

# **Science, Technology, Engineering, and Mathematics (STEM)**

## **Books for Children Nine-Years-Old and Younger**

*A selected list from **The Best Children's Books of the Year, 2012-2016 editions***

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### **11 Experiments That Failed**

by Jenny Offill, pictures by Nancy Carpenter  
(Schwartz & Wade/Random House, 2011)  
Question, hypothesis, method, result--how can a budding scientist go wrong? It depends on the questions asked. Mixed media illustrations. (5-7)

### **About Hummingbirds: A Guide for Children**

by Cathryn Sill, illustrated by John Sill  
(Peachtree, 2011)  
Detailed watercolor illustrations support and extend the gentle text which highlights key facts about the lives of these creatures. (5-8)

### **Alex the Parrot: No Ordinary Bird; A True Story**

written by Stephanie Spinner, illustrated by Meilo So  
(Alfred A. Knopf BFYR/Random House, 2012)  
A scientist trains a gray parrot to talk and comprehend. Colorful watercolor and gouache illustrations. (8-10)

### **Animal Babies (Scholastic Discover More series)**

by Andrea Pinnington and Tory Gordon-Harris  
(Scholastic Press, 2012)  
Beautiful color photographs and simple easy-to-read text explain how animals are alike and different. Glossary and index. (5-7)

### **Animal School: What Class Are You?**

by Michelle Lord, illustrated by Michael Garland  
(Holiday House, 2014)  
With rhythmic, rhyming text and vivid digi-woodcut illustrations, students are introduced to vertebrates. (7-10)

### **Animal Teachers**

by Janet Halfmann, illustrated by Katy Hudson  
(Blue Apple Books, 2014)  
How do animals learn their life skills? Simple explanations along with descriptive paintings. Additional facts. (4-8)

### **Animals That Make Me Say Wow!**

by Dawn Cusick  
(Imagine/Charlesbridge, 2014)  
Brief text and color photographs describe how special adaptations in a variety of animals help them find food and protect themselves and their young. (7-10)

### **Ankylosaur Attack**

by Daniel Loxton, illustrated by Daniel Loxton, with Jim W. W. Smith  
(Kids Can Press, 2011)  
A young Ankylosaur saves an elderly handicapped "relative" of his species from being eaten by a hungry Tyrannosaur. Bold illustrations create the world of dinosaurs. (5-8)

### **Apples A to Z**

by Margaret McNamara, illustrated by Jake Parker  
(Scholastic Press, 2012)  
Fascinating facts about apples, with inviting animal characters, are presented with full-page harvest-colored illustrations. (4-8)

### **Around One Log: Chipmunks, Spiders, and Creepy Insiders**

by Anthony D. Fredericks, ill. by Jennifer DiRubbio  
(Dawn Publications, 2011)  
A giant oak is felled by lightning and gradually becomes home to a variety of woodland creatures. (5-7)

### **A Baby Elephant in the Wild**

by Caitlin O'Connell, photographed by Caitlin O'Connell, and Timothy Rodwell  
(Houghton Mifflin Harcourt BFYR, 2014)  
Did you know that baby elephants weigh 150 pounds at birth and grow inside their mothers for two years? Follow a baby and its family for a year in Namibia. Color photographs. (7-10)

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### **Be a Beach Detective**

written and illustrated by Peggy Kochanoff  
(Nimbus Publishing, 2015)  
Can dead jellyfish still sting you? Fascinating information about common sea creatures and plants. Detailed labeled illustrations, glossary and references. (8-11)

### **The Beetle Book**

written and illustrated by Steve Jenkins  
(Houghton Mifflin/HMH, 2012)  
Stunning cut-paper illustrations and captivating text capture the fascinating diversity of beetles. (6-10)

### **Behold the Beautiful Dung Beetle**

by Cheryl Bardoe, illustrated by Alan Marks  
(Charlesbridge, 2014)  
Three varieties of dung beetles fight over, devour, and hoard fecal matter and lay their eggs in it in a variety of ways. Dramatic watercolor and pencil illustrations. (7-9)

### **The Big Green Book of the Big Blue Sea**

by Helaine Becker, illustrated by Willow Dawson  
(Kids Can Press, 2012)  
Follow these experiments with water and learn about ocean science. Color illustrations, drawings and photos. (6-8)

### **A Bird Is a Bird**

written and illustrated by Lizzy Rockwell  
(Holiday House, 2015)  
What makes a bird a bird? It takes special common attributes. Rendered in watercolor and colored pencil. (2-6)

### **Bird Talk: What Birds Are Saying and Why**

written and illustrated by Lita Judge  
(Roaring Brook Press/Macmillan, 2012)  
Birds from around the world communicate with sounds, motions and mimicry. Glossary, references, and web site invite further study. Lush watercolors. (4-8)

### **\*Birds (Discover More series)**

by Penelope Arlon, and Tory Gordon-Harris  
(Scholastic Press, 2014)  
Fun facts about a variety of birds ranging from hummingbirds to eagles, depicted with amazing, detailed color photographs. (5-8)

### **Bone by Bone: Comparing Animal Skeletons**

by Sara Levine, illustrated by T.S Spookytooth  
(Millbrook Press/Lerner, 2013)  
What animal would you be like if your finger bones reached your feet? If you had no arms? Guess and compare your skeleton to other animals. Useful illustrations. (6-9)

