

Teachers Guide

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“The Parenting Game” Multidisciplinary Classroom Activities

Teachers guide for the Young Naturalists article “The Parenting Game,” by Jan Welsh. Published in the March–April 2005 *Minnesota Conservation Volunteer*, or visit www.dnr.state.mn.us/young_naturalists/parenting.

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 Minnesota Conservation Volunteer articles), copy-ready study questions with answer key, and a copy-ready vocabulary sheet. There is also a practice quiz in Minnesota Comprehensive Assessments format. Materials may be reproduced and/or modified 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.



Summary

“The Parenting Game” describes the parenting strategies of a variety of mammals, birds, insects, reptiles, and amphibians, including the black bear, duck, stinkbug, and painted turtle. The importance of habitat as shelter and protection from predators links this article to other important environmental issues, such as wetlands preservation, prairie restoration, and shoreland protection (see extension activities).

Suggested reading levels:

Upper elementary through middle school

Total words: 1,867

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Materials: Paper, poster board, pencils, pens, markers, and resources from your media center.

Preparation time: One to two hours, not including time for extension activities

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

Minnesota Academic Standards applications: “The Parenting Game” may be applied at the upper-elementary through middle school 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

Grade 5: IV Life Science

- E. Biological Populations Changes Over Time

Grade 7: IV Life Science

- D. Heredity
- E. Biological Populations Changes Over Time

Social Studies

Grades 4–8: V Geography.

- D. Interconnections: Analysis of Cultural Variation

Arts

Artistic Expression: Visual Arts

Complete Academic Standards are available at www.education.state.mn.us.

Preview Begin your preview with a discussion of human parenting in various cultures. Challenge students to relate the length of time human children stay with their parents before living independently to the time offspring of other species stay with their parents.

Skim the article, taking note of photos and headings. You may wish to start a chart where you can record facts on various species. Categories might include: species, number of young, maturity at birth, parental attention to young, skills parents teach. Keeping important information accessible on poster board or large sheets of paper while you read the article helps many students, especially with writing activities. See

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www.graphic.org for many excellent examples of graphic organizers.

The **KWL** (Ogle, 1986) strategy may be used to organize thoughts about parenting. Brainstorm as a class or in small groups to find out what students already know (**K**) about parenting. Next, discuss what students want (**W**) to learn (or wonder) about parenting. As you complete the lesson, build a list of what they learned (**L**). Display your **K** and **W** ideas on poster board while you work with the article. Complete the **L** component as you read the article and engage in extension activities. See www.teach-nology.com/web_tools/graphic_org/kwl for a ready-to-use **KWL** organizer.

Vocabulary preview

Preview the italicized words in the article and the vocabulary sheet at the end of this guide. Your vocabulary preview strategy will depend on the age and background knowledge of your students. You may preview all or some of these words; however, recognize that extended vocabulary preview may discourage some readers or frustrate those who are anxious to begin reading. If you wish, display some words on poster board so students may refer to them while you read the article. Vocabulary flashcards may also be useful

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 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 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). The study questions may be also used as a quiz. Please note that questions 2, 7, 8, 15, and 16 require inferential 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. For example, items 2, 4, 9, 13, 15, and 16 will give students some basic concepts of various parenting strategies. 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 questions, combined with vocabulary, as a quiz. Other assessment ideas: (1) Have students create a chart comparing and contrasting the parenting strategies described in the article. (2) Ask students to draw, color, and display posters of parents and young illustrating key concepts in the article (see Preview). (3) Assign

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an essay exam comparing and contrasting parenting behavior of two or more species. (4) Connect an extension activity to your evaluation. Allow students to present what they have learned to the class in an oral or poster presentation.

Extension activities

1. Encourage students to dig deeper into the parenting behavior of a species of their choice. Susan Allport’s excellent and readable book *A Natural History of Parenting: From Emperor Penguins to Reluctant Ewes, a Naturalist Looks at Parenting in the Animal World and Ours* will give them a good background from which to conduct further research.
2. Students may compare parenting behavior between humans and other species, and/or across cultures. A possible focus could be understanding the difference between instinctive and learned behavior. Another interesting possibility could focus on gender-specific behavior in various human cultures and other species. See Web resources and References, below. As a challenge, ask students to debate the importance of instinct in human behavior. To what extent, if any, do instincts exist in human behavior?
3. Take a field trip to a zoo to observe parent-offspring interactions.
4. Encourage students to share experiences they have had with pets or farm animals.

Web resources

Excellent lesson plans for grades 5–6

school.discovery.com/lessonplans/programs/animalinstincts

“Bringing Up Baby” under “Wildlife”

members.bellatlantic.net/~lilbun/tslibrary.html

Others

www.pbs.org/wnet/nature/baby

www.enchantedlearning.com/subjects/animals/Animalbabies

www.pbs.org/wgbh/nova/seahorse/superdads.html

Related *Conservation Volunteer* articles available online at

www.dnr.state.mn.us/volunteer/articles include:

July–August 2004

About Those Bears

www.dnr.state.mn.us/volunteer/julaug04/bears.html

March–April 2004

Magnificent Journey

www.dnr.state.mn.us/volunteer/marapr04/cranes.html

Special Delivery (Young Naturalists article with teachers guide)

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

Rookery Blues

www.dnr.state.mn.us/volunteer/marapr04/rookery.html

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The Slinky, Stinky Weasel Family (Young Naturalists article with teachers guide)

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

March–April 2001

Six Slippery Salamanders (Young Naturalists article with teachers guide)

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

References

Allport, Susan. *A Natural History of Parenting: From Emperor Penguins to Reluctant Ewes, a Naturalist Looks at Parenting in the Animal Worlds and Ours*. Harmony, 1997.

