



Classroom Guide for
THE MANGROVE TREE
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Trumbore
illustrated by Susan L. Roth

Reading Level

* Reading Level: Grade 3
Interest Level: Grades 1–5
Guided Reading Level: Q
Accelerated Reader® Level/Points: 6.4/.5

*Reading level based on the Spache Readability Formula

Themes

Environment, Science, Farming, Community Outreach/Helping Others, Sociological and Social Transformations, Creativity, Africa, Asian/Asian American

Synopsis

The people of Hargigo, a village in the tiny African country of Eritrea, were living without enough food for themselves and their animals. The families were hungry, and their goats and sheep were hungry too. When Dr. Gordon Sato, an American scientist, went to Eritrea, he wanted to help change the lives of the villagers for the better. His plan began with some special trees—mangrove trees.

The mangrove is a sturdy tree that Dr. Sato taught the villagers how to plant. Using fertilizer and sea water, the trees flourished, the people planting and caring for the trees earned money, and the people and animals of the village were better fed.

With alternating verse and prose passages, *The Mangrove Tree* invites readers to discover how Dr. Sato's mangrove tree-planting project transformed an impoverished village into a self-sufficient community. This is also a story that focuses on environmental innovation. It is a celebration of creativity, hard work, and the ability of one man to make a positive difference in the lives of many.

Background

During World War II, when Gordon Sato was a teenager, he and his family were forced to live in the Manzanar War Relocation Center, a concentration camp where Japanese Americans were imprisoned because the United States and Japan were at war, and the U.S. government thought Japanese Americans might be a threat to the country. At Manzanar Gordon learned how to grow corn in the dusty ground to help feed his family and others in the camp. Later, after Gordon earned a doctorate degree and became a

cell biologist, he wanted to use his knowledge to help people of Eritrea, who were living in poverty after years of war with Ethiopia.

What is so impressive about Dr. Sato's project is how a simple tree—the mangrove—can impact the economy of an entire community. Because the roots of the trees provide hiding places for small fish and sea animals, larger fish are attracted to the area, which improves the catch of the fishermen. The leaves of the trees provide food for animals, which improves the lives of the farmers. The women plant the trees and earn wages, which improves the quality of life for their families. All of these microeconomic changes have a macroeconomic impact on the community.

In recent years, Dr. Sato has adapted his Eritrean project in an effort to help other impoverished communities around the world.

The information in the book is presented on two levels. On the left-hand side of each spread is a very easy to understand cumulative verse that gives the basics of the mangrove tree project. On the right-hand side of each spread is more detailed information about the project and the science behind it. Students may read just the verse sections, or they may read the additional information along with the verse. There is also additional information, accompanied by photographs, about Dr. Sato and the Eritrean project at the back of the book.

Teaching Tip

The Mangrove Tree is an excellent choice to use as part of a unit on the environment and/or sustainable farming and living.

BEFORE READING**Prereading Focus Questions**

Before introducing the book to students, you may wish to develop background information, tap prior knowledge, and promote anticipation with questions such as the following:

1. Have you ever planted a tree? What did you do? What did you do to care for the tree after it was planted?
2. Have you ever seen a live sheep or goat? What can you tell us about the animal(s)? What do they need to survive?
3. What is nonfiction? Have we read any nonfiction books? How can you tell if a book is nonfiction?

Exploring the Book

Write the title and subtitle of the book on the chalkboard. Tell students that a mangrove tree is special because unlike other trees, it can live in salty water. Ask students to talk about how planting trees might help to feed families.

Let students look at the illustration on the front cover. Discuss what they notice about the illustration. Ask them what they predict the story will be about.

Flip through the book and point out to students the two-part story: the cumulative verses on the left and the additional information on the right. Mention that the information on the right will explain more about what they learn from the verses.

