

STUDY QUESTIONS

TO “A TREE FOR ALL SEASONS”

Study and learn facts and ideas based on this Young Naturalists nonfiction story in *Minnesota Conservation Volunteer*, March-April 2022, 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. MINNESOTA HAS MORE ASPEN TREES THAN:

- New Jersey, New Hampshire, and Vermont, combined
- any other state
- All of the other 52 native tree species put together
- Canada

2. TRUE OR FALSE: THERE ARE MORE ASPEN TREES THAN OAK TREES IN MINNESOTA.

3. WHICH OF MINNESOTA'S TWO ASPEN SPECIES HAVE THE FOLLOWING TRAITS? LABEL THEM "Q" FOR QUAKING ASPEN, "B" FOR BIGTOOTH ASPEN, OR "BQ" FOR BOTH?

- _____ Smooth bark that becomes rough as the tree grows old
- _____ Triangle-shaped leaves
- _____ Oval-shaped leaves
- _____ Wide teeth on the leaf edges
- _____ Dark scars on branches where branches used to be

4. IN WHICH OF THESE PLACES WOULD AN ASPEN BE MOST LIKELY TO GROW?

- in the middle of a pine forest
- in the middle of a woodland
- in the middle of a cornfield
- at the edge of a forest

5. WHAT IS A PIONEER SPECIES?

6. NAME TWO WAYS FIRES BENEFIT ASPEN?

7. WHICH IS CORRECT?

- a. pollen + seed = egg
- b. egg + pollen = seed
- c. egg + seed = pollen

8. A SINGLE ASPEN TREE CAN PRODUCE MORE THAN _____ SEEDS.

- a. 100
- b. 1,000
- c. 100,000
- d. 1,000,000
- e. 1,000,000,000

9. WHICH PARTS OF AN ASPEN DOES THE ARTICLE SAY THAT GROUSE EAT? CIRCLE ALL THAT APPLY?

- a. twigs
- b. leaves
- c. buds
- d. catkins
- e. stem

10. WHAT DOES THE WRITER MEAN WHEN SHE CALLS ELK A "LOST SPECIES"? MARK AN "X" NEXT TO ALL THAT APPLY.

- They hide, so it is hard to find them.
- They are uncommon because the places they lived were cleared for farming.
- They have a hard time finding their way around in a thick aspen forest.
- They are uncommon because too many were hunted.

11. What makes it possible for aspen to photosynthesize in winter?

CHALLENGE QUESTION: Why might it be beneficial to an aspen to wobble its leaves wobble in the breeze?

MINNESOTA COMPREHENSIVE ASSESSMENTS PRACTICE ITEMS

1. THE TITLE OF THIS STORY IS “A TREE FOR ALL SEASONS.” BASED ON WHAT YOU LEARNED, WHY IS THIS A GOOD NAME FOR THE ASPEN? _____

2. NAME THREE WAYS IN WHICH QUAKING ASPEN AND BIG-TOOTHED ASPEN ARE SIMILAR, AND THREE WAYS IN WHICH THEY ARE DIFFERENT. _____

3. HOW CAN YOU TELL THE DIFFERENCE BETWEEN ASPEN BARK AND BIRCH BARK? _____

4. WHAT DOES THE AUTHOR MEAN WHEN SHE WRITES, “CHANGE CREATES OPPORTUNITIES”?

5. WHICH OF THESE IS NOT A USE FOR ASPEN DESCRIBED IN THE ARTICLE?

Material for boxes, furniture, and houses

Paper

Fuel pellets

Fences for elk

Medicine

Food for pine martens, bobcats, and hawks

Food for deer, moose, and rodents

Vocabulary

Catkin – soft, dangling tree flower

Hooved – having hooves

Lodge – an indoor place to gather or live

Predator – an animal that eats other animals

Rodent – a kind of mammal that gnaws its food and has teeth that continually grow

Thicket – a space filled with trees or shrubs

Tribal – of or related to tribes