



## Introduction

Designing your own waste audit is a good test of scientific skills and provides an opportunity to act based on research findings. When designing a waste audit there are a number of important considerations including safety, equipment, location and sorting. You will design your own audit with these in mind.

## Safety

You must perform a risk assessment before doing a waste audit. Some types of waste should not be handled. These include human or animal waste and anything containing human body fluids (e.g., used Band-Aid). Waste may include sharp objects or rotting food that pose a danger. Depending upon where waste is stored, it may attract rodents or insects that could pose a risk. The location of your audit may carry risks, such as the chance of sunburn if outside.

Consider the possible items, dangers and controls in your risk assessment. Use the template below, adding any additional items that you think are relevant. The assessment of human and animal waste is included as an example.

### Waste Audit Risk Assessment

Item	Risk	Control
Human or animal waste	May contain microbes that cause disease	Avoid this waste; do not handle contaminated items; wear gloves for protection
Waste with body fluids		
Sharp objects		
Rotting food		
Insects		

## Equipment

Risk control will dictate some of the equipment needed for personal protection, such as gloves. The equipment and facilities available will affect your choice of method. For example, if only small scales are available, you may need to sample a smaller amount of waste. You will probably need bags or bins for the sorted waste. Write your equipment list in the space below. Use bullet points for each item.

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## Equipment List

### Collecting results

You need to decide what categories to use for waste sorting before designing your results table. Will you sort waste by council bin category or by type of material? How detailed will your categories be? For example, will you separate hard and soft plastics or different types of metal? What units of measurement will you use (e.g., grams or kilograms)? Will you calculate the percentage of each item? Draw your results table in the space below.

### Results

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### Analysis

1. What category represented the majority of waste you surveyed? \_\_\_\_\_

2. What difficulties did you encounter in your waste audit? \_\_\_\_\_  
\_\_\_\_\_

3. Explain how you ensured that you collected valid data. \_\_\_\_\_  
\_\_\_\_\_

4. What steps could you take to test the reliability of your results? \_\_\_\_\_  
\_\_\_\_\_

5. Compare your results to household waste in NSW as shown at right. Give possible reasons for differences.

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2011 waste audit by NSW EPA	
Category	Percentage
Organic	53.8
Paper	19.6
Plastics	10.5
Glass	3.7
Earth-based	3.0
Metals	2.8
Other	6.6

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6. What recycling opportunities are available in your local area for the waste collected? \_\_\_\_\_

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7. What steps could you take to reduce the amount of waste produced by your household? \_\_\_\_\_

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**References:**

The [Waste Audit video](#) from AusEarthEd has helpful suggestions.

NSW EPA (2014). Domestic kerbside waste and recycling in NSW: Results of the 2011 waste audits. Environment Protection Authority, Sydney. <https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/warrlocal/140442-audits-2011.pdf>

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