

parts including the genitals, but refers to bodily wastes in babyish slang terms. Another disappointment is the cardboard exclamatory interjections: a case of the text not trusting the illustrations to convey the moods of excitement and amazement.

A second component of the set is an information guide which provides "supplementary information and answers which might arise when reading the book". However, the information used to answer these questions is based on statistics for an adult's bodily functions. The author either loses sight of her audience – or tries to educate the adult as well. The intent is unclear. Better to have provided facts relevant to the child using tangible measures.

Also in the set is a board game patterned on "Snakes and ladders". (Playing pieces and dice are included.) The game is intended to show children how events/actions affect their health. However, the "if - then" conditions presented are too black and white, bordering on being didactic. (If you sit too close to the TV, you will have poor vision – a snake. If you play with alphabet building blocks, you will learn how to read – a ladder.) A younger child would not likely understand several of the inferences.

The binding element which facilitates the flow between the components is the illustrative work of Darcia Labrosse. She has captured the spirit of childhood, appealing to their sense of humour by animating the children's pets and stuffed toys in both the book and the game board. In the information guide, she has provided simple yet thorough illustration of the anatomy. The latter illustrations might have been more useful to the child if included in the book rather than the guide.

In spite of several limitations, the set is a good resource to supplement other materials on growth, development and self-discovery for young children.

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NON-FICTION: SOME RECOMMENDED TEXTS

Wonderstruck II. Bob McDonald and Eric Grace. Illus. Gary Pearson and Sandra Hemsworth. CBC Enterprises, 1989. 96 pp., \$10.95 paper. ISBN 0-88794-360-8; **The dinosaurs: A new discovery.** Janet Stewart. Illus. Chris Walker. Cyril Hayes Press, 1989. 32 pp., \$13.95, \$5.95 cloth, paper. ISBN 0-88625-234-2, 0-88625-235-0; **Nature what's it?** Ed., Lyn Thomas. Owl: Greedy de Pencier Books, 1989. 32 pp., \$6.95 paper. ISBN 0-920775-38-1; **Looking at the environment.** David Suzuki, with Barbara Hehner. Stoddart, 1989. 92 pp., \$9.95 paper. ISBN 0-7737-5255-2; **The serendipity effect.** Larry Verstraete. Scholastic-Tab, 1989. 124 pp., \$3.95 paper. ISBN 0-590-71889-4; **The**

architecture of animals. Adrian Forsyth. Camden House, 1989. 72 pp., \$9.95 paper. ISBN 0-920656-08-0.

Wonderstruck II, a clear, entertaining, and impressive account of some fundamentals of science, is taken from a popular television show. It deals with liquids that can suddenly change their viscosity, fibre optics and other optics, the Doppler effect, atmospheric pressure, and other issues. The chapters include, "Why are sweet things bad for your teeth?" "Why do knuckles pop?" "What is a mirage?" and 26 others, all accompanied by delightful "Kitchen demos," experiments that are described in a clear, non-condescending way, and that should be fun for the whole family. I highly recommend this book.

The ever-popular dinosaurs receive a thoughtful and detailed treatment in *The dinosaurs: A new discovery*, with sections on origins of life, paths of dinosaur evolution, ways of dating the Earth and the fossils in it, and where fossils can be found. The dinosaurs themselves are shown in attractive colour drawings, and include not only the familiar ones like Tyrannosaurus and Triceratops, but the giant Apatasaurus and the small Compsognathus, which may have been warm-blooded. A few criticisms: the scale of different stages in the Earth's history on pages four and five doesn't really make the reader appreciate that a very small part of it – in a time scale – was occupied by fossils and a still smaller part by humans; and the statement that "life...first began in the seas, with proteins and cells," gives a different view of the "primeval soup," doubtful because there were amino acids and suchlike, but probably not proteins! In order to go on a fossil hunt, a child or adult would need more information, and preferably some photographs, but this book might make him/her willing to search for them in the library.

Nature what's it? is a collection of colour photographs from *Owl* magazine, showing parts of plants and animals – dandelion seeds, frogs' eggs, butterfly wings, pinecones, and so forth – in close-up, for the reader to identify. Each photograph includes clues and the answer on the next page provides information about each organism. The book is certainly attractive and the explanations informative. I would expect, however, that a child would find only one reading of the book sufficient, though she might then want to try it on her friends.

Looking at the environment, the new title in Suzuki's "Looking at" series, defines the environment, as "everything around you," and includes chapters about ecosystems, air, water, trees, waste of energy and materials and how to avoid such waste. In discussing the greenhouse effect, the authors could have said more about the role of forests in controlling it; they quite rightly mention industrial pollutants, but could have said more about their chemical nature and the choices faced by those who want to avoid all pollutants, such as insecticides. Interesting and educational "something to do" exercises concern the action of worms, tests for air pollution, dirt in the air, food chain mobiles,

composting, and the breathing of plants. The experiment on degradation of different kinds of toilet paper in water gives a misleading picture, since in a sewer, all kinds of paper would break down much more quickly. The projects on track hunts, hatching brine shrimp, and making different kinds of bird and squirrel feeders, and some of the "amazing facts" such as the squirrels' obstacle course are mainly space-fillers. This attractive and interesting book would have profited from more care and focus.

The serendipity effect is an account of important discoveries and inventions triggered by a chance observation or an accident. The title comes, as we should have been told, from a Persian fairy tale, about three princes of Serendip who had "the faculty of finding valuable or agreeable things not sought for." The discoveries include pendular motion (Galileo), penicillin (Fleming), the phonograph (Edison), radioactivity (Becquerel), immunity (Pasteur), and some fifty others. The author might well also have quoted Pasteur: "Chance favours the prepared mind." The book is lively, informative, very well-referenced and should give its young readers a knowledge of how scientists and inventors actually make discoveries.

The title, *The architecture of animals*, refers not to the forms of the animals themselves, but to what they build. Some fascinating structures are illustrated with beautiful photographs: turtle, fish, and birds' nests, the last in amazing abundance; snail shells, moles' and ants' tunnels, beaver dams, and other structures. The text is usually interesting, though it could have used some editing. For example, it is mentioned that "the body begins to twist" during the larval stage of growth of a snail, but what does this mean? Elsewhere, it is stated that "Their [the ant] colonies...can be seen almost anywhere on a city sidewalk. When you sweep the surface sand away, there appears to be nothing underneath." I am still trying to figure this one out. *Is there something underneath the surface sand (which I don't see that often in Toronto, anyway)?* Outside of these niggling criticisms, the book can be well-recommended as a guide to animal ingenuity and apparent aesthetic sense.

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A HUGE HERO

Incredible Jumbo: A novel. Barbara Smucker. Viking (Penguin), 1990. 177 pp., \$14.95 cloth. ISBN 0-670-82970-6.

Jumbo, the African elephant who fascinated thousands, especially children, on both sides of the Atlantic in the late nineteenth century, and whose name has entered the English language in such terms as *jumbo jet*, is one of the major