### **Boy, Were We Wrong About the Human Body**

by Kathleen V. Kudlinski, illustrated by Debbie Tilley  
(Dial BFYR/Penguin, 2015)  
What will we find in twenty years that will disprove what we know for sure? A delightful romp through medical history with humorous watercolors. Timeline. (7-9)

### **Boy, Were We Wrong About the Weather!**

by Kathleen V. Kudlinski, illustrated by Sebastia Serra  
(Dial BFYR/Penguin, 2015)  
Throughout recorded history, people had myriad theories about weather--all wrong! This book corrects errors in belief and sets us straight. Pencil and computer graphics. Timeline. (7-9)

### **The Boy Who Harnessed the Wind**

written by William Kamkwamba and Bryan Mealer, illustrated by Elizabeth Zunon  
(Dial BFYR/Penguin, 2012)  
The true story of fourteen-year-old William Kamkwamba, who taught himself to build a windmill, thereby bringing electricity to his drought-stricken Malawi village. Oil and cut-paper illustrations. (5-9)

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### **Bring On the Birds**

written and illustrated by Susan Stockdale  
(Peachtree, 2011)

This is a delightful introduction to both exotic and familiar birds is described in simple rhyming text with exotic illustrations. (5-7)

### **Bugs (Scholastic Discover More series)**

by Penelope Arlon and Tory Gordon-Harris  
(Scholastic Press, 2012)

Bugs help us by spinning silk, making honey, and eating cow dung--but they also spread disease and sting. Meet every kind of bug, all presented with detailed color photographs. (7-10)

### **\*Buried Sunlight: How Fossil Fuels Have Changed the Earth**

by Molly Bang and Penny Chisholm, illustrated by Molly Bang

(Blue Sky Press/Scholastic, 2014)

Fossil fuels, how humans have used them, and the effect on climate change are explained clearly from the sun's perspective. Full-page, brightly colored art. (7-10)

### **A Butterfly Called Hope**

by Mary Alice Monroe, with Linda Love, photographed by Barbara J. Bergwerf  
(Sylvan Dell, 2013)

Hope finds a butterfly and learns to identify and care for it in this story of the life cycle of a monarch.

Photographs show development at each stage. (4-7)

### **A Butterfly is Patient**

by Dianna Hutts Aston, illustrated by Sylvia Long  
(Chronicle, 2011)

Beautiful watercolors and astounding facts illustrate the magical world of butterflies. (7-10)

### **\*Butterfly Tree**

by Sandra Markle, illustrated by Leslie Wu  
(Peachtree, 2011)

A daughter and her mother follow an orange cloud from the beach into the woods and discover it is a mass of migrating monarch butterflies. Soft pastel illustrations. (6-9)

### **\*Buzz About Bees**

by Kari-Lynn Winters  
(Fitzhenry & Whiteside, 2013)

An in-depth account of the history and social structure of bees with activities and clearly labeled drawings and photographs. (8-12)

### **Can You See Me?**

written and illustrated by Ted Lewin  
(Holiday House, 2014)

Animals are hard to spot in the Costa Rican rain forest, but one creature stands out--a red poison dart frog. Beautifully illustrated in shimmering pencil and watercolor. (3-5)

### **The Case of the Vanishing Honeybees: A Scientific Mystery**

by Sandra Markle  
(Millbrook/Lerner, 2013)

Why are so many honeybees dying? Scientists try to solve the mystery. Engaging, helpful photographs and illustrations. (8-12)

### **The Case of the Vanishing Little Brown Bats: A Scientific Mystery**

by Sandra Markle  
(Millbrook Press/Lerner, 2014)

Before it is too late, scientists must find out what is killing little brown bats, which are essential in keeping insects under control. Color photographs. (8-12)

### **\*Circle, Square, Moose**

by Kelly Bingham, illustrated by Paul O. Zelinsky  
(Greenwillow Books/HarperCollins, 2014)

Moose and Zebra continue their playful friendship while exploring shapes. Dynamic illustrations celebrate geometry. (4-7)

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**Creature Features: 25 Animals Explain Why They Look the Way They Do**

by Steve Jenkins, and Robin Page, illustrated by Steve Jenkins  
(Houghton Mifflin Harcourt BFYR, 2014)  
Animals explain why their faces have feathers, tusks, bright colors, long tongues, or big beaks. Colorful cut-paper collages. (6-9)

**\*Curious Critters: Marine**

written and photographed by David FitzSimmons  
(Wild Iris Publishers, 2015)  
Twenty North American ocean inhabitants share their unique stories. Breathtaking photographs. Backmatter. (8-11)

**\*Daytime Nighttime**

written and illustrated by William Low  
(Henry Holt and Co. BFYR/Macmillan, 2014)  
Do grasshoppers, rabbits, frogs, and fireflies appear by day or by night? Vibrant, full-page color illustrations. (3-6)

**Dear Wandering Wildebeest: And Other Poems from the Water Hole**

by Irene Latham, illustrated by Anna Wadham  
(Millbrook Press/Lerner, 2014)  
Visit a water hole on an African savannah. Poems and soft illustrations describe the animals as they gather there to drink. Glossary, bibliography, web sites. (6-9)

