

## DISCUSSION GUIDE

### She Can STEM

50 Trailblazing Women in Science from Ancient History to Today – Includes hands-on activities exploring Science, Technology, Engineering, and Math

By Liz Lee Heinecke • Illustrated by Kelly Anne Dalton

\$19.99 US/£14.99 UK/\$25.99 CAN

ISBN: 9780760386064

Ages 7 to 12 (Grades: 2 to 7)

112 pages • Hardcover, 7x9.15 inches

#### Learning Objectives

Get to know 50 fascinating women in science, past and present, and use hands-on activities to dig deeper into their discoveries and their work.

## DISCUSSION TOPICS

### 1. CURIOSITY

Curiosity is the cornerstone of science. What are some hobbies or events that inspired curiosity in the scientists you read about in *She Can STEM*? Have you had experiences that made you want to learn more about a scientific topic, or prompted you to investigate a natural mystery?

### 2. OBSTACLES (DISCRIMINATION)

Many of the women in this book faced obstacles such as discrimination as they tried to pursue their education and focus on their research. What are some of the obstacles they faced, and how did they overcome them? Do you think discrimination still exists in science? How can we keep working to overcome it?

### 3. HISTORY AND SOCIAL CHANGES

For a long time, only wealthy people had the time, equipment and opportunities to pursue higher education and careers in science. How has science and the people who study it changed since the time of Tapputi and other historical scientists in the book? How did social change and scientific advances through history affect the women you read about?

### 4. SPORTS AND THE ARTS

Many of the scientists in *She Can STEM* were and are exceptionally talented individuals in disciplines outside of the laboratory. How do you think participation in sports, music and the arts both in school and outside of school helps people excel at science and other STEM subjects?

### 5. MENTORS AND ROLE MODELS

While role models show us who we can be, mentors are guides who give advice to those who are less experienced. Mentors can be parents, teachers, siblings, academic advisors and colleagues. Who were some of the mentors in this book? Who are your mentors and role models?

## ACTIVITIES

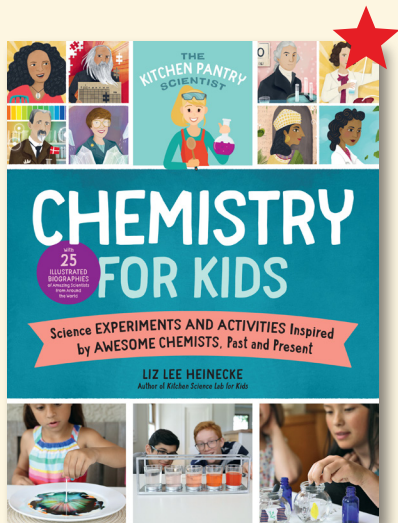
1. Choose three scientists from this book who you find especially interesting and try the hands-on activity that accompanies their biography. You can also make up an experiment of your own.
2. Make a Timeline of important scientific advances and discoveries over the last 500 years, and then place the scientists you read about in this book on the timeline to see how they fit into the big picture.
3. Go to [scistarter.org](https://www.scistarter.org) and sign up to participate in a citizen science project so you can help scientists around the world collect data for their research. Use the site's project finder to help you choose a topic such as plants, animals or weather and find a research project that fascinates you.

## QUESTIONS

1. Do you think the scientists in *She Can STEM* have made the world a better place through their work and outreach? How?
2. Would you rather do research where you have a specific outcome in mind, or approach a subject with a more general curiosity to see what you discover along the way?
3. Are you drawn to one particular branch of science? For example, would you rather be in Antarctica working to protect plants and animals, like Dr. Dana Bergstrom, or looking for new galaxies, like Burçin Mutlu-Pakdil?
4. Which of the scientists in this book inspires you most? If you could meet one of them, what would you ask them about their work?
5. How do you apply what you know about science to your own life? How can you use this knowledge for the good of everyone?



## More Books by Liz Lee Heinecke and Kelly Anne Dalton



2021 AAAS/Subaru SB&F Prize for Excellence in Middle Grade Science Books Longlist

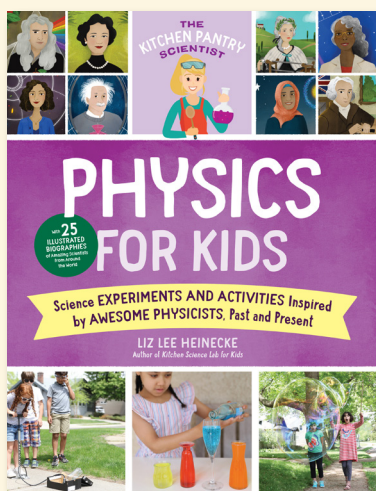
2021 NSTA-CBC Outstanding Science Trade Book

2021 EUREKA! Nonfiction Children's Honor Book

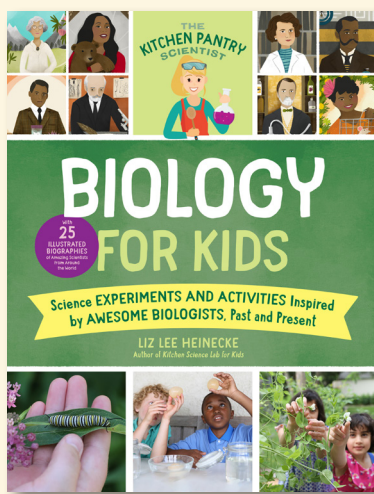
★ "Readers are sure to experience wondrous results in their own kitchens."  
—*School Library Journal*, Starred Review

"Kids will have a great time exploring the chemistry activities found in this book."  
—*Booklist*

"Engagingly written."—*Science Magazine*

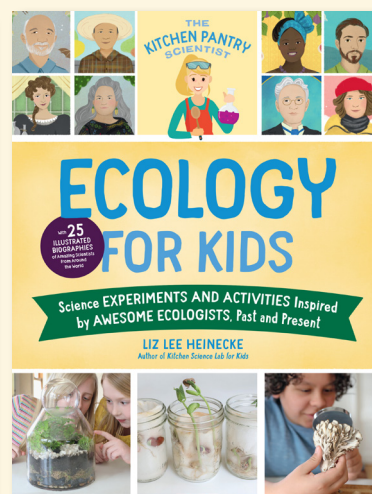


"Recommended for classroom or at-home exploration."—*Booklist*



2022 AAAS/Subaru SB&F Prize for Excellence in Hands-on Science Books Longlist

"Timely . . . will appeal to parents and caregivers who are looking for hands-on, nonscreen oriented activities for student enrichment."—*School Library Journal*



2024 AAAS/Subaru SB&F Prize for Excellence in Hands-on Science Books Shortlist

2024 Minnesota Book Awards Finalist, Middle Grade Literature

"This tried-and-true design treats ecology as the lively science it is."—*Booklist*

### Suggested Further Reading

1. *Yes, Boys Can: Inspiring Stories of Men Who Changed the World - He Can H.E.A.L.* by Jonathan Juravich and Richard V. Reeves and illustrated by Chris King (Quarry Books, 2024)
2. *Wild Life: Finding My Purpose in an Untamed World* by Dr. Rae Wynn-Grant (Get Lifted Books, 2024)
3. *The Sea Around Us* by Rachel Carson (Oxford University Press, 1951)
4. *The Edge of the Sea* by Rachel Carson (Houghton Mifflin, 1955)
5. *Braiding Sweetgrass* by Dr. Robin Wall Kimmerer (Milkweed Editions, 2013)

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