(Books published in 2008)

Today’s classrooms have no real walls! Students explore the world on field trips, during virtual journeys on the world wide web, and through the books they read. These pathways help them fly to the ends of the universe to satisfy their scientific curiosity.

(NEW from the National Science Digital Library! The Expert Voices blog links to each book’s page on the publisher’s website, providing additional information and purchase options; links to the book’s record in the WorldCat, allowing patrons to easily find the works at their nearest library; and level-appropriate resources held in the NSDL central and/or Pathways Collections.)

Again this year, the professionals of the NSTA/CBC Review Panel for Outstanding Science Trade Books for Students K–12 have been pleased to serve as travel guides, identifying the best in trade books for student explorations. Their recommendations encourage young readers to fly Over the Rivers, brave the Antarctic with Emperors of the Ice, come Face to Face With Elephants, or help a family of mountain gorillas Looking for Miza. There are journeys to microworlds as well, inviting students into Dr. Frankenstein’s lab to investigate the human body, to search nests for Eggs, or work with a National Geographic scientist to explore Genetics.

Each of these books is not just accurate, up-to-date, and attractive but also represents a new, creative path to inquiry. They often have text at a variety of levels—suitable for first reading alone or in a group and for revisiting again and again to learn more. Graphics are often so detailed that they not only support the text but provide opportunities for students to hone their observation skills and to make connections and apply concepts. And almost all of these roads to adventure are linked to other paths (print and electronic) so that the curious explorer can go further. The journey begins here—come along.

Juliana Texley,
Lead Reviewer, NSTA Recommends
About the Annotations

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

1. Titles marked with 🌟 are Selectors’ Choices—books that individual panel members responded to with particular enthusiasm.
3. The prices are current as of January 2009.
4. The notation Paper ed. (F) indicates that a paperback edition is forthcoming and whether the publisher is different from the hardcover edition.
5. Reading levels [P = Primary (K–2); E = Elementary (3–5); I = Intermediate (6–8); A = Advanced (9–12)] are provided by the reviewers. They are intended as guidelines and are not meant to limit the potential use of titles.
6. The reviewer’s initials follow each description (see Members of the Book Selection Panel, below).
7. The most relevant National Science Content Standards are indicated by Roman numerals (see below).

National Science Content Standards

I Unifying Concepts and Processes
II Science as Inquiry
III Physical Science Perspectives
IV Life Science
V Earth and Space Science
VI Science and Technology
VII Science in Personal and Social
VIII History and Nature of Science

Archaeology, Anthropology, and Paleontology


Gripping stories are accompanied by highly informative expedition photographs of human remains discovered in glaciers around the world, such as in the Alps of Europe and the Andes of Peru. The
preserved bodies give us a glimpse into our human prehistory as well as the climate and inhabitants of Earth’s past. Tips on “Personal Ways to Help the Environment,” Suggested Websites, List of Glaciers to Explore and Visit, Acknowledgments, Bibliography, Illustration Credits, Index. LS (I, V, VIII)

*Sabertooth*. Written and illustrated by Patrick O’Brien. Henry Holt and Company. 32pp. Trade ISBN 978-0-8050-7105-9, $16.95. (P, E) Discover fascinating facts about the ferocious sabertooth tiger, examine a timeline for its extinction, and learn about the evolution of cats. Readers can use inquiry to determine qualitative characteristics of these animals. This book also discusses other big cats that are endangered and steps that can be taken to protect these amazing creatures. JCL (II, IV, VIII)

**Biography**

* A *Life in the Wild: George Schaller’s Struggle to Save the Last Great Beasts*, Pamela S. Turner. Illustrated with photographs by George B. Schaller. Farrar, Straus, and Giroux Books for Young Readers. 112pp. ISBN 978-0-374-34578-5, $21.95. (I) This book offers a compelling biography of scientist George Schaller, a renowned animal conservationist. Stories tell of his attempts to save the world’s most endangered animals, including mountain gorillas, tigers, snow leopards, and many more. This book is illustrated with many of Schaller’s own photographs. Internet and Multimedia Resources, Index. NSC (IV, VIII)

