

A WORD ON WASTE



MISSION STATEMENT

1. To create an awareness and understanding of the waste we create
2. To change attitudes and behaviour, to achieve waste reduction

A WORD ON WASTE, a teacher's resource kit on Waste Reduction and Recycling, has been designed and developed for primary and intermediate school teachers in the Auckland region by the Auckland Regional Council.

The lessons and activities in this resource kit are designed to create a basic awareness and knowledge of waste management issues in New Zealand and to equip students with the necessary skills to protect and improve our environment.

A WORD ON WASTE encompasses a range of curriculum areas, including social studies, art, mathematics, science, language, craft and construction, drama, cultural studies, music, physical education and health. The emphasis throughout this kit is to increase students' awareness and understanding of waste reduction and recycling by participating in "hands on" individual and classroom activities

There is no copyright on the material in this kit, so it can be photocopied. It has been designed with photocopying in mind.

ACKNOWLEDGEMENTS

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Auckland College of Education, Education Advisory Services
Auckland College of Education, students who contributed to the conception of the activities:
Colin Percy (Faculty Member)

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Auckland City Council	Franklin District Council
Manukau City Council	North Shore City Council
Papakura District Council	Rodney District Council
Waitakere City Council	

Thank you to those companies who provided reusable folders for this kit.

A special thank you to all the schools, teachers and pupils who participated in trialling the draft of this kit.

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Education Kit for Junior and Intermediate Educators

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HOW TO USE THIS KIT



A WORD ON WASTE is divided into several units, each covering a solid waste management issue. Topics covered in this kit are resource use, waste, landfilling, waste reduction, reuse, recycling, packaging, composting, litter and hazardous waste. The kit incorporates the strands (areas of knowledge) of both the Science and Social Studies Curriculum. It also encompasses the Essential Learning Skills and provides opportunities to develop and extend these basic learning tools.

At the beginning of each lesson is a summary of background information related to that particular subject. Each unit begins with a list of relevant vocabulary terms and a comprehensive glossary of waste management terms and definitions is also provided at the end of the kit.

Waste management fundamentals forming the basis of A WORD ON WASTE are as follows:

- Waste Reduction: Prevention of waste at the source by using less, by redesigning products and/or by changing society's patterns of consumption or waste generation.
- Waste Reuse: Using a product over and over in its original form, e.g. glass bottles are washed and refilled for reuse.
- Waste Recycling: The process of collecting used materials such as glass, aluminium, plastic and paper for reprocessing or re-manufacturing into new products.
- Resource Recovery: Processing of collected raw waste to separate recyclable materials and converting the remaining mixture into useful materials or energy forms.
- Residual: Disposal of waste in an environmentally acceptable and cost effective manner.

The lessons and activities in A WORD ON WASTE are designed to be flexible in both time and age constraints. The kit can be used as is, or teachers can select activities and resources to suit their needs. The extra activities at the end of each lesson reinforce concepts and consolidate learning. They can be used in group or individual situations or as a homework task.

Teachers may choose to expand or simplify the lessons and activities according to their class education needs. ARC Environment would like to hear of your successes and your ideas to improve and extend this kit. An evaluation sheet is attached at the end of the kit.

A WORD ON WASTE incorporates the eight groupings of essential skills:

COMMUNICATION SKILLS

NUMERACY SKILLS

PROBLEM SOLVING SKILLS

INFORMATION SKILLS

WORK AND STUDY SKILLS

PHYSICAL SKILLS

SELF MANAGEMENT AND COMPETITIVE SKILLS

SOCIAL AND COOPERATIVE SKILLS

A WORD ON WASTE develops the following skills within the SEVEN ESSENTIAL LEARNING AREAS:

HEALTH AND WELL BEING

monitoring
cleaning
decomposing
walking
jumping

washing
preserving
saving
running
skipping

THE ARTS

painting
designing
drawing
acting
photography
describing

building
inventing
creating
composing
modelling

SOCIAL SCIENCE

researching
changing
organising
distinguishing
selecting
critical thinking
relating
comparing and evaluating past/present
comparing cultures and customs

investigating
interpreting
inferring
applying
observing
surveying

TECHNOLOGY

surveying
researching
observing
evaluating

investigating
exploring
reporting

SCIENCE

measuring
researching
evaluating
problem-solving
applying
interpreting
organising
distinguishing

investigating
analysing
observing
exploring
collecting
classifying
calculating

MATHEMATICS

measuring
comparing
relating
calculating
classifying

graphing
counting
analysing
evaluating

LANGUAGE

researching
debating
listening
distinguishing
communicating
assimilating
labelling
describing
interviewing
writing, creative and formal

speaking
reporting
identifying
reading
analysing
advertising
categorising
interpreting
selecting



the teaching units in **A WORD ON WASTE** can be incorporated into the following science strands

