

Good Science Books



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Ages 5 to 8

Anno's mysterious multiplying jar

Anno, Mitsumasa and Masaichiro (Bodley Head, 1982, 44pp.)

Inside the jar was water which became a sea, in which there was one island, and on the island were two countries, and in each country there were three mountains.... This story is at first presented with pictures, but then is retold with a dot representing each of the objects, and with the mathematical equation shown ($2 \times 1 = 2$, and so on). This is an effective way of showing how big numbers can become, as the number of dots will not fit on the pages before we get to the ten jars in each box. (MATHEMATICS)

Strawberry

Coldrey, Jennifer (Stopwatch Book, A. & C. Black, 1988, 25pp.)

Shows how the strawberry plant has roots, grows flower buds, develops fruit, and how new plants grow from runners. The text is clear but the real strength of the book is the full colour photographs by George Bernard, which illustrate each point admirably. Occasional drawings highlight some points. (PLANTS)

The magic school bus at the waterworks

Cole, Joanna (Scholastic, 1986, 40pp.)

This book takes a rather fantastical look at a town's water supply. It is written from the perspective of a pupil whose class has the strangest teacher in the school. She makes the class grow mould on bread! And organises an excursion to the waterworks. On the way, the school bus passes through a tunnel and changes, and the children become part of the water cycle, being evaporated up into clouds, falling as rain, and eventually emerging from the school washroom taps. As well as their magic journey, the book presents 'water facts' that the children have to find. The lively full-colour illustrations by Bruce Degen are liberally sprinkled with bubbles containing the children's amusing comments. The story moves well, and is fun without seeming contrived.

The magic school bus inside the Earth, by the same team (1987), uses a similar approach to explore the rocks of the Earth's crust and right inside the Earth. An author, illustrator and reader discussion at the end draws attention to the fact that a bus would melt inside the Earth, and other physical impossibilities in the fantasy.

The magic school bus inside the human body, by the same team (1989), has a similar treatment but does not provide such a good overview as the subject is much more complicated. The quiz at the end is a more effective way of drawing attention to the liberties in the illustrations than the list in *Waterworks*.

A television series and several spin-off series of books have ensured this series' continuing popularity. See www.scholastic.com/magicschoolbus/books for a full listing. (OUR WORLD; HUMAN BIOLOGY)

Robert Crowther's amazing pop-up house of inventions

Crowther, Robert (Walker, 2000, 12 openings)

Robert Crowther has been creating wonderful pop-up books for many years, most notably *The most amazing hide-and-seek alphabet book*. In this introduction to the history of technology, he uses his paper engineering skills, room by room, through a house. Covering the kitchen, bathroom, living room, bedroom and garage, flaps are lifted, doors opened and dials turned to reveal when various appliances, machines and other common innovations and traditions were invented or first used. (TECHNOLOGY)

Bat loves the night

Davies, Nicola; illustrated by Sarah Fox Davies (Read and Wonder, Walker, 2001, 28pp.)

A simple narrative follows one night's activities of a pipistrelle bat, as it flies out between broken tiles, under trees and over bushes catching insects, and then returns to its roost and its baby. A secondary text in distinct font provides additional information on echolocation, food and roosting sites. Delicate illustrations by Sarah Fox Davies use a cream background for the day and pale blue for night. Reissued with an accompanying CD in 2008. (ANIMALS)

Big blue whale

Davies, Nicola; illustrated by Nick Maland (Read and Wonder, Walker, 1997, 32pp.)

This picture book about blue whales has been thoughtfully and unusually designed. Variations in the size of the lettering and snippets of information which follow the lines of the illustrations create visual interest and add emphasis. The text is well-written by a qualified zoologist and the illustrator, Nick Maland, has used cross-hatching effectively to create texture and movement. Reissued with an accompanying CD in 2008. (ANIMALS)

Mount St Helens: The smoking mountain

Furgang, Kathy (Volcanoes of the World, PowerKids Press, Rosen, 2001)

The Volcanoes of the World series covers six different volcanoes which have experienced historically important eruptions, some recently such as this title or others in the past (eg, Mt Vesuvius). Each double page spread includes one full page of illustration and the facing page is simply worded text in large font on the relevant topic. The spectacular photographs combined with coloured pages and a simple glossary and index provide a very attractive and accessible introduction to a fascinating subject. Also Krakatoa: history's loudest volcano. (OUR WORLD)

I like monkeys because

Hansard, Peter; illustrated by Patricia Casey (Read and Wonder, Walker Books, 1993, 28pp.)

Introduces the variety of monkeys in lively language, in recognition that young children learn through all their senses, and puts into words the types of monkey behaviour children can see at the zoo. Illustrations (by Patricia Casey) in soft watercolour and line are equally lively. The different monkey types are labelled. (ANIMALS)

Happy birth day!

Harris, Robie H.; illustrated by Michael Emberley (Walker, 1996, 26pp.)

In this large format picture book, a mother tells her child exactly what happened on the day of her birth. From the moment of emergence into the world, the events of that first day – the first breath, the cutting of the cord, the first breastfeed – are lovingly described. Accompanying the text are evocative but accurate paintings by Michael Emberley of the newborn infant, complete with screwed-up face, surrounded by mother, father, doctor and doting relatives. (HUMAN BIOLOGY)

The pebble in my pocket: A history of our Earth

Hooper, Meredith; illustrated by Chris Coady (Viking, 1996, 32pp.)

Focusing on the pebble a child can hold, Hooper describes geological processes from a time of volcanic activity 480 million years ago, through uplift and erosion, sedimentation, another cycle of uplift and erosion, and changes in living things over that time. The story is told in simple but evocative language that should enable a young child to comprehend in broad terms the great changes that each part of the Earth has undergone. Coloured illustrations by Chris Coady show changes in scenery and some of the animals from different ages.

In a similar way *The drop in my drink: The story of water on our planet* (Viking, 1998, 32pp.) uses evocative language to show how the same water has cycled and recycled from ocean to sky to land and through living things through millions of years of change. (GENERAL SCIENCE)

The emperor's egg

Jenkins, Martin; illustrated by Jane Chapman (Read and Wonder, Walker, 2000, 31pp.)

Using storytelling techniques Jenkins introduces young children to the wonder of how the male emperor penguin incubates his mate's egg through the Antarctic winter while the mate is away feeding, and how the female returns to feed the chick while the male goes off to sea. A secondary text in italics, in lines that flow through the illustrations, adds other items of information. The illustrations by Jane Chapman have plenty of life and form part of an excellent colour design. Due to be reissued with an accompanying CD at the end of 2008. (ANIMALS)

The beaver family book

Kalas, Sybille and Klaus (North South Books, 1999, 48pp.)

This refreshingly alive and personal story tells how three baby beavers were taken from northern Sweden to Beaverbrook in Austria to be re-established there and studied. The book gives a few insights into the pleasures and difficulties of studying wild animals, and many insights into how beavers live. The coloured photographs are varied, interesting and well arranged. There are several brilliant touches of design, one being the pattern of the beaver's tail on the endpapers. Translated from German by Patricia Crampton.

The penguin family book and *The polar bear family book*, also co-written by Sybille Kalas, have a similarly fresh approach in showing the life cycle of a penguins and polar bears. (ANIMALS)

I love guinea pigs

King-Smith, Dick; illustrated by Anita Jeram (Read and Wonder, Walker Books, 1994, 28pp.)

Written with humour as the personal statement of someone with a life long interest in guinea pigs, the text covers, very briefly, the history of European knowledge of guinea pigs, the varieties available, how to look after them, the sounds they make, and what the newborn are like. The line and wash coloured illustrations by Anita Jeram show particularly good lifelike postures of both guinea pigs and people and their brief notes provide additional information without interrupting the flow of the text.

All pigs are beautiful (1995) is a similar lighthearted and personal account about domestic pigs. (Like the film *Babe* it is likely to discourage an interest in eating pork.) Reissued with an accompanying CD in 2008. (ANIMALS)

Yakkin the swamp tortoise: Book 1 – The most dangerous year

Kuchling, Guundie and Gerald (Chelonia Enterprises, 1995, 32pp.)

The swamp tortoise is endangered. It lives in seasonal swamps on clay pans in the Swan River Valley. The biology is described through the realistic story of one young tortoise, from hatching through the seasons of the first year, in an easy to read text. Linocut illustrations have bold lines and bright colours and are complemented by a bold font.

In *Book 2 – Survival* (Era 1997) *Yakkin's* fate is followed through three years. She survives bushfire and a cat's interest, but brick pits drain the swamp and she has to leave. Fortunately a family picks her up on a road and she is taken to a special nature reserve. The text reads as well but a lighter font does not go so well with the linocuts. Endnotes provide information without disrupting the story. (ANIMALS. AUSTRALIAN)

The snake book

Ling, Mary and Mary Atkinson (Dorling Kindersley, 1997, 28pp.)

Each snake featured in this book has been placed in a photographer's white box to be photographed. The effect given when the book is opened is to see a very realistic vivid image of a snake across a white double-page spread. Snakes chosen are both venomous and non-venomous but do not include any Australian examples despite some of the most poisonous snakes in the world originating here. Text is very simple with a few more facts about each species given on the last page. Photography by Frank Greenaway and Dave King. (ANIMALS)

Until I met Dudley

McGough, Roger; illustrated by Chris Riddell (Angus & Robertson, 1997, 28pp.)

With two such highly regarded creators of children's books as Roger McGough and illustrator Chris Riddell, this book could hardly lose. Narrated in the first person, the small girl telling the story explains how she used to think various gadgets worked pre-Dudley. Dragons toasting bread and snakes as vacuum cleaners are just two illustrated in glorious nonsensical detail. After meeting Dudley the learned bespectacled dog, the real mechanism behind these and other inventions is explained to her. A final concluding touch of genius is the last double-page spread showing a great many silly creatures, which featured earlier in the fantastical imaginings of the little girl, waving goodbye and leaving the book. Non-fiction text compiled by Moira Butterfield and Douglas Maxwell. (TECHNOLOGY)

Polar bear cubs

Matthews, Downs (Hippo Books, Scholastic, 1990)

A well-written and very readable text follows the first two years in the life of a pair of cubs. Illustrated with an excellent choice of photographs by Dan Guravich. Suitable for reading aloud to younger children. (ANIMALS)

Something about water

Matthews, Penny; illustrated by Tom JELLETT (Omnibus, 2009, unpagged)

It is not often that a reader comes across an information book written in an entertaining manner, especially one that makes them laugh out loud. However Something about water is just such a book. Largely presented in comic strip format, the narrator Robbie tells readers his honest unimpressed opinion about recycling. However Robbie becomes fascinated by the fact that the amount of water on the earth is finite and that it has been recycled for millennia. Explanations of the water cycle, the water composition of plants and animals, the percentage of water in the oceans and the statistics of average daily water consumption are all accurately presented but in a very reader-friendly manner. Instead of being lectured, readers are amused and entertained while they learn important facts. The illustrator's sense of humour also shines through in the cartoon-style drawings in the narrative boxes and in the collages, diagrams and endpapers. This is a non-fiction book that children will find engaging, funny and informative. (OUR WORLD. AUSTRALIAN)

Into the deep

Norman, Dr Mark and David Paul (Black Dog Books, 2010, 32pp.)

This 25.5cm square paperback only uses conventional left-to-right double-page spreads for the first two and last openings. The rest of the book is to be read vertically by rotating the book so that the left-hand page is at the top. Down the side of each spread is a depth chart and placed at the appropriate depths are photos of the fascinating creatures that live in the ocean. As the distance from the surface gets deeper, the background of the pages changes until it is black. Simple captions identify each creature and give brief information about them while the distances at the edge of the page are put into perspective by occasional facts about human activity at certain depths, such as how deep scuba divers can go and how far deep-sea fishing nets reach. The outstanding features of this book are the unusual layout and design and the stunning photographs. (OUR WORLD; ANIMALS)

Sand swimmers: The secret life of Australia's dead heart

Oliver, Narelle (Lothian, 1999, 32pp.)

Providing aesthetic pleasure and a calm and reflective setting, this is an outstanding book on Australia's desert animals, from insects to mammals. Brown colours predominate and the reader is drawn in to find what is not immediately obvious. It is about the desert's normal state rather than the flowering after rain, and it introduces the human context, contrasting Aboriginal knowledge with Sturt's despair at the lifeless centre. Unfortunately, the use of lino-cuts limits the clarity of the illustrations and some animals carry names no longer current. (ANIMALS. AUSTRALIAN)

My pop-up body book

Petty, William (text) Jennie Maizels (illus.) (Walker Books, 2010, unpagged)

Young children usually love pop-up books and this one should prove popular. Each double-page spread covers a different aspect of the human organism entitled My Beginning, My Head, My Chest, My Tummy and My Moving Body. Within these generalised sections are tabs to pull, wheels to turn and flaps to unfold, all revealing much more information than the few captions on the page. Some of the paper engineering is very clever such as the face unfolding to reveal the muscular structure on the left-hand side and the skull on the right. While fairly robust, the book still needs to be treated with care to preserve all the correct folds. (HUMAN BIOLOGY)

Disaster!

Platt, Richard; illustrated by Richard Bonson (Viking, 1997, 32pp.)

Each double-page spread of this large-format book is devoted to a particular disaster which actually occurred. Detailed, historically accurate illustrations, often with cross-sections or following a time sequence, are surrounded by captions and paragraphs of text. Maps and boxes of scientific facts explain why the disaster happened. Topics covered include volcanoes, earthquakes, tsunamis, cyclones (Tracy is the historical example discussed in detail), plagues, fires, floods, landslides, the sinking of the Titanic and the crash of the Hindenberg. Illustrated by Richard Bonson. (OUR WORLD)

Stephen Biesty's incredible cross-sections

Platt, Richard (Viking, 1992, 48pp.)

This ground-breaking book, originally published by Dorling Kindersley, was the first of the recent spate using a very large format with detailed cross-sections of various inventions. Each double-page shows a cutaway or sliced drawing revealing the inner workings of a building or vehicle. Detailed captions placed around the drawing label relevant parts and explain the components which make up the whole construction. Topics include castles, cathedrals, skyscrapers, coal mines, oil rigs, various ships, planes and trains. (TECHNOLOGY)

Once I was a cardboard box... but now I am a book about polar bears

Poitier, Anton (text) Melvyn Evans (Five Mile Press, 2009, 24pp.)

Originally published in the UK by Potter Books, this book and its companion, Once I was a comic... but now I'm a book about tigers, are written by well-known author Tony Potter. The books are produced totally of recycled paper and board and the dual text explains to readers all about polar bears in the main text and how recycling of paper is done on the right-hand side of each double-page spread. The design and layout are excellent with large bold font, photos of polar bears and drawings combining to be clear and engaging. This clever concept works surprisingly well and young readers will be well-informed about both polar bears and recycling. (OUR WORLD; ANIMALS; TECHNOLOGY)

Uneversaurus

Potts, Adrian (David Fickling Books, 2006, unpagged)

Although a picture book, some of the vocabulary, concepts and jokes are more suitable for an older readership. Beginning with the obvious statement “No human has ever seen a dinosaur”, the text then asks “So how do we know what they looked like?” The book shows how clues on fossils help scientists put the skeletons of these creatures together and extrapolate from the skeleton to a realistic image of the living creature. But it then launches into a very good discussion of characteristics of animal coverings such as colour, camouflage, shading and texture and how these features may possibly have applied to dinosaur appearance. The illustrations then show imaginative options such as a tiger-striped Tyrannosaurus, a red Stegosaurus and a flock of multi-coloured Pterodactyls. Readers are urged to use their imaginations to guess what these amazing creatures may have looked like and the final endpaper provides a drawing of an Amargasaurus for them to colour in however they like. (PREHISTORIC TIMES; ANIMALS)

Pobblebonk the frog

Reilly, Pauline (Kangaroo Press, 1996, 32pp.)

Information about frogs is given in a story about a particular frog with human interest supplied by children catching tadpoles. Finishes with four pages of facts about frogs. The concentration on one type of frog avoids the confusion that covering too many varied lifestyles can cause for this age group. The format is unpretentious with soft pencil and wash illustrations by Will Rolland.

This is one in a long series of books by this team about different Australian animals. The series is important because it introduces so much of our wildlife in a simple, accessible format. The slip-up in The Koala of depicting a front opening pouch is quite uncharacteristic of the series. (ANIMALS. AUSTRALIAN)

Fungi

Rotter, Charles (Creative Education (Images), 1994, 40pp.)

Superb colour photographs illustrate every page. Each one takes up a whole page or double-page spread and they include magnifications and close-ups as well as more common mushroom and toadstools. The straightforward text is relegated to boxes, each of which has a translucent background so that the detail in the photo still shows through. This attention to design and detail has created a visually stunning book. (PLANTS)

Dinosaurs

Sabuda, Robert and Matthew Reinhart (Encyclopedia Prehistorica, Walker Books, 2005, unpagged)

The first book in the ‘Encyclopedia Prehistorica’ series, Dinosaurs contains over 35 amazing pop-ups by renowned paper engineer Robert Sabuda and his associate. There are six double-page spreads which each open to reveal a large pop-up prehistoric creature. Around the sides of each page are more opening flaps containing smaller pop-ups. The information about all of these animals and their time on earth is contained in captions and within the flaps. This book was followed by two more volumes in the series, Sharks and other sea-monsters and Megabeasts. Due to the number of moving parts, the recommended age for these books is five and up. (PREHISTORIC TIMES)

What Darwin saw: The journey that changed the world

Schanzer, Rosalyn; (National Geographic, 2009, 48pp)

Rosalyn Schanzer has been fascinated by Charles Darwin for some time. To research this book she not only retraced his route in South America and the Galapagos Islands but also read his journals, letters and books and pored over his drawings. The result is a picture book in graphic novel format with much of the text in speech bubbles because it is a modern paraphrase of Darwin’s own words. The result is a colourful, informative, reader-friendly and entertaining account of the voyage of the Beagle and the important discoveries

made along the way. The last few pages recount the lengthy process involved before *The Origin of Species* was finally published and the momentous upheaval it caused in both scientific and religious circles. This is a book for young readers to pore over with its format and detailed illustrations. (FAMOUS SCIENTISTS)

Starry messenger: A book depicting the life of a famous scientist, mathematician, astronomer, philosopher, physicist Galileo Galilei

Sis, Peter (Farrar Straus Giroux, Frances Foster Books, 1996, 36pp.)

This is a picture book that can be read by (or to) several age groups. Each double page usually contains only one paragraph of text relating the story of Galileo, his astronomical discoveries and his trial by the Church. However this simple text is augmented and extended by the large medieval-style paintings and the additional sections of prose written in handwritten script. These include extra facts about Galileo's life and quotes from his writings. The more the reader delves into the extra details the bigger the picture that is drawn about this remarkable scientist. The final double page talking about his pardon by the Church 300 years after his death is particularly moving. (FAMOUS SCIENTISTS; SPACE)

How do I know it's an ant? A book about animals

Stodart, Eleanor (Envirobook, 2002, 32pp.)

With watercolour illustrations, one paragraph of text and informative captions and labels per page, this book introduces 24 animal types, drawing attention to the features that help us tell one from another. A further 17 are covered briefly on one page. Most examples can be seen in Australia. The introduction draws attention to major features to look for, such as segments, legs and feelers, in terms a young child can understand. The rudiments of classification are introduced through colour-coded headings which indicate whether the animal has an internal skeleton, exoskeleton or no skeleton. Sizes are indicated. (ANIMALS. AUSTRALIAN)

One less fish

Toft, Kim Michelle and Allan Sheather (University of Queensland Press, 1997, 32pp.)

