Young ists

Teachers Guide

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"The Slinky, Stinky Weasel Family," Multidisciplinary Classroom Activities

Teachers guide for the Young Naturalists article "The Slinky, Stinky Weasel Family," by Blane Klemek. Published in the May-June 2003 *Volunteer*, or visit www.dnr.mn.us/young_naturalists/weasels.

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.mdnr.gov/education/teachers/activities/ynstudyguides/survey.html.

Summary

Weasels comprise the largest family of carnivores on earth. Eight species inhabit Minnesota. Following a general description of weasels' physical characteristics and habits, the author provides a detailed look at each species, including short-tailed weasels, long-tailed weasels, least weasels, mink, American marten, fishers, river otters, and American badgers. He also looks at the wolverine, which once made its home in Minnesota. He concludes with a brief discussion of trapping and furs.

Suggested reading levels:

Upper elementary through ninth grade

Total words:

1,881

Materials: Pencils, colored pencils, drawing paper, tag board, research resources on Minnesota

mammals and the fur trade from your media center.

Preparation time: About one hour, not including extension activities

Estimated instructional time:

Two to three 50-minute class periods

Minnesota Academic Standards applications:

"The Slinky, Stinky Weasel Family" may be applied to the following Minnesota Department of Education standards:

I. Reading and LiteratureScienceA. Word Recognition, Analysis andGrade 4

Fluency

B. Vocabulary Expansion IV. Life Science

C. Comprehension F. Flow of Matter and Energy

Grades 7

II. Writing

A. Types of Writing IV. Life Science

B. Elements of Composition
 C. Spelling
 D. Research
 B. Diversity of Organisms
 C. Interdependence of Life
 F. Flow of Matter and Energy

E. Handwriting and Word Processing

Arts

III. Speaking, Listening and Viewing Artistic Expression

A. Speaking and Listening D. Visual Arts

B. Media Literacy

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

Preview

"The Slinky, Stinky Weasel Family" may be a useful addition to your language arts, social studies, or science curriculum; as a nonfiction reading activity; as a supplement to your Minnesota history text; as an example of predator-prey relationships; or as part of a study of natural selection of unique physical characteristics.

The KWL strategy (Ogle, 1986) is an excellent way to introduce the article. Begin by asking the entire class or small cooperative groups to brainstorm everything they Know about the weasel family. Next compile a list of questions (what we Want to know) about weasels. It is a good idea to compile K and W lists on large sheets of paper and display them while you are working on the article. Make a third sheet for what is Learned and add to it as students find the answers to their questions.

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. 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).

Connections to vocabulary in the article may also be made during KWL. If students are not familiar with some of the terms, include them in the W list. Other terms may be added to the W list as they read the article. Eventually they can be moved to the L list. You may write vocabulary from the article in green ink, while other ideas are written in black. Notes: Some of the words in the vocabulary list definitions may require further explanation. Also, preview the study questions for unfamiliar terms, such as mustelid and carnivore.

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 that 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

Questions in the study guide 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, explaining how it is organized. You may wish to read the story aloud and complete the study guide 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). Part or all of the study guide may be used as a quiz. Note: Items 3, 6, 8, 9, and 14 and the Challenge require varying degrees of analytical thinking.

Adaptations

Read aloud to special needs students. Abbreviate the study guide or highlight priority items to be completed first. If time allows, remaining items may be attempted. For example, items 1, 3, 4, 5, and 7 will give students a good base of knowledge about weasels. 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 guide, combined with vocabulary, as a quiz. Other assessment ideas: 1) Ask students to pick one species and develop a portfolio of researched facts, artwork, and writing. For example, students could write a descriptive paragraph of at least five sentences with an accompanying drawing of the species described. 2) Ask individuals or groups to make oral and/or written presentations. For example, a group could describe possible effects on prey animal populations and on other predators if weasels became extinct. 3) Assign students to make posters illustrating mustelid species in their ecological niches.

Extension activities

- 1. The ferret (Mustela nigripes) is a popular pet mustelid. If a student in your class keeps a ferret, invite the ferret to visit your classroom. A local pet shop might be willing to bring a ferret to school. There are several ferret Web sites listed below.
- 2. Weasels have an undeserved bad reputation. Ask your students to give you examples of how the word weasel is used. See the Web resources list below for an excellent article from the Buffalo News on the weasel's image. You may wish to expand your discussion to include other animals with image problems, such as the wolf, fox, coyote, and crow. How have their reputations affected how humans manage them?
- 3. Use this article to introduce your students to the science of taxonomy, or classification. Biology uses a system devised by the Swedish scientist Linnaeus. The words in parentheses behind the names of specific species are in Latin. Some students may be interested in learning how organisms are classified, then sharing what they have learned with their classmates.
- 4. Use this article to introduce your students to the study of mammals. One of the best sources of information on Minnesota mammals is Stan Tekiela's The Mammals of Minnesota (2005). Your media center may have a copy. The *Conservation Volunteer* has many articles on Minnesota mammals available at www.mndnr.gov/young_naturalists, or see the DNR's Nature Snapshots at www.mndnr.gov/snapshots/mammals.
- 5. Encourage your students to complete the crossword puzzle at the end of the article to reinforce the concepts you have introduced.