**Disgusting Food Invaders**

by Ruth Owen  
(Bearport, 2011)  
Hard to digest facts about various creatures that can live on our food are embellished with electron microscope photographs. (7-10)

**Dolphin Dive (Scholastic Discover More Readers)**

by James Buckley, Jr.  
(Scholastic Press, 2014)  
These smart mammals live in pods, hunt and feed together, communicate, and swim fast. Color photographs above and below the water. (6-8)

**Donkeys**

written by Darice Bailer  
(Marshall Cavendish, 2011)  
Donkeys mourn their losses, are from the same family as zebras and a female is called a jenny--and more about these interesting animals. Includes glossary and resources. (7-9)

**Eat Your Math Homework: Recipes for Hungry Minds**

by Ann McCallum, illustrated by Leeza Hernandez  
(Charlesbridge, 2011)  
Playfully illustrated rabbits introduce math concepts through recipes. (8-10)

**Edible Colors**

written and illustrated by Jennifer Vogel Bass  
(Roaring Brook Press/Macmillan, 2014)  
Well-known and very unusual vegetables and fruits are grouped by their colors with surprising results! Bright labeled photographs. (6-9)

**\*Elizabeth, Queen of the Seas**

by Lynne Cox, illustrated by Brian Floca  
(Schwartz & Wade Books/Random House, 2014)  
An elephant seal finds a home on the Avon River in a New Zealand town. Based on a true story and illustrated in pen and ink and watercolor. Includes a photograph of Elizabeth. (5-9)

**Eric Carle's How Things Grow**

written and illustrated by Eric Carle  
(Grosset & Dunlap/Penguin, 2015)  
What happened to the very hungry caterpillar? Lift the flap to learn how animals and plants change and grow. Brightly illustrated. (2-4)

**Eye (How It Works series)**

written and illustrated by David Macaulay, with Sheila Keenan  
(David Macaulay Studio/Macmillan, 2013)  
With labeled illustrations and clear, simple text, the way human eyes function is described. (6-9)

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### **Family Pack**

by Sandra Markle, illustrated by Alan Marks  
(Charlesbridge, 2011)

Transferred from Canada to Yellowstone as part of a reproduction project, a lone female wolf finds a new family. Factual information included. (6-9)

### **Farm (Scholastic Discover More series)**

by Penelope Arlon and Tony Gordon-Harris  
(Scholastic Press, 2012)

Brief captions and appealing photographs explain how animals and crops are raised and sent to market. (6-8)

### **Feel the Force**

by Tom Adams, illustrated by Thomas Flintham  
(Templar Books/Candlewick, 2011)

What exactly is electricity? Magnetism? Light? Pop-ups, pull tabs, and flaps plus a few experiments explain why things work the way they do. (8-11)

### **Ferdinand Fox's First Summer**

written and photographed by Mary Holland  
(Sylvan Dell, 2013)

The first summer of a litter of foxes is described in detail. Close-up and dramatic photographs add to the text. (6-8)

### **\*First Peas to the Table: How Thomas Jefferson Inspired a School Garden**

by Susan Grigsby, illustrated by Nicole Tadgell  
(Albert Whitman, 2012)

Maya is determined to win the "first peas" contest in her class, following the directions in Thomas Jefferson's Garden Book. Watercolor illustrations. (6-8)

### **Flight of the Honey Bee**

by Raymond Huber, illustrated by Brian Lovelock  
(Candlewick Press, 2013)

Travel along with Scout as she leaves the hive in search of nectar and pollen to make delicious honey. Colorful acrylic, pencil and watercolor illustrations. (6-8)

### **Fractions In Disguise**

by Edward Einhorn, illustrated by David Clark  
(Charlesbridge, 2014)

Mr. Factor, who loves fractions, goes on an exciting adventure to gain a prized possession. Humorous ink and watercolor illustrations. (8-11)

### **Frog Song**

by Brenda Z. Guiberson, illustrated by Gennady Spirin  
(Henry Holt BFYR/Macmillan, 2013)

Lush illustrations in tempera, watercolor, and pencil illuminate facts about various frogs around the world. Rich background information. (7-10)

### **Frogs!: Strange and Wonderful**

by Laurence Pringle, illustrated by Meryl Henderson  
(Boyd's Mills, 2012)

Realistic watercolor illustrations illuminate the fascinating exploration of the similarities and differences among the many and varied species of these amphibians. (7-9)

### **\*Galápagos George**

by Jean Craighead George, illustrated by Wendell Minor  
(Harper/HarperCollins, 2014)

One million years ago giant tortoises migrated to the Galápagos Islands and slowly evolved into different kinds of tortoises. Realistic watercolor paintings. (6-9)

### **Grasslands**

by Cathryn Sill, illustrated by John Sill  
(Peachtree, 2011)

What grasslands are and how wildlife survives in diverse environments are simply described. Includes map, glossary, and bibliography. (5-8)

### **The Great Monkey Rescue: Saving the Golden Lion Tamarins**

by Sandra Markle  
(Millbrook Press/Lerner, 2015)

Scientists use unique strategies to save Brazil's Golden Lion Tamarin monkeys from the brink of extinction. Gorgeous color photos. (8-10)

