

ECOSYSTEM
SERIES

A GRASSLAND ECOSYSTEM

Who Needs a PRAIRIE?

KAREN PATKAU

TEACHER'S GUIDE

ALIGNS WITH COMMON CORE STATE STANDARDS



TUNDRA BOOKS

Dear Educator

Who Needs a Prairie? A Grassland Ecosystem introduces students to the fascinating grassland ecosystem. Award-winning author and illustrator Karen Patkau uses striking illustrations and informative text that can be used in a number of ways, including:

- To explore conceptual and thematic connections such as ecosystems, habitat, food chains, conservation, responsibility, connection, dependence
- As enrichment for a science and ecology unit
- As a whole class read aloud or for independent reading and/or research

The activity guide includes a variety of discussion questions, whole class, small group and independent activities and prompts to elicit a meaningful understanding of the text for children ranging in age from seven to ten years. The suggested activities can be adapted to suit the needs of your students. Where applicable, activities have been aligned with Common Core State Standards.

About the Book

Prairies are wild and rugged grasslands, whose inhabitants depend on each other and their surroundings. Author and illustrator Karen Patkau takes us on a magical journey through one of the earth's most important ecosystems. In *Who Needs a Prairie? A Grassland Ecosystem*, we discover, in breathtaking art and lyrical text, the plants and animals that thrive in its unique conditions — from buttercups, pincushion cacti, prairie crocuses and sage brush to burrowing owls, dung beetles, yellow-bellied racers and voles.

As part of Tundra's exciting Ecosystem Series, along with *Who Needs an Iceberg?*, *Who Needs a Jungle?*, *Who Needs a Reef?*, *Who Needs a Desert?* and *Who Needs a Swamp?*, *Who Needs a Prairie?* brims with captivating creatures, fact-filled notes, a useful glossary, ecological features and a comprehensive map. Each book is not only informative and beautiful, but also a call to action for all of us who care about the world in which we live!

About the Author

Karen Patkau is the award-winning author and illustrator of many books for children, including *Creatures Great and Small* and *Creatures Yesterday and Today*. Her first three books in the Ecosystem series were published to much critical acclaim. *Who Needs an Iceberg?* was a Green Book Festival Honor Book; *Who Needs a Jungle?* was chosen by the Canadian Children's Book Centre as a Best Book for Kids & Teens; and *Who Needs a Swamp?* received a Silver Birch Express nomination as well as being a Green Book Festival Honor Book. Karen Patkau lives in Toronto.



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Pre-Reading Discussion / Activities

1. Introduce/review the concept of an “ecosystem.”
2. Show the cover of *Who Needs a Prairie?* to students without revealing the title. *What ecosystem does this book explore? How do you know?*
3. In pairs, small groups, individually or as a class, investigate students’ prior knowledge of prairies. Ask students to complete a Who/What/Where/When/Why/How chart with what they know. Younger students can draw a picture of what they think a prairie looks like. Remind students to try and include both plant and animal life. As a class, brainstorm and record a list of words that come to mind when students think of prairies.
4. Record any questions students have about prairies.

Learning Activities

1. What Do You See?

- The vivid illustrations in the book enhance our understanding of the complex nature of the prairie. Re-read the book and locate what is being described in the text within the illustration. Re-read the section at the end of the book about the prairie’s inhabitants and challenge students to locate the living things in the illustrations.
- Assign chunks of text to individuals or pairs of students and ask them to illustrate the text. Encourage the use of bright, vivid colors and to further research any of the creatures or plant life that they are not sure about.

(RI.3.7)

2. Creatures of the Prairie

- There are many unique and fascinating living things that live on a prairie. Select one of them and write a fictitious story with the living thing as the main character. Use the prairie itself as your setting and try to incorporate as much scientific knowledge about the prairie into your story as possible.
- There are many living things on the prairie that have weird and wonderful names. Create your own prairie creature. Name your creature, write a brief description of how the creature survives on the prairie in all four seasons and create a model or draw/paint your living thing.

(W.3.3, W.4.3, W.5.3)

3. Food, Shelter, Water

- Consider the basics you need to survive (food, shelter, water). What characteristics of the prairie might make it difficult for its inhabitants to find these basic necessities? What explanations can you find in the book that explain how some of the animals adapt to the harsh prairie conditions?

(RI.3.1, RI.4.1)

4. Four Seasons

- Unlike deserts, the prairie described in the book has four distinct seasons. Divide a large piece of paper into four sections and label each section with one of the four seasons. Based on what you learned in the book about the living things on a prairie, sketch out what each season would look like, and show how some of the living things adapt to the often harsh weather conditions of each season.

(RI.3.7)



Learning Activities (Continued)

5. Where in the World?

- Examine the map of where prairies can be found in the world. Make a list of the parts of the world that have prairies.
- Which continent has the most grasslands? Which continent has the least amount of grasslands? Research the name of the grasslands shown on the map in the book. Write a list in order from largest to smallest.

(RI.3.1)

6. Glossary

- Select five of the terms included in the glossary to examine more closely. Carefully read and think about the definitions provided and rewrite the definitions in your own words. Use the terms in sentences that demonstrate your understanding.
- Add any other words within the book that you are unsure of to a glossary of your own making.

(RI.3.4, RI.4.4)



7. Comprehension Questions

Provide the following list of questions for students to answer. Students can answer the questions in writing, pictures or orally depending on their level.

- How do wild and rugged prairies become grasslands?
- How do prairie inhabitants depend on each other and their surroundings?
- What wildlife and plants thrive in large open spaces?
- How do seasons and weather conditions affect life on the prairies?
- How can a fire restore the land?
- How does a food chain form?
- Why do we need prairies?

