YOUNG NATURALISTS

Study Questions

to "Color by Nature"

Study and learn facts and ideas based on this Young Naturalists nonfiction story in *Minnesota Conservation Volunteer,* March–April 2015, www.mndnr.gov/mcvmagazine.

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, pimpleback, 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 do animals see? Why is a bluebird blue? How do 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!

Prepared by Jack Judkins, Curriculum Connections Minnesota

MINNESOTA CONSERVATION VOLUNTEER

"Color by Nature" Study Questions

Study and learn facts and ideas based on this Young Naturalists nonfiction story in Minnesota Conservation Volunteer, March–April 2015, www.mndnr.gov/mcvmagazine.

1. List at least five ways color can help plants and animals.

_____

_____

_____

_____

2. How do pigments enable us to see colors?

_____

_____

_____

3. Why do ruby-throated hummingbirds have red chins (sometimes)?

_____

_____

_____

4. Adaptations help living things _____ and _____.

5. How do western grebe parents know when to feed their chicks?

_____

_____

_____

6. Would you like to be fed like a baby herring gull? Why or why not?

7. How does color help a red-bellied snake survive?

8. The lady beetle's orange color is an example of _____ coloration.

9. Give an example of "advertising coloration."

10. What do carotenoids have to do with color?

11. When is the male goldfinch yellow? Why?

12. Why does the male green frog have a yellow throat?

13. The grasshopper's color helps it _____.

14. Young common five-lined skinks have red tails. True False

15. How do black bears help blueberries survive?

16. If you see a double-crested cormorant perched with its wings spread out, what might you conclude?

17. What times of year are weasels brown and white? Why?

18. What is "flagging," and what does it mean?

Challenge: This article describes 16 plant and animal color adaptations. Divide them into at least three categories based on any criteria you choose. You may make a table or chart to illustrate the categories. Explain how you divided the 16 into groups.

Minnesota Comprehensive Assessment

Name _____ Period _____ Date _____

1. The short-tailed weasel's pineal gland
A. controls how much the weasel eats.
B. changes the color of the weasel's coat.
C. is located in the weasel's tail.
D. does not help the weasel survive.

2. Some flowers have pigments that
A. reflect ultraviolet light.
B. attract pollinators.
C. are invisible to humans.
D. A, B, and C.

3. Biliverdin is a pigment found in
A. cormorant eggs.
B. robin eggs.
C. blueberries.
D. green frogs.

4. Describe how pigments help plants and animals survive.

_____
_____
_____
_____
_____
_____

5. Red-bellied snakes eat
A. raccoons.
B. crows.
C. slugs.
D. milkweeds.

Student Study Guide: Vocabulary

absorb draw in

aphid small sap-sucking insect

carbon dioxide (CO_2) a naturally occurring chemical compound composed of two oxygen atoms and one carbon atom

camouflage coloration that makes animals hard to see

herpetologist scientist who studies amphibians

hibernate spend the winter in a special kind of deep sleep

juvenile young animal or human, such as a teenager

nectar sugar-rich liquid produced by plants

predator animal that kills and eats other animals

reflect cast back light from a surface

ultraviolet light electromagnetic radiation that is invisible to the human eye and causes suntan and sunburn

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

What does **absorb** mean?	FOLD	To **draw in** is to
What is an **aphid**?	FOLD	**A small sap-sucking insect** is called an
Carbon dioxide is	FOLD	**A naturally occurring chemical compound composed of two oxygen atoms and one carbon atom** is
Camouflage is	FOLD	**Coloration that makes animals hard to see** is
What is a **herpetologist**?	FOLD	**A scientist who studies amphibians** is called a

To **HIBERNATE** is to	FOLD	To **SPEND THE WINTER IN A SPECIAL KIND OF DEEP SLEEP** is to
What is a **JUVENILE**?	FOLD	A **YOUNG ANIMAL OR HUMAN, SUCH AS A TEENAGER,** is called a
What is **NECTAR**?	FOLD	The **SUGAR-RICH LIQUID PRODUCED BY PLANTS** is
A **PREDATOR** is	FOLD	**AN ANIMAL THAT KILLS AND EATS OTHER ANIMALS** is a
To **REFLECT** is to	FOLD	To **CAST BACK LIGHT FROM A SURFACE** is to
What is **ULTRAVIOLET LIGHT**?	FOLD	**ELECTROMAGNETIC RADIATION THAT IS INVISIBLE TO THE HUMAN EYE AND CAUSES SUNTAN AND SUNBURN** is called

FOLD

FOLD

FOLD

FOLD

FOLD

FOLD