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### **\*The Greatest Dinosaur Ever**

by Brenda Z. Guiberson, illustrated by Gennady Spirin  
(Henry Holt BFYR/Macmillan, 2013)  
Simple, clear text describes the special feature that might make each of the twelve dinosaurs presented "the greatest." Exquisite oil paint illustrations. (5-8)

### **Gross Body Invaders**

by Ruth Owen  
(Bearport, 2011)  
Disgusting yet fascinating facts about various parasites living right under our noses--literally. Includes stunning microscopic photographs. (7-10)

### **\*Handle With Care: An Unusual Butterfly Journey**

by Loree Griffin Burns, photographed by Ellen Harasimowicz  
(Millbrook Press/Lerner, 2014)  
Butterflies change from eggs to caterpillars to pupae under the meticulous care of workers on a farm in Costa Rica. Colorful photographs detail the stages. (6-10)

### **\*Hatch!**

written and illustrated by Roxie Munro  
(Marshall Cavendish, 2011)  
Read the hints and look at the eggs. Can you guess which bird laid them? (8-12)

### **Here Come the Humpbacks!**

by April Pulley Sayre, illustrated by Jamie Hogan  
(Charlesbridge, 2013)  
An information-filled account of whale migration, birth and nurturing of the young, pod behavior and ways of protecting them. Rich charcoal and pastel illustrations. (6-12)

### **\*The Honeybee Man**

written by Lela Nargi, illustrated by Kyrsten Brooker  
(Schwartz & Wade/Random House, 2011)  
On a rooftop in Brooklyn, Fred cares for three hives of active bees. Informative appealing text and collage and oil paint illustrations. (4-7)

### **\*How Big Were Dinosaurs?**

written and illustrated by Lita Judge  
(Roaring Brook Press/Macmillan, 2013)  
Simple text and amusing color illustrations compare the size and weight of familiar and lesser-known dinosaurs to familiar animals and objects. (4-7)

### **How Many Jelly Beans?**

by Andrea Menotti, illustrated by Yancey Labat  
(Chronicle, 2012)  
Using jelly beans, a boy and a girl explore numbers. Bold illustrations with lots of counting to be done. (5-8)

### **How the Weather Works: A Hands-On Guide to Our Changing Climate**

by Christiane Dorion, illustrated by Beverley Young  
(Templar Books/Candlewick, 2011)  
Interactive, paper-engineered format explores and explains the many complex aspects of the earth's weather. (6-9)

### **Hurricanes: Be Aware and Prepare**

by Renée Gray-Wilburn  
(Capstone Press/Capstone, 2014)  
Rain falls in sheets, the wind howls, bends trees and tosses objects. How do we know if it is a hurricane? Dramatic photographs. (6-8)

### **I Hatched!**

by Jill Esbaum, illustrated by Jen Corace  
(Dial BFYR/Penguin, 2014)  
A killdeer chick is traced from birth through its development in clear, amusing rhymes and engaging watercolors. (4-6)



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### **I See a Pattern Here**

written and illustrated by Bruce Goldstone  
(Henry Holt and Co. BFYR/Macmillan, 2015)  
Look at diverse patterns in nature, art work, and more, and explore the secrets behind them. Instructions for making your own patterns. Colorful photographs. (8-10)

### **If You Love Honey: Nature's Connections**

by Martha Sullivan, illustrated by Cathy Morrison  
(Dawn Publications, 2015)  
Bees make honey--but they don't do it alone. They are part of an interactive cycle that includes dandelions, ladybugs, and many other plants and animals. Colorful, detailed illustrations. (7-9)

### **Infinity and Me**

by Kate Hosford, illustrations by Gabi Swiatkowska  
(Carolrhoda/Lerner, 2012)  
Children and adults explore the concept of things that go on forever. Whimsical illustrations. (6-8)

### **Into the Outdoors**

by Susan Gal  
(Knopf/Random House, 2011)  
The story of a family camping trip serves as a playful introduction to prepositions. Charcoal and digital collage illustrations. (5-8)

### **It's Snowing!**

written and illustrated by Gail Gibbons  
(Holiday House, 2011)  
Engaging watercolors highlight information about snowflakes' formation, different types of snow falls, and many ways to play in snow. (5-10)

### **Jasper's Story: Saving Moon Bears**

by Jill Robinson and Marc Bekoff, illustrated by Gijsbert van Frankenhuyzen  
(Sleeping Bear Press, 2013)  
Jasper, an abused moon bear in China, is rescued and taken to live in a protected compound with other moon bears. Realistic, painted illustrations. (8-11)

### **Just Fine the Way They Are: From Dirt Roads to Rail Roads to Interstates**

by Connie Nordhielm Wooldridge, illustrated by Richard Walz  
(Calkins Creek/Boyd's Mills, 2011)  
The story of American transportation is accompanied by rich, engaging illustrations. Timeline, bibliography, and resources. (7-10)

### **Just A Second: A Different Way to Look at Time**

written and illustrated by Steve Jenkins  
(Houghton Mifflin/HMH, 2011)  
An award winning illustrator explores the relationship of time increments as he compares speed, amounts, and consumption. Exquisitely illustrated with graphic collages. (6-8)

