



Acknowledgments

This publication also includes the Challenges published in the BP Technology Challenge Files published in 1990 and 1993. Some of the Challenges published in those editions were based on ideas in The 'Egg Race Fact File', by Mike Watts, published by SATTRO, Surrey, 1989.

The Pot Plant Packaging Challenge is modified from the task developed by the Auckland based Equals Group.

Some Challenges are modified from those used by regional BP Technology Challenge groups in New Zealand. In particular, Brian Coles and his team in Palmerston North have been responsible for the development of Theme Challenges and the ideas in that section (pages 4.4–4.5) are largely theirs.

Curriculum documents referred to are:

THE NEW ZEALAND CURRICULUM FRAMEWORK document (*especially the Essential Skills, pages 17–20*)

SCIENCE IN THE NEW ZEALAND CURRICULUM.

TECHNOLOGY IN THE NEW ZEALAND CURRICULUM.

Bibliography

These books are included as they are especially interesting, useful or readable. However, as will be noted from their dates, many are no longer in print, hence the inclusion of brief background notes.

Bridges

There are many books on bridges. Two are listed below, the first because it is well illustrated, informative and comprehensive; the second because it shows the diversity of bridges in New Zealand (even if it doesn't include the Rakaia Gorge bridge with its unique truss structure).

Brown, David J. *Bridges: THREE THOUSAND YEARS OF DEFYING NATURE*. Mitchell Beazley, London, 1993.

Hudson, Patrick. *BRIDGES OF NEW ZEALAND*. IPL Books, NZ, 1993.

Mangonel

Payne-Gallwey, Ralph. *THE BOOK OF THE CROSSBOW*. Dover Publications Inc, 1995. This is a re-publication, originally published in 1903. It has a section on ballista, mangonels and trebuchets, and cautions that the claims made for the performance of some trebuchets are extravagant.

Various sites on the World Wide Web, not given here as they may change. Do a keyword search for mangonel and trebuchet.

Coded messages

Gardner, Martin. *CODES, CIPHERS AND SECRET WRITING*. Dover Publications Inc. 1984.

Long lift

Severn, Bill. *ROPE ROUNDUP*. Van Rees Press. 1960.

36 Second Timer

Jesperson, James, & Jane Fitz-Randolph. *FROM SUNDIALS TO ATOMIC CLOCKS*. Dover Publications, 1982.

Packaging

Griffin, Roger C., Stanley Sacharow, Aaron L. Brody. *PRINCIPLES OF PACKAGE DEVELOPMENT*. Second Edition. Krieger Publishing Company, Florida. 1985, reprinted 1993.

Hanlon, Joseph E. *HANDBOOK OF PACKAGE ENGINEERING*. Second Edition. McGraw-Hill Book Company. 1985.

Shelters

Allan, Edward. *HOW BUILDINGS WORK. THE NATURAL ORDER OF ARCHITECTURE*. Oxford University Press. 1980.

Outside Challenges

Pelham, David. *THE PENGUIN BOOK OF KITES*. Penguin. 1976. (There are many books on kites, this is still one of the best.)

Waugh, Albert E. *SUNDIALS: THEIR THEORY AND CONSTRUCTION*. Dover Publications. 1973.

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