(Books published in 1996)

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:

- Anthropology and Paleontology
- Biography
- Earth Science
- Environment and Ecology
- Integrated Science
- Life Science
- Physical Science

Notes:

- About the Books and the Selection Process
- About the Annotations

Anthropology and Paleontology

* THE BONE DETECTIVES: HOW FORENSIC ANTHROPOLOGISTS SOLVE CRIMES AND UNCOVER MYSTERIES OF THE DEAD. Donna M. Jackson. Illustrated with photographs by Charlie Fellenbaum. Little, Brown. 48pp. ISBN 0-316-82935-8. $16.95. (I,A) This engaging book details the investigative processes used by forensic anthropologists to determine the sex, race, height, and weight of a person by studying the bones and teeth. Includes colorful photos of the activities, historical accounts of famous forensic investigations, and a list of other forensic detectives. Author's Note. Glossary. CRB (I,II,VII,VIII)
DINOSAUR WORLDS: NEW DINOSAURS, NEW DISCOVERIES. Don Lessem. Illustrated with various photographs, drawings, diagrams, and maps. Boyds Mills. 192pp. ISBN 1-56397-597-1. $19.95. (A) This book contains the latest information about what the dinosaurs looked like, how they lived, how they died, and how they were discovered. Beautiful illustrations depict the dinosaurs in what is thought to be their natural habitat. This is a comprehensive reference about the Age of the Dinosaurs. Author's Note. Glossary. Index. Further Reading List. CRB (IV,V,I)

HOW DINOSAURS CAME TO BE. Patricia Lauber. Illustrated by Douglas Henderson. Simon and Schuster. 48pp. ISBN 0-689-80531-4. $17. (I) Beautiful illustrations complement the descriptive narrative of time before dinosaurs. Changes, documented by fossil records, in reptiles and amphibians that survived the mass extinction at the end of the Permian period are presented in a captivating, chronological manner. These changes led to the ascendance of dinosaurs and mammals. Index includes pronunciations. RJK (IV)

SEARCHING FOR VELOCIRAPTOR. Lowell Dingus and Mark A. Norell. Illustrated with various photographs. HarperCollins. 32pp. ISBN trade: 0-06-025893-4, $15.95; library: 0-06-025894-2, $15.89. (I) A team from the American Museum of Natural History retraces the 1920s explorations of Roy Chapman Andrews, who was searching for human fossils in Mongolia but instead discovered the first dinosaur eggs. Color photographs show the current process from field to museum exhibit. Includes list of museums with large dinosaur exhibitions. JRW (II,IV,V,VIII)

Biography

AMERICAN ENVIRONMENTAL HEROES (Collective Biographies series). Phyllis M. Stanley. Illustrated with various photographs and prints. Enslow. 128pp. ISBN library: 0-89490-630-5. $18.95. (I,A) This delightful, inspirational book describes the lives and aspirations of 10 environmental heroes. From Thoreau to Leopold to Frances Moore Lappe, we meet ordinary people who are actively concerned about this planet and about the people and animals on it. Includes a guide to national parks. Author's Note. Index. Chapter Notes. Further Reading List. RJK (VII,II,VIII)

ANTONI VAN LEEUWENHOEK: FIRST TO SEE MICROSCOPIC LIFE (Great Minds of Science series). Lisa Yount. Illustrated with various photographs and prints. Enslow. 128pp. ISBN library: 0-89490-680-1. $18.95. (I) Not a scientist but a fabric seller, Antoni van Leeuwenhoek's life teaches us much about the science processes of observation, persistence, record keeping, and hypothesis. He improved upon a tool of his trade, the magnifying glass, to create quality microscopes. For his entire 91 years, he was curious, meticulous, and thrilled with his discoveries and successes an inspiration to all budding scientists. Includes activities using a microscope or magnifying glass. Glossary. Index. Chronology. Chapter Notes. Further Reading List. Afterword. BtB (VIII,II)

Earth Science


HIGHEST, LONGEST, DEEPEST: A FOLDOUT GUIDE TO THE WORLD'S RECORD BREAKERS. (Reference series). John Malam. Illustrated by Gary Hincks. Simon and Schuster. 42pp. ISBN 0-689-80951-4. $16.95. (I) Heavily illustrated pages cover natural phenomena such as the longest river, highest waterfall, and biggest desert. Outline boxes highlight how the topic was made and other fascinating facts. Foldout landscape pages are durable and will increase the book's interest. Glossary. Index. Map Information. JRW (V)

