

BEST STEM BOOKS 2025

Books published in 2024



STEM books offer endless opportunities for engaged learning. They invite students to see the world differently and to think in new ways about what they observe.

We have chosen titles that provoke readers to examine the “thinking stance” of characters—not simply to look at actions and results.

Best STEM Books winners explore problems and possible solutions in the scientific world and, where applicable, in the lives of the protagonists. Instead of focusing on specific content, the Best STEM Books emphasize real-world issues that cross disciplinary boundaries.

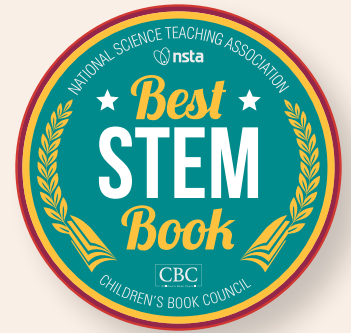
Teachers can use these books to foster and model “minds-on” work. Parents, grandparents, and other caregivers can involve even the very youngest children in the process of STEM thinking.

How do we prepare 21st-century kids for challenges and jobs that we at present cannot even describe? The Best STEM Books help by celebrating convergent and divergent thinking, analysis and creativity, persistence, and the sheer joy of figuring things out.

ABOUT THE REVIEWS

In addition to standard publishing information, the reviews indicate the following:

1. International Standard Book Numbers (ISBN) are included for trade editions.
2. The prices are current as of January 2025.
3. Reading levels (K–2, 3–5, 6–8, and 9–12) are provided by the reviewers. They are intended as guidelines and are not meant to limit the potential use of titles.
4. The reviewer's initials follow each description



American Wings: Chicago's Pioneering Black Aviators and the Race for Equality in the Sky

SHERRI L. SMITH AND ELIZABETH WEIN.

Penguin Young Readers / G.P. Putnam's Sons Books for Young Readers. 384pp. ISBN 9780593323984, \$19.99. (6–8, 9–12)

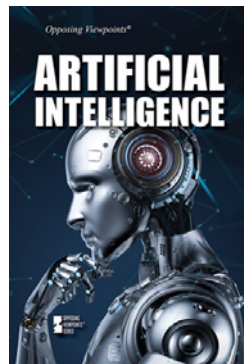
Discover the untold story of Black aviators who defied Jim Crow laws to take flight. This compelling narrative chronicles Cornelius Coffey, Willa Brown, and others as they built a Chicago airfield, integrated aviation training, and paved the way for equality. A soaring testament to resilience and determination. Author's Note, Source Notes, Resources, Index. (AF)



Artificial Intelligence (Opposing Viewpoints Series)

EDITED BY AVERY ELIZABETH HURT. Rosen Publishing / Greenhaven Publishing. 176pp. ISBN 9781534509511, \$34.80. (6–8, 9–12)

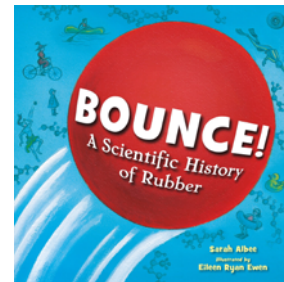
Although artificial intelligence is not new, many new applications have emerged that are utilized by many more people, prompting the question of how AI should be utilized in society. Each chapter has a viewpoint related to how artificial intelligence can be used and dives into the question of whether AI should be used. This book focuses on current topics related to AI from a wide range of perspectives, which prompts the reader to think about it. Recommended Readings, Bibliography, Index. (CAR)



Bounce!: A Scientific History of Rubber

SARAH ALBEE. Illustrated by Eileen Ryan Ewen. Charlesbridge Publishing. ISBN 9781623543792, \$18.99. (3–5, 6–8)

Albee's exploration of the history of rubber is both enlightening and entertaining, revealing its historical significance and scientific properties with a playful tone. The author intertwines the narrative of rubber's journey from indigenous innovation to global industrialization, while also addressing the environmental and human rights issues that arose along the way. Ewen's charming illustrations complement the text beautifully, making this a delightful read for curious minds and budding scientists alike. Author's Note, Timeline, Bibliography. (RG)



BEST STEM BOOKS CRITERIA AND RUBRIC

OVERVIEW

STEM (Science, Technology, Engineering, and Mathematics) is an integrated and creative approach to discovering and applying knowledge about our world to solve problems which utilizes one, or more of the content areas. Trade books that deliver background and model the practices of STEM provide context and inspiration to readers. Recognizing the best publications in this field can help guide their use and provide direction to publishers.

