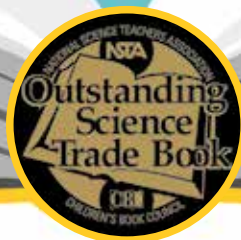


# OUTSTANDING SCIENCE TRADE BOOKS FOR STUDENTS K–12: 2018



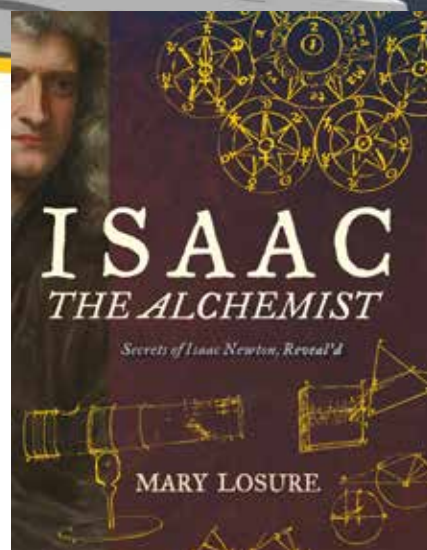
## BOOKS PUBLISHED in 2017

We invite you to explore this year's list of Outstanding Science Trade Books, which builds upon our 45-year history of identifying the very best in science books for children. In the award-winning titles below, you'll find not only traditional science content but also engineering and design. We hope you'll enjoy enhancing your own spirit of inquiry as you and the children in your life investigate science through the year's best trade books.

### PS1: Matter and Its Interactions: Science as Inquiry

*Isaac the Alchemist: Secrets of Isaac Newton, Revealed.* Mary Losure. Candlewick Press. 176pp. Trade ISBN 978076370634, \$19.99. (6–12) The story of Isaac Newton's childhood was not always a happy one. Sent to live with a pharmacist after his father died and mother remarried made for a lonely life but one filled with the opportunity to learn what he had missed in the country. Discover how an interest in alchemy and magic led Isaac to become an accomplished mathematician and the father of physics, inspiring a scientific revolution. (KC) SEP8, CCC7

*The Secret Project.* Jonah Winter. Illustrated by Jeanette Winter. Simon & Schuster/Beach Lane Books. 40pp. Trade ISBN 9781481469135, \$17.99. (6–8) Through simple text structure and captivating illustrations, this book tackles



the controversial, sensitive, and gloomy topic of the Manhattan project. It provides a glimpse of the secret nuclear laboratory at Los Alamos as well as the creation and testing of the first nuclear bomb. The book addresses a very complicated historical event in a mysterious but thought-provoking way. Author's Note, Further Reading (TBV) CCC5, SEP1, SEP3

### *This Book Stinks! Gross Garbage, Rotten Rubbish, and the Science of Trash.*

Sarah Wassner Flynn. National Geographic Kids. 128pp. Trade ISBN 9781426327308, \$14.99. (3–8) Through bright photographs and simple text structure, this book takes a deep look into the hefty problem of trash, offering fun facts and creative solutions for its management. Each double-page spread addresses a different topic related to trash and provides information, suggested activities, and ideas to reduce and recycle. Index, Photo Credits. (TBV) CCC2, CCC5, SEP1, SEP6, SEP7, SEP8

### *When the Sky Breaks: Hurricanes, Tornadoes, and the Worst Weather in the World.*

Simon Winchester. Penguin Young Readers/Viking Books for Young Readers. 96pp. Trade ISBN 9780451476357, \$22.99. (6–8) The young reader is encouraged to explore some of nature’s most dangerous weather and climate phenomena such as hurricanes, tornadoes, and climate change. The book expands on the damage, how that can affect and alter lives dramatically, and, later, the time to recover. Afterword, Recommended Reading, Acknowledgments, Index, and Photo Credits. (LS) ESS2, ESS3, ETS1

## PS2: Motion and Stability: Forces and Interactions

### *Newton’s Rainbow: The Revolutionary Discoveries of a Young Scientist.*

Kathryn Lasky. Illustrated by Kevin Hawkes. Macmillan Children’s Publishing Group/Farrar, Straus and Giroux (BYR). 48pp. Trade ISBN 9780374355135, \$17.99. (3–5) This biographical story of Isaac Newton traces his curiosity and growing love of science as a child through school experiences that shaped the scholar he became. (KAM) SEP2, SEP3

