

## **RECYCLE-WASTES NOT WANT NOT**

### **OBJECTIVE:**

By the end of this lab you will have a better upstanding of waste and recycling. You will also gain insight on improving conservation, controlling our limited resources and an understanding that you can make a difference in the global community by being "Green".

### **INTRODUCTION:**

Everyday we dispose and consume large amounts of materials. Our actions have a definite impact on our earth's resources. The first step to conserving our resources is to understand where this waste is taking place. By educating ourselves on where waste takes place, we can begin to curb our life styles. Waste is not permanent by all means, we can control this monster by reducing, reusing and recycling materials we may ordinarily throw out in the trash.

We will begin this lab by understanding what we can do as individuals to alter our own waste output. By altering our lifestyles just a little we begin to build a substantial positive impact on our world

For this lab you will be asked to work in groups of 4 (best by table group). You will be assigned a specific building zone for your observations. A map of the campus has been provided so you can mark out your zones.

### **PART ONE**

#### **WASTE NOT, WANT NOT VIDEO**

Many countries are limited in space for trash, so innovative ways of disposal have been adopted by many countries. Many countries such as the United States do not have a land shortage where countries such as Japan and other smaller countries have limited space to store or treat trash. You will see how some countries deal with trash in the film "Waste Not Want Not". After watching the video answer one of the following questions, please limit your answer to 1 page front and back!

- 1) You are an environmentalist who is lobbying to build a waste facility in a town that does not want the plant in their backyard. Explain what your plant does and reasons the town will benefit from it. Use at least 3 examples from the film Waste Not, Want Not to support your work.
- 2) For this question you are to assume you just received your PhD. in Garbageology. Give me the title and a short abstract of your thesis. Use at least 3 examples from the film Waste Not, Want Not to support your work
- 3) The video Waste Not, Want Not needs to be reviewed for a catalog that sells videos to schools. Give a review of the video and why it is important for the school to buy it. Use at least 3 examples from the film to support your work.

## **PART TWO SELF WASTE AUDIT**

In order to begin change one must first begin with their own lifestyle. As a steward of the earth you are obligated to become more conservation minded. In this part of the laboratory you will begin to understand what you can do to curb your own waste.

### **A water consumption audit**

If you live in an area where waste water is collected your water is sent to a water treatment plant for recycling. If you live in an area where you have a septic system in your yard, you recycle water naturally, as the water filters it's way back to the water supply. This exercise is designed to help you understand the amount of water you use on a daily basis and what you can do to lower your usage.

First you will record the amount of water you use and then determine how to curb your water consumption. Use the enclosed list of Average Water Demands Of Everyday Activities to determine how much water you consume during your everyday activities.

- 1) During the next 48 hours record all your water usage on the Water Usage Chart provided.
- 2) Analyze your results and then determine what you can do to lower your water usage.
- 3) Record your water consumption for the next 48 hours on your chart, following your ideas on lowering water usage.
- 4) Share this data with the others in your group on presentation day.

### **Purchase audit**

Waste also includes purchases you make, not so much the product itself but the packaging of it. Think of a product or item you recently purchased which had excess packaging. The average American throws out his own weight in packaging every month. If you had the ability to alter the packaging of one product what would it be? How would you change the product packaging to lower the amount of waste. Use models, pictures or diagrams to make your point. Share your thoughts on product consolidation with your class

### **Paper audit**

One 60 foot tree weighs on average 1,610 pounds. That same tree will yield 80,500 sheets of 8.5in X11in paper. Now think of all the paper products you use (cereal boxes, news papers, toilet paper and much more it all adds up) perhaps one of the most annoying paper is junk mail. Did you know that the average household's daily mail is about two thirds junk mail?

