Grade 6-8 Lesson: Waste Management

Activity 2: Recycle Audit

"Did you know, the average student produces 0.5lbs of waste each day?!"

A waste audit is an educational opportunity for students to investigate the waste types and volume of materials that get discarded daily at your school or home. Audits are a simple and cost-effective tool to accurately understand waste behavior.

Introduction into Waste Audits

A waste audit can provide measurements of each classroom or home's daily waste habits. The data collected during the waste audit will help determine the effectiveness of the school or household's general waste reduction and recycling behaviors, and will highlight areas to take action and educate on. Do you need new signage? Do you have a dedicated green team? Do you need more recycling receptacles? An audit can help answer these questions.

Equipment Recommended

- Protective clothing including rubber disposable gloves and aprons;
- Labels and markers to identify date, location, and waste stream for each bag collected;
- Camera;
- Writing utensil and printed checklist to record the data;
- Weighing scales (optional); and
- Large, sealed containers for weighing waste (optional).

How to Begin Your Waste Audit

First, choose which waste stream you would like to audit (ex: recycling, organics). We recommend beginning with recycling. Due to safety reasons, garbage audits should only be completed by experienced individuals once or once you've consulted your health and safety representative at your school.

Second, select the group of students that will complete the physical audit. For schools, make sure you include your custodial team in the planning process as they can advise you on

additional items to be aware of regarding your school's waste collection program or highlight areas for improvement.

Lastly, determine an auditing date; preferably a week when there are no special events occurring. Audits should be on a need-to-know basis, as to not skew your results or regular student or family's behaviours before they begin. Ask the custodial team, or have your students, collect all waste over a 1 to 3-day period and place in a secure location. If you are doing a single audit, waste can be collected daily up to 3 days. Waste should be collected on Tuesday, Wednesday and Thursday to avoid incidences of higher absences on Monday or Friday that may skew your results. Provide labels for the students or custodial team, so each waste bag can be categorized with the date and collection location. For detailed statistics, conduct multiple waste audits throughout the year or complete annually.

Steps for Physical Waste Audit

Step One: Weigh your empty containers and total audit

Skip step one and four if you do not require weight measurements for your waste audit.

Weigh empty collection containers so you can subtract those weights from the actual waste.

Weigh all bags of waste collected within the collection containers. Add altogether then subtract the weight of the container to get your total weight of just the waste stream.

Step Two: Sort out waste streams

In a spacious area, remove waste from their bags or collection containers and spread it out on a clean surface, outside pavement, or on top of disposable plastic. Begin sorting your waste stream into categories (ex: one section each for recycling and/or organics). If you would like more details, create subcategories (ex: recycling stream broken down into container deposit items and paper).

Step Three: Record Data

Visually make note then record what is within each categorized pile. Count and categorize the items (ex: Recycling – 1 tin can, 5 paper); this step is important if you do not plan on weighing your waste. For more detailed information, estimate your subcategories in percentages (ex: 70% paper, 10% deposit bottles). Document this step with photos for reference. For ease, print off our audit checklist or create your own.

School Recycling Audit				
Recycling	Aluminum	Paper/Cardboard	Plastic #1-#7	Tin
	15 items	110 items	23 items	3 items
Waste	Mixed Recyclables	Stretchy Plastic	Food	Paper Cups
	5 items	0 items	36 items	20 items

Step Four: Weight Calculations

From the data recorded, use the following formula to get accurate statistics on waste audit results.

(1) [Container – (Total Waste Stream + Container)] = Total Weight of Waste Stream

(2) [Container – (Total Recycling + Container)] = Total Weight of Recycling

(3) [(Total Weight of Recycling – Container) / Total Weight of Everything Collected] x 100 = % of Recycling within Total Waste Collected

Step Five: Report and Educate your School or Household

Create a short report about your waste audit findings. Share the results of the audit with your school or family. Highlight any areas for improvement by creating new educational posters showing images of key contaminants located near receptacles. Sharing the waste audit results also gives you the opportunity to reinforce your recycling, organics, or waste goals and how to properly use the waste receptacles in your school or home.