HURRICANES: EARTH'S MIGHTIEST STORMS. Patricia Lauber. Illustrated with various photographs, diagrams, and maps. Scholastic. 64pp. ISBN 0-590-47406-5. $16.95. (I) Not just another book about "big weather." Hurricanes is an amazing work that uses narrative very effectively in weaving the story of these powerful storms. Clearly written and relevant text combined with impressive photographs and informative illustrations further enhance this excellent work. Index. Further Reading List. PSB (V)


Environment and Ecology

COMPOST! GROWING GARDENS FROM YOUR GARBAGE. Linda Glaser. Illustrated by Anca Hariton. Millbrook. 32pp. ISBN library: 1-56294-659-5, $15.90; paperback: 0-7613-0030-9, $7.95. (P) Learn about the wonderful world of composting through the eyes of a little girl. She narrates what composting is, what her family puts into the composting bin, how they maintain it, and how they use it to fertilize their garden. Simple text and rich watercolor illustrations introduce the young child to nature's recycling program. Includes questions and answers about composting for adults. DMD (V,IV)

ECOLOGY (Young Oxford series). Michael Scott. Illustrated with various photographs, drawings, diagrams, and maps. Oxford. 160pp. ISBN trade: 0-19-521167-7, $25; library: 0-19-521166-9, $27. (A) This book provides readers with a rich first look at Earth's habitats and ecosystems. Students explore the adaptation of plant and animal life in response to the Earth's changing conditions. The text includes special sections highlighting environmental conditions, natural and manmade, that threaten the Earth's ecology. Note: Although the female dotterel may deplete some fat reserves in laying eggs, there is no
evidence that this is her primary reason for deserting. She leaves the nest in order to mate with up to
two more males in the same season (see page 71). Glossary. Index. GMM (IV,VIII)

$18. (A) These nature essays take the reader through winter and spring with Arnosky on his Vermont
farm. His "still, soft voice" encourages the kind of slowing down that opens one's senses to the wonders
of nature and that leads to an enhanced appreciation for the natural world. Author's Note. Index. PSB
(VII)

RAIN FORESTS (Endangered People and Places series). Sara Oldfield. Illustrated with various
book details the many aspects of rain forests — from the people who inhabit them and the cultures
represented, to the uses and abuses of the land, and the future of such regions. Detailed text and vibrant,
real-life photography absorb readers in the history, present state, and future of one of nature's richest
resources. Glossary. Index. DAD (V,IV)

SQUISHY, MISTY, DAMP & MUDDY: THE IN-BETWEEN WORLD OF WETLANDS. Molly
Sierra Club (F). (P,I) Stunning, well-placed photographs pull the reader into this book. The story here is
diversity--of wetlands and the abundant life they support. It also speaks of their precarious future and
the importance of preservation. Cone's richly innovative text is enhanced by touches of alliteration and
an almost poetic cadence. PSB (IV,VII)

described activities, from collecting and observing slime molds to testing human ability to differentiate
odors, encourage children to creatively explore their world. An engaging narrative compares human
senses and capabilities to those of animals. Glossary. Index. List of resources. RJK (II,III,IV)

YUCK! A BIG BOOK OF LITTLE HORRORS. Robert Snedden. Illustrated with various
photographs. Simon and Schuster. 32pp. ISBN 0-689-80676-0. $15. (I) Using bright colors, a variety of
print sizes, and a question, the author shows through a series of enlargements what microscopic
creatures are in our everyday world, i.e., beds, floor, breakfast, toothbrush, and body. Children will love
this book. Their heavy use and the foldout flaps will necessitate periodic replacement. JRW (IV,VII)

Integrated Science

* ECHOES FOR THE EYE: POEMS TO CELEBRATE PATTERNS IN NATURE. Barbara Juster
library: 0-06-024399-6, $14.89. (P) Pastel drawings illustrate these "poems to celebrate patterns in
nature." This lovely picture book introduces observation and integrates several subject areas. Author's
Note. Illustrator's Note. JRW (I,IV)

makes comparisons about many topics of interest. Speed, size, strength, natural phenomena, and
disasters keep readers intrigued for hours. Brilliant illustrations, sometimes to scale, and succinct text demonstrate unique characteristics of thousands of facts. Author's Note. Index. BtB (II)

