

TEACHERS GUIDE

TO “LITTLE STINKERS”

Multidisciplinary classroom activities based on the Young Naturalists nonfiction story in *Minnesota Conservation Volunteer*, November–December 2017, www.mndnr.gov/mcvmagazine.

Minnesota Conservation Volunteer magazine tells stories that connect readers to wild things and wild places. Subjects include earth science, wildlife biology, botany, forestry, ecology, natural and cultural history, state parks, and outdoor life.

Education has been a priority for this magazine since its beginning in 1940. “One word—Education—sums up our objective,” wrote the editors in the first issue. Thanks to the MCV Charbonneau Education Fund, every public library and school in Minnesota receives a subscription. Please tell other educators about this resource.

Every issue now features a Young Naturalists story and an online Teachers Guide. As an educator, you may download Young Naturalists stories and reproduce or modify the Teachers Guide. The [student portion of the guide](#) includes vocabulary cards, study questions, and other materials.

Readers’ contributions keep *Minnesota Conservation Volunteer* alive. The magazine is entirely financially supported by its readers.

Find every issue online. Each story and issue is available in a searchable PDF format. Visit www.mndnr.gov/mcvmagazine and click on *past issues*.

Thank you for bringing Young Naturalists into your classroom!

“LITTLE STINKERS”

Multidisciplinary classroom activities based on the Young Naturalists nonfiction story in *Minnesota Conservation Volunteer*, January–February 2018, www.mndnr.gov/mcvmagazine.



SUMMARY. “Little Stinkers” introduces Young Naturalists to the world of Minnesota skunks, describing how they live, what they eat, how they got their name, and how and why they make a stink.

SUGGESTED READING LEVELS. Third through middle-school grades

MATERIALS. KWL organizer, index cards, supplies for producing reports (paper, poster board, colored pencils, crayons, pens, markers, audio- or video recording equipment, etc.), YouTube videos (See Web Resources), and other print and online resources your media specialist may provide.

PREPARATION TIME. One to two hours, not including time for extension activities

ESTIMATED INSTRUCTION TIME. One or two 50-minute class periods (not including extensions)

MINNESOTA ACADEMIC STANDARDS APPLICATIONS. “Little Stinkers” may be applied to the following Minnesota Department of Education standards:

LANGUAGE ARTS READING BENCHMARKS INFORMATIONAL TEXT 3–8

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

WRITING BENCHMARKS 3–8 Text Types and Purposes, Writing Process, Research to Build and Present Knowledge, Range of Writing

READING BENCHMARKS: LITERACY IN SCIENCE AND TECHNICAL SUBJECTS 6–8

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 6–8

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

SCIENCE 3 AND 5

Life Science

3.4.1.1.1; 3.4.1.1.2; 3.4.3.2.1; 5.4.1.1.1

ARTS K–12

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

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

PREVIEW. When we think of skunks we often think of the musky spray they give off when threatened. But that’s just part of their fascinating story! You can use a **KWL** activity to find out students already know and would like to know about skunks. To come up with a “what we know” (**K**) list about skunks, divide the class into small groups to brainstorm their ideas. Give each student a copy of the organizer (see www.teach-nology.com/web_tools/graphic_org/kwl.) and encourage each to make notes during the group discussion. Ask what students would like to learn, or what questions they have (**W**), about skunks. Record their questions on poster board or a whiteboard for reference. As you read and discuss the article and do activities, record your new knowledge in the “what we learn” (**L**) list. 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 activity on academic standards that apply for that class.

VOCABULARY PREVIEW. You can find a copy-ready vocabulary list at the end of this guide. Feel free to modify it to fit your needs. Share the words with you students and invite them to guess what they think they mean. Tell them you will be reading a story that will help them understand these words so they can use them in the future!

