

old Luke put it: "The pictures are great and the parasites are amazing."

The frontier for pioneering authors and publishers, beyond the ever-popular dinosaurs and extant animals, is giving a feel for the nature of scientific research. *Famously Foul Experiments* (8–16 years) succeeds splendidly. Nick Arnold explores key experiments in the history of science using simple activities for the reader to do at home, short biographies of the scientists who first established the principles and a pithy explanation of the concepts. We are given Hubble and expanding balloons, Darwin and a game of natural selection using coloured paperclips, and Ibn Al-Haytham and the pin-hole camera, to name just a few.

In *The Global Garden* (6–12 years) by Kate Petty and Jennie Maizels, garden gnomes bearing schematic molecules of carbon dioxide and water appear on a page of pop-up plant nutrition to illustrate photosynthesis in this delightful book on the origins of food and the global economy. It is exciting to see authors effortlessly including plant biochemistry and physiology as part of a broader story, much as they are in life. Six-year-old Nell and 13-year-old Floss were both delighted by the gnomes — illustrating how the very best books appeal to readers of all ages. Similarly, Arthur Kornberg — yes, of DNA synthesis fame — spans the generations in *Germ Stories*. This collection of cautionary verses on microbiology were originally written for his grandchildren and many of the rhyming couplets are a delight to child and adult.

Some cultural commentators say that books are enjoying their final years of supremacy. Whether this is the case or not, recent competition from the new media has only been a good thing for children's science publishing. Books such as the ones reviewed here make the case for a strong future for the printed page. ■ Harriet Coles was formally Arts and Books Editor at *Nature* and is commissioning editor for this children's science book issue.

#### Why is snot green?

by Glenn Murphy

Macmillan: £4.99, \$10.31

#### The Goopy Chewy Rumble Plop Book

by Steve Alton & Nick Sharratt

Bodley Head: £9.99, \$17.99

#### Famously Foul Experiments

by Nick Arnold

Scholastic: £5.99, \$12.38

#### Horrible Science Annual 2008

by Nick Arnold

Scholastic: £6.99

#### What's Eating You?

by Nicola Davies & Neal Layton (illus.)

Walker Books: £7.99, \$12.99

#### The Global Garden

by Kate Petty; Jennie Maizels (illus.)

Eden Project/Random House: £12.99/  
\$14.99

#### Germ Stories

by Authur Kornberg; Adam Alanz (illus.)

University Science Books: £22.50



SPUD GOES GREEN, EGMONT PRESS, ILLUSTRATION BY N. BAINES.

## Young planet-savers

### Tom Standage, with help from Ella (7½)

Their parents grew up in the shadow of a possible nuclear war. Children today are growing up in the knowledge that the environment is in peril — and that some actions make things better whereas others make things worse. Last year, my daughter Ella, then aged six, began to ask whether various activities, such as bouncing on her trampoline, "made global warming" or not. If Ella is any guide, her generation has picked up on the climate of ecological concern, but seems to have nebulous views about why they should be worried and what they should be doing in response. Ella is surely not alone in expressing particular concern for the fate of polar bears as the Arctic ice melts, a consequence of climate change that is much easier for a seven-year-old to grasp than are falling crop yields or desertification.

