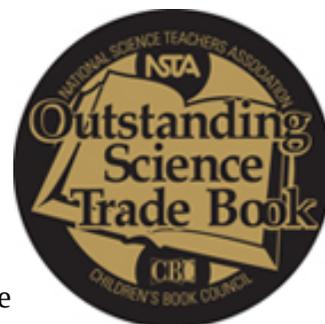




## Outstanding Science Trade Books for Students K–12: 2000 (Books published in 1999)

[OSTB home](#)

A cooperative project between the National Science Teachers Association and the [Children's Book Council](#). This list is published annually in the March issue of *Science and Children*, the journal devoted to preschool through middle level science teaching. The books on the list are targeted at grades K–8.



### Categories:

- [Biography](#)
- [Earth and Space Science](#)
- [Environment and Ecology](#)
- [Integrated Science](#)
- [Life Science](#)
- [Physical Science](#)
- [Technology and Engineering](#)

### [About the Annotations](#)

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## Biography

\* **A Picture Book of George Washington Carver.** David A. Adler. Illustrated by Dan Brown. Holiday House. 32pp. Trade ISBN 0-8234-1429-9, \$15.95. (P,I) This biography portrays the many influences on the life of George Washington Carver: his early years, his education, and his ever-present thirst for knowledge. The book, enriched by intricate color drawings, also demonstrates the vastness and significance of Carver's many contributions to science. Author's Note, Bibliography, Important Dates. PSB (VIII,I,VII)

**Science in the Renaissance (Science of the Past series).** Brendan January. Illustrated with maps, photographs of paintings, drawings, and sculpture. Franklin Watts/Grolier. 64pp. Library ISBN 0-531-11526-7, \$25. (I,A) The reader will come to understand how the advances in scientific knowledge that occurred during the Renaissance in Europe in the 15th and 16th centuries forever changed the way

people viewed the world and the universe. The importance of Galileo's ideas of experimentation and the beginning of the scientific method are among the factors credited with the origins of modern science. Glossary, Index, Resources. JKH (VIII,II)

## Earth and Space Science

**\* Discovering El Niño: How Fable and Fact Together Help Explain the Weather.** Patricia Seibert. Illustrated by Jan Davey Ellis. Millbrook. 32pp. Library ISBN 0-7613-1273-0, \$21.90. (I) The author does a wonderful job of blending together the scientific information and facts about El Niño with the historical perspective and lore about the origins of the name. The reader is told the tale of the first observance of El Niño near Peru through history to today when scientists track and monitor this weather pattern. Afterword. CAR (V,VI,VIII)

**DK Guide to Space: A Photographic Journey Through the Universe.** Peter Bond. Illustrated with photographs from NASA's robotic space probes and the Hubble space telescope. DK Publishing. 64pp. Trade ISBN 0-7894-3946-8, \$19.95. (A) Through vivid photographs, the reader is presented with information on the components of the solar system and universe. Each topic is described in a two-page layout that integrates scientific information with striking illustrations. Some of the topics included are the sun, planets, space exploration, galaxies, and stars. Index. CAR (V,VI)

**DK Space Encyclopedia.** Heather Couper and Nigel Henbest. Illustrated with charts, maps, and photographs. DK Publishing. 304pp. Trade ISBN 0-7894-4708-8, \$29.95. (A) This comprehensive guide to astronomy and space travel, arranged by an extensive list of topics, will help young stargazers better understand the work done by top scientists. Stunning, detailed images plus instructions for building a simple telescope make this book essential for anyone interested in space and astronomy. CD-ROM, How to Use This Book section, Reference section, Index. JKH (V,VI,II)

**Erosion (Carolrhoda Earth Watch Book series).** Written and illustrated with photographs by Sherie Winner. Carolrhoda/Lerner. 48pp. Library ISBN 1-57505-223-7, \$21.27. (I) Photographs of actual locations offer the reader views of one of nature's strongest land-shaping forces: erosion. The text provides information on glaciers, water, and wind as forces of erosion, as well as how these forces shape the Earth's surface. Glossary, Index, About the Author. CAR (V,I)

**Space Station Science: Life in Free Fall.** Marianne J. Dyson. Illustrated with drawings by Dave Klug and photographs from various sources. Scholastic Reference. 128pp. Trade ISBN 0-590-05889-4, \$16.95. (I) Welcome aboard the International Space Station! Readers are introduced to the numerous systems that keep the space station up and running and the complexities of day-to-day living onboard. Complete with hands-on activities that simulate life in space and full-color illustrations, this book shows what it's like to live in a space station. Foreword by Buzz Aldrin. Glossary, Index, For Further Study. MBC (V,VI)