## LSI: From Molecules to Organisms: Structures and Processes

### *About Habitats: Seashores.*

Cathryn Sill. Illustrated by John Sill. Peachtree Publishers. 48pp. Trade ISBN 9781561459681, \$16.95. (K–2) Illustrations are richly enhanced with a plethora of visual information for the young reader to quickly grasp the beautiful and diverse landscapes, animals, and plant life

that are the essence of viable and productive seashores. Glossary, Bibliography, and Detailed Afterword. (LS) LS2, LS4

### *Animal Journal: Land Mammals of the World.*

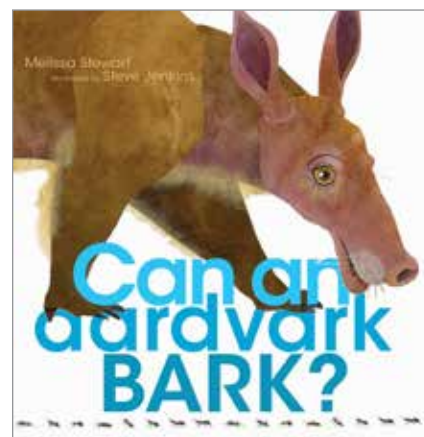
Juan Carlos Alonso. Quarto/Walter Foster Jr. 128pp. Trade ISBN 9781633221963, \$19.95. (3–5) Fantastically illustrated, with specific animal statistics and factual information, showcasing the magnificent diversity of terrestrial animals found living on our planet, this book would be a terrific addition to any library, whether personal or school. Introduction, Glossary, and About the Author. LS2, LS3, LS4

### *Birds Make Nests.*

Michael Garland. Holiday House. 32pp. Trade ISBN 9780823436620, \$16.95. (K–2) Explore the wide variety of nests made by birds in this beautifully illustrated book. (GSM) LS4

### *Can an Aardvark Bark?*

Melissa Stewart. Illustrated by Steve Jenkins. Simon & Schuster/Beach Lane Books. 32pp. Trade ISBN 9781481458528, \$17.99. (K–5) Squeals, grunts, and barks are just a few of the sounds that animals make. Explore vocalizations that animals use to communicate in this question-and-answer format book. Detailed cut-and-torn paper collage illustrations by Steve Jenkins showing the animals vocalizing complement the text. (BOD) SEP1, CCC6



### *Catching Air: Taking the Leap With Gliding Animals.*

Snead B. Collard III. Tilbury House Publishers. 48pp. Trade ISBN 9780884484967, \$17.95. (3–8) This book is filled with stunning photographs accompanied by equally captivating information about animals around the globe that glide long distances through air. The book includes informational boxes on “How Nature Works” and historical drawings that explain evolutionary and anatomical details of various animals that glide. Online Websites, Adult books, Gliding Words and Phrases (TBV) LS3, LS4, CCC2, CCC4, CCC6, SEP8

## About the Reviews

(SAMPLE) <sup>1</sup> <sup>2</sup>  
*The Opryland.* The Nashville Brothers. Illustrated with photographs. Tennessee Press. 168pp. Trade ISBN 0-592-67321-1, \$18.95; Library ISBN 0-592-64213-X, \$18.99. Paper ed. (5–12) Members of the Opryland crew take readers on a <sup>3</sup> tour of a tropical <sup>4</sup> indoor environment. Author’s Note. (ABC) CC4 <sup>5</sup> <sup>2</sup> <sup>3</sup>  
<sub>4</sub> <sub>5</sub>

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

1. International Standard Book Numbers (ISBN) are included for all available editions (trade, library, and paperback).
2. The prices are current as of January 2018.
3. Reading levels 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 (see Members of the Book Selection Panel listed on page 91).
5. The most relevant *Next Generation Science Standards* are indicated by codes (see page 89).

### *Feathers and Hair, What Animals Wear.*

Jennifer Ward. Illustrated by Jing Jing Tsong. Simon & Schuster/Beach Lane Books. 48pp. Trade ISBN 9781481430814, \$17.99. (K–2) Rhyming text woven with vibrant, colorful illustrations introduces children to the body coverings of a variety of animals. In a read aloud, children will want to name the animals illustrated that “wear hair” or scales, spikes, etc. A ‘Meet the Animals’ section in the back gives more extensive information about the animals featured in the book. (BOD) CCC6

### *The Girl Who Thought in Pictures: The Story of Dr. Temple Grandin.*

Julia Finley Mosca. Illustrated by Daniel Rieley. The Innovation Press. 40pp. Trade ISBN 9781943147304, \$17.99. (3–8) The expectations for Temple’s capacity of learning lowered when she was diagnosed with autism but she used a unique way of thinking to learn – in pictures! A compelling story about the unique way Dr. Temple Grandin used her visual thinking to invent groundbreaking improvements in farming, especially animal care. (KC) SEP1, SEP2, SEP6, SEP8, CCC1