MAKING SENSE OF THE MATERIAL WORLD

Unit 3: LANDFILL

One Place Our Rubbish Goes
Build Your Own Landfill

Unit 5: REUSE

One More Time
Disposable v. Durable
Something Old Turned New

Unit 6: RECYCLE

Recycling ... How and Where
Home Recycling Pamphlet
Recycling Centre Visit
The Plastic Mountain
Making Recycled Paper
Glass Galore
Metal Cans
Metal Recycling

Unit 7: PACKAGING

Packaging Through the Ages
What Is It Made Of?
Containers ... One Too Many
All Wrapped up
Wrap It Up

Unit 8: COMPOST

Let it Rot
How To Build a Mini Compostor
Worms Eat Rubbish

Unit 9: LITTER

Waste Out Of Place
Litter Awareness Week

Unit 10: HAZARDOUS WASTE

Hazards in the Home
Proper Disposal

MAKING SENSE OF THE LIVING WORLD

Unit 1: RESOURCES

World in a Jar
Me and My World
Needs and Wants

MAKING SENSE OF PLANET EARTH AND BEYOND

Unit 1: RESOURCES

Planet Earth
Running Out of Resources
Needs and Wants

Unit 4: REDUCE

Stop Waste at the Source

Unit 9: LITTER

Waste Not on the Water
Marine Debris
Tip No Waste in the Drain

Unit 10: HAZARDOUS WASTE

Take Care

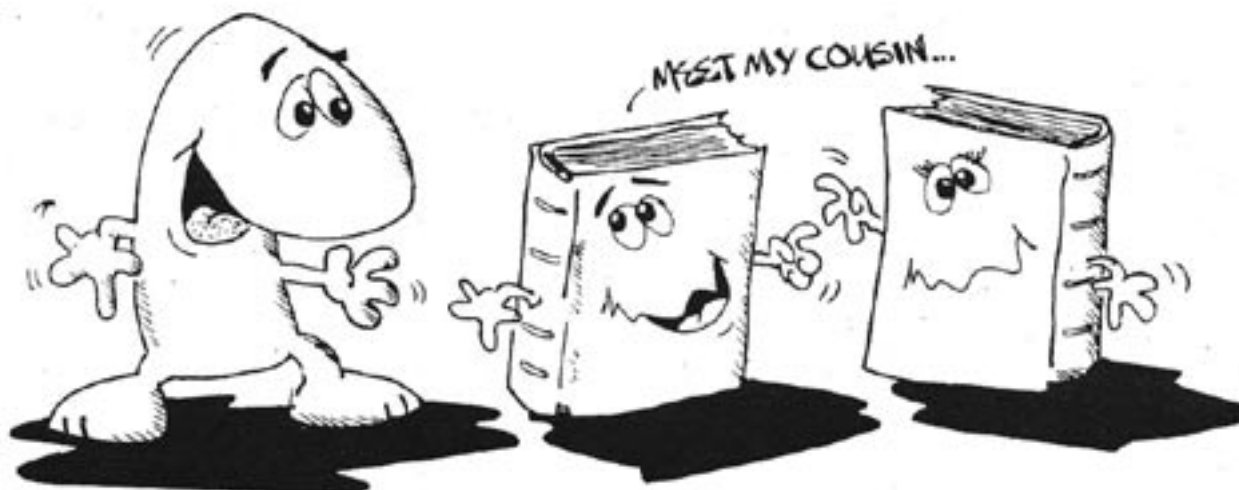
MAKING SENSE OF SCIENCE AND TECHNOLOGY

Unit 2: WASTE

Waste Then and Now



RELATED READING MATERIAL



Adam and Paradise Island (Jnr Int Snr)
Charles Keeping
Oxford University Press

Atlas of Environmental Issues (Int Snr)
Dr Nick Middleton
Oxford University Press

A Tale of Antarctica (Jnr Int)
Ulco Glimmerveen
Scholastic Hardcover NY Publishers

A Walk to the Beach
C. Gaskin
Heinemann Reed 1989

Caring for Planet Earth
Barbara Holland & Hazel Lucas
Lion Publishing, England

Conservation (Jnr Int)
Preserve Our World for the Future
Robert Ingpen & Margaret Dunkle
Puffin Books, Penguin Books Australia

Conserving the Jungles (Int Snr)
Lawrence Williams
Evans Brothers Ltd.

