YOUNG NATURALISTS

TEACHERS GUIDE

to "Four Different Minnesotas"

Multidisciplinary classroom activities based on the Young Naturalists nonfiction story in *Minnesota Conservation Volunteer*, Sep-Oct 2025, mndnr.gov/mcvmagazine.

Minnesota Conservation Volunteer magazine tells stories that connect readers to wild things and wild places. Subjects include earth science, wildlife biology, botany, forestry, ecology, natural and cultural history, state parks, and outdoor life.

Education has been a priority for this magazine since its beginning in 1940. "One word—Education—sums up our objective," wrote the editors in the first issue. Thanks to the *MCV* Charbonneau Education Fund, every public library and school in Minnesota receives a subscription. Please tell other educators about this resource.

Every issue now features a Young Naturalists story and an online Teachers Guide. As an educator, you may download Young Naturalists stories and reproduce or modify the Teachers Guide. The student portion of the guide includes vocabulary words, study questions, and other materials.

Readers' contributions keep *Minnesota Conservation Volunteer* alive. The magazine is entirely financially supported by its readers.

Find every issue online. Each story and issue is available in a searchable PDF format. Visit mndnr.gov/mcvmagazine and click on *past issues*.

Thank you for bringing Young Naturalists into your classroom!

"Four Different Minnesotas"

Multidisciplinary classroom activities based on the Young Naturalists nonfiction story in *Minnesota Conservation Volunteer*, Sep-Oct 2025, mndnr.gov/mcvmagazine.

Summary. The "Four Different Minnesotas" Young Naturalist story provides readers with an overview of Minnesota's four biomes. Learn the distinguishing features of the tallgrass aspen parkland, prairie grassland, coniferous forest, and deciduous forest, and get ideas of places to visit to experience these fascinating places!

Suggested reading levels. Third through middle school grades

Materials. KWL organizer; optional resources include dictionaries, video viewing equipment, Internet access and other print and online resources your media specialist may provide.

Preparation time. 10–15 minutes, not including time for extension activities.

Estimated instruction time. 30–60 minutes, not including extension activities.

Minnesota academic standards applications. "Four Different Minnesotas" activities described below may be used to support the following Minnesota Department of Education standards for students in grades 3–8. For more information on the Minnesota Academic Standards, see www.education.state.mn.us.

Arts Benchmarks (Grades 3-8)

Artistic Process: Create or Make (Benchmarks 0.2.1.2.1, 0.2.1.5.1, 4.2.1.2.1, 4.2.1.5.1, 6.2.1.2.1)

Language benchmarks Grades 3-8)

Vocabulary Acquisition and Use (Benchmarks 3.10.4.4, 4.10.4.4, 5.10.4.4, 6.11.4.4, 6.11.6.6, 7.11.4.4, 7.11.6.6, 8.11.4.4, 8.11.6.6)

Writing benchmarks:

Text Types and Purposes (Benchmark 6.14.1.1)
Research to Build and Present Knowledge (Benchmark 6.14.7.7)

Speaking, Viewing, Listening and Media Literacy (Grades 3-8)

Comprehension and Collaboration (Benchmarks 3.8.1.1, 3.8.2.2, 4.8.1.1, 4.8.2.2, 5.8.1.1, 5.8.2.2, 6.9.1.1, 6.9.2.2, 7.9.1.1, 7.9.2.2, 8.9.1.1)
Presentation of Knowledge and Ideas (Benchmarks 3.8.4.4, 4.8.4.4, 5.8.4.4, 6.9.4.4, 7.9.4.4, 8.9.4.4)

Reading Benchmarks: Literacy in Science and Technical Subjects

Key Ideas and Details (Benchmarks 6.13.1.1, 6.13.2.2)
Craft and Structure (Benchmarks 6.13.4.4, 6.13.6.6)

Science (*coding is based on the 2019 commissioner approved draft of MN Academic Standards in Science)

Science and Engineering Practices

1. Asking questions (for science)
3. Developing and using models
6. Analyzing and interpreting data
7. Engaging in argument from evidence
8. Obtaining, evaluating, and communicating information

