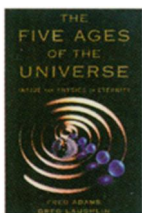
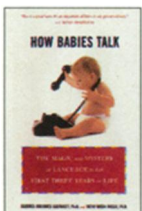


# SCIENCE NEWS BOOKS

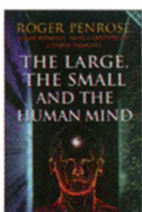
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**The Five Ages of the Universe: Inside the Physics of Eternity**—Fred Adams and Greg Laughlin. While many astrophysicists concentrate on the universe's origins, Adams and Laughlin are recognized for their vision of the future. They delineate five epochs of universal life based on unwavering laws of physics. The universe is quite young, they say, as we are the midst of stage two: the Stelliferous Era, dominated by life-giving stars. Its precursor, the Primordial Era, encompasses the Big Bang and the birth of the lighter elements of the periodic table. In the next 90 trillion years, the Degenerate Era will take hold and visible radiation from ordinary stars will cease, leading to the Black Hole Era of proton decay. Finally, there is the Dark Era looming about  $10^{21}$  years from now, when black holes will have evaporated and no energy-producing objects will exist. As they describe each age, the authors also speculate about the possibilities for life. Free Pr, 1999, 251 p., b&w illus., hardcover, \$25.00.

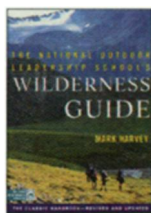


**How Babies Talk: The Magic and Mystery of Language in the First Three Years of Life**—Roberta Michnick Golinkoff and Kathy Hirsh-Pasek. Golinkoff and Hirsh-Pasek blend scientific findings about babies and language with methods of implementing these findings to expand the vocabulary of a child. Within the pages of this report, we learn that fetuses even react to their mothers' voices and loud sounds. The authors define the path of language development beginning in the womb and describe how best to hone a child's skill. Readers also glean insight into the ways in which youngsters attach meaning and context to their words. Dutton, 1999, 256 p., hardcover, \$25.95.

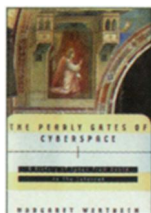


**The Large, the Small and the Human Mind**—Roger Penrose. Controversy has dogged Penrose since the 1989 publication of *The Emperor's New Mind*, in which he evaluated the role of quantum mechanics in understanding the underpinnings of the mind. Another Penrose book offered a rebuttal to his critics. In this volume, Penrose does not wait for new counterclaims. Instead, he furthers his argument and then invites professors of philosophy Abner Shimony and Nancy Cartwright, and theoretical physicist Stephen Hawking to refute his theories. Penrose's topics are the shortcomings in modern physics, his own solutions, and how his ideas can explain the nature of the human mind. Originally published in 1997, this edition is expanded and updated to include an accessible example of Gödel's theorem and a proposal for a physical experiment to test some of Penrose's ideas about quantum mechanics. Cambridge U Pr, 1999, 201 p., b&w illus., paperback, \$12.95.

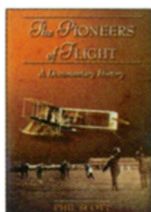
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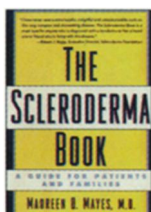
**The National Outdoor Leadership School's Wilderness Guide**—Mark Harvey. From the latest "leave no trace" camping techniques to how to organize a search party, the information in this completely updated and revised handbook is useful for both novice and experienced hikers, backpackers, and campers. With an emphasis on how to enjoy the magnificence of the wilds without spoiling it, Harvey details equipment selection, camping techniques, compass use, emergency procedures, backcountry cooking, weather principles, and preparation. He provides clear text and illustrations. Fireside, 1999, 268 p., b&w photos/illus., paperback, \$15.00.



**The Pearly Gates of Cyberspace: A History of Space from Dante to the Internet**—Margaret Wertheim. In Wertheim's view, cyberspace has brought us back to the beliefs of our medieval ancestors who saw themselves embedded in both physical and spiritual space. This comes after a long metaphysical drought imposed by Renaissance physicists who assigned scientific meaning and mathematical laws to all aspects of space. Because cyberspace harkens back to a dualism in which the human mind lives beyond matter, Wertheim likens this "digital domain" to a "technological substitute for the Christian space of Heaven." After all, cyberspace exists beyond physical space. Although heady and often dense, her arguments are well executed in their approach to issues sure to loom with greater importance as the digital age matures. Norton, 1999, 336 p., hardcover, \$24.95.



**The Pioneers of Flight: A Documentary History**—Phil Scott, ed. Rather than rehash the lives and pursuits of aviators and their would-be predecessors, Scott relies on the words of people who were part of the early quest to fly. This anthology culls personal stories, letters, newspaper reports, journal articles, scientific notes, and patent applications to reveal how the mastery of the obstacles of physics and aerodynamics culminated in the Wright Brothers' accomplishment at Kitty Hawk. Ovid's account of the feathered flying machine crafted by Daedalus and flown by his son Icarus initiates the text. Included are the writings of Octave Chanute, Sir George Cayley, and Glenn Curtiss, as well as Orville and Wilbur Wright. Princeton U Pr, 1999, 234 p., b&w photos/illus., hardcover, \$24.95.



**The Scleroderma Book: A Guide for Patients and Families**—Maureen D. Mayes. A noted authority on this obscure autoimmune disorder presents an accessible handbook to understanding, detecting, and treating scleroderma. Closely linked to lupus and rheumatoid arthritis, scleroderma initially manifests itself in small patches of hardened skin. The condition subsequently can attack the lungs, kidneys, and blood vessels. Mayes covers the effects of the various manifestations of scleroderma on the body and discusses ways of battling and coping with the condition. OUP, 1999, 182 p., hardcover, \$23.00.

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