

**STUDY QUESTIONS to “COOL CRITTERS”**


*Minnesota Conservation Volunteer* magazine is your guide to wild things. Every other month, six times a year, the magazine arrives in your school library. Each one has a story for Young Naturalists like you. **Are you curious about wild things?** Young Naturalists tells true stories that can answer all kinds of questions such as these—

**Have you ever heard of a purple wartyback?** How about a pink heelsplitter, pimple-back, or monkeyface? All are Minnesota freshwater mussels. Read Young Naturalists stories to learn which species (kinds) of critters live in Minnesota—frogs, salamanders, snakes, wild cats, wild dogs, weasels, mice, and rabbits.

Want to **peek inside the den of a red fox** and see how the kits grow up? Are you a rock hound searching for agates? Have you ever wondered what’s alive under snow? How animals see? Why is a bluebird blue? How birds fly?

Would you like to hear the true story of **giants of the ice age**? Young Naturalists also tells you about the underground universe. You can read the story of a tiny owl that went to a hospital with an injured wing. Find out about a boy who worked in a logging camp. Read the story of Ojibwe children today hunting and gathering like their ancestors did.

Learn how to get started **camping, snowshoeing, ice fishing, or canoeing.**

**Find these stories and more online** at www.mndnr.gov/young_naturalists.

*Your knowledge of wild things helps you explore and enjoy the outdoors. Have fun!*
Study and learn facts and ideas based on this Young Naturalists nonfiction story in Minnesota Conservation Volunteer, July–August 2017, www.mndnr.gov/mcvmagazine.

1. How does a nesting gull beat the heat on a sunny day?
______________________________________________________________________
______________________________________________________________________

2. How does panting help an animal stay cool?
______________________________________________________________________
______________________________________________________________________

3. Name three kinds of Minnesota birds that pant. _______________________
______________________________________________________________________

4. Describe three ways you stay cool on a hot summer’s day.
______________________________________________________________________
______________________________________________________________________

5. Name four kinds of birds that use gular fluttering to stay cool.
______________________________________________________________________
______________________________________________________________________

6. If a bird performed 420 gular flutters per minute, how many would that be per second? _______________________

7. The process of cooling off by touching something cool is called:
A. evaporation
B. radiation
C. conduction
D. estivation
8. True or false: Cormorants, pelicans, and other birds use blood vessels in their ears to radiate heat from their bodies. ____________

9. Are fish cold-blooded or warm-blooded? ________________

10. Name four kinds of animals that estivate: ____________________________________________________________

10. What is the main difference between hibernation and estivation? ______________________________________

11. Name five kinds of animals that take baths to stay cool: ________________________________________________

12. Two cooling strategies that take advantage of evaporation are ________________________________ and ________________________________.

Challenge: Based on what you learned in this story, why does a fan help you feel cooler?
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________

Minnesota Comprehensive Assessment

Name _________________________________ Period _____ Date _________

1. Which of these animals does NOT sweat?
   A. Humans
   B. Horses
   C. Gorillas
   D. Deer

2. A herring gull sits in a special way that minimizes the amount of sunlight that hits it. What is the antonym of minimize?
________________________________________________________________________________________
3. The obelisk posture is:
A. A small cavity in a rock that a snake uses to shade itself in hot weather
B. A pose a dragonfly takes to help minimize exposure to the sun
C. The way a squirrel spreads itself out on a tree branch
D. A fox’s posture when it is panting.

4. What is conduction?
____________________________________________________________________
____________________________________________________________________

5. If a lake or stream gets too warm, a cold-water fish species may no longer be able to live in it. What might happen to it instead?
____________________________________________________________________
____________________________________________________________________

**Student Study Guide: Vocabulary**

**Evaporation** the process by which a liquid turns into a gas

**Loaf** relax

**Laced** covered with a lacelike pattern

**Minimize** get or make the least of

**Obelisk** a tall, thin pillar

**Parasite** a living thing that benefits from another living thing in a way that harms the host

**Posture** the way an animal holds its body

**Sundial** an object that uses a shadow cast by the sun to tell time

**Visor** a flat object that provides shade

**Vole** a small, mouselike mammal
Student Study Guide: Vocabulary cards

Cut along 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.

When a liquid turns to gas, it undergoes Evaporation.

When animals loaf, they relax.

An object that is laced is covered with a lacelike pattern.

If you minimize something, you make the least of something.

An obelisk is a tall, thin tower.

fold

fold

fold

fold
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>A parasite is</td>
<td>A living thing that benefits from another living thing in a way that harms the host is</td>
</tr>
<tr>
<td>The way an animal holds its body is called its Posture is</td>
<td></td>
</tr>
<tr>
<td>An object that uses a shadow cast by the sun to tell time is called a A sundial is</td>
<td></td>
</tr>
<tr>
<td>What is a visor?</td>
<td>A flat object that provides shade is known as a</td>
</tr>
<tr>
<td>A vole is</td>
<td>A small, mouse-like mammal is called</td>
</tr>
</tbody>
</table>