To science teachers, there’s a special meaning to the term “literacy” that goes far beyond language arts. For over a decade, the National Science Education Standards have focused our attention on scientific literacy, a golden umbrella that encompasses not just reading, writing, and speaking but the attitudes, content knowledge, and process skills that make it possible to investigate natural phenomena and understand the results.

Those are the qualities we look for in the books that earn each year’s NSTA/Children’s Book Council Outstanding Trade Book awards. It isn’t just the facts between their covers that make them great selections—although getting those facts correct in text and graphics is certainly the most basic requirement for consideration. But beyond content, each book must have the capacity to entice young readers to be active participants in the scientific endeavor from the earliest years onward. In a really good trade book, the processes of science jump off every page, drawing readers into the adventure of exploring the natural world.

In this year’s collection, which is our 35th anniversary, you can fly Over the Mountains or peer down from a Satellite to explore the Earth from far above. With professional researchers, readers can puzzle the mysteries of A Dinosaur Named Jane or follow the Tracks of a Panda. The important new facts about personal health in Sneeze and Breast Cancer Update can help readers make better personal decisions. Even the youngest students can become apprentice scientists as they listen to the lyric prose of Here Is the Wetlandor Guess What Is Growing Inside This Egg.

The books that earn the committee’s highest recognition in this annual competition often go even further, nurturing important skills for tomorrow’s citizens. This year’s winners challenge readers to think about public health and public policy. In Superbugs Strike Back, readers become public-health detectives, following the emergence of new and devastating antibiotic-resistant diseases. Both Einstein Adds a New Dimension and The Ultimate Weapon ask readers to consider the difficult ethical and environmental problems involved in the development of nuclear energy for war and peace.

Each of these outstanding selections defies the traditional image of a child “curling up with a good book.” Yes, they can be a source of great personal reading, encouraging students of all ages to stretch
their skills and their imagination as they interact with the printed page. But these journeys of the scientific imagination seldom end with the final chapter. They have the capacity to draw the reader out from that cozy seat and into the natural world—to observe, investigate, and continue the process of discovery that has characterized scientists from Aristotle to Hawking. The adventures begin here.

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 2008.
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 listed 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


Dinosaur Eggs Discovered! Unscrambling the Clues. Lowell Dingus, Luis M. Chiappe, and Rodolfo Coria. Illustrated by Stephanie Abramowicz. Twenty-First Century Books, a division of Lerner Publishing Group. 112pp. Library ISBN 978-0-8225-6791-2, $30.60. (I) Share the exciting experiences of a group of paleontologists on a fossil trek in Patagonia, Argentina, who stumble across one of the most prolific dinosaur egg discoveries in history. Follow the scientists as they unravel the egg-laying dinosaurs’ identity, their geologic age, and their calamitous extinction. Glossary, Bibliography, Further Reading and Websites, Index, Acknowledgments, Photo Credits. LS (V, VI, VIII)


Giant Sea Reptiles of the Dinosaur Age. Caroline Arnold. Illustrated by Laurie Caple. Clarion Books. 40pp. Trade ISBN 978-0-618-50449-7, $16. (I) This book describes giant sea reptiles that lived during the Mesozoic Era from 250 to 65 million years ago, and it often relates physical characteristics to probable behaviors. This book also tells about fossil discoveries and the ongoing, challenging work of scientists to excavate, exhibit, and understand them. Watercolor illustrations add to the text. Table of Contents, Index. PLB (IV, VIII)


Biography

moves onto his work throughout adulthood. This text is a strong resource for teaching about the nature of science. Table of Contents, Glossary, Bibliography, Index. PLB (VIII, II)


**Earth and Space Science**


★★ **Close to the Wind: The Beaufort Scale.** Written and illustrated by Peter Malone. G.P. Putnam’s Sons, an imprint of Penguin Young Readers Group. 40pp. Trade ISBN 978-0-399-24399-8, $16.99. (P) This beautifully illustrated book, filled with magnificent paintings and detailed diagrams, vividly portrays the 13-point wind scale created by British naval officer Francis Beaufort. The Beaufort scale is brought to life through the fascinating letters of a midshipman at sea and his encounters with the effects of the wind. Author’s Note, Glossary. PJC (V, III, VIII)

