

Sandhurst *KINSHIP WITH THE EARTH* – Unit Outlines

Level: Foundation
Title: *The 4Rs – Rethink, Reduce, Reuse, Recycle*
Strand: Understanding Sustainability

- Teaching & Learning
- School Operations & Processes
- Management of Resources
- Community Engagement & Partnerships
- Story & Celebration

Suggested Duration: 4 Weeks

Unit Focus

In this unit, students will focus on reducing personal landfill waste through the application of the principles of the '4Rs'.

Unit Outcomes

By the end of this unit students should be able to:

- Understand what landfill waste is and how it impacts the environment.
- Explain ways to reduce landfill waste in their classroom and at home.

Key Understandings for Students

- Using the 4Rs help to reduce our landfill waste for the sustainability of the Earth.
- Rethinking and Reducing are the most beneficial for the natural environment.
- There are many ways to Rethink, Reduce, Reuse and Recycle.
- We are all responsible and one person can make a difference to the environment.

Curriculum Links - VELs

DOMAIN	DIMENSION	KEY ELEMENTS FROM STANDARDS
Design, Creativity and technology	<ul style="list-style-type: none"> • Investigating and designing • Producing • Analysing and evaluating 	Not applicable

Background for Teachers

- Understand what waste to landfill is and how it effects the natural environment.
- Understand local waste systems ie. where waste goes once its collected from home and school, what can be recycled in the local area (council collected as well as electronic waste, hard waste collections etc.)
- Understand the hierarchy of:
 - * Rethink – what you buy, what it's made of, life-span and durability
 - * Reduce – packaging, things that aren't needed, food waste
 - * Reuse – share, repair and reuse
 - * Recycle – composting, recycling products, buying products from recycled materials
- Assist students with their assessment task to implement The 4Rs in the classroom and at home e.g. rubbish-free lunchboxes, reducing paper use, introducing compost systems, plastic bag reduction campaign.
- Contact Calder Regional Waste Management Group to book the Litte Green Wagon, resource trailer.
<http://calderregionalwaste.designexperts.com.au/little-green-wagon.html>

Suggested Teaching & Learning Experiences

Focusing Activity

Choose a variety of everyday classroom waste items and bury them in your school yard eg. banana peel, sandwich, brown paper lunch bag, old glue-stick, glad wrap. Use this activity to introduce the concept of 'decompose' and 'break down in nature'. Dig these items up at the end of your unit to see what has happened to these items and apply to students' knowledge about landfill.

- Undertake a school bin waste audit. At the end of the school day, students collect the contents of every landfill bin in the school. They measure the waste by weighing it or calculating how many bags are filled.
- Empty the bin contents on to a plastic sheet and sort the rubbish into categories, using student pre-existing knowledge.
What could be composted/recycled, reused?
What is unnecessary waste eg. plastic wrap?
What makes up most of the waste? Classroom waste? Food scraps?
Electronic waste?
- List ideas for reducing the school's landfill waste.
- Explore where waste goes after you put it in the classroom bin.
Who empties the bin? Where does the waste go? How does it get there? How often is the waste collected from school? How much does it cost?
- Discuss "What do I need?" vs "What do I want?"
ie. what we need to survive and what we want to make our lives better.
- Is all packaging necessary? What are the benefits/issues with packaging of foods today? Why is it important for us to think before purchasing products?

- Look at the content of a lunchbox and apply the principles of The 4Rs to discuss how to make it more environmentally friendly.
- Look at everyday items and discuss how they could be reused, repaired or shared to avoid being placed in landfill.
- How can we use everyday things for different purposes?
eg. What makes a good planting container?
Discuss criteria for materials which can be reused effectively.
- Go on a tour of your local council/shire waste processing depot.
- Guest speaker: ask your local waste education officer, council officer (or even the person who drives the garbage truck) to be a guest speaker.
- Learn about the Keep Australia Beautiful program. Students create posters to promote "Keep Our School Beautiful" based on the learning they have acquired.

Going Further...

- How much waste does one person create in a day? Students count how many things they throw into the bin in one day. They create graphs
- Write a narrative about the 'life' or life cycle of an object, communicating The 4Rs.
- Create a 'talk', podcast or film about how to use The 4Rs to reduce landfill waste.
- Write an article for the newsletter about using The 4Rs at home.
- Take a long term experiment of how things decay. Bury 4 chocolate bars still in their wrappers and 4 without their wrappers in the garden. Dig up one of each type every term and see what happens.
Alternatively – place a Big Mac in a sealed jar and leave for a month or two.
- Investigate the life cycle of everyday items used at school:
Where is the product made? What is it made from? How is it packaged? How do we transport it? How do we use it? How do we dispose of it? How long does it take to decompose?
- Undertake an audit at your school and make a campaign to reduce litter in the yard.
Visit your local waterway to see how litter is affecting the local environment.
- Investigate how advertising influences people's choices and their desire to buy more.
- Why are slogans important for communicating environmental messages? Create slogans that encourage people to use The 4Rs to reduce waste.

Resources

Calder Regional Waste Management Group to book the Little Green wagon, resource trailer.

<http://calderregionalwaste.designexperts.com.au/little-green-wagon.html>

Australian Government - Living Greener - <http://www.livinggreener.gov.au/>

CERES Community Environment Park and RMIT – Life Cycle Resources

<http://sustainability.ceres.org.au/resource/type/article/?sort=view>

Cool Australia. Curriculum Resources

<http://coolaustralia.org/activity/national-recycling-week-my-lunch-box-foundation/>

<http://coolaustralia.org/activity/what-happens-to-waste-experiment/>

Clean Up Australia - <http://www.cleanup.org.au>

Dr Seuss - 'The Lorax' (book)

Keep Australia Beautiful - <http://www.kab.org.au/>

National Nude Food Day - <http://nudefoodday.com.au/>

Ollie Saves the Planet - <http://www.ollierecycles.com.au>

Planet Ark - National Recycling Week - <http://recyclingweek.planetark.org/>

Planet Ark - Recycling Near You - <http://recyclingnearyou.com.au/>

Rethink WasteWise Education Centre - <http://www.rethink.vic.gov.au>

Websearch – *rotting food* and/or *hamburger decaying* on youtube clips
- 14 year old cheese burger