

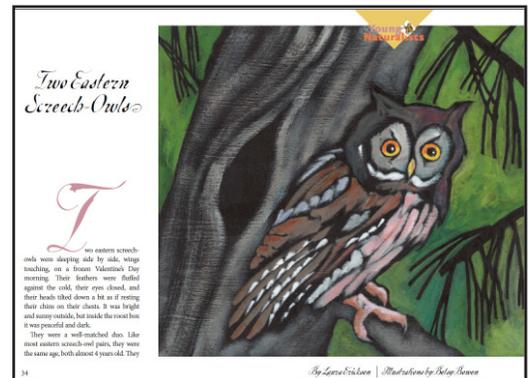
Teachers Guide

Prepared by Jack Judkins, curriculum consultant, Bemidji, Minnesota

“Two Eastern Screech-Owls” Multidisciplinary Classroom Activities

Teachers guide for the Young Naturalists article “Two Eastern Screech-Owls” by Laura Erickson with illustrations by Betsy Bowen. Published in the November-December 2011 *Minnesota Conservation Volunteer*, or visit www.mndnr.gov/young_naturalists/screech_owls.

Young Naturalists teachers guides are provided free of charge to classroom teachers, parents, and students. This 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 and vocabulary study cards. 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.mndnr.gov/education/teachers/activities/ynstudyguides/survey.html. If you are downloading articles from the website, please note that only Young Naturalists articles are available in PDF.

Summary

In this story the reader gets an early-spring glimpse of a nesting pair of eastern screech-owls. Students will learn about nesting and hunting behavior patterns, as well as about how these interesting birds raise their young.

Suggested reading levels:

Intermediate through middle/junior high school grades

Total words:

1,272

Materials:

Paper, poster board, colored pencils, crayons, pens, markers, as well as print and online resources your media specialist may provide

Preparation time:

One to two hours, not including time for extension activities

Estimated instructional time:

One or two 50-minute class periods (not including extensions)

“Two Eastern Screech-Owls”—Teachers Guide

Minnesota Academic Standards applications:

“Two Eastern Screech-Owls” may be applied to the following Minnesota Department of Education standards:

Language Arts

Reading Benchmarks

Informational Text K–5; 6–12

Key Ideas and Details
Craft and Structure
Integration of Knowledge and Ideas
Range of Reading and Level of Text Complexity

Foundational Skills K–5

Phonics and Word Recognition
Fluency

Writing Benchmarks K–5; 6–12

Text Types and Purposes
Writing Process (6–12:
Production and Distribution of Writing)
Research to Build and Present Knowledge
Range of Writing

Speaking, Viewing, Listening and Media Literacy Benchmarks K–5

Comprehension and Collaboration
Presentation of Knowledge and Ideas
Media Literacy

Language Benchmarks K–5

Conventions of Standard English
Knowledge of Language
Vocabulary Acquisition and Use

Reading Benchmarks: Literacy in Science and Technical Subjects 6–12

Key Ideas and Details
Craft and Structure
Integration of Knowledge and Ideas
Range of Reading and Level of Text Complexity

Writing Benchmarks: Literacy in History/Social Studies, Science and Technical Subjects 6–12

Text Types and Purposes
Writing Process: Production and Distribution of Writing
Research to Build and Present Knowledge
Range of Writing

Science

Grade 3

3.4.1.1.1: Structure and Function in Living Systems
3.4.3.2.2: Evolution in Living Systems

Grade 5

5.4.1.1.1: Structure and Function in Living Systems
5.4.2.1.2: Interdependence Among Living Systems

Grade 7

7.4.2.1.1; 7.4.2.1.2; 7.4.2.1.3;
7.4.2.2.1; 7.4.2.2.2; 7.4.2.2.3:
Interdependence Among Living Systems
7.4.3.2.3: Evolution in Living Systems

Arts

Grades K–12

1. Artistic Foundations: Visual Arts
2. Artistic Process: Create or Make: Visual Arts
3. Artistic Process: Perform or Present: Visual Arts
4. Artistic Process: Respond or Critique: Visual Arts

Language Arts standards were undergoing a major revision at the time this article was published. Format and content will change significantly. 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.

“Two Eastern Screech-Owls”—Teachers Guide

Preview Before students survey the article, display photos of screech owls, a mounted specimen, or, if possible, a live owl (see Web Resources). Follow with the **KWL** strategy (Ogle, 1986) to find out what your students already know (**K**) about owls, what they would like to learn (**W**); and eventually what they learned (**L**) while reading the article and related materials and through participating in extension activities. You might begin by asking small groups to brainstorm their ideas. Then combine the groups’ data to make a class list. Display your **K** and **W** ideas on poster board or paper (see Vocabulary preview). Add to your **L** list as you read and discuss the article. See www.teach-nology.com/web_tools/graphic_org/kwl for a KWL generator that will produce individual organizers for your students, which may also be used to record answers to **W** questions. KWL gives you the opportunity to introduce interdisciplinary connections you will make during extension activities. If you use the article in science or art class, you may wish to focus your prereading discussion on academic standards that apply for that class.