(RI.3.1, W.3.2, W.4.2, W.5.2)

Learning Activities (Continued)

8. True or False

- Indicate whether the following statements about deserts are true or false. For any of the false statements, rewrite the statement to make it true.

Grass develops from its base, not from the tips.

True / False

The Great Plains are located in South America.

True / False

Almost all of the grasslands in the world are “natural.”

True / False

The population of people on Earth is decreasing.

True / False

Bacteria and fungi are examples of decomposers.

True / False

The largest land animal in North America is a herbivore.

True / False

Long periods of time with a lot of rain are called “droughts.”

True / False

All animals on the prairie live in underground burrows.

True / False

(RI.3.1)

9. Fill in the blanks using the words provided below.

- When one living thing eats another, and is then in turn eaten by something else, a _____ is formed.
- _____ live on and break down leftover dead matter.
- An example of a prairie omnivore is _____.
- An example of a prairie herbivore is _____.
- An example of a prairie carnivore is _____.
- Plants make their own food using _____, _____ and _____.
- An animal that is hunted by another animal for food is called their _____.

BADGER

FOOD CHAIN

SUN

VOLE

PREY

CARBON DIOXIDE

FERRET

WATER

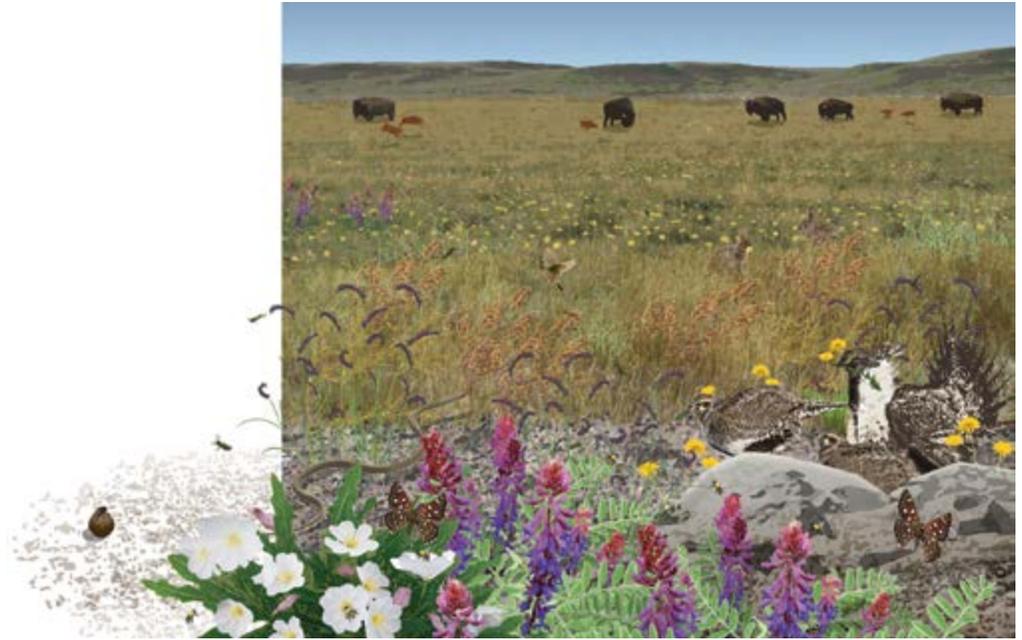
DECOMPOSERS

(RI.3.1)

Wrap-Up Discussion Questions

1. Assign one of the living things listed at the end of the book that can be found in a prairie to each student. Ask them to further research the creature or plant and present back what they have learned in small groups or to the class. Consider creating a class mural with each student contributing a drawing of their living thing.
2. Revisit what students recorded of what they knew about prairies before reading the book and their questions from the pre-reading discussion. What are three facts that the students learned about prairies? Were all of their questions answered? What further questions do they have to explore?
3. Read the other books in the Ecosystem series. Compare and contrast the different ecosystems.

(W.3.7, W.4.7)



PRAISE FOR the Ecosystem Series:

“Patkau introduces readers to the North American Arctic ecosystem efficiently and methodically, discussing habitat, the food chain and seasonal changes, along with the ever-important formation of the iceberg ... Her digitally composed illustrations at times offer informative scenic views, and at times, present readers with more direct scientific information. This, as well as its companion volumes *Who Needs a Swamp?* and *Who Needs a Jungle?*, offers a clear, readable introduction for budding naturalists and geographers.”

– *The Toronto Star*

“... Patkau offers a series of vibrant scenes ... striking illustrations. The text both interprets the visual content ... and offers paragraphs of diverse facts.”

– *Booklist*

Links

<http://www.patkauillustration.com/>

Appendix: Common Core State Standard

- CCSS.ELA-Literacy.RI.3.1** Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
- CCSS.ELA-Literacy.RI.3.4** Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.
- CCSS.ELA-Literacy.RI.3.7** Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).
- CCSS.ELA-Literacy.RI.4.1** Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
- CCSS.ELA-Literacy.RI.4.4** Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.
- CCSS.ELA-Literacy.W.3.2** Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- CCSS.ELA-Literacy.W.3.3** Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
- CCSS.ELA-Literacy.W.3.7** Conduct short research projects that build knowledge about a topic.
- CCSS.ELA-Literacy.W.4.2** Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- CCSS.ELA-Literacy.W.4.3** Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
- CCSS.ELA-Literacy.W.4.7** Conduct short research projects that build knowledge through investigation of different aspects of a topic.
- CCSS.ELA-Literacy.W.5.2** Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- CCSS.ELA-Literacy.W.5.3** Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.