Collins Guide to the New Zealand Seashore
D. Gunson
Collins Publishing Ltd.

Don't Throw It Away (Jnr Int)
Brian Knapp
Macmillan Co. of Australia Pty. Ltd.

Ecology & Conservation (Int Snr)
Steven Seidenberg
Belitha Press

Ecology Watch (Int Snr)
Rain Forests
Rodney Aldis

Extinction is Forever
Graham Meadows
Shortland Publications

Friends of the Earth Yearbook (Jnr Int Snr)
Grandreams Ltd. London

Go Easy On The Earth (Jnr Int Snr)
Royal Forest & Bird Society

Good Planets are Hard to Find (Int Snr)
Roma Dehr
Earth Beat Press, Canada

Ian & Fred's Big Green Book (Jnr)
Pearce Winton
Bennett Kingfisher

Natural History of New Zealand
N. Bishop
Hodder & Stoughton, 1992

Pollution – Earth in Danger (Jnr Int)
Ron Thomas & Jan Hipgrove
The Macmillan Company of Australia

Rainforest (Jnr)
Helen Cowcher
Picture Corgi Books

Resources and Rubbish (Int Snr)
David Relph
New House Publishers Ltd

Sara Scrap and her Wonderful Heap (Jnr Int)
Wendy Lewis
Coverleaf Evans Bros. Ltd

Save Our Earth (Jnr Int)
Ron Bacon
Shortland Publications Ltd.

Science Understandings
The Environment
1. The Great Rubbish Mountain
Teacher's Guide
Colin Walker
Lands End Publishing

Seas and Oceans
Clint Twist
Cloveday

The Climate Crisis
John Becklake and Franklin Watts
Aladdin Books

The Dream (Jnr Int)
Carole Riley
Ashton Scholastic

The Environment (Jnr Int Snr)
The Earth in Danger
Ron Thomas & Jan Hipgrove
The Macmillan Company of Australia

The Hoi Hoi (Int Snr)
New Zealand's Yellow Eyed Penguin
Adele Verran
Hodder and Stoughton

The Lorax
Dr Seuss
Collins

The Magic School Bus at the Water Works
(Jnr Int)
Joanna Cole
Scholastic Inc. New York

The Pond That Turned Into a Puddle (Jnr Int)
Janette Morris
Paul Hamlyn, Publisher

The Story of the Kakapo Parrot of the Night
(Jnr Int)

Philip templer & Chris Gaslan
Hodder & Stoughton

The War on Pollution
Mike Lyth
Wayland Publications

The World of Plastics (Snr)
Plastics Environmental Advisory Council
Ph (09) 262 3773

Usborne Conservation Guides (Jnr Int Snr)
Protecting Endangered Species
Felicity Brooks
Usborne Publishing London

Visual Science 'Water' (Int Snr)
Bill Gunsten
Macdonald Education

What a Load of Rubbish! (Jnr Int)
Steve Skidmore
Collins Dove, Australia

What a Waste
Stephen Jones
Harcourt Brace Jovanovich

Where the Forest Meets the Sea (Jnr Int)
Jeanie Baker
Walker Books, London

Wildtracker Activity Books (Jnr)
Save It
Watch It
Grow It
Enjoy It
Donna Bryant
Hodder & Stoughton

World in Danger (Jnr Int)
Air
Water
Steve Pollock & Peter Wingham
Belitha Press

World Issue – The Environment (Jnr Int Snr)
Adam Markham
Wayland Publishers

Young Person's Guide to Saving the Planet
(Int Snr)
Debbie Silver & Bernadette Vallely
Virage Press Ltd

Books available at these outlets:

Dorothy Butler Books
Ashton Scholastics, Private Bag, Penrose
Good Book Company, Mt Eden
Jabberwocky, Dominion Road, Mt Eden
Daniels Bookshop, St Heliers

This list compiled with special thanks to:

Trish Bowden
St Kentigern School

A number of local organisations including the ARC Environment have a supply of waste related pictures/posters/pamphlets available upon request. Check the "Environmental Organisations" list in the Appendix.

WASTE/RECYCLING EXCURSIONS

Sims Pacific Metals
259 James Fletcher Drive
Otahuhu
Ph: 09 270 4222
Contact: Brian Haggar

Waitakere Learning Centre
Waitakere City Recycling and Transfer
Station
The Concourse
Henderson
Ph: 09 837 6173
Contact: Waste Minimisation Officer