CRITERIA

The best STEM trade books must invite STEM-like thinking by:

- Modeling real-world innovation
- Embracing real-world design, invention and innovation
- Connecting with authentic experiences
- Showing assimilation of new ideas
- Illustrating teamwork, diverse skills, creativity, and cooperation
- Inviting divergent thinking and doing
- Integrating interdisciplinary and creative approaches
- Exploring multiple solutions to problems
- Addressing connections between STEM disciplines
- Exploring Engineering Habits of Mind
 - Systems thinking
 - Creativity
 - Optimisation
 - Collaboration
 - Communication
 - Ethical considerations
 - Critical thinking

The best STEM trade books might represent the practices of science and engineering by:

- Asking questions, solving problems, designing and redesigning
- Integrating STEM disciplines
- Showing the progressive changes that characterize invention and/or engineering by:
 - Demonstrating designing or redesigning, improving, building, or repairing a product or idea
 - Showing the process of working through trial and error
 - Progressively developing better engineering solutions
 - Analyzing efforts and makes necessary modifications along the way
 - Illustrates at points, failure might happen and that is acceptable
 - Providing reflection and learning occurs.

Building a Beak: How a Toucan's Rescue Inspired the World

BECCA MCMURDIE. Illustrated by Diana Hernández. Page Street Publishing / Page Street Kids. 32pp. ISBN 9781645678687, \$18.99. (K-2, 3-5)

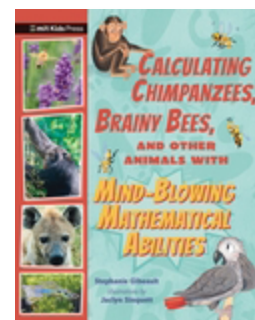
Discover the inspiring true story of Grecia, a toucan whose survival depended on an innovative solution after she suffered a severe injury. Witness the remarkable collaboration between veterinarians and engineers as they use cutting-edge 3D printing technology to create a prosthetic beak for Grecia. Her journey not only saved her life but also inspired the people of Costa Rica to come together and enact laws to better protect the animals of the rainforest. Author's Notes, Timeline, Bibliography. (JCW)



Calculating Chimpanzees, Brainy Bees, and Other Animals with Mind-Blowing Mathematical Abilities

STEPHANIE GIBEAULT. Illustrated by Jaclyn Sinquett. Candlewick Press / MIT Kids Press. 96pp. ISBN 9781536230017, \$17.99. (3-5, 6-8)

Go on a wild adventure into the brains of nature's secret math whizzes! From chimpanzees cracking number puzzles to bees solving geometry problems, this book is packed with stories and fun facts about the animal kingdom's smarts. It is perfect for curious minds; mixing facts and science with fun storytelling. Learn how animals are more mathematically minded than you ever imagined. Add to Your Knowledge, Bibliography, Acknowledgements, Image Credits, Index. (JJP)



Codebreaker Charlotte

CEDAR WANG. Illustrated by Cedar Wang. Clavis Publishing. 32pp. ISBN 9781605379999, \$19.95. (K-2)

Play along with Charlotte, a clever young girl with a knack for cracking codes and solving puzzles. When her grandmother sets out a special birthday puzzle, Charlotte dives in and uncovers the incredible story about her grandma's role as a codebreaker during World War II. Along the way, she learns about the fascinating places in England where groundbreaking code-breaking efforts changed the course of the war. (JP)



Else B. in the Sea: The Woman Who Painted the Wonders of the Deep

CEDAR WANG. Illustrated by Cedar Wang. Clavis Publishing. 32pp. ISBN 9781605379999, \$19.95. (K-2)

Play along with Charlotte, a clever young girl with a knack for cracking codes and solving puzzles. When her grandmother sets out a special birthday puzzle, Charlotte dives in and uncovers the incredible story about her grandma's role as a codebreaker during World War II. Along the way, she learns about the fascinating places in England where groundbreaking code-breaking efforts changed the course of the war. (JP)