You might wish to use the study cards (adapted from *Strategic Tutoring*) found at the end of the [Study Questions](#) for this Young Naturalists feature. On one half of the card, in large letters, is a

key vocabulary word or phrase with smaller letters framing the word or phrase in a question or statement. On the other half is the answer to the question or the rest of the statement. Cut along the horizontal line, fold in the middle, and tape or staple, then use like flash cards. We've included a few blanks so you or your students can add new words or phrases if you'd like.

STUDY QUESTIONS OVERVIEW. Preview the study questions with your class before you read the article. Then read the story aloud. Complete the study questions in class, in small groups, or as an independent activity, or use them as a quiz.

ADAPTATIONS. Read aloud to special needs students. Abbreviate the study questions or focus on items appropriate for the students. Adapt or provide assistance with extension activities as circumstances allow.

ASSESSMENT. You may use all or part of the study guide, combined with vocabulary, as a quiz. Other assessment ideas include: (1) Ask students to describe what they learned about skunks. See the "learned" list from your **KWL** activity. (2) Have students write multiple-choice, true-false, or short-answer questions based on the article. Select the best items for a class quiz. (3) Posters and presentations are an excellent strategy for allowing students to demonstrate what they have learned. To add variety and give students a chance to practice diverse skills consider using variations on traditional ways of reporting, such as having students interview each other, make mobiles displaying various skunk facts, produce audio or video recordings of their report, or create a web page about their subject.

EXTENSION ACTIVITIES. Extensions are intended for individual students, small groups, or your entire class. Young Naturalists articles provide teachers many opportunities to make connections to related topics, to allow students to follow particular interests, or to focus on specific academic standards.

1. The article mentions that Minnesota has two kinds of skunks, but one—the spotted skunk—is only rarely seen these days. Study the history of the spotted skunk in Minnesota. Where did it used to be more common? What reasons are given for its disappearance, while the spotted skunk remains ubiquitous?
2. Another name for skunk is "polecat." Break students into two or three teams for a compare-and-contrast exercise. How is a skunk like a housecat? How is it different? Combine the lists. How many of the answers were shared by the groups? How many were unique to one group or the other? Comment on how the exercise shows the value of brainstorming together and also of tapping diverse perspectives.
3. Look at the eyes of the skunk in the photo on page 36. Many nocturnal animals have a membrane in the back of their eye called a tapetum that causes their eyes to look like they're glowing when you shine a light at them. Use the Young Naturalists feature "Wild Vision" (see "Related MCV Articles" below) and other sources to learn more about this special feature, which animals have it, and how it helps them survive.
4. Read an American Indian story about skunks, or invite an American Indian storyteller

to your classroom to share a story about skunks from his or her culture of origin. Discuss why people tell stories about animals. See “Web Resources” below.

5. Invite students to use their imagination to make up a story about a skunk. For extra challenge, make a “noun jar”—a jar with slips of paper with a variety of nouns, such as father, chair, rainbow, and rock. Have students choose three slips of paper and challenge them to use the nouns in their story.

6. A group of skunks is a surfeit. Many other kinds of animals have “group names” also, from flock to herd to gaggle. Use the Young Naturalists feature “The Name Game” (see “Related Articles” below) and other resources to explore the wide range of names for skunks.

7. Rather than hibernating, skunks go into torpor, a state of slowing down. Learn about and then compare and contrast hibernation and torpor. Under what circumstances would one benefit an animal more than the other?

8. A skunk’s black-and-white stripes is an example of protective coloration—colors that help their owners survive by reducing the odds they will be harmed by another creature. Some protective coloration, known as camouflage, seeks to make the animal hard to see. In the case of the skunk, the protective coloration makes it very conspicuous. How does this type of color help a skunk survive? What other animals have this type of protective coloration? Use the Young Naturalists feature “Color by Nature” (see “Related MCV Articles” below) and other resources to explore protective coloration.