**Tornadoes.** Seymour Simon. Illustrated with photographs. Morrow/HarperCollins. 32pp. Trade ISBN 0-688-14646-5, \$16; Library ISBN 0-688-14647-3, \$15.89. Paper ed., (F), Harper Trophy/HarperCollins. (P,I) Extensive information on tornadoes is provided for readers. More specifically there are explanations of how tornadoes develop, where they occur, how they are tracked,

and the dangers associated with them. Through the use of well-illustrated diagrams and real-life photographs, the reader can explore this weather phenomenon. CAR (V,VII)

## Environment and Ecology

**Shelterwood.** Susan Hand Shetterly. Illustrated by Rebecca Haley McCall. Tilbury House. 40pp. Trade ISBN 0-88448-210-3, \$16.95. Paper ed., (F). (P,I) Beautifully illustrated in oils, this story takes the reader on a summer journey through the woods to learn how environmentally conscious foresters protect the inhabitants by selectively cutting trees, leaving shelter for animals and protecting young trees. The characters also share their appreciation of plants and animals by identifying those that dwell in the woods. NPS (IV,VII)

## Integrated Science

**Nature's Paintbrush: The Patterns and Colors Around You.** Written and illustrated by Susan Stockdale. Simon and Schuster. 32pp. Trade ISBN 0-689-81081-4, \$15. Paperback ed., (F). (P) Cleverly combining marvelous illustrations of nature's camouflage with simple text, the author explores ways in which patterns and colors are helpful to living things. This book encourages children to observe, think about, and enjoy colors and patterns in the natural world. Author/Illustrator's Note. KBH (IV,II)

\* **Pumpkin Circle: The Story of a Garden.** George Levenson. Illustrated with photographs by Shmuel Thaler. Tricycle/Ten Speed. 40pp. Trade ISBN 1-58246-004-3, \$14.95. (P,I) The concept of how plants grow is shown through the amazing cycle of nature unfolding in a backyard pumpkin patch. The book captures each phase of the pumpkin's life with time-lapse photography: seeds sprouting, flowers blooming, bees buzzing, pumpkins growing, and finally the pumpkin returning to Earth. Afterword: "How to Grow Pumpkins," Pumpkin Circle Web site. KBH (II,IV,V)

## Life Science

**A is for ... ? A Photographer's Alphabet of Animals.** Written and illustrated with photographs by Henry Horenstein. Gulliver/Harcourt Brace. 36pp. Trade ISBN 0-15-201582-5, \$16. (P) Stimulate inquiry with the beautiful black-and-white photographs in this very special alphabet book. Animals from A to Z are featured in partial views and from unique angles. By examining the limited photographic clues of physical attributes, the reader is lead to solve the mystery of identifying the animal. Answers are provided at the end. Photographer's Note. LMN (II,IV)

**Animal Defenses: How Animals Protect Themselves.** Etta Kaner. Illustrated by Pat Stephens. Kids Can Press. 40pp. Trade ISBN 1-55074-419-4, \$10.95; Paperback ISBN 1-55074-421-6, \$5.95. (I) Unusual defense mechanisms employed by animals are described in this well-illustrated text. Divided into chapters, the reader observes various mechanisms of protection, including poisonous skin, camouflage coloration, group living, and imitation. Particularly unique animals in each category are individually discussed. Index. NPS (IV)

**Around the World: Who's Been Here?** Written and illustrated by Lindsay Barrett George. Greenwillow/HarperCollins. 40pp. Trade ISBN 0-688-15268-6, \$16; Library ISBN 0-688-15269-4, \$15.89. Paper ed., (F), Harper Trophy/HarperCollins. (P,I) This cleverly written story is told in the form of letters. Miss Lewis, a teacher, circles the globe to search for wildlife in its natural habitat. Her letters and pictures encourage her students and the reader to examine the pictures and discover "Who's Been Here?" A turn of the page reveals the correct answer. End papers are maps drawn by the students. End Notes. JMH (I,II,IV)

**Baby Whale's Journey. Jonathan London.** Illustrated by Jon Van Zyle. Chronicle. 40pp. Trade ISBN 0-8118-2496-9, \$14.95. (P) Dramatically illustrated, this book is a poetic account of a young sperm whale's life from conception to infancy. The text also portrays the young calf as it develops skills of communication, feeding, and group socialization. Afterword, Read-er's Guide. NPS (IV)

**Bananas!** Jacqueline Farmer. Illustrated by Page Eastburn O'Rourke. Charlesbridge. 32pp. Trade ISBN 0-88106-114-X, \$15.95; Paperback ISBN 0-88106-115-8, \$6.95. (P,I) In a lighthearted manner the author provides information about the history, growth, varieties, care, shipping requirements, and nutritional value of bananas. At the conclusion of the book are recipes, songs, riddles, poems, and "banana humor." JMH (II,IV)