This cautionary tale is told in rhyme. In a progression from 12 to zero each type of fish in turn loses one of its number due to a different problem in the environment (explained in a subtext in small font). The illustrations have brilliant colours and give the book great aesthetic appeal. The rhyming text is backed up by an introduction, a description of the 12 types of fish, and a glossary. (ANIMALS. AUSTRALIAN)

Aranea: A story about a spider

Wagner, Jenny (Kestrel, 1975, 32pp.)

Tells the story, without any anthropomorphism, of how a garden spider coped with a sudden rainstorm. The attractive black and white illustrations by Ron Brooks are rather stylised. (ANIMALS. AUSTRALIAN)

Is a blue whale the biggest thing there is?

Wells, Robert E. (Albert Whitman, 1993, 32pp.)

Using the blue whale as the standard unit of measure, this humorous picture book aims to show the young reader just how big the universe really is. Ludicrous drawings of jars containing 100 blue whales, towers of 100 Mount Everests and bags of 100 planet Earths try to give the reader a feel for how enormous it is. Apart from one page using feet and tons, exact measurements are not given. (OUR WORLD)

A drop of water: A book of science and wonder

Wick, Walter (Scholastic, 1997, 40pp.)

Walter Wick is the photographer behind the very popular 'I Spy' series of picture puzzle books. In this scientific picture book, he uses his considerable skills to introduce young readers to the properties of water. Superb freeze-frame photographs of drops and splashes, bubbles of amazing shapes, snowflakes and dew-encrusted spiders' webs are supplemented with a simple straightforward text about molecules, surface tension, water vapour, ice and the water cycle, among other water-related topics. (OUR WORLD)

What makes me me?

Winston, Robert (Dorling Kindersley, 2004, 96p.)

This well-designed, extensively illustrated book provides an excellent explanation about the human body for young readers. Four sections answer the leading questions: What am I made of? What makes me unique? How does my brain work? What kind of person am I? The contents cover the chemical composition and systems of the body, genetics, the brain including memory and intelligence and personality. Short sections called 'Test Yourself' are included at relevant stages for the reader to quiz themselves about such aspects as dominant and recessive genetic traits, memory and different types of intelligence. The logical arrangement of the subject matter combined with clear layout, photographs of child subjects, short sections of text and language that addresses the reader made this a winner of the Royal Society's Aventis Junior Prize in 2005. (HUMAN BIOLOGY)

Ages 8 to 11

A new view of the solar system

Aguilar, David A. (National Geographic, 2008, 48p.)

David Aguilar is Director of Science Information at the Harvard Smithsonian Center for Astrophysics and past Director of the Fiske Planetarium. In this very up-to-date book, the latest information about our solar system is presented in a well-designed and beautifully presented format. In addition to the facts about the main eight planets and their major moons, the author explains the new classification of Pluto as a dwarf planet and the addition of Ceres, in the asteroid belt, to the same category. Less well-known parts of the solar system such as the Kuiper belt and the Oort cloud are also described. Illustrated with spectacular space art by the author, the text manages to explain complex topics in a child-centred manner, including 'The solar system in a grocery bag' analogy on the final page. Although presented in picture book format, the concepts discussed make this book more suited to an older readership. (SPACE)

Life in a rotten log

Atkinson, Kathie (Little Ark, Allen & Unwin, 1993, 32pp.)

By following the process of decay of a fallen tree till a new seedling tree takes root, this book introduces the various organisms that live in or on a rotting log and shows clearly that decay also means new life. The text and photographs convey the author's enthusiasm for her subject. (ANIMALS; PLANTS. AUSTRALIAN)

Inventions: Pop-up models from the drawings of Leonardo da Vinci

Bark, Jaspre; paper engineering by David Hawcock; illustration by David Lawrence (Walker Books, 2008, unpagged)

This intricate pop-up book brings to life the inventions and notebooks of Leonardo da Vinci. Typeset in a font called Da Vinci Forward, the design of the book reinforces its historical origins by creating the impression that it is a handwritten notebook on aging paper. Reproductions of Leonardo's sketches and the text are in sepia and six of his designs have been transformed into three-dimensional pop-ups. Although a pop-up book, the delicate design of some of these and the language and vocabulary of the text makes this book more suitable for older children, ranging up to adult. This is a fascinating look at the genius of the man whose inventions were so far ahead of his time. (FAMOUS SCIENTISTS; TECHNOLOGY)

An introduction to insects

Bird, Bettina and Joan Short (Bookshelf, Martin Educational, 1988, 48pp.)

The first third of the book describes the structure of insects and how they breathe and make sounds. The next part describes the life histories of silverfish (no metamorphosis); short-horned grasshopper, dragon fly, cicada (part metamorphosis); and wanderer butterfly and Christmas beetle (full metamorphosis). Then a section describes insect behaviour. There is a pronunciation guide, and an index, but no glossary – words are explained as they are introduced. Colour photographs, line drawings and paintings are all clear and well captioned. Illustrated by Deborah Savin. (ANIMALS. AUSTRALIAN)

Linnea's windowsill garden

Bjork, Christina and Lena Anderson (R. & S. Books, 1988, 59pp.)

Linnea loves plants but because she lives in an apartment she grows them in pots all over her room. She tells the reader how she does it and how she learns from her friend Mr Bloom. The first person technique allows the authors' enthusiasm to bubble through. As well as learning how to grow plants and some plant biology, the reader will find simple games and tricks, all based on plants. Australian readers will need to read 'south' for 'north' and so on as it has not been adapted for the southern hemisphere. Translated from Swedish by Joan Sandin. (PLANTS)

Pleistocene times

Breidahl, Harry (*Wildlife of Ancient Australia*, Macmillan, 2002, 32pp.)

One of a series of six, this book introduces animals that lived in Australia up to 2 million years ago. Each book in the series follows a standard format, placing the period or epoch in context, giving some information about specific animals, a world map of the time, a look at the vegetation, and how the period ended. As well as an index, glossary and reference list, a 'code-breaker' to scientific names (a list of word roots) provides an interesting way of helping children understand these names.

Other books in the series are Miocene and Pliocene times, Eocene and Miocene times, Cretaceous times, Jurassic times, and Triassic times. The books on earlier periods are more speculative and extrapolate from our knowledge of other continents. (PRESHISTORIC TIMES. AUSTRALIAN)

The spotted-tailed quoll

Breidahl, Harry (*Investigating Australian Animals*, Macmillan, 1994, 24 pp.)

This formal instructive book about quolls is clearly laid out, showing their position among mammals, their distribution (all four quolls are shown), measurement, tracks, diet, reproduction and conservation. Illustrated by Judy Uehlein Nelson.

Other titles in the series, which has several illustrators, The koala, The red kangaroo, The common wombat, The common ringtail possum and The southern brown bandicoot, closely follow the same format so that some parts are repetitive but together they give a good introduction to Australian marsupials. (ANIMALS. AUSTRALIAN)

Tree (Revised edition)

Burnie, David (*Eyewitness Guides*, Dorling Kindersley, 2003, 64pp.)

An illustrated guide to trees, both broadleaved and conifers, their life cycles, buds, bark, leaves and so on. The text on each page is short but each opening has several photographs and the captions contain much information. They include snippets about spices and other ways in which people have used trees. It has a British bias but is valuable as a general study of trees. For the older end of the 7-12 age range. (PLANTS)

Killer plants and how to grow them

Cheers, Gordon and Julie Silk; illustrated by Marjorie Crosby-Fairall (Puffin, 1996, 32pp.)

A brief introduction to carnivorous plants is followed by a brief description of ten varieties with tips for growing them, and double page spreads on sizes and distribution. Although there is no discussion of why a few plants are carnivorous and there are a couple of references to plants being happy, the illustrations by Marjorie Corssley-Farall and the design and clarity of the text make this an effective book. (PLANTS. AUSTRALIAN)

Spotlight on spiders

Clyne, Densley (*Small World Series*, Little Ark/Allen & Unwin, 1995, 32pp.)

Brilliant photographs and a relaxed conversational text approach the subject in a way young children will easily relate to.

It's a frog's life (1995) and **Flutter by butterfly** (1994) also provide good introductions to these animals. However, the first books in the series were less clear as they lacked captions. For the younger end of the 7-12 age range. (ANIMALS. AUSTRALIAN)

Sharks

Coupe, Sheena and Robert (Great Creatures of the World, Golden Press, 1990, 68pp.)

An excellent comprehensive guide to sharks of all kinds, lavishly illustrated with colour photographs, drawings and diagrams. Coverage includes what sharks are, ancient species, types of sharks, habitat, reproduction and shark attacks. Fact boxes contain interesting snippets of information. The glossary and index make it a useful reference tool.

A companion volume, Whales by Leslie Dow, follows a similar format but contains a couple of small errors (one photograph is upside down!). (ANIMALS. AUSTRALIAN)

Black holes

Couper, Heather and Nigel Henbest; illustrated by Luciano Corbella (Harper Collins, 1996, 45pp.)

Produced by Dorling Kindersley, this volume uses their successful approach of visual presentation of information with text broken up into small segments and captions arranged around illustrations to explain a complex series of concepts in astronomy. Some pages effectively use white text or boxes on black backgrounds and a central foldout also adds variety. Illustrations by Luciano Corbella are an effective mix of photos, diagrams, drawings and paintings.

A companion volume is Big bang. With a very effective first page of grey nothingness, it presents the evidence for the big bang theory of the creation of the universe. It is also honest enough to discuss problems with the evidence and scientists who disagree with the consensus opinion. Other theories are mentioned as well as religious and philosophical creation stories. (SPACE)

Reptiles

Creagh, Carson (and Weldon Owen team) (Allen & Unwin/Macdonald Young Books (Discoveries), 1996, 64pp.)

Using a caption-text layout similar to the Collins Eyewitness Guides but with fewer items per page and with more artwork than photographs, this book provides a good overview of reptile biology. It has one doublepage spread for ancient reptiles, four each for chelonians and crocodylians, one for the tuatara, nine for lizards, seven for snakes, and one for danger to reptiles. Although prepared in Australia it is designed for the international market and so the examples used come from around the world, but good Australian examples are included.

Mammals (1996) has similar format and forms an excellent overview of the subject.

Dinosaurs (1995) also provides a good overview of the subject, putting them in context well, with sections on before the dinosaurs, the world in Triassic, Jurassic and Cretaceous periods and uncovering dinosaur clues as well as describing types and behaviour. (ANIMALS; PREHISTORIC TIMES. AUSTRALIAN)

Bodies from the Ice: Melting glaciers and the recovery of the past

Deem, James M. (Houghton Mifflin, 2008, 58pp.)

Bodies from the Ice has been listed as an Honour book in the American Library Association's Robert F. Sibert Informational Book Medal award for 2009. Following on from earlier titles, Bodies from the Ash and Bodies from the Bog, this title discusses bodies which have been found in mountainous regions around the world. In addition to well-known discoveries such as Ötzi the iceman from The Alps and the body of missing English climber George Mallory on Everest, the book also discusses the Inca mummies found in Peru, unidentified European climbers and a native American Indian body found in Canada. This volume is not only about archaeology, however, but also about glaciers and mountains. It is very well-designed and contains many illustrations including photographs, historical documents and maps. (OUR WORLD)

A story of natural numbers

Demant, David (Black Dog Books, 2008, 136pp.)

For the young mathematics enthusiast, this colourfully presented book explains all about numbers. Covering what numbers are used for, their history, how they came about, symbols used to represent them, the language of mathematics and number systems, this book covers some quite complex topics in clear and simple language. It also has some activities, jokes, tables and fact boxes, including information about famous mathematicians. Well-designed using colourful page backgrounds, text boxes and humorous illustrations (the patterned sheep on pp68-69 are delightful), there isn't a single white page in the whole book. It also includes sensible advice about using and guarding personal numbers, such as PINs. (MATHS)

The science of a light bulb

Evans, Neville (Science World Series, Wayland, 1999, 32pp.)

The technology behind modern lighting is introduced by following how people learnt to burn different substances in lamps to make light, and then to use electricity in arc lamps, light bulbs and then fluorescent tubes. Diagrams of simple electric circuits and how electric current enters and leaves a light bulb are shown. Illustrated mainly by photographs. (TECHNOLOGY)

Paper airplanes and super flyers (Revised ed.)

Francis, Neil (Kids Can Press, 1996, 40pp.)

Instructs how to make gliders (paper aeroplanes – including how to add elevators or wing flaps and rudder), parachutes, and kites with short passages giving the principles of how they work. Illustrated by June Bradford with clear line drawings. North American outlook. (TECHNOLOGY)

The little book of big questions

French, Jackie; illustrated by Terry Denton (Little Ark, Allen & Unwin, 1998, 112pp.)

French discusses a range of possible answers to questions such as How did the universe begin? What is life? How do we know what is right or wrong? The answers are primarily based on scientific knowledge but also mention the beliefs of the major religions. Boxes ask readers what they think. Line drawings by Terry Denton provide humorous relief and emphasise some points. The book shows that information can support different theories and provides an excellent basis for discussion and thinking. (GENERAL SCIENCE. AUSTRALIAN)

The secret world of wombats

French, Jackie; illustrated by Bruce Whatley (HarperCollins Australia, 2005, 176pp.)

From the creators of Diary of a wombat comes a more serious and informative book about the biology and behaviour of wombats. Told in an entertaining tone with amusing anecdotes, this book is written by an author who loves wombats dearly and lives with several on her property.

A follow-up title about kangaroos has just been published in 2008 called How high can a kangaroo hop? (ANIMALS; AUSTRALIAN)

There's an echidna at the bottom of my garden

French, Jackie; illustrated by David Stanley (Tadpoles, Koala Books, 1997, 64pp.)

Two threads run side by side. In a larger serif font and in the first person, the author tells of her encounters with an echidna over the years. The incidents are built into a readable narrative which has a good climax as not one, or two, but three echidnas are seen. In smaller non-serif font, adjacent to each appropriate incident, are a few sentences about echidna biology. The half tone illustrations (by David Stanley) are attractive but have minor problems with spines being too large and feet inaccurate. (ANIMALS. AUSTRALIAN)

Evolve or die

Gates, Phil (*Horrible Science*, Scholastic, 1999, 128pp.)

With the earthy humour and school jokes enjoyed by 10-12 year olds, this book gives a rapid overview of how life has evolved and how people's ideas about the origins of life have changed. It discusses some interesting fossils and how they were preserved, genetics, and some important scientists such as Darwin, Mendel, Wegener, Francis and Crick. Cartoons by Tony de Saulles extend the humour of the text and add some serious things such as a time line. With a table of contents but no index, books in this series are designed for enjoyable reading rather than research.

In similar style but with more emphasis on scatological humour, *Disgusting digestion* by Nick Arnold shows the various parts of the alimentary canal and related organs and the value of sewage treatment in reducing disease. Correct medical terms are introduced with humour which challenges readers to use them.

Also by Nick Arnold, *Bulging brains*, uses the advertising language we hear everyday and the term neuro-phone to show how the nervous system works. Once again important scientists are introduced and cartoons by Terry de Saulles increase the book's appeal.

For a full listing of all books in this popular series see www.scholastic.co.uk/zone/book_horr-science.htm (GENERAL SCIENCE; HUMAN BIOLOGY)

The young Oxford book of the human being

Glover, David (Oxford University Press, 1996, 160pp.)

It isn't often that a book about the human body covers the whole of a person. But the cover on this book sums it up well when it states that this book is about 'the body, the mind and the way we live'. Divided into four sections, the topics covered are divided into Origins, Body, Mind and Living Together. The first two sections are self-explanatory. The third and fourth sections are what separates this book from the mass of others on this subject because they include explanations on intelligence and creativity, the conscious and unconscious, coping with stress, emotions and fears, social groupings, culture, religion and belief, inventions and discoveries and the future. This treatment of the human being as more than just its physical body leads to a more holistic discussion of humankind, resulting in a more balanced overview tying all aspects of humanity together. (HUMAN BIOLOGY)

Oceans

Green, Jen (*3D pop-up explorer*, Walker Books, 2008, 30 pp.)

This is not a pop-up book for the very young child. Rather it contains a lot of information about ocean ecology, including different habitats, life forms and food chains. Slightly larger than A4 landscape in size, the widthways arrangement of the pages has been used to great effect in the design, layout and illustrative content. This includes five three-dimensional pop-up pages which show very effectively life in a rock pool, on a tropical coral reef, in a kelp forest, in waters below 200 metres deep and around 'black smokers'. The book is indexed and all photographs, diagrams and illustrations are captioned, with much of the information in these paragraphs. The only flaw is on p 21 where the text mistakenly claims that 'Great white sharks can grow up to half a metre long' instead of 'up to six metres long'. (The publisher has been advised of this and it should be fixed in the next printing.) (OUR WORLD; ANIMALS)

Can you feel the force?

Hammond, Richard (Dorling Kindersley, 2006, 96p.)

Best known for his appearances on top-rating television program Top Gear, Richard Hammond has written a book about physics for young readers which won the 2007 Royal Society Prize for Science Books Junior Prize. After the first section about the history of science and some of the most important discoveries in the field of physics, the following chapters cover energy and forces, matter and light. Profusely illustrated in full colour, this attractive well-designed introduction to physics makes the subject accessible for upper primary students. (PHYSICS)

Let's talk about where babies come from

Harris, Robie H.; illustrated by Michael Emberley (Walker, 1999, 81pp.)

As it covers everything a pre-pubescent child or younger teenager is likely to ask about sex and babies, this book has quite a lot of text, but it is also amply illustrated by Michael Emberley with a mixture of serious and humorous coloured drawings. Body differences (inside and out), sperm, eggs and how they get together, different kinds of love, development of the foetus, birth, multiple pregnancies, genes, adoption, OK and not-OK touches, HIV and AIDS are all discussed reassuringly. The comments of a somewhat anthropomorphic cartoon-style bird and bee add a light touch. (HUMAN BIOLOGY)

The ultimate dinosaur book

Lambert, David (RD Press, 1993, 192pp.)

Lots of young readers are quite fascinated by dinosaurs and often pass through a dinosaur phase. This book is one of the most comprehensive on the market, probably only accessible to the keenest of young fans because of its technical language. However, its superb illustrations, including photographs of models of reconstructed dinosaurs, would keep many young readers occupied for hours. As this is a Dorling Kindersley book, it is laid out along similar lines to the Eyewitness Guides. Each double page has an introductory paragraph with additional information adjacent to the illustrations. There is an introductory section on excavating fossils and restoring them. The book concludes with an A-Z of dinosaurs as well as a comprehensive index. (PREHISTORIC TIMES)

Gogo fish!: the story of the Western Australian state fossil emblem

Long, Dr John, illustrated by John Long and Jill Ruse (Western Australian Museum, 2004, 40p.)

Dr John Long is a palaeontologist who works for the Western Australian Museum. This book is a description of the expedition to Gogo Station in 1986 when the fossil of *Mcnamaraspis kaprios* was discovered, the techniques used to extract the fossil from the rock and the research undertaken before naming it. A subsequent campaign by schoolchildren resulted in the species being proclaimed as Western Australia's state fossil emblem. This book is a good explanation of a palaeontologist's job and the painstaking behind-the-scenes work involved in any major discovery. (PREHISTORIC TIMES. AUSTRALIAN)

Walking with the seasons in Kakadu

Lucas, Dianne; illustrated by Ken Searle (Allen & Unwin, 2003, 32pp.)