### *The Great Penguin Rescue: Saving the African Penguins.*

Sandra Markle. Lerner/Millbrook Press. 48pp. Trade ISBN 9781512413151, \$30.65. (3–8) This book provides a comprehensive history of how human activity has caused stress that contributed to the decline of the African Penguin population. The conservation methods being used to try to restore their numbers are examined providing hope that human intervention can ensure survival of the species. Back matter includes a timeline, glossary, index and resources. (BOD) SEP1, SEP3, SEP6, LS2, ESS3, ETS1, CCC2, CCC3

### *How Animals Build.*

Moira Butterfield. Illustrated by Tim Hutchinson. Lonely Planet Kids. 24pp. Trade ISBN 9781786576637, \$18.99. (3–5) Animal homes of every shape, size, building material, and location are discovered on colorful fold-out pages. Get a view inside of each animal’s land or water home by lifting flaps. Read about how it builds a home that is just right for its needs, and sometimes for the needs of other animals who share its home. (LMSA) LS3, CCC1, CCC2, CCC6, SEP2, SEP6

### *How to be an Elephant: Growing Up in the African Wild.*

Katherine Roy. Macmillan Children’s Publishing Group/Roaring Brook Press. 48pp. Trade ISBN 9781626721784, \$18.99. (3–5)

## The Three Dimensions of the Framework

(from *A Framework for K–12 Science Education*, National Research Council, 2012)

### Science and Engineering Practices

- SEP1: Asking questions (for science) and defining problems (for engineering)
- SEP2: Developing and using models
- SEP3: Planning and carrying out investigations
- SEP4: Analyzing and interpreting data
- SEP5: Using mathematics and computational thinking
- SEP6: Constructing explanations (for science) and designing solutions (for engineering)
- SEP7: Engaging in argument from evidence
- SEP8: Obtaining, evaluating, and communicating information

### Crosscutting Concepts

- CCC1: Patterns
- CCC2: Cause and effect: Mechanism and explanation
- CCC3: Scale, proportion, and quantity
- CCC4: Systems and system models
- CCC5: Energy and matter: Flows, cycles, and conservation
- CCC6: Structure and function
- CCC7: Stability and change

### Disciplinary Core Ideas

#### Physical Sciences

- PS1: Matter and its interactions
- PS2: Motion and stability: Forces and interactions
- PS3: Energy
- PS4: Waves and their applications in technologies for information transfer

#### Life Sciences

- LS1: From molecules to organisms: Structures and processes
- LS2: Ecosystems: Interactions, energy, and dynamics
- LS3: Heredity: Inheritance and variation of traits
- LS4: Biological evolution: Unity and diversity

#### Earth and Space Sciences

- ESS1: Earth’s place in the universe
- ESS2: Earth’s systems
- ESS3: Earth and human activity

#### Engineering, Technology, and Applications of Science

- ETS1: Engineering design
- ETS2: Links among engineering, technology, science, and society

In keeping with the National Science Teachers Association’s Strategic Goal 3 (*Next Generation Science Standards* and STEM), for this year’s annotations, titles that have been awarded the *Outstanding Science Trade Book* award from NSTA/CBC will be aligned to the Scientific and Engineering Practices, Crosscutting Concepts, and Disciplinary Core Ideas from *A Framework for K–12 Science Education*, on which the NGSS is based.

All titles will be listed primarily by the prevailing Disciplinary Core Idea (DCI). This will allow teachers to quickly identify books that may be used with specific concepts.

Titles may receive notations of secondary DCIs, Science and Engineering Practices (SEPs), and Crosscutting Concepts (CCCs) at the end of each notation. Titles are not being listed primarily by SEPs and CCCs because these should be woven throughout all science concepts.

What does a baby elephant need to learn, and how do its unique body structures allow it to survive and thrive? This beautifully illustrated book follows a newborn elephant as it learns how to use its perfectly designed skeleton, ears, trunk, gut, and listening skills with the help of its herd. The text and illustrations creatively offer deeper understanding of these adaptations through the young elephant's exploration. (LMSA) CCC6, SEP2

*It's A Fungus Among Us: The Good, the Bad, and the Downright Scary.* Carla Billups and Dawn Cusick. Quarto/MoonDance Press. 80pp. Trade ISBN 9781633221543, \$14.95. (6–8) This book has everything one wants to know about fungi, such as their influence upon the making of foodstuffs (bread), medicines, human diseases (ringworm), as well as providing habitats for other living organisms. While some fungi are edible, there are also many that are poisonous to humans. Credits, Glossary, and Index. (LS) LS2, LS3, LS4

