

## STEM Reading List

This list of Outstanding Science Trade Books for Students K-12 has just been announced by the [National Science Teachers Association](#) and the [Children's Book Council](#).

### Winning Titles

[Animal Grossapedia](#). Melissa Stewart. Scholastic.

*Just gross enough that children will read it, with a good variety of examples and nice focus on vocabulary.*

[A Warmer World](#). Caroline Arnold. Charlesbridge.

*Beautiful book with two levels: story line and facts about an important current issue and its effect on animals.*

[ABC ZooBorns!](#) Andrew Bleiman and Chris Eastland. Simon & Schuster/Beach Lane Books.

*Younger readers will love this book; lovely language and photos in an alphabet theme.*

[About Habitats: Oceans](#). Cathryn Sill. Peachtree Publishers.

*Double level book with unusual format; a simple story line and beautiful artwork. Great addition to this popular series.*

[Alex the Parrot: No Ordinary Bird](#). Stephanie Spinner. Random House/Knopf.

*Good literature bringing attention to the intelligence of animals and treatment of pets, and the story line emphasizes the ongoing nature of this research on animal behavior.*

[Alien Deep](#). Bradley Hague. National Geographic Children's Books.

*Great example of scientists who kept asking questions; data rich text.*

[Barnum's Bones](#). Tracey Fern. Macmillan Children's Book Group/Farrar, Straus and Giroux Books for Young Readers.

*Nice story of discovery, which illustrates that such projects take time, and the value of collection and observation.*

[Birds of a Feather](#). Bernadette Gervais and Francesco Pittau. Chronicle Books.

*Fun and interactive; tactile format allows a list of facts to become interesting.*

[Black Gold](#). Albert Marrin. Random House/Knopf.

*Easy to understand presentation of hard concepts; makes Earth science content understandable.*

[Body Actions](#). Shelley Rotner. Holiday House.

*A great introduction to body systems for children; easy to understand at that grade level.*

[Bomb](#). Steve Sheinkin. Macmillan Children's Book Group/Roaring Brook Press/Flash Point.

*Lots of science, with a thread of intrigue running through it that will keep secondary students going.*

[Citizen Scientists](#). Loree Griffin Burns. Macmillan Children's Book Group/Henry Holt Books for Young Readers.

*Great stories about young investigators and place-based science; inspirational.*

[D is for Desert](#). Barbara Gowan. Sleeping Bear Press.

*Dual-level book, with rhyming couplets to read aloud. Many possibilities to link to social studies.*

[Desert Baths](#). Darcy Pattison. Sylvan Dell Publishing.

*Great compare-and-contrast text of animals performing common tasks.*

[Dolphin Baby](#). Nicola Davies. Candlewick Press.

*With very simple vocabulary, smooth flowing text, and sound science facts, this book will engage early readers.*

[Eight Days Gone](#). Linda McReynolds. Charlesbridge.

*Brilliant poetry describes an out-of-this-world experience in space exploration.*

[Eye of the Storm](#). Kate Messner. Walker Books for Young Readers.

*Good engineering and science fiction connections make this a good resource for the NGSS.*

[Faces From the Past](#). James M. Deem. Houghton Mifflin Books for Children/Houghton Mifflin Harcourt.

*Great introduction to the science of facial reconstruction; outstanding illustrations.*

[Forensic Identification](#). Elizabeth A. Murray. Lerner/Twenty-First Century Books.  
*Personal stories make this book relatable for students even though the topic is quite serious; a dense but valuable reference.*

[Frogs!](#) Laurence Pringle. Boyds Mills Press.  
*The interactive format makes the book stand out; nicely illustrated and includes interesting ways humans have interacted with frogs and their unique adaptations.*

[Get the Scoop on Animal Poop!](#) Dawn Cusick. Charlesbridge/Imagine Publishing.  
*A totally new approach to food chains! Who thought poop could be outstanding? Just gross enough to fascinate.*

[Giant Squid](#). Mary M. Cerullo and Clyde F.E. Roper. Capstone Press.  
*A great companion book for a zoology class, with example of inquiry, historical perspective nicely intertwined with very nice text features.*

