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 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.

Two of the most influential books of all time—and surprisingly readable.

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

A clever and masterfully written description of the human genome.

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

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

Three of the most influential books of all time—and surprisingly readable.

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

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

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

The Background story points out all!

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

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.
Earth and Space Sciences

A reconstructing of life’s past in the context of a float trip through the Grand Canyon.

An account of the origins of the universe.

For anyone who’s ever wondered where the universe came from.

General Science

A guided exploration of the bizarre nature of time and space from the perspective of modern physics.

A look inside the world of professional astronomy.

The charming autobiography of an orthogonal thinker.

Ecology

An examination of the effects of pesticides that has become a classic in the environmental movement.

Many credit Douglas’s work for setting in motion events that would result in the creation of Everglades National Park.

A description of the extraordinary lives of chimpanzees in the wild.

One of the first scientific descriptions of the social and ecological aspects of mountain gorillas based on Schaller’s 20-month field observation.

An analysis of how new scientific ideas replace old ones.

A visual study of the relative sizes of things from quarks to superclusters.

An analysis of the processes of scientific discovery.
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.


Physics and Chemistry


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Reference


Internet Resources

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