### **Ladybugs**

written and illustrated by Gail Gibbons  
(Holiday House, 2012)  
These beetles live on six of the seven continents. The physical characteristics, stages of development, and habitats come to life in bright, labeled illustrations. (4-8)

### **A Leaf Can Be . . .**

by Laura Purdie Salas, illustrations by Violeta Dabija  
(Millbrook, 2012)  
A poetic text describes all the things leaves can do throughout the seasons. Notes, glossary, list for further reading. Warm illustrations. (4-6)

### **Lifetime: The Amazing Numbers in Animal Lives**

by Lola M. Schaefer, illustrated by Christopher Silas Neal  
(Chronicle, 2013)  
A glimpse into the amazing amounts animals will shed, molt, bore, give birth, and grow over various lifespans. Includes extra animal facts and math challenges. Colorful mixed-media illustrations. (5-9)

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### **Lightning, Hurricanes, and Blizzards: The Science of Storms**

by Paul Fleisher

(Lerner Publications, 2011)

Learn to differentiate hurricanes, cyclones and thunderstorms. Can violent weather be helpful? What about sand storms and dust devils? Fascinating facts, experiments, glossary, and resources. (7-10)

### **Matter Matters!**

by Tom Adams, illustrated by Thomas Flintham

(Templar Books/Candlewick, 2012)

Atoms, elements, solid, liquid, gas, and more are explained simply and depicted by colorful pop-ups. (8-11)

### **Mice Mischief: Math Facts in Action**

by Caroline Stills, illustrated by Judith Rossell

(Holiday House, 2014)

Playful mice demonstrate ways to make ten as they engage in everyday work and play. Pencil, acrylic, and collage illustrations. (4-7)

### **\*A Mom for Umade**

by Maria Faulconer, illustrated by Susan Kathleen Hartung

(Dial BFYR/Penguin, 2014)

After months of nurturing a baby gorilla, her zookeepers come up with a plan to find a true mother surrogate, Colorful oil paintings. Author's note. (5-8)

### **Monkey Colors**

by Darrin Lunde, illustrated by Patricia J. Wynne

(Charlesbridge, 2012)

Meet mandrills, macaques, and more. Realistic watercolor and ink illustrations. (5-7)

### **My Body (Scholastic Discover More series)**

by Andrea Pinnington and Penny Lamprell

(Scholastic Press, 2012)

What happens to food in your stomach? Where is your femur? Photographs and diagrams help answer these questions and many others. (6-8)

### **\*Mysterious Patterns: Finding Fractals in Nature**

by Sarah C. Campbell, photographed by Sarah C.

Campbell and Richard P. Campbell

(Boyd's Mills Press/Highlights, 2014)

Gorgeous photographs accompany a simple and straightforward explanation of fractals, geometric shapes made up of smaller parts that each look like the whole shape. (7-10)

### **National Geographic Little Kids First Big Book of Space**

by Catherine D. Hughes, illustrated by David A.

Aguilar

(National Geographic, 2012)

A captivating introduction to Earth and its immediate spatial environs, our solar system, the universe, and stars, and an exploration of space accompanied by photographs. (6-10)

### **Neighborhood Sharks: Hunting With the Great Whites of California's Farallon Islands**

written and illustrated by Katherine Roy

(David Macaulay Studio/Macmillan, 2014)

All of the necessary conditions--from their anatomy to their environment--that enable sharks to capture their food are described. Striking, yet muted, color illustrations. (8-11)

### **\*Nic Bishop Butterflies**

written and photographed by Nic Bishop

(Scholastic Press, 2011)

The cycle and distinctive colorings and habitats of butterflies are clearly explained and photographed stage by stage. (5-8)

### **Nic Bishop: Lizards**

written and photographed by Nic Bishop

(Scholastic Press, 2014)

Spectacular photographs and clear text introduce a variety of these reptiles. Glossary and photo-index. (6-8)



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### **North: The Amazing Story of Arctic Migration**

by Nick Dowson, illustrated by Patrick Benson  
(Candlewick Press, 2011)

Follow the stunning illustrations and join the millions of animals on their spring migration to the Arctic. (6-9)

### **\*Ocean Sunlight: How Tiny Plants Feed the Seas**

by Molly Bang and Penny Chisholm, illustrated by Molly Bang

(Blue Sky/Scholastic, 2012)

Enticing illustrations and simple text explain how the sun supports life, even in the depths of the ocean. Extensive notes. (5-10)

### **Octopuses (Animal Abilities series)**

by Anna Claybourne

(Heinemann-Raintree/Capstone, 2013)

Learn all about these extremely intelligent aquatic invertebrates. Clear text and diagrams and striking photographs. (8-10)

### **\*Octopuses! Strange and Wonderful**

by Laurence Pringle, illustrated by Meryl Henderson  
(Boyd's Mills Press/Highlights, 2015)

Learn all about these solitary, highly intelligent mollusks who can change color and shape in a fraction of a second and perform complex tasks. Finely detailed watercolor illustrations. Glossary, bibliography, and index. (8-11)

### **On Kiki's Reef**

by Carol L. Malnor, illustrated by Trina L. Hunner  
(Dawn Publications, 2014)