[Gopher to the Rescue](#). Terry Catasús Jennings. Sylvan Dell Publishing.  
*A good story that gives an unusual perspective on a current topic, showing succession after a volcano eruption on Mt. St. Helens.*

[Hiss-s-s-s!](#) Eric A. Kimmel. Holiday House.  
*This book illustrates the need for responsibility in caring for a difficult pet and cultural sensitivity.*

[I, Galileo](#). Bonnie Christensen. Random House/Knopf.  
*Young students can be introduced to Galileo in this appealing book with great resources.*

[Invincible Microbe](#). Jim Murphy and Alison Blank. Houghton Mifflin Harcourt/Clarion Books.  
*Historical perspective on a microbe that made an impact on history; the long path to find a cure for this disease is still complex but students can learn a great deal from the process.*

[Island](#). Jason Chin. Macmillan Children's Book Group/Roaring Brook Press/Flash Point.  
*Great example of change over time; well prepared method of introducing adaptations and evolution.*

[Ladybugs](#). Gail Gibbons. Holiday House.

*A nice introduction with links to organic farming; good text elements like pronunciation guide and context clues for building reading skills.*

[Leopard and Silkie](#). Brenda Peterson. Macmillan Children's Book Group/Henry Holt Books for Young Readers.

*Sweet and simple version of an important story; relates being a citizen scientist to real ecological issues.*

[Life in the Ocean](#). Claire A. Nivola. Macmillan Children's Book Group/Farrar, Straus and Giroux Books for Young Readers.

*Sylvia Earle sets an example for great ocean science; the book also contains many examples such as journaling.*

[Moonbird](#). Phillip Hoose. Macmillan Children's Book Group/Farrar, Straus and Giroux Books for Young Readers.

*The voice of the author gives this book a special appeal (gave one reviewer goose bumps!); the science (especially sidebars) and the insight into how research is done were great elements. Great STEM resource.*

[My First Day](#). Steve Jenkins and Robin Page. Houghton Mifflin Books for Children/Houghton Mifflin Harcourt.

*Beautiful pictures make this book come to life for young readers; excellent information regarding early animal adaptation.*

[Nature's Patchwork Quilt](#). Mary Miché. Dawn Publications.

*The illustrations make this book on habitats stand out; great text for integrating language arts because of treatment of key words.*

[Nic Bishop Snakes](#). Nic Bishop. Scholastic.

*The photographer "blows the reader out of the water" with his photos; this will get every reader interested and enable inquiry.*

[One White Dolphin](#). Gill Lewis. Simon & Schuster/ Atheneum Books for Young Readers.

*Presents complex scientific concepts in an interesting format that even non-traditional science students will love.*

[Open Wide!](#) Catherine Ham. EarlyLight Books.

*This book is a great one to share! What fun! It provides a unique perspective on animal adaptations.*

[Out of This World](#). Amy E. Sklansky. Random House/Knopf.

*Points that are fun and scientifically accurate; this book enables the listener or reader to find evidence in poetry.*

[Rachel Carson and Her Book That Changed the World](#). Laurie Lawlor. Holiday House.

*What an inspiration for young girls who might become scientists. Beyond outstanding, 50 years after Rachel Carson's landmark book. Illustrations, text, epilogue, and source notes add to the quality.*

[Saving Animals from Oil Spills](#). Stephen Person. Bearport Publishing.

*Timely and well-written, this story integrates science and society.*

[Saving Yasha](#). Lia Kvatum. National Geographic Children's Books.

*Focuses on the scientific research that was needed to save the bear.*

[Scholastic Discover More: The Elements](#). Dan Green. Scholastic.

*Books on chemistry are rare; strong blend of math and science which will serve to be an excellent reference.*

[Seababy](#). Ellen Levine. Walker Books for Young Readers.

*Good story of human support for an endangered species (sea otters) with limited interference in the habitat and a link to a live webcam.*

[Seahorses](#). Jennifer Keats Curtis. Macmillan Children's Book Group/Henry Holt Books for Young Readers.

*The uniqueness of the species will totally engage readers and the science will amaze.*

[Seymour Simon's Extreme Earth Records](#). Seymour Simon. Chronicle Books.

*This book looks at very interesting environments; accurate and beautiful illustrations for both Earth and environmental curricula.*

[Snead B. Collard III's Most Fun Book Ever About Lizards](#). Snead B. Collard III. Charlesbridge.

