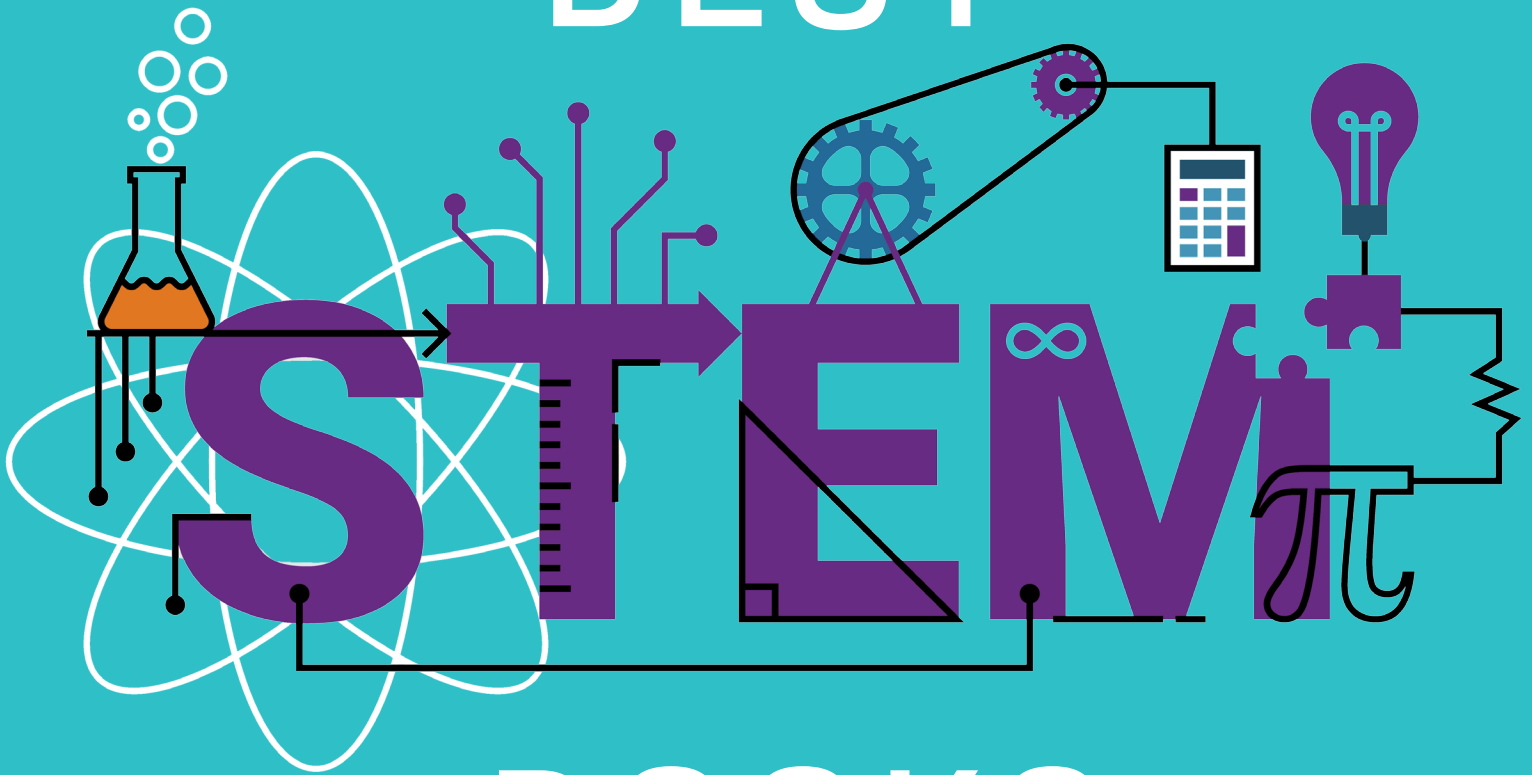


BEST



BOOKS



NSTA National Science Teachers Association

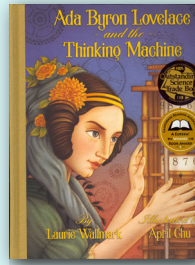
WINNING TITLES

This is the inaugural year for the “Best STEM Books” list. Interest from readers and publishers alike has been “off the charts.” The impetus for the list is the profound difference between the purely-science books on the annual list of *Outstanding Science Trade Books* (jointly created by the National Science Teachers Association and the Children’s Book Council) and the titles we honor here.