In English, but with some terms from the Gundjehmi language, this book takes readers through the six seasons recognised by the Aboriginal people of Kakadu. It shows readers the weather patterns and the characteristic changes in plants and animals which determine the beginning and end of each season. Descriptions of the activities of flowers, fruits and animals are set in boxes against one to three scenes of each season painted by Ken Searle. People playing or collecting food are often included. Animals and flowers are shown well, except for the orb spider being upside down. (ANIMALS; PLANTS. AUSTRALIAN)

How nearly everything was invented: by the Brainwaves

MacLeod, Jilly, illustrated by Lisa Swerling and Ralph Lazar (Dorling Kindersley, 2006, 61p.)

Shortlisted for The Royal Society Prize for Science Books: Junior Prize in 2007, *How nearly everything was invented* is supposedly written by the Brainwaves, small cartoon-style characters who populate each page in large numbers to provide comments on the topic under discussion. Every second alternate double-page spread is actually a fold-out which opens up to provide a four-page timeline of the development in a particular subject. Inventions and their applications covered include the lens, the steam engine, electricity and the light bulb, the internal combustion engine and the transistor, along with brief information of the people who made some of these important breakthroughs.

In 2007 the same illustrators published the next in the series, *How the incredible human body works: by the Brainwaves*, written by Richard Walker, which uses the same format to explain the systems of the human body. The four-page lengthways foldout of the digestive system is particularly worth noting. (TECHNOLOGY; HUMAN BIOLOGY)

‘What’s happening to me?’

Mayle, Peter; illustrated by Arthur Robins (Pan Australia, 1988, 56pp.)

Tells about puberty changes clearly and informally, with special attention to the things that worry teenagers and the preteens. Apart from two charts of life drawings showing the changes, the illustrations by Arthur Robin are cartoon style, very expressive and to the point.

Also by the same team is **‘Where did I come from?’**. It has less text and larger typeface to show younger children how babies are made. (HUMAN BIOLOGY)

Atoms, dinosaurs and DNA: 68 great New Zealand scientists

Meduna, Veronika and Rebecca Priestley (Random House New Zealand, 2008, 160pp.)

Adapted from a 2006 exhibition at the National Library of New Zealand, this book expands its coverage of scientific discovery in that country to include twice as many scientists. Taking a chronological approach since European colonisation, the first entries are for scientists such as Solander and Banks who were not New Zealand-born but investigated its unique natural environment and published their findings. Some of these scientists such as Ernest Rutherford are world-renowned whilst others are more famous in their own country or in their own specialty. The book is well-designed and laid out with personal photos and biographical information, awards, quotes and photos relevant to their field of expertise. This book provides a fascinating introduction to many fields of scientific endeavour as well as introducing readers to the inspiring men and women of New Zealand who have made outstanding contributions to it. (FAMOUS SCIENTISTS; GENERAL SCIENCE)

Gorillas

Miller-Schroeder, Patricia (Raintree Steck-Vaughn, Untamed World, 1997, 64pp.)

This introduction to these fascinating creatures contains much more useful information than many of the glossy coffee-table books produced for adults. From the use of a small gorilla silhouette at the top of each page to the use of a variety of layouts according to the nature of the information, this is a well-conceived and well-planned book. While many pages are standard in their layout, others have backgrounds of shades of green or yellow. Arguments for and against conservation are given. Quotes from wildlife biologists and folklore about gorillas all add to a well-rounded coverage of the subject. (ANIMALS)

Australian frogs: Amazing amphibians

Morris, Jill; illustrated by Lynne Tracey (Greater Glider, 1995, 48pp.)

After a general introduction on frog biology, 17 types of frogs are described. The outstanding features are the gouache paintings setting the frogs in their habitats and depicting other animals (labelled) that live there. Verses forming part of the illustrations are not of high literary quality but may help children remember certain features about the frogs and may make the book accessible to younger children. Illustrated by Lynne Tracey. Similar books are Australian kangaroos: magnificent Macropods (1998), Australian owls, frogmouths and nightjars (1993) and Australian bats (1992) but the latter has a few problems with readability and consistency of the text. (ANIMALS. AUSTRALIAN)

The wombat who talked to the stars: The journal of a northern hairy-nosed wombat

Morris, Jill; illustrated by Sharon Dye (Greater Glider, 1997, 32pp.)

Told in the first person as though by Male No 25. The first part follows a caption-text approach with items of information grouped under page headings and scattered over the page. Then there are some verses and the story of the capture of Male 104 for a breeding program. The overall effect is of a collection of well-researched but disparate items, but the illustrations by Sharon Dye and colour scheme make the book very attractive. (ANIMALS. AUSTRALIAN)

Insect (Revised ed.)

Mound, Laurence (Eyewitness Guide, Dorling Kindersley, 2003, 64 pp.)

This is a thorough introduction to insects from general features of structure and development, to descriptions of major families, and insect relationships with plants and people. It even has a page showing what are not insects to clear up any confusion. The detail is suitable for older readers but the generous array of photographs would also make it accessible for younger readers. For the older end of the 7-12 age range. (ANIMALS)

Howard Florey: Miracle maker

Murray, Kirsty (Little Ark, Allen & Unwin, 1998, 32pp.)

Despite its unfortunate cramped appearance, this book is a good biography of Florey. It shows how his work was built on discoveries by others and was developed through the cooperative efforts of a team. (FAMOUS SCIENTISTS. AUSTRALIAN)

Man-eaters and blood suckers

Murray, Kirsty (Allen & Unwin/Little Ark, 1998, 96pp.)

This title in the well-regarded True Stories series takes as its starting point many children's fascination with gruesome accounts of man-eating animals. The combination of true accounts of attacks with facts about the usual behaviour of the species concerned is recounted in a lively conversational style. The fearsome tiger baring its teeth on the front cover adds to the book's appeal. (ANIMALS. AUSTRALIAN)

Animal architects

Nicholson, John (Allen & Unwin, 2003, 32pp.)

Examples of animal houses or nests are grouped and described, such as the burrows of wombats, badgers, prairie dogs, meerkats, and trapdoor spiders. The mallee fowl is included as a digger with the above, with details about the construction and temperature control of its mound. Other groups are nomads (animals which carry their houses with them, such as turtles, shellfish and hermit crabs), weavers (several birds and spiders), carpenters (woodpecker, beaver, carpenter bee and woodworm), and bricklayers (oven bird, termites, bees and wasps, albatross and mudlark). The text is straightforward, sometimes with quite a bit of detail in captions, and Nicholson's coloured drawings clearly illustrate relevant points. (ANIMALS. AUSTRALIAN)

Building the Sydney Harbour Bridge

Nicholson, John (Allen & Unwin, 2000, 32pp.)

Award-winning Australian author and illustrator John Nicholson has produced a well-written and visually stunning account of the building of the Sydney Harbour Bridge. The engineering and technical feats involved, combined with historical insights into the society of the time, produce a fascinating well-rounded look at an unusual topic. Named as an Honour Book in the 2001 Children's Book Council of Australia Eve Pownall Award for Information Books. (TECHNOLOGY. AUSTRALIAN)

The penguin book: Birds in suits

Norman, Dr Mark (Black Dog Books, 2006, 30p.)

Winner of the 2007 Eve Pownall Award for Information Books in the annual Children's Book Council of Australia Book of the Year Awards, The penguin book is notable for its excellent design by Blue Boat Design. Superb colour photographs of each species of penguin are combined with well-designed page layout and clear diagrams to present an excellent description of this intriguing bird. Dr Mark Norman is a research scientist with Museum Victoria and has followed this book with the companion volumes The Antarctica Book: Living in the freezer (2007) and The Shark Book: Fish with Attitude (2008). (ANIMALS. AUSTRALIAN)

Numbers

Parker, Steve (Macdonald Young Books, Science Works!, 1995, 46pp.)

One of the best features of this book is the excellent introduction to the book itself – how it is laid out, the contents of the different sections and what the different colour-coded panels contain. This makes the following pages easy to follow and enables the reader to jump straight to sections which may interest them such as the Special FX or DIY Science panels. The overall coverage is not just an introduction to numbers and mathematics but a fascinating conglomerate of facts, activities and curiosities. (MATHEMATICS)

Skeleton (Revised ed.)

Parker, Steve (Eyewitness Guides, Dorling Kindersley, 2003, 64pp.)

This is a thoroughly and clearly illustrated book on human and other skeletons. It looks at whole skeletons of a human, other mammals, birds, fish, reptiles, amphibians and exoskeletons, before looking more closely at the parts of each skeleton using the human skeleton as a reference. It is very detailed, with skeletons shown starkly against a white background. Many small topical pictures fill the spaces on each page. The captions in small print contain much information, but a brief text introduces each subject. This is a book to explore slowly, and to use as a reference from primary to early tertiary level. (ANIMALS; HUMAN BIOLOGY)

Rock and mineral (Revised ed.)

Pellant, Chris and staff of Natural History Museum (Eyewitness Guides, Dorling Kindersley, 2003, 64pp.)

Like other Eyewitness Guides it covers its subject with numerous photographs on white background, and with captions and a brief text. Explains what rocks and minerals are, types of rocks, and uses – for tools, building, pigments, ore, gems, etc. For the older end of the 7-12 age range. (OUR WORLD)

Numbers: The key to the universe

Poskitt, Kjartan (Murderous Maths, Scholastic, 2002, 192pp.)

In a down to earth (or should we say out in space?) informal style, this book introduces Fibonacci numbers, things you can do with squares and cubes, prime numbers, numbering systems with different bases, and many other intriguing but useless things you can do with numbers. The humour and line drawings by Philip Reeve will draw in many children who enjoy playing with numbers at the older end of this age range. With a table of contents but no index, books in this series are designed to be read for enjoyment rather than be used for research.

With similar earthy humour (guaranteed no sums), Vicious circles, and other savage shapes explores the characteristics of circles, triangles and polygons and concludes with a proof of Pythagorus' theorem done as a court trial of a revived Pythagorus. Algebra and the phantom X introduces algebra and shows how it can be used to solve problems such as the price of arrows and cannonballs and to prove how some card tricks work. The humour and cartoon drawing will engage children previously turned off by the idea of maths. (MATHEMATICS)

More Australian dinosaurs

Pride, Marilyn (Angus & Robertson, 1997, 32pp.)

Twelve types of recently discovered reptiles and amphibian from dinosaur times are described and depicted in a double-page spread each. Maps indicate location of fossil finds and the text indicates how only a few bones of each were found. The introduction and descriptions together give a good overview of Australia in the Mesozoic. This book is much more readable than either the easier (Dinosaurs of Australia) or more difficult (Australian Dinosaurs) version of Pride's earlier book, but it covers a different selection of species. (PREHISTORIC TIMES. AUSTRALIAN)

Time: the measuring of time from the Egyptian calendar to the atomic clock

Rochat, Caterina (Watts, 1995, 48pp.)

Originally produced in Florence and illustrated by a team of three Italian illustrators, this book covers the history of the measurement of time. In layout it is not unlike the Eyewitness Guides with an introductory paragraph or two on each new topic with further information in lengthy captions adjacent to the illustrations. Some double pages feature a large central illustration while others contain several smaller ones. Contents cover calendars, clocks and seasons, including important figures who have contributed to the field and experiments for the reader. Part of the "How Science Works" series. (OUR WORLD)

Our patchwork planet: The story of plate tectonics

Sattler, Helen Roney; illustrated by Giulio Maestro (Lothrop, Lee & Shepard, 1995, 48pp.)

In this unusual book for children, the topics of plate tectonics and continental drift are described clearly and illustrated effectively with maps, diagrams and photographs. The contents follow a logical progression and the book concludes with a reading list containing references to journal articles as well as books. Bright blue borders, captions, endpapers and page numbers tone with the colours used in the illustrations to produce an attractive explanation of a complex subject. Illustrated by Giulio Maestro. (OUR WORLD)

Icebergs and glaciers

Simon, Seymour (Morrow, 1987, 32pp.)

Combining magnificent full-colour photographs with glossy blue, black or white pages of text, this large picture book format title covers the creation of glaciers, ice caps and sheets, and icebergs. (OUR WORLD)

Out of sight: Pictures of hidden worlds

Simon, Seymour (Sea Star, 2000, 48pp.)

The large spectacular images in this book are of things which cannot be seen by the naked eye. Electron micrographs, CAT scans, X-rays, freeze-frame photographs and satellite and telescope images are combined with colour coordinated text boxes. Young readers are introduced to many of the techniques used in science, medicine and photography which enable us to see into otherwise invisible realms. (TECHNOLOGY)

Discover and learn about Australian forests and woodlands

Slater, Pat (Ark Australia Habitats and Ecosystems, Steve Parish, 2002, 48pp.)

Brief introductory sections on the voyage of ark Australia, forest ecology, classification, and biodiversity, are followed by more detail on Australia's forest types (tropical and temperate rainforests, monsoon forests, dry and wet sclerophyll forests). Information is given in short paragraphs, text boxes on specific subjects, coloured

photographs (mainly by Steve Parish), captions, and 'facts 'n' figures files'. Other sections cover predators and parasites, fungi, food chains and other interactions, and effects of fire and humans. The resulting presentation is attractive for both browsing and studying.

Discover and learn about Australian wetlands and waterways also covers its subject well, but other books in the series are rather disjointed. (PLANTS; ANIMALS. AUSTRALIAN)

Mammals

Slater, Pat (First Field Guides, Steve Parish, 1997, 56pp.)

Not specifically for children but the small size (books in this series are both pocket-sized and slim) limits the content, making this field guide easy enough for children to tackle. The use of colour and symbols makes the information easy to take in at a glance. Each species described is allotted a page, with distribution map. For the older end of the 7-12 age range.

Other titles in the series are Frogs and reptiles, Fish, Birds, Insects and spiders (identifies by orders or families rather than species), and Marine life. (ANIMALS. AUSTRALIAN)

Birds

Stodart, Eleanor (Australian Junior Field Guide, Octopus, 1989, 72pp.)

Other Australian Junior Field Guides are Butterflies and moths, Biters and stingers, Frogs, The seashore (1989); Reptiles, Beetles (1990); The backyard, creeks and ponds (1991). All introduce the young reader to the subject by describing, and depicting in coloured photographs, a limited number of the more common species. Introductory notes and line drawings show where and how to look. Each book concludes with a number of log pages. (ANIMALS. AUSTRALIAN)

A doctor's life: A visual history of doctors and nurses through the ages

Storring, Rod (Heinemann, 1998, 48pp.)

Despite the lack of an introduction and conclusion, this book nevertheless provides an interesting overview of the history of medicine by innovative means. Each double page takes a medical practitioner from a particular historical period, beginning with the Romans. A photograph of a person dressed as he or she would have appeared features on the page, together with the medical tools of the day. The text includes information on techniques such as blood letting as well as medical practices of the time. Although mainly discussing Western medicine, Islamic and North American Indian medicine are mentioned but not Oriental or Chinese. (TECHNOLOGY)

Looking at plants

Suzuki, David (Australian adaptation, Little Ark Books/Allen & Unwin, 1989, 96pp.)

Several sections inform about plants, their importance or structure, and are each followed by a few activities which demonstrate plant biology or uses. Instructions are written for children to follow themselves and indicate where help will be needed with boiling water and other potentially dangerous steps. Illustrated with line drawings.

Looking at the body, . . . at the senses, . . . at insects, . . . at the weather, and . . . at the environment provide equally informative and child-oriented texts and suitable activities for the age group. (PLANTS; ANIMALS; GENERAL SCIENCE)

The heart of the world: Antarctica

Tulloch, Carol (ABC Books, 2003, 45pp.)

This very full introduction to Antarctica begins with its geological history and uses numerous small clear photographs from many sources, and some lively diagrams and sketches by the author. It describes Antarctica's unique position in the world, the ice sheets, sea ice, climate, wildlife, human history, and the role of international cooperation. Most information is provided in a very readable text, but some details, such as descriptions of animals, are presented as captions to photographs and in boxes which give the personal views and activities of scientists from different disciplines. (OUR WORLD. AUSTRALIAN)

A leaf in time

Walker, David; illustrated by Mic Rolph (Making Sense of Science Series, Portland Press, 1999, 32pp.)

This outline of life on Earth, from early bacteria to industrial society, emphasises the essential role plants have played in producing oxygen, feeding all life, and providing us with stored energy in fossil fuels. The narrative has the satisfying structure of a story and the simple, clear language will help children and their teachers develop their own language for discussion. The book is best read as a whole, perhaps with an adult to help the child, rather than approaching it as a source of facts. There is no index or glossary, but specialised words are printed in bold when they first appear, with a pronunciation guide in the brackets. The soft watercolour illustrations by Mic Rolph provide scope for discussion. (PLANTS)

Ladybird

Watts, Barrie (Keeping Minibeasts, Franklin Watts, 1990, 29pp.)

In this attractively designed, clear, practical guide to keeping ladybirds, colour photographs show the insects in action and handling methods such as how to use a small brush for collecting. The animal and its habits, and techniques for handling, housing (the reader is shown how to make a net cage), feeding and then release are described. Another book in the series, *Ants*, depicts species not occurring in Australia but the general statements on life cycles and handling are appropriate and make the book a valuable guide. (ANIMALS)

Emperors of the ice: The emperor penguins of Antarctica

Westerskov, Kim (Omnibus, 1997, 42pp.)

A narrative text divided by headings and accompanied by superb photographs describes the biology of emperor penguins after a general section on Antarctic conditions. The enthusiasm of the New Zealand author and photographer shines through.

Seals of the blizzard: The Weddell seals of Antarctica (1997) covers its subject in similar style and format. (ANIMALS)

My first science book

Wilkes, Angela (Hodder and Stoughton, 1990, 48pp.)

Originally produced in England by Dorling Kindersley. Large eye-catching photographs illustrate the equipment needed, and the step-by-step instructions for each activity. Even though format and title suggest a very young reader, the vocabulary and sometimes the complexity of instructions make this a book for primary school children. Precautions and warnings are given where necessary. (GENERAL SCIENCE)

Ages 11 and up

Backyard insects (2nd ed.)

Horne, Paul A. (The Miegunyah Press at Melbourne University Press, 2005, 264pp.)

This comprehensive identification manual to the insects which inhabit Australian backyards is readily accessible to the older child reader. Each left-hand page is black with a photo of the insect while each white right-hand page contains the common name of the insect in bold type, its scientific family name and a few paragraphs of information with its size, dietary habits and genus listed simply in a right-hand margin. Occasionally the text about an insect will spread onto a second page in which case a second photograph is also included, but generally the information is only a few paragraphs in length. Photographs by Denis J. Crawford. (ANIMALS. AUSTRALIAN)

The encyclopedia of science (Revised.ed.)

(Dorling Kindersley, 2006, 448pp.)

The caption-text approach so well developed by Dorling Kindersley is well suited to an encyclopedia. Information is grouped under topic headings, which are grouped into sections. 'Find Out More' boxes, a comprehensive index and a glossary allow for easy cross-referencing. Illustrated in full colour throughout. For the upper primary and secondary levels. (GENERAL SCIENCE)

Carbon

Knapp, Brian (Reed Library, Elements, 1996, 56pp.)

This is one title in a series of books designed to assist young chemists understand the characteristics and usage of the most important chemical elements. There are 15 volumes in the set and Carbon is typical of the series. Topics covered include the carbon cycle, the occurrence of carbon and its compounds, polymers and organic compounds. The contents conclude with key facts about carbon, the periodic table, understanding equations and a glossary of technical terms. (GENERAL SCIENCE)

1001 inventions that changed the world

Challoner, Jack (ed.) (ABC Books, 2009, 960pp.)

