



## Adult Books

Berger, Theodore W. ***Toward Replacement Parts for the Brain: Implantable Biomimetic Electronics as Neural Prostheses.*** Cambridge, Ma: MIT Press, 2005.

This collection of essays outlines current advances in research on the intracranial implantation of devices that can communicate with the brain in order to restore sensory, motor, or cognitive functions.

Howell, Joel D. ***Technology in the Hospital: Transforming Patient Care in the Early Twentieth Century.*** Baltimore: Johns Hopkins University Press, 1995.

Drawing on the medical treatment of more than 2,000 patients in Pennsylvania and New York hospitals, Howell traces the ways in which medical technology was used, not merely how it was talked about. He utilizes a wide range of sources -- including medical texts, popular literature, and the visual arts -- to explore how technology came to be such a central feature of medical care.

Huettel, Scott A. ***Functional Magnetic Resonance Imaging.*** Sunderland, MA: Sinauer Associates, Publishers, 2004.

This textbook provides a true introduction to functional magnetic resonance imaging (fMRI), which has become the dominant research technique in cognitive neuroscience. This textbook presents a comprehensive overview of all aspects of fMRI, designed with undergraduate students, graduate students, and beginning researchers in mind.

Kevles, Bettyann. ***Naked to the Bone: Medical Imaging in the Twentieth Century.*** Reading, MA: Addison-Wesley, 1998.

Writing 101 years after the discovery of X rays by Wilhelm Roentgen, the author presents the history of the technology, showing how it was refined over the following 50 years and challenged after WWII by newer technologies based on television and the computer.

Michette, Alan. ***X-rays: The First Hundred Years.*** Chichester, NY: John Wiley & Sons, 1996.

The discovery of x-rays has revolutionized many areas of 20th century science. This book commemorates the 100th anniversary of the discovery of x-rays by Wilhelm Rontgen in 1895. Eminent scientists review historical aspects and discuss modern techniques and applications. Discusses diffraction, spectroscopy, microscopy, lithography, and astronomy. Includes an extensive glossary of technical terms.

Spitzer, Victor M. ***Atlas of the Visible Human Male: Reverse Engineering of the Human Body***. Sudbury, MA: Jones and Bartlett, 1998.

This book catalogs the internal human male in a way never before possible. High-definition computers were used to compile visual 'cuts' taken from one cadaver into three different perspectives: transverse, coronal, & sagittal. This is a visually compelling and scientifically precise collection of nearly 3,000 full-color images. Additional 3D images provide views of entire body systems.

Wolbarst, Anthony B. ***Looking within: How X-ray, CT, MRI, Ultrasound, and Other Medical Images are Created, and How they Help Physicians Save Lives***. Berkeley, CA: University of California Press, 1999.

In nonspecialized language, *Looking Within* discusses how X-ray, fluoroscopic, CT, MRI, positron emission tomography (PET), ultrasound, and other medical pictures are created, and explores the essential roles they play in the diagnosis and treatment of patients.

## Young Adult Books

Davison, Martine. ***Maggie and the Emergency Room***. New York: Random House, 1992.

When Maggie falls off her bike, her mother takes her to be examined, x-rayed, and stitched in the emergency room of a nearby hospital.

McClafferty, Carla Killough. ***The Head Bone's Connected to the Neck Bone: The Weird, Wacky, and Wonderful X-ray***. NY: Farrar, Straus and Giroux, 2001.

Through an engaging text and numerous photographs and illustrations, Carla Killough McClafferty tells the history of the X-ray, from its discovery to its uses today. McClafferty's chronicle also covers such things as the use of X-rays in examining fine art and identifying forgeries; the study of Egyptian mummies by X-rays; and X-ray use in everything from astronomy to paleontology, from airplane manufacture to the familiar dentist's office.

Mulcahy, Robert. ***Medical Technology: Inventing the Instruments***. Minneapolis, MN: Oliver Press, 1997.

This collection of short biographies focuses on seven scientists who were responsible for inventions such as the stethoscope, thermometer, and electrocardiograph. The well-written text is filled with details that will appeal to young readers, such as the accidental discovery of X-rays and how false teeth were made in the early days of dentistry.

Olson, Karen. ***Cooper gets an X-ray***. Atlanta, GA: Pritchett & Hull Associates, 2002.

This is the first in a series of books written especially for children who are diagnosed with a disease or are about to undergo an unfamiliar medical procedure. In this book, Cooper falls and hurts his hand and is taken by his

mother to see if it's broken. He meets and x-ray technologist who shows him everything in the x-ray room and teaches him about the x-ray process.

Olson, Karen. ***Cooper Gets a Cast***. Atlanta, GA: Pritchett & Hull Associates, 2002.

Cooper falls from his tree house and breaks his leg. His dad takes him to the hospital and an X-ray confirms his leg is broken. Cooper then visits and orthopedic doctor who puts a cast on his leg

Olson, Karen. ***Cooper Gets a CT Scan***. Atlanta, GA: Pritchett & Hull Associates, 2002.

When Cooper accidentally hurts his head, he goes to have a CT scan. A CT Technologist teaches Cooper about the CT machine, how it works, and what will happen.

Zonta, Pat. ***Jessica's X-ray***. Toronto: Firefly Books, 2002.

In the book, kids follow Jessica, who has broken her arm, as she tours the hospital seeing x-ray rooms and looking at actual x-ray, CAT-scan, MRI and ultrasound images. Featuring six real x-ray images printed on mylar so readers can see firsthand what Jessica sees. An identification key at the end of the book also helps kids pick out bones and muscles on their own.

## Media

***Cross-sectional Anatomy Tutor [CD-ROM]***. Jones and Bartlett Publishersm, 1998.

This CD-ROM provides an interactive course for anatomy education and evaluation, it highlights cross-sectional images of the human body.

***Energy in Action: Electromagnetic Energy [VHS]***. 23 min. Schlessinger Media, 2000.

What do radios, microwave ovens and X-ray machines have in common? They all use different forms of electromagnetic energy to do work. In *Electromagnetic Energy*, learn that cosmic rays from space and visible light are also part of the family of energy waves known as the electromagnetic spectrum. Grades 5-8.

***Science in a Technical World: Medical Laboratory Technology [VHS]***. 20 min. W.

H. Freeman and Company, 2002.

The 12 units that make up the *Science in a Technical World* program take a "hands-on, minds-on" approach, with students investigating a wide range of industry-based problems faced by science technicians in a typical work day. The units have been selected to expose students to chemical, biological, and geoscience industries. Each involves students in the solution of a science technology-related problem that might actually occur in the focus industry of the units. This active learning approach promotes understanding. Grades 9-12.