

Young Naturalists Study Questions

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!

The Soil is Alive Study Questions - by Mary Hoff

Study and learn facts and ideas based on this Young Naturalists nonfiction story in Minnesota Conservation Volunteer, September-October 2020, www.mndnr.gov/mcvmagazine.

Name _____ Date _____

1. Layers of soil are called

- a. ingredients
- b. horizons
- c. topsoil
- d. vertisols

2. What is soil porosity?

3. List three ways soil can help you.

4. Name three ways you can help soil.

5. Match the habitat to the type of soil it is most likely to have:

| | |
|------------------|-------------|
| Mixed forest | Mollisols |
| Deciduous forest | Alfisols |
| River bottom | Entisols |
| Prairie | Inseptisols |
| Wetland | Histosols |

6. Name two kinds of soil creatures that feed on bacteria.

7. Name three jobs microbes perform in making and maintaining healthy soil.

8. Which of these are protozoa?

- ___ rhizobia
- ___ amoebas
- ___ nematodes
- ___ ciliates
- ___ flagellates

9. Name three ways soil pollution can be harmful.

10. Which of the following should NOT be used to make compost?

- fallen leaves
- bread crusts
- eggshells
- chicken bones
- cheese
- onion peels

Challenge Question: Using information from the story, approximately how many living creatures might be in the cup of soil that your teacher showed you before reading this story?

Minnesota Comprehensive Assessments Practice Items

“The Soil is Alive!” by Mary Hoff. Published in the September–October 2020 *Minnesota Conservation Volunteer*, or visit www.mndnr.gov/young_naturalists/soil.

Name _____ Date _____

1. Put the soil layers in order, with 1 being the top layer and 5 being the deepest layer.

- subsoil
- decomposing matter
- topsoil
- parent material
- sand and silt

2. How do rocks and pebbles turn into soil?

3. True or false: Insects are animals. **True.**

4. A symbiotic relationship is a relationship in which two kinds of organisms interact in a way that benefits both. What symbiotic relationship does this story describe? **Bacteria called rhizobia share nitrogen with plants, which in turn share sugar with them.**

5. Why is it a good idea to cover bare soil with mulch? **To keep it from washing or blowing away.**

Vocabulary

“The Soil is Alive!” by Mary Hoff. Published in the September–October 2020 *Minnesota Conservation Volunteer*, or visit www.mndnr.gov/young_naturalists/soil.

compaction – squishing

decomposers – living things that turn formerly living things into chemical building blocks other living things can use to grow

erosion – wearing away

inhabitants – creatures that live in a place

microbes – organisms that are too small to be seen without magnification

mulch – a ground covering often made from chopped or shredded plant parts

unsuitable – not good for

Compaction is the process of

Squishing things together is called

Living things that turn formerly living things into chemical building blocks other living things can use to grow are known as

Decomposers are

Erosion is a process of

When something is **wearing away**, it is undergoing

Creatures that live in a place are its

Inhabitants are

Tiny **organisms that are too small to be seen without magnification** are called

Microbes are

When you cover soil with **mulch**, you cover it with

A ground covering often made from chopped or shredded plant parts is known as

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