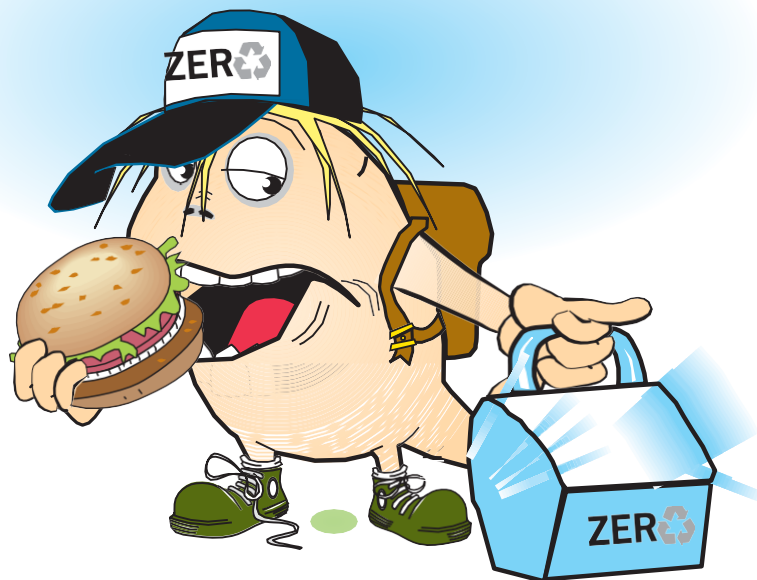




"Educating Today for a Sustainable Tomorrow"



The Litterless Lunchbox

Teacher Guide

Introduction:

Zero Waste Education (ZWE) is an award winning programme which has been teaching children about sustainable resource use through reducing, reusing, recycling and composting. Established in 1993 ZWE is now taught in over 500 schools throughout New Zealand.

This Council funded programme enables children to investigate the link between earth's natural resources, the products they use and see around them and the resulting waste that pollutes our environment. It empowers them to make decisions to reduce the waste pile by reducing, reusing, recycling and composting and by sharing their knowledge with others.

The programme consists of eight units each focusing on a specific solution to our waste problem. The units alternate each year so students will receive new material while building on what they have previously learned. By the time students leave Year 8 they will have received all eight units.

- Years 1 and 2: Is That Really Rubbish? and The Litterless Lunchbox
- Years 3 and 4: Reduce Unit and Reusing Unit
- Years 5 and 6: Recycling Unit and Composting Unit
- Years 7 and 8: Resource Sustainability Unit and Water Unit

Teacher Guide Overview

This guide is provided to assist teachers in undertaking curriculum planning for learning in class. Included in all ZWE teacher guides are suggested hands-on extension activities. The guide promotes the inquiry learning process using the ZWE *Four R's of Inquiry*. This is just one of many inquiry learning models available and you may choose to use a different model. A more detailed version of the inquiry model follows.



The ZWE visit takes place during the 'Research' stage of the inquiry process. During this time student's will be immersed in the topic of 'Reducing the Waste Pile' and will cover selected achievement objectives from the New Zealand Curriculum. The aim is for

students to build up a knowledge bank and become experts in the topic.

Post ZWE, students are given an opportunity to 'Regroup' as a class and consider the current waste related issues in their school, home or wider community. Students are then able to 'Respond' to a specific issue they are passionate about as group or independently. To 'Reflect' is an important part of the inquiry process and students should be given a chance to review and share what they have learnt and the actions they have taken.

Timetabling

This unit consists of two 45-minute lessons and is taught by specialist educator.

Teacher Obligations

We ask that teachers remain in their classroom for the duration of all lessons.

Workbooks

Each student receives their own worksheet to complete during the ZWE lessons. At the end of the unit students are encouraged to take their worksheets home to share their learning.

The Litterless Lunchbox Unit

Students are introduced to the concept of 'litter' (things we don't want anymore). They explore their own lunchboxes to find what litter may hide there. After examining the connection between the litter in their lunchboxes and the litter in the environment they begin to learn some simple alternatives to a litter-filled lunchbox. Through discovery and simple card games and colouring activities students gain the knowledge to create their own Litterless lunchbox which they can share with others.

After the ZWE visit teachers are encouraged to continue the learning through an inquiry learning process, detailed below.

Curriculum Planner

<h3 style="color: #008000;">Zero Waste – Reducing the Waste Pile</h3>			
<b style="color: #008000;">Values: Community & participation. Ecological sustainability.	<b style="color: #008000;">Key Competencies: Using language, symbols, texts. Participating & contributing.	<b style="color: #008000;">Principles: Future Focus – sustainability.	<b style="color: #008000;">Learning Areas: Social Sciences Health and PE Technology
<p><b style="color: #008000;">Possible Achievement Objectives:</p> <p><b style="color: #008000;">Social Science (Level 1)</p> <p>Students will gain knowledge, skills and experience to:</p> <ul style="list-style-type: none"> • <i>Understand that people have different roles and responsibilities as part of their participation in groups.</i> <p><b style="color: #008000;">Social Science (Level 2)</p> <p>Students will gain knowledge, skills and experience to:</p> <ul style="list-style-type: none"> • <i>Understand that people have social, cultural and economic roles, rights and responsibilities.</i> • <i>Understand how places influence people and people influence places.</i> 			
<p><b style="color: #008000;">Health & Physical Education (level 1)</p> <p><b style="color: #008000;">Healthy Communities and Environments:</p> <p>Students will:</p> <p>Rights, responsibilities, and laws; People and the environment:</p> <ul style="list-style-type: none"> • <i>Take individual and collective action to contribute to environments enjoyed by all.</i> <p><b style="color: #008000;">Health & Physical Education (level 2)</p> <p><b style="color: #008000;">Healthy Communities and Environments:</p> <p>Students will:</p> <p>Rights, responsibilities, and laws; People and the environment:</p> <ul style="list-style-type: none"> • <i>Contribute to and use simple guidelines and practices that promote physically and socially healthy classrooms, schools and local environments.</i> 			