*This book approaches the topic with humor; engaging and scientific; outstanding photos and great text from an author who has captivated readers for years.*

[Super Nature](#). DK Publishing.

*A great classroom supplement with beautiful photos supported by facts.*

[Survival at 120 Above](#). Debbie S. Miller. Walker Books for Young Readers.  
*Solid book from previous winner; this lesser known condition for survival will fit in with the Standards. The book has complex, elegant language to describe the science.*

[Temple Grandin](#). Sy Montgomery. Houghton Mifflin Books for Children/Houghton Mifflin Harcourt.  
*The autobiography of the autistic expert on animal treatment will be inspirational to a subset of students as well as to all readers.*

[The Beetle Book](#). Steve Jenkins. Houghton Mifflin Books for Children/Houghton Mifflin Harcourt.  
*Interesting illustrations bring this book of beetles to life, and turns this field guide into a favorite for young insect lovers.*

[The Book of Blood](#). HP Newquist. Houghton Mifflin Books for Children/Houghton Mifflin Harcourt.  
*This will appeal to a wide audience and does a good job of describing many anecdotes about blood--even why the myth of vampires persisted in history.*

[The Boy Who Harnessed the Wind](#). William Kamkwamba and Bryan Mealer. Penguin/Dial.  
*The engineering and technology in the book's story makes it a great STEM resource and an inspirational human story.*

[The Mighty Mars Rovers](#). Elizabeth Rusch. Houghton Mifflin Books for Children/Houghton Mifflin Harcourt.  
*A timely topic; photographs of a working lab help students avoid misconceptions.*

[The Plant Hunters](#). Anita Silvey. Macmillan Children's Book Group/ Farrar, Straus and Giroux Books for Young Readers.  
*This collection of botanist biographies expands the range of career resources.*

[The Polar Bear Scientists](#). Peter Lourie. Houghton Mifflin Books for Children/Houghton Mifflin Harcourt.  
*Another outstanding example in a diverse series about actual researchers; modern practices of science are illustrated as the book discusses climate change and habitat loss.*

[Track that Scat!](#) Lisa Morlock. Sleeping Bear Press.

*Engaging story in a dual text with good nonfiction information; multiple meanings of words will fascinate readers.*

[Waiting for Ice.](#) Sandra Markle. Charlesbridge.

*Touching, fact-based story about a bear observed in the wild. An important topic told in an accurate and interesting way.*

[What Color Is My World?](#) Kareem Abdul-Jabbar and Raymond Obstfeld.

Candlewick Press.

*Integrated with technology, engineering and social studies, this book highlights unknown inventors. Useful for Invention units and STEM curricula. The variety of inventors and inventions will be appreciated.*

[Wild Horse Scientists.](#) Kay Frydenborg. Houghton Mifflin Books for Children/Houghton Mifflin Harcourt.

*History of the wild horses on Assateague Island; researchers illustrate the methods used.*

## **AND HERE ARE SOME OTHER GREAT S.T.E.M. BOOKS!**

### **SCIENCE TITLES**

[Kakapo Rescue: Saving the World's Strangest Parrot by Sy Montgomery](#)

Houghton Mifflin Harcourt

On remote Codfish Island off the southern coast of New Zealand live the last ninety-one kakapo parrots on earth. These trusting, flightless, and beautiful birds—the largest and most unusual parrots on earth—have suffered devastating population loss.

Now, on an island refuge with the last of the species, New Zealand's National Kakapo Recovery Team is working to restore the kakapo population. With the help of fourteen humans who share a single hut and a passion for saving these

odd ground-dwelling birds, the kakapo are making a comeback in New Zealand.

Follow intrepid animal lovers Sy Montgomery and Nic Bishop on a ten-day excursion to witness the exciting events in the life of the kakapo.

### [Phineas Gage: A Gruesome but True Story about Brain Science by John Fleischman](#)

Sandpiper Books

Phineas Gage was truly a man with a hole in his head. A railroad construction foreman, Phineas was blasting rock near Cavendish, Vermont, in 1848 when a thirteen-pound iron rod was shot through his brain. Miraculously, he survived another eleven years and became a textbook case in brain science. But he was forever changed by the accident, and what happened inside his brain will tell you a lot about how your brain works and what makes us who we are.

