

Waste not ... want not

Web-based study of Waste Management

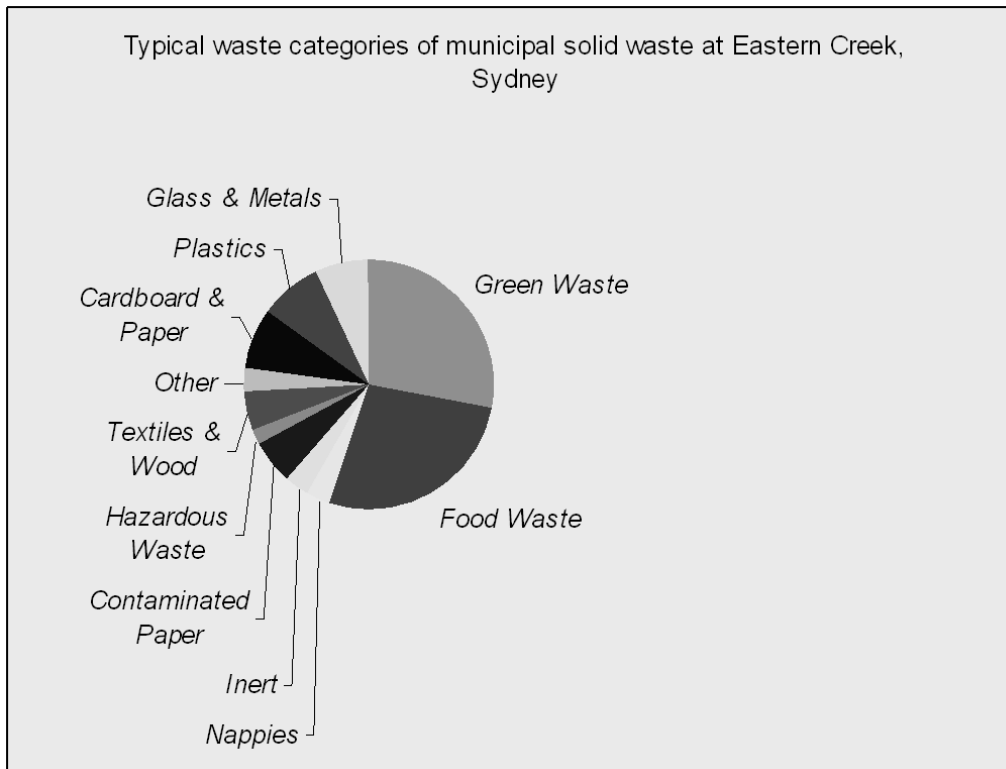
Year 10 Geography Assignment 1 2010

Assignment Due: Monday 22nd March 2010

Weighting: 15%

This assignment is to be completed using your laptop and submitted via Moodle <http://web3.maitgross-h.schools.nsw.edu.au/moodle/> by the due date. All work is to be original and students who download materials without acknowledging their sources will be severely penalised. All answers are to be written in complete sentences using correct punctuation and paragraphing. Marks will be given in question 19 for literacy.

Spiralling land costs and a decline in the number of suitable sites for landfill have forced NSW to find new ways to treat the increasing volumes of solid waste taken away each week by municipal councils from homes, offices, shops and schools. In Australia, we separate residential waste into glass, plastics, metal cans and paper. This recycling has been very successful but too much waste is still finding its way into landfill. Therefore significant changes need to be made to the way we treat municipal solid waste so that there can be an environmentally and economically sustainable outcome.



What is waste? (20 marks)

1. Create a mind map to show the kinds of materials that make up residential waste. (5 marks)
2. Write down the way(s) in which residential waste is different from other waste that is generated in Australia. (5 marks)
3. Following are some general labels we use to talk about waste: liquid waste – solid waste – nuclear waste – organic waste – inorganic waste. Write a definition of each type of waste and find an image of each type. (10 marks)

Re-use, Recycle, Refuse (17 marks)

On 12th December 2005 the Queen's Commonwealth Games baton arrived at Australia's Casey Station in Antarctica. Casey Station is a very important research station for Australian scientists working in Antarctica.

This leg of the baton's journey was coordinated by the Australian Antarctic Division (AAD), which leads the scientific program in Antarctic on behalf of the Australian Federal Government. The Department of the Environment and Heritage is responsible for the operation of the AAD and it is from this website <http://www.aad.gov.au> that you will find answers to the questions set down in this task. Finding the answers will give you some understanding of Antarctica, then, you will have a closer look at the issue of waste there.

4. Locate a map of Antarctica showing its relationship to Australia. Copy and paste this map. (2 marks. Remember to write down the source of this map).
5. What is the area of Antarctica? (1 mark)
6. What is the difference between the land area of Australia and Antarctica? (1 mark)
7. What is the name and height of Antarctica's highest and lowest points? (2 marks)
8. If you were in Antarctica and someone asked "What is the time?" which country's time would it be? (1 mark)



The photograph above shows the pristine Antarctic environment. Yet today it is waste that is spoiling this environment and waste that must be managed so that Antarctica can return to its near-pristine, near-original untouched state.

Use the AAD website and <http://www.classroom.antarctica.gov.au/8-environment/8-3-waste-management-in-antarctica> and other websites of your choice to access information about Casey Station, one of the Australian bases in Antarctica.

9. What kind of waste has been generated at Casey Station since Australia set up there? (1 mark)
10. In the past, how was waste disposed of at Casey Station? Copy and paste three photos from the website to answer this question. (4 marks)
11. In what year did Australia begin to decontaminate the site of Casey Station? (1 mark)
12. How is Australia decontaminating the Casey Station site? (1 mark)
13. Why is Australia decontaminating the Casey Station site? (1 mark)
14. What is the Madrid Protocol? (2 marks)

Waste at Maitland Grossmann High School (33 marks)

Now let's look at waste management a little closer to home. Let's look at waste management at Maitland Grossmann High School.

The following statistics were found on the NSW Environment Protection Authority website.

School waste

School waste differs from most other waste found in our society. Data from Solid Waste Audits conducted by School Communities Recycling All Paper LTD (SCRAP) over five years show how it differs:

Recyclable paper	31%	Plastics	11%
Compostable paper	7%	Aluminium foil and cans	2%
Liquid carton board	4%	Other metals	2%
Food and garden waste	38%	Miscellaneous (glass, textiles etc)	5%
Organics sub-total	80%	Other sub-total	20%

15. Which school service would create the following waste – plastics, aluminium foil and cans? (1 mark)
16. What is the difference between recyclable paper and compostable paper? (2 marks)
17. Give three examples of organics found in your school waste. (3 marks)

Conduct an audit of the waste MGHS generates. An audit is an examination of a subject which is carried out to find the facts. In this case, the subject is waste.

18. (a) Draw a mind map to identify the types of waste MGHS produces. (5 marks)
 (b) Choose a small section of the school to conduct your individual survey.
 (c) Write down the times and the days on which you will examine types of waste found there.
 (d) Draw up a table to record your results. The table should include different types of waste.
 (e) Complete the table as you conduct your survey.
 (f) Summarise your results. How will you display mathematically the summary of your results?
19. Write your report. In your report clearly state the action that could be taken by the school and/or the students to manage waste. This report should be no more than 1000 words in length and should include the information gathered in Question 19 above. (20 marks)