Web resources

Ferrets

www.ferrets-ferrets.com

Minnesota mustelids

www.mndnr.gov/snapshots/mammals

Weasels' reputation

www.acsu.buffalo.edu/~insrisg/nature/nw99/weasels.html

Least weasel

animaldiversity.ummz.umich.edu/accounts/mustela/m._ nivalis\$narrative.html

Mammals

www.upress.umn.edu/Books/H/hazard_mammals.html

Web resources continued

Smithsonian Museum, Mammals of the World

www.nmnh.si.edu/msw/

Mammals

www.nature.ca/notebooks/english/mammpg.htm

Related articles

Many related *Minnesota Conservation Volunteer* articles are available online at www.dnr.state. mn.us/volunteer/articles/index.html, including:

"Spring to Life Ponds" (YN article with teacher's guide)

May-June 2008

www.mndnr.gov/young_naturalists/ponds/index.html

"Big Brown Bat"

September-October 2003

www.mndnr.gov/volunteer/sepoct03/profile.html

"Prickle Pigs"

September-October 2001

www.mndnr.gov/young_naturalists/porcupines/index.html

"Scampering Mammals"

January-February 2001

www.mndnr.gov/young_naturalists/scamperingmammals/index.html

"American Marten"

January-February 2001

www.mndnr.gov/volunteer/janfeb01/martenprofile.html

"Eager Beavers"

July-August 1995

www.mndnr.gov/young_naturalists/beavers/index.html

"Wild Dogs"

March-April 1995

www.mndnr.gov/young_naturalists/wilddogs/index.html

"Shadow Tails"

November-December 1994

www.mndnr.gov/young_naturalists/squirrels/index.html

"Wildcats!"

January-February 1994

www.mndnr.gov/young_naturalists/wildcats/index.html

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.

Tekiela, S. *Mammals of Minnesota Field Guide*. Cambridge, MN: Adventure Publications, 2005.

Study Questions

Name	_Period	
1. Mustelids are the largest family of carnivores in the worl		
2. Members of two other large carnivore families are popul		
3. Mustelids are flexible. What does "flexible" mean? How	•	_
4. Why do mustelids have to eat so much?		
5. Give at least two example of how mustelids are well adap	oted to their enviro	onments.
6. How much was Dan paid per day?		
7. Explain "delayed implantation." Why is this is an import	ant adaptation?	
8.How do mustelids use musk?		

9. How is the least weasel unique among Minnesota species?
10. Compare and contrast the mink and American badger. On the back of this page, draw a Venn diagram (two partially overlapping circles). Write characteristics of the mink in the left circle, characteristics of the American badger in the right circle, and characteristics common to the two in the overlapping area.
11. The fisher is noted for hunting the porcupine. Describe its strategy
12. When was the last time a wolverine was seen in Minnesota? What does the Latin name for wolverine mean? Why would you want to avoid a wolverine if you encountered one in the forest?
13. Why is otter fur so valuable?
14. What is badger fur used for?
15. What is the most surprising or interesting fact you have learned about weasels?
16. <i>Challenge:</i> Weasels are solitary. Why is this an important adaptation?

Study Questions Answer Key

Teachers guide for the Young Naturalists article "The Slinky, Stinky Weasel Family," by Blane Klemek. Published in the May-June 2003 Volunteer, or visit www.dnr.mn.us/young_naturalists/weasels.