Another "1001 Original" in the "Before You Die" series, this overview of technological advances is divided into chronological sections from "The ancient world" through to "The internet age". It gives approximate times for those innovations unable to be specifically dated as well as years for later inventions, beginning with stone tools about 2,600,000 BCE and ending with the large Hadron Collider in 2008. Descriptions of each breakthrough are brief, ranging from a paragraph to half a page, and there are no detailed explanations of the inner workings of each invention. However what this book does provide is an impressive lengthy list of humankind's ingenuity across a range of fields, illustrated with photographs or historical art on every double page spread. With an index at the front and a glossary and index of inventors at the end, information retrieval is easy and also assisted by cross-referencing in individual entries. (FAMOUS SCIENTISTS; TECHNOLOGY)

Wildlife of Australia

Egerton, Louise (text) Jiri Lochman (photos) (Allen & Unwin Jacana Books, 2009, 448pp.)

Whilst not a comprehensive encyclopedia of all of Australia's animals (that would take volumes!), this book is nevertheless a thorough overview. Following on from a foreword by Professor Michael Archer, a map of the country and an introduction outlining the history of the continent, six sections cover Australian mammals, birds, reptiles, frogs, freshwater fishes and invertebrates. The text is written in a conversational tone without being too casual and the photographs are excellent. Emphasis is not on individual animals, as in a field guide, but rather on groups so that, for instance, the reptile section discusses skinks, goannas, blind snakes etc. Despite some minor grammatical errors, this title would be a useful home library reference book. It concludes with sections on further information and scientific names, a glossary and an index. (ANIMALS)

Blame my brain: the amazing teenage brain revealed

Morgan, Nicola (Walker Books, 2007, 207p.)

This entertaining paperback describes the changes which take place in the human brain during adolescence and how these changes contribute to many teenage behavioural trends which may drive parents to distraction. These include emotional reactions, sleep patterns and risk-taking. Also included are sections on gender differences, the effects of alcohol and other drugs and psychological problems such as depression. This book is also an informative source for parents and was shortlisted for the Royal Society Junior Prize for Science Books in 2006. A companion volume called Know your brain: Feed it Test it Stretch it was published in 2007. (HUMAN BIOLOGY)

The state of the planet

Nicholson, John (Allen & Unwin, 2000, 48pp.)

This introduction to many of the world's environmental problems is suitable for upper primary and secondary students. With less illustrative content than most of John Nicholson's books and more detailed text, issues such as deforestation, loss of biodiversity, pollution, global warming and energy usage are discussed in a balanced manner. With sections on what is being done and what the reader can do to help, this book is made less depressing and more relevant to its young audience. It also has an introduction by David Suzuki. (THE PHYSICAL WORLD. AUSTRALIAN)

The Usborne internet-linked science encyclopedia

Rogers, Kirsteen et al. (Usborne, 2000, 448pp.)

This comprehensive encyclopedia not only introduces a vast number of scientific topics to the young (and not so young) reader but also lists hundreds of tried and tested websites. It is most attractively produced, with pages of different colours, excellent illustrative content and clear and concise explanations. In a work of this magnitude, it is unusual to see so few minor areas of concern regarding accuracy. A magnificent reference work for young and old, students and teachers alike. See www.usborne-quicklinks.com for the webpages recommended in the book. (GENERAL SCIENCE)

Tobacco and your mouth: The incredibly disgusting story

Winters, Adam (Incredibly Disgusting Drugs, Rosen Central, 2000, 48pp.)

Starting with the effect of ubiquitous advertising, this book then shows the danger of addiction, what happens to the mouth and lungs, the effect of secondhand smoke, and cigarettes as a cause of fire. It also discusses how not to start and how to stop. It uses chatty language with some graphic photographs. For the older end of this age range. (HUMAN BIOLOGY)

How cool stuff works

Woodford, Chris and others (Dorling Kindersley, 2005, 256p.)

This comprehensive book examines the science and componentry behind the modern technology developed in recent years. Divided into chapters with verbs as headings (eg. 'Connect', 'Play', 'Move' and 'Survive'), the full colour, well-designed and attractive pages provide brief explanations of how equipment such as MP3 players, voice recognition, microwave ovens, submersibles, virtual keyboards and pacemakers work. (TECHNOLOGY)

Animals

Preschool

One hungry spider

Baker, Jeannie (Scholastic Australia, 2006, 28pp.)

This counting book also teaches a few things about how an orb web spider lives. Illustrations are carefully constructed collages. (ANIMALS)

Silly Galah

Brian, Janeen; illustrated by Cheryll Johns (Scholastic Australia/Omnibus, 2001, 32pp.)

Light-hearted verses and bold bright illustrations by Cheryll Johns introduce children to seventeen Australian animals (eight mammals, six birds, two reptiles and one frog). A secondary text around the edge of the page provides a bit more information in more serious fashion. (ANIMALS. AUSTRALIAN)

Sebastian lives in a hat

Catterwell, Thelma; illustrated by Kerry Argent (Scholastic Australia/Omnibus, 1991, 32pp.)

The mother of Sebastian, a wombat, was killed by a car when he was about four months old and still in her pouch. He was hand-reared by the author who describes in this picture book his development and needs until he was able to return to the wild. Delightful, realistic full colour illustrations by Kerry Argent complement the text. Reissued in paperback by Scholastic in 2004. (ANIMALS. AUSTRALIAN)

Diary of a Wombat

French, Jackie; illustrated by Bruce Whatley (Harper Collins, 2002, 32pp.)

A wombat's daily activities and interactions with the people who live near her burrow are recorded in diary form as though by the wombat, with items like 'slept a bit', 'asked for carrots'. The brief text indirectly reveals a lot about wombat character and about the tolerance needed to live with an animal whose requirements do not quite coincide with those of the people. Bruce Whatley's illustrations bring the wombat to life. (ANIMALS. AUSTRALIAN)

Growing Frogs

French, Vivian; illustrated by Alison Bartlett (Read and Wonder, Walker Books, 2000, 30pp.)

The story of a little girl and her mother who take some frogspawn and watch it develop into frogs is combined with scientific facts about frog biology and sound advice on how to look after tadpoles and frogs. An unusual typeface, a naïve style of art and a simple index add to the child-centred text, resulting in a charming information book for young children. Reissued with an accompanying CD in 2008. (ANIMALS)

365 Penguins

Fromental, Jean-Luc and Joëlle Jolivet (Abrams books for Young Readers, 2006, unpagged)

This large format, four-colour picture book tells the amusing story of a family which receives by courier a penguin a day for a year. However apart from the humorous storyline, the young reader is introduced to basic mathematical operations. When the numbers of penguins are added, they are arranged in groups ("12 boxes of 12 penguins = ??") and their food requirements are calculated. By the end of the book, readers have discovered who is clandestinely sending the birds, why and some basic facts about penguins. However the strength of the book is in its plot and mathematical concepts. (MATHEMATICS; ANIMALS)

Two's Company...

Greenway, Shirley (Charlesbridge, 1997, 32pp.)

This beautiful picture book illustrated with superb photographs from the team at Oxford Scientific Films is a simple introduction to animal behaviour through the names of different groups of animals. Each left-hand

page shows a small photograph of a single animal and a photograph of two of the animals; the right-hand page shows a large picture of a whole group with the correct name (flock, shoal, swarm, herd, etc.) A simple introductory page and a corresponding conclusion tie up the concept neatly but a final two pages of further information about each animal adds an extra dimension. (ANIMALS)

Walk with a Wolf

Howker, Janni; illustrated by Sarah Fox-Davies (Read and Wonder, Walker Books, 2001, 32pp.)

Originally published in hardback in 1997 and reprinted in paperback in 2001, *Walk with a wolf* is a superbly produced information book for young children. The lyrical, poetic text is written by an award-winning British author and the beautiful realistic illustrations are by an artist experienced in creating animal books for children. As with other titles in the Read and Wonder series, additional facts about wolves are curved beside the evocative artwork to augment the information imparted in the narrative. Due to be reissued with an accompanying CD at the end of 2008. (ANIMALS)

Mrs Millar's Frogs

Millar, Annette; illustrated by Kerry Anne Jordinson (Paperbark, 1998, 24pp.)

This delightfully simple story, told in rhyming verse in the first person, tells about Mrs Millar who lives in Broome and has frogs in every room. A snake comes in after the frogs so she banishes them to the pond outside. She misses them so much she allows them back inside. Both verse and illustrations (by Kerry Anne Jordinson) are fun and full of life. (ANIMALS. AUSTRALIAN)

The Hunt

Oliver, Narelle (Lothian, 1995, 32pp.)

A tawny frogmouth chases a series of animals for food but, before it can catch them, they disappear by settling on a background where their camouflage is most effective or by disguising themselves as a twig. Then the tawny frogmouth itself has to disguise itself as a branch to avoid a powerful owl. Keys at the back of the book indicate where and what all the hidden species are (there are many more than those the tawny frogmouth sees). (ANIMALS. AUSTRALIAN)

Where in the Wild?: Camouflaged Creatures Concealed and Revealed

Schwartz, David M. and Yael Schy (text), Dwight Kuhn (photos) (Tricycle Press, 2007, unpagged)

This flap book demonstrates the concept of camouflage to children in a stunning and very effective format. Each page opening has a heading and poem on the left-hand side and a full-size colour photograph on the right. Somewhere in the photograph is a well-camouflaged animal. To find out what the creature is and where it is hidden, the flap is lifted to reveal the same photograph greyed out except for the animal. A full page of information about it is then contained on the reverse side of the flap. With an emphasis on North American animals, those featured include mammals, amphibians, insects, reptiles and birds' eggs. With the additional information included, this book is also suitable for the 5 - 8 age group. (ANIMALS)

Ages 5 to 8

Bat Loves the Night

Davies, Nicola; illustrated by Sarah Fox Davies (Read and Wonder, Walker, 2001, 28pp.)

A simple narrative follows one night's activities of a pipistrelle bat, as it flies out between broken tiles, under trees and over bushes catching insects, and then returns to its roost and its baby. A secondary text in distinct font provides additional information on echolocation, food and roosting sites. Delicate illustrations by Sarah Fox Davies use a cream background for the day and pale blue for night. Reissued with an accompanying CD in 2008. (ANIMALS)

Big Blue Whale

Davies, Nicola; illustrated by Nick Maland (Read and Wonder, Walker, 1997, 32pp.)

This picture book about blue whales has been thoughtfully and unusually designed. Variations in the size of the lettering and snippets of information which follow the lines of the illustrations create visual interest and add emphasis. The text is well-written by a qualified zoologist and the illustrator, Nick Maland, has used cross-hatching effectively to create texture and movement. Reissued with an accompanying CD in 2008. (ANIMALS)

I Like Monkeys Because

Hansard, Peter; illustrated by Patricia Casey (Read and Wonder, Walker Books, 1993, 28pp.)

Introduces the variety of monkeys in lively language, in recognition that young children learn through all their senses, and puts into words the types of monkey behaviour children can see at the zoo. Illustrations (by Patricia Casey) in soft watercolour and line are equally lively. The different monkey types are labelled. (ANIMALS)

The Emperor's Egg

Jenkins, Martin; illustrated by Jane Chapman (Read and Wonder, Walker, 2000, 31pp.)

Using storytelling techniques Jenkins introduces young children to the wonder of how the male emperor penguin incubates his mate's egg through the Antarctic winter while the mate is away feeding, and how the female returns to feed the chick while the male goes off to sea. A secondary text in italics, in lines that flow through the illustrations, adds other items of information. The illustrations by Jane Chapman have plenty of life and form part of an excellent colour design. Due to be reissued with an accompanying CD at the end of 2008. (ANIMALS)

The Beaver Family Book

Kalas, Sybille and Klaus (North South Books, 1999, 48pp.)

This refreshingly alive and personal story tells how three baby beavers were taken from northern Sweden to Beaverbrook in Austria to be re-established there and studied. The book gives a few insights into the pleasures and difficulties of studying wild animals, and many insights into how beavers live. The coloured photographs are varied, interesting and well arranged. There are several brilliant touches of design, one being the pattern of the beaver's tail on the endpapers. Translated from German by Patricia Crampton.

The penguin family book and The polar bear family book, also co-written by Sybille Kalas, have a similarly fresh approach in showing the life cycle of a penguins and polar bears. (ANIMALS)

I Love Guinea Pigs

King-Smith, Dick; illustrated by Anita Jeram (Read and Wonder, Walker Books, 1994, 28pp.)

Written with humour as the personal statement of someone with a life long interest in guinea pigs, the text covers, very briefly, the history of European knowledge of guinea pigs, the varieties available, how to look after them, the sounds they make, and what the newborn are like. The line and wash coloured illustrations by Anita Jeram show particularly good lifelike postures of both guinea pigs and people and their brief notes provide additional information without interrupting the flow of the text.

All pigs are beautiful (1995) is a similar lighthearted and personal account about domestic pigs. (Like the film Babe it is likely to discourage an interest in eating pork.) Reissued with an accompanying CD in 2008. (ANIMALS)

Yakkin the Swamp Tortoise: Book 1 – The most dangerous year

Kuchling, Guundie and Gerald (Chelonia Enterprises, 1995, 32pp.)

The swamp tortoise is endangered. It lives in seasonal swamps on clay pans in the Swan River Valley. The biology is described through the realistic story of one young tortoise, from hatching through the seasons of the first year, in an easy to read text. Linocut illustrations have bold lines and bright colours and are complemented by a bold font.

In Book 2 – **Survival** (Era 1997) Yakkin's fate is followed through three years. She survives bushfire and a cat's interest, but brick pits drain the swamp and she has to leave. Fortunately a family picks her up on a road and she is taken to a special nature reserve. The text reads as well but a lighter font does not go so well with the linocuts. Endnotes provide information without disrupting the story. (ANIMALS. AUSTRALIAN)

The Snake Book

Ling, Mary and Mary Atkinson (Dorling Kindersley, 1997, 28pp.)

Each snake featured in this book has been placed in a photographer's white box to be photographed. The effect given when the book is opened is to see a very realistic vivid image of a snake across a white double-page spread. Snakes chosen are both venomous and non-venomous but do not include any Australian examples despite some of the most poisonous snakes in the world originating here. Text is very simple with a few more facts about each species given on the last page. Photography by Frank Greenaway and Dave King. (ANIMALS)

Polar Bear Cubs

Matthews, Downs (Hippo Books, Scholastic, 1990)

A well-written and very readable text follows the first two years in the life of a pair of cubs. Illustrated with an excellent choice of photographs by Dan Guravich. Suitable for reading aloud to younger children. (ANIMALS)

Into the Deep

Norman, Dr Mark and David Paul (Black Dog Books, 2010, 32pp.)

This 25.5cm square paperback only uses conventional left-to-right double-page spreads for the first two and last openings. The rest of the book is to be read vertically by rotating the book so that the left-hand page is at the top. Down the side of each spread is a depth chart and placed at the appropriate depths are photos of the fascinating creatures that live in the ocean. As the distance from the surface gets deeper, the background of the pages changes until it is black. Simple captions identify each creature and give brief information about them while the distances at the edge of the page are put into perspective by occasional facts about human activity at certain depths, such as how deep scuba divers can go and how far deep-sea fishing nets reach. The outstanding features of this book are the unusual layout and design and the stunning photographs. (OUR WORLD; ANIMALS)

Sand Swimmers: The Secret Life of Australia's Dead Heart

Oliver, Narelle (Lothian, 1999, 32pp.)

Providing aesthetic pleasure and a calm and reflective setting, this is an outstanding book on Australia's desert animals, from insects to mammals. Brown colours predominate and the reader is drawn in to find what is not immediately obvious. It is about the desert's normal state rather than the flowering after rain, and it introduces the human context, contrasting Aboriginal knowledge with Sturt's despair at the lifeless centre. Unfortunately, the use of lino-cuts limits the clarity of the illustrations and some animals carry names no longer current. (ANIMALS. AUSTRALIAN)

Uneversaurus

Potts, Adrian (David Fickling Books, 2006, unpagged)

Although a picture book, some of the vocabulary, concepts and jokes are more suitable for an older readership. Beginning with the obvious statement “No human has ever seen a dinosaur”, the text then asks “So how do we know what they looked like?” The book shows how clues on fossils help scientists put the skeletons of these creatures together and extrapolate from the skeleton to a realistic image of the living creature. But it then launches into a very good discussion of characteristics of animal coverings such as colour, camouflage, shading and texture and how these features may possibly have applied to dinosaur appearance. The illustrations then show imaginative options such as a tiger-striped Tyrannosaurus, a red Stegosaurus and a flock of multi-coloured Pterodactyls. Readers are urged to use their imaginations to guess what these amazing creatures may have looked like and the final endpaper provides a drawing of an Amargasaurus for them to colour in however they like. (PREHISTORIC TIMES; ANIMALS)

Pobblebonk the Frog

Reilly, Pauline (Kangaroo Press, 1996, 32pp.)

Information about frogs is given in a story about a particular frog with human interest supplied by children catching tadpoles. Finishes with four pages of facts about frogs. The concentration on one type of frog avoids the confusion that covering too many varied lifestyles can cause for this age group. The format is unpretentious with soft pencil and wash illustrations by Will Rolland.

This is one in a long series of books by this team about different Australian animals. The series is important because it introduces so much of our wildlife in a simple, accessible format. The slip-up in The Koala of depicting a front opening pouch is quite uncharacteristic of the series. (ANIMALS. AUSTRALIAN)

Once I was a Cardboard Box... but now I am a book about polar bears

Poitier, Anton (text) Melvyn Evans (Five Mile Press, 2009, 24pp.)

Originally published in the UK by Potter Books, this book and its companion, Once I was a comic... but now I'm a book about tigers, are written by well-known author Tony Potter. The books are produced totally of recycled paper and board and the dual text explains to readers all about polar bears in the main text and how recycling of paper is done on the right-hand side of each double-page spread. The design and layout are excellent with large bold font, photos of polar bears and drawings combining to be clear and engaging. This clever concept works surprisingly well and young readers will be well-informed about both polar bears and recycling. (OUR WORLD; ANIMALS; TECHNOLOGY)

How Do I Know it's an Ant? A book about animals

Stodart, Eleanor (Envirobook, 2002, 32pp.)

With watercolour illustrations, one paragraph of text and informative captions and labels per page, this book introduces 24 animal types, drawing attention to the features that help us tell one from another. A further 17 are covered briefly on one page. Most examples can be seen in Australia. The introduction draws attention to major features to look for, such as segments, legs and feelers, in terms a young child can understand. The rudiments of classification are introduced through colour-coded headings which indicate whether the animal has an internal skeleton, exoskeleton or no skeleton. Sizes are indicated. (ANIMALS. AUSTRALIAN)

One Less Fish

Toft, Kim Michelle and Allan Sheather (University of Queensland Press, 1997, 32pp.)

This cautionary tale is told in rhyme. In a progression from 12 to zero each type of fish in turn loses one of its number due to a different problem in the environment (explained in a subtext in small font). The illustrations have brilliant colours and give the book great aesthetic appeal. The rhyming text is backed up by an introduction, a description of the 12 types of fish, and a glossary. (ANIMALS. AUSTRALIAN)

Aranea: A story about a spider

Wagner, Jenny (Kestrel, 1975, 32pp.)

Tells the story, without any anthropomorphism, of how a garden spider coped with a sudden rainstorm. The attractive black and white illustrations by Ron Brooks are rather stylised. (ANIMALS. AUSTRALIAN)

Ages 8 to 11

Life in a rotten log

Atkinson, Kathie (Little Ark, Allen & Unwin, 1993, 32pp.)

By following the process of decay of a fallen tree till a new seedling tree takes root, this book introduces the various organisms that live in or on a rotting log and shows clearly that decay also means new life. The text and photographs convey the author's enthusiasm for her subject. (ANIMALS; PLANTS. AUSTRALIAN)

An Introduction to Insects

Bird, Bettina and Joan Short (Bookshelf, Martin Educational, 1988, 48pp.)