On the surface, STEM appears to be a clear-cut acronym for content that draws on science, technology, engineering, and math. But the fact is that many thoughtful readers have their own unique notion of what STEM means. Notwithstanding those definitional differences, the panel of judges that selected the winning titles chose them because each book reinforces STEM thinking—modeling innovation, demonstrating authentic problem-solving and assimilation of new ideas, all while exploring solutions that show progressive change or improvement.

Best STEM Books is a joint project of several organizations: the American Society for Engineering Education, the International Technology and Engineering Educators Association, the National Science Teachers Association, the Society of Elementary Presidential Awardees, and the Children’s Book Council (ASEE, ITEEA, NSTA, SEPA, and CBC). The list provides knowledgeable recommendations to educators, librarians, parents, and caregivers about the best trade books with STEM content.

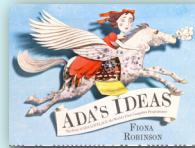
We invite you to explore this extraordinary list of Best STEM books.



Ada Bryon Lovelace and the Thinking Machine
Laurie Wallmark
Illustrated by *April Chu*

Creston Books

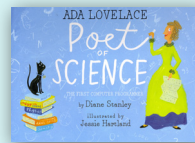
Ada is a unique young woman who models creative thinking, applies mathematics and science to design, and publishes a pioneering computer program



Ada's Ideas
Fiona Robinson

ABRAMS

An inspirational story of Ada Byron Lovelace, who overcame struggles to pursue her interests in math and science.

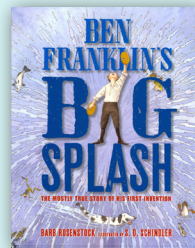


Ada Lovelace, Poet of Science
Diane Stanley

Illustrated by *Jessie Hartland*

Simon & Schuster / Paula Wiseman Books

Ada Lovelace was able to nurture her imagination and model innovative thinking to create the first computer program ever published

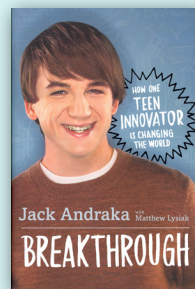


Ben Franklin's Big Splash
Barb Rosenstock

Illustrated by *S.D. Schindler*

Boyd's Mills Press / Calkins Creek

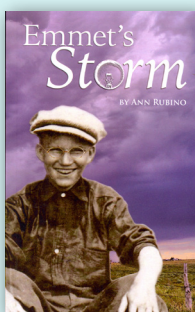
Even as a young boy, Ben Franklin uses design thinking to explore multiple solutions to invent swim fins.



Breakthrough
Jack Andraka

HarperCollins

Faced with multiple challenges, young scientist Jack Andraka perseveres to design an early-detection test for several cancers

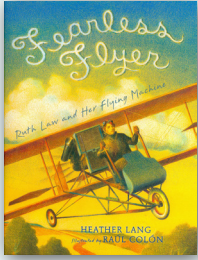


Emmet's Storm
Ann Rubino

Catree Books

In the context of his era, Emmet explores solutions to a community problem through persistence.

BEST STEM BOOKS



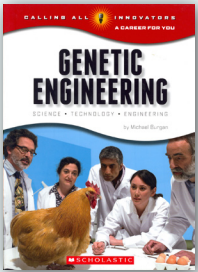
Fearless Flyer

Heather Lang

Illustrated by Raúl Colón

Boyd's Mills Press / Calkins Creek

Ruth Law, 1916 biplane pilot, improves and redesigns flight equipment, daring to fly cross-country and setting a new long-distance record.

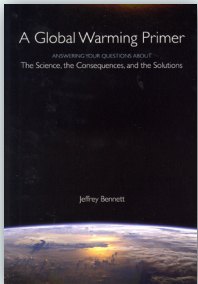


Genetic Engineering

Michael Burgan

Scholastic Library Publishing.

The fast-changing field of genetic engineering is highlighted, inviting readers to explore multiple solutions and implications for society.