The Enigma Girls: How Ten Teenagers Broke Ciphers, Kept Secrets, and Helped Win World War II

CANDACE FLEMING. Scholastic / Scholastic Focus. 384pp. ISBN 9781338749571 \$17.99. (6-8, 9-12)

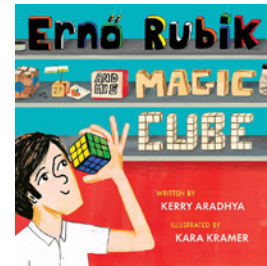
Actual events are brought to life through the narrative description of how young women who were selected for their own individual skill set managed to decipher codes, become cryptographers, and keep the secrets of Station X during World War II. The voice with which the story is told allows you to feel as if you are standing alongside these young women who employ science, math, and critical thinking to solve important riddles and codes. Index. (CAR)



Erno Rubik and His Magic Cube

KERRY ARADHYA. Illustrated by Kara Kramer. Peachtree. 32pp. ISBN 9781682636640, \$18.99. (K-2, 3-5)

Through his inventive process, Rubik demonstrated how curiosity, imagination, and a deep interest in spatial relationships could lead to a revolutionary invention that would captivate people worldwide, inspiring others to explore the joy of problem-solving and creative thinking. (KC)



ABOUT CBC

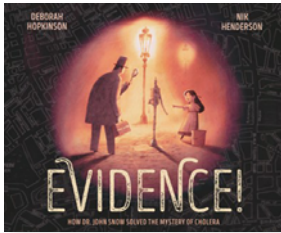
The Children's Book Council (CBC) is the nonprofit trade association for children's book publishers in North America, dedicated to supporting and informing the industry and fostering literacy. The CBC offers children's publishers the opportunity to work together on issues of importance to the industry at large, including educational programming, literacy advocacy, and collaborations with other national organizations. The anchor sponsor of Children's Book Week, the CBC is proud to partner with other national organizations on co-sponsored reading lists, educational programming, and literacy initiatives. For more information, visit www.cbcbooks.org.

The books that appear in these lists were chosen by a review panel made up of educators and other subject-area experts, all appointed by the National Science Teachers Association. NSTA and CBC have joined forces on developing this annual list since 1973, and over the years it has become the go-to resource for school librarians, science teachers, and parents eager to cultivate a love of science in young readers. Initially, the list was primarily targeted at grades K through 8. Beginning in 2002, it expanded to include high school. Down through the years, this effort has had but a single mission—to highlight the very best in science trade books for young audiences.

Evidence!: How Dr. John Snow Solved the Mystery of Cholera

DEBORAH HOPKINSON. Illustrated by Nik Henderson. Random House Children's Books. 40pp. ISBN 9780593426814, \$19.99. (3-5)

A narrative and developmentally appropriate explanation of how Dr. John Snow investigated and tracked down the spread of cholera in 19th-century London. Shared as a mystery to be solved, the story takes the reader on a journey through both scientific and popular thinking at that time and how evidence helped him to identify how this deadly disease spread. End Notes. Resources. (CAR)



The Fabulous Fannie Farmer: Kitchen Scientist and America's Cook

EMMA BLAND SMITH. Illustrated by Susan Reagan. Astra Books for Young Readers / Calkins Creek. 40pp. ISBN 9781635926125, \$18.99. (K-2, 3-5)

Fannie Farmer's innovative cookbook, which she published despite initial skepticism from publishers, transformed home cooking by providing clear, reliable recipes that anyone could follow, ensuring consistent and successful culinary results without guesswork or reliance on intuition. (KC)



How Do You Turn Data into Drawings?: A Statistics Book about Graphs and Data

CLAYTON GRIDER. Illustrated by Srimalie Bassani. Flowerpot Press. 36pp. ISBN 9781486729708, \$9.99. (3-5)

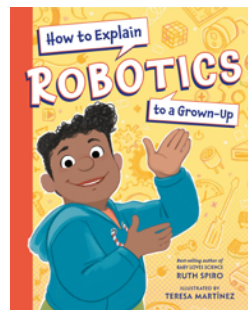
Dive into the world of graphs and data through exciting and colorful illustrations and fun examples. This book breaks down complex ideas into simple, engaging concepts and shows kids how to collect, analyze and display information in different ways. It is a playful, creative and informative guide for turning numbers into images, and engages children in learning how to understand data and graphs. Interactive Activities and Exercises. (JP)



