

## **Bound to Stay Bound Books**

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# Next Generation Science Standards for Grade 8

#### **Grade 8 Physical Science**

Bryant, Jill. Medical Inventions: The Best Of Health. (635014) il. Innovations in the medical field save countless lives daily. In this title, a timeline of breakthrough medical inventions is explored through dynamic photographs and interesting fact boxes. Fleming's advances with penicillin and the invention of the X-ray machine are some of the featured inventions that keep us in "the best of health!" (10-13) Crabtree 2014 (AR) \$15.59

Conkling, Winifred. Radioactive!: How Irene Curie & Lise Meitner Revolutionized Science And Changed The World. (235484) il. The little-known story of how two brilliant female physicists' groundbreaking discoveries led to the invention of the atomic bomb. (12-16) Algonquin 2016 B+,K,L,Q+,M (AR/RC) \$20.49

**Dakers, Diane. Nitrogen Cycle. (254657)** il. This informative book explains how the Earth's supply of nitrogen moves in different forms in a cycle from the air to the soil to living things. (10-13) Crabtree 2015 (AR) \$15.59

**Losure, Mary. Isaac The Alchemist: Secrets Of Isaac Newton, Reveal'd. (587802)** A surprising true story of Isaac Newton's boyhood suggests an intellectual development owing as much to magic as science. (10-14) Candlewick 2017 B,K+,L+,M+,W \$21.91

**MacCarald, Clara. Invention Of The Transistor. (592109)** il. Presents a behind-the-scenes look at the invention of the transistor. (08-12) Child's World 2017 (AR) \$21.89

Nydal Dahl, Oyvind. Electronics For Kids: Play With Simple Circuits And Experiment With Electricity! (254311) il. Demystifies electricity and teaches how to build electronics projects. Covers how circuits, voltage, and current

work. Each part of the book focuses on different fundamental electronics concepts with hands-on projects. (10-14) No Starch 2016 \$25.39

Roland, James. How LEDs Work. (762640) il. This book will explain how light-emitting diodes (LEDs) work and what products they are used in, as well as comparing LEDs with traditional incandescent and fluorescent light bulbs. (08-11) Lerner 2017 B (AR) \$29.38

Smith, Linda Wasmer. Louis Pasteur: Genius Disease Fighter. (827290) il. A biography of one of the first scientists to understand the importance of microorganisms in causing disease. (10-14) Enslow 2015 \$27.48

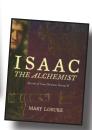
Swanson, Jennifer. Super Gear: Nanotechnology And Sports Team Up. (867770) il. A close-up look at how nanotechnology is used to create high-tech swimsuits, tennis rackets, golf clubs, running shoes, and more. (09-12) Charlesbridge 2016 B,K-,L,C \$20.49

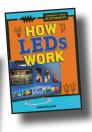
White, Rowland. Cleared For Takeoff: The Ultimate Book Of Flight. (939296) il. This compendium of the history of flight for young readers includes fascinating facts and trivia, helpful diagrams, stories of aviation's pioneers, and fascinating profiles of remarkable planes, accompanied by stunning photographs and illustrations. (10-14) Chronicle 2016 B,K,L \$23.31

**Wood, Alix. Chemical Weapons. (962356)** il. An introduction to chemical weapons, including their earliest uses, their most advanced forms, the ethical debates surrounding them, and more. (09-13) PowerKids 2016 (AR) \$26.30

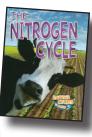
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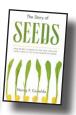


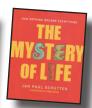














#### **Grade 8 Life Science**

Burns, Loree Griffin. Beetle Busters: A Rogue Insect And The People Who Track It. (175328) Harasimowicz, Ellen il. A fascinating photo essay about the tree-killing Asian long-horned beetle and a nationwide effort from bug scientists to tree doctors working to eradicate this incredibly invasive pest. (10-14) Houghton 2014 B+,K+,L+,Q+,M,C,W (AR/RC) \$21.21

Carson, Mary Kay. Inside Biosphere 2: Earth Science Under Glass. (194955) Uhlman, Tom il. In the 1990s, scientists lived inside Biosphere 2 (Biosphere 1 is the Earth itself) for two years, trying to figure out if colonizing Mars would ever be possible. Now scientists don't live there but instead conduct all sorts of studies and experiments aimed to help us better understand our environment and especially understand what sort of things are happening to it due to climate change and other man-made problems. (10-14) Houghton 2015 B+,K,L+,Q+,M,C (AR/RC) \$21.21

Castaldo, Nancy F. (Nancy Fusco) Story Of Seeds: From Mendel's Garden To Your Plate, And How There's More Of Less To Eat Around The World. (198684) This book speaks to the current ways we think about our food, which crops farmers are allowed to grow, and what consumers are able to eat. (12-16) Houghton 2016 B+,K,Q+,M (AR/RC) \$20.51

**Dakers, Diane. Nitrogen Cycle. (254657)** il. This informative book explains how the Earth's supply of nitrogen moves in different forms in a cycle from the air to the soil to living things. (10-13) Crabtree 2015 (AR) \$15.59