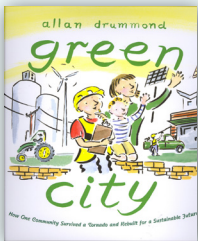


A Global Warming Primer

Jeffrey Bennett

Big Kid Science

The impact of global warming is presented in detail.



Green City

Allan Drummond

Macmillan / Farrar Straus Giroux

A city devastated by a tornado is rebuilt for an environmentally sustainable future by citizens who design multiple solutions.



Hello Ruby

Linda Luukas

Macmillan/Feiwel & Friends

Ruby and her fanciful friends explore the logical skills that underpin programming in a book that will invite the youngest learners to explore.



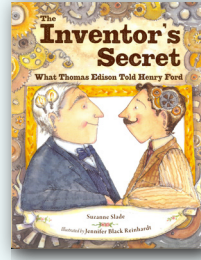
Inventions that Could Have Changed the World... But Didn't

Joe Rhatigan

Illustrated by Anthony Owsley

Charlesbridge/Imagine

A flying car, a bed that ejects sleepers when it is time to awaken, a toilet seat for cats--these are just a few of the imagined, creative, and sometimes patented inventions that did not change the world.



The Inventor's Secret

Suzanne Slade

Illustrated by Jennifer Black Reinhardt

Charlesbridge

Edison and Ford were widely curious—and all of the work they did (including the many mistakes along the way) highlights how these inventors persevered, designed, and redesigned.



The Marvelous Thing That Came from a Spring

Gilbert Ford

Simon & Schuster/Atheneum Books for Young Readers.

While dreamer Richard James works as a navy engineer exploring ways to keep ships from vibrating, he designs one of the most popular toys in American history, the Slinky.

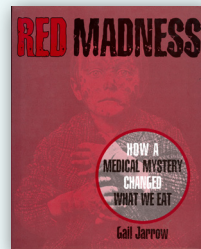


The Most Magnificent Thing

Ashley Spires

Kids Can Press

A young girl engages in the engineering and design process as she struggles to create the most magnificent thing—which is not revealed until the end of the story.

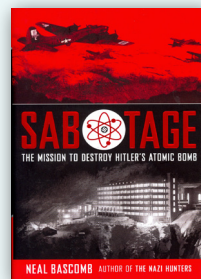


Red Madness

Gail Jarrow

Boyd's Mills Press/Calkins Creek

Pellagra, a mysterious disease, affected millions until a public health crusader kept an open mind while analyzing the results of medical research.

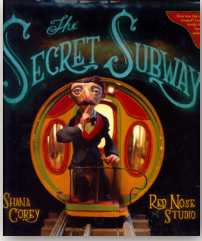


Sabotage

Neal Bascomb

Scholastic/Arthur A. Levine Books

Faced with Germany's invasion of Norway, nine Norwegian commandos explore multiple solutions to life-threatening problems, as they change the course of World War II.



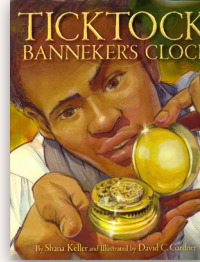
The Secret Subway

Shana Corey

Illustrated by Red Nose Studio

Random House/Schwartz & Wade

Alfred Ely Beach uses divergent ideas from the community to solve a transportation problem with vividly relevant illustrations.



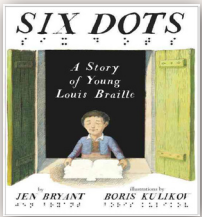
Ticktock Banneker's Clock

Shana Keller

Illustrated by David C. Gardner

Sleeping Bear Press

A young Benjamin Banneker perseveres to "reverse-engineer" a pocket watch to improve and scale up his design of a strike clock.



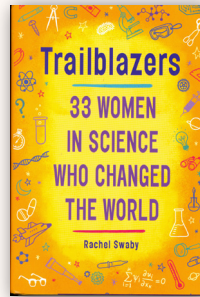
Six Dots

Jen Bryant

Illustrated by Boris Kulikov

Random House/Alfred A. Knopf BFYR

At age 15, blind Louis Braille exemplifies persistence and creativity as he constructs a system for reading and writing through code.

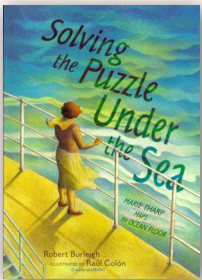


Trailblazers

Rachel Swaby

Random House/Delacorte Press

33 vignettes that exemplify progressive change as well as perseverance, innovative thinking, change, and discovery.