Another strategy for accessing prior knowledge is a brainstorming web. You may download a printable web at www.teachervision.fen.com/tv/printables/TCR/0743932080_007.pdf.

Vocabulary preview See the copy-ready vocabulary list included in this guide. You may wish to modify the list based on your knowledge of your students’ needs or the subject you are teaching. Pretesting vocabulary individually, in small groups, or with your entire class can be an effective vocabulary preview strategy. You may then post-test at the conclusion of this activity (see Assessment section below).

You may wish to use the study cards found at the end of this guide. Cut along the horizontal line; fold in the middle, and tape or staple. Study cards (see *Strategic Tutoring*, Hock, Deshler, and Schumaker 2000) can be applied to any subject area. On one side of the card, in large letters, write a key word or phrase students are expected to know. In smaller letters, frame the word or phrase in a question or statement. On the other side of the card, in large letters, write the answer to the question. Finally, in smaller letters, frame the answer in a question or statement. Blanks are provided to allow you or your students to add new words or phrases.

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). Preview the entire guide with your class before you read the article. You may wish to read the story aloud and complete the study questions in class, in small groups, or as an independent activity. 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). The study questions may be also used as a quiz. Note: Items 1, 3, 8, 10, 12 and the Challenge require varying degrees of critical thinking.

Adaptations Read aloud to special needs students. Abbreviate the study questions or highlight priority items to be completed first. If time allows, remaining items may be attempted. Peer helpers, paraprofessionals, or adult volunteers may lend a hand with the study questions. With close teacher supervision, cooperative groups can also offer effective support to special needs students, especially for extension activities.

Assessment You may use all or part of the study guide, combined with vocabulary, as a quiz. Other assessment ideas include: (1) Students may write an essay describing one or more of the main ideas in the article. For example, essays could focus on mating and reproduction, nesting, hunting, interactions with other birds, or physical/behavioral

Assessment continued

adaptations. (2) Students may write multiple-choice, true-false, or short-answer questions. Select the best items for a class quiz. (3) Poster presentations may supplement or take the place of the essays. Students may work in small groups with each group member focusing on a different main idea. (4) Have students complete the main idea and supporting details activity found at www.teachervision.fen.com/tv/printables/scottforesman/Math_2_TTM_25.pdf. You or your students can select main ideas. If you wish to include more than two main ideas, use more than one sheet.

Extension activities

1. Invite a DNR nongame biologist to visit your classroom to present information about eastern screech owls. See www.dnr.state.mn.us/eco/nongame/index.html. Organizations listed in Web Resources below do presentations with live raptors.
2. The *Volunteer* has published several articles about owls you may wish to bundle with this article. See Related Articles.
3. Challenge students to learn more about owl adaptations. See Web Resources. Adaptations can be related to climate change as owls extend their range to find food or favorable weather.
4. Challenge students to write and illustrate haiku poems about spring, owls, their prey, and their habitats. See www.wikihow.com/Write-a-Haiku-Poem for excellent step-by-step haiku instructions with accompanying video.
5. Use this article in your life science unit on evolution to explore how plants and animals adapt to environmental conditions.
6. Dissect owl pellets and catalog the contents. See Web resources. This works well as a partners activity. Glue pellet contents to top half of black paper with inventory sheet attached to bottom for an effective classroom display.
7. There are several species of birds mentioned in the article. Challenge students to draw scenes from the story that feature one or more species. See poster presentations in Assessment section above.

Web resources

Minnesota DNR

www.dnr.state.mn.us/eco/nongame/index.html
www.dnr.state.mn.us/snans/index.html
www.dnr.state.mn.us/nature_viewing/index.html

Owl Adaptations

www.worldofowls.com/whatareowls.htm
www.owlpages.com/articles.php?section=Owl+Physiology&title=Feathers
www.seaworld.org/animal-info/info-books/raptors/adaptations.htm

Owl Pellets

www.kidwings.com/owlpellets/flash/v4/index.htm
www.biologycorner.com/worksheets/owlpellet.html
www.hometrainingtools.com/owl-pellet-dissection-project/a/1244/
www.hawkquest.org/TA/XL/Pellet.pdf