**The Barn Owl (Animal Lives series).** Sally Tagholm. Illustrated by Bert Kitchen. Kingfisher. 32pp. Trade ISBN 0-7534-5171-9, \$9.95. (I) Covering the span of one year of a barn owl's life, this book provides information about its physical characteristics and behavior patterns. Hunting, mating, feeding, and nesting information is supplied in the story. The clearly written text is brought to life through beautiful, accurate illustrations of these birds. Afterword, Glossary, Index, Resource Information. CAR (IV,I)

**Bizarre Birds.** Written and illustrated with photographs by Doug Wechsler and VIREO. Boyds Mills. 48pp. Trade ISBN 1-56397-760-5, \$17.95. (I,A) This volume discusses the strange traits of some of the 10,000 species of birds. Divided into chapters based on physical traits, eating habits, ability to fly, breeding, and interesting habits, this book investigates the fascinating and bizarre aspects of the birds. Beautiful color photographs accompany the various descriptions. Epilogue, Glossary, Index. PSB (IV,I)

\* **Crawdad Creek.** Scott Russell Sanders. Illustrated by Robert Hynes. National Geographic. 32pp. Trade ISBN 0-7922-7097-5, \$15.95. (P,I) Exquisitely detailed paintings capture the beauty of the wild, natural world waiting to be discovered. The book encourages readers to go outside; find moving water; and open their eyes, ears, and hearts to the wilderness everywhere. A great book to encourage young readers to observe all the details of the world around them. Author's Note. JKH (IV,II)

**Crocodiles & Alligators.** Seymour Simon. Illustrated with photographs. HarperCollins. 32pp. Trade ISBN 0-06-027473-5, \$15.95; Library ISBN 0-06-027474-3, \$15.89. Paper ed., (F), Harper Trophy/HarperCollins. (P,I) The author has blended clearly written text and exquisite photographs to create a superb resource about the physical characteristics and intriguing behavior of crocodiles and alligators. "Croc-skin" embossed endpapers add a delightful touch to the book. JMH (II,IV)

**Dandelions (Early Bird Nature Book series).** Kathleen V. Kudlinski. Illustrated with photographs by Jerome Wexler. Lerner. 48pp. Library ISBN 0-8225-3016-3, \$22.60. (P) This book provides the reader

with an excellent resource for learning about the life cycle of the dandelion plant. There are also a variety of interesting facts about the plant's history and its uses. Afterword, Glossary, Index. JMH (II,IV)

\* **Dive! My Adventures in the Deep Frontier.** Sylvia A. Earle. Illustrated with photographs by Wolcott Henry. National Geographic. 64pp. Trade ISBN 0-7922-7144-0, \$18.95. (I) In a fascinating, beautifully illustrated book, this world-renowned underwater explorer and researcher plunges the young reader into a luminous underwater world. The reader will "walk the seafloor" to learn about the wonders of the deep and the technology needed to explore it. With outstanding photographs and lively illustrated text, readers will discover how incredible our ocean world is and how to explore and protect it. Time Line of Ocean Exploration, Glossary, Resources, Index. LLM (IV,VI)

**The Emperor's Egg.** Martin Jenkins. Illustrated by Jane Chapman. Candlewick. 32pp. Trade ISBN 0-7636-0557-3, \$16.99. Paperback ed., (F). (P,I) Delightful paintings and a simple, straightforward text invite the reader to explore the frigid world of Emperor penguins. Readers learn about the roles and responsibilities of the penguin parents, their eating habits, and how they work together to survive in the harsh Antarctic environment. Index. LMN (IV,I)

**Exploding Ants: Amazing Facts About How Animals Adapt.** Joanne Settel, Ph.D. Illustrated with photographs. Atheneum/Simon and Schuster. 40pp. Trade ISBN 0-689-81739-8, \$16. Paperback ed., (F). (I,A) Some animal habits that may seem disgusting (frogs using their eyeballs to help swallow their food or small worms living in a dog's nose mucus) are really wonderful adaptations that make it possible for a great variety of creatures to live and thrive on Earth as they find shelter, food, and safety in the natural world. Glossary, Index, Selected Readings. JKH (IV)