Solving the Puzzle Under the Sea

Robert Burleigh

Illustrated by Raúl Colón

Simon & Schuster/Paula Wiseman Books.

In 1948 at Columbia University, Marie Tharpe carefully plotted Atlantic Ocean depth data, ultimately discovering a remarkable formation--the mountainous Mid-Atlantic Ridge.



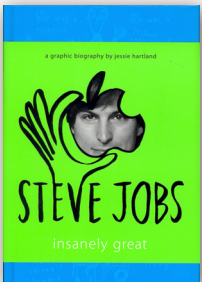
Wangari Maathai

Franck Prévot

Illustrated by Aurélia Fronty

Charlesbridge

Strong and fearless, Wangari Maathai engineers both peace and environmental responsibility through problem solving and persistence.

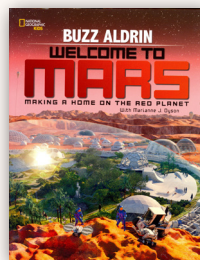


Steve Jobs

Jessie Hartland

Random House/ Schwartz & Wade

The eclectic curiosity, drive for perfection, and imperfect personality of Jobs are all illustrated in this graphic novel about a quirky genius.

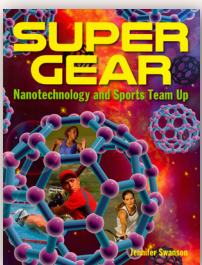


Welcome to Mars

Buzz Aldrin with Marianne J. Dyson

National Geographic Kids Books

Astronaut Buzz Aldrin shares ideas about failures and successes in an authentic situation--while being encouraged to think critically about planning for a trip to Mars.

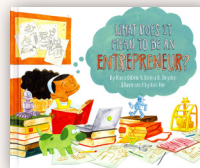


Super Gear

Jennifer Swanson

Charlesbridge

Stronger, lighter, safer, faster: Innovative improvements through nanotechnology demonstrate progressively better solutions, changing the world of sports.



What Does It Mean To Be An Entrepreneur?

Rana DiOrio and Emma D. Dryden

Illustrated by Ken Min

Little Pickle Press.

Innovation and open-minded thinking are the focus of this story, in which a young entrepreneur demonstrates curiosity, takes risks, overcomes challenges, and exemplifies perseverance.

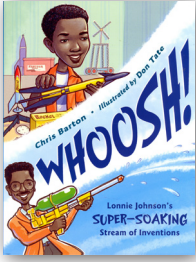


SWAP!

Steve Light

Candlewick Press

A little pirate uses ingenious thinking to progressively change an old ship into a new ship of which his friend can be proud.



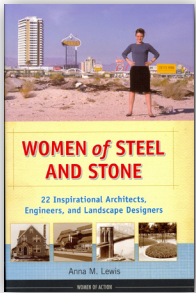
Whoosh!

Chris Barton

Illustrated by *Don Tate*

Charlesbridge

From childhood to adult, Tuskegee to NASA, Lonnie Johnson used authentic problems to design and construct the Super Soaker.



Women of Steel and Stone

Anna M. Lewis.

Chicago Review Press

This diverse collection of biographies of female architects allows readers insight into the women's challenges and reflective thinking.



