GREAT BOOKS FOR SCIENCE TEACHERS: REVIEWS

Goldwyn, Martin M. 1979. *How a Fly Walks Upside Down . . . and Other Curious Facts*. Published by Citadel Press of Secaucus, NJ, it is currently remaindered by Barnes and Noble, 1126 Fifth Avenue, New York, NY 10011-5666. 253 pp. $6.95 (softcover) (plus $3.95 shipping if ordered alone).

Many humorous illustrations, segmented question-and-answer style, and large print insure this book will be well-worn in a short time in both elementary and high school classrooms. Questions posed and answered include: Why do we yawn, how do birds learn to build their nests, what happens when we blush, how does exposed film become a picture, what causes snow, what are freckles, what is hair and why is it straight or curly, why is the ocean blue, does a hummingbird really hum, how does a bee make wax, do fish ever go to sleep, and many, many more.


The text is high school reading level, but the excellent summaries of plant parts and the extensive color illustrations and photographs will hold the interest of students at lower reading levels. Technical material is accurately simplified in this reference book. Tentative identifications are possible for many common plants. Each common plant is accompanied with coverage of both real and folk medicine usage. Surprisingly solid botany and a fascinating reference.


Actually, I was more gratified to learn the answer to Ivory soap being 99 and 44/100 pure WHAT? Embedded in the answer to Why Lawns? was the fact that nearly 1/5 of the surface area of New Jersey is in lawns, that the average lawn could produce $2000 in
food crops but instead soaks up about $200 for lawn care. Why is the touch tone keypad arranged differently from a calculator keypad? Why don't you get goosebumps on your face? And if nothing sticks to Teflon®, how do they get Teflon® to stick to the pan? Why is there a black dot in the middle of otherwise white bird droppings? (I find that half of science is asking the right questions and my students aren't accustomed to asking them. Maybe this can help make the world less obvious and more "questionable.") Feldman also has written: When do Fish Sleep? (No. 015315 for $16.95) and Imponderables: The Solutions to the Problems to Everyday Life (No. 660083 for $6.95 softcover) all also available from PCB.


The Oxford author of The Selfish Gene responds to the 18th century creationist argument that "a watch requires a watchmaker" with a readable explanation of the mechanisms of evolution. In an unique application of a computer, Dawkins shows "cumulative selection (in which each improvement, however slight, is used as a basis for future building" and generates a line from Shakespeare in just 41 generations of reproduction, starting with a random line of letters. This is an important resource for the biology teacher confronting anti-evolutionists and for advanced biology students with inquiring minds.


This book on "the world of venomous animals" is promoted by Science News Book Service. High interest might keep students reading and re-reading its heavily-illustrated pages. It is sadly flawed by errors and a shallow understanding of many of the venomous creatures covered. The text deals as much with social and cultural factors as with biology, and the degree of speculation and not-too-careful generalization is very high. For example, Russell's viper is not a rattlesnake, the moth on page 88 is not a hornet, African "killer" bees do not produce more honey, etc. Where was the
knowledgeable editor? It is best to buy a personal copy of the book
and use selected pictures and valid anecdotes in class, and not place
the book in the school or classroom library.

Originally published by Summit Books (a Division of Simon and
Schuster, inc.), it is currently being remaindered from Barnes
and Noble, 126 Fifth Avenue, New York, NY 10011-5666. 192
pp. $7.95 (softcover) ($3.95 one-time shipping charge).

"Here you meet the 'Lost Mariner' who lost his memory and with
it his personal history; patients who are convulsed with epileptic
memories; patients who feel disembodied and others who feel
phantom limbs . . . not simply studies of disease but of life itself
struggling against adversity." Sacks not only will keep your students
interested, but you might rethink your stance toward memory,
mental illness, and aspects of learning.

Feynman, Richard P. 1985. *Surely You Must Be Joking, Mr.
Feynman!* Bantam Books, Inc., 666 Fifth Avenue, New York,
NY 10103. 322 pp. $8.95 (softcover).

Founder of quantum electrodynamics. Idea-trader with Einstein.
Reluctant recipient of the Nobel Prize in Physics! He retells the life
of a young scientist. You could read "He Fixes Radios by Thinking"
to any science class and they would listen and laugh and feel the
excitement of being a "science kid." Feynman was allowed to become
one of America's greatest scientists because a series of teachers
discarded their "scope and sequence" in order to give Feynman both
the push and freedom to be different, honest, and very, very
curious! Before I read Feynman, I had been partly seduced into
thinking activity-centered programs such as SCIS and ESS were "the
answer." His life of science learning, recalled in humorous detail,
stands as proof that no program can surpass the value of the expert
teacher and the expert student. You might even buy copies to give
to certain students. (Feynman was profiled on two NOVA programs:
"Last Journey of a Genius" and "The Pleasure of Finding Things
Out.")

Once you have read Surely You Must Be Joking . . . , you will save your lunch money to buy the "further adventures of a curious character." The first half of this volume includes additional vignettes not in the first volume. The last half deals with his participation (although undergoing therapy for cancer) on the commission that investigated the explosion of the space shuttle. Yes, Feynman was the curious character who reached over and dunked the model O-ring into his glass of ice water during the panel hearings and ended out the drawn-out "uncertainty" on how the rubber would react to cold. Yes, there is still the humor, but also many tears in this volume. And what we wouldn’t give to see more students who could life "caring less what other people think!"

--reviewed by J. Richard Schrock, Assistant Professor of Biology
Division of Biological Sciences
Emporia State University


This handy little book includes amazing facts, experiments, and wondrous drawings illustrating all the systems of the body. Each unit is simple enough to be used with young elementary students, but contains enough supplemental facts to be helpful in teaching high school biology students about their bodies. This book helps teachers take students on a tour of the amazing territory that is inside the bag we live in that we call our skin. This is one of 18 in a series of Brown Paper Bag School books designed to make learning fun and educational.

--reviewed by Karen Eidman
Division of Biological Sciences
Emporia State University