### [The Race to Save the Lord God Bird by Phillip M. Hoose](#)

Farrar, Straus and Giroux

The tragedy of extinction is explained through the dramatic story of a legendary bird, the Ivory-billed Woodpecker, and of those who tried to possess it, paint it, shoot it, sell it, and, in a last-ditch effort, save it. A powerful saga that sweeps through two hundred years of history, it introduces artists like John James Audubon, bird collectors like William Brewster, and finally a new breed of scientist in Cornell's Arthur A. "Doc" Allen and his young ornithology student, James Tanner, whose quest to save the Ivory-bill culminates in one of the first great conservation showdowns in U.S. history, an early round in what is now a worldwide effort to save species. As hope for the Ivory-bill fades in the United States, the bird is last spotted in Cuba in 1987, and Cuban scientists join in the race to save it.



All this, plus Mr. Hoose's wonderful story-telling skills, comes together to give us what David Allen Sibley, author of *The Sibley Guide to Birds* calls "the most thorough and readable account to date of the personalities, fashions, economics, and politics that combined to bring about the demise of the Ivory-billed Woodpecker."

[The Case of the Monkeys that Fell from the Trees and Other Mysteries in Tropical Nature by Susan](#)

[Quinlan](#)

Boyds Mills Press

Why would several monkeys suddenly fall from the trees? How do tiny frogs make deadly poisons. Why do certain plants harbour hoards of biting ants? What kind of creature pollinates an odd-looking flower? These are some of the mysteries explored in this fascinating book by wildlife biologist Susan Quinlan. This title features: eleven ecological mysteries solved by science. It offers abundant information on three types of tropical forest. It reveals the interconnectedness of nature.

[The Sky's the Limit by Catherine Thimmesh](#)

Houghton Mifflin Harcourt

They study the night sky, watch chimpanzees in the wild, and dig up ancient clay treasures. They search the beach for rare fossils, photograph old rock carvings, explore the hazards of lead poisoning, and wander into dark caves. And in their watching, digging, and wandering they become discoverers. Young and old, they are women and girls who discover seventy-million-year-old sea lizards, the very origins of counting and writing, Stone Age cave art, mysterious matter in the universe, and how a puddle of water can be sanitized when heated by the sun.

Here is a tribute to the findings and revelations of these remarkable women and girls: to their perseverance, their epiphanies, their wondrous curiosity. Brought to life by stunning collage illustrations, these inspiring stories drawn from primary sources consistently probe into still unanswered questions. Here are discoveries that open our eyes not only to what women and girls can accomplish but also to the astonishing world in which we live.

### [When Objects Talk: Solving a Crime with Science by Mark P. Friedlander Jr.](#)

Using a fictional murder case as the thread on which to string "beads" of forensic practices, the authors present a broad range of scientific techniques used by law-enforcement agencies around the world. From fingerprints to DNA, from basic autopsy to the cutting edge of facial reconstruction, the readable, informative text gives students an understanding of the scientific methods and how they are used to help police, lawyers, judges, and juries bring criminals to justice. Color photos (some informative, others merely decorative) keep pace with the text, the goriest being a skull in the early stages of facial reconstruction.

### [A Drop of Water: A Book of Science and Water by Walter Wick](#)

Scholastic Press

Wick's striking color photographs of water in various states and stages of movement capture moments of change in beautiful patterns that cannot be observed without the advantages of stop action and magnification. These pictures present water drops; soap bubbles; water condensing and evaporating; snowflakes, frost, and dew; and water as a prism. The paragraphs of text that accompany the images read like extended captions; they describe what is being pictured and briefly comment on the phenomenon taking place. A set of short directions for doing the observations and experiments included appears at the end. The photographs are the outstanding feature here; they do stimulate wonder. Perhaps the book

succeeds more as an exploration of their use to enhance scientific observation than as a description of the characteristics of water. Wick clearly shows that science and art both offer ways to observe the world around us.