**Map: Satellite.** DK Publishing. 360pp. Trade ISBN 978-0-756626419, $40. (I, A) This book contains fantastic images of Earth from space illustrating phenomena such as Arctic ice anomalies, ozone depletion, and seasonal changes. Readers can easily visualize coastlines, mountain ranges, fault systems, rivers, lakes, and other landscape phenomena. Many world cities are highlighted, illustrating their development respective to their geology and geographic setting. Foreword, Map Key, Index: A Selection of Major Settlements and Features, Credits. LS (V, VI, II)

**Environment and Ecology**

★★ **Over the Mountains: An Aerial View of Geology.** Michael Collier. Photographs by Michael Collier. Mikaya Press. 128pp. Trade ISBN 978-1-931414-18-0, $29.95. (I,A) This book shows fabulous photographs, taken from the air, of real-world landscapes such as Denali, the San Andreas Fault, and
Shenandoah. Photographs are explained via colorful diagrams and/or well-written descriptions. The photography leaves the reader with a desire to inquire more about the magnificent vistas illustrated. What a marvelous way to study geology! Foreword, Introduction, Map of Photo Locations, Glossary, Selected Bibliography, Acknowledgments, Index. LS (V, VI, II)

Health and Science

Belly-Busting Worm Invasions! Parasites That Love Your Insides! Thomasine E. Lewis Tilden. Franklin Watts. 64pp. Library ISBN 978-0-531-12068-2, $26; Paperback ISBN 978-0-531-18736-4, $7.95. (I) Imagine a four-foot-long guinea worm in your leg, or perhaps a peashaped tapeworm in your brain. These true-life case studies just might repulse you, but they'll also completely intrigue you! This book includes parasite-related historical information, news, and career possibilities and is part of the 24/7 Science Behind the Scenes Medical Files series. Table of Contents, Resources, Glossary, Index, Author’s Note. PLB (IV, VII)


Circulating Life: Blood Transfusion From Ancient Superstition to Modern Medicine. Cherie Winner. Twenty-First Century Books, a division of Lerner Publishing Group. 112pp. Library ISBN 978-0-8225-6606-9, $30.60. (A) This book is a fascinating account of the roles that blood has played in human medicine throughout history and of current areas of transfusion research. It’s an excellent portrayal of ways our understandings change over time. Primary sources, photographs, and sidebars add to the text. Table of Contents, Glossary, Bibliography, Further Reading and Websites, Index. PLB (VII, VIII, IV)

Gut-Eating Bugs: Maggots Reveal the Time of Death! Danielle Denega. Franklin Watts. 64pp. Library ISBN 978-0-531-11824-5, $26; Paperback ISBN 978-0-531-17525-5, $7.95. (E, I) Can bugs tell the time of death? This book has three case studies that explore how insects found on dead bodies help scientists solve the crime and tell the time of death by studying the insects’ life cycles. This very energetic book has lots of great illustration and content connections. Resources of Professional Organizations, Suggested Books for Further Reading, Websites, Dictionary (Glossary), Index, Authors Note, Sources. DTC (IV, II, VII)
**Life Science**


*Box Turtles*. Lynn M. Stone. Lerner Publications Company, a division of Lerner Publishing Group. 48pp. Library ISBN 978-1-57505-869-6, $26.60. (I) Learn about the four species of box turtles found in North America and gain interesting information about their habitats, feeding habits, and reproductive behavior. Bibliography, Glossary, Index. CRB (IV)

*Face to Face With Caterpillars*. Darlyne A. Murawski. Illustrated with photographs by Darlyne A. Murawski. National Geographic Society. 32pp. Trade ISBN 978-1-4263-0052-3, $16.95; Library ISBN 978-1-4263-0053-0, $25.90. Paper ed. (F). (E) Firsthand information and stunning photographs give readers a rare glimpse into the form, diet, defenses, habitat, and geographic range of many extraordinary caterpillars. Included are tips for locating and observing these organisms, as well as exciting accounts of face-to-face encounters. Glossary, Index, Bibliography. PJC (IV, II, VIII)