* Emperor of the Ice: A True Story of Disaster and Survival in the Antarctic, 1910–13*, Richard Farr. Illustrated with photographs. Farrar, Straus, and Giroux Books for Young Readers. 240pp. Trade ISBN 978-0-374-31975-5, $19.95. (I, A) This fantastic story of survival during the golden age of Antarctic exploration (c. 1900–1913) concerns two men in the quest for an Emperor Penguin’s egg to verify the hypothesis that birds evolved directly from dinosaurs; their attempt was made during the dark, windy, and cold months of an Antarctic winter. Maps and Charts, Preface, Sources, Bibliography, Illustration Credits. LS (V, VII, VIII)

*Farmer George Plants a Nation*. Peggy Thomas. Illustrated by Layne Johnson. Calkins Creek, an Imprint of Boyds Mills Press, Inc. 40pp. Trade ISBN 978-1-59078-460-0, $17.95. (E) Readers meet George Washington, a thoughtful farmer who delighted in experiments with plants, tools, and new methods of farming at his home in Mt. Vernon, Virginia. Washington believed that many successful farmers would help America grow into a stronger nation. This picture book is rich in primary sources such as letters and diary entries; it provides accurate maps and paintings from a historical point of view. SF (IV, VII, VIII)

**Earth and Space Science**

*Life on Earth—And Beyond*, Pamela S. Turner. Illustrated with prints and photographs. Charlesbridge. 112pp. Trade ISBN 978-1-58089-133-2, $19.95. (I, A) Searching for life that could exist on other worlds begins on Earth. This book gives an account of an astrobiologist’s search for areas that are similar to Martian environments (Antarctica, the Sahara Desert, and Siberia) to find out how life
survives in such harsh earthly environments. Readers are left to consider that life may possibly exist on Mars under similar conditions. Introduction, Resources, Acknowledgments, Photo Credits, Index. LS (III, IV, V, VI)

Moon Landing. Richard Platt. Illustrated by David Hawcock. Candlewick Press. 10pp. Trade ISBN 978-0-76364-046-0, $29.99. (E, I, A) From magnificent, three-dimensional pop-ups to foldouts and small, inserted books, this 40th anniversary commemoration of Apollo 11 is extraordinary and informative in its entirety. The outstanding visuals inform, and the detailed text chronicles early space endeavors—from international space competition through the many successful flights of the Gemini and Apollo programs. DLK (V, VIII)

Over the Rivers: An Aerial View of Geology. Michael Collier. Mikaya Press. 128pp. Trade ISBN 978-1-931414-21-0, $34.95. (I, A) This book contains stunning photographs illustrating the geological dynamics of many rivers in the continental United States, such as the Colorado, Mississippi, and Green rivers. This would be a great text for an Earth science classroom to enhance the study of weathering, erosion, and deposition in the development of landscapes sculpted by running water. Introduction, Map of Major River Systems in United States (except Hawaii), Recommended Reading, Photo Locations, Acknowledgments, Index, Glossary. LS (II, V, VI)

Environment and Ecology


Animals on the Edge: Science Races to Save Species Threatened With Extinction. Sandra Pobst. Illustrated with photographs from various sources. National Geographic Society. 64pp. Trade ISBN 978-1-4263-0358-6, $17.95; Library ISBN 978-1-4263-0265-7, $27.90. (I, A) Readers join scientists in adventures focused on learning about and saving endangered species. The text explains causes of species endangerment and reasons to care about animals. This book has a historical perspective, an interview with a conservation biologist, and striking photographs. Overall, it is a strong portrayal of the nature of science. Timeline, Glossary, Bibliography, Index. PLB (IV, VII, VIII)


blend of ecology, social justice, and character education, this book tells the story of how Wangari Maathai helped bring the trees back to Kenya. Wangari encouraged local women in nearby tribes to help, and together they restored Kenya back to being “green.” Author’s Note. JCL (IV, VII)

**When the Wolves Returned: Restoring Nature’s Balance in Yellowstone.** Dorothy Hinshaw Patent. Illustrated with photographs by Dan Hartman and Cassie Hartman. Walker Books for Young Readers. 36pp. Trade ISBN 0-8027-9686-9, $17.95; Library ISBN 0-8027-9687-7, $18.95. (E, I) This stunning book presents an informed and comprehensive explanation of how the balance of nature has been restored to Yellowstone National Park as a result of restoring the park’s wolf population. Breathtaking photographs accompany a beautifully written, dual-text format that will inform and engage readers. Index, Notes About Photographs, Lists of Books and Websites. DLK (IV)

