

STUDY QUESTIONS

TO “7 GEOLOGICAL WONDERS”

Study and learn facts and ideas based on this Young Naturalists nonfiction story in *Minnesota Conservation Volunteer*, May-June 2024, 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.

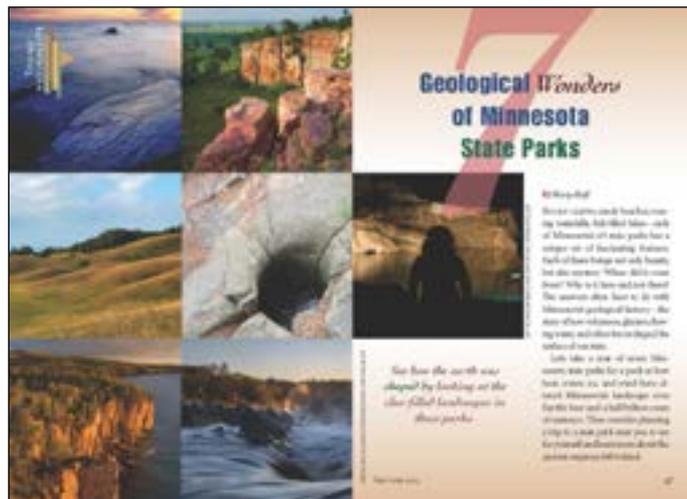
Learn how to get started **camping, snowshoeing, ice fishing, or canoeing**.

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!

“7 GEOLOGICAL WONDERS”

Study and learn facts and ideas based on this Young Naturalists nonfiction story in *Minnesota Conservation Volunteer*, May-June 2024, www.mndnr.gov/mcvmagazine.



1. NAME FOUR THINGS THAT SHAPE MINNESOTA'S LANDSCAPE.

2. TRUE OR FALSE. THE CLIMATE IN WHAT IS NOW MINNESOTA HAS ALWAYS BEEN ABOUT WHAT IT IS NOW.

3. WHAT DOES WIND DO TO ROCK?

- A. IT MAKES IT MORE CHALLENGING.
- B. IT TURNS IT INTO SAND AND SILT.
- C. IT GLUES IT TOGETHER.
- D. IT HEATS IT.

4. PUT THE FOLLOWING GEOLOGICAL EVENTS AFFECTING MINNESOTA INTO ORDER, FROM OLDEST TIMES TO NEWEST:

GLACIERS COVER THE LAND.

MOUNTAINS AND VOLCANOES ARISE.

SEAS COVER THE LAND.

THE LAND STRETCHES AND THINS.

5. WHAT KIND OF MINERAL ARE THE WHITE STRIPES IN THE ROCKS AT JAY COOKE STATE PARK MADE FROM?

6. TRUE OR FALSE: JAY COOKE STATE PARK WAS ONCE COVERED BY GLACIERS.

7. WHY DOES SOME ROCK AT BLUE MOUNDS STATE PARK HAVE RIPPLES?

8. WHAT GIVES SOME ROCKS AT BLUE MOUNDS STATE PARK A PINKISH COLOR?

- A. HEAT AND PRESSURE
- B. IRON
- C. GLACIERS
- D. WIND AND WATER

9. WHICH OF THESE IS TRUE OF RHYOLITE? CIRCLE ALL THAT ARE CORRECT.

- a. It is found at Tettegouche State Park.
- b. It is one of the hardest rocks in Minnesota.
- c. It formed from liquid rock.
- d. It is reddish.

10. TRUE OR FALSE: THE WHITE SPECKS IN RHYOLITE ARE SMALL BITS OF ROCK TRAPPED IN LAVA.

11. HOW DID MYSTERY CAVE'S TUNNELS FORM?

- a. They were carved by glaciers
- b. The rock dissolved in water
- c. Lava spewed out from beneath the Earth, leaving empty tunnels behind
- d. Gophers dug them.

12. WHERE DID THE ROCKS AND PEBBLES FOUND AT GLACIAL LAKES STATE PARK COME FROM, AND HOW DID THEY GET THERE?

13. CHALLENGE QUESTION: MATCH THE PARK WITH THE FEATURE THE STORY SAYS YOU CAN FIND THERE.

MINNESOTA COMPREHENSIVE ASSESSMENTS PRACTICE ITEMS

1. HOW LONG AGO DID THE FIRST ANIMALS APPEAR ON EARTH?

- A. LESS THAN A BILLION YEARS AGO
- B. MORE THAN A BILLION YEARS AGO
- C. A BILLION YEARS AGO

2. HOW DID THE PLACE WE NOW KNOW AS MINNESOTA MOVE AROUND EARTH IN THE PAST?

3. MUD IS TO SHALE AS SAND IS TO:

Quartz
Feldspar
Graywacke
All of the above.

4. WHY DO SOME BLUE MOUNDS STATE PARK ROCKS HAVE SCRATCH MARKS?

5. WHAT THREE THINGS TURN SANDSTONE INTO QUARTZITE?

VOCABULARY

cylindrical – shaped like a cylinder

eons – a very long time

molten – melted

orientation – the way something is placed relative to other things

outcrop – rock emerging from the ground

sedimentary – composed of tiny particles that settled out from a liquid

+++