Setting a Purpose for Reading

Have students read to:

- find out about the ways mangrove trees help feed people
- learn about specific techniques and science involved in planting mangrove trees

Vocabulary

Have students turn to the Glossary and Pronunciation Guide at the back of the book, or write the words and names, plus their pronunciations, on the chalkboard or a chart. Ask students to practice pronouncing each entry and then discuss what it means. For entries other than names, encourage students to use them in their own sentences.

Also encourage students to use the Glossary to remind themselves of meanings and/or pronunciations they may forget as they read the book.

AFTER READING

Discussion Questions

After students have read the book, use these or similar questions to generate discussion, enhance comprehension, and develop understanding of the content. Encourage students to refer back to the text and photographs in the book to support their responses.

Literal Comprehension

1. Where in Eritrea were the mangrove trees planted? Why did Dr. Sato decide to plant the trees in that spot?
2. Who planted and cared for the trees? How did planting mangrove trees help them?
3. What special things did they have to do to make sure the trees would grow?
4. How did planting mangrove trees help the shepherds, sheep, and goats of Hargigo?
5. How did planting mangrove trees help the children of Hargigo?
6. How did mangrove trees help the fishermen?
7. Where else would Dr. Sato like to start planting mangrove trees? Why does he want to do this?

Extension/Higher Level Thinking
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1. What made Dr. Sato think that mangrove trees would grow by the sea in Eritrea?

2. Why is it important that the people of Hargigo use every part of the mangrove tree? How does doing this help them? How does it help the environment?
3. How do you think the people of Hargigo feel about Dr. Sato? Find some passages in the book to support your answer.
4. Why do you think Dr. Sato is motivated to help people around the world?
5. How does the additional information on the right side of each illustration add to the information in the poem on the left? Did this combination of two types of information make the story more or less interesting for you? Why?

Literature Circles

If you use literature circles during reading time, students might find the following suggestions helpful in focusing on the different roles of the group members.

- The **Questioner** might use questions similar to the ones in the Discussion Question section of this guide.
- The **Passage Locator** might look for lines in the story that show how the girl's feelings change from the beginning to the end.
- The **Illustrator** might create a poster or bulletin board of spring and summer flowers, especially purple ones.
- The **Connector** might find other stories to share with the group in which a grandparent passes away, and make connections among the stories focusing on how each child experiences this event.
- The **Summarizer** might provide a brief summary of the group's reading and discussion points for each meeting.
- The **Investigator** might look for information about what causes changes in plants and flowers as the seasons and temperature change in different parts of the country.

*There are many resource books available with more information about organizing and implementing literature circles. Three such books you may wish to refer to are: *GETTING STARTED WITH LITERATURE CIRCLES* by Katherine L. Schlick Noe and Nancy J. Johnson (Christopher-Gordon, 1999), *LITERATURE CIRCLES: VOICE AND CHOICE IN BOOK CLUBS AND READING GROUPS* by Harvey Daniels (Stenhouse, 2002), and *LITERATURE CIRCLES RESOURCE GUIDE* by Bonnie Campbell Hill, Katherine L. Schlick Noe, and Nancy J. Johnson (Christopher-Gordon, 2000).

Reader's Response

Use the following questions and writing activities to help students practice active reading and personalize their responses to the book. Suggest that students respond in reader's journals, essays, or oral discussion. You may also want to set aside time for students to share and discuss their written work, if they wish to.

1. What characteristics does Dr. Sato have that helped him succeed with The Manzanar Project?

2. Does Dr. Sato's work remind you of the work of any other people who have helped those in poor countries? Who are they? Why does Dr. Sato's work remind you of their work?
3. Think about the people of Hargigo. How do you think they feel now that Dr. Sato has been working with them for several years? Is there someone who has helped you overcome a problem? How did that person help you? How do you feel about that person?
4. What did you notice about the illustrations in this book? Do you like the pictures, or not? Why? Did they help you understand the story? How?
5. Have students create a timeline or chart of the steps in planting mangrove trees and the benefits the trees provide including a one to two sentence description of each step. Then ask students to tell which they think are most important and why.
6. Have students write a book recommendation for this story explaining why they would or would not recommend this book to other students.