You have collected the 5 days worth of junk mail. How many grams did your junk mail collection weigh? Remember to subtract or tare the weight of your bag that held your junk mail before recording your weight. \_\_\_\_\_

You receive junk mail because your address was sold to a mailing list. The more lists you are on the more junk mail you will receive. Below are 2 addresses to the largest

mailing list companies. Send a letter containing your exact mailing list where the junk mail is being received and a written request to be removed from their mailing list. It may take a month or two but you will notice a reduction in your junk mail.

Mail Preference Service, PO Box 9008, Farmingdale, NY 11735  
The Direct Marketing Association, 6 East 43rd St., New York, NY 10017

## PART THREE ROWAN WASTE AUDIT

### Water flow

In our part of the country, we depend on our ground water resources. Over half of the total population in the United States drinks ground water. Drought conditions and pollution has heightened our need for water conservation. It has been shown that up to 50 percent of the water wasted in the home is attributed to taps that run unnecessarily.

In this portion of the lab you will investigate your Building Zone for leaky faucets in the bathrooms. Record the building, floor and how many sinks are in the bathroom. Be sure to indicate which gender the bathroom was designed for. When entering the opposite gender's bathroom, announce that you are entering and place a note on the door or have a "watch" indicate your presence explaining that you are collecting scientific data.

- 1) Take a plastic 10 or 25ml graduated cylinder and a watch with a second hand (if you do not have one ask your instructor for a timer or stop watch) to measure your drips.
- 2) Record the amount of water (in mls) that drips out of your leaky faucet in a 2 minute period.
- 3) Repeat step 2 and then average the 2 time points.
- 4) Use the chart labeled Water Waste to record your results.

### Electric flow

Lighting accounts for 25 percent of United States electricity usage. In order to create electricity, power plants must consume fuel and will produce a number of air pollutants. It takes 394 pounds of coal to keep a single 100 watt incandescent light bulb burning for 12 hours each day for one year. Substituting a fluorescent light for a traditional incandescent bulb can keep a half ton of CO<sub>2</sub> out of the atmosphere over the useful life of a bulb.

Your Building Zone will be observed for energy loss by recording the number of classrooms that have the lights on when there is no class or students occupying a room. Indicate the building, time and room number on the Electric Waste Chart at the end of the lab.

### Trash flow

A typical college will spend the same amount of money on the disposal trash as

the student body will spend on text books. Although the amount of trash produced in schools has increased steadily over the past 10 years most schools are making efforts to control trash costs. Recycling bins are placed in and around many buildings on campuses. By recycling, schools can reduce the amount of trash needing to be dumped by separating reusable products.

Your Building Zone will contain many different trash receptacles. On your Trash Flow work sheet record the type of trash container (commingled, paper, trash etc.) and the size (small, medium, large or dumpster) of the container.

## Average Water Demands Of Everyday Activities

**shower** - 6 gallons of water

**shower** - 3 gallons of water  
**low flow**

**toilet flush** - 5 gallons each flush unrestricted

**toilet flush** - 4 gallons each flush which has a brick in the toilet tank  
“bricked”

**toilet flush** - 2 gallons each flush which is low flow  
**low flow**

**brushing teeth** - 10 gallons  
**tap running**

**brushing teeth** - wet brush, rinsing briefly half a gallon

**shaving** - 10 gallons  
**tap running**

**shaving** - 1 gallon  
**filling basin**

**hand washing** - 20 gallons  
**tap running**

**hand washing** - 1 gallon  
**filling basin**

**dish washing** - 30 gallons  
**tap running**

**dish washing** - wash and rinse in sink 5 gallons  
**filling sink**

**automatic dishwasher** - full cycle 15 gallons  
**full cycle**

**automatic dishwasher** - short cycle 11 gallons  
**short cycle**

**washing machine** - 40 gallons

**\*\* use your best judgment on any other water usage\*\***

# Water Flow Chart Days 1 and 2

use tally marks for each gallon used (I)

# Water Flow Chart Days 3 and 4

use tally marks for each gallon used (I)

# Electric Waste

## Room Number

# Water Waste Chart

# Trash Flow