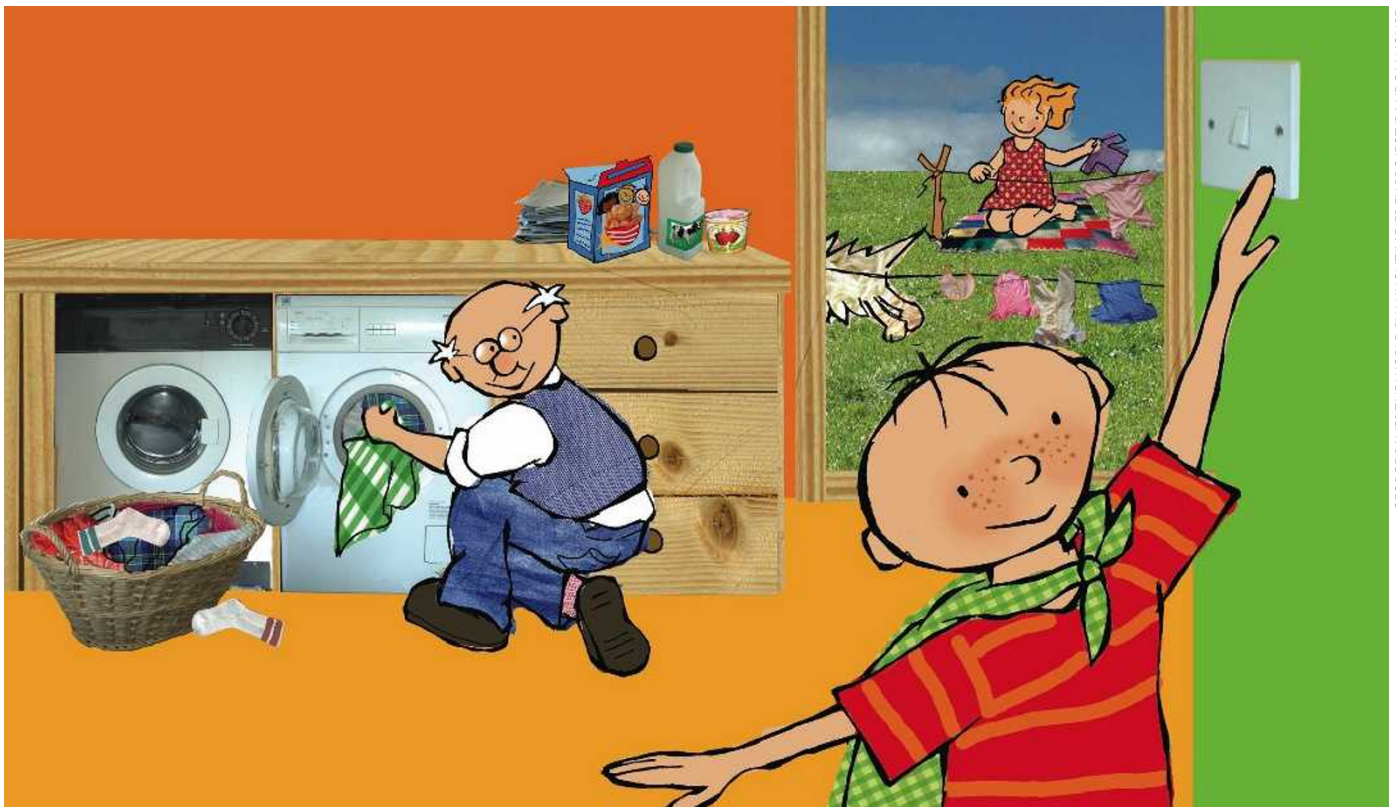
This combination of passion for the idea of environmentalism, and vagueness about details, is widespread among children. Publishers have spotted an opportunity and are rushing to publish environmental books for young readers. Some of these weave a subtle eco-message into a story, to instil a deeper understanding of natural processes and cycles; others are hectoring 'how-to' manuals that tell would-be planet-savers what to do.

*Is That a Butterfly?* is at the gentler end of the spectrum. A clueless bee and a well-informed snail watch and discuss the progress of tiny eggs as they develop into caterpillars and then

butterflies, in a simple tale that explains the idea of life cycles. Readers can lift flaps to see what is going on underneath leaves, and the book even manages to explain caterpillars' use of prickly spines as a defence mechanism. *Why Should I Protect Nature?* goes a step further and explains why it is in humans' self-interest to respect and preserve the environment. Global warming is not mentioned. The much simpler message is far more likely to resonate with children. If you pick flowers and swat bees, for example, "we'd have no honey for breakfast"; and if you leave litter in the countryside it might harm the farm animals that produce milk and wool.

The green agenda is more prominent in *George Saves the World by Lunchtime* (4–7 years) (pictured overleaf), a jolly book that makes fun of the mundane nature of planet-saving while delivering some admirably pithy explanations: "When you throw things away, you are also throwing away the materials, the time and the energy it took to make them." The hapless George expects saving the world to be swash-buckling stuff. Instead he is taught to switch the lights off, do the recycling, take toys and clothes to a charity shop, buy locally produced strawberries and so on.

