

# School Waste Audit & Analysis

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It is suggested that the audit be conducted on an annual basis in order to detect trends in waste disposal behavior from year-to-year. The audit can be conducted regardless of if a recycling program is in place. If there is not a program in place, simply omit any sections pertaining to recycling bins. However, it is important to still be aware of which items are recyclable through potential recycling vendors in your area in order to complete the audit.

The data collected from this activity is intended to help your school determine appropriate steps to help reduce the amount of waste that goes into the trash, to increase the amount of recyclables that go into recyclable bins instead of trash cans, and to decrease the overall amount of waste generated from your school – recyclable and non-recyclable. As a teacher, you should discuss the audit with your principal or other administrators prior to conducting it to find out if there is interest in improving current waste disposal systems.

**Safety:** Always wear latex or rubber gloves when handling items in the trash or recycling bins. Do not handle any trash in restrooms or from the health office. Wear closed-toe shoes.

## **Time:**

- School-wide audit – 4 hours
- Site Analysis –1 hour as homework
- School-wide Analysis – 1 hour in class

## **Supplies:**

- Latex or rubber gloves (per student)
- Scale for weighing trash (hanging scales or bathroom scale)
- Scrap paper for labeling waste
- Calculator (per student)

### **Per Group:**

- \*Data Sheet for each site/room
- Pencil
- Tarp for sorting waste
- Extra trash bags
- Five-gallon bucket

### **Site Analysis:**

- Completed Data Sheet for each site/room
- Site Audit Analysis sheet for each site/room
- Site Audit Analysis data form for each site/room

Calculator

Pencil or pen

School Analysis:

Completed Data Sheet for each site/room

Completed Site Audit Analysis sheet for each site/room

Completed Site Audit Analysis data form for each site/room

School Audit Analysis sheet (per student)

Pencil or pen

Calculator

\* The Data Sheet lists common recyclable materials. Your school might not recycle all of these materials or it may recycle more materials. Fill out the form based upon your specific school's waste program. If you do not have a recycling program but want to find out how much waste your school could recycle using a specific recycling plan, feel free to adapt your data collection by omitting the middle "Found in Recycling Bins" column.

## **Instructions:**

### **The Audit:**

1. Determine which trash cans you plan to sort through and talk with your maintenance and cafeteria staff ahead of time about not collecting the selected cans and recycling bins until after your class has performed the audit.
2. Find a large area, indoors or outdoors, sheltered from precipitation and wind to do the sorting.
3. Separate the students into groups of ~4 students. Students will need to collect data and sort waste in their groups. Larger or smaller groups are also acceptable depending on needs.
4. Using the waste audit form, record from where the waste was collected. (classrooms, cafeteria, etc.)
5. Put on gloves and weigh and estimate the volume of material.  
Weight: Weigh the unopened bag of garbage and the recycling bins using the scale.  
Volume: Compare volume to the 5-gallon bucket
6. Empty the contents of the bag on tarp and sort into waste categories listed on the form.
7. Record the weight and estimate the volume for each of the categories.  
Weight: put in buckets and weigh, subtract weight of bucket.  
Volume: estimate volume by measuring how much of the bucket is full
8. Make notes about items that you find a lot of and anything else of interest.
9. Repeat this process and complete a NEW Data Sheet for each room or part of school audited.

10. Return non-recyclables to garbage cans and sort recyclables into recycling bins. Wash tarp and buckets. Put cans and bins back where you found them.

**Post Audit:**

1. Complete calculations on the Data Sheets you filled out during the audit.
2. Complete a Site Audit Analysis for EACH Data Sheet students filled out. Have students divide the Site Audits they completed among their group and finish for homework. They also need to fill out a Site Audit Analysis data form for each site calculating the estimated materials generated over ONE SCHOOL YEAR.
3. As a class, use your Site Audit Analysis sheets and data forms to complete the School Audit Analysis sheet.
4. Some questions to think about when utilizing your information:
  - a. What were the main components of the school's waste?
  - b. Would the results be different if the audit was conducted at a different time in the school year?
  - c. What were some of the items that could have been reused instead of thrown away?
  - d. How could students, and the entire school, reduce waste in each of the materials categories?
5. If this is the first year conducting the audit, work as a class to design a graph that charts the recycling and mainstream waste overall weights and volumes of the school annually. If this is not the first year of the audit and a graph has already been created, add this year's data to the graph to record long term trends.