Science books for professional pleasure reading: round out your content knowledge and foster interest in science with this list

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By Grinell Smith

SCIENCE BOOKS for PROFESSIONAL PLEASURE READING

Readers love science, and they passionately share this love with colleagues and education students. Here's how I encourage a love of science in my preservice students. I have them select a book from this list—with the only requirement being that they enjoy it! So far, the list has proven extensive enough that none of my students has come to the end of it without a book to enjoy, and hopefully it will always contain a few books that even the most well-read among us hasn't yet gotten around to.

Next time you hear someone say, "I was never good at science" or "I don't know enough about science to teach it well," share this list. There's bound to be something there for everyone. Or, peruse the list to see where you'd like to beef up your own content knowledge.

The list of books has been years in the making, and although many of the books are established science classics, certainly not all of them are. Some books were suggested by scientists, science educators, and former students. Some came from an analogous list for science journalists compiled by Boyce Rensberger, director of the Knight Science Journalism Fellowship at MIT (see Internet Resources). Some are simply my personal favorites. I've categorized the books by subject, and within each subject, arranged the books alphabetically by author. Also, when I include a new book, I write to its author and ask for suggestions for an addition or two that he or she thinks would be both worthwhile for science educators and accessible to people who may not have much formal education in science. If you have suggestions for additions to the list, by all means, share them!
Biology
Two of the most influential books of all time—and surprisingly readable.

A reverse-chronology of life on Earth.

A clear, entertaining, accessible, and utterly compelling rejection of intelligent design.

An account of evolution that makes you wonder whether your genes belong to you or you belong to your genes.

An excellent description of Darwinian evolution and its philosophical implications.

The exclamation point says it all!

Gould manages to turn the story of bugs extinct for a half billion years into a page-turner.

A dazzling look at the diversity of life.

An examination of evolution and its philosophical implications by a Nobel Prize–winning biochemist.

A tour of the most complex mechanism in the known universe.

A skillfully written presentation of the idea that human language is a legacy of our evolutionary past and is, in fact, instinctual.

A detailed and careful look at what makes insects do what they do.

A clever and masterfully written description of the human genome.

A description of how genes and the environment interact to make us who we are.

A lyrically written collection of essays that capture the extraordinary mechanisms of life at the cellular level.

Written by one of the scientists who shared the Nobel Prize for elucidating the structure of DNA.

A history of genetics from the perspective of one of the field’s luminaries.

A story of Darwin’s finches and the scientists who observed them continuously for 20 years.

Summer 2008 41
Earth and Space Sciences


Ecology


Science Books for Professional Pleasure Reading

A thoroughly engrossing look at what happens to our bodies after we die.

A guide for science education reform as well as an impressive attempt to explain what you need to know to be considered scientifically literate.

The companion to the acclaimed public television series chronicling the discoveries of science.

A fascinating and accessible look into the world of mathematics.

An examination of the shared boundaries of physics, chemistry, and biology.

A guide for presenting and understanding complex information via images.

The captivating story of the discovery of a living fossil, the coelacanth, off the coast of West Africa.

A gripping and true murder-mystery that illustrates how genetics is used in forensic criminology.

A revealing autobiography that also illustrates much about how science is done.

Connecting to the Standards
This article relates to the following National Science Education Standards (NRC 1996).

Professional Development Standards

Standard A:
Professional development for teachers of science requires learning essential science content through the perspectives and methods of inquiry.

Standard C:
Professional development for teachers of science requires building understanding and ability for lifelong learning.

A Pulitzer Prize-winning account of what biology can tell us about human societies.

Physics and Chemistry
Written for the general audience by the man himself.

Six of the easiest chapters on physics taken from Feynman's celebrated Lectures on Physics collection.

The fascinating story of the man behind the persona.

A remarkable approach to understanding matter using a relatively small number of core ideas.

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Reference

Internet Resources
Books Every Science Writer Should Read
http://web.mit.edu/knight-science/resources/science_books.html

Summer 2008 43