*It Starts with a Seed.* Laura Knowles. Illustrated by Jennie Webber. Quarto/Words & Pictures. 32pp. Trade ISBN 9781910277263, \$18.95. (K–2) The life cycle of a tree is told through simple poetic text and beautiful illustrations. The book makes connections between the tree and wildlife. Supplemented by an informative endnote about the tree featured in the illustrations, a sycamore tree. (PB) LS2, CCC1

*Living Things and Nonliving Things: A Compare and Contrast Book.* Kevin Kurtz. Arbordale Publishing. 32pp. Trade ISBN 9781628559859, \$17.95. (K–2) This book is perfect for compare-and-contrast lessons for young, budding scientists! It provides simple and accurate comparison of living and nonliving things, accompanied by beautiful photographs and questions that promote critical, logical, and analytical thinking. Glossary, Living or Nonliving Checklist (TBV) CCC1, SEP1, SEP4, SEP6, SEP7, SEP8

*Moonlight Crab Count.* Dr. Neeti Bathala and Jennifer Keats Curtis. Illustrated by Veronica V. Jones. Arbordale Publishing. 32pp. Trade ISBN 9781628559309, \$17.95. (3–5) Join Leena, her mom, and their dog Bobie, as they spend their summer as citizen scientists helping in the effort to conserve horseshoe crabs. References. (GSM) LS4

*My Journey to the Stars.* Scott Kelly. Illustrated by André Ceolin. Random House/

## About CBC and NSTA

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](http://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.

Crown Books for Young Readers. 48pp. Trade ISBN 9781524763770, \$17.99. (3–5) Many students will relate to the child who had trouble paying attention in school. Scott Kelly was inspired by a book about test pilots and astronauts to dream and set goals for his future, ultimately achieving those dreams. The book also recounts his early family life with his twin brother Mark and highlights how problems can be preparation for your future life. "You never know when your problems can become your strengths." (BOD) SEP8

*Out of School and Into Nature: The Anna Comstock Story.* Suzanne Slade. Illustrated by Jessica Lanan. Sleeping Bear Press. 32pp. Trade ISBN 9781585369867, \$16.99. (3–5) This picture book is a biography of Anna Comstock, an artist and naturalist who chose to pursue a career in science despite what was considered the social norm for women during her time period. Anna attended college and went on to become a pioneer in education reform; she encouraged schools to have science classes outside so students could observe natural phenomena, thus fueling their interest in science. (KC) LS2, SEP 1, SEP3, CCC1

*Over and Under the Pond.* Kate Messner. Illustrated by Christopher Silas Neal. Chronicle Books. 48pp. Trade ISBN 9781452145426, \$17.99. (K–2) Discover the secrets of a mountain pond's ecosystem from over and under the pond. Author's Note, Reference. (GSM) ESS3

*Seagrass Dreams.* Kathleen Hanes. Illustrated by Chloe Bonfield. Quarto/Seagrass Press. 32pp. Trade ISBN 9781633221253, \$17.95. (K–2) This beautifully illustrated counting book introduces readers to life in the world's seagrass environments. Young children can find and count the animals in the illustrations. Older children will enjoy the additional details about the animals and finding their locations on a world map in the back matter. Also included is a glossary and references. (BOD) SEP8, LS2, CCC6

*Secrets of the Sea: Discover a Hidden World.* Kate Baker. Illustrated by Eleanor Taylor. Candlewick Press/Big Picture Press. 96pp. Trade ISBN 9780763698393, \$24.99. (3–5) This beautifully illustrated book has colorful drawings of sea life not often observed by humankind—such as a swordtail squid, sea butterfly, or the purple sea urchin. It inspires the reader to explore deeper into Earth's oceans for even more exotic and curious creatures. Selected Bibliography, and Online Resources. (LS) LS2, LS3, LS4

*Tall Tall Tree.* Anthony D. Fredericks. Illustrated by Chad Wallace. Dawn Publications. 32pp. Trade ISBN 9781584696025, \$8.95. (K–2) Explore the wildlife living in a redwood tree through counting, rhyme, and some hidden surprises! (GSM) ESS3

*Tide Pool Secrets.* Narelle Oliver. Candlewick Press. 32pp. Trade ISBN 9780763691592, \$18.99. (K–5) Tide pools are full of secrets. Lift

flaps to reveal the hidden sea life in tide pools in this wonderfully illustrated book. Learn how these animals keep themselves moist when the water recedes leaving them exposed. Back matter includes more information about tide pools and the animals that live there. (BOD) SEP1, SEP8, LS2, CCC2, CCC6