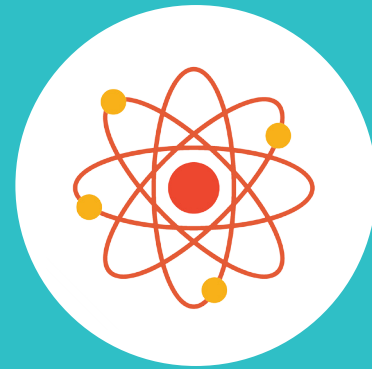
Women Who Launched the Computer Age

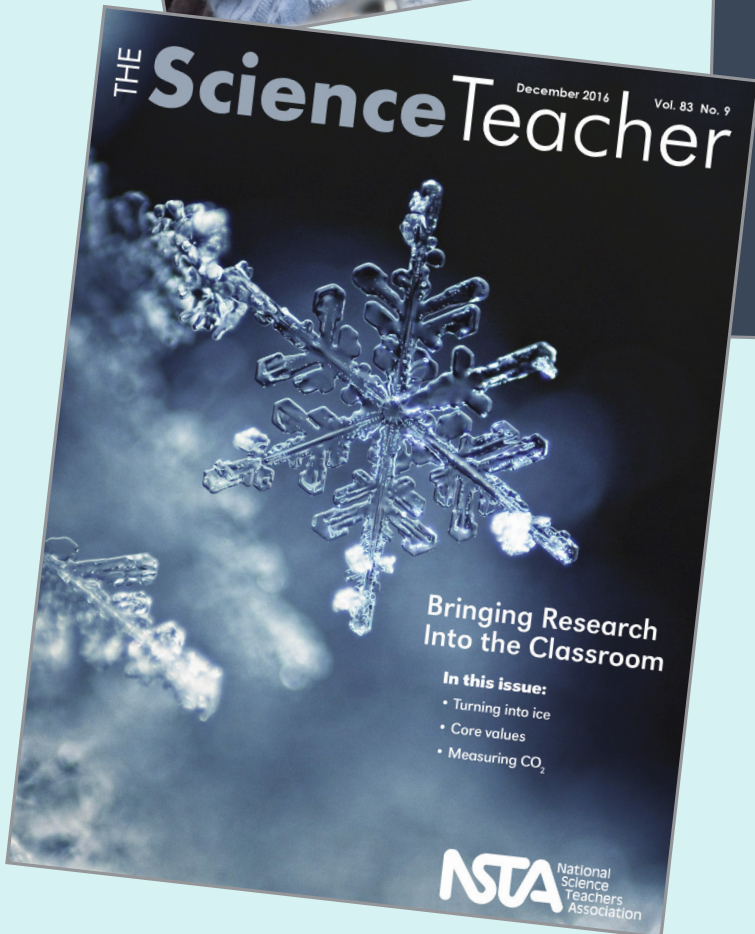
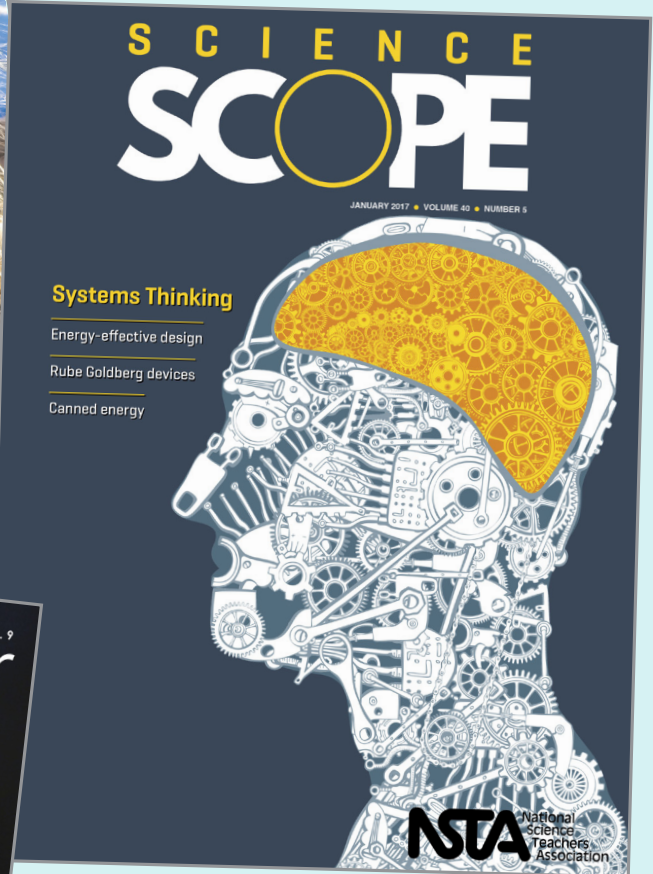
Laurie Calkhoven

Illustrated by *Alyssa Petersen*

Simon & Schuster/Simon Spotlight

The story of the women "computers" from World War II--and the process by which they developed the first programming for the ENIAC computers--is told through the lens of both history and technology.





Full reviews of these books will be available in the March 2017 issues of NSTA's K–12 journals and online at www.nsta.org/publications/stembooks/