### [The Way We Work: Getting to Know the Amazing Human Body by David Macaulay](#)

Houghton Mifflin Harcourt

In this comprehensive and entertaining resource, David Macaulay reveals the inner workings of the human body as only he could. In order to present this complicated subject in an accurate and entertaining way, he put in years of research. He sat in on anatomy classes, dissections, and even reached inside the rib cages of two cadavers to compare their spleen sizes. He observed numerous surgeries, including a ten-hour procedure where a diseased pancreas was removed, as well as one where a worn-out old knee was replaced by a brand new one. This hands-on investigation gives Macaulay a unique perspective to lead his readers on a visual journey through the workings of the human body.

### [My Light by Molly Bang](#)

Caldecott Honor artist Molly Bang's brilliant new picture book celebrates the many wonders of the sun.

### [Big Ideas that Changed the World by Isabel Thomas](#)

DK Publishing

From matches to mobiles, antibiotics and the flexible drinking straw - some inventions don't just change the way we do things but change the world. Marvel at some of the world's most amazing discoveries that have made a sensation, from the first wheel to satellite navigation. Kids will love the

incredible facts and info, such as why the tin can was invented 60 years before the can opener? Read on in wonder at the stories behind each ground-breaking discovery - the people, ideas and knock on effects. Some of the biggest ideas covered include the Model T Ford, Edison's lightbulb, Catseyes and the first Apple.

## **TECHNOLOGY TITLES**

[If Stones Could Speak: Unlocking the Secrets of Stonehenge by Marc Aronson](#)

National Geographic Children's Books

Were the carefully placed stones a burial site, an ancient calendar, a place of Druid worship...or even a site of sacrifice? World-renowned archaeologist Mike Parker-Pearson has spent the last seven years on a quest to answer these and many other questions. In *If Stones Could Speak*, award-winning author Marc Aronson joins the research crew and records their efforts to crack Stonehenge's secrets. National Geographic helped sponsor the Riverside archeological team's mission, and now young readers can journey behind the scenes to experience this groundbreaking story first-hand, through the eyes of the experts.

Mike and his team have revolutionized our understanding of Stonehenge by exploring the surrounding landscape for clues about the stones -- an idea first suggested by a visitor from Madagascar. The results have been breathtaking: The team recently unearthed the largest Neolithic village ever found in England. Marc Aronson had total access to the site, the team, and their work over two seasons of digging and brings the inspirational story of the discoveries taking place at this World Historical Site to young readers. The informative and drama-driven text includes tales of dead bodies, cremations, feasting, and ancient rituals, as well as insights into the science of uncovering the ancient past.

The expert text, stunning photography, and explanatory maps and illustrations will all help young readers see this ancient monument in totally new ways, and inspire future generations of archaeological explorers.

[Shocking Science: Fun & Fascinating Electrical Experiments by Ron Spring Hirschi](#)

Sterling

Children will be “shocked” to learn that with just a few wires, batteries, bulbs, and buzzers they can unlock the mysteries and magic of electricity! These simple and safe experiments will prove enlightening on everything from electrons to circuits to wattage. Bend paper with a comb that's "charged up" with static electricity. Find out what lemons, potatoes, and coins have to do with electricity by using them to discover how a battery works, and then get right down to the "nuts and volts" of the matter by making one of your own. Also see why "opposites attract," construct a circuit board, send a coded message with a buzzer; and lots more. By the time children have tried out all these amazing experiments, they'll realize for the first time why electricity is more than just turning on a light switch! Cartoons and color photographs throughout add to the fun.

## **ENGINEERING TITLES**

[Team Moon: How 400,000 People Landed Apollo 11 on the Moon](#) by Catherine Thimmesh

Houghton Mifflin Harcourt

Here is a rare perspective on a story we only thought we knew. For Apollo 11, the first moon landing, is a story that belongs to many, not just the few and famous. It belongs to the seamstress who put together twenty-two layers of fabric for each space suit. To the engineers who created a special heat shield

to protect the capsule during its fiery reentry. It belongs to the flight directors, camera designers, software experts, suit testers, telescope crew, aerospace technicians, photo developers, engineers, and navigators.

Gathering direct quotes from some of these folks who worked behind the scenes, Catherine Thimmesh reveals their very human worries and concerns. Culling NASA transcripts, national archives, and stunning NASA photos from Apollo 11, she captures not only the sheer magnitude of this feat but also the dedication, ingenuity, and perseverance of the greatest team ever—the team that worked to first put man on that great gray rock in the sky.