The life cycle of the green sea turtle as it journeys from egg to adult teaches about the ocean ecosystem. Engaging illustrations, references and resources. (6-9)

### **On the Construction Site: A Shine-a-Light Book**

by Carron Brown, illustrated by Bee Johnson  
(Kane Miller/EDC, 2015)

This informative book on the construction of city buildings is presented in a Q & A format. Shine a light to reveal the hidden illustrations. (5-8)

### **\*One Gorilla: A Counting Book**

written and illustrated by Anthony Browne  
(Candlewick Press, 2013)

Bold colors and expressive faces portray primates in this surprising counting book. (4-7)

### **\*Outside Your Window: A First Book of Nature**

by Nicola Davies, illustrated by Mark Hearld  
(Candlewick Press, 2012)

Some children look but don't really SEE! With its colorful mixed-media illustrations and the author's vivid observations (in poetry and prose), this book will inspire children's curiosity. (4-8)

### **Parrots Over Puerto Rico**

by Susan L. Roth, Cindy Trumbore, illustrated by Susan L. Roth

(Lee & Low, 2013)

In a burst of brilliant colors, the parrots of Puerto Rico are presented in ingenious cut-paper and fabric collages. Clear, comprehensive text including the history of Puerto Rico. References. (7-9)

### **Pedal It!: How Bicycles Are Changing the World**

by Michelle Mulder

(Orca, 2013)

The history and uses of bicycles that have been around for nearly 200 years is depicted in engaging text and photographs. (8-11)

### **Penguins (Scholastic Discover More series)**

by Penelope Arlon and Tory Gordon-Harris  
(Scholastic Press, 2012)

Want to know about penguins? Find out where they live, what they eat, how they sleep, and other interesting facts, including how to protect them. (8-10)

### **Planets (Scholastic Discover More Readers)**

by Gail Tuchman

(Scholastic Press, 2014)

Interesting facts, photos, and diagrams introduce our solar system. (6-8)

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by Penelope Arlon and Tory Gordon-Harris  
(Scholastic Press, 2012)  
Clear text in attractive layout with plentiful photographs introduces readers to our solar system and beyond. (6-9)

### **Plants Feed Me**

written and illustrated by Lizzy Rockwell  
(Holiday House, 2014)  
Learn how plants grow and about the many parts of plants that we can eat. Simple language and gouache illustrations. (3-6)

### **Polar Bears**

written and photographed by Mark Newman  
(Henry Holt/Macmillan, 2011)  
Surprising facts about this Arctic animal are described in clear text and glorious color photographs. (5-9)

### **Prairie Dogs**

written by Darice Bailer  
(Marshall Cavendish, 2011)  
The habits, habitats, life-style, predators, and protective barking are explained with excellent photographs, Bibliography, glossary, index, and websites. (7-10)

### **\*Puffling Patrol**

written and illustrated by Ted and Betsy Lewin  
(Lee & Low, 2012)  
On an island off Iceland, children rescue baby puffins trying to reach the sea. Watercolors and field sketches. (5-8)

### **\*Python**

by Christopher Cheng, illustrated by Mark Jackson  
(Candlewick Press, 2013)  
Large mixed media illustrations show Python warming up, molting, hunting, and reproducing. Additional information in captions and at the end of the book. (6-9)

### **Raindrops Roll**

by April Pulley Sayre  
(Beach Lane Books/Simon & Schuster, 2015)  
Outstanding photographs with guiding texts reveal the science of raindrops as they land. Backnotes add details about the water cycle. (5-8)

### **\*Reptiles**

by Mark Hutchinson  
(Simon & Schuster, 2011)  
Crocodiles, lizards, snakes, and tortoises are explored in clear text with exciting photographs. Glossary. (7-14)

### **\*Sand Swimmers: The Secret Life of Australia's Desert Wilderness**

written and illustrated by Narelle Oliver  
(Candlewick Press, 2015)  
An astonishing variety of wildlife has adapted to the extremely harsh conditions in the desert of Central Australia. Meticulously detailed mixed-media illustrations. (8-11)

### **Saving Yasha: The Incredible True Story of an Adopted Moon Bear**

by Lia Kvatum, photographs by Liya Pokrovskaya  
(National Geographic, 2012)  
Two young Russian scientists follow an orphaned Moon Bear. Photographs, map, and notes. (7-11)

### **Scorpions!: Strange and Wonderful**

by Laurence Pringle, illustrated by Meryl Henderson  
(Boyd's Mills/Highlights, 2013)  
From the cephalothorax (head) to abdomen (end), this predator's world is revealed. Supportive paintings. (8-11)

### **Sea Horses**

by Nicole Corse  
(Scholastic Press, 2011)  
A fish with no scales? A father that has babies? Learn more about these unusual creatures in descriptive text and close-up photographs. (5-7)

# Science, Technology, Engineering, and Mathematics (STEM)

## Books for Children Nine-Years-Old and Younger

A selected list from *The Best Children's Books of the Year, 2012-2016 editions*

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### **\*Seabird in the Forest: The Mystery of the Marbled Murrelet**

written and illustrated by Joan Dunning  
(Boyds Mills, 2011)

Where does the marbled murrelet nest and raise young? After many years of searching, scientists found the surprising answer. Lush, textured illustrations. (7-10)