*Guess What Is Growing Inside This Egg*. Written and illustrated by Mia Posada. Millbrook Press, a division of Lerner Publishing Group. 32pp. Trade ISBN 978-0-8225-6192-7, $15.95; Library ISBN 978-0-8225-6192-7, $15.95. (P) Readers are given rhyming clues to help them guess which animals are growing inside eggs depicted in illustrations. Eggs of birds, reptiles, spiders, and mollusks are featured. Answers are given on subsequent pages, with additional information about each featured species. Scaled pictures provide size comparisons of eggs. Incubation Timeline. KTR (IV)

biotic features of a wetland using simple but rich language. Vivid watercolor illustrations capture the essence of this environment. Author’s Note.KTR (IV)

*It's a Butterfly's Life*. Written and illustrated by Irene Kelly. Holiday House. 32pp. Trade ISBN 978-0-8234-1860-2, $16.95. (E) Through engaging text and beautiful illustrations, learn about the life cycle of butterflies and many more interesting facts about these colorful insects. CRB (IV)

*Nic Bishop Spiders*. Written and illustrated by Nic Bishop. Scholastic Nonfiction. 48pp. Trade ISBN 0-439-87756-3, $16.99. (A) Remarkably detailed photographs present close-up views of these intriguing creatures. Nic Bishop’s study of spiders is documented through astonishing photos and exciting text. Unusual facts (a spider’s blood is pale blue!), as well as information concerning how the organism molts, hunts, eats, and dances will fascinate readers. Glossary, Index. PJC (IV, II, VIII)


*Superbugs Strike Back: When Antibiotics Fail*. Connie Goldsmith. Twenty-First Century Books, a division of Lerner Publishing Group. 112pp. Library ISBN 978-0-8225-6607-6, $30.60. (A) From the earliest explorations of bacteria to present-day super“bug” bacteria, this book explores the evolution of bacteria and resistance in our world. From the common sources in food and soil to the search for new drugs, readers will be fascinated by both the level of content and readability. Glossary, Source Notes, Selected Biography, Further Reading and Websites, Index. DTC (IV, VI, VII)


*Where in the Wild? Camouflaged Creatures Concealed…and Revealed*. David M. Schwartz and Yael Schy. Photographs by Dwight Kuhn. Tricycle Press. 44pp. Trade ISBN 978-1-58246-207-3, $15.95. (E) Clever poems describe each camouflaged animal before readers are asked to find the animal within a magnificent photograph of its natural habitat. Opening the folded page reveals the animal, and then detailed information is provided about the animal. The presentation is very engaging. DLK (IV, I)
Physical Science

Rockets, Ron Miller. Twenty-First Century Books, a division of Lerner Publishing Group. 112pp. Library ISBN 978-0-8225-7153-7, $31.93. (I, A) Rockets from ancient Chinese history to modern-day applications in space exploration are the topic of this book. Containing content with which many readers are not familiar, this book explores the invention and use of rockets throughout history with many little-known applications. There are good descriptions of physical science and technological applications. Glossary, Source Notes, Bibliography, Further Reading: Books, Museums, and Websites, Index. DTC (III, V, VI)

Technology and Engineering


Members of the Book Selection Panel

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Len Sharp (LS)
Educational Consultant
Supervisor: Student Teachers
LeMoyne College
Syracuse, New York

Diana Wiig (DLW)
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Rock Springs, Wyoming

About the Books and the Selection Process
The books that appear in this annotated bibliography selected as Outstanding Science Trade Books were published in 2007. They are intended primarily for kindergarten through 12th grade. 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 Children’s Book Council 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 explanation above) to which the books relate. Where more than one standard is listed, the most applicable standard is given first.

**Outstanding Science Trade Books for Students K–12: 2009—Call for Submissions**

**Deadline for submissions:** June 16, 2008

**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 2008.
• Titles originally published abroad are eligible only if they have a 2008 U.S. publication date; reprints or licensed editions of titles initially published in the U.S. before 2008 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 at** [www.cbcbooks.org](http://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, see [www.cbcbooks.org](http://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.

Visit CBC’s and NSTA’s websites at [www.cbcbooks.org](http://www.cbcbooks.org) and [www.nsta.org](http://www.nsta.org). Expanded reviews of these award-winning books are available at [old.nsta.org/recommends](http://old.nsta.org/recommends).