**Life Science**

**ALL ABOUT DEER.** Written and illustrated by Jim Arnosky. Scholastic. 28pp. ISBN 0-590-46792-1. $15.95. (P) Detailed illustrations and informative text invite the animal enthusiast to get a close-up look at deer. The book describes their physical characteristics, what they eat, how they raise their young, how they travel, and the dangers they face from predators. Learn amazing facts about deer hoofs and antlers. DMD (IV)


**ANIMAL HOMES** (*Inside Guides* series). Barbara Taylor. Illustrated with various photographs and drawings. DK Publishing. 44pp. ISBN 0-7894-1012-5. $15.95. (I) A variety of animal homes, including those of ants, termites, birds, and small mammals are depicted in this book. Beautiful illustrations show the complexities of many animal homes. These pictures are embellished with interesting and accurate information about each featured animal. Glossary. Index. CRB (IV)

**ANIMALS: BLACK AND WHITE.** Written and illustrated by Phyllis Limbacher Tildes. Charlesbridge. 32pp. ISBN trade: 0-88106-960-4, $14.95; library: 0-88106-961-2, $15.88; paperback: 0-88106-959-0, $6.95. (P) Young readers are invited to identify seven diverse animals distinguished by their black-and-white color. A stunning picture puzzle detailing a piece of the black-and-white pattern of each animal accompanies clear, well-written clues. Children will delight in turning the page to reveal the identity of each animal. Includes facts on animals. DMD (IV)


**BAT.** Caroline Arnold. Illustrated with photographs by Richard Hewett. Morrow. 48pp. ISBN trade: 0-688-13726-1, $16; library: 0-688-13727-X, $15.93. (I) Reveals the fascinating life history of American bats, with special emphasis on Mexican free-tailed and big brown bats. Facts dispel many myths and superstitions attributed to these nocturnal flying mammals. Excellent full-color photographs are an essential part of the text. Index. MM (IV)

**BENEATH BLUE WATERS: MEETINGS WITH REMARKABLE DEEP-SEA CREATURES.** Deborah Kovacs and Kate Madin. Illustrated with photographs by Larry Madin and various sources. Viking. 64pp. ISBN 0-670-85653-3. $16.99. (I) The vast expanse of ocean that is miles down from
sunlight and warmth remains a virtually untouched natural region. Diving teams and professional photographers bring the world under the deep blue to life for curious young minds. Go "beneath blue waters" and discover the variety and beauty of life that dwells therein. Author's Note. Glossary. Epilogue. DAD (IV)

**BLOOD** (*Body Books* series). Anna Sandeman. Illustrated by Ian Thompson and various photographs. Copper Beach/Millbrook. 32pp. ISBN library: 0-7613-0477-0. $13.90. (P) For all "how" and "why" questions young minds ask, this book will delight children, teachers, and parents. It offers a look at the heart, lungs, and blood vessels to find out how the blood keeps flowing and why it is essential to making the human body tick. Glossary. Index. DAD (IV)


**A DESERT SCRAPBOOK: DAWN TO DUSK IN THE SONORAN DESERT**. Written and illustrated by Virginia Wright-Frierson. Simon and Schuster. 32pp. ISBN 0-689-80678-7. $16. (I) The author takes the reader on a tour of the Sonoran Desert, using the skill of an artist, scientist, and writer to show some of the plants, animals, and physical features of this ecosystem. The clear and concise text is accompanied by beautiful illustrations. CRB (IV,VII)

* **FLIGHT OF THE GOLDEN PLOVER: THE AMAZING MIGRATION BETWEEN HAWAII AND ALASKA**. Debbie S. Miller. Illustrated by Daniel Van Zyle. Alaska Northwest/Graphic Arts Center. 32pp. ISBN 0-88240-474-1. $15.95. (I) What bird makes its home on both the grassy slopes of Hawaii and the frozen tundra of Alaska? This is the fascinating story of the Pacific golden plover, which migrates 3,000 miles nonstop between its diverse habitats. Well written and beautifully illustrated, this book details the characteristics and adaptation of this amazing shorebird. Includes facts about the golden plover. Author's Note. Pronunciation Guide. DMD (IV)