**The Wolves Are Back.** Jean Craighead George. Illustrated by Wendell Minor. Dutton’s Children’s Books. 32pp. Trade ISBN 978-0-525-47947, $16.99. (P, E) Once, the wolves were gone and nature was out of balance. Then, wolves were brought back to Yellowstone National Park, and there was a newly restored balance in the animal and plant world there. Protecting these wolves and their wildness is an engaging story, expertly told and illustrated. SF (IV)

**Health Science**


**Dr. Frankenstein’s Human Body Book.** Richard Walker. Dorling Kindersley. 96pp. Trade ISBN 978-0-7566-4091-0, $24.99. (E, I) An amazing exploration of the human body from the inside out, this durable book invites the reader to work as the doctor’s trusty assistant. Human anatomy is studied, step by step, in a laboratory setting. The author provides x-rays, color photos, drawings, and a good sense of humor. SF (IV, VI)


directions for keeping the world healthy from pathogens that threaten global populations. As drug-resistant diseases emerge, scientists race to develop vaccines to control the spread of the drug-resistant strains. Glossary, Bibliography, Index. DLW (IV, VII, VIII)

**Life Science**


*Eggs*. Marilyn Singer and Emma Stevenson. Holiday House. 32pp. Trade ISBN 9780823417278, $16.95. (E, I) This fascinating picture book is laden with information about an amazing variety of eggs, including those from both common and unusual species. Shape, color, size, unique characteristics, and quantities of various animals’ eggs are detailed. Extraordinary, lifelike illustrations enhance the text. Glossary, Index, Source Notes, Contact Information for Nature and Wildlife Education and Advocacy Groups. DLK (IV)


*Fabulous Fishes*. Written and illustrated by Susan Stockdale. Peachtree Publishers. 32pp. Trade ISBN 9781561454297, $15.95. (P) By pairing rhyming text and factual information, this beautifully illustrated book introduces young readers to both exotic and familiar fishes. Bold, colorful, fabulous fish are depicted in their natural habitats. An afterword supplies additional information about the adult of each species. Bibliography. PJC (IV)

includes natural history and conservation information as well as stunning photographs. Facts at a Glance, Glossary, Bibliography, Index, Research and Photographic Notes. PLB (II, IV, VIII)

**Face to Face With Elephants.** Written and illustrated by Beverly and Dereck Joubert. National Geographic Society. 32pp. Trade ISBN 978-1-4263-0325-8, $16.95; Library ISBN 978-1-4263-0326-5, $25.90. (E, I) Firsthand information and stunning photographs take readers into the wilds of Africa to visit these intelligent, fascinating, gentle giants. Exciting accounts relate face-to-face encounters with a complex community of elephants. Also included are suggestions for supporting the world’s elephant population. Facts at a Glance, Glossary, Further Reading, Websites, Index. PJC (II, IV, VIII)

**Face to Face With Lions.** Written and illustrated by Beverly and Dereck Joubert. National Geographic Society. 32pp. Trade ISBN 978-1-4263-0207-7, $16.95; Library ISBN 978-1-4263-0208-4, $25.90. (E, I) This book contains firsthand information and photographs provided by the authors, who have observed lions face-to-face. Conservation messages about lions and their habitats are included. Glossary. Index. NSC (II, IV, VIII)

**Finding Home.** Sandra Markle. Illustrated by Alan Marks. Charlesbridge. 32pp. Trade ISBN 978-1-58089-122-6, $15.95. (P, E) In this real-life story, readers join a koala mother and her baby joey as they flee a raging fire in a fight for survival. Leaving their destroyed home in the bush and encountering the edge of the risky world of humans, the frightened animals finally find a safe new home. SF (IV)

**Genetics: From DNA to Designer Dogs.** Kathleen Simpson. Illustrated with photographs from various sources. National Geographic Society. 64pp. Trade ISBN 978-1-4263-0361-6, $17.95; Library ISBN 978-1-4263-0327-2, $27.90. (I, A) Portraying the work of scientists in the quickly advancing field of genetics, the stories in this book tell about researchers sequencing a mummy’s DNA and investigating the use of human stem cells. It includes an interview with a DNA investigator and superb photographs. Timeline, Glossary, Bibliography, Index. PLB (IV, VII, VIII)


**Looking for Miza.** Juliana Hatkoff, Isabella Hatkoff, Craig Hatkoff, and Paula Kahumbu. Photographs by Peter Greste. Scholastic Press. 40pp. Trade ISBN 0-545-08540-3, $16.99; Library ISBN 978-0-545-08540-3, $16.99. (P, E). This moving story illustrates the bond uniting a family of mountain gorillas and the search for a missing family member. The relationship between the rangers and the mountain gorillas is a testament to the efforts to protect these animals. Epilogue. DLW (IV, VII)