How to Explain Robotics to a Grown-Up

RUTH SPIRO. Illustrated by Teresa Martínez. Charlesbridge. 32pp. ISBN 9781623543198, \$17.99. (K-2, 3-5)

Enter into the fun and accessible world of robotics for young readers. With engaging explanations and playful humor, this book helps kids understand complex concepts like algorithms, sensors, and artificial intelligence while showing them how robots are part of everyday life. Bright illustrations add charm and clarity, making it a delightful resource for kids to outsmart adults with their new, tech-savvy smarts! Glossary, Dedications, Resources. (JP)



The Iguanodon's Horn

SEAN RUBIN. HarperCollins / Clarion Books. 48pp. ISBN 9780063239210, \$21.99. (K-2, 3-5)

Ever since mysterious bones were found in 1822, scientists and artists have tried to imagine, draw, and build a model for a dinosaur they eventually named Iguanodon. Sean Rubin made the scientific discovery process come alive through pages of well integrated text and illustrations. Author's Endnotes. (BL)



The Little Green Swing (Little Ruby's Big Ideas)

BRENDA MAIER. Illustrated by Sonia Sánchez. Scholastic / Scholastic Press. 40pp. ISBN 9781338816198, \$17.09. (K-2)

Ruby demonstrated STEM thinking throughout the book beginning with her first design, reflecting and revising. She persisted knowing if she kept working at it she could do better. Ruby shows her brothers just how innovative out of the box thinking can be. Author's Note, Illustrations of Different Types of Swings. (KR)



Planning Grandma's Party: Measurements, Fractions, and Fun

LENKA CHYTILOVA/HELENA HARASTOVA.

Illustrated by Xiana Teimoy. Albatros Media. 32pp. ISBN 9788000072869, \$16.95. (3-5)

Mathematics is used in such a unique way helping readers to think of all the possibilities when considering what scale to use, what measuring device is most appropriate or the fastest way to Grandma's house. This book exudes STEM as it inspires creative thinking.. Author's Introductions, Suggestions for Further Reading. (KR)

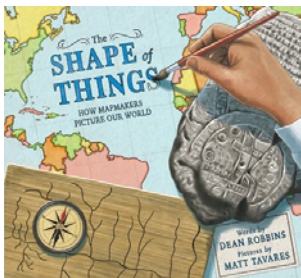


The Shape of Things: How Mapmakers Picture Our World

DEAN ROBBINS. Illustrated by Matt Tavares.

Random House Children's Books. 40pp. ISBN 9780593479254, \$19.99. (K-2, 3-5)

Embark on a journey through the fascinating history of mapmaking, from prehistoric cave drawings to the Greeks' use of geometry to determine Earth's shape, and finally to the advanced laser and satellite technology employed by modern cartographers. Explore the intersection of art and STEM. Timeline, Author's and Illustrator's Notes, Bibliography. (JCW)



Skybound!: Starring Mary Myers as Carlotta, Daredevil Aeronaut and Scientist

SUE GANZ-SCHMITT. Illustrated by Tony Piedra and Mackenzie Joy. Candlewick Press. ISBN 9781536219494. \$18.99. (K-2)

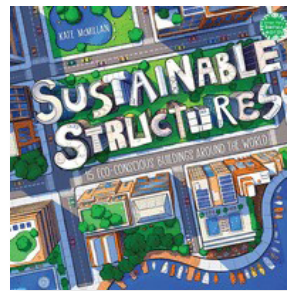
Mary Myers and her husband designed and constructed balloons of all shapes and sizes. Using the stage name Carlotta, Mary took the first flight in 1880, doing balloon tricks for crowds while recording flight data. Author's Note. (BL)



Sustainable Structures: 15 Eco-Conscious Buildings Around the World

KATE MCMILLAN. Holiday House. 80pp. ISBN 9780823455669, \$21.99. (3-5)