## LS2: Ecosystems: Interactions, Energy, and Dynamics

### *Honey Girl: The Hawaiian Monk Seal.*

Jeanne Walker Harvey. Illustrated by Shennen Bersani. Arbordale Publishing. 32pp. Trade ISBN 9781628559217. \$17.95. (3–5) This true story of an interaction between humans and a marine mammal introduces the reader to a favorite seal mom who frequented a Hawaiian beach to raise her young. When she is seriously injured by a fishhook, local scientists and veterinarians rally to treat her life-threatening injury, and then release this endangered animal back on her beach under the watchful eyes of caring volunteers. (LMSA) CCC2, SEP1

### *Shark Lady: The True Story of How Eugenie Clark Became the Ocean's Most Fearless Scientist.*

Jess Keating. Illustrated by Marta Álvarez Miguéns. Sourcebooks/Jabberwocky. 40pp. Trade ISBN 9781492642046. \$17.99. (K–2) Allowed to explore her passion for sharks as a child through family outings and books, this young girl set a path for becoming a renowned shark scientist and advocate. She broke the societal mold for women of her time to be scientists, and through her life's work, changed public opinion on this misunderstood animal. This story celebrates the outcome of following your passion with grit and determination. (LMSA) CCC2, SEP1, SEP3, SEP7

## LS3: Heredity: Inheritance and Variation of Traits

### *Hawk Mother: The Story of a Red-Tailed Hawk Who Hatched Chickens.*

Kara Hagedorn. Web of Life Children's Books. 32pp. Trade ISBN 9780988330375. \$16.95. (3–5) Sunshine, an injured red-tailed hawk, will never have babies of her own. Photographs

capture the reader as Sunshine's story of becoming a mother of two chicks unfolds. (KAM) CCC4, CCC6

### *Hello! The Guide, Period.*

Naama Bloom. Penguin Young Readers/Dutton Books for Young Readers. 176pp. Trade ISBN 9780399187315. \$19.99. (6–8) This is a fun, approachable guide through puberty with real-life facts about young women's changing bodies. (GSM)

## LS4: Biological Evolution: Unity and Diversity

### *Bat Count: A Citizen Science Story.*

Anna Forrester. Illustrated by Susan Detwiler. Arbordale Publishing. 32pp. Trade ISBN 9781628558944. \$17.95. (3–5) *Bat Count* is a beautifully told story about two families: Jojo's family and the bat family. Take your reader through this journey to understand the importance of bats and their recovery in nature. It is an engaging story of the importance of how scientists need the support of all of us to help save the world around us. You will be inspired to become a citizen scientist! (JPE) SEP4, SEP8, LS4

### *Bees: A Honey History.*

Piotr Socha. Abrams Books for Young Readers. 80pp. Trade ISBN 9781419726156. \$24.95. (3–5) This book

provides a rich, fun, and comprehensive history of the bee! From pollination to Cleopatra. From hives to world explorers. Readers learn not only the factual side of how honey is created and the life of bees, but a social history of the importance that honey has played in history. From cave paintings to big city bees, *Bees* is a great resource for any library. Open this book to any page to explore the rich history of bees! (JPE) SEP4, SEP7

### *Botanicum.*

Kathy Willis. Illustrated by Katie Scott. Candlewick Press/Big Picture Press. 112pp. Trade ISBN 9780763689230. \$35.00. (3–5) Opening this oversize picture book is like stepping into an art gallery. The stunning artwork is complemented with text that gives the reader insight into both exotic and common plants. (KC) SEP7, SEP8, CCC1, CCC2, CCC7

### *Ribbit.*

Jorey Hurley. Simon & Schuster/Paula Wiseman Books. 40pp. Trade ISBN 9781481432740. \$16.99. (K–2) Do not let the simplicity of this book fool you! The life cycle of the frog is beautifully illustrated. Great for young readers, as well as budding biologists. The author's note is filled with great information on the life cycle of the frog and the book's beautiful illustrations are perfect for sparking conversation.