Cross Cutting Concepts

2. Patterns
2.Cause and effect
3.Scale, proportion, and quantity
4.System and system models
7. Stability and change

Disciplinary Core Ideas

Life Sciences 2: Ecosystems: Interactions, energy, and dynamics
Life Sciences 3: Earth and human activity
Engineering, Technology, and the Applications of Science 2: Links among Engineering, Tech-

nology, Science, and Society
Earth and Space Sciences 3: Earth and human activity

Social Studies

Citizenship and Government (Benchmarks 4.1.1.1.1, 6.1.1.1.1, 7.1.1.1.1)
Geography (Benchmarks 4.3.1.1.1, 4.3.1.1.2, 4.3.4.9.1, 5.3.4.10.1, 6.3.1.1.1, 7.3.1.1.1, 8.3.1.1.1)

For current, complete Minnesota Academic Standards, see www.education.state.mn.us. Teachers who find other connections to standards are encouraged to contact *Minnesota Conservation Volunteer.*

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Preview. Introduce students to the Young Naturalists' story by reading aloud the story's title ("Four Different Minnesotas"), explaining that the story is about the four biomes of Minnesota. Ask students to share what they know about habitats. Then explain that biomes are much larger and have a specific climate, and also read the description of biomes on the story's title page: "Biomes are regions of the state that look different and have their own mix of plants and animals." Ask students to look at the title page and make predictions regarding what the four biomes of Minnesota are. They can return to their predictions after reading the story.

Vocabulary preview. You can find a copy-ready vocabulary list at the end of this guide. Feel free to modify it to fit your needs. Share the words with your students and invite them to share whay they think these words mean. Tell them you will be reading a story that will help them undertand these words so they can use them in the future.

Study questions overview. Questions in the study guide parallel the story (the answer to the first question appears first in the article, followed by the second, and so on.) Preview the study questions with your class before you read the article. Then read the story aloud. Complete the study questions in class, in small groups, or as an independent activity, or use them as a quiz.

Assessment. You may use all or part of the study guide, combined with vocabulary, as a quiz. Other assessment ideas include: (1) Have students write multiple-choice, true-false, or short-answer questions based on the story. Select the best items for a class quiz. (2) After reading the story, ask students to draw sketches that illustrate the four biomes and include key details about each. Alternatively, provide students with a blank map of Minnesota and have them label the biomes, listing several key characteristics for each. (3) Have students play "mystery biome," where they are in pairs; they take turns describing one of the biomes and

having their partner guess which biome it is. (4) Ask students to select two biomes and write an essay comparing them.

1. Visit a state park, forest, or natural area near you to experience firsthand the characteristics of the biome in which you live. If you are unable to do so, invite a DNR naturalist to visit your classroom to share more about your biome. Or invite a resource manager from the DNR to share more about the role of natural resource management in preserving, maintaining, and restoring Minnesota's biomes and the species that call those biomes home.

2. Review the climate conditions for each biome provided in the story. Ask students to consider this information alongside the map of the biomes on p. 47 of the story. Provide students with a blank map of Minnesota, having them label the biomes and general climate conditions for each. Next, have students add additional climate details (average annual temperatures and rainfall) to their map, using the DNR's biome comparison chart. Then invite students to think about the connection between climate and biomes (aiming toward the recognition that the distinguishing features of biomes are influenced by climate). Using the interactive map tool at the NASA Earth Observatory website (https://earthobservatory.nasa.gov/biome), ask students to think about this question: What patterns do you notice in terms of the distribution of biomes? Invite discussion, toward the recognition that latitude and biome distribution are closely related (for example, as you move further from the equator, temperatures decrease and conditions are often drier, whereas closer to the equator, temperatures are warmer and wetter; temperature and precipitation influence the types of plants that grow and the wildlife that live there).

3. Using the listed plant and animal species for your biome, have students create a classroom biome "museum." Have students select a species that calls your biome home and then research that species and how it is adapted to its biome. Students can share what they learned through their species research by creating a poster, 3D model, or some other educational display. Then invite other classes or parents to visit their biome museum.

4. Have students create a travel brochure for one of the biomes featured in the story, highlighting features of the biome and specific places to visit (or students could create a travel brochure for one of the parks, forests, or other natural areas suggested in the story). Alternatively, students could be asked to design a travel route and a trip itinerary that includes a visit to a state park in each biome. Another option is for students to select one of the places listed in the story (one of the parks, preserves, forests, etc.) and learn more about that place, sharing what they learned with their classmates through an oral media arts presentation or a poster.