Frydenborg, Kay. Chocolate: Sweet Science And Dark Secrets Of The World's Favorite Treat. (361180) il. An engrossing account for teen readers that captures the history, science, and economic and cultural implications of the harvesting of cacao and creation of chocolate. (12-16) Houghton 2015 B,K,L+,Q,CA,W (AR/RC) \$21.21

Heos, Bridget. Stronger Than Steel: Spider Silk DNA And The Quest For Better Bulletproof Vests, Sutures, And Parachute Rope. (439971) Comins, Andy il. Examines golden orb weaver spiders and genetically engineered goats, whose milk contains proteins to spin spider silk-and to weave a nearly indestructible fiber. This material might someday be used to repair or replace human ligaments and bones, improve body armor, strenghten parachute rope, and tether an airplane to an aircraft carrier! Also explores ethical concerns of genetic research. (10-14) Houghton 2013 B,K,L,Q,C,W+ (AR/RC) \$21.21

**Jarrow, Gail. Fatal Fever: Tracking Down Typhoid Mary. (489958)** il. The true story of the woman who unwittingly spread deadly bacteria, the epidemiologist who discovered her trail of infection, and the health department that decided her fate. (10-14) Calkins Creek 2015 B+,K+,L+,Q+,M,C,W+(AR/RC) \$20.49

Kim, Melissa. Learning About The Endocrine And Reproductive Systems. (517930) il. Learn how these two systems work together to ensure survival of the human race. (10-14) Enslow 2013 Q \$24.67

Newquist, H. P. (Harvey P.) Human Body: The Story Of How We Protect, Repair, And Make Ourselves Stronger. (675322) il. An exploration of the objects that scientists and tinkerers throughout history have invented to protect, repair, or improve our bodies. (08-12) Viking 2015 B,K,Q+,M,CA \$21.21

**Patent, Dorothy Hinshaw. Call Of The Osprey. (703324)** Munoz, William il. A stunning addition to the Scientists in the Field series that explores mercury pollution found in the rivers and streams of Western Montana that might cause harm to humans--and the extinction of the entire osprey species. **(10-14)** Houghton 2015 B,K,L,Q+,M,C (AR/RC) \$21.21

Schutten, Jan Paul. Mystery Of Life: How Nothing Became Everything. (790880) Rieder, Floor il. With decades of scientific knowledge behind him and a genuine sense of fun in his approach, Jan Paul Schutten rewards curiosity with engaging explanations about some of the most complicated scientific issues that exist, and tells readers that there is much left to discover. For example: Why does the paramecium deserve a standing ovation? How do you build a planet? Does a tree want to be tall? How does a bacterium turn into a blue whale? How can you survive without a rear end? (10-14) Aladdin 2015 B, K, L, Q, W (AR) \$19.11

Smith, Linda Wasmer. Louis Pasteur: Genius Disease Fighter. (827290) il. A biography of one of the first scientists to understand the importance of microorganisms in causing disease. (10-14) Enslow 2015 \$27.48

Turner, Pamela S. Crow Smarts: Inside The Brain Of The World's Brightest Bird. (894188) Comins, Andy il. Scientists take you on a research trip to New Caledonia in the Pacific Ocean to follow crows in aviaries and in the wild while answering many thought-provoking questions like: "Can a crow outsmart a scientist?" (10-14) Houghton 2016 K,L+,M+,C (AR) \$21.21

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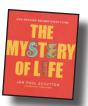




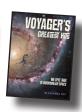












### Grade 8 Earth & Space Science

Aguilar, David A. Cosmic Catastrophes: Seven Ways To Destroy A Planet Like Earth. (046444) il. A lively exploration of seven cosmic catastrophes that could hit Earth and any of the other 20 billion Earth-like planets in our galaxy. (08-12) Viking 2016 B,L \$21.21

Carson, Mary Kay. Inside Biosphere 2: Earth Science Under Glass. (194955) Uhlman, Tom il. In the 1990s, scientists lived inside Biosphere 2 (Biosphere 1 is the Earth itself) for two years, trying to figure out if colonizing Mars would ever be possible. Now scientists don't live there but instead conduct all sorts of studies and experiments aimed to help us better understand our environment and especially understand what sort of things are happening to it due to climate change and other man-made problems. (10-14) Houghton 2015 B+,K,L+,Q+,M,C (AR/RC) \$21.21

Cherrix, Amy E. Eye Of The Storm: NASA, Drones, And The Race To Crack The Hurricane Code. (210107) il. NASA scientists and pilots fly a Global Hawk drone right into the eye of a hurricane in order to learn more about how one of nature's deadliest killers work--and how we save lives when hurricanes hit. (10-14) Houghton 2017 K \$21.21

**Dakers, Diane. Nitrogen Cycle. (254657)** il. This informative book explains how the Earth's supply of nitrogen moves in different forms in a cycle from the air to the soil to living things. (10-13) Crabtree 2015 (AR) \$15.59