Owls of Minnesota

www.dnr.state.mn.us/birds/index.html
www.raptor.cvm.umn.edu/EducateandLearn/AboutRaptors/home.html

**Web resources
continued**

Live Owls in Your Classroom

www.hscbemidji.org/
www.audubon-center.org/
www.raptor.cvm.umn.edu/
www.lloydjohnsonfoundation.org/what_we_fund/index.php?page=Hawk-Ridge
www.smm.org/warnernaturecenter/outreach
www.mnzoo.com/education/education_zoomobile.asp

Other Birds in this Article

www.allaboutbirds.org/guide/Downy_Woodpecker/id
www.allaboutbirds.org/guide/Pileated_woodpecker/lifehistory
www.allaboutbirds.org/guide/European_Starling/id
www.allaboutbirds.org/guide/American_Crow/id
www.allaboutbirds.org/guide/Blue_jay/id
www.allaboutbirds.org/guide/Black-capped_Chickadee/id
www.allaboutbirds.org/guide/Northern_flicker/id

Minnesota DNR Teacher Resource

www.mndnr.gov/education/teachers/index.html

Note: All websites were active at the time of this guide’s publication. However, some may no longer be active when this guide is accessed.

Related articles

In addition to the related articles listed below, every *Minnesota Conservation Volunteer* article published since 1940 is now online in searchable PDF. See: webapps8.dnr.state.mn.us/volunteer_index.

September-October 1992

“Awesome Owls”

www.dnr.state.mn.us/young_naturalists/awesomeowls/index.html (YN article)

March-April 1994

“Baby Birds of Minnesota”

www.dnr.state.mn.us/young_naturalists/babybirds/index.html (YN article)

January-February 1995

“What’s Making a Racket?” (YN article)

www.dnr.state.mn.us/young_naturalists/woodpeckers/index.html

January-February 2001

“Scampering Mammals”

www.dnr.state.mn.us/young_naturalists/scamperingmammals/index.html (YN article)

March-April 2001

“Whoooo’s Watching?”

www.dnr.state.mn.us/young_naturalists/owladventures/index.html (YN article with teachers guide)

“Two Eastern Screech-Owls”—Teachers Guide

Related articles continued

January-February 2004

“The Nature of Feathers”

www.dnr.state.mn.us/young_naturalists/feathers/index.html (YN article with teachers guide)

March-April 2006

“The Hole Story”

www.dnr.state.mn.us/young_naturalists/cavity_nesters/index.html (YN article with teachers guide)

January-February 2011

“The Greatest of Feet”

www.dnr.state.mn.us/young_naturalists/feet/index.html (YN article with teachers guide)

March-April 2011

“Northern Saw-Whet Owl 10-583”

www.dnr.state.mn.us/young_naturalists/saw_whet_owl/index.html (YN article with teachers guide)

References

Hock, M.F., Deshler, D.D., and Schumaker, J.B. *Strategic Tutoring*. Lawrence, Kan.: Edge Enterprises, 2000.

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

Teachers guide for the Young Naturalists article “Two Eastern Screech-Owls” by Laura Erickson with illustrations by Betsy Bowen. Published in the November-December 2011 *Minnesota Conservation Volunteer*, or visit www.mndnr.gov/young_naturalists/screech_owls.

1. During what month does this story begin? _____
 2. Why do you suppose the woodpecker chose the owls’ nest box for a drum? _____

 3. Why do owls spit up their pellets? _____

 4. The male owl shared the mouse he caught on a blustery night with his mate. Why? _____

 5. Why do owls prefer cavities in trees to man-made nesting boxes? _____

 6. What did male owl do that led the writer to guess that the owl preferred a particular nest site?

 7. The owls’ restlessness was explained by _____
_____.
 8. What do screech owls and starlings have in common? _____

 9. The owls were not nesting in their ideal location because _____

 10. Why was a spot close to the zoo a good location? _____

 11. Explain why the color of a screech owl’s plumage is important. _____

 12. Why do you suppose the blue jay was alarmed by the owls? _____

 13. What is preening, and why is it an important owl behavior? _____

 14. How long can eastern screech owls live? _____
- Challenge:* If you were a baby screech owl, what factors would affect your chances of growing to adulthood? _____

Study Questions Answer Key

Teachers guide for the Young Naturalists article “Two Eastern Screech-Owls” by Laura Erickson with illustrations by Betsy Bowen. Published in the November-December 2011 *Minnesota Conservation Volunteer*, or visit www.mndnr.gov/young_naturalists/screech_owls.