## Members of the Book Selection Panel

### **Laura Arndt** (LMSA)

Consultant, Writer, and Educator  
McREL International  
Franktown, CO

### **Patricia Bricker** (PB)

Associate Professor and Associate Director  
Western Carolina University  
School of Teaching and Learning  
Cullowhee, NC

### **Kelly Chaney** (KC)

Master Teacher, UALR Teach  
University of Arkansas at Little Rock  
Little Rock, AR

### **James P. Ewing** (JPE)

STEM Educator/Lead PreK–5  
Amidon-Bowen Elementary School  
Washington, DC

### **Katherine Anna Mangione** (KAM)

Assistant Professor  
Middle Tennessee State University  
Murfreesboro, TN

### **Genet Mehari** (GSM)

Science Specialist  
Curley K–8  
Jamaica Plain, MA

### **Betsy O'Day** (BOD)

Elementary Science Specialist  
Hallsville Intermediate School  
Hallsville, MO

### **Len Sharp** (LS)

Adjunct Professor  
LeMoyne College  
Syracuse, NY

### **Trupti Vora** (TBV)

Science Teacher  
Cameron Middle School  
Framingham, MA

Visit CBC's and NSTA's websites at  
[www.cbcbooks.org](http://www.cbcbooks.org) and [www.nsta.org](http://www.nsta.org).

Expanded reviews of these  
award-winning books are available at  
[www.nsta.org/recommends](http://www.nsta.org/recommends).

*Pup The Sea Otter.* Jonathan London. Illustrated by Sean London. Graphic Arts Books. 32pp. Trade ISBN 9781943328871, \$16.99. (K–2) An enchanting story with fetching illustrations portrays the life of a young otter as he grows to adulthood. (KAM) CCC4

*The Secret Life of the Red Fox.* Laurence Pringle. Illustrated by Kate Garchinsky. Boyds Mills Press. 32pp. Trade ISBN 9781629792606, \$16.95. (3–5) Travel alongside the red fox as this book takes the reader through its amazing life, season by season. It is a fun read and has great information. The secret life of the red fox is revealed through this wonderful story and beautiful illustrations that chronicle the day-to-day life of one of the wood's most elusive creatures. (JPE) LS2

## ESS1: Earth's Place in the Universe

*Caroline's Comets: A True Story.* Emily Arnold McCully. Holiday House. 40pp. Trade ISBN 9780823436644, \$16.95. (3–5) This book narrates the inspirational story of Caroline Herschel. She overcame struggles to become the first woman to discover a comet and first-ever woman to get paid for her scientific research. Beautiful illustrations make this biography engaging for young readers. Notes, Bibliography, Glossary, Timeline. (TBV) CCC4, SEP1, SEP3, SEP4, SEP8, ETS2

*Margaret and the Moon: How Margaret Hamilton Saved the First Lunar Landing.* Dean Robbins. Illustrated by Lucy Knisley. Random House/Alfred A. Knopf Books for Young Readers. 40pp. Trade ISBN 9780399551857, \$17.99. (K–2) This is the story of Margaret Hamilton, who was instrumental in writing the computer programs that allowed for one of the greatest technological events in human history to occur – the successful flights of the Apollo missions. Author's Note, Additional Reading, and Bibliography. (LS) ESS3, ETS1, ETS2

*Seven Wonders of the Solar System.* David A. Aguilar. Penguin Young Readers/Viking Books for Young Readers. 80pp. Trade ISBN 9780451476852, \$18.99. (6–8) Explore the seven wonders of the solar system from our Earth to Pluto and Charon, nestled at the edge of the Kuiper Belt. Beautiful illustrations and captivating text transport the reader through space and time. (KAM) SEP 2, CCC3, CCC6, ESS3



*When Planet Earth Was New.* James Gladstone. Illustrated by Katherine Diemert. Owlkids Books. 40pp. Trade ISBN 9781771472036, \$18.95. (K–2) Simple text paired with colorful illustrations briefly tell the nearly five billion year history of our Earth. Endnotes, sources, and glossary included. (KAM) CCC4, CCC7, PS2, ESS2

*When the Sun Goes Dark.* Andrew Fraknoi and Dennis Schatz. Illustrated by Eric Freeberg. NSTA Press/NSTA Kids. 36pp. Trade ISBN 9781681400112, \$14.95. (6–8) Two curious children create models of solar eclipses in their living room with their astronomer grandparents, later going outside to learn how to safely view them. Clear science concept explanations and diagrams of eclipses, along with easy-to-make models, are woven into the characters' conversations and activities. Readers could easily reproduce the models themselves. (LMSA) CCC1, CCC4, SEP1, SEP2, SEP4, SEP6

## ESS2: Earth's Systems

*ABCs from Space.* Adam Voiland. Simon & Schuster/Paula Wiseman Books. 40pp. Trade ISBN 9781481494281, \$18.99. (K–2) This book has stunning satellite photographs of the Earth from space, each representing a different letter of the alphabet. Endnotes describe each photograph and its location and answers questions about the images and science content. Appropriate for all ages. Map, Glossary. (PB) ESS1, ETS2

*Grand Canyon.* Jason Chin. Macmillan Children's Publishing Group/Roaring Brook Press. 56pp. Trade ISBN 9781596439504, \$19.99.