The first third of the book describes the structure of insects and how they breathe and make sounds. The next part describes the life histories of silverfish (no metamorphosis); short-horned grasshopper, dragon fly, cicada (part metamorphosis); and wanderer butterfly and Christmas beetle (full metamorphosis). Then a section describes insect behaviour. There is a pronunciation guide, and an index, but no glossary – words are explained as they are introduced. Colour photographs, line drawings and paintings are all clear and well captioned. Illustrated by Deborah Savin. (ANIMALS. AUSTRALIAN)

The Spotted-tailed Quoll

Breidahl, Harry (Investigating Australian Animals, Macmillan, 1994, 24 pp.)

This formal instructive book about quolls is clearly laid out, showing their position among mammals, their distribution (all four quolls are shown), measurement, tracks, diet, reproduction and conservation. Illustrated by Judy Uehlein Nelson.

Other titles in the series, which has several illustrators, The koala, The red kangaroo, The common wombat, The common ringtail possum and The southern brown bandicoot, closely follow the same format so that some parts are repetitive but together they give a good introduction to Australian marsupials. (ANIMALS. AUSTRALIAN)

Spotlight on Spiders

Clyne, Densley (Small World Series, Little Ark/Allen & Unwin, 1995, 32pp.)

Brilliant photographs and a relaxed conversational text approach the subject in a way young children will easily relate to.

It's a frog's life (1995) and **Flutter by butterfly** (1994) also provide good introductions to these animals. However, the first books in the series were less clear as they lacked captions. For the younger end of the 7-12 age range. (ANIMALS. AUSTRALIAN)

Sharks

Coupe, Sheena and Robert (Great Creatures of the World, Golden Press, 1990, 68pp.)

An excellent comprehensive guide to sharks of all kinds, lavishly illustrated with colour photographs, drawings and diagrams. Coverage includes what sharks are, ancient species, types of sharks, habitat, reproduction and shark attacks. Fact boxes contain interesting snippets of information. The glossary and index make it a useful reference tool.

A companion volume, *Whales* by Leslie Dow, follows a similar format but contains a couple of small errors (one photograph is upside down!). (ANIMALS. AUSTRALIAN)

Reptiles

Creagh, Carson (and Weldon Owen team) (Allen & Unwin/Macdonald Young Books (Discoveries), 1996, 64pp.)

Using a caption-text layout similar to the Collins Eyewitness Guides but with fewer items per page and with more artwork than photographs, this book provides a good overview of reptile biology. It has one doublepage spread for ancient reptiles, four each for chelonians and crocodilians, one for the tuatara, nine for lizards, seven for snakes, and one for danger to reptiles. Although prepared in Australia it is designed for the international market and so the examples used come from around the world, but good Australian examples are included.

Mammals (1996) has similar format and forms an excellent overview of the subject.

Dinosaurs (1995) also provides a good overview of the subject, putting them in context well, with sections on before the dinosaurs, the world in Triassic, Jurassic and Cretaceous periods and uncovering dinosaur clues as well as describing types and behaviour. (ANIMALS; PREHISTORIC TIMES. AUSTRALIAN)

Wildlife of Australia

Egerton, Louise (text) Jiri Lochman (photos) (Allen & Unwin Jacana Books, 2009, 448pp.)

Whilst not a comprehensive encyclopedia of all of Australia's animals (that would take volumes!), this book is nevertheless a thorough overview. Following on from a foreword by Professor Michael Archer, a map of the country and an introduction outlining the history of the continent, six sections cover Australian mammals, birds, reptiles, frogs, freshwater fishes and invertebrates. The text is written in a conversational tone without being too casual and the photographs are excellent. Emphasis is not on individual animals, as in a field guide, but rather on groups so that, for instance, the reptile section discusses skinks, goannas, blind snakes etc. Despite some minor grammatical errors, this title would be a useful home library reference book. It concludes with sections on further information and scientific names, a glossary and an index. (ANIMALS)

The secret world of wombats

French, Jackie; illustrated by Bruce Whatley (HarperCollins Australia, 2005, 176pp.)

From the creators of *Diary of a wombat* comes a more serious and informative book about the biology and behaviour of wombats. Told in an entertaining tone with amusing anecdotes, this book is written by an author who loves wombats dearly and lives with several on her property.

A follow-up title about kangaroos has just been published in 2008 called **How high can a kangaroo hop?** (ANIMALS; AUSTRALIAN)

There's an Echidna at the Bottom of my Garden

French, Jackie; illustrated by David Stanley (Tadpoles, Koala Books, 1997, 64pp.)

Two threads run side by side. In a larger serif font and in the first person, the author tells of her encounters with an echidna over the years. The incidents are built into a readable narrative which has a good climax as not one, or two, but three echidnas are seen. In smaller non-serif font, adjacent to each appropriate incident, are a few sentences about echidna biology. The half tone illustrations (by David Stanley) are attractive but have minor problems with spines being too large and feet inaccurate. (ANIMALS. AUSTRALIAN)

Oceans

Green, Jen (3D pop-up explorer, Walker Books, 2008, 30 pp.)

This is not a pop-up book for the very young child. Rather it contains a lot of information about ocean ecology, including different habitats, life forms and food chains. Slightly larger than A4 landscape in size, the widthways arrangement of the pages has been used to great effect in the design, layout and illustrative content. This includes five three-dimensional pop-up pages which show very effectively life in a rock pool, on a tropical coral reef, in a kelp forest, in waters below 200 metres deep and around 'black smokers'. The book is indexed and all photographs, diagrams and illustrations are captioned, with much of the information in these paragraphs. The only flaw is on p 21 where the text mistakenly claims that 'Great white sharks can grow up to half a metre long' instead of 'up to six metres long'. (The publisher has been advised of this and it should be fixed in the next printing.) (OUR WORLD; ANIMALS)

Walking with the Seasons in Kakadu

Lucas, Dianne; illustrated by Ken Searle (Allen & Unwin, 2003, 32pp.)

In English, but with some terms from the Gundjehmi language, this book takes readers through the six seasons recognised by the Aboriginal people of Kakadu. It shows readers the weather patterns and the characteristic changes in plants and animals which determine the beginning and end of each season. Descriptions of the activities of flowers, fruits and animals are set in boxes against one to three scenes of each season painted by Ken Searle. People playing or collecting food are often included. Animals and flowers are shown well, except for the orb spider being upside down. (ANIMALS; PLANTS. AUSTRALIAN)

Gorillas

Miller-Schroeder, Patricia (Raintree Steck-Vaughn, Untamed World, 1997, 64pp.)

This introduction to these fascinating creatures contains much more useful information than many of the glossy coffee-table books produced for adults. From the use of a small gorilla silhouette at the top of each page to the use of a variety of layouts according to the nature of the information, this is a well-conceived and well-planned book. While many pages are standard in their layout, others have backgrounds of shades of green or yellow. Arguments for and against conservation are given. Quotes from wildlife biologists and folklore about gorillas all add to a well-rounded coverage of the subject. (ANIMALS)

Australian Frogs: Amazing Amphibians

Morris, Jill; illustrated by Lynne Tracey (Greater Glider, 1995, 48pp.)

After a general introduction on frog biology, 17 types of frogs are described. The outstanding features are the gouache paintings setting the frogs in their habitats and depicting other animals (labelled) that live there. Verses forming part of the illustrations are not of high literary quality but may help children remember certain features about the frogs and may make the book accessible to younger children. Illustrated by Lynne Tracey. Similar books are Australian kangaroos: magnificent Macropods (1998), Australian owls, frogmouths and nightjars (1993) and Australian bats (1992) but the latter has a few problems with readability and consistency of the text. (ANIMALS. AUSTRALIAN)

The Wombat Who Talked to the Stars: The journal of a northern hairy-nosed wombat

Morris, Jill; illustrated by Sharon Dye (Greater Glider, 1997, 32pp.)

Told in the first person as though by Male No 25. The first part follows a caption-text approach with items of information grouped under page headings and scattered over the page. Then there are some verses and the story of the capture of Male 104 for a breeding program. The overall effect is of a collection of well-researched but disparate items, but the illustrations by Sharon Dye and colour scheme make the book very attractive. (ANIMALS. AUSTRALIAN)

Insect (Revised ed.)

Mound, Laurence (Eyewitness Guide, Dorling Kindersley, 2003, 64 pp.)

This is a thorough introduction to insects from general features of structure and development, to descriptions

of major families, and insect relationships with plants and people. It even has a page showing what are not insects to clear up any confusion. The detail is suitable for older readers but the generous array of photographs would also make it accessible for younger readers. For the older end of the 7-12 age range. (ANIMALS)

Man-eaters and Blood Suckers

Murray, Kirsty (Allen & Unwin/Little Ark, 1998, 96pp.)

This title in the well-regarded True Stories series takes as its starting point many children's fascination with gruesome accounts of man-eating animals. The combination of true accounts of attacks with facts about the usual behaviour of the species concerned is recounted in a lively conversational style. The fearsome tiger baring its teeth on the front cover adds to the book's appeal. (ANIMALS. AUSTRALIAN)

Animal Architects

Nicholson, John (Allen & Unwin, 2003, 32pp.)

Examples of animal houses or nests are grouped and described, such as the burrows of wombats, badgers, prairie dogs, meerkats, and trapdoor spiders. The mallee fowl is included as a digger with the above, with details about the construction and temperature control of its mound. Other groups are nomads (animals which carry their houses with them, such as turtles, shellfish and hermit crabs), weavers (several birds and spiders), carpenters (woodpecker, beaver, carpenter bee and woodworm), and bricklayers (oven bird, termites, bees and wasps, albatross and mudlark). The text is straightforward, sometimes with quite a bit of detail in captions, and Nicholson's coloured drawings clearly illustrate relevant points. (ANIMALS. AUSTRALIAN)

The Penguin Book: Birds in Suits

Norman, Dr Mark (Black Dog Books, 2006, 30p.)

Winner of the 2007 Eve Pownall Award for Information Books in the annual Children's Book Council of Australia Book of the Year Awards, The penguin book is notable for its excellent design by Blue Boat Design. Superb colour photographs of each species of penguin are combined with well-designed page layout and clear diagrams to present an excellent description of this intriguing bird. Dr Mark Norman is a research scientist with Museum Victoria and has followed this book with the companion volumes The Antarctica Book: Living in the freezer (2007) and The Shark Book: Fish with Attitude (2008). (ANIMALS. AUSTRALIAN)

Skeleton (Revised ed.)

Parker, Steve (Eyewitness Guides, Dorling Kindersley, 2003, 64pp.)

This is a thoroughly and clearly illustrated book on human and other skeletons. It looks at whole skeletons of a human, other mammals, birds, fish, reptiles, amphibians and exoskeletons, before looking more closely at the parts of each skeleton using the human skeleton as a reference. It is very detailed, with skeletons shown starkly against a white background. Many small topical pictures fill the spaces on each page. The captions in small print contain much information, but a brief text introduces each subject. This is a book to explore slowly, and to use as a reference from primary to early tertiary level. (ANIMALS; HUMAN BIOLOGY)

Discover and Learn About Australian Forests and Woodlands

Slater, Pat (Ark Australia Habitats and Ecosystems, Steve Parish, 2002, 48pp.)

Brief introductory sections on the voyage of ark Australia, forest ecology, classification, and biodiversity, are followed by more detail on Australia's forest types (tropical and temperate rainforests, monsoon forests, dry and wet sclerophyll forests). Information is given in short paragraphs, text boxes on specific subjects, coloured photographs (mainly by Steve Parish), captions, and 'facts 'n' figures files'. Other sections cover predators and parasites, fungi, food chains and other interactions, and effects of fire and humans. The resulting presentation is attractive for both browsing and studying.

Discover and learn about Australian wetlands and waterways also covers its subject well, but other books in the series are rather disjointed. (PLANTS; ANIMALS. AUSTRALIAN)

Mammals

Slater, Pat (*First Field Guides*, Steve Parish, 1997, 56pp.)

Not specifically for children but the small size (books in this series are both pocket-sized and slim) limits the content, making this field guide easy enough for children to tackle. The use of colour and symbols makes the information easy to take in at a glance. Each species described is allotted a page, with distribution map. For the older end of the 7-12 age range.

Other titles in the series are Frogs and reptiles, Fish, Birds, Insects and spiders (identifies by orders or families rather than species), and Marine life. (ANIMALS. AUSTRALIAN)

Birds

Stodart, Eleanor (*Australian Junior Field Guide*, Octopus, 1989, 72pp.)

Other Australian Junior Field Guides are Butterflies and moths, Bites and stingers, Frogs, The seashore (1989); Reptiles, Beetles (1990); The backyard, creeks and ponds (1991). All introduce the young reader to the subject by describing, and depicting in coloured photographs, a limited number of the more common species. Introductory notes and line drawings show where and how to look. Each book concludes with a number of log pages. (ANIMALS. AUSTRALIAN)

Looking at Plants

Suzuki, David (*Australian adaptation*, Little Ark Books/Allen & Unwin, 1989, 96pp.)

Several sections inform about plants, their importance or structure, and are each followed by a few activities which demonstrate plant biology or uses. Instructions are written for children to follow themselves and indicate where help will be needed with boiling water and other potentially dangerous steps. Illustrated with line drawings.

Looking at the body, . . . at the senses, . . . at insects, . . . at the weather, and . . . at the environment provide equally informative and child-oriented texts and suitable activities for the age group. (PLANTS; ANIMALS; GENERAL SCIENCE)

Ladybird

Watts, Barrie (*Keeping Minibeasts*, Franklin Watts, 1990, 29pp.)

In this attractively designed, clear, practical guide to keeping ladybirds, colour photographs show the insects in action and handling methods such as how to use a small brush for collecting. The animal and its habits, and techniques for handling, housing (the reader is shown how to make a net cage), feeding and then release are described. Another book in the series, *Ants*, depicts species not occurring in Australia but the general statements on life cycles and handling are appropriate and make the book a valuable guide. (ANIMALS)

Emperors of the Ice: The Emperor Penguins of Antarctica

Westerskov, Kim (*Omnibus*, 1997, 42pp.)

A narrative text divided by headings and accompanied by superb photographs describes the biology of emperor penguins after a general section on Antarctic conditions. The enthusiasm of the New Zealand author and photographer shines through.

Seals of the blizzard: The Weddell seals of Antarctica (1997) covers its subject in similar style and format. (ANIMALS)

Ages 11+

Backyard insects (2nd ed.)

Horne, Paul A. (The Miegunyah Press at Melbourne University Press, 2005, 264pp.)

This comprehensive identification manual to the insects which inhabit Australian backyards is readily accessible to the older child reader. Each left-hand page is black with a photo of the insect while each white right-hand page contains the common name of the insect in bold type, its scientific family name and a few paragraphs of information with its size, dietary habits and genus listed simply in a right-hand margin. Occasionally the text about an insect will spread onto a second page in which case a second photograph is also included, but generally the information is only a few paragraphs in length. Photographs by Denis J. Crawford. (ANIMALS. AUSTRALIAN)

Famous Scientists

Ages 5 to 8

Starry Messenger: A Book Depicting the Life of a Famous Scientist, Mathematician, Astronomer, Philosopher, Physicist Galileo Galilei

Sis, Peter (Farrar Straus Giroux, Frances Foster Books, 1996, 36pp.)

This is a picture book that can be read by (or to) several age groups. Each double page usually contains only one paragraph of text relating the story of Galileo, his astronomical discoveries and his trial by the Church. However this simple text is augmented and extended by the large medieval-style paintings and the additional sections of prose written in handwritten script. These include extra facts about Galileo's life and quotes from his writings. The more the reader delves into the extra details the bigger the picture that is drawn about this remarkable scientist. The final double page talking about his pardon by the Church 300 years after his death is particularly moving. (FAMOUS SCIENTISTS; SPACE)

Ages 8 to 11

1001 Inventions that Changed the World

Challoner, Jack (ed.) (ABC Books, 2009, 960pp.)

Another "1001 Original" in the "Before You Die" series, this overview of technological advances is divided into chronological sections from "The ancient world" through to "The internet age". It gives approximate times for those innovations unable to be specifically dated as well as years for later inventions, beginning with stone tools about 2,600,000 BCE and ending with the large Hadron Collider in 2008. Descriptions of each breakthrough are brief, ranging from a paragraph to half a page, and there are no detailed explanations of the inner workings of each invention. However what this book does provide is an impressive lengthy list of humankind's ingenuity across a range of fields, illustrated with photographs or historical art on every double page spread. With an index at the front and a glossary and index of inventors at the end, information retrieval is easy and also assisted by cross-referencing in individual entries. (FAMOUS SCIENTISTS; TECHNOLOGY)

Howard Florey: Miracle Maker

Murray, Kirsty (Little Ark, Allen & Unwin, 1998, 32pp.)

Despite its unfortunate cramped appearance, this book is a good biography of Florey. It shows how his work was built on discoveries by others and was developed through the cooperative efforts of a team. (FAMOUS SCIENTISTS. AUSTRALIAN)

Atoms, Dinosaurs and DNA: 68 great New Zealand scientists

Meduna, Veronika and Rebecca Priestley (Random House New Zealand, 2008, 160pp.)

Adapted from a 2006 exhibition at the National Library of New Zealand, this book expands its coverage of scientific discovery in that country to include twice as many scientists. Taking a chronological approach since European colonisation, the first entries are for scientists such as Solander and Banks who were not New Zealand-born but investigated its unique natural environment and published their findings. Some of these scientists such as Ernest Rutherford are world-renowned whilst others are more famous in their own country or in their own specialty. The book is well-designed and laid out with personal photos and biographical information, awards, quotes and photos relevant to their field of expertise. This book provides a fascinating introduction to many fields of scientific endeavour as well as introducing readers to the inspiring men and women of New Zealand who have made outstanding contributions to it. (FAMOUS SCIENTISTS; GENERAL SCIENCE)

General Science

Preschool

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Full page photographs by Fiona Pragoff of children undertaking a variety of activities with everyday objects are accompanied by simple statements and questions to set them thinking about the science around us. An apple is dropped into water, cut in half and allowed to go brown, used for printing, cooked and its seeds planted. Further information for parents is added at the end.

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Howitt, Christine (text) Peter Bowdidge (photos) (Christine Howitt, 2010, unpagged)

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My First Science Book

Wilkes, Angela (Hodder and Stoughton, 1990, 48pp.)

Originally produced in England by Dorling Kindersley. Large eye-catching photographs illustrate the equipment needed, and the step-by-step instructions for each activity. Even though format and title suggest a very young reader, the vocabulary and sometimes the complexity of instructions make this a book for primary school children. Precautions and warnings are given where necessary. (GENERAL SCIENCE)

Ages 11+

The Encyclopedia of Science (Revised.ed.)

Dorling Kindersley, 2006, 448pp.

The caption-text approach so well developed by Dorling Kindersley is well suited to an encyclopedia. Information is grouped under topic headings, which are grouped into sections. 'Find Out More' boxes, a comprehensive index and a glossary allow for easy cross-referencing. Illustrated in full colour throughout. For the upper primary and secondary levels. (GENERAL SCIENCE)

Carbon

Knapp, Brian (Reed Library, Elements, 1996, 56pp.)

This is one title in a series of books designed to assist young chemists understand the characteristics and usage of the most important chemical elements. There are 15 volumes in the set and Carbon is typical of the series. Topics covered include the carbon cycle, the occurrence of carbon and its compounds, polymers and organic compounds. The contents conclude with key facts about carbon, the periodic table, understanding equations and a glossary of technical terms. (GENERAL SCIENCE)

The Usborne internet-linked science encyclopedia

Rogers, Kirsteen et al. (Usborne, 2000, 448pp.)

