

STUDY QUESTIONS

TO “HOW BIG IS THAT TREE?”

Study and learn facts and ideas based on this Young Naturalists nonfiction story in *Minnesota Conservation Volunteer*, July–August 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, 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.

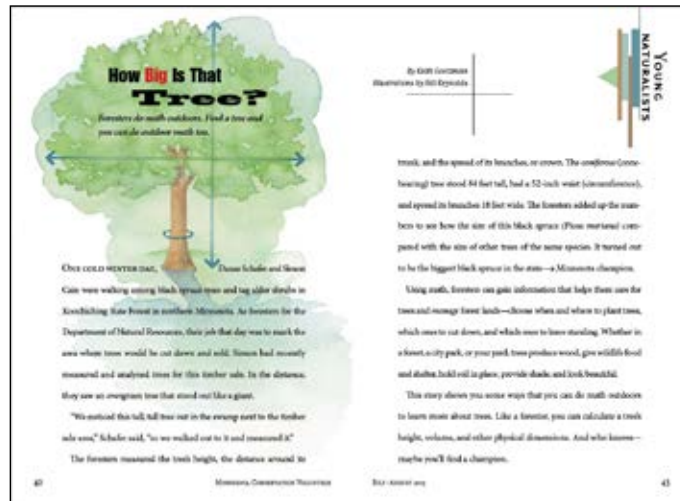
Learn how to get started **camping, snowshoeing, ice fishing, or canoeing**.

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!

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1. WHY WERE DANA SCHAEFER AND SIMON CAIN IN THE WOODS?

2. WHAT DID THEY NOTICE THAT WAS OUT OF THE ORDINARY?

3. WHAT HAPPENED NEXT?

4. *Picea mariana* IS ANOTHER NAME FOR

5. HOW DOES MATH HELP FORESTERS MANAGE FOREST LANDS?

6. WHAT MAKES TREES SO VALUABLE?

7. CAN YOU FIND THE HEIGHT OF A TREE WITHOUT A CLINOMETER?

8. IF YOU ARE USING A 12-INCH RULER, YOUR PARTNER APPEARS 3 INCHES TALL ON THE RULER, AND YOUR PARTNER IS ACTUALLY 50 INCHES TALL, HOW TALL IS THE TREE IN FEET? _____

9. WHY DO YOU SUPPOSE A FORESTER WOULD WANT TO KNOW A TREE'S VOLUME? _____

10. WHAT IS A TREE'S CIRCUMFERENCE? _____

11. IF A TREE'S CIRCUMFERENCE IS 37 INCHES AND THE TREE IS 200 INCHES TALL, WHAT IS ITS VOLUME? _____

12. HOW MANY SCHOOL FORESTS ARE THERE IN MINNESOTA? _____

13. IMAGINE YOU ARE STANDING UNDER A WHITE OAK TREE AND YOU WANT TO CALCULATE THE CROWN SPREAD. AT ITS NARROWEST POINT THE CROWN IS 17 FEET. AT ITS WIDEST POINT THE CROWN IS 37 FEET. WHAT IS THE CROWN'S SPREAD? _____

14. WHITE SPRUCE IS ALSO KNOWN AS _____

CHALLENGE: THE STATE CHAMPION WHITE PINE IS 103 FEET TALL AND HAS A CIRCUMFERENCE OF 214 INCHES AND A CROWN SPREAD OF 84 FEET. HOW MANY POINTS HAS IT EARNED ON THE MINNESOTA BIG TREE REGISTRY?

MINNESOTA COMPREHENSIVE ASSESSMENT

NAME _____ **PERIOD** _____ **DATE** _____

1. The smallest school forest in Minnesota is _____ acre; the largest is _____ acres.

- A. less than one; greater than 300
- B. less than one; 200
- C. less than one; 100
- D. less than one; 50

2. The state champion white spruce is about as tall as a _____ story building.

- A. 8
- B. 12
- C. 10
- D. 5

3. The state champion black spruce is _____ feet tall.

- A. 66
- B. 98
- C. 58
- D. 84

4. What is a clinometer used for? _____

5. The cylinder of a tree's trunk is also known as its

- A. height.
- B. circumference.
- C. volume.
- D. radius.

STUDENT STUDY GUIDE: VOCABULARY

ANALYZE study something closely and carefully

CALCULATE find a number using mathematical processes

DEPARTMENT OF NATURAL RESOURCES state agency responsible for management and conservation of Minnesota's land, water, plants, and wildlife

DIMENSIONS measurements that describe the size of an object

FORMULA a way to express information symbolically

MANAGE take care of and make decisions about

PROPORTIONAL when two variables have a fixed relationship with each other such that a change in one will result in a corresponding change the other

VOLUME amount of three-dimensional space an object occupies

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
ANALYZE
mean?

FOLD

To **STUDY SOMETHING CLOSELY
AND CAREFULLY** is to

To
CALCULATE
is to

FOLD

To **FIND A NUMBER BY
USING MATHEMATICAL
PROCESSES** is to

What is the
**DEPARTMENT OF NATURAL
RESOURCES?**

FOLD

**THE STATE AGENCY RESPONSIBLE
FOR MANAGEMENT AND
CONSERVATION OF
MINNESOTA'S LAND, WATER,
PLANTS, AND WILDLIFE** is the

DIMENSIONS
are

FOLD

**MEASUREMENTS THAT DESCRIBE
THE SIZE OF AN OBJECT** are its

What is a mathematical
FORMULA?

FOLD

A **WAY TO EXPRESS INFORMATION
SYMBOLICALLY** is called a

To **MANAGE**
is to

FOLD

To **TAKE CARE OF AND MAKE DECISIONS ABOUT** is to

What does
PROPORTIONAL
mean?

FOLD

WHEN TWO VARIABLES HAVE A FIXED RELATIONSHIP WITH EACH OTHER SUCH THAT A CHANGE IN ONE WILL RESULT IN A CORRESPONDING CHANGE THE OTHER they are

What is
VOLUME?

FOLD

The **AMOUNT OF THREE DIMENSIONAL SPACE AN OBJECT OCCUPIES** is its

FOLD

FOLD

FOLD