(3–5) Hike with a dad and daughter from the bottom of the canyon to the South Rim while they explore the rock layers and jump back in time to experience the canyon at several geologic stages of its creation. Notice the changing plants and animals along the way who call different depths of the canyon home. Page border illustrations and additional informational text offers rich exploration of the canyon. (LMSA) LS2, CCC2, CCC7, SEP2, SEP6

## ESS3: Earth and Human Activity

*The End of the Wild.* Nicole Helget. Little, Brown Books for Young Readers. 272pp. Trade ISBN 9780316245111, \$16.99. (3–5) Eleven-year-old Fern faces many challenges in this thought-provoking realistic fiction chapter book that embeds issues related to fracking and the environment, hunger and poverty, and loss and forgiveness. This book helps readers consider multiple, connected aspects of environmental issues. (PB) LS2, ESS2, SEP1, SEP7, SEP8, CCC2, CCC7

*Exploring Space: From Galileo to the Mars Rover and Beyond.* Martin Jenkins. Illustrated by Stephen Biesty. Candlewick Press. 64pp. Trade ISBN 9780763689315, \$17.99. (6–12) Beautiful illustrations and helpful diagrams reflect humankind's love affair with the night sky, space, and the quest to explore space. (KAM) SEP1, SEP2, SEP5, SEP6, CCC2, CCC6, ESS1, ETS1, ETS2

*The Street Beneath My Feet.* Charlotte Guillain. Illustrated by Yuval Zommer. Quarto/Words & Pictures. 20pp. Trade ISBN 9781682971369, \$22.95. (K–5) Explore the world



that exists beneath our feet, all the way to the inner core of Earth, as this book literally unfolds 8 feet (2.4 meters)! Packed as thick as soil, *Street* will capture the imagination of any young scientist. This book is a great way for students to explore, in depth, the world that is, in fact, beneath our feet in a beautifully illustrated book. This book is for any student who wants to explore geology, archeology, or a student who is just curious! (JPE)

## ETS1: Engineering Design

*Cao Chong Weighs an Elephant.* Songju Ma Daemicke. Illustrated by Christina Wald. Arbordale Publishing. 32pp. Trade ISBN 9781628559033, \$17.95. (3–5) The emperor has a problem. He wants to weigh his elephant but there is not a scale big enough. What to do? Others try to come up with a solution to this vexing problem but it is six-year-old Cao Chong who comes up with a creative solution using buoyancy in this beautifully illustrated picture book. (KC) SEP1, SEP3, SEP4, SEP5, SEP6, SEP7, SEP8, CCC2, CCC3

## ETS2: Links Among Engineering, Technology, Science and Society

*Chasing Space, Young Readers' Edition.* Leland Melvin. HarperCollins/Amistad. 240pp. Trade ISBN 9780062665928, \$17.99. (3–8) A memoir of Leland Melvin, former NFL wide receiver turned astronaut, who shares his personal journey and how he overcame adversity, developed a strong work ethic, and seized opportunities to reach his goals. Activities and investigations in the back of the book allow students to explore astronomy concepts. (KC) SEP2, SEP3, CCC2

*Elon Musk and the Quest for a Fantastic Future Young Readers' Edition.* Ashlee Vance. HarperCollins. 288pp. Trade ISBN 9780062463289, \$16.99. (6–8) This adaptation of Ashlee Vance's *Elon Musk: Tesla, SpaceX, and the Quest for a Fantastic Future* gives young readers access to Musk's story from his childhood in South Africa to becoming one of the most innovative businessmen in the world. (GSM) SEP3, ETS1

*Finding Wonders: Three Girls Who Changed Science.* Jeannine Atkins. Simon & Schuster/Atheneum Books for Young Readers. 208pp. Trade ISBN 9781481465656, \$17.99. (6–8)

This unique novel in verse shares compelling stories based upon the real lives of three girls who made a difference in science: Maria Merian and her metamorphosis discoveries, Mary Anning and her fossil discoveries, and Maria Mitchell and her comet discoveries. An author's note provides historical context and explains how the author weaves factual information with her imagination to fill

in knowledge gaps. (PB) LS1, LS4, ESS1, SEP1, SEP3, SEP6, SEP8

*Girl Code: Gaming, Going Viral, and Getting It Done.* Andrea Gonzales and Sophie Houser. HarperCollins. 288pp. Trade ISBN 9780062472502, \$17.99. (9–12) This is the inspiring true story of two high school girls who met at a summer coding camp for girls, created a *Tampon Run* video game

## About the Books and the Selection Process

The books that appear in this annotated bibliography selected as Outstanding Science Trade Books were published in 2017. They are intended primarily for grades K–12. They were selected by members of a book review panel appointed by the National Science Teachers Association (NSTA) and assembled in cooperation with the Children's Book Council (CBC). NSTA and CBC have cooperated on this bibliographic project since 1973.

