

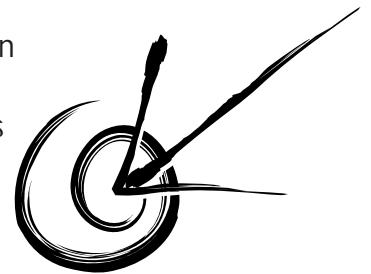


Resourceful Rubbish

Lesson aims

How can you turn rubbish into a resource?

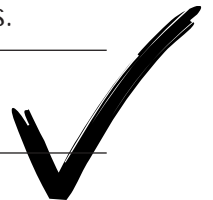
Students will learn about recycling, separating rubbish and how we can use re-use items rather than put them in the waste bin! Students will understand the importance of reducing landfill waste and explore ways in which we can be creative and re-use items.



Learning outcomes

As outlined in the National Profiles:

Studies of Society and the Environment	Place and Space	Features of places. Care of places. People and places.
	Resources	Use of resources. Management and enterprise.
	Natural & Social Systems	Natural systems. Economic systems.
The Arts	Creating, Making and Presenting	Exploring and developing ideas. Using skills, techniques and processes. Presenting.





Background information

Recycling and reusing rubbish is the best way in which we can reduce landfill waste and conserve resources. It provides a way to manage solid waste while reducing pollution, conserving energy, creating jobs and building more competitive manufacturing industries. Natural resources simply will not last forever.

In Australia there are 20 billion fewer trees than when Europeans first settled here in 1788. Paper accounts for a large part of rubbish found in Australia, paper rubbish is not only unsightly in the environment it can also be very harmful to animals and marine life, as can other forms of rubbish such as plastic and glass.

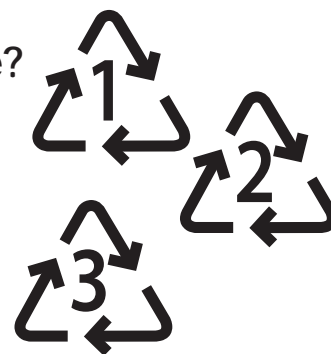
So, why is recycling important?

- Waste that is recycled can save a lot of energy. For example making glass from recycled material only requires 40% of the energy necessary to make glass from sand.
- Glass takes one million years to break down naturally!
- Recycling one tonne of plastic saves enough energy to run a refrigerator for a month
- One standard aluminium can recycled will save 767 grams of CO₂ which is the equivalent of 1 ³/₄ wheelie bins in size, so If every household in Australia recycled just one more aluminium drink can each week over the year we would save more than 300 thousand tonnes of CO₂e.
- Recycled aluminium requires 95% less energy to re-manufacture.
- Ensuring that a small old car is recycled can save more than the average per capita carbon footprint of the world; more than 4 tonnes of CO₂e emissions.

- An individual who lets their newspapers go to landfill will unnecessarily cause 350kgs of extra CO₂ each year.
- Recycling all of the top 5 selling Australian newspapers would save in excess of 20000 Tonnes of CO₂e.
- Recycling all recyclable waste can reduce your carbon footprint in excess of 1 Tonne CO₂.

What can we recycle?

- Cardboard and paper products
- Some plastics – generally plastics labelled 1,2 and 3 can be recycled
- Aluminium
- Glass – clear, green, brown, glass jars



How can we recycle?

- Download your copy of the Triple bin challenge manual and discover how you can implement recycling into your school.
- Conduct a Triple bin Audit. Sort the rubbish bins throughout the school and record which bins are collecting the most rubbish, what types of rubbish are being collected and discuss way in which your school could improve waste issues.
- Arrange for your local council or contractor to collect recyclable rubbish which they will then dispose of correctly.
- Discuss ways in which your school community can reduce, reuse and recycle. For example, use unwanted paper as scrap paper, use plastic bags in art class to make sculptures.



Sources & further information

Clean Up Australia produce an annual rubbish report.

www.cleanup.org.au

Visy Recycling Australia

www.visy.com.au

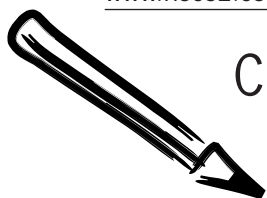
NSW EPA website provides some useful facts about litter.

www.epa.nsw.gov.au/litter/

Facts courtesy of

The Carbon Reduction Institute

www.noco2.com.au



Classroom activities

1. Background Discussion

Ask the class what 'recycling' is. Have any of the students ever recycled before? Ask them to give examples of what they have recycled within their home or at school. Encourage students to think about new and creative ways in which they can recycle and reuse. E.g. make jewellery out of plastics, paper, or pot plants from milk bottles.

2. Let's recycle and recreate!

- Investigate litter in the playground, divide the class up into small groups and ask them not to separate the rubbish but to keep it in the same bag. Allow 10 minutes for rubbish collection.
- Meet again and as a class separate the rubbish into reusable, recyclable and waste.
- Have groups form again and allocate each group 5 pieces of rubbish. Give the group 20 minutes to design and create a new product from their material. Also supply, scissors, glue, paint, string etc. for the

group to use communally. Student could make an art piece, pot plants for the garden, a storage facility for keys, a new hat etc. encourage students to be creative and try to use all the materials that were given to them.

3. Presentation and Discussion

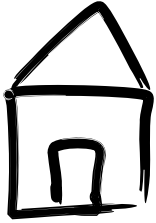
- Have each group present their new product and encourage a class discussion about what they have created, what is it used for, does it work?
- After the group presentations, discuss:
- Why the product has saved energy use or space in a landfill
- Do the students think they will continue to recycle?
- What ways can they encourage other students in the school to recycle?
- Talk about practical ways in which we can reuse items on a daily basis. E.g. Milk bottles used as a watering can or to make a bird feeder.

4. Resourceful rubbish

- Ask students to complete the *Worksheet: What can I recycle and what can I reuse?*
- Ask the students to develop a 1 minute television commercial to promote their new product. Students could make up a song, dance, poem, play to advertise their new product.
- Have each group show their commercial to the class.

Visit the activities link to download further education materials which focus on climate change.

Activities courtesy of the Western Australia Department of Environment and Conservation.



Extension / Home-based Activities

Lower Primary

What goes where?

Draw a picture of three coloured bins and draw items which go in each bin.

Middle Primary

Draw the life cycle for the following items, a plastic bottle, an aluminium can and a plastic bag. Let each student choose if they would like to draw a life cycle for an item which will be re-used or one that becomes waste in a landfill. Have each student compare their life cycles.

Upper Primary

Compare

Design a comparative table of the effects of different rubbish items on the environment. Compare, paper, plastic, glass and non-recyclable items. Analyse the results.



Worksheet: What can I recycle and what can I reuse?

How could you reuse the following items?

Paper

Milk Carton

Plastic Straw

Cardboard Box

Chip packet

Why not reuse this Activity Sheet?

What are four benefits of recycling?

1.

2.

3.

4.

Circle the items below which are NOT recyclable:

