**Personal Solid Waste Inventory**

**Procedure:**

* Collect and store all solid waste material, including items that may be recycled, for a 7 day period. **DO NOT** collect anything that might pose as a health hazard- hygiene items and food waste are not to be collected.
* Record a running inventory of all solid wastes collected through out the week with a final tally at the end of items that fit each major category (paper/cardboard, plastic, aluminum, Styrofoam, glass and unidentifiable/misc).
* You do not have to carry your trash with you for the 7 day period, but the highest grade you can receive is 85 if you choose not to. (It will be easier to collect your trash if you bring your trash bag with you)
* You will bring your items to class on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to calculate the weekly and yearly mass of your waste.

**Hypothesis:**

1. Of the 7 categories listed above, which do you think you will have the highest mass of?
2. Of the 7 categories listed above, which do you think you will have the lowest mass of?
3. What percentage of mass do you think you will be able to recycle?

**Solid Waste Inventory**

|  |  |  |  |
| --- | --- | --- | --- |
| \*\*\*Plastics\*\*\* | | | |
| Item | **Number of Pieces** | **Item** | **Number of Pieces** |
| Beverage containers/lids |  | Forks/Spoons/etc |  |
| Food wrappers |  | Straws |  |
| Non-food packaging |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Weekly Total Plastic  (g or kg): |  | **Annual Total Plastic**  **(g or kg):** |  |

|  |  |  |  |
| --- | --- | --- | --- |
| \*\*\*Aluminum\*\*\* | | | |
| Item | **Number of Pieces** | **Item** | **Number of Pieces** |
| Cans |  | Foil |  |
|  |  |  |  |
| Weekly Total Aluminum  (g or kg): |  | **Annual Total Aluminum**  **(g or kg):** |  |

|  |  |  |  |
| --- | --- | --- | --- |
| \*\*\*Paper\*\*\* | | | |
| Item | **Number of Pieces** | **Item** | **Number of Pieces** |
| School-related |  | Paper bags |  |
| Pages of magazines/catalogs |  | Mail |  |
| Pages of newspaper |  | Store Receipts |  |
| Paper towels/napkins |  | \*ESTIMATE\* squares of toilet paper |  |
|  |  |  |  |
|  |  |  |  |
| Weekly Total Paper  (g or kg): |  | **Annual Total Paper**  **(g or kg):** |  |

|  |  |  |  |
| --- | --- | --- | --- |
| \*\*\*Glass\*\*\* | | | |
| Item | **Number of Pieces** | **Item** | **Number of Pieces** |
| Bottles |  | Jars |  |
|  |  |  |  |
| Weekly Total Glass  (g or kg): |  | **Annual Total Glass**  **(g or kg):** |  |

|  |  |  |  |
| --- | --- | --- | --- |
| \*\*\*Styrofoam\*\*\* | | | |
| Item | **Number of Pieces** | **Item** | **Number of Pieces** |
| Packaging materials |  | Cups/plates |  |
|  |  |  |  |
| Weekly Total Styrofoam  (g or kg): |  | **Annual Total Styrofoam**  **(g or kg):** |  |

|  |  |  |  |
| --- | --- | --- | --- |
| \*\*\*Unidentifiable/ Misc\*\*\* | | | |
| Item | **Number of Pieces** | **Item** | **Number of Pieces** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Weekly Total Mixed Metals  (g or kg): |  | **Annual Total Mixed Metals**  **(g or kg):** |  |

**Separate the items into the categories recyclable and non-recyclable.**

Mass of recyclable items: \_\_\_\_\_\_\_\_\_\_\_

**Inventory Check for 15 points:**

|  |  |
| --- | --- |
| Day 1 |  |
| Day 2 |  |
| Day 3 |  |
| Day 4 |  |
| Day 5 |  |

Mass of non-recyclable items: \_\_\_\_\_\_\_\_\_\_

**Totals:**

1. Total Solid Waste Items for the 1 week period:
2. Total Solid Waste Items for 1 year:
3. Total Mass of Solid Waste materials for the 1 week period:
4. Total Mass of Solid Waste materials for 1 year:
5. What percentage of mass was recyclable?
6. If you lived to the ripe age of 80, what would the total mass of your solid waste be? SHOW YOUR MATH. (keep in mind, you aren’t starting at age 0)
7. If you lived to the ripe age of 80, what would the total mass of your recyclables be? SHOW YOUR MATH. (keep in mind, you aren’t starting at age 0)

Questions

1. Was your hypothesis correct (questions 1 & 2), why or why not?
2. Create an analogy for the mass of your total solid waste for the year as well as the total mass of your recyclables.
3. Statistically, what is the largest component of solid waste (*paper, plastic, yard waste, etc*)?
4. Based on your observations, what type of solid waste material is the most abundant? Does this match what is typically observed (the answer to #3)- why or why not?
5. Describe three significant and specific environmental impacts that are associated with the “life cycle” of the material type you identified in question 3.
6. If your parents completed this same inventory, how do you think theirs would differ from yours in terms of types and amounts of materials used?
7. How did you alter your choices about the foods you ate or items you purchased during the last seven days due to the type or amount of packaging?
8. Part of this lab was the requirement to recycle all materials that could be recycled. If you were not required to recycle what would have been the fate of some your trash? Why?