**FOX**. Caroline Arnold. Illustrated with photographs by Richard Hewett. Morrow. 48pp. ISBN trade: 0-688-13728-8, $16; library: 0-688-13729-6, $15.93. (I) Follow the kit fox through its day-to-day activities in the desert regions of Mexico and the United States. Spectacular full-color photographs capture the kit and several other species of foxes in their natural habitats. Readers discover family lives, hunting techniques, and means of communicating. Includes a brief essay on foxes and their reputation and association to human society. Index. GMM (IV)

* **FROM CATERPILLAR TO BUTTERFLY** (*Let's-Read-and-Find-Out Science* series). Deborah Heiligman. Illustrated by Bari Weissman. HarperCollins. 32pp. ISBN trade: 0-06-024264-7; $14.95; library: 0-06-024268-X, $14.89; paperback (Harper Trophy): 0-06-445129-1, $4.95. (P) Painted Lady butterfly growth stages are seen through the eyes of children in a primary classroom. A real plus is the diversity of the students. Illustrations are large, bright, and detailed. Information tidbits are creatively placed around some sketches as if to respond to the thoughts of a questioning child. Includes a guide to common butterflies and places to see butterflies. PSB (IV)
THE HEART: OUR CIRCULATORY SYSTEM. Seymour Simon. Illustrated with various photographs and drawings. Morrow. 32pp. ISBN trade: 0-688-11407-5, $16; library: 0-688-11408-3, $15.93. (I) Numerous computer-colored micrographs taken by a scanning electron microscope illustrate the large-print text describing the heart and its functions. Small, labeled cross-section drawings provide further explanation. Author's Note. JRW (IV)

JOURNEY OF THE RED WOLF. Roland Smith. Illustrated with photographs by the author. Cobblehill. 64pp. ISBN 0-525-65162-4. $16.99. (I) The red wolf, found throughout the South in the 1800s, became almost extinct by the mid-1960s. This fascinating volume details the saga of the red wolves, their rescue through captive breeding, and their successful release in coastal North Carolina. Includes a list of zoos that have set up a breeding program for red wolves. Author's Note. Index. Afterword. MM (IV)

MUTE SWANS (Creatures in White series). Wendy Pfeffer. Illustrated with various photographs. Silver. 32pp. ISBN library: 0-382-39325-2, $14.95; paperback: 0-382-39324-4, $5.95. (P) Journey to Swan Lake to observe the characteristics and life cycle of the snowy-white mute swan. Follow a pair of swans through the year as they build a nest, raise their young, migrate to their winter grounds, and return to the lake in the spring. Lyrical text complements stunning close-up photographs. Includes list of facts and habitat map. DMD (IV)

* THE NAKED MOLE-RAT MYSTERY: SCIENTIFIC SLEUTHS AT WORK (Discovery series). Gail Jarrow and Paul Sherman. Illustrated with various photographs and diagrams. Lerner. 112pp. ISBN library: 0-8225-2853-3. $17.96. (A) Wow! What a creature! Students will enjoy learning how scientists sleuthed the mystery of this unique organism. This story shares scientists' efforts to learn the anatomy, physiology, behaviors, and social structure of the naked mole-rat, not studied closely until the 1950s. Author's Note. Glossary. Index. BtB (IV,II)

NO MORE DODOS: HOW ZOOS HELP ENDANGERED WILDLIFE (Discovery series). Nicholas Nirgiotis and Theodore Nirgiotis. Illustrated with various photographs. Lerner. 112pp. ISBN library: 0-8225-2856-8. $17.96. (A) Explores the most severe of the extinction problems in the world and the efforts of zoos and conservation organizations to curb the growing extinction of various species. Includes a list of major conservation organizations. Author's Note. Glossary. Index. Further Reading List. Metric Conversion Chart. DAD (IV)

* OVER UNDER IN THE GARDEN: AN ALPHABET BOOK. Written and illustrated by Pat Schories. Farrar. 32pp. ISBN 0-374-35677-7. $16. (P) As they learn their ABCs, beginning readers also discover the beauty and wonder of life in the garden. Drawings in Earth tones and muted pastels capture plants and animals from acorns and ants to zucchini and zebra butterflies. GMM (IV)