**Gorilla Walk.** Written and illustrated by Ted Lewin and Betsy Lewin. Lothrop/HarperCollins. 48pp. Trade ISBN 0-688-16509-5, \$16; Library ISBN 0-688-16510-9, \$15.93. (P,I) Visit the Bwindi Impenetrable [Forest] National Park in southern Uganda to meet the mountain gorilla. This beautifully illustrated and charmingly written story relates the travels of a party of explorers as they enter and explore the habitat and society of a subspecies of gorillas found in this area. Map, Mountain Gorilla Facts, Index. MBC (IV)

**Hello, Fish! Visiting the Coral Reef.** Sylvia A. Earle. Illustrated with photographs by Wolcott Henry. National Geographic. 32pp. Trade ISBN 0-7922-7103-3, \$15.95. (P) In very poetic yet fact-filled text accompanied by eye-catching, large-format photographs, the young reader is given an up-close-and-personal view of a variety of funny, unusual, and beautiful fish, all residents of various coral reefs around the world. Map. LLM (IV)

\* **Here Is the African Savanna.** Madeleine Dunphy. Illustrated by Tom Leonard. Hyperion. 32pp. Trade ISBN 0-7868-0162-X, \$14.99; Library ISBN 0-7868-2134-5, \$15.49. (P,I) A classic style of cumulative verse builds the text as it weaves the story of the food web of the African savanna. The strength and survival of the animals is illustrated by luminous paintings featuring the interdependence of each strand of the food web. Afterword. LMN (IV,I)

**My Cheetah Family (Carolrhoda Photo Books series).** Written and illustrated with photographs by Matto H. Barfuss. Carolrhoda/Lerner. 48pp. Library ISBN 1-57505-377-2, \$22.60. (I,A) The author's

visit to Serengeti National Park in Tanzania leads him to an amazing adventure-watching five cheetah cubs grow up to self sufficiency. This poignant tale provides insight into the lives and habitats of these magnificent animals. Excellent color photographs add to the beauty of the book. Cheetah Facts and Figures, Resources, Index. PSB (IV,I)

**National Audubon Society First Field Guide: Trees.** Brian Cassie. Illustrated with photographs. Scholastic Reference. 160pp. Trade ISBN 0-590-05472-4, \$17.95; Paperback ISBN 0-590-05490-2, \$11.95. (I,A) Whether you are looking at trees in your own yard, taking a walk in the woods, or vacationing in a wilderness park, this field guide will help you look at trees the way a naturalist does. The book provides information on everything children might want to know about trees, such as unique characteristics, life cycles, and varied habitats. More than 450 color photographs and illustrations capture the beauty of over 150 species in North America. Glossary, Resources, Index. LLM (IV)

\* **Once a Wolf: How Wildlife Biologists Fought to Bring Back the Gray Wolf.** Stephen R. Swinburne. Illustrated with photographs by Jim Brandenburg. Houghton Mifflin. 48pp. Trade ISBN 0-395-89827-7, \$16. (I) This book is a thorough account of the life of the gray wolf, from its value to the ecosystem to a description of its problematic relationships with people as well as the conservation movement that is credited with restoring the wolf population by returning wolves to their natural habitat. Map, Bibliography, Web Sites, Index. JMH (I,IV,VII)

**Outside and Inside Kangaroos (Outside and Inside series).** Sandra Markle. Illustrated with photographs. Atheneum/Simon and Schuster. 40pp. Trade ISBN 0-689-81456-9, \$16. Paperback ed., (F). (I) This addition to the author's series of books provides vivid descriptions of the habitat and the external and internal features of the kangaroo, all highlighted with excellent color photographs. Vocabulary words are italicized in the text and can be found in the glossary. A Looking Back section provides a starting point for inquiry science. Map, Glossary, Index. PSB (IV,I,II)

**A Pill Bug's Life (Nature Upclose series).** Written and illustrated by John Himmelman. Children's Press/Grolier. 32pp. Library ISBN 0-516-21165-X, \$24; Paperback ISBN 0-516-26798-1, \$6.95. (P) In this well-illustrated book, follow the life of a common garden creature: the pill bug. The story begins with the birth of a pill bug and continues through the seasons for three years. This wonderful book will enrich students' studies of an easy-to-raise insect. Glossary. MBC (IV)

\* **The Pumpkin Book. Written and illustrated by Gail Gibbons.** Holiday House. 32pp. Trade ISBN 0-8234-1465-5, \$16.95. (P,I) Young jack-o'-lantern lovers will appreciate this account of the life cycle of the pumpkin. Brilliantly illustrated with diagrammed and labeled sections, the book also explains the role of the pumpkin in the traditional American fall holidays and ends with information for home and classroom projects. NPS (IV)

