

A large pile of garbage, including plastic bottles, paper, and other debris, is shown. A yellow forklift is visible in the background, working on the pile. The image is overlaid with a dark green semi-transparent area on the right side, and a bright green semi-transparent area on the left side. The text "Where is 'Away'?" is written in a bright green font over the dark green area.

# Where is “Away”?



# Not All Waste Are Equal

## Biodegradable

- ▶ Can be broken down
- ▶ Plant and animal matter, newspaper, cotton, leather

## Non-biodegradable

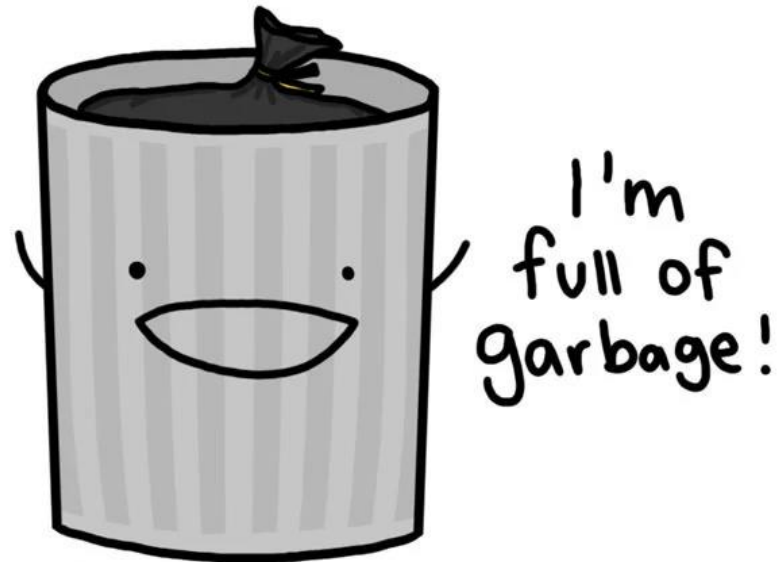
- ▶ Cannot be broken down
- ▶ Chemicals, polyester, nylon and plastic



# Types of Solid Waste

## 1. Municipal Solid Waste

- ▶ Waste produced by households and businesses
- ▶ About 2% of total solid waste- more than 210 million metric tons each year





# Types of Solid Waste

## 2. Manufacturing, Mining, and Agriculture

### Manufacturing

- ▶ Scrap metal, plastics, paper, sludge, ash
- ▶ Consumers indirectly produce this waste by purchasing manufactured products

### ▶ Mining

- ▶ Leftover rock and minerals

### ▶ Agriculture

- ▶ Crop wastes and manure



# Solid Waste Management

## Landfills

- ▶ More than 50% of waste created in the US end up in landfills
- ▶ Contain the waste that is buried inside it





# Safeguarding Landfills

1. Must be lined with clay and plastic liner
2. Must have system to collect and treating leachate
3. Vent pipes carry methane out, collect or burn for energy



# Building more Landfills

- ▶ Running out of space
- ▶ Materials are not decomposing fast enough
- ▶ Active landfills in...
  - ▶ 1988 = 8,000
  - ▶ 2008 = 1,900

# Incinerators



- ▶ Used to burn solid waste
- ▶ What type of issues will this cause?
  - ▶ Burning certain items can lead to air pollution and toxic gasses
  - ▶ Ash goes in landfill- can be more toxic