**Monarch and Milkweed.** Helen Frost. Illustrated by Leonid Gore. Atheneum Books for Young Readers, an imprint of Simon & Schuster Children’s Publishing Division. 40pp. Trade ISBN 978-1-4169-0085-6, $17.99. (P) In one of nature’s most perfect relationships, the milkweed plant is the food supply for the monarch butterfly as their life cycles complement each other and the seasons change. While reading
simple factual narratives and viewing colorful illustrations, young readers can make observations of change over time. SF (IV)

**Nic Bishop Frogs.** Written and illustrated by Nic Bishop. Scholastic Reference. 48pp. Trade ISBN 0-439-87755-5, $17.99; Library ISBN 978-0-439-87755-8, $17.99. (P, E) Remarkably detailed photographs and captivating text are used to portray these intriguing creatures. Nic Bishop’s study of frogs is documented through astonishing, close-up photos and fascinating text. Unusual facts (a few frogs can freeze partially solid!) as well as information concerning life cycles, defense tactics, and body structures will fascinate readers. Author’s Note, Index, Glossary. PJC (II, IV, VIII)


**Predators.** John Seidensticker and Susan Lumpkin. Simon & Schuster Books for Young Readers, an imprint of Simon & Schuster Children’s Publishing Division. 64pp. Trade ISBN 978-1-4169-3863-7, $16.99. (E, I) Analyze predators as never before! Every possible category of predators is scrutinized. The book also describes predators in different biomes and examines diverse predators by classifying them within the animal kingdom. The color reproductions are magnificent. Glossary, Index. JCL (IV)


**Wings.** Sneed B. Collard, III. Illustrated by Robin Brickman. Charlesbridge. 32pp. Trade ISBN 978-1-57091-611-3, $19.95; Paperback ISBN 978-1-57091-612-0, $7.95. (E, I) This book gives detailed information about the diversity of insect, bird, and bat wings—from tiny to huge and from brightly colored to clear. It also explains how wings enable animals to fly. Unique species are featured, and detailed, colorful illustrations bring these winged animals to life. Glossary, Lists of Books and Websites. DLK (IV)

Physical Science

*Car Science*. Richard Hammond. DK Publishing. 96pp. Trade ISBN 978-0-7566-4026-2, $17.99. (I, A) This book is a comprehensive analysis of every aspect of the automobile and the scientific principles that make every part work. Clear explanations coupled with excellent illustrations make the car into more than just a vehicle—it is an everyday science project that students will embrace. Monster trucks, sport cars, and “cars of the future” will also pique interest. Glossary, Index. DLK (III, VI)

Technology and Engineering


Members of the Book Selection Panel

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Donna L. Knoell (DLK)
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Visit CBC’s and NSTA’s websites at www.cbcbooks.org and www.nsta.org. Expanded reviews of these award-winning books are available at www.nsta.org/recommends.

About the Books and the Selection Process

The books that appear in this annotated bibliography selected as Outstanding Science Trade Books were published in 2008. 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 annotations 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/about/members.html.

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 National Science Content Standards (see About the Annotations, above) to which the books relate. Where more than one standard is listed, the most applicable standard is given first.

**Call for Submissions for 2010 Outstanding Science Trade Books for Students K–12**

*Deadline for submissions: June 16, 2009*

**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 2009.
- Titles originally published abroad are eligible only if they have a 2009 U.S. publication date; reprints or licensed editions of titles initially published in the United States before 2009 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.
- Fiction is eligible if the book has substantial science content.

**Number of titles you may submit**

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 in late April 2009 at www.cbcbooks.org.
About CBC and NSTA

The Children’s Book Council (CBC) is a nonprofit trade organization that encourages the use and enjoyment of books and related literacy materials for young people. The official sponsor of Children’s Book Week, the CBC supports reading-encouragement programs both independently and with other national and international organizations. The CBC’s members are U.S. publishers and packagers of trade books for children and young adults and producers of book-related materials for young people. For more information, visit www.cbcbooks.org. The National Science Teachers Association (NSTA) is an organization of science education professionals and has as its purpose the stimulation, improvement, and coordination of science teaching and learning. For further information on NSTA membership and services, call 800-722-NSTA.