**Red-Eyed Tree Frog.** Joy Cowley. Illustrated with photographs by Nic Bishop. Scholastic Press. 32pp. Trade ISBN 0-590-87175-7, \$16.95. (P) Through engaging and informative text and outstanding photography, this book is an exciting new way to look at nature. It provides students with a unique way to see the natural world through the adventures of a red-eyed tree frog: searching for food, avoiding the dangers of the rain forest, and trying to survive attacks from poisonous caterpillars and hungry boa constrictors. Afterword. LLM (IV)

**Snake.** Chris Mattison. Illustrated with photographs. DK Publishing. 192pp. Trade ISBN 0-7894-4660-X, \$29.95. (A) Captivating, glossy photographs charm students to read and research more than 60 types of snakes, ranging from adders to yellow anacondas. This richly formatted book features each snake in detailed entries with informative, readable text. Glossary, Index, Snake Directory. LMN (IV,I)

\* **A Symphony of Whales.** Steve Schuch. Illustrated by Peter Sylvada. Harcourt Brace/Harcourt Trade. 32pp. Trade ISBN 0-15-201670-8, \$16. (P,I) This enchanting tale was inspired by a true story about the efforts of a group of people working to save whales trapped in an ice-enclosed bay. The story and artwork weave the story of human effort and partnership to assist imperiled beluga whales. Historical Notes. MBC (V,IV)

**Where Are the Night Animals? (Let's-Read-and-Find-Out Science series).** Written and illustrated by Mary Ann Fraser. HarperCollins. 32pp. Trade ISBN 0-06-027717-3, \$15.95; Library ISBN 0-06-027718-1, \$15.89; Paperback ISBN 0-06-445176-3, \$4.95 (Harper Trophy/HarperCollins). (P) The author's lyrical text and realistic illustrations help explain how nocturnal animals are adapted to living in the dark. This book helps the reader understand the world that comes alive under the cover of darkness-where are the night animals and where do they go during the day? Afterword. JKH (IV)

## Physical Science

**Flicker Flash.** Joan Bransfield Graham. Illustrated by Nancy Davis. Houghton Mifflin. 32pp. Trade ISBN 0-395-90501-X, \$15. (P,I,A) This volume contains poetry about light sources. The vivid colors and words form the shape of objects to give delightful visual as well as contextual information about the concepts. Candles, fireflies, lighthouses, and fireworks are among the light sources portrayed-an excellent way to combine science, art, and literature. PSB (III)

**How Tall, How Short, How Faraway.** David A. Adler. Illustrated by Nancy Tobin. Holiday House. 32pp. Trade ISBN 0-8234-1375-6, \$15.95. (P) In this wonderful hands-on concept book, easy technological measuring tools are superbly introduced and explained. Practical explorations are provided for young students to achieve a deeper understanding of measurements and measuring. The informative text and colorful illustrations clearly explain the difference between customary and metric systems. Conversion Tables. KBH (III,II,VI)

## Technology and Engineering

**How the Future Began: Communications.** Anthony Wilson. Illustrated with drawings and photographs. Kingfisher. 64pp. Trade ISBN 0-7534-5179-4, \$15.95. (I) How the Future Began: Communications, with its innovative design and compelling text, is an illuminating guide to the future . It beautifully explores the developments that have brought us cellular phones, satellite television, and e-mail, while sharing scientists' beliefs about exciting future advances. Glossary, Web sites, Places of Interest. KBH (VI,VIII)

## About the Annotations

- 1 Titles marked with \* are Selectors' Choices—books to which individual panel members responded with particular enthusiasm.
- 2 Title: Subtitle
- 3 Author
- 4 Illustrator
- 5 Publisher
- 6 Number of pages
- 7 International Standard Book Numbers (ISBNs) are included for all available editions (trade, library, and paperback). The symbol "F" indicates that a paperback edition is forthcoming.
- 8 Price as of January 1999
- 9 Reading Level:
  - P primary
  - I intermediate
  - A advanced
- 10 Brief descriptive annotation
- 11 Code indicating reviewer responsible for the annotation (see reviewer list above)
- 12 National science content standards, in order of applicability
  - I Unifying Concepts and Processes
  - II Science as Inquiry
  - III Physical Science
  - IV Life Science
  - V Earth and Space Science
  - VI Science and Technology
  - VII Science in Personal and Social Perspectives
  - VIII History and Nature of Science

(sample)

\* **THE RAIN FOREST** (*Exploring Our Environment* series). Elaine Crocker. Illustrated with various photographs. Ecosystem Press. 32pp. ISBN trade: 0-592-67321-1, \$18.95; library: O-592-64213-X, \$18.99. Paper ed., (F). (I,A) Through full-color photographs and an engaging narrative, readers can explore this wondrous ecosystem. Author's Note. ABC (VII,II)