



PERSONAL WASTE ECO-AUDIT WORKSHEET

Introduction

How much waste do you think you produce? According to a World Bank report from 2018, a typical person in a developed country produces about 1.6 kg of waste per day. According to this same report, the average American produced nearly 2.2 kg of waste each day. Whereas an average South African produces about 0.7kg of waste per day. That waste adds up! For example, if you were to tally up the average South Africans yearly waste it would add up to:

- 255 KG per person each year!

Most of us have no idea how much waste we produce each day. With this activity, you'll get a glimpse!

Your Challenge:

Part 1:

Collect all your waste for a 24-hour period in a bin bag. Then review and organise that bag to learn something about your personal waste habits. Record your findings on the Personal Waste Eco-Audit Datasheet





Part 2:

Think about all the electronic products you've ever owned and what happened to them. Document these items on the Personal E-Waste Eco-Audit Datasheet.

Part 1: Personal Waste Eco-Audit Materials

Needed:

- Bathroom scale
- 2 large bin bags
- Protective gloves (rubber or latex)
- 2 containers for sorting food wastes

Instructions:

1. Carry a bin bag with you for a 24-hour period.
2. Throw every bit of waste you generate into the bag, except for "dirty" waste. Rather than adding toilet paper, tissues, etc., put the same amount of clean and unused materials in your bag. For example, if you use four squares of toilet paper, add four clean squares of toilet paper to your bag. (Yes, this is wasting materials in the short term, but it is in the name of science and may help you waste much less later!)
3. After 24 hours, weigh your bin bag and record the weight on your datasheet.
4. Find two containers that will be large enough to sort your food wastes into: one for plant-based products that can be composted and one for meat and dairy products that cannot be composted.
5. Weigh each empty container and record its weight on your datasheet.
6. Put on your protective gloves, and then separate your waste into the categories listed in the chart. To minimize mess, put food wastes in the containers you weighed.
7. Use the Personal Waste Eco-Audit Datasheet to record the weight of the items in each waste category. Be sure to first weigh each food waste container while it is empty and to then subtract that amount from the total weight of the container and the food waste in it. Be precise when taking measurements!
8. After sorting all the waste, weigh the items in each category and record the number. When you've weighed the items in all categories, add up the amounts, and record the total in the final column. This number should be very close to your original, pre-sorting weight.
9. Calculate the percentage of the total each category represents by dividing each category's weight by the total weight and then multiplying that by 100. Record each percentage. Check that all the percentages add up to 100.
10. Transfer to the second chart the weight you recorded for each category on the first chart. Multiply each Daily Total by 7 to get a Weekly Total. Then multiply each Weekly Total by 52 to get an Annual Total.





Directions:

Record the weight of your waste (in kilograms).

Original, pre-sorting, weight of bin bag with waste: _____

Weight of containers: Compostable container: _____ Noncompatible container: _____

Step 1: Data Collection									
	Paper	Cardboard	Plastics	Metal	Glass	Food waste: Compostable	Food waste: Non-compostable	Other	TOTAL
Weight									
% of Total									

(To calculate the percentages, divide the category amount by the total weight; then multiply that number by 100.)

Step 2: Personal Eco-Audit Analysis Sheet				
Material	Daily Total (kg)	Weekly Total (7days)	Annual Total (52 weeks)	%
Paper				
Cardboard				
Plastics				
Metal				
Glass				
Food waste (Compostable)				
Food waste (Non -Compostable)				
Other				
TOTAL				





Part 1: Personal Waste Eco-Audit Questions

1. How does your daily waste total as a South African compare to the global average of a typical person in a developed country: 1.6 kg and to the daily average of an American: 2.2 kg? Explain factors that might influence why your daily total is like or different from those numbers.

2. Do you think the numbers you tallied for one days' worth of waste are reflective of your typical waste habits, or do you think you usually throw away waste in a day? Explain.

3. What steps could you take to reduce your household waste?

4. Which was the largest category of waste you produced? Why do you think this was the largest?





Part 2: Personal E-Waste Eco-Audit

Use this worksheet to tally the electronics you have personally owned. For the purposes of this eco-audit, focus on electronics that are yours personally rather than on those that belong to other members of your household.

Directions:

List every electronic item you can remember that you have ever owned. Be sure to list and record every version you have ever owned of each type of electronic device. For example, list every cell phone you have ever had (one per row) and then move on to the next category. Examples of common electronic products you may have owned include the following: cell phone, computer (desktop, tablet, notebook); mp3 player; speakers; digital camera; television; headphones; bluetooth headset; hair dryer; flat iron; curling iron; electric toothbrush; electric razor; etc.

Electronic waste Personal Eco-Audit Analysis Sheet				
Electronic	Make & Model	How long have you had it/did you have it?	If you no longer have it, why did you replace it? (e.g. broken, out of date etc.)	If you no longer have it, what did you do to it? (Put in waste bin, recycled, threw away, sold it, gave it to someone else)
E.g. Cell phone	Samsung A24	2 years	Broken	Still have it in my drawer





Electronic waste Personal Eco-Audit Analysis Sheet

Electronic	Make & Model	How long have you had it/did you have it?	If you no longer have it, why did you replace it? (e.g. broken, out of date etc.)	If you no longer have it, what did you do to it? (Put in waste bin, recycled, threw away, sold it, gave it to someone else)





Part 2: Personal Electronic Waste Eco-Audit Questions

1. What aspects of your personal e-waste eco-audit surprised you? Explain.

2. How complete and reliable do you think this list of electronics is? Explain.

3. Why did you replace most of your electronics?

4. Why did you keep some electronics longer than others?

5. What are some ways you can reduce the amount of e-waste you generate?