Levy, Sharon. “Parenting Paradox.” *National Wildlife*. 40(5): Aug./Sept. 2002. (Available on line at www.nwf.org/nationalwildlife/article.cfm?issueid=45&articleid=516.)

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.

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Study Questions

"The Parenting Game," by Jan Welsh

Minnesota Conversation Volunteer, March–April 2005

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

Name _____ Period _____ Date _____

1. Why did the young owl's parents not respond to its calls? _____

2. Animals with highly developed brains need lots of time to raise their young. Why? _____

3. How are baby eagles and baby rabbits alike. _____

4. Why is the habitat of grassland birds, such as upland sandpipers, so important in raising their young? _____

5. Why should you not disturb plants growing near the water? _____

6. How does temperature affect turtle eggs? _____

7. How does being born in winter help bear cubs survive? _____

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8. What do the words *incubate* and *insulate* have to do with baby birds? _____

9. Some insects put glue on their eggs. Why? _____

10. How do adult songbirds keep their nests clean while they are raising their young? _____

11. Is the color of the inside of baby birds' mouths important? Yes or no? Why or why not? _____

12. What does *regurgitate* mean? _____

What does it have to do with parenting? _____

13. Where do bluebottle flies lay their eggs? Why? _____

14. Explain why mother and father loons migrate south before their young do. _____

15. Sometimes animal parents act aggressively toward their young. Why? _____

16. Why is imprinting important? _____

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Study Questions Answer Key

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1. Why did the young owl’s parents not respond to its calls? **It wouldn’t learn how to find its own food if they continued to feed it.**
2. Animals with highly developed brains need lots of time to raise their young. Why? **It takes a long time to teach their young the skills they need to survive.**
3. How are baby eagles and baby rabbits alike? **They are both born with their eyes closed.**
4. Why is the habitat of grassland birds, such as upland sandpipers, so important in raising their young? **Tall grass gives the young a place to hide from predators.**
5. Why should you not disturb plants growing near the water? **Shoreline plants prevent erosion. When soil washes into the lake it destroys the spawning beds of fish.**
6. How does temperature affect turtle eggs? **Higher temps when the eggs are incubating mean more females will hatch. Lower temps produce more males.**
7. How does being born in winter help bear cubs survive? **Answers may vary, but should mention that cubs are protected when they are most vulnerable.**
8. What do the words incubate and insulate have to do with baby birds? **They both refer to keeping the eggs warm.**
9. Some insects put glue on their eggs. Why? **The glue keeps the eggs in a safe place until they hatch.**
10. How do adult birds songbirds keep their nests clean while they are raising their young? **They collect the nestlings’ droppings in a fecal sac and then take it out of the nest.**
11. Is the color of the inside of baby birds’ mouths important? **Yes.** Why or why not? **The bright color (pink) makes a good target for the parent.**
12. What does regurgitate mean? To throw up or vomit. What does it have to do with parenting? **Some birds and animals carry food to their nests or dens and then regurgitate it to feed their young.**
13. Where do bluebottle flies lay their eggs? Why? On dead animals. **The larvae, called maggots, eat the animal.**
14. Explain why mother and father loons migrate south before their young do. **The chicks need time to grow and become strong enough for the long journey.**
15. Sometimes animal parents act aggressively toward their young. Why? **It’s their way of telling their young to begin living on their own.**
16. Why is imprinting important? **Newborn animals and birds must quickly learn who their parents are.**

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Minnesota Comprehensive Assessments Practice Items

"The Parenting Game," by Jan Welsh

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

Name _____ Period _____ Date _____

- How does the parenting of insects differ from that of mammals?
 - Insects care for their young for many months.
 - Mammals do not make nests for their young.
 - Mammals care for their young for a long time.
 - Insects feed milk to their young
- Beaver kits usually live with their parents for _____.
 - one week.
 - two years.
 - one year.
 - 10 years
- Native prairie grasses should be preserved because _____.
 - 4 inches thick
 - 2 feet thick
 - 1 inch thick
 - blue-gray in color
- Mammal babies develop _____ their mothers, while baby birds develop _____ their mothers.
 - inside, inside
 - outside, outside
 - inside, outside
 - outside, inside
- A newly hatched goose following a young girl everywhere is an example of _____.
 - fledging.
 - imprinting.
 - regurgitating.
 - incubating

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Minnesota Comprehensive Assessments Practice Items Answer Key

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1. How does the parenting of insects differ from that of mammals? **C. Mammals care for their young for a long time.**
2. Beaver kits usually live with their parents for **B. two years.**
3. Native prairie grasses should be preserved because **A. they provide shelter from predators.**
4. Mammal babies develop **C. inside** their mothers, while baby birds develop **outside** their mothers.
5. Newly hatched goose following a young girl everywhere is an example of **B. imprinting.**

Vocabulary

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

excavate dig up

habitat a place where an animal normally lives

incubate to warm eggs by sitting on them

insulate to keep heat from escaping

larvae immature insects

native plant a plant originally found in a place

navigate find the way

nutritious food that is good for you

owlet, young birds
eaglet,
nestling

predator an animal that eats other animals

regurgitate to bring up partly digested food back to mouth