1. During what month does this story begin? **Valentine’s Day is in February.**
 2. Why do you suppose the woodpecker chose the owls’ nest box for a drum? **It made a loud noise.**
 3. Why do owls spit up their pellets? **Answers may vary. They spit up what they cannot digest.**
 4. The male owl shared the mouse he caught on a blustery night with his mate. Why? **His hormone levels were changing. Perhaps he wanted his mate to be strong for the breeding season.**
 5. Why do owls prefer cavities in trees to man-made nesting boxes? **Tree cavities stay more humid and are better insulated against temperature changes.**
 6. What did the male owl do that led the writer to guess that the owl preferred a particular nest site? **He stored two mice there, which let his mate know he liked that nest cavity.**
 7. The owls’ restlessness was explained by **changing hormone levels.**
 8. What do screech owls and starlings have in common? **They are both birds, and they both nest in cavities made by other birds.**
 9. The owls were not nesting in their ideal location because **a storm had blown down the tree in which the nest was.**
 10. Why was a spot close to the zoo a good location? **It was close to a reliable food source (mice that came to feed from the zoo animals’ food troughs).**
 11. Explain why the color of a screech owl’s plumage is important. **Gray feathers provide good insulation against cold weather.**
 12. Why do you suppose the blue jay was alarmed by the owls? **Perhaps the blue jay recognized the owls as predators.**
 13. What is preening, and why is it an important owl behavior? **Preening is grooming with the beak. Birds gently pull their feathers through their beaks. Mutual preening helps owls bond to one another.**
 14. How long can eastern screech owls live? **Wild screech owls have been known to survive for 14 or more years.**
- Challenge:* If you were a baby screech owl, what factors would affect your chances of growing to adulthood? **Answers may vary, but should include: the availability of food, the size of the chick (smaller chicks may not be fed), and the location of the nest (urban vs. rural).**

Minnesota Comprehensive Assessments Practice Items

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Name _____ Period _____ Date _____

1. Eastern screech owls’ primary prey is

- A. frogs.
- B. mice.
- C. snakes.
- D. rabbits.

2. Chickadees nest in

- A. old barns.
- B. attics.
- C. cavities.
- D. none of the above

3. Eastern screech owl males and females are about the same size.

- A. True
- B. False

4. Owl pellets contain

- A. fur, teeth, and bones.
- B. nuts and seeds.
- C. indigestible parts of prey animals.
- D. A and C.

5. Why can’t owl build their own nest cavities?

Minnesota Comprehensive Assessments Answer Key

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1. Eastern screech owls’ primary prey is **B. mice**.
2. Chickadees nest in **C. cavities**.
3. Eastern screech owl males and females are about the same size. **A. True**
4. Owl pellets contain **D. A and C**.
5. Why can’t owl build their own nest cavities? **Unlike woodpeckers, owls do not have beaks that are adapted for building nest cavities.**

Vocabulary

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calories	the energy units in food
cavities	hollow places
courting	trying to attract a mate
duo	a pair of closely related things
fledge	to become capable of flight
genetically	referring to characteristics that are inherited from parents
hormones	chemicals produced in one part of the body that send signals to cells in another part of the body
indigestible	not digestible
irritable	easily annoyed
plumage	color and pattern of a bird’s feathers
predation	the act of preying on (killing and eating) other animals
predators	animals that kill and eat other animals
skittish	nervous

“Two Eastern Screech-Owls”—Teachers Guide

Vocabulary Study Cards

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Cut along the horizontal lines, fold in the middle and tape or staple. Blanks are provided to allow you or your students to add new words or phrases.

What are
calories?

FOLD HERE

The energy units in food
are called

Nest **cavities**
are

FOLD HERE

Hollow places
where birds nest are called

When birds are
courting
they are

FOLD HERE

When birds are
trying to attract a mate
they are

What is a
duo?

FOLD HERE

A a pair of **closely**
related things is a

When baby birds
fledge they

FOLD HERE

When baby birds
learn to fly they

Genetically
refers to

FOLD HERE

**Characteristics, such as hair
or eye color, that are
inherited from parents
are transferred**

Hormones are
chemicals produced in one
part of the body that

FOLD HERE

Chemicals produced in one part of
the body that **send signals to cells in
another part of the body** are called

If a food is
indigestible
it is

FOLD HERE

If a food is
not digestible
it is called

To be
irritable
is to be

FOLD HERE

To be
easily annoyed
is to be

A bird’s
plumage
is the

FOLD HERE

What is a name for the
**color and pattern of a bird’s
feathers?**

Predation is

FOLD HERE

What is **the act of preying (killing
and eating) on other animals?**

Predators
are

FOLD HERE

What are **animals that kill and eat
other animals?**

To be
skittish
is to be

FOLD HERE

To be
nervous
is to be

FOLD HERE