ESL Teaching Strategies

These strategies might be helpful to use with students who are English language learners.

1. Assign ELL students to read the story aloud with strong English readers/speakers.
2. Have each student write three questions about the story. Then let students pair up and discuss the answers to the questions.
3. Depending on students' level of English proficiency, after the first reading:
 - Review the illustrations in order and have students summarize what is happening on each page, first orally, then in writing.
 - Have students work in pairs to retell either the plot of the story or key details. Then ask students to write a short summary, synopsis, or opinion about what they have read.
4. Have students give a short talk about what they admire about a character or central figure in the story.

INTERDISCIPLINARY ACTIVITIES

Use some of the following activities to help students integrate their reading experiences with other curriculum areas.

Social Studies

1. The "Web Sites of Interest" section at the back of the book lists four sites, two of which explain more about The Manzanar Project and two of which explain more about the prizes Dr. Sato has been awarded. Have students choose a website and spend 15–30

minutes familiarizing themselves with the site and taking notes. Have students write a short report about the most interesting thing they learned from the site. You may also wish to provide time for students to share their reports with the class.

2. Throughout the book other countries are mentioned including Mexico, Peru, Mauritania, and Morocco. Help students locate these places on a map or globe. Then have small groups of students choose one of the countries mentioned and create a fact sheet. Some facts you may want them to look up are population, capital city, national language, popular foods, majority religion, climate, and environmental issues.

Science

1. There are many opportunities for diagramming in this story. Younger students can create a simple carbon dioxide-oxygen diagram showing the roles of both plants (mangrove trees) and animals (humans). Older students can diagram the nitrogen, phosphorus, and iron that provide nutrients to trees in addition to the carbon dioxide and oxygen diagram.
2. Can mangroves grow in your area of the country? Have students list the conditions necessary for mangrove trees to survive. Then let students investigate whether or not those conditions exist in your area. If not, have students find out where in the United States mangroves live and how they affect and are affected by those specific environments.

Language Arts

The use of expository prose passages alongside verse passages in a nonfiction book is an interesting way to present factual information. Provide students with some newspaper and magazine articles that are reading level appropriate. Then, using *The Mangrove Tree* as a guide, have students create verse passages to convey the information in their news articles.

Art

The illustrations in *The Mangrove Tree* were created as collages using paper and fabric. Make available many different kinds of paper and fabric, plus scissors and glue. Students may then create collage illustrations to go along with the verse passages they wrote for the Language Arts activity. Or students may wish to create collage illustrations for parts of the story that were not illustrated in the book.

About the Author and Illustrator

Susan L. Roth creates unique mixed-media collage illustrations that have appeared in numerous award-winning children's books, many of which she also wrote. About her inspiration for *The Mangrove Tree* Roth says, "I wanted to write this book ever since I first heard about [Dr. Sato's] project in Eritrea. I wanted to illustrate this book the minute I saw photographs of the project." Roth lives in New York. Her website is susanroth.com.

Cindy Trumbore has been involved with young people's literature for most of her career. A former editor in children's book publishing, she now writes children's books, edits books for classrooms, and teaches writing. Her past titles include *The Genie in the Book* and *Discovering the Titanic*. When her friend Susan L. Roth approached her to coauthor *The Mangrove Tree*, Trumbore was immediately excited by the chance to research and write about Dr. Sato's work. She lives with her family in New Jersey. Her website is cindykane.net.

Book Information

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RESOURCES ON THE WEB

Learn more about *The Mangrove Tree* at: http://www.leeandlow.com/books/417/hc/the_mangrove_tree_planting_trees_to_feed_families

Order Information**On the Web:**

<http://www.leeandlow.com/order> (general order information)

By Phone:

212-779-4400 ext. 25

212-683-1894

By Mail:

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