

STUDY QUESTIONS

TO “FANTASTIC FUR”

Study and learn facts and ideas based on this Young Naturalists nonfiction story in *Minnesota Conservation Volunteer*, January–February 2022, 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, 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!

“FANTASTIC FUR” STUDY QUESTIONS

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1. NAME THREE BENEFITS FUR PROVIDES? _____

2. MATCH THE HAIR PARTS WITH THE FUNCTION:

- | | |
|------------------|---|
| Guard hairs | Send signals from the hairs to the brain |
| Underhairs | Give the animal color, protect from injury due to rubbing, shed water |
| Cortex | Holds pigment and moisture |
| Sebaceous glands | Secrete oil |
| Nerves | Insulate, keep skin dry |

3. WHAT PART OF A HAIR GIVES COLOR?

- a. medulla
- b. cortex
- c. cuticle

4. NAME THREE WAYS A DEER'S WINTER HAIR IS DIFFERENT FROM ITS SUMMER HAIR. IT IS LONGER, IT IS HOLLOW, IT IS FILLED WITH AIR. _____

5. WHAT KINDS OF HAIR HELPS A MAMMAL SENSE OBJECTS AROUND THEM?

6. THE ABILITY TO TRAP AIR IN FUR IS CALLED?

7. HOW DOES A BEAVER BENEFIT BY TRAPPING AIR IN ITS FUR?

8. TRUE OR FALSE: MAMMALS USE HAIR TO SENSE FOOD IN THE OCEAN.

9. _____ AND _____ HELP CATS SNEAK UP ON THEIR PREY BY PROVIDING CAMOUFLAGE IN HABITATS WITH LOTS OF DIFFERENT COLORS AND TEXTURES.

10. TRUE OR FALSE: SEA OTTERS ARE NATIVE TO MINNESOTA.

11. WHICH HAS LONGER WHISKERS: WILD DOGS OR WILD CATS?

12. HOW DO MAMMALS USE PILOERECTOR?

- a. To signal aggression.
- b. To trap air near their skin.
- c. To sense objects around them.
- d. All of the above.
- e. a & b.

CHALLENGE QUESTION: On the time line below, mark the approximate time for each of these events:

- A. The age of the oldest known mammal fossils.
- B. The period during which small, furry mammals became abundant.
- C. When *Spinolestes xenarthrosus* was alive.

_____X_____X_____

200 MILLION YEARS AGO 100 MILLION YEARS AGO TODAY

MINNESOTA COMPREHENSIVE ASSESSMENTS PRACTICE ITEMS

1. WHAT IS THE DIFFERENCE BETWEEN HAIR AND FUR? _____

2. NAME ONE THING BESIDES HAIR THAT MAKES MAMMALS DIFFERENT FROM OTHER ANIMALS.

3. NAME THREE WAYS THE STORY TELLS US THAT THE COLOR OF FUR HELPS AN ANIMAL SURVIVE? _____

4. WHY DID MIT SCIENTISTS MAKE FAKE FUR?

- a. They were trying to design more waterproof clothing.
- c. They wanted to understand how air entrainment works.
- d. They were trying to design warmer clothing.
- e. All of the above.

5. THE ARTICLE TELLS US THAT NATIVE AMERICANS VALUED BISON FOR THEIR DENSE UNDERFUR. WHY DO YOU THINK DID THEY CONSIDER THIS VALUABLE?

Place the following in order of shortest to longest:

American bison underfur

Sea otter guard hairs

American pygmy shrew hair

American bison fur

Sea otter undercoat fur

American pygmy shrew fur

Vocabulary

abrasions – wear caused by rubbing densities – closeness

follicle – a tiny depression in the skin frigid – extremely cold

groom – care for a body

pigments – molecules that give an object color

keratin – a protein that gives body parts structure and strength

meticulously – very carefully

plunged – moved rapidly into

tissue – a group of cells in or on a body

velvet – a soft fabric made of short, densely packed fibers sticking out from a backing.

vital – very important