

Environmental Audit - Solid Waste

Aim:

The purpose of this audit is to find the weight, volume and type of waste produced by your school. From this information, you can investigate ways to better manage your school's waste.

This activity can be run in the morning (using waste collected and stored from the previous day) or in the afternoon (using waste collected from the start of the day).

WH&S

Students are to wear gloves at all times when handling waste, and wash hands thoroughly at the end of the practical.

Sharp objects should be handled with care, using the safety equipment supplied (litter pickers and tongs).

Students are to wear fully enclosed shoes.

Equipment:

- Full garbage bins
- Gloves
- Litter pickers or tongs
- Tarps
- Record sheet
- Buckets
- Clip board and pen
- Calculator
- Electronic scales (can be loaned from Council)

Method:

1. Divide into groups (groups of 4-5 work best).
2. Within each group, nominate a team leader, scribe, weigher, sorter and monitor.
3. Collect all the necessary equipment and gloves.
4. Using a selection of bins from the school grounds (i.e. staff room, canteen, playground etc.), appoint a group to each bin.
5. Spread out the plastic tarp, or use a grassy area and pour out the contents of the bin.
6. For the purposes of this audit, the waste will be divided into three waste streams (categories):
 - Food
 - Recyclables
 - General Waste
7. Start to separate the waste out into the three streams using the tools and gloves supplied.
8. Once separated, place the contents of the food waste category into the bucket provided.
9. Using the electronic scales, weigh the food and record the weight on the record sheet.
10. Record the volume on the record sheet. Eg: if the bucket is half full, put $\frac{1}{2}$ in the volume column.
11. Empty the bucket and do the same for the two remaining waste streams.
12. Using the record sheet, complete the calculation table.
13. Develop a PowerPoint report or poster based on the information you have collected from the audit, identifying ways to reduce and recycle your waste.
These might include:
 - Increasing the schools paper recycling;
 - Composting or wormfarming food and garden scraps.

Environmental Audit – Record Sheet

Further Activities:

Based on the data collected, discuss some of the environmental ramifications of Australia's consumption and waste habits. Consider landfill site capacity, site rehabilitation after landfill closures, the possible future carbon emission trading and resources availability.

Select a waste stream and research the different waste processes employed by Newcastle and other countries. Present your findings to the class.

Repeat the audit after you have implemented some of the recommendations. Assess the success and identify the waste streams which require more work.

Co-mingled Recycling Hints and Tips

- Recycle all household plastics, tins, cans, glass bottles, paper and cardboard;
- All rigid (hard) types of plastic can be recycled. This includes ice-cream containers, shampoo bottles, take-away containers and laundry liquid bottles;
- To assist the sorting process, ensure the item remains in the same shape you purchased it as- don't squash items cans or cartons;
- Keep the lids on your plastic bottles; just make sure that they are empty-they don't need to be washed out;
- Leave the plastic windows in envelopes;
- If the item is made up of more than one material, for example a glass jar with a metal lid, separate the components before putting them both in the recycling bin;
- Paper that is contaminated with a lot of oil or food (like pizza boxes and napkins) can't go in the recycling bin, compost it instead;
- Plastic bags cannot be put in the recycling bin. Instead, try re-useable green bags or place unwanted plastic bags and old green bags in the recycling bins provided out the front of major supermarkets;
- Don't place broken Pyrex or crockery in your recycling bin- it has the potential to ruin the glass recycling batch;
- Try not to pack recyclables in tightly together, keep them separate when placing them in the recycling bin.

Environmental Audit – Record Sheet

Group _____ Date _____

Bin location _____

Record the volume and weight of the three waste streams in the table below.

Waste Audit	Food Scraps	Recyclables	General Waste
Volume (Buckets)			
Weight (kg)			

A) Calculate the total amount of recyclable and compostable waste.	A) _____ kg
B) Calculate the total amount of all waste.	B) _____ kg
C) Calculate the percentage of your school's waste that could be diverted from landfill. In other words, the waste that can be either recycled or composted. Tip: Divide the total waste (kg) by the recyclable and compostable waste (kg) and multiply by 100.	(A/B) x 100 = _____ %

Using the EPA's online recycling calculator, see how your recycling efforts are benefiting the environment. You will be able to calculate the landfill space saved, greenhouse impact, and water and energy savings from your recycling.

<http://www.epa.nsw.gov.au/warrlocal/recyclator.htm>

Select three items commonly found in your school's garbage and analyse the current and potential disposal/reprocessing methods.

Waste Generated	Present Disposal Method	Alternate process	Management Strategy
Eg: Paper	General waste	Yes	Implement a recycling service

For any further information please contact Council's Waste Education Officer on **02 4974 2848**.