### **The Secret Galaxy**

by Fran Hodgkins, photographed by Mike Taylor  
(Tilbury House, 2014)

In its own words, the Milky Way tells about its composition, particularly the stars and black holes. Stunning photographs from different views enhance understanding. (7-9)

### **The Secret Life of the Woolly Bear Caterpillar**

by Laurence Pringle, illustrated by Joan Paley  
(Boyds Mills Press/Highlights, 2014)

The life cycle of the caterpillar that becomes an Isabella Tiger Moth is described with detailed illustrations. (7-9)

### **Secrets of the Seashore**

by Carron Brown, illustrated by Alyssa Nassner  
(Kane/Miller/EDC, 2014)

This clever book presents tide pools which are full of hidden sea creatures revealed by shining a light behind the page. Investigation is encouraged. Illustrations in color and black-and-white. (5-9)

### **See What a Seal Can Do**

by Chris Butterworth, illustrated by Kate Nelms  
(Candlewick Press, 2013)

Discover the surprisingly active life of a gray seal as it dives deep into the sea in search of food. Lovely, realistic mixed-media illustrations. (5-8)

### **Seeing Symmetry**

written and illustrated by Loreen Leedy  
(Holiday House, 2012)

Though it is all around us in many different forms, it is all explained in a brightly illustrated format. (5-8)

### **Simple Machines: Wheels, Levers, and Pulleys**

by David A. Adler, illustrated by Anna Raff  
(Holiday House, 2015)

Did you know your teeth are simple machines? Find out how many simple machines are in our everyday life. Useful, clear illustrations. (5-7)

### **\*Simple Machines**

by D. J. Ward, illustrated by Mike Lowery  
(Harper/HarperCollins, 2015)

Six basic simple machines - lever, wheel and axle, pulley, ramp, wedge, and screw - are described and humorously explained. Pen, ink, and digital illustrations. (5-8)

### **The Skull in the Rock: How a Scientist, a Boy, and Google Earth Opened a New Window on Human Origins**

by Lee R. Berger, and Marc Aronson  
(National Geographic, 2012)

After nine-year-old Matthew finds a fossil, his father discovers new ways of looking at human evolution. (8-12)

### **Skunk Kits**

#### **Tiger Cubs**

by Ruth Owen  
(Bearport, 2011)

The early years of these animals are described in these scientific introductions. Vivid photographs and graphics. Bibliography, index. (6-9)

### **Small Wonders: Jean-Henri Fabre & His World of Insects**

by Matthew Clark Smith, illustrated by Giuliano Ferri

(Two Lions/Amazon Publishing, 2015)

Admired by Darwin, this little-known naturalist observed insects in the wild, made important discoveries, and published more than 200 works. Detailed watercolors. Sources, time line. (8-11)

**Science, Technology, Engineering, and Mathematics (STEM)**  
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**So You Want to Grow a Pizza? (Grow Your Food series)**

by Bridget Heos, illustrated by Daniele Fabbri  
(Amicus, 2015)

A humorous how-to on how to grow the ingredients for pizza sauce. Warm, colorful illustrations of the process. Recipe and resource list. (5-8)

**Some Bugs**

by Angela DiTerlizzi, illustrated by Brendan Wenzel  
(Beach Lane Books/ Simon & Schuster BFYR, 2014)

Rhyming verses explore busy bugs and insects that hop, glide, swim, or hide. Colorful collages illustrate a busy backyard world. (3-6)

**Sounds of the Savanna**

by Terry Catasús Jennings, illustrated by Phyllis Saroff  
(Arbordale, 2015)

From elephants trumpeting and rumbling to baboons shrieking and grunting, the animals of the savanna communicate through many different sounds. Detailed digital and oil illustrations. (7-9)

**Spidermania: Friends on the Web**

by Alexandra Siy, photographed by Dennis Kunkel  
(Holiday House, 2015)

This informative overview of spider anatomy, behavior, and habitats includes additional material, glossary, sources, a bibliography, and up-close photography. (8-12)

**The Story of Life: A First Book about Evolution**

by Catherine Barr and Steve Williams, illustrated by Amy Husband  
(Frances Lincoln Children's Books, 2015)

From the hot noisy world of volcanoes four billion years ago to the furry animals that became humans, evolution is explained in a clear simple text with helpful illustrations. (8-11)

**\*Stripes of All Types**

written and illustrated by Susan Stockdale  
(Peachtree, 2013)

Learn why okapis, turkeys, cactus bees, and many other animals have stripes. Clear, simple text and clean, vivid acrylic illustrations. (5-7)

**\*Swamp Chomp**

by Lola M. Schaefer, illustrated by Paul Meisel  
(Holiday House, 2014)

Vibrant, detailed double-page spread illustrations with simple action-verb text introduce young readers to the life and food chain of a swamp. Endnotes. (2-6)

**That's A Possibility!: A Book About What Might Happen**

written and illustrated by Bruce Goldstone  
(Henry Holt BFYR/Macmillan, 2013)

It is more certain than probable, with these fun photos and examples, that you will walk away with a better grasp and appreciation of probabilities. (7-11)

**This Bridge Will Not Be Gray**

by Dave Eggers, illustrated by Tucker Nichols  
(McSweeney's, 2015)

