in plumage, key field markings, and ranges.**

11. Some guides have silhouettes. What are silhouettes and why are they important? **They show body outline or shape. Sometimes you get only a brief glimpse of a bird.**

12. If you interested in taking up birding as a hobby, what equipment might you need? **Sunglasses, bug spray, cap, field, and backpack.**

13. Start your own species checklist. How many species have you seen? **Answers will vary.**

14. Draw a bird you have seen and use colored pencils to show its field markings. You may want to include its habitat or its mate, or show it eating something. **Drawings will vary.**

Minnesota Comprehensive Assessments Practice Items

"Let's Go Birding!" by Blane Klemek. Illustrations by Ron Finger
Minnesota Conservation Volunteer, March–April 2003
www.dnr.state.mn.us/young_naturalists/birding

Name_____Period_____Date_____

1. Why are color and pattern of feathers good details for birders to observe?
   A. It is a way to tell male from female birds.
   B. Color and pattern is often the most noticeable detail.
   C. A and B.
   D. Color and pattern can indicate how rare the species is.

2. Which species of bird often eats while hanging upside down?
   A. Common crow
   B. Blue jay
   C. Mallard
   D. White-breasted nuthatch

3. Information found in a field guide includes
   A. spring and fall plumage.
   B. preferred habitat.
   C. body length and wingspan.
   D. all of the above.

4. The most powerful binoculars are often not the best for birding because
   A. they fog up easily.
   B. they are too heavy and difficult to hold steady.
   C. they are hard to find in stores.
   D. there is too much glare.

5. Minnesota has _____ species of birds.
   A. 4,028
   B. 48
   C. 428
   D. 8,042

Minnesota Comprehensive Assessments Practice Items Answer Key

"Let's Go Birding!" by Blane Klemek
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www.dnr.state.mn.us/young_naturalists/birding

1. Why are color and pattern of feathers good details for birders to observe? **C. A. It is a way to tell male from female birds; and B. Color and pattern is often the most noticeable detail.**
2. Which species of bird often eats while hanging upside down? **D. White-breasted nuthatch**
3 Information found in a field guide includes **D. all of the above.**
4. The most powerful binoculars are often not the best for birding because **B. they are too heavy and difficult to hold steady.**
5. Minnesota has **C. 428** species of birds.

Vocabulary

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www.dnr.state.mn.us/young_naturalists/birding

birding	observing and identifying birds
distinguish	tell apart
exotic	from another country, unusual
grooming	cleaning feathers and other body parts
habitat	place a bird is commonly found
identical	exactly the same
plumage	feather color and pattern
posture	position of body
range	where birds migrate from season to season
silhouette	body outline or shape
species	similar birds that reproduce with one another
suet	animal fat, usually from cows