- 1. Mustelids are the largest family of carnivores in the world. What do carnivores eat? **Meat; other animals.**
- 2. Members of two other large carnivore families are popular family pets. What are they? Cats and dogs.
- 3. Mustelids are flexible. What does "flexible" mean? How does flexibility help weasels? **Bendable**; weasels can fit through small holes and down tunnels; some climb trees or swim.
- 4. Why do mustelids have to eat so much? Their long bodies do not store heat well; they stay active in winter, when it takes more energy to stay warm.
- 5. Give at least two example of how mustelids are well adapted to their environments. **Answers will vary: Fishers** and martens can climb trees. Badgers have strong legs and long claws for digging. Otters and mink are excellent swimmers.
- 6. Explain "delayed implantation." Why is this is an important adaptation? The female can delay giving birth in hard times by carrying her fertilized eggs until food is more plentiful and the weather is warmer, so young are more likely to survive.
- 7. How do mustelids use musk? To mark their territory and food caches; to attract a mate; to deter predators.
- 8. How is the least weasel unique among Minnesota species? It is the smallest carnivore in North American; it has the shortest tail of any weasel.
- 9. Compare and contrast the mink and American badger. On the back of this page, draw a Venn diagram (two partially overlapping circles). Write characteristics of the mink in the left circle, characteristics of the American badger in the right circle, and characteristics common to the two in the overlapping area. Many possible answers, including both are mustelids, fierce hunters, and carnivores; the badger is larger, preys on different animals than the mink, and lives in the forest as opposed to near wetlands.
- 10. The fisher is noted for hunting the porcupine. Describe its strategy. It attacks the porcupine's face until it is tired and dazed, then flips the porcupine over and attacks its belly or throat, where there are no quills.
- 11. When was the last time a wolverine was seen in Minnesota? What does the Latin name for wolverine mean? Why would you want to avoid a wolverine if you encountered one in the forest? **1899**; **Glutton**; **they are ferocious**.
- 12. Why is otter fur so valuable? It is valued for its luster, durability, and water resistance.
- 13. What is badger fur used for? Paintbrushes and shaving brushes.
- 14. What is the most surprising or interesting fact you have learned about weasels? **Answers will vary.**

Challenge: Weasels are solitary. Why is this an important adaptation? Answers will vary. Students may note the weasels' hunting strategies and conclude that weasels needs space apart from other weasels, which are also predators, to find enough prey to survive. Weasels' hunting strategies do not require cooperation, as do those of pack mammals, such as wolves.

Minnesota Comprehensive Assessments Practice Items

Name	Pe	riod	Date	
1. Mustelids burn	as much energy as do roun	d-bodied	small animals.	
A. 10 times	. .			
B. 5 times				
C. 4 times				
D. 2 times				
2. Mustelid feet are specially ada	apted for		·	
A. swimming				
B. climbing				
C. digging				
D. all of the above				
3. Why are river otters well adap	oted to northern Minnesota lake	es and rive	ers?	-
				_
4. If you took a vacation that bromight you see in all four statA. least weaselB. long-tailed weasel	• .	nsin, Iowa	, and Nebraska,	which weasel
C. short-tailed weasel				
D. wolverine				
5. How did the wolverine get its	Latin name?			
A. It is a dainty eater.				
B. It is a picky eater.				
C. It eats a lot of just about 6	everything.			
D. It originated in a Latin-sp	peaking country.			

Minnesota Comprehensive Assessments Answer Key

- 1. Mustelids burn **C. 4 times** as much energy as do round-bodied small animals.
- 2. Mustelid feet are specially adapted for **D. all of the above**.
- 3. Why are river otters well adapted to northern Minnesota lakes and rivers? **Answers will vary. Otters** can food easily in lakes and rivers. There are many lakes and rivers in northern Minnesota. Otters' bodies are well suited to a cold, semi-aquatic habitat.
- 4. If you took a vacation that brought you to Minnesota, Wisconsin, Iowa, and Nebraska, which weasel might you see in all four states? **B. long-tailed weasel**
- 5. How did the wolverine get its Latin name? C. It eats a lot of just about everything.

Vocabulary

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adaptation a trait of an organism that helps it get along in its

environment

carrion dead and decaying animals carcasses walk or move slowly

cavity hole or hollow space

ferocious fierce; savage

flexible bendable; able to change shape

hibernate sleep through the winter

kits baby weasels

mammal an animal that feeds its young milk and has skin covered

with hair

predators animals that kill and eat other animals

prey animals that predators kill and eat

rodents gnawing mammals, such as mice and rats

solitary preferring to be or live alone

Vocabulary Study Cards

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What is adaptation?	What is a trait of an organism that helps it get along in its environment called?
What is carrion?	What are dead and decaying animals' carcasses called?
What is a cavity ?	What is a hole or hollow space called?

Vocabulary Study Cards

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A ferocious animal is	A fierce or savage animal is
What does flexible mean?	When an animal is bendable or able to change shape it is
What does hibernate mean?	To sleep through the winter is to

Vocabulary Study Cards

Teachers guide for the Young Naturalists article "The Slinky, Stinky Weasel Family," by Blane Klemek. Published in the May-June 2003 *Volunteer*, or visit www.dnr.mn.us/young_naturalists/weasels.

What are kits?	Baby weasels are called
What is a mammal ?	What is an animal that feeds its young milk and has skin covered with hair called?
What are predators ?	Animals that kill and eat other animals are

Vocabulary Study Cards

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Prey animals are	Animals that are killed and eaten by other animals are
What are rodents?	Gnawing mammals, such as mice and rats are
To be solitary is to	To prefer to be or live alone is to be

Vocabulary Study Cards

Cut along the horizontal lines, fold on the dashed vertical line and tape or staple. Blanks are provallow you or your students to add new words or phrases.			rided to	
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