Children get their own version of the grown-up "my year as an eco-warrior" genre in *Spud Goes Green* (8–12 years) (pictured). Formatted as a diary, it starts with young Spud's New Year's resolution to "go green" with the help of his friend Adi, who provides the advice on such



GEORGE SAVES THE WORLD BY LUNCHTIME, EDEN PROJECT/RANDOM HOUSE

things as sealing draughty doors, recycling, living for a day without electricity, conserving water and recycling. The tone and layout are humorous, and pack in lots of silly factoids (some of them dubious) and craft projects, both of which appealed to Ella. "If you shout at a cup of water for eight years, it gets warm!" we both learnt. Ella particularly liked the idea of recycling her own paper.

*101 Ways to Save the Earth* (6–12 years) takes a more strait-laced approach in which a friendly whale lays out the basics of environmentalism, focusing on water, habitat, air, life and energy (which make the acronym WHALE). The book then suggests 101 ways to be green in everyday life, from putting a brick in the cistern to making your own compost. All these tips are labelled with whales sporting appropriate letters: W and E if a particular action saves water and energy, for example. Saving the Earth is defined quite broadly: there is a box on global warming, but readers might be forgiven for concluding that avoiding cosmetics tested on animals, and buying your cat a collar with a bell on it to give birds a sporting chance, are of equal importance. The author is naturalist and broadcaster David Bellamy, a climate-change sceptic who prefers readers to focus on conservation rather than carbon emissions; he provides a list of conservation organizations at the back of the book.

The tone of *Superkids* (8–12 years) is altogether more strident. As the jacket puts it: "Help! The Zombie Adults are messing up the world! They're killing our animals, wasting our water, destroying our trees, poisoning our food ... Who can save the day? We need ... the

Super Kids." Saving the day does not simply mean protecting the environment. It means helping the homeless; cutting back on television, as "one in five children are affected by violence on TV" (adversely, one assumes); and not getting "caught up in the celebrity trap". Nuclear power is written off as a bad idea and genetically modified foods are said to contain "random bits of DNA, all stitched together", which will no doubt be news to their creators. These are things over which reasonable Zombie Adults can disagree.

Ella was most impressed by *An Inconvenient Truth* (7–18+ years), the book version of Al Gore's lecture and Oscar-winning film. With photographs, charts and not much text, it vividly explains the danger posed by climate change. "Part of some countries would go underwater ... and there are lots more wildfires," she concluded. "It has lots of good pictures." As a keen student of hurricanes, tornadoes and other natural disasters, Ella was enthralled; there are even polar bears. Having made such a compelling case for action, the book's suggestions for what children can do seem rather feeble: switch to low-energy bulbs and try to use your car a bit less, essentially.

Perhaps that is inevitable. The underlying problem is that voluntary greenery by a few eco-conscious consumers in the wealthy West is not going to be enough. Voluntarism is a good way to practise for a carbon-restricted world, and can help to galvanize support for broader political action. Addressing the environmental challenges of the coming decades will require high-level political action by governments. A minority of consumers may choose to avoid

incandescent lightbulbs and gas-guzzling cars, but governments can ban them outright. Ultimately, if Ella's generation is to save the world, it will be by voting for politicians who are prepared to impose tough restrictions on them. Perhaps they will be more inclined to vote for painful emissions cuts if they have grown up reading books like these and worrying about polar bears. ■

Tom Standage is business editor of *The Economist* in London, UK. His recent books include *A History of the World in Six Glasses*.

#### **Is That a Butterfly**

by Claire Llewellyn; Ant Parker (illus.)  
Macmillan: £3.85

#### **Why Should I Protect Nature?**

by Jen Green; Mike Gordon (illus.)  
Hodder Wayland: £5.99

#### **George Saves the World by Lunchtime**

by Jo Readman; Ley Honor Roberts (illus.)  
Eden Project: £5.99

#### **Spud Goes Green**

by Giles Thaxton  
Egmont: £4.99

#### **101 Ways to Save the Earth**

by David Bellamy; Penny Dann (illus.)  
Frances Lincoln: £5.99

#### **Superkids: 250 Incredible Ways for Kids to Save the Planet**

by Sasha Norris; edited by Malcolm Tait; Rupert Davies (illus.)  
Think: £5.99

#### **An Inconvenient Truth: The Crisis of Global Warming**

by Al Gore  
Bloomsbury: £9.99