

SCIENTISTS IN THE FIELD

WHERE SCIENCE
MEETS ADVENTURE

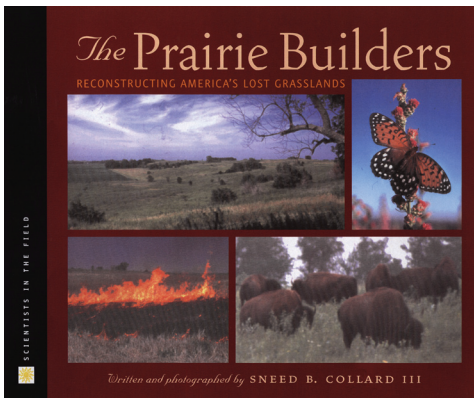
DISCUSSION AND ACTIVITY GUIDE

The Prairie Builders: Reconstructing America's Lost Grasslands
written and photographed by Sneed B. Collard III



About the Series

The Prairie Builders is part of the award-winning Scientists in the Field series, which began in 1999. This distinguished and innovative series examines the work of real-life scientists doing actual research. Young readers discover what it is like to be a working scientist, investigate an intriguing research project in action, and gain a wealth of knowledge about fascinating scientific topics. Outstanding writing and stellar photography are features of every book in the series. Reading levels vary, but the books will interest a wide range of readers.



The Prairie Builders:
Reconstructing America's Lost Grasslands
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About the Book

Sneed B. Collard III tells the remarkable story of an effort to bring back part of the native tallgrass prairie that once covered American's heartland. By following scientists who are working on the 8,000-acre Neal Smith National Wildlife Refuge in Iowa, readers will learn where the vision for a new prairie came from and how a dedicated group of scientists and volunteers is working to turn this vision into reality.

About the Author

Sneed B. Collard III has written more than fifty books for young people. In 2006, he received the Washington Post–Children's Book Guild Nonfiction Award for his body of work. He lives with his family in Montana. To learn more about Sneed B. Collard III, visit www.sneedbcollardiii.com.

Discussion Questions

While Collard clearly states that the Neal Smith National Wildlife Refuge is but a small shadow of a vast tallgrass prairie habitat that used to cover 400,000 square miles, it has reason to celebrate some amazing successes and it continues to improve. If we are able to build a tallgrass habitat out of cornfields, what other endangered or threatened habitats should we consider building?

A congressman comes to you for approval to spend a lot of money to build a place that will attract wild animals. He wants to completely bulldoze the existing plants and then reseed the area with grass that will grow very tall. He tells you that when the grass does get tall, he plans to burn it. What kind of reception do you think Neal Smith had in Congress with this plan? We know the plan passed, but we also know that Congress is notorious for disagreement and arguments. What reactions do you think Smith faced? Now go back to the previous discussion question and anticipate what sort of reactions you would expect if your habitat resurrection project made it to Congress today?

Houghton Mifflin Harcourt Books for Young Readers

Visit www.sciencemeetsadventure.com for authors' Adventure Notes, teacher resources, videos, and more!

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Applying and Extending Our Knowledge:

Collard states on page 21 that a spiderwort plant from central Iowa may look like one from Indiana, but probably is not the same. This discussion concerns Drobney's initial task of finding the correct seeds for the area.

- Have students inspect seeds that come from two different companies in two different states. Pick big seeds like kidney bean seeds and pumpkin seeds so that students are able to cut them open and inspect the seed coats, the food supply, and the plant embryos from both seeds. Compare and contrast the seeds and create a presentation (poster, video, oral report, graph, etc.) of what they notice. Have students answer questions such as why some seed coats are thicker, why some seeds are so much bigger, or why some seeds are flatter and some are more rounded.
- Germinate the seeds and then plant both kinds in separate containers, which are labeled to show where each seed came from. Plant the seeds in clear containers so that students are able to see the root development. Do they notice a difference in plants that come from two different areas? If not, why not? If they do, what factors make them different? Have students present their findings or debate the merit of different explanations.

Common Core Connections

W.6.7.RST.6-8.3 The teacher may privately plant and make a map of where five different kinds of seeds are planted. Do NOT plant the seeds in a pattern or in rows. Do NOT plant all of the same kind of seeds together. DO keep track of where everything is planted. Share with students three of the seeds planted, but NOT where they are planted. Tell them that in the container are five different seeds from five different plants. As the seeds begin to sprout and grow, have students make predictions about which plants belong to the three seeds they know are in the planter and which plants are NOT from the seeds they know about. Have students try to figure out what kinds of plants are from the two mystery seeds.

- Make a plant log for each seed and have teams of students regularly (at least three times a week, if not EVERY DAY) draw and label what they observe with the seed growth. Many days will look very similar. Make sure students date each entry and provide weather and temperature conditions (even if the plants are grown indoors).

Common Core Connections

W.6.7.RST.6-8.3 Find an area, if possible, on your school property that you can observe on a regular basis. Make a list of all the plants in the area. Keep dated and illustrated journal entries that record the time, weather conditions, and notes about plants and animals observed. Use your school library to research the types of plants and animals observed. Are the plants and animals native to the area?

- Research plants and animals native to your school location. Provide students with small terrariums and have them try to collect native plant seeds and replicate a small piece of a native habitat for your area. Students will likely have very little success growing plants. It is important for students to understand that scientists often learn as much from failure as they do from success. Have them find one variable to change and try again. Continue as time permits. Ideally, this is an activity that works best with several months of time to observe, record, and try again. However, it is an activity that does not require much in the way of daily time required and it lends itself well to assigning small teams of students who share the daily recording and maintenance. Teachers can schedule a longer session every two or three weeks to have the class to review the results and plan any needed changes.

Common Core Connection

W.6.7.RST.6-8.3

Further Reading

Years of Dust: The Story of the Dustbowl.
Life in a Grassland. Life During the Dust Bowl.
[Websites to Explore](#)

Guide created by:

Ed Spicer, Curriculum Consultant, and Lynn Rutan, retired middle school librarian, now reviewer and blogger at Bookends: the Booklist Youth Blog

Houghton Mifflin Harcourt Books for Young Readers

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