A humorous, unique history of design and building of the Golden Gate Bridge in San Francisco. Colored paper and collage illustrations. (8-10)

**Ticks: Dangerous Hitchhikers**

by Sandra Markle  
(Lerner, 2011)

All you want to know about ticks (or not!) is included in this accurate, well-illustrated scientific study. Useful information about protection from tick bites (8-11)

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**Time for a Bath**

**Time to Sleep**

written and illustrated by Steve Jenkins and Robin Page  
(Houghton Mifflin/HMH, 2011)

A clear and simple text describes the different ways a variety of animals get their rest and bathe. Detailed back matter elaborates. Torn paper collages. (5-8)

**Tiny Creatures: The World of Microbes**

by Nicola Davies, illustrated by Emily Sutton  
(Candlewick Press, 2014)

What living things exist everywhere, and are so small that billions are inside your body? Learn what they are and about the amazing things they do. Clear, detailed watercolors. (6-8)

**Train**

written and illustrated by Elisha Cooper  
(Orchard Books/Scholastic, 2013)

Follow commuter trains, freight trains, high-speed trains, and more on their journeys. Gentle, detailed watercolor and pencil illustrations. (5-7)

**\*Volcano Rising**

by Elizabeth Rusch, illustrated by Susan Swan  
(Charlesbridge, 2013)

Vivid multimedia illustrations highlight how eight volcanoes grow and shape their landscapes. Glossary, bibliography. (7-10)

**Water is Water**

by Miranda Paul, illustrated by Jason Chin  
(Neal Porter Books/Roaring Brook Press/Macmillan, 2015)

Siblings explore the many different forms that water takes during each season. Lyrical text with realistic watercolor and gouache illustrations. Back matter provides scientific facts and bibliography. (6-9)

**Weeds Find a Way**

by Cindy Jenson-Elliott, illustrated by Carolyn Fisher

(Beach Lane Books/ Simon & Schuster BFYR, 2014)

A poetic exploration of how the uncelebrated weed travels and grows. Vibrant, full-page illustrations. (4-7)

**What in the World?: Numbers in Nature**

by Nancy Raines Day, illustrated by Kurt Cyrus  
(Beach Lane Books/Simon & Schuster, 2015)

Large scale, colorful illustrations and a simple rhyming text describe birds two by two, three by three, and other sets in nature. (6-8)

**What To Expect When You're Expecting Hatchlings: A Guide For Crocodilian Parents (and Curious Kids)**

by Bridget Heos, illustrated by Stephane Jorisch  
(Millbrook, 2012)

Learn everything you need to know to be well prepared when crocodile babies arrive. Hilarious question-and-answer format, brightly colored illustrations, and references. (7-10)

**What to Expect When You're Expecting Joeys: A Guide for Marsupial Parents (and Curious Kids)**

by Bridget Heos, illustrated by Stephane Jorisch  
(Millbrook Press/Lerner, 2011)

Colorful illustrations and conversational text provide a humorous explanation of marsupial development. (7-10)

**What's in the Garden?**

by Marianne Berkes, illustrated by Cris Arbo  
(Dawn Publications, 2013)

Can you guess what each thing growing in the garden is? Turn each page to see if you are right and find a delicious, easy recipe. Illustrated with realistic paintings. (6-9)

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**When Lunch Fights Back: Wickedly Clever  
Animal Defenses**

by Rebecca L. Johnson  
(Millbrook Press/Lerner, 2014)  
How do certain creatures fight off predators? Read about the weird and wild defenses they use. Photographs, notes, bibliography. (8-11)

**Zero the Hero**

by Jean Holub, illustrated by Tom Lichtenheld  
(Henry Holt & Co. BFYR/Macmillan, 2012)  
Underappreciated by the other numbers, Zero proves that their value is diminished without him. Funny, lively text and hilarious, colorful cartoonlike illustrations. (6-9)

**When the Wind Blows**

by Stacy Clark, illustrated by Brad Sneed  
(Holiday House, 2015)  
What wind can do--from blowing sails to turning windmills to produce power. Poetically told with appealing illustrations. (5-7)

**Who Has These Feet?**

by Laura Hulbert, illustrated by Erik Brooks  
(Henry Holt & Co. BFYR/Macmillan, 2011)  
To which animals do these eight pairs of feet belong and why do they look the way they do? The simple text and bold watercolor illustrations provide the answers. (5-7)

**Wild About Bears**

written and illustrated by Jeannie Brett  
(Charlesbridge, 2014)  
Learn about the similarities and differences of bear species and how to protect them. Engaging accessible text and watercolor illustrations. (6-8)

**The Wing Wing Brothers Math Spectacular!**

written and illustrated by Ethan Long  
(Holiday House, 2012)  
Five duck brothers perform acrobatic feats and include explanations for comparative math, addition and subtraction. Clever and appealing. Lively, humorous illustrations. (5-7)

**A Zeal of Zebras: An Alphabet of Collective  
Nouns**

by Woop Studios (Chronicle, 2011)  
Collective nouns--some familiar, some surprising and whimsical-- are the framework for this imaginative book of animals and insects, arranged alphabetically. Bold digitally rendered illustrations along with facts. (5-7)