This comprehensive encyclopedia not only introduces a vast number of scientific topics to the young (and not so young) reader but also lists hundreds of tried and tested websites. It is most attractively produced, with pages of different colours, excellent illustrative content and clear and concise explanations. In a work of this magnitude, it is unusual to see so few minor areas of concern regarding accuracy. A magnificent reference work for young and old, students and teachers alike. See www.usborne-quicklinks.com for the webpages recommended in the book. (GENERAL SCIENCE)

Human Biology

Ages 5 to 8

The Magic School Bus at the Waterworks

Cole, Joanna (Scholastic, 1986, 40pp.)

This book takes a rather fantastical look at a town's water supply. It is written from the perspective of a pupil whose class has the strangest teacher in the school. She makes the class grow mould on bread! And organises an excursion to the waterworks. On the way, the school bus passes through a tunnel and changes, and the children become part of the water cycle, being evaporated up into clouds, falling as rain, and eventually emerging from the school washroom taps. As well as their magic journey, the book presents 'water facts' that the children have to find. The lively full-colour illustrations by Bruce Degen are liberally sprinkled with bubbles containing the children's amusing comments. The story moves well, and is fun without seeming contrived.

The magic school bus inside the Earth, by the same team (1987), uses a similar approach to explore the rocks of the Earth's crust and right inside the Earth. An author, illustrator and reader discussion at the end draws attention to the fact that a bus would melt inside the Earth, and other physical impossibilities in the fantasy.

The magic school bus inside the human body, by the same team (1989), has a similar treatment but does not provide such a good overview as the subject is much more complicated. The quiz at the end is a more effective way of drawing attention to the liberties in the illustrations than the list in *Waterworks*.

A television series and several spin-off series of books have ensured this series' continuing popularity. See www.scholastic.com/magicschoolbus/books for a full listing. (OUR WORLD; HUMAN BIOLOGY)

Happy Birth Day!

Harris, Robie H.; illustrated by Michael Emberley (Walker, 1996, 26pp.)

In this large format picture book, a mother tells her child exactly what happened on the day of her birth. From the moment of emergence into the world, the events of that first day – the first breath, the cutting of the cord, the first breastfeed – are lovingly described. Accompanying the text are evocative but accurate paintings by Michael Emberley of the newborn infant, complete with screwed-up face, surrounded by mother, father, doctor and doting relatives. (HUMAN BIOLOGY)

My Pop-up Body Book

Petty, William (text) Jennie Maizels (illus.) (Walker Books, 2010, unpagged)

Young children usually love pop-up books and this one should prove popular. Each double-page spread covers a different aspect of the human organism entitled *My Beginning*, *My Head*, *My Chest*, *My Tummy* and *My Moving Body*. Within these generalised sections are tabs to pull, wheels to turn and flaps to unfold, all revealing much more information than the few captions on the page. Some of the paper engineering is very clever such as the face unfolding to reveal the muscular structure on the left-hand side and the skull on the right. While fairly robust, the book still needs to be treated with care to preserve all the correct folds. (HUMAN BIOLOGY)

What Makes Me Me?

Winston, Robert (Dorling Kindersley, 2004, 96p.)

This well-designed, extensively illustrated book provides an excellent explanation about the human body for young readers. Four sections answer the leading questions: *What am I made of?* *What makes me unique?*

How does my brain work? What kind of person am I? The contents cover the chemical composition and systems of the body, genetics, the brain including memory and intelligence and personality. Short sections called 'Test Yourself' are included at relevant stages for the reader to quiz themselves about such aspects as dominant and recessive genetic traits, memory and different types of intelligence. The logical arrangement of the subject matter combined with clear layout, photographs of child subjects, short sections of text and language that addresses the reader made this a winner of the Royal Society's Aventis Junior Prize in 2005. (HUMAN BIOLOGY)

Ages 8 to 11

Evolve or Die

Gates, Phil (Horrible Science, Scholastic, 1999, 128pp.)

With the earthy humour and school jokes enjoyed by 10-12 year olds, this book gives a rapid overview of how life has evolved and how people's ideas about the origins of life have changed. It discusses some interesting fossils and how they were preserved, genetics, and some important scientists such as Darwin, Mendel, Wegener, Francis and Crick. Cartoons by Tony de Saulles extend the humour of the text and add some serious things such as a time line. With a table of contents but no index, books in this series are designed for enjoyable reading rather than research.

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The Young Oxford Book of the Human Being

Glover, David (Oxford University Press, 1996, 160pp.)

It isn't often that a book about the human body covers the whole of a person. But the cover on this book sums it up well when it states that this book is about 'the body, the mind and the way we live'. Divided into four sections, the topics covered are divided into Origins, Body, Mind and Living Together. The first two sections are self-explanatory. The third and fourth sections are what separates this book from the mass of others on this subject because they include explanations on intelligence and creativity, the conscious and unconscious, coping with stress, emotions and fears, social groupings, culture, religion and belief, inventions and discoveries and the future. This treatment of the human being as more than just its physical body leads to a more holistic discussion of humankind, resulting in a more balanced overview tying all aspects of humanity together.

(HUMAN BIOLOGY)

Let's Talk About Where Babies Come From

Harris, Robie H.; illustrated by Michael Emberley (Walker, 1999, 81pp.)

As it covers everything a pre-pubescent child or younger teenager is likely to ask about sex and babies, this book has quite a lot of text, but it is also amply illustrated by Michael Emberley with a mixture of serious and humorous coloured drawings. Body differences (inside and out), sperm, eggs and how they get together, different kinds of love, development of the foetus, birth, multiple pregnancies, genes, adoption, OK and not-OK touches, HIV and AIDS are all discussed reassuringly. The comments of a somewhat anthropomorphic cartoon-style bird and bee add a light touch. (HUMAN BIOLOGY)

How Nearly Everything Was Invented: by the Brainwaves

MacLeod, Jilly, illustrated by Lisa Swerling and Ralph Lazar (Dorling Kindersley, 2006, 61p.)

Shortlisted for The Royal Society Prize for Science Books: Junior Prize in 2007, *How nearly everything was invented* is supposedly written by the Brainwaves, small cartoon-style characters who populate each page in large numbers to provide comments on the topic under discussion. Every second alternate double-page spread is actually a fold-out which opens up to provide a four-page timeline of the development in a particular subject. Inventions and their applications covered include the lens, the steam engine, electricity and the light bulb, the internal combustion engine and the transistor, along with brief information of the people who made some of these important breakthroughs.

In 2007 the same illustrators published the next in the series, **How the incredible human body works: by the Brainwaves**, written by Richard Walker, which uses the same format to explain the systems of the human body. The four-page lengthways foldout of the digestive system is particularly worth noting. (TECHNOLOGY; HUMAN BIOLOGY)

“What’s Happening to Me?”

Mayle, Peter; illustrated by Arthur Robins (Pan Australia, 1988, 56pp.)

Tells about puberty changes clearly and informally, with special attention to the things that worry teenagers and the preteens. Apart from two charts of life drawings showing the changes, the illustrations by Arthur Robin are cartoon style, very expressive and to the point.

Also by the same team is **“Where did I come from?”**. It has less text and larger typeface to show younger children how babies are made. (HUMAN BIOLOGY)

Skeleton (Revised ed.)

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Ages 11+

Blame my Brain: the Amazing Teenage Brain Revealed

Morgan, Nicola (Walker Books, 2007, 207p.)

This entertaining paperback describes the changes which take place in the human brain during adolescence and how these changes contribute to many teenage behavioural trends which may drive parents to distraction. These include emotional reactions, sleep patterns and risk-taking. Also included are sections on gender differences, the effects of alcohol and other drugs and psychological problems such as depression. This book is also an informative source for parents and was shortlisted for the Royal Society Junior Prize for Science Books in 2006. A companion volume called **Know your brain: Feed it Test it Stretch it** was published in 2007. (HUMAN BIOLOGY)

Tobacco and Your Mouth: The Incredibly Disgusting Story

Winters, Adam (Incredibly Disgusting Drugs, Rosen Central, 2000, 48pp.)

Starting with the effect of ubiquitous advertising, this book then shows the danger of addiction, what happens to the mouth and lungs, the effect of secondhand smoke, and cigarettes as a cause of fire. It also discusses how not to start and how to stop. It uses chatty language with some graphic photographs. For the older end of this age range. (HUMAN BIOLOGY)

Maths

Preschool

My Apple

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Full page photographs by Fiona Pragoff of children undertaking a variety of activities with everyday objects are accompanied by simple statements and questions to set them thinking about the science around us. An apple is dropped into water, cut in half and allowed to go brown, used for printing, cooked and its seeds planted. Further information for parents is added at the end.

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Meduna, Veronika and Rebecca Priestley (Random House New Zealand, 2008, 160pp.)

Adapted from a 2006 exhibition at the National Library of New Zealand, this book expands its coverage of scientific discovery in that country to include twice as many scientists. Taking a chronological approach since European colonisation, the first entries are for scientists such as Solander and Banks who were not New

Zealand-born but investigated its unique natural environment and published their findings. Some of these scientists such as Ernest Rutherford are world-renowned whilst others are more famous in their own country or in their own specialty. The book is well-designed and laid out with personal photos and biographical information, awards, quotes and photos relevant to their field of expertise. This book provides a fascinating introduction to many fields of scientific endeavour as well as introducing readers to the inspiring men and women of New Zealand who have made outstanding contributions to it. (FAMOUS SCIENTISTS; GENERAL SCIENCE)

My First Science Book

Wilkes, Angela (Hodder and Stoughton, 1990, 48pp.)

Originally produced in England by Dorling Kindersley. Large eye-catching photographs illustrate the equipment needed, and the step-by-step instructions for each activity. Even though format and title suggest a very young reader, the vocabulary and sometimes the complexity of instructions make this a book for primary school children. Precautions and warnings are given where necessary. (GENERAL SCIENCE)

Ages 11+

The Encyclopedia of Science (Revised.ed.)

(Dorling Kindersley, 2006, 448pp.)

The caption-text approach so well developed by Dorling Kindersley is well suited to an encyclopedia. Information is grouped under topic headings, which are grouped into sections. 'Find Out More' boxes, a comprehensive index and a glossary allow for easy cross-referencing. Illustrated in full colour throughout. For the upper primary and secondary levels. (GENERAL SCIENCE)

Carbon

Knapp, Brian (Reed Library, Elements, 1996, 56pp.)

This is one title in a series of books designed to assist young chemists understand the characteristics and usage of the most important chemical elements. There are 15 volumes in the set and Carbon is typical of the series. Topics covered include the carbon cycle, the occurrence of carbon and its compounds, polymers and organic compounds. The contents conclude with key facts about carbon, the periodic table, understanding equations and a glossary of technical terms. (GENERAL SCIENCE)

The Usborne Internet-linked Science Encyclopedia

Rogers, Kirsteen et al. (Usborne, 2000, 448pp.)

This comprehensive encyclopedia not only introduces a vast number of scientific topics to the young (and not so young) reader but also lists hundreds of tried and tested websites. It is most attractively produced, with pages of different colours, excellent illustrative content and clear and concise explanations. In a work of this magnitude, it is unusual to see so few minor areas of concern regarding accuracy. A magnificent reference work for young and old, students and teachers alike. See www.usborne-quicklinks.com for the webpages recommended in the book. (GENERAL SCIENCE)

Our World

Preschool

The Quicksand Book

de Paola, Tomie, (Holiday House, 1977, 32pp.)

This tongue-in-cheek Tarzan-style picture book has a jungle girl sinking in quicksand while a know-it-all jungle boy lectures her about its properties and formation. After describing various rescue techniques, he pulls her free, only to fall in himself. (OUR WORLD)

Science is Everywhere

Howitt, Christine (text) Peter Bowdidge (photos) (Christine Howitt, 2010, unpagged)

This self-published book is a wonderful introduction to the world of science for preschoolers. Beautifully photographed and designed, the book shows young Joe and his Mum going for a walk. As they go through the garden and along the fence, jump into puddles and explore the park, Mum points out all the things that science helps to explain, such as what shadows are, where puddles go when the sun comes out, how rainbows are formed, why things fall towards the ground, why metal objects rust and how cheese is made. The layout and design are excellent, with text and a single item on different coloured pages on the left and a full-page photo on the right. The photographs are well-composed and the one of Joe on the first double-page spread is most engaging. At the end of the book are three pages of notes for parents, giving them some helpful suggestions for activities to do with their child. Available from www.scienceiseverywhere.com.au (GENERAL SCIENCE; OUR WORLD)

Ages 5 to 8

The Magic School Bus at the Waterworks

Cole, Joanna (Scholastic, 1986, 40pp.)

This book takes a rather fantastical look at a town's water supply. It is written from the perspective of a pupil whose class has the strangest teacher in the school. She makes the class grow mould on bread! And organises an excursion to the waterworks. On the way, the school bus passes through a tunnel and changes, and the children become part of the water cycle, being evaporated up into clouds, falling as rain, and eventually emerging from the school washroom taps. As well as their magic journey, the book presents 'water facts' that the children have to find. The lively full-colour illustrations by Bruce Degen are liberally sprinkled with bubbles containing the children's amusing comments. The story moves well, and is fun without seeming contrived.

The magic school bus inside the Earth, by the same team (1987), uses a similar approach to explore the rocks of the Earth's crust and right inside the Earth. An author, illustrator and reader discussion at the end draws attention to the fact that a bus would melt inside the Earth, and other physical impossibilities in the fantasy.

The magic school bus inside the human body, by the same team (1989), has a similar treatment but does not provide such a good overview as the subject is much more complicated. The quiz at the end is a more effective way of drawing attention to the liberties in the illustrations than the list in *Waterworks*.

A television series and several spin-off series of books have ensured this series' continuing popularity. See www.scholastic.com/magicschoolbus/books for a full listing. (OUR WORLD; HUMAN BIOLOGY)

Mount St Helens: The Smoking Mountain

Furgang, Kathy (Volcanoes of the World, PowerKids Press, Rosen, 2001)

The Volcanoes of the World series covers six different volcanoes which have experienced historically important eruptions, some recently such as this title or others in the past (eg, Mt Vesuvius). Each double page spread includes one full page of illustration and the facing page is simply worded text in large font on the relevant topic. The spectacular photographs combined with coloured pages and a simple glossary and index provide a very attractive and accessible introduction to a fascinating subject. Also Krakatoa: history's loudest volcano. (OUR WORLD)

Into the Deep

Norman, Dr Mark and David Paul (Black Dog Books, 2010, 32pp.)

This 25.5cm square paperback only uses conventional left-to-right double-page spreads for the first two and last openings. The rest of the book is to be read vertically by rotating the book so that the left-hand page is at the top. Down the side of each spread is a depth chart and placed at the appropriate depths are photos of the fascinating creatures that live in the ocean. As the distance from the surface gets deeper, the background of the pages changes until it is black. Simple captions identify each creature and give brief information about them while the distances at the edge of the page are put into perspective by occasional facts about human activity at certain depths, such as how deep scuba divers can go and how far deep-sea fishing nets reach. The outstanding features of this book are the unusual layout and design and the stunning photographs. (OUR WORLD; ANIMALS)

Once I Was a Cardboard Box... but Now I am a Book About Polar Bears

Poitier, Anton (text) Melvyn Evans (Five Mile Press, 2009, 24pp.)

Originally published in the UK by Potter Books, this book and its companion, Once I was a comic... but now I'm a book about tigers, are written by well-known author Tony Potter. The books are produced totally of recycled paper and board and the dual text explains to readers all about polar bears in the main text and how recycling of paper is done on the right-hand side of each double-page spread. The design and layout are excellent with large bold font, photos of polar bears and drawings combining to be clear and engaging. This clever concept works surprisingly well and young readers will be well-informed about both polar bears and recycling. (OUR WORLD; ANIMALS; TECHNOLOGY)

Disaster!

Platt, Richard; illustrated by Richard Bonson (Viking, 1997, 32pp.)

Each double-page spread of this large-format book is devoted to a particular disaster which actually occurred. Detailed, historically accurate illustrations, often with cross-sections or following a time sequence, are surrounded by captions and paragraphs of text. Maps and boxes of scientific facts explain why the disaster happened. Topics covered include volcanoes, earthquakes, tsunamis, cyclones (Tracy is the historical example discussed in detail), plagues, fires, floods, landslides, the sinking of the Titanic and the crash of the Hindenberg. Illustrated by Richard Bonson. (OUR WORLD)

Is a Blue Whale the Biggest Thing There is?

Wells, Robert E. (Albert Whitman, 1993, 32pp.)

Using the blue whale as the standard unit of measure, this humorous picture book aims to show the young reader just how big the universe really is. Ludicrous drawings of jars containing 100 blue whales, towers of 100 Mount Everests and bags of 100 planet Earths try to give the reader a feel for how enormous it is. Apart from one page using feet and tons, exact measurements are not given. (OUR WORLD)

A drop of water: A book of science and wonder

Wick, Walter (Scholastic, 1997, 40pp.)

Walter Wick is the photographer behind the very popular 'I Spy' series of picture puzzle books. In this scientific

picture book, he uses his considerable skills to introduce young readers to the properties of water. Superb freeze-frame photographs of drops and splashes, bubbles of amazing shapes, snowflakes and dew-encrusted spiders' webs are supplemented with a simple straightforward text about molecules, surface tension, water vapour, ice and the water cycle, among other water-related topics. (OUR WORLD)

Ages 8 to 11

Bodies from the Ice: Melting glaciers and the recovery of the past

Deem, James M. (Houghton Mifflin, 2008, 58pp.)

Bodies from the Ice has been listed as an Honour book in the American Library Association's Robert F. Sibert Informational Book Medal award for 2009. Following on from earlier titles, Bodies from the Ash and Bodies from the Bog, this title discusses bodies which have been found in mountainous regions around the world. In addition to well-known discoveries such as Ötzi the iceman from The Alps and the body of missing English climber George Mallory on Everest, the book also discusses the Inca mummies found in Peru, unidentified European climbers and a native American Indian body found in Canada. This volume is not only about archaeology, however, but also about glaciers and mountains. It is very well-designed and contains many illustrations including photographs, historical documents and maps. (OUR WORLD)

Rock and mineral (Revised ed.)

Pellant, Chris and staff of Natural History Museum (Eyewitness Guides, Dorling Kindersley, 2003, 64pp.)

Like other Eyewitness Guides it covers its subject with numerous photographs on white background, and with captions and a brief text. Explains what rocks and minerals are, types of rocks, and uses – for tools, building, pigments, ore, gems, etc. For the older end of the 7-12 age range. (OUR WORLD)

Oceans

Green, Jen (3D pop-up explorer, Walker Books, 2008, 30 pp.)

This is not a pop-up book for the very young child. Rather it contains a lot of information about ocean ecology, including different habitats, life forms and food chains. Slightly larger than A4 landscape in size, the widthways arrangement of the pages has been used to great effect in the design, layout and illustrative content. This includes five three-dimensional pop-up pages which show very effectively life in a rock pool, on a tropical coral reef, in a kelp forest, in waters below 200 metres deep and around 'black smokers'. The book is indexed and all photographs, diagrams and illustrations are captioned, with much of the information in these paragraphs. The only flaw is on p 21 where the text mistakenly claims that 'Great white sharks can grow up to half a metre long' instead of 'up to six metres long'. (The publisher has been advised of this and it should be fixed in the next printing.) (OUR WORLD; ANIMALS)

Time: the measuring of time from the Egyptian calendar to the atomic clock

Rochat, Caterina (Watts, 1995, 48pp.)