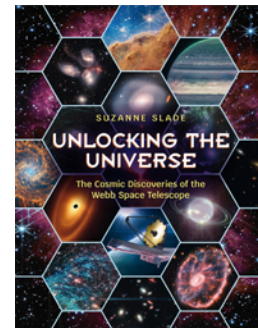
From wooden skyscrapers that reduce construction waste to a floating school and a research station on skis, the book showcases extraordinary architectural solutions inspired by nature and environmental consciousness. This work offers readers of all ages an engaging look at how creative design can address environmental challenges and inspire sustainable building practices. (KC)



Unlocking the Universe: The Cosmic Discoveries of the Webb Space Telescope

SUZANNE SLADE. Charlesbridge. 48pp. ISBN 9781623544591, \$17.99. (3-5, 6-8)

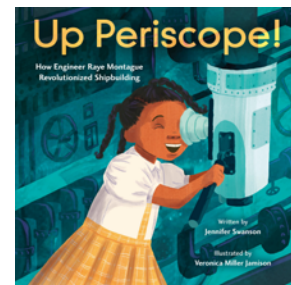
This informative and inspiring story of the conception, design, testing, redesign, assembly, and launch of the Webb Space Telescope. Featuring stunning photographs, this book immerses readers in the groundbreaking science and engineering behind a device that has transformed our understanding of the universe. Author's Notes, Resources, Bibliography. (JCW)



Up Periscope!: How Engineer Raye Montague Revolutionized Shipbuilding

JENNIFER SWANSON. Illustrated by Veronica Miller Jamison. Little Brown Books for Young Readers. 40pp. ISBN 9780316565486, \$18.99. (K-2, 3-5)

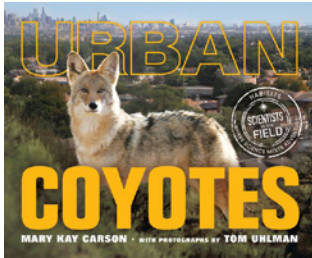
Ray Montague is the first engineer who created a computer-generated ship design. As a black woman, Ray overcame gender and racial barriers in education and job assignment to accomplish the engineering breakthrough. Author's Note. (BL)



Urban Coyotes

MARY KAY CARSON. Illustrated by Tom Uhlman. HarperCollins / Clarion Books. 80pp. ISBN 9780063271470, \$21.99. (3-5, 6-8)

In *Urban Coyotes*, Explore how a group studies coyotes to support coexistence in Chicago's urban landscape. This engaging entry in the *Scientists in the Field* series shows the real-life work of researchers tracking these adaptable predators and uncovering their impact on ecosystems. Stunning photography brings this fascinating study to life. Glossary, Find Out More, Bibliography, Index. (AF)



Whirligigs: The Wondrous Windmills of Vollis Simpson's Imagination

CAROLE BOSTON WEATHERFORD. Illustrated by Edwin Fotheringham. Astra Books for Young Readers / Calkins Creek. 32pp. ISBN 9781662680410, \$18.99. (K-2, 3-5)

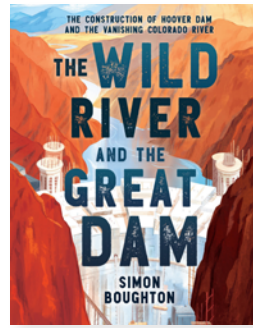
In desiring to know how things worked and learning how to fix things, Vollis Simpson loved to explore metal and tinkered throughout life. Following his service in the military, he returned home and built windmills – many colorful windmills that could be seen for miles. *Whirligigs* explores his life, passion, and how these beautiful creations have been preserved for all to see. Author's Note, Bibliography, Background Information. (CAR)



The Wild River and the Great Dam: The Construction of Hoover Dam and the Vanishing Colorado River

SIMON BOUGHTON. Little Brown Books for Young Readers / Christy Ottaviano Books. 256pp. ISBN 9780316380744, \$19.99. (6-8)