The panel looks at both content and presentation. Selection is based generally on the following criteria:

- The book has substantial science content.
- Information is clear, accurate, and up-to-date.
- Theories and facts are clearly distinguished.
- Facts are not oversimplified to the point that the information is misleading.
- Generalizations are supported by facts, and significant facts are not omitted.
- Books are free of gender, ethnic, and socioeconomic bias.

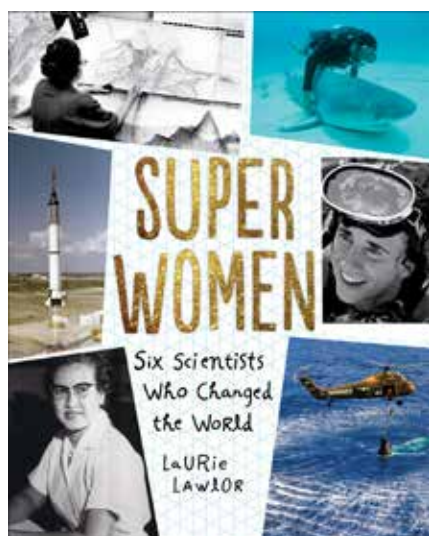
The panel also uses rigorous selection guidelines relating to the presentation of material, including the following: logical presentation and a clear sequence of ideas; appropriate content level for the intended audience; compatible text and illustrations; illustrations that are accurate representations in size, color, and scale; appropriate trim size and format of the book for the subject and audience; and well-organized layout that advances the text. The panel also gives attention to the quality of binding, paper, reproduction, and the appropriateness of typeface. Each panel member reads all the books, but reviews reflect only the appraisal of the individual panelist whose initials appear at the end of each entry.

Publishers' names appear in abbreviated form; complete names and addresses are available from the CBC and in standard reference works such as *Children's Books in Print*. CBC's Member List is available at [www.cbcbooks.org/membership/member-list/](http://www.cbcbooks.org/membership/member-list/).

Titles are arranged by subject category. Although some titles are appropriate for more than one category, the books have been placed where their usefulness in science education appears greatest. Panelists have also indicated the *Next Generation Science Standards* (see About the Reviews on page 88) to which the books relate. Where more than one standard is listed, the most applicable standard is given first.

that went viral, and got an inside look at the tech industry. An excellent example of girls finding their voice and using technology to address social issues. (PB) SEP1, SEP2, SEP3, SEP6, SEP8

***Mosquitoes Don't Bite Me.*** Pendred E. Noyce. Cover Illustration by Jan-Willem Boer. Tumblehome Learning. 200pp. Trade ISBN 9781943431304, \$16.95. (6–8) This realistic science fiction tale exposes young readers to conducting scientific research while thinking about social issues, such as health disparities and subtle racism. The mysterious aspect of the storyline will keep young adults interested while making them curious about scientific inquiry and research to cure diseases. (TBV) CCC2, SEP1, SEP3, SEP6, SEP7, SEP8



***Super Women: Six Scientists Who Changed the World.*** Laurie Lawlor. Holiday House. 64pp. Trade ISBN 9780823436750, \$17.95. (6–12) The inspiring stories of six female scientists who faced discrimination, persevered, and made significant contributions. Includes shark scientist Eugenie Clark, biochemist Gertrude Elion, mathematician Katherine Coleman Johnson, geologist Marie Thorp, archaeologist Florence Hawley Ellis, and astronomer Eleanor Margaret Burbidge. Specific examples of sexism illuminate historical struggles in important ways. Table of contents, glossary, sources, source notes, index. (PB) LS1, ESS1, ESS2, SEP5

## Call for Submissions

for 2019 Outstanding Science Trade Books for Students K–12

Deadline for submissions: July 2, 2018

### 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 2018.
- Titles originally published abroad are eligible only if they have a 2018 U.S. publication date; reprints or licensed editions of titles initially published in the United States before 2018 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 2018 are not acceptable. Spanish-language editions published simultaneously with English-language editions in 2018 are eligible.
- Fiction is eligible if the book has substantial science content.

### Number of titles that may be submitted

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 through June 2018 at [www.cbcbooks.org/outstanding-science/](http://www.cbcbooks.org/outstanding-science/).

### 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.