SIMON & SCHUSTER CHILDREN'S GUIDE TO BIRDS. Jinny Johnson. Illustrated with photographs and drawings. Simon and Schuster. 96pp. ISBN 0-689-80199-8. $19.95. (I,A) Soar through the air with the American golden plover or dive with the king penguin in this engaging and informative one-volume encyclopedia on birds. Beginning bird-lovers can find out more about the over 9,000 species of birds through real-life photos, drawings, and fact-packed text. Foreword. Glossary. Index. GMM (IV)
THE SUNFLOWER FAMILY (Nature Watch series). Cherie Winner. Illustrated with photographs by Sherry Shahan. Carolrhoda. 48pp. ISBN library: 1-57505-007-2, $14.96; paperback (First Avenue Editions): 1-57505-007-2, $7.95. (I) The Compositae or sunflower family flourishes on all continents except Antarctica. In this colorful and informative book, sunflower pictures are used to invite readers to discover the physical characteristics, reproduction processes, locations, and uses of these varied and complex plants. Glossary. Index. MM (IV)

Physical Science

BLACK HOLES. Heather Couper and Nigel Henbest. Illustrated with various drawings and diagrams by Luciano Corbella. DK Publishing. 44pp. ISBN 0-7894-0451-6. $16.95. (A) Wormholes, mirages and ripples, naked singularities, exploding black holes; even the chapter titles stretch the imagination. The text and superb illustrations do the same. The skillful narrative describes the role that black holes play in our universe and brings the reader to the frontier of scientific knowledge. Glossary. Index. RJK (III,I,V)


WAVES: THE ELECTROMAGNETIC UNIVERSE. Gloria Skurzynski. Illustrated with various photographs and diagrams. National Geographic. 48pp. ISBN 0-7922-3520-7. $16.95. (I,A) Spectacular color photographs, easy-to-follow diagrams, and a comprehensive glossary supplement the text and help students understand basic scientific principles at work in everyday technology. The book is simple enough so that children understand the link between pure and applied science, yet advanced enough so that children ponder over questions that researchers continue to study today. Glossary. Index. GMM (III,V,I)

About the Books and the Selection Process

The books that appear in this annotated bibliography were selected as outstanding children's science trade books published in 1996. They are intended primarily for kindergarten to eighth grade. They were selected by 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 generally based 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 so that the information is misleading; generalizations are supported by facts, and significant facts are not omitted; and 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: presentation is logical and sequence of ideas is clear;
the content level is appropriate for the intended audience; text and illustrations are compatible; illustrations enhance the presentation and are accurate representations in size, color, and scale; trim size and format are appropriate to the subject and audience; and layout is well organized and advances the text. In addition, the panel gives attention to the quality of binding, paper, reproduction, and to the appropriateness of typeface. Each annotation is initialed by the person who wrote it. All panel members read the books, but annotations do not necessarily reflect the appraisal of the entire panel.

Publishers' names appear in abbreviated form; complete names and addresses are available in such standard reference works as Literary Market Place (Bowker) and from the Children's Book Council (CBC). To obtain CBC's Members List, send $2 and a self-addressed 6" x 9" envelope with 78 cents postage to CBC, Attn.: CBC Members List, 568 Broadway, Suite 404, New York, NY 10012.

Titles are arranged by subject category. Although some titles are appropriate for more than one category, they have been placed where their usefulness in science education appears greatest. This year, panelists have also indicated the National Science Content Standards (see list below) to which the book relates. Where more than one standard is listed, the most applicable standard is given first.

The Children's Book Council is a not-for-profit association encouraging the use and enjoyment of children's books and related literacy materials. Its members are publishers of trade books for children and producers of book-related materials for young people. CBC is the official sponsor of National Children's Book Week and cooperates on reading development projects with several national associations, including NSTA. To receive a brochure of CBC's reading encouragement materials, write to CBC, Attn: Catalog, 568 Broadway, Suite 404, New York, NY 10012. The National Science Teachers Association 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, telephone (800) 830-3232. Visit NSTA's and CBC's websites at www.nsta.org and www.CBCbooks.org, respectively.

Current members of the book review panel are:

GERRY M. MADRAZO, JR. (Panel Chair)
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  Mathematics and Science Education Network
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   Greenwich High School
   Greenwich, Connecticut (JRW)

About the Annotations

1 Titles marked with * are Selectors' Choices—books that individual panel members responded to 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 1997
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)