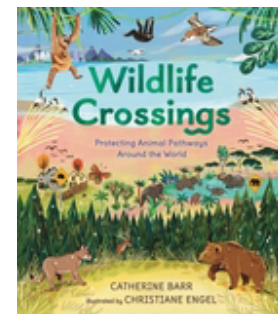
Boughton offers a compelling exploration of the monumental achievement of Hoover Dam, intertwining social, economic, cultural and environmental histories with engineering marvels. By utilizing primary sources and visual aids, the author brings to life the stories of the thousands of workers who risked their lives to make this project possible. The book ends with an afterward on the current state of the Colorado river and the people who depend on it. Timeline, List of Dams on the Colorado River, Bibliography, Photo Credits. (RG)



Wildlife Crossings: Protecting Animal Pathways Around the World

CATHERINE BARR. Illustrated by Christiane Engel. Candlewick Press. 40pp. ISBN 9781536236255, \$18.99. (K-2, 3-5)

The human-engineered world increasingly encroaches on the habitats and migration paths of animals worldwide. Discover how science and engineering unite to reconnect fragmented ecosystems and restore migration routes through the innovative creation of wildlife crossings. Inspire young learners to think critically as they delve into seven examples of crossings brought to life by collaborative efforts among engineers, conservationists, local governments, and community stakeholders. These real-world stories showcase the power of applied STEM in addressing urgent environmental challenges. (JCW)



CALL FOR 2026 BEST STEM BOOKS FOR STUDENTS K-12

Deadline for submissions: April 29, 2025

ELIGIBILITY

- Titles should be for grades K-12.
- All titles must originate from a children's publishing company or division and must be published (not simply distributed) by a publisher incorporated in the United States.
- Titles must be published in 2025.
- Titles originally published abroad are eligible only if they have a 2025 U.S. publication date; reprints or licensed editions of titles initially published in the United States before 2025 are not eligible.
- Original paperbacks are eligible; paperback reprints are not. If a book is published simultaneously in hardcover and paperback, either edition may be submitted. If both editions are submitted, they constitute separate entries.
- Revisions are eligible only if the book has been newly illustrated or if substantial text, constituting at least 25% of the book, has been changed or added.
- Math books are not eligible unless the mathematical principles are applied to scientific functions such as measuring for experiments, using statistical models for scientific research, and so on.
- Textbooks, workbooks, kits, experiment-only books, and activity books are not eligible.
- Spanish-language editions of titles published in English before 2025 are not acceptable. Spanish-language editions published simultaneously with English-language editions in 2025 are eligible.
- Fiction is eligible if the book has substantial science content.

NUMBER OF TITLES YOU MAY SUBMIT

Each participating publisher may submit an unlimited number of titles.

SUBMISSION GUIDELINES

Books should have value for both classroom studies and library collections supporting students' work.

Full submission guidelines will be available throughout the months of March and April 2025 at <https://www.cbcbooks.org/awards-and-book-lists/best-stem-books/>.

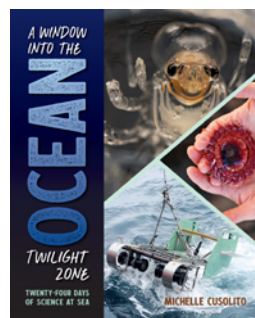
FEES

There is no submission fee for CBC Regular and Affiliate Members. The fee is \$75 per title for Associate and Initiating Members and \$300 per title for non-members. All fees are non-refundable. Titles may not be substituted. There is no refund if a title is canceled or postponed.

A Window into the Ocean Twilight Zone

MICHELLE CUSOLITO. Charlesbridge. 144pp. ISBN 9781623543020, \$18.99. (6-8)

Dive into the mysteries of the deep with *A Window Into the Ocean Twilight Zone*. Experience the thrilling voyage to study Earth's last frontier using cutting-edge technology through the eyes of a researcher. Packed with vivid photos and captivating details, this STEM adventure reveals the wonders of ocean exploration. Biographical Information, Index. (AF)



Yumbo Gumbo

KEILA V. DAWSON. Illustrated by Katie Crumpton. Charlesbridge. 32pp. ISBN 9781623543259, \$16.99. (K-2)

Making gumbo was a data experience that was shared by the entire family. Annabelle made decisions on the likes and dislikes of the family. Deciding what to do each time there was a tie provided Annabelle an opportunity to demonstrate her innovative thinking. Her clever solution which shouts STEM solves the problem so that everyone is happy. Author's Note, Glossary, More Math Ideas to Try. (KR)