Originally produced in Florence and illustrated by a team of three Italian illustrators, this book covers the history of the measurement of time. In layout it is not unlike the Eyewitness Guides with an introductory paragraph or two on each new topic with further information in lengthy captions adjacent to the illustrations. Some double pages feature a large central illustration while others contain several smaller ones. Contents cover calendars, clocks and seasons, including important figures who have contributed to the field and experiments for the reader. Part of the "How Science Works" series. (OUR WORLD)

Our patchwork planet: The story of plate tectonics

Sattler, Helen Roney; illustrated by Giulio Maestro (Lothrop, Lee & Shepard, 1995, 48pp.)

In this unusual book for children, the topics of plate tectonics and continental drift are described clearly and illustrated effectively with maps, diagrams and photographs. The contents follow a logical progression and the book concludes with a reading list containing references to journal articles as well as books. Bright blue borders, captions, endpapers and page numbers tone with the colours used in the illustrations to produce an attractive explanation of a complex subject. Illustrated by Giulio Maestro. (OUR WORLD)

Icebergs and glaciers

Simon, Seymour (Morrow, 1987, 32pp.)

Combining magnificent full-colour photographs with glossy blue, black or white pages of text, this large picture book format title covers the creation of glaciers, ice caps and sheets, and icebergs. (OUR WORLD)

The heart of the world: Antarctica

Tulloch, Carol (ABC Books, 2003, 45pp.)

This very full introduction to Antarctica begins with its geological history and uses numerous small clear photographs from many sources, and some lively diagrams and sketches by the author. It describes Antarctica's unique position in the world, the ice sheets, sea ice, climate, wildlife, human history, and the role of international cooperation. Most information is provided in a very readable text, but some details, such as descriptions of animals, are presented as captions to photographs and in boxes which give the personal views and activities of scientists from different disciplines. (OUR WORLD. AUSTRALIAN)

Ages 11+

The state of the planet

Nicholson, John (Allen & Unwin, 2000, 48pp.)

This introduction to many of the world's environmental problems is suitable for upper primary and secondary students. With less illustrative content than most of John Nicholson's books and more detailed text, issues such as deforestation, loss of biodiversity, pollution, global warming and energy usage are discussed in a balanced manner. With sections on what is being done and what the reader can do to help, this book is made less depressing and more relevant to its young audience. It also has an introduction by David Suzuki. (OUR WORLD. AUSTRALIAN)

Physics

Preschool

Who sank the boat?

Allen, Pamela (Nelson, 1982, 32pp.)

This picture storybook with brief rhyming text and humorous full colour illustrations shows several animals climbing into a rowing dinghy one after another as the boat gets lower and lower in the water. The last in is a mouse, and that is just too much. The text does not explicitly tell the reader that they all sank the boat.

The less colourful Mr Archimedes' bath (1980), in equally lighthearted manner, introduces children to the idea that bodies displace water. (PHYSICS. AUSTRALIAN)

Push

Graham, Bob (Science Early Learner Series, Five Mile Press, 1986, 16pp.)

Bill tries riding his tricycle in grass, in mud, on the carpet and kitchen floor, but discovers that the path is best. Also, Heat, Moving, Senses, Sound and Water. Each has a named character and pet, a brief text and delightful cartoon-style colour illustrations.

Four of these books were re-issued in 1991 with new titles. They are now called It's much too hot!, Look out for Rosy!, Pig's wild cart ride and Rupert's big splash. (PHYSICS. AUSTRALIAN)

Let's try it out with towers and bridges: Hands-on early learning science activities

Simon, Seymour and Nicole Fauteux, illustrated by Doug Cushman (Simon & Schuster Books for Young Readers, 2003, unpagged)

The 'Let's try it out' series presents simple experiments with everyday materials for young children to try at home. In this book, blocks, drinking straws, cardboard tubes and pieces of paper are used to show how buildings and bridges of different shapes can be made strong enough to withstand various forces such as weight and wind. Australian readers may not be familiar with the introductory section about the American pioneers going west but this is a minor issue. (TECHNOLOGY; PHYSICS)

Ages 8 to 11

Can you feel the force?

Hammond, Richard (Dorling Kindersley, 2006, 96p.)

Best known for his appearances on top-rating television program Top Gear, Richard Hammond has written a book about physics for young readers which won the 2007 Royal Society Prize for Science Books Junior Prize. After the first section about the history of science and some of the most important discoveries in the field of physics, the following chapters cover energy and forces, matter and light. Profusely illustrated in full colour, this attractive well-designed introduction to physics makes the subject accessible for upper primary students. (PHYSICS)

Plants

Preschool

A seed is sleepy

Aston, Dianna Hutts; illustrated by Sylvia Long (Chronicle Books, 2007, unpagged)

This beautiful picture book describes seeds and how they germinate. Each double page spread features a different aspect of seeds with a poetic statement in large-size handwritten calligraphy. The language used in these sentences is more poetic than factual, such as 'A seed is sleepy' and 'A seed is clever'. However the scientific basis for these statements is then given in further information on the page. The great strengths of the book are in the magnificent botanical illustrations, executed in ink and watercolour, and in the book design. A double page before the title page is covered with different types of seeds, all labelled, and the final double page at the back shows the adult plants of these and other seeds mentioned in the book. (Note: Because this is an American publication, imperial measurements are used.)

An earlier companion volume by the same team is *An egg is quiet* (Chronicle Books, 2006) which won many awards. (PLANTS)

Ages 5 to 8

Strawberry

Coldrey, Jennifer (Stopwatch Book, A. & C. Black, 1988, 25pp.)

Shows how the strawberry plant has roots, grows flower buds, develops fruit, and how new plants grow from runners. The text is clear but the real strength of the book is the full colour photographs by George Bernard, which illustrate each point admirably. Occasional drawings highlight some points. (PLANTS)

Fungi

Rotter, Charles (Creative Education (Images), 1994, 40pp.)

Superb colour photographs illustrate every page. Each one takes up a whole page or double-page spread and they include magnifications and close-ups as well as more common mushroom and toadstools. The straightforward text is relegated to boxes, each of which has a translucent background so that the detail in the photo still shows through. This attention to design and detail has created a visually stunning book. (PLANTS)

Ages 8 to 11

Life in a rotten log

Atkinson, Kathie (Little Ark, Allen & Unwin, 1993, 32pp.)

By following the process of decay of a fallen tree till a new seedling tree takes root, this book introduces the various organisms that live in or on a rotting log and shows clearly that decay also means new life. The text and photographs convey the author's enthusiasm for her subject. (ANIMALS; PLANTS. AUSTRALIAN)

Linnea's windowsill garden

Bjork, Christina and Lena Anderson (R. & S. Books, 1988, 59pp.)

Linnea loves plants but because she lives in an apartment she grows them in pots all over her room. She tells the reader how she does it and how she learns from her friend Mr Bloom. The first person technique allows the authors' enthusiasm to bubble through. As well as learning how to grow plants and some plant biology, the reader will find simple games and tricks, all based on plants. Australian readers will need to read 'south' for 'north' and so on as it has not been adapted for the southern hemisphere. Translated from Swedish by Joan Sandin. (PLANTS)

Tree (Revised edition)

Burnie, David (Eyewitness Guides, Dorling Kindersley, 2003, 64pp.)

An illustrated guide to trees, both broadleaved and conifers, their life cycles, buds, bark, leaves and so on. The text on each page is short but each opening has several photographs and the captions contain much information. They include snippets about spices and other ways in which people have used trees. It has a British bias but is valuable as a general study of trees. For the older end of the 7-12 age range. (PLANTS)

Killer plants and how to grow them

Cheers, Gordon and Julie Silk; illustrated by Marjorie Crosby-Fairall (Puffin, 1996, 32pp.)

A brief introduction to carnivorous plants is followed by a brief description of ten varieties with tips for growing them, and double page spreads on sizes and distribution. Although there is no discussion of why a few plants are carnivorous and there are a couple of references to plants being happy, the illustrations by Marjorie Corssley-Farall and the design and clarity of the text make this an effective book. (PLANTS. AUSTRALIAN)

Walking with the seasons in Kakadu

Lucas, Dianne; illustrated by Ken Searle (Allen & Unwin, 2003, 32pp.)

In English, but with some terms from the Gundjehmi language, this books takes readers through the six seasons recognised by the Aboriginal people of Kakadu. It shows readers the weather patterns and the characteristic changes in plants and animals which determine the beginning and end of each season. Descriptions of the activities of flowers, fruits and animals are set in boxes against one to three scenes of each season painted by Ken Searle. People playing or collecting food are often included. Animals and flowers are shown well, except for the orb spider being upside down. (ANIMALS; PLANTS. AUSTRALIAN)

Discover and learn about Australian forests and woodlands

Slater, Pat (Ark Australia Habitats and Ecosystems, Steve Parish, 2002, 48pp.)

Brief introductory sections on the voyage of ark Australia, forest ecology, classification, and biodiversity, are followed by more detail on Australia's forest types (tropical and temperate rainforests, monsoon forests, dry and wet sclerophyll forests). Information is given in short paragraphs, text boxes on specific subjects, coloured photographs (mainly by Steve Parish), captions, and 'facts 'n' figures files'. Other sections cover predators and parasites, fungi, food chains and other interactions, and effects of fire and humans. The resulting presentation is attractive for both browsing and studying.

Discover and learn about Australian wetlands and waterways also covers its subject well, but other books in the series are rather disjointed. (PLANTS; ANIMALS. AUSTRALIAN)

Looking at plants

Suzuki, David (Australian adaptation, Little Ark Books/Allen & Unwin, 1989, 96pp.)

Several sections inform about plants, their importance or structure, and are each followed by a few activities which demonstrate plant biology or uses. Instructions are written for children to follow themselves and indicate where help will be needed with boiling water and other potentially dangerous steps. Illustrated with line drawings.

Looking at the body, . . . at the senses, . . . at insects, . . . at the weather, and . . . at the environment provide equally informative and child-oriented texts and suitable activities for the age group. (PLANTS; ANIMALS; GENERAL SCIENCE)

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Walker, David; illustrated by Mic Rolph (Making Sense of Science Series, Portland Press, 1999, 32pp.)

This outline of life on Earth, from early bacteria to industrial society, emphasises the essential role plants have played in producing oxygen, feeding all life, and providing us with stored energy in fossil fuels. The narrative has the satisfying structure of a story and the simple, clear language will help children and their teachers develop their own language for discussion. The book is best read as a whole, perhaps with an adult to help the child, rather than approaching it as a source of facts. There is no index or glossary, but specialised words are printed in bold when they first appear, with a pronunciation guide in the brackets. The soft watercolour illustrations by Mic Rolph provide scope for discussion. (PLANTS)

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Prehistoric times

Preschool

Boy, were we wrong about dinosaurs!

Kudlinski, Kathleen V.; illustrated by S.D.Schindler (Dutton Children's Books, 2005, unpagged)

This picture book is not really about dinosaurs. Rather it shows the way scientific knowledge adapts and grows in the light of new discoveries. Using dinosaurs as the subject matter, the book explains how interpretations of fossils have changed since they were first discovered (the ancient Chinese thought they were dragon bones) and therefore our understanding of these creatures. Examples include the placement of Iguanodon's 'horn' on its nose when they later turned out to be spikes on its front limbs and the way the nests of baby dinosaurs has altered thinking on dinosaur behaviour. An excellent explanation for young children about how scientific facts are not always correct at first and the need to be open to new interpretations and understandings as scientific knowledge evolves. Also suitable for ages 5-8. (PREHISTORIC TIMES; GENERAL SCIENCE)

Ages 5 to 8

Uneversaurus

Potts, Adrian (David Fickling Books, 2006, unpagged)

Although a picture book, some of the vocabulary, concepts and jokes are more suitable for an older readership. Beginning with the obvious statement "No human has ever seen a dinosaur", the text then asks "So how do we know what they looked like?" The book shows how clues on fossils help scientists put the skeletons of these creatures together and extrapolate from the skeleton to a realistic image of the living creature. But it then launches into a very good discussion of characteristics of animal coverings such as colour, camouflage, shading and texture and how these features may possibly have applied to dinosaur appearance. The illustrations then show imaginative options such as a tiger-striped Tyrannosaurus, a red Stegosaurus and a flock of multi-coloured Pterodactyls. Readers are urged to use their imaginations to guess what these amazing creatures may have looked like and the final endpaper provides a drawing of an Amargasaurus for them to colour in however they like. (PREHISTORIC TIMES; ANIMALS)

Dinosaurs

Sabuda, Robert and Matthew Reinhart (Encyclopedia Prehistorica, Walker Books, 2005, unpagged)

The first book in the 'Encyclopedia Prehistorica' series, Dinosaurs contains over 35 amazing pop-ups by renowned paper engineer Robert Sabuda and his associate. There are six double-page spreads which each open to reveal a large pop-up prehistoric creature. Around the sides of each page are more opening flaps containing smaller pop-ups. The information about all of these animals and their time on earth is contained in captions and within the flaps. This book was followed by two more volumes in the series, Sharks and other sea-monsters and Megabeasts. Due to the number of moving parts, the recommended age for these books is five and up. (PREHISTORIC TIMES)

Ages 8 to 11

Pleistocene times

Breidahl, Harry (Wildlife of Ancient Australia, Macmillan, 2002, 32pp.)

One of a series of six, this book introduces animals that lived in Australia up to 2 million years ago. Each book in the series follows a standard format, placing the period or epoch in context, giving some information about specific animals, a world map of the time, a look at the vegetation, and how the period ended. As well as an index, glossary and reference list, a 'code-breaker' to scientific names (a list of word roots) provides an interesting way of helping children understand these names.

Other books in the series are **Miocene and Pliocene times**, **Eocene and Miocene times**, **Cretaceous times**, **Jurassic times**, and **Triassic times**. The books on earlier periods are more speculative and extrapolate from our knowledge of other continents. (PREHISTORIC TIMES. AUSTRALIAN)

Reptiles

Creagh, Carson (and Weldon Owen team) (Allen & Unwin/Macdonald Young Books (Discoveries), 1996, 64pp.)

Using a caption-text layout similar to the Collins Eyewitness Guides but with fewer items per page and with more artwork than photographs, this book provides a good overview of reptile biology. It has one doublepage spread for ancient reptiles, four each for chelonians and crocodilians, one for the tuatara, nine for lizards, seven for snakes, and one for danger to reptiles. Although prepared in Australia it is designed for the international market and so the examples used come from around the world, but good Australian examples are included.

Mammals (1996) has similar format and forms an excellent overview of the subject.

Dinosaurs (1995) also provides a good overview of the subject, putting them in context well, with sections on before the dinosaurs, the world in Triassic, Jurassic and Cretaceous periods and uncovering dinosaur clues as well as describing types and behaviour. (ANIMALS; PREHISTORIC TIMES. AUSTRALIAN)

The ultimate dinosaur book

Lambert, David (RD Press, 1993, 192pp.)

Lots of young readers are quite fascinated by dinosaurs and often pass through a dinosaur phase. This book is one of the most comprehensive on the market, probably only accessible to the keenest of young fans because of its technical language. However, its superb illustrations, including photographs of models of reconstructed dinosaurs, would keep many young readers occupied for hours. As this is a Dorling Kindersley book, it is laid out along similar lines to the Eyewitness Guides. Each double page has an introductory paragraph with additional information adjacent to the illustrations. There is an introductory section on excavating fossils and restoring them. The book concludes with an A-Z of dinosaurs as well as a comprehensive index. (PREHISTORIC TIMES)

Gogo fish!: the story of the Western Australian state fossil emblem

Long, Dr John, illustrated by John Long and Jill Ruse (Western Australian Museum, 2004, 40p.)

Dr John Long is a palaeontologist who works for the Western Australian Museum. This book is a description of the expedition to Gogo Station in 1986 when the fossil of *Mcnamaraspis kaprios* was discovered, the techniques used to extract the fossil from the rock and the research undertaken before naming it. A subsequent campaign by schoolchildren resulted in the species being proclaimed as Western Australia's state fossil emblem. This book is a good explanation of a palaeontologist's job and the painstaking behind-the-scenes work involved in any major discovery. (PREHISTORIC TIMES. AUSTRALIAN)

More Australian dinosaurs

Pride, Marilyn (Angus & Robertson, 1997, 32pp.)

Twelve types of recently discovered reptiles and amphibian from dinosaur times are described and depicted in a double-page spread each. Maps indicate location of fossil finds and the text indicates how only a few bones of each were found. The introduction and descriptions together give a good overview of Australia in the Mesozoic. This book is much more readable than either the easier (*Dinosaurs of Australia*) or more difficult (*Australian Dinosaurs*) version of Pride's earlier book, but it covers a different selection of species. (PREHISTORIC TIMES. AUSTRALIAN)

Preschool

Science picture books will help develop observation and thinking. Some of the books in this section may not seem very scientific or informative, but they are included because they develop an idea in a way that can lead to understanding scientific thought.

Who sank the boat?

Allen, Pamela (Nelson, 1982, 32pp.)

This picture storybook with brief rhyming text and humorous full colour illustrations shows several animals climbing into a rowing dinghy one after another as the boat gets lower and lower in the water. The last in is a mouse, and that is just too much. The text does not explicitly tell the reader that they all sank the boat.

The less colourful Mr Archimedes' bath (1980), in equally lighthearted manner, introduces children to the idea that bodies displace water. (PHYSICS. AUSTRALIAN)

A seed is sleepy

Aston, Dianna Hutts; illustrated by Sylvia Long (Chronicle Books, 2007, unpagged)

This beautiful picture book describes seeds and how they germinate. Each double page spread features a different aspect of seeds with a poetic statement in large-size handwritten calligraphy. The language used in these sentences is more poetic than factual, such as 'A seed is sleepy' and 'A seed is clever'. However the scientific basis for these statements is then given in further information on the page. The great strengths of the book are in the magnificent botanical illustrations, executed in ink and watercolour, and in the book design. A double page before the title page is covered with different types of seeds, all labelled, and the final double page at the back shows the adult plants of these and other seeds mentioned in the book. (Note: Because this is an American publication, imperial measurements are used.)

An earlier companion volume by the same team is **An egg is quiet** (Chronicle Books, 2006) which won many awards. (PLANTS)

One hungry spider

Baker, Jeannie (Scholastic Australia, 2006, 28pp.)

This counting book also teaches a few things about how an orb web spider lives. Illustrations are carefully constructed collages. (ANIMALS)

Silly galah

Brian, Janeen; illustrated by Cheryll Johns (Scholastic Australia/Omnibus, 2001, 32pp.)

Light-hearted verses and bold bright illustrations by Cheryll Johns introduce children to seventeen Australian animals (eight mammals, six birds, two reptiles and one frog). A secondary text around the edge of the page provides a bit more information in more serious fashion. (ANIMALS. AUSTRALIAN)

Sebastian lives in a hat

Catterwell, Thelma; illustrated by Kerry Argent (Scholastic Australia/Omnibus, 1991, 32pp.)

The mother of Sebastian, a wombat, was killed by a car when he was about four months old and still in her pouch. He was hand-reared by the author who describes in this picture book his development and needs until he was able to return to the wild. Delightful, realistic full colour illustrations by Kerry Argent complement the text. Reissued in paperback by Scholastic in 2004. (ANIMALS. AUSTRALIAN)

My apple

Davies, Kay and Wendy Oldfield (Simple Science, A. & C. Black, 1997, 26pp.)