Suggested Inquiry Process

Inquiry stage: Research	
<p>Pre-visit: Check in: what do we already know about rubbish? <i>Think, Pair, Share (class brainstorm)</i>. Explore types of rubbish, e.g.: packaging, plastic, bottles, cans, paper, cardboard, food.</p>	
<p>During visit: Most of the <i>research</i> stage takes place during the ZWE visit with the educator. The learning intentions and assessment tasks in this stage are based around the ZWE lessons, activities, workbook and marking template. Each of the assessment tasks below relate to a workbook activity (see ZWE marking template for more information).</p>	
<p>Learning Intentions:</p> <p>Students are introduced to the concept of rubbish (stuff we don't want anymore).</p> <p>Students will explore how some common rubbish could be reused.</p> <p>Students will explore how some common rubbish could be recycled.</p> <p>Students will explore how some common rubbish could be composted.</p> <p>Students can distinguish between multiple reusable, recyclable, and compostable rubbish.</p>	<p>Workbook Assessment Activities:</p> <p>N/A</p> <p>A1: Students analyse, judge and identify items of rubbish that can be reused.</p> <p>A2: Students analyse, judge and identify items of rubbish that can and cannot be recycled.</p> <p>A3: Students analyse, judge and identify organic and inorganic waste.</p> <p>A4: Students analyse, judge and sort items of rubbish into reusable, recyclable and compostable categories.</p>
Inquiry stage: Regroup	
<p>Learning Intention:</p> <p>Examine the current situation concerning waste in the school or wider community.</p>	<p>Focusing Ideas, Questions:</p> <ul style="list-style-type: none"> - What are the issues? - How might they affect us now or in the future? - Why are they happening? - How do we feel about these issues? - Has our new knowledge changed the way we feel?
<p>Possible Activities:</p> <ul style="list-style-type: none"> - Create a class knowledge bank based on previous and new knowledge. - Think, Pair, Share / Brainstorm using visual mind-mapping - Discuss the issues using De Bono's Six Thinking Hats. 	

Inquiry stage: Respond

Learning Intention:

Respond to an issue concerning waste in the school or wider community.

Record findings / Improvements

Focusing Ideas, Questions:

- Which issue do we want to respond to?
- Can something be done?
- What could/would happen if...?
- How might we make others aware?
- How can our knowledge and ideas help others?
- How can we influence decisions made by others?
- Who is going to do what? *Who decides?*

Record findings / improvements:

- What sort of information should we show?
- How will we collect it?
- How will we sort and present the information?
- Who is going to do what? *Who decides*

Possible Activities:

- Look at rubbish in lunchboxes e.g. chip packets, yoghurt containers, plastic wrap etc. Calculate how much rubbish students bring each day/week/month/year. Record findings using tally charts, graphs etc. For each rubbish problem have students explore and find possible solutions.

- Design a litterless lunchbox making it easy to bring no rubbish to school. Create litterless lunch recipes and menus to take home and share with adults. Have a litterless lunch-off, a competition to see who can bring the least amount of rubbish for a week.

Inquiry stage: Reflect

Learning Intention:

Share the learning journey with others, using a variety of ways to convey information.

Focusing Ideas, Questions:

- How has the issue changed?
- What is different? *Is anything different?*
- What evidence do we have to show this?
- Have your feelings changed about the issue?
- What could we do better next time?
- What is left to do?

Possible Activities:

- Revisit the class knowledge bank, add to it with new knowledge.
- Explore ways of presenting information and share findings with as many people as possible.

Additional Resources

These resources are suggested for Year 1 and 2 units:

Ministry of Education, Literacy online: Ready to Read shared reading texts.

Ready to Read poem cards: A2 or A3-sized cards with traditional and contemporary material. Many of the contemporary poems reflect familiar aspects of New Zealand life.

Ready to Read big books: Ready to Read big books have high-interest topics and storylines that invite active participation such as prediction, problem solving, and unison responses.

Nga Tamariki A Tangaroa. Years 1-4: At Christmas, the Watene family go to the beach. As well as cleaning the beach of lots of rubbish, showing their love of the children of Tangaroa, they work out which kinds of rubbish can be recycled.

Grandma's Vase: Years 1-4: When Grandma's vase gets broken Malia decides they can solve the problem by making a new one. She gathers up some materials from the recycling bin, and with Grandma's help, successfully creates a new vase.



<http://literacyonline.tki.org.nz/Literacy-Online/Planning-for-my-students-needs/Instructional-Series/Ready-to-Read/Shared-reading-texts>

http://www.thechair.co.nz/servlet/Srv.Ecos_Process_HTML_File?P1=/graphics/moe/signon

Local Council: Check out your local council's website for other education resources.