Web Resources

Minnesota DNR Web pages

Minnesota's Biomes
Ecological Classification System

General Teacher and Student Resources

Minnesota DNR Teachers' Resources

Young Naturalists Stories:

Ubiquitous Conifers
A Tree for All Seasons
Little Habitats on the Prairie

Minnesota Conservation Volunteer stories

Last Stands of Big Woods

Other Materials

Biomes of MN Map for Coloring
MN Biomes Classroom Resource
Biomes of Minnesota (University of Minnesota Extension
Biomes (NASA)

Study questions answer key

1. The changes in the landscape and the animals, trees and plants that you notice while you drive across Minnesota are because you are traveling through different?
a) biomes
b) geographic borders
c) time zones
d) scenery

2. Minnesota is home to how many biomes?
a) two
b) many
c) four
d) none of the above

3. True or false: Minnesota's biomes have been changed by people. **True, especially in the past 200 years.**
4. Which biome has been most dramatically changed by European settlers, so much so that less than 1% of what it originally was remains? ?

a. Tallgrass aspen parkland
b. Prairie grassland
c. Coniferous forest
d. Deciduous forest

5. True or False. To experience a biome first-hand, people must visit places like zoos and museums, where scientists have re-created displays of biomes. **False (People can visit biomes throughout the state through Minnesota's parks, forests, refuges, preserves, and other kinds of natural areas.)**

6. How have people changed Minnesota's deciduous forest biome? **People have cleared forests for farmland and timber. People have cleared forests for farmland and timber.**

7. If you visited Lake Maria State Park, which biome would you experience?
a. Coniferous forest
b. Deciduous forest
c. Prairie grassland
d. Tallgrass aspen parkland

8. In which biome are droughts common?
a. Coniferous forest
b. Deciduous forest
c. Prairie grassland
d. Tallgrass aspen parkland

9. 9.What sculpted the landscape of the coniferous forest biome of northeastern Minnesota?
a) Glaciers
b) Lake Superior
c) Foresters and biologists
d) Wildfires

Challenge question: Go back through the story to find and list examples of the many ways in which humans have shaped and continue to shape Minnesota's biomes. **Plowing prairies for farming; cutting forests to create farms and for timber to build things; controlled fires (prescribed burns) to keep prairie lands grassy; reintroduced bison to the prairie grasslands; efforts to restore forested land; limited wildfires, which has allowed aspen to take over grassland in the tallgrass aspen parkland; allowed grazing of livestock in the tallgrass aspen parkland biome.**

Minnesota comprehensive assessments answer key.

1. Which of the following would be considered a main idea from the story?
a. Biomes are larger than habitats.
b. It is important that each of us do our part to help conserve Minnesota's biomes so the wildlife doesn't become extinct.
c. Humans have influenced and continue to influence Minnesota's biomes.
d. Some areas of Minnesota have prairie grassland instead of trees.

2. Using story details, which two biomes have been most affected by being cleared for farmland?
a. Deciduous forest and prairie grassland
b. Tallgrass aspen parkland and coniferous forest
c. Deciduous forest and coniferous forest
d. Prairie grassland and tallgrass aspen parkland

3. In which biome do you have a chance to see bison (buffalo)?
a. Prairie grassland.
b. Coniferous forest.
c. Deciduous forest.
d. None; Minnesota does not have bison.

4. What can we infer regarding the author's purpose for writing this story?
a. The author prefers the coniferous forest over the other biomes.
b. The author wants each reader to help prevent Minnesota's landscape from further changing because the biomes have changed so much in the past 200 years.
c. The author wants to help readers plan a road trip around the state of Minnesota.
d. The author wants readers to learn about the distinguishing characteristics of Minnesota's four biomes and to have ideas of places to visit to experience these biomes.

5.What does the author use to help readers where each of the four biomes is located?
a. Figurative language
b. An outline
c. A figure (map)
d. A legend

Vocabulary list

Biome – a large area with a specific climate and unique plants and animals

Climate – the average weather in a region over a period of years

Humid – when the air has a lot of water vapor in it

Deciduous – a tree or shrub that loses its leaves each year

Conifers – trees with needles instead of leaves

Prairie – a grass-covered plain with few or no trees

Drought – a period of drier than normal conditions

Dormant – to shut down or slow down for a period of time

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