Fleischman, Paul. Eyes Wide Open: Going Behind The Environmental Headlines. (340826) il. Offers teens an environmental wake-up call and a tool kit for decoding the barrage of conflicting information confronting them. (14-18) Candlewick 2014 B+,L+,Q+,M,CM (AR/RC) \$15.22

Heos, Bridget. It's Getting Hot In Here: The Past, Present, And Future Of Global Warming. (439956) This hard-hitting look at climate change examines the effects it's having across the world, the politics behind denial, and the ways in which we can all work to lessen the harsh effects of our warming world. Perfect for young environmentalists looking to learn about the ways in which we can take action against global warming. (12-16) Houghton 2015 B,K,L,Q,C,W (AR) \$20.51

Schutten, Jan Paul. Mystery Of Life: How Nothing Became Everything. (790880) Rieder, Floor il. With decades of scientific knowledge behind him and a genuine sense of fun in his approach, Jan Paul Schutten rewards curiosity with engaging explanations about some of the most complicated scientific issues that exist, and tells readers that there is much left to discover. For example: Why does the paramecium deserve a standing ovation? How do you build a planet? Does a tree want to be tall? How does a bacterium turn into a blue whale? How can you survive without a rear end? (10-14) Aladdin 2015 B,K,L,Q,W (AR) \$19.11

Siy, Alexandra. Voyagers Greatest Hits: The Epic Trek To Interstellar Space. (823144) il. Celebrate the fortieth anniversary of the Voyager mission as the twin space probes travel beyond our solar system to the stars. (10-14) Charlesbridge \$21.21

Winchester, Simon. When The Sky Breaks: Hurricanes, Tornadoes, And The Worst Weather In The World. (955837) il. Hurricanes, typhoons, cyclones, tornadoes: when these giant storms hit, they are natural disasters with huge impact! (10-14) Viking 2017 \$24.01

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#### **Grade 8 Engineering Design**

Bryant, Jill. Medical Inventions: The Best Of Health. (635014) il. Innovations in the medical field save countless lives daily. In this title, a timeline of breakthrough medical inventions is explored through dynamic photographs and interesting fact boxes. Fleming's advances with penicillin and the invention of the X-ray machine are some of the featured inventions that keep us in "the best of health!" (10-13) Crabtree 2014 (AR) \$15.59

Carson, Mary Kay. Inside Biosphere 2: Earth Science Under Glass. (194955) Uhlman, Tom il. In the 1990s, scientists lived inside Biosphere 2 (Biosphere 1 is the Earth itself) for two years, trying to figure out if colonizing Mars would ever be possible. Now scientists don't live there but instead conduct all sorts of studies and experiments aimed to help us better understand our environment and especially understand what sort of things are happening to it due to climate change and other man-made problems. (10-14) Houghton 2015 B+,K,L+,Q+,M,C (AR/RC) \$21.21

Cherrix, Amy E. Eye Of The Storm: NASA, Drones, And The Race To Crack The Hurricane Code. (210107) il. NASA scientists and pilots fly a Global Hawk drone right into the eye of a hurricane in order to learn more about how one of nature's deadliest killers work--and how we save lives when hurricanes hit. (10-14) Houghton K \$21.21

**Gregory, Josh. Apps: From Concept To Consumer. (400971)** il. Learn about the history of mobile apps and find out what it takes to make it in this exciting career field. (10-13) Children's 2015 B,L (AR) \$14.25

MacCarald, Clara. Invention Of The Transistor. (592109) il. Presents a behind-the-scenes look at the invention of the transistor. (08-12) Child's World 2017 (AR) \$21.89

Nydal Dahl, Oyvind. Electronics For Kids: Play With Simple Circuits And Experiment With Electricity! (254311) il. Demystifies electricity and teaches how to build electronics projects. Covers how circuits, voltage, and current work. Each part of the book focuses on different fundamental electronics concepts with hands-on projects. (10-14) No Starch 2016 \$25.39

**Otfinoski, Steven. 3D Printing: Science, Technology, Engineering. (694145)** il. Learn about the history of 3D printing and find out what it takes to make it in this exciting career field. (10-13) Children's 2017 B (AR) \$14.25

Swanson, Jennifer. Super Gear: Nanotechnology And Sports Team Up. (867770) il. A close-up look at how nanotechnology is used to create high-tech swimsuits, tennis rackets, golf clubs, running shoes, and more. (09-12) Charlesbridge 2016 B,K-,L,C \$20.49

White, Rowland. Cleared For Takeoff: The Ultimate Book Of Flight. (939296) il. This compendium of the history of flight for young readers includes fascinating facts and trivia, helpful diagrams, stories of aviation's pioneers, and fascinating profiles of remarkable planes, accompanied by stunning photographs and illustrations. (10-14) Chronicle 2016 B,K,L \$23.31 Set \$18345 9 Books @ \$177.59

Spring 2019 (Prices subject to change)

#### **Reviews and Reading Program Abbreviations**

- **B** Booklist
- C Bulletin of the Center for Children's Books
- K Kirkus Reviews
- L School Library Journal
- M Horn Book
- Q Horn Book Guide
- W Publishers Weekly
- + Starred review
- AR Accelerated Reader® test available
- RC Reading Counts® test available