WEB RESOURCES

GENERAL TEACHER AND STUDENT RESOURCES

[Minnesota DNR Teachers’ Resources](#)

[DNR Kids Page](#)

ALL ABOUT SKUNKS

[Eastern Spotted Skunk \(Minnesota DNR\)](#)

[Striped Skunk \(Minnesota DNR\)](#)

AMERICAN INDIAN SKUNK STORIES

[Native American Skunk Mythology](#)

[Native American Mythology](#)

SKUNK SPRAY

[Ask Smithsonian: What Makes Skunk Spray Smell So Terrible?](#)

[Animalogic: The Science of Skunk Spray \(video\)](#)

WARNING COLORATION

[American Museum of Natural History: Warning Coloration in the Animal World \(video\)](#)

RELATED MCV ARTICLES*

[Color by Nature](#)

[Wild Vision](#)

[The Name Game](#)

[Spotted Skunk](#)

STUDY QUESTIONS ANSWER KEY

1. When does a skunk spray? **When it feels trapped by a larger animal**
2. How many skunk species live in Minnesota? **Two, the striped skunk and the spotted skunk**
3. What are three clues we can use to tell that a skunk is a mammal? **1) It has a fur coat 2) it is warm-blooded 3) it produces milk for its young.**
4. What do you call an animal that eats other animals?
 - a. herbivore
 - b. mammal
 - c. furbearer
 - d. carnivore**
5. What characteristic of a skunk do you think made scientists name it after the Roman goddess of volcanoes?
 - a. it gives off foul-smelling gases**
 - b. it lives underground
 - c. it has black and white strips
 - d. it eats dead things
6. Where do skunks go when the weather gets cold? **They hole up in a burrow underground, cuddling with other skunks to stay warm.**
7. How does torpor help a skunk survive? **It slows down the skunk's metabolism so it needs to burn less fat for energy.**
8. A male skunk is called a **buck**. A female skunk is called a **doe**. A baby skunk is called a **kit**.
9. True or false: Newborn skunks have stripes. **True. They don't have fur, but their skin is striped.**
10. How does play help a baby skunk survive? **It gives it a chance to practice skills it will need as an adult**
11. A group of skunks is called a:
 - a. herd
 - b. surfeit**
 - c. flock
 - d. pride

12. Name three things a skunk might eat. **Answers vary. Choices mentioned in the article include mice, grasshoppers, frogs, crayfish, nuts, fruits, garbage, dried corn, rotting meat, caterpillars, bird eggs, honey, crayfish, frogs, beetles, snails, and mice.**

13. What predator can easily get around skunks' defenses, and how does it do it? **A great horned owl can swoop down from above and surprise a skunk before it sprays. Even if the skunk does spray, the owl doesn't have much of a sense of smell, so the musk doesn't bother it.**

Challenge: The striped skunk's Latin name is *Mephitis mephitis*. Why do you think scientists give living things Latin names? Hint: The article mentions two other names for the skunk: skunk and *segankw*. **Different places and different cultures may refer to the same animal by different names. By giving living things Latin names, scientists all around the world can talk about the same species using a common language.**

MINNESOTA COMPREHENSIVE ASSESSMENTS ANSWER KEY.

1. Where do skunks live?

- a. on farms
- b. in towns
- c. in cities
- d. all of the above**

2. What sense are skunks most likely to use to find prey?

- a. sight
- b. hearing
- c. touch
- d. smell**
- e. taste

3. How do skunks get ready for winter? **They eat as much as they can to put on fat that they will use as an energy source in winter, when food is scarce.**

4. Why won't a mother skunk let male skunks near her kits? **They might kill them.**

5. How do skunks help people? **They eat insects and snails that damage gardens and crops and eat mice that could damage crops or spread disease.**

VOCABULARY LIST

den a home for an animal

metabolism the process by which a body builds and breaks down molecules to carry out the business of staying alive

nausea the sense of needing to throw up

predator an animal that kills and eats other animals

rabies a deadly disease caused by a virus that can infect skunks and other wild mammals as well as dogs and humans

territory an area that an animal lives in and defends from other animals

toxic capable of poisoning

vaccinate give a weakened or dead form of a disease organism to help protect against disease