[The Wright Brothers: How They Invented the Airplane by Russell Freedman](#)

Holiday House

What unusual people the Wright brothers were! Despite a four-year difference in age, the two grew up to be as close as twins, a patient bachelor pair who methodically set out to prove the possibility of powered, controlled human flight. Just as methodically, they promoted their new flying machine, made lots of money, and overcame the U. S. government's stubborn lack of interest. In his own inimitable way, Freedman takes readers back to that exciting time, using not only the Wrights' written descriptions and the accounts of awed observers, but also a large selection of the careful photographs that Wilbur and Orville took to document their experiments. After an opening chapter to set the stage, the author creates a detailed family portrait. He closes with discussions of the photographs, sites to visit, and sources of further information about the Wright brothers. Freedman's achievement is as splendid as those of his subjects.

[Hidden Worlds: Looking through a Scientist's Microscope by Stephen Kramer](#)

Houghton Mifflin Harcourt

There are hidden worlds in nature—places you can visit only with a microscope. Dennis Kunkel has been exploring these worlds for more than twenty-five years, and now you can go along with him as he uses his powerful

microscopes to reveal the hidden beauty of everyday objects: a crystal of sugar, a grain of pollen, a blade of grass.

For Dennis, science has always been an adventure, the chance to make discoveries and explore new frontiers. Follow Dennis and author Stephen Kramer through Hidden Worlds and you'll never see your world the same way again!

### [Reinvent the Wheel by Ruth Kassinger](#)

Wiley

Discover the history and the science behind classic inventions and experience your own "Eureka!" moments of inspiration with the projects in this unique book. Through the ages, resourceful humans have found ingenious ways to meet the need of the moment with inventions ranging from catapults to colorful dyes to batteries. With this fantastic collection of fun, hands-on projects, you will uncover the answers to intriguing questions like: Who created ink? Why did Archimedes invent the water screw? And how did cave artists come up with paint? Plus, you will learn how and why these inventors were inspired, and how to come up with your own inventions.

With easy-to-follow instructions on how to make some common things we often take for granted, from paper to compasses, Reinvent the Wheel is packed with exciting projects and challenges. There are still many problems to be solved and gadgets to be invented. Maybe you'll be the next great inventor to change the way we live.

### [Technology Book for Girls and Other Advanced Beings by Trudee Romanek](#)

Kids Can Press

This title in the Books for Girls series looks at technology that girls encounter every day, such as CD players, microwave ovens and touchscreens. Filled with fun, easy-to-do activities, it encourages girls to experiment and explore. They are also introduced to eight women who work in exciting technological careers, including an astronomer, a radio frequency inspector and a plant physiologist.

## [The New Way Things Work by David Macaulay](#)

Houghton Mifflin Harcourt

The information age is upon us, baffling us with thousands of complicated state-of-the-art technologies. To help make sense of the computer age, David Macaulay brings us *The New Way Things Work*. This completely updated and expanded edition describes twelve new machines and includes more than seventy new pages detailing the latest innovations. With an entirely new section that guides us through the complicated world of digital machinery, where masses of electronic information can be squeezed onto a single tiny microchip, this revised edition embraces all of the newest developments, from cars to watches. Each scientific principle is brilliantly explained--with the help of a charming, if rather slow-witted, woolly mammoth.

## [Iggy Peck, Architect by Andrea Beaty, illustrated by David Roberts](#)

Harry N. Abrams

Meet Iggy Peck—creative, independent, and not afraid to express himself! In the spirit of David Shannon’s *No*, David and Rosemary Wells’s *Noisy Nora*, Iggy Peck will delight readers looking for irreverent, inspired fun.

Iggy has one passion: building. His parents are proud of his fabulous creations, though they’re sometimes surprised by his materials—who could forget the tower he built of dirty diapers? When his second-grade teacher declares her dislike of architecture, Iggy faces a challenge. He loves building too much to give it up! With Andrea Beaty’s irresistible rhyming text and David Roberts’s puckish illustrations, this book will charm creative kids everywhere, and amuse their sometimes bewildered parents.