Full page photographs by Fiona Pragoff of children undertaking a variety of activities with everyday objects are accompanied by simple statements and questions to set them thinking about the science around us. An apple is dropped into water, cut in half and allowed to go brown, used for printing, cooked and its seeds planted. Further information for parents is added at the end.

Five other titles in the series provide a series of experiments for an age group not often catered for in science publishing. (GENERAL SCIENCE)

The quicksand book

de Paola, Tomie, (Holiday House, 1977, 32pp.)

This tongue-in-cheek Tarzan-style picture book has a jungle girl sinking in quicksand while a know-it-all jungle boy lectures her about its properties and formation. After describing various rescue techniques, he pulls her free, only to fall in himself. (OUR WORLD)

Diary of a wombat

French, Jackie; illustrated by Bruce Whatley (Harper Collins, 2002, 32pp.)

A wombat's daily activities and interactions with the people who live near her burrow are recorded in diary form as though by the wombat, with items like 'slept a bit', 'asked for carrots'. The brief text indirectly reveals a lot about wombat character and about the tolerance needed to live with an animal whose requirements do not quite coincide with those of the people. Bruce Whatley's illustrations bring the wombat to life. (ANIMALS. AUSTRALIAN)

Growing frogs

French, Vivian; illustrated by Alison Bartlett (Read and Wonder, Walker Books, 2000, 30pp.)

The story of a little girl and her mother who take some frogspawn and watch it develop into frogs is combined with scientific facts about frog biology and sound advice on how to look after tadpoles and frogs. An unusual typeface, a naïve style of art and a simple index add to the child-centred text, resulting in a charming information book for young children. Reissued with an accompanying CD in 2008. (ANIMALS)

365 penguins

Fromental, Jean-Luc and Joëlle Jolivet (Abrams books for Young Readers, 2006, unpagged)

This large format, four-colour picture book tells the amusing story of a family which receives by courier a penguin a day for a year. However apart from the humorous storyline, the young reader is introduced to basic mathematical operations. When the numbers of penguins are added, they are arranged in groups ("12 boxes of 12 penguins = ??") and their food requirements are calculated. By the end of the book, readers have discovered who is clandestinely sending the birds, why and some basic facts about penguins. However the strength of the book is in its plot and mathematical concepts. (MATHEMATICS; ANIMALS)

Push

Graham, Bob (Science Early Learner Series, Five Mile Press, 1986, 16pp.)

Bill tries riding his tricycle in grass, in mud, on the carpet and kitchen floor, but discovers that the path is best. Also, Heat, Moving, Senses, Sound and Water. Each has a named character and pet, a brief text and delightful cartoon-style colour illustrations.

Four of these books were re-issued in 1991 with new titles. They are now called **It's much too hot!**, **Look out for Rosy!**, **Pig's wild cart ride** and **Rupert's big splash**. (PHYSICS. AUSTRALIAN)

The rabbit problem

Gravett, Emily (Macmillan, 2009, unpagged)

In 1202, Leonardo of Pisa (known as Fibonacci) studied a mathematical sequence based on the proposition of a pair of rabbits being placed in a field and reproducing under certain conditions. Emily Gravett has taken this idea and produced a very entertaining picture book where Lonely and Chalk Rabbit set up home in Fibonacci's Field and produce a family. Laid out in the design of a yearly calendar, the pages contain baby record books, ration books, newspaper items, cookbooks, cutouts and flaps. Small descriptions of Fibonacci and his sequence are found in these additions for readers who want to know more about the mathematics and the actual sequence itself unfolds on the population signpost. There is more information about how the sequence works on the back cover and a disclaimer that this book is NOT about maths but the humorous story is great fun and may be read to quite young children. (MATHEMATICS)

Two's company...

Greenway, Shirley (Charlesbridge, 1997, 32pp.)

This beautiful picture book illustrated with superb photographs from the team at Oxford Scientific Films is a simple introduction to animal behaviour through the names of different groups of animals. Each left-hand page shows a small photograph of a single animal and a photograph of two of the animals; the right-hand page shows a large picture of a whole group with the correct name (flock, shoal, swarm, herd, etc.) A simple introductory page and a corresponding conclusion tie up the concept neatly but a final two pages of further information about each animal adds an extra dimension. (ANIMALS)

Science is everywhere

Howitt, Christine (text) Peter Bowdidge (photos) (Christine Howitt, 2010, unpagged)

This self-published book is a wonderful introduction to the world of science for preschoolers. Beautifully photographed and designed, the book shows young Joe and his Mum going for a walk. As they go through the garden and along the fence, jump into puddles and explore the park, Mum points out all the things that science helps to explain, such as what shadows are, where puddles go when the sun comes out, how rainbows are formed, why things fall towards the ground, why metal objects rust and how cheese is made. The layout and design are excellent, with text and a single item on different coloured pages on the left and a full-page photo on the right. The photographs are well-composed and the one of Joe on the first double-page spread is most engaging. At the end of the book are three pages of notes for parents, giving them some helpful suggestions for activities to do with their child. Available from www.scienceiseverywhere.com.au (GENERAL SCIENCE; OUR WORLD)

Walk with a wolf

Howker, Janni; illustrated by Sarah Fox-Davies (Read and Wonder, Walker Books, 2001, 32pp.)

Originally published in hardback in 1997 and reprinted in paperback in 2001, Walk with a wolf is a superbly produced information book for young children. The lyrical, poetic text is written by an award-winning British author and the beautiful realistic illustrations are by an artist experienced in creating animal books for children. As with other titles in the Read and Wonder series, additional facts about wolves are curved beside the evocative artwork to augment the information imparted in the narrative. Due to be reissued with an accompanying CD at the end of 2008. (ANIMALS)

Boy, were we wrong about dinosaurs!

Kudlinski, Kathleen V.; illustrated by S.D.Schindler (Dutton Children's Books, 2005, unpagged)

This picture book is not really about dinosaurs. Rather it shows the way scientific knowledge adapts and grows in the light of new discoveries. Using dinosaurs as the subject matter, the book explains how interpretations of fossils have changed since they were first discovered (the ancient Chinese thought they were dragon bones) and therefore our understanding of these creatures. Examples include the placement of Iguanodon's 'horn' on its nose when they later turned out to be spikes on its front limbs and the way the nests of baby dinosaurs has

altered thinking on dinosaur behaviour. An excellent explanation for young children about how scientific facts are not always correct at first and the need to be open to new interpretations and understandings as scientific knowledge evolves. Also suitable for ages 5-8. (PREHISTORIC TIMES; GENERAL SCIENCE)

Mrs Millar's frogs

Millar, Annette; illustrated by Kerry Anne Jordinson (Paperbark, 1998, 24pp.)

This delightfully simple story, told in rhyming verse in the first person, tells about Mrs Millar who lives in Broome and has frogs in every room. A snake comes in after the frogs so she banishes them to the pond outside. She misses them so much she allows them back inside. Both verse and illustrations (by Kerry Anne Jordinson) are fun and full of life. (ANIMALS. AUSTRALIAN)

The Hunt

Oliver, Narelle (Lothian, 1995, 32pp.)

A tawny frogmouth chases a series of animals for food but, before it can catch them, they disappear by settling on a background where their camouflage is most effective or by disguising themselves as a twig. Then the tawny frogmouth itself has to disguise itself as a branch to avoid a powerful owl. Keys at the back of the book indicate where and what all the hidden species are (there are many more than those the tawny frogmouth sees). (ANIMALS. AUSTRALIAN)

Sorting

Pluckrose, Henry (Know About Series, Franklin Watts, 1988, 32pp.)

The brief text has questions which will start a child thinking about different ways in which objects can be sorted – by size, colour, type (toy animals or buttons). It introduces set theory by showing how things can be sorted into different sets. Chris Fairclough's clear, well composed colour photographs expand the text and illustrate each point specifically.

Capacity by the same team (also published 1988) starts the child thinking about how much liquid or marbles a jar holds, and how to compare them, and leads to our standard measure of volume, the litre. Weight (1987) introduces the concept of weight, and how to weigh things. (MATHEMATICS)

Where in the Wild?: Camouflaged creatures concealed...and revealed

Schwartz, David M. and Yael Schy (text), Dwight Kuhn (photos) (Tricycle Press, 2007, unpagged)

This flap book demonstrates the concept of camouflage to children in a stunning and very effective format. Each page opening has a heading and poem on the left-hand side and a full-size colour photograph on the right. Somewhere in the photograph is a well-camouflaged animal. To find out what the creature is and where it is hidden, the flap is lifted to reveal the same photograph greyed out except for the animal. A full page of information about it is then contained on the reverse side of the flap. With an emphasis on North American animals, those featured include mammals, amphibians, insects, reptiles and birds' eggs. With the additional information included, this book is also suitable for the 5 - 8 age group. (ANIMALS)

Let's try it out with towers and bridges: Hands-on early learning science activities

Simon, Seymour and Nicole Fauteux, illustrated by Doug Cushman (Simon & Schuster Books for Young Readers, 2003, unpagged)

The 'Let's try it out' series presents simple experiments with everyday materials for young children to try at home. In this book, blocks, drinking straws, cardboard tubes and pieces of paper are used to show how buildings and bridges of different shapes can be made strong enough to withstand various forces such as weight and wind. Australian readers may not be familiar with the introductory section about the American pioneers going west but this is a minor issue. (TECHNOLOGY; PHYSICS)

10 things I can do to help my world

Walsh, Melanie (Walker Books, 2008, unpagged)

This interactive picture book for young children contains flaps and cut-outs along with a simple text encouraging preschoolers and their families to do simple things to live more lightly on the earth. The suggested changes in behaviour are well within the abilities of this age group and include such things as always using both sides of a page, planting seeds, recycling and turning off the light when it's not being used. With an attractive yellow cover with die-cut light globe, the bright colours continue inside and the text can be read with just a single larger sentence on each page or with further information. Printed on recycled paper, the production of this book has put into practice what it is advocating. This book is valuable and useful for both educational and home situations. (OUR WORLD)

Space

Ages 5 to 8

Starry messenger: A book depicting the life of a famous scientist, mathematician, astronomer, philosopher, physicist Galileo Galilei

Sis, Peter (Farrar Straus Giroux, Frances Foster Books, 1996, 36pp.)

This is a picture book that can be read by (or to) several age groups. Each double page usually contains only one paragraph of text relating the story of Galileo, his astronomical discoveries and his trial by the Church. However this simple text is augmented and extended by the large medieval-style paintings and the additional sections of prose written in handwritten script. These include extra facts about Galileo's life and quotes from his writings. The more the reader delves into the extra details the bigger the picture that is drawn about this remarkable scientist. The final double page talking about his pardon by the Church 300 years after his death is particularly moving. (FAMOUS SCIENTISTS; SPACE)

Ages 8 to 11

A new view of the solar system

Aguilar, David A. (National Geographic, 2008, 48p.)

David Aguilar is Director of Science Information at the Harvard Smithsonian Center for Astrophysics and past Director of the Fiske Planetarium. In this very up-to-date book, the latest information about our solar system is presented in a well-designed and beautifully presented format. In addition to the facts about the main eight planets and their major moons, the author explains the new classification of Pluto as a dwarf planet and the addition of Ceres, in the asteroid belt, to the same category. Less well-known parts of the solar system such as the Kuiper belt and the Oort cloud are also described. Illustrated with spectacular space art by the author, the text manages to explain complex topics in a child-centred manner, including 'The solar system in a grocery bag' analogy on the final page. Although presented in picture book format, the concepts discussed make this book more suited to an older readership. (SPACE)

Black holes

Couper, Heather and Nigel Henbest; illustrated by Luciano Corbella (Harper Collins, 1996, 45pp.)

Produced by Dorling Kindersley, this volume uses their successful approach of visual presentation of information with text broken up into small segments and captions arranged around illustrations to explain a complex series of concepts in astronomy. Some pages effectively use white text or boxes on black backgrounds and a central foldout also adds variety. Illustrations by Luciano Corbella are an effective mix of photos, diagrams, drawings and paintings.

A companion volume is **Big bang**. With a very effective first page of grey nothingness, it presents the evidence for the big bang theory of the creation of the universe. It is also honest enough to discuss problems with the evidence and scientists who disagree with the consensus opinion. Other theories are mentioned as well as religious and philosophical creation stories. (SPACE)

Technology

Preschool

Let's try it out with towers and bridges: Hands-on early learning science activities

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The 'Let's try it out' series presents simple experiments with everyday materials for young children to try at home. In this book, blocks, drinking straws, cardboard tubes and pieces of paper are used to show how buildings and bridges of different shapes can be made strong enough to withstand various forces such as weight and wind. Australian readers may not be familiar with the introductory section about the American pioneers going west but this is a minor issue. (TECHNOLOGY; PHYSICS)

Ages 5 to 8

Robert Crowther's amazing pop-up house of inventions

Crowther, Robert (Walker, 2000, 12 openings)

Robert Crowther has been creating wonderful pop-up books for many years, most notably The most amazing hide-and-seek alphabet book. In this introduction to the history of technology, he uses his paper engineering skills, room by room, through a house. Covering the kitchen, bathroom, living room, bedroom and garage, flaps are lifted, doors opened and dials turned to reveal when various appliances, machines and other common innovations and traditions were invented or first used. (TECHNOLOGY)

Until I met Dudley

McGough, Roger; illustrated by Chris Riddell (Angus & Robertson, 1997, 28pp.)

With two such highly regarded creators of children's books as Roger McGough and illustrator Chris Riddell, this book could hardly lose. Narrated in the first person, the small girl telling the story explains how she used to think various gadgets worked pre-Dudley. Dragons toasting bread and snakes as vacuum cleaners are just two illustrated in glorious nonsensical detail. After meeting Dudley the learned bespectacled dog, the real mechanism behind these and other inventions is explained to her. A final concluding touch of genius is the last double-page spread showing a great many silly creatures, which featured earlier in the fantastical imaginings of the little girl, waving goodbye and leaving the book. Non-fiction text compiled by Moira Butterfield and Douglas Maxwell. (TECHNOLOGY)

Once I was a cardboard box... but now I am a book about polar bears

Poitier, Anton (text) Melvyn Evans (Five Mile Press, 2009, 24pp.)

Originally published in the UK by Potter Books, this book and its companion, Once I was a comic... but now I'm a book about tigers, are written by well-known author Tony Potter. The books are produced totally of recycled paper and board and the dual text explains to readers all about polar bears in the main text and how recycling of paper is done on the right-hand side of each double-page spread. The design and layout are excellent with large bold font, photos of polar bears and drawings combining to be clear and engaging. This clever concept works surprisingly well and young readers will be well-informed about both polar bears and recycling. (OUR WORLD; ANIMALS; TECHNOLOGY)

Stephen Biesty's incredible cross-sections

Platt, Richard (Viking, 1992, 48pp.)

This ground-breaking book, originally published by Dorling Kindersley, was the first of the recent spate using a very large format with detailed cross-sections of various inventions. Each double-page shows a cutaway or sliced drawing revealing the inner workings of a building or vehicle. Detailed captions placed around the drawing label relevant parts and explain the components which make up the whole construction. Topics include castles, cathedrals, skyscrapers, coal mines, oil rigs, various ships, planes and trains. (TECHNOLOGY)

Ages 8 to 11

The science of a light bulb

Evans, Neville (Science World Series, Wayland, 1999, 32pp.)

The technology behind modern lighting is introduced by following how people learnt to burn different substances in lamps to make light, and then to use electricity in arc lamps, light bulbs and then fluorescent tubes. Diagrams of simple electric circuits and how electric current enters and leaves a light bulb are shown. Illustrated mainly by photographs. (TECHNOLOGY)

Paper airplanes and super flyers (Revised ed.)

Francis, Neil (Kids Can Press, 1996, 40pp.)

Instructs how to make gliders (paper aeroplanes – including how to add elevators or wing flaps and rudder), parachutes, and kites with short passages giving the principles of how they work. Illustrated by June Bradford with clear line drawings. North American outlook. (TECHNOLOGY)

How nearly everything was invented: by the Brainwaves

MacLeod, Jilly, illustrated by Lisa Swerling and Ralph Lazar (Dorling Kindersley, 2006, 61p.)

Shortlisted for The Royal Society Prize for Science Books: Junior Prize in 2007, How nearly everything was invented is supposedly written by the Brainwaves, small cartoon-style characters who populate each page in large numbers to provide comments on the topic under discussion. Every second alternate double-page spread is actually a fold-out which opens up to provide a four-page timeline of the development in a particular subject. Inventions and their applications covered include the lens, the steam engine, electricity and the light bulb, the internal combustion engine and the transistor, along with brief information of the people who made some of these important breakthroughs.

In 2007 the same illustrators published the next in the series, How the incredible human body works: by the Brainwaves, written by Richard Walker, which uses the same format to explain the systems of the human body. The four-page lengthways foldout of the digestive system is particularly worth noting. (TECHNOLOGY; HUMAN BIOLOGY)

Building the Sydney Harbour Bridge

Nicholson, John (Allen & Unwin, 2000, 32pp.)

Award-winning Australian author and illustrator John Nicholson has produced a well-written and visually stunning account of the building of the Sydney Harbour Bridge. The engineering and technical feats involved, combined with historical insights into the society of the time, produce a fascinating well-rounded look at an unusual topic. Named as an Honour Book in the 2001 Children's Book Council of Australia Eve Pownall Award for Information Books. (TECHNOLOGY. AUSTRALIAN)

Out of sight: Pictures of hidden worlds

Simon, Seymour (Sea Star, 2000, 48pp.)

The large spectacular images in this book are of things which cannot be seen by the naked eye. Electron micrographs, CAT scans, X-rays, freeze-frame photographs and satellite and telescope images are combined with colour coordinated text boxes. Young readers are introduced to many of the techniques used in science, medicine and photography which enable us to see into otherwise invisible realms. (TECHNOLOGY)

A doctor's life: A visual history of doctors and nurses through the ages

Storring, Rod (Heinemann, 1998, 48pp.)

Despite the lack of an introduction and conclusion, this book nevertheless provides an interesting overview of the history of medicine by innovative means. Each double page takes a medical practitioner from a particular historical period, beginning with the Romans. A photograph of a person dressed as he or she would have appeared features on the page, together with the medical tools of the day. The text includes information on techniques such as blood letting as well as medical practices of the time. Although mainly discussing Western medicine, Islamic and North American Indian medicine are mentioned but not Oriental or Chinese. (TECHNOLOGY)

Ages 11+

1001 inventions that changed the world

Challoner, Jack (ed.) (ABC Books, 2009, 960pp.)

Another "1001 Original" in the "Before You Die" series, this overview of technological advances is divided into chronological sections from "The ancient world" through to "The internet age". It gives approximate times for those innovations unable to be specifically dated as well as years for later inventions, beginning with stone tools about 2,600,000 BCE and ending with the large Hadron Collider in 2008. Descriptions of each breakthrough are brief, ranging from a paragraph to half a page, and there are no detailed explanations of the inner workings of each invention. However what this book does provide is an impressive lengthy list of humankind's ingenuity across a range of fields, illustrated with photographs or historical art on every double page spread. With an index at the front and a glossary and index of inventors at the end, information retrieval is easy and also assisted by cross-referencing in individual entries. (FAMOUS SCIENTISTS; TECHNOLOGY)

How cool stuff works

Woodford, Chris and others (Dorling Kindersley, 2005, 256p.)

This comprehensive book examines the science and componentry behind the modern technology developed in recent years. Divided into chapters with verbs as headings (eg. 'Connect', 'Play', 'Move' and 'Survive'), the full colour, well-designed and attractive pages provide brief explanations of how equipment such as MP3 players, voice recognition, microwave ovens, submersibles, virtual keyboards and pacemakers work. (TECHNOLOGY)