## [Karakuri: How to Make Mechanical Paper Models that Move by Keisuke Saka](#)

St. Martin’s Griffin

Originally published in Japan, *Karakuri* is introduction to the simple mechanisms, such as gears, cranks, cams, and levers, used to bring to life these amazing moving paper models or automata. Included are pull-out pages for



you to use to construct your own moving models of the different types of gears. These models serve as the basis for designing your own karakuri or may just be admired on their own.

Detailed explanations, accompanied by diagrams, explain the physics behind how karakuri move and operate, so you really learn about the properties of the different types of gears and cams. And to inspire you, also included are four fun, full-color karakuri models designed by the author, a well-known paper engineer. Printed on pull-out pages and easily assembled, the projects include a whimsical tea-serving robot, an amusing penguin perched on an iceberg and trying to fly, a delightful peek-a-boo-playing teddy bear, and a mesmerizing train that goes around on a track and through a tunnel!

With complete directions, fourteen full-size models, and the science behind the craft revealed, this book is a unique introduction to an ancient art

## **MATH TITLES**

[Math Curse by Jon Scieszka](#)

Viking Penguin

The day after her teacher announces, "You know, you can think of almost everything as a math problem," the narrator is afflicted with a "math curse" that affects how she views every facet of her day ("Everything seems to be a

problem"). A minimum of the questions she asks herself are entirely logical ("How many quarts are in a gallon?"); some are far-fetched extrapolations (if an M&M is about one centimeter long and the Mississippi River is about 4000 kilometers long, how many M&Ms would it take to measure the length of this river?); and a happily hefty number are sheer nonsense: "I undo 8 buttons plus 2 shoelaces. I subtract 2 shoes. I multiply times 2 socks and divide by 3 pillows to get 5 sheep, remainder 1, which is all I need to count before I fall asleep." Like the text, Smith's wonderfully wacky collage-like art will give readers ample food for thought—even if it's part junk food. Here's a morsel: "Does tunafish + tunafish = fournafish?"

### [Seaweed Soup](#) [Stuart J. Murphy](#)

HarperCollins

In this level 1 MathStart book, Murphy introduces the concepts of matching sets, or one-to-one-correspondence. On a sunny beach, Turtle makes a batch of seaweed soup and invites his friends Crab, Sandpiper, Seagull, and Clam to join him for lunch. One by one, his friends come to the table, requiring Turtle to produce an additional place setting. The lunch is a success, and at the close, Turtle produces another whole pot of the savory stuff. Adults will want to read through this book before sharing it with children so that they can guide discussion about Turtle's table-setting dilemma. A graph will help children review what they've learned, and two pages of ideas for extending the book are appended. Remkiewicz's appealing illustrations encourage children to match sets and count items in each set

### [The Ultimate Bubble Book](#) [by Shar Levine](#)

Sterling Publishing

Kids know bubbles are cool—but who would have thought they could teach basic science and math principles, too? It's time for some good, clean, and smart fun with bubbly experiments that combine learning and play. Each page is delightfully appealing and filled with colorful, child-friendly illustrations. Watch one bubble "swallow" another. Prove that bubbles don't like heat, don't mind cold, and really, really like humidity. Bothered by adults always saying,

"Don't blow bubbles in your milk?" They won't mind if it's done in the name of science. So go ahead: get a straw, a glass of chocolate milk, and a timer and see whether soap or drink bubbles last longer. Find out how whales use bubbles to capture food and why soda fizzes. Make magic mixtures, bubbles that seem as if they'll never burst, and lots more.

## [Go Figure! A Totally Cool Book About Numbers by Johnny Ball](#)

DK Children

Experience the mysterious and magical world of numbers as never before. This unique book investigates mathematical marvels such as why daisies always have 34, 55, or 89 petals, why the world's phone numbers appear in pi, and other patterns and paradoxes that will make readers look at numbers in a whole new way.

## [Why Pi? By Johnny Ball](#)

This entertaining follow-up to DK's popular Go Figure!, Why Pi? presents even more mind-bending ways to think about numbers. This time, author Johnny Ball focuses on how people have used numbers to measure things through the ages, from the ways the ancient Egyptians measured the pyramids to how modern scientists measure time and space.

Johnny Ball has hosted more than 20 UK children's television series about math and science.