

# Landfill in an Envelope

Developed by Laura McCoy

**Intended Participants:** grade 5-adult (can be modified for younger participants)

**Overview:** This activity allows participants to visualize what is actually thrown away and what goes in landfills. They can then utilize critical thinking and problem solving to assess waste diversion options.

## Essential Questions:

- Where is “away” when you throw something away?
- What are alternatives to throwing things in the landfill?
- How can our choices and how we view things effect the environment and our waste footprint?

## Key Concepts and Terms:

- **Garbage-** waste or refuse that is discarded of and typically sent to a landfill.
- **Recycling-** the idea of turning something old into something new. In this case we are referring to curbside recycling which are items that generally are paper, plastic, metal, and glass items that are generated from grocery stores and found in kitchens, bathrooms, and laundry rooms.
- **Back Yard Compost-** the aerobic decomposition of organic materials like yard debris, grass, leaves, kitchen scraps.
- **Upcycle-** to reuse objects or materials originally destined for disposal, in a way that adds value or higher quality. For example turning scrap paper into art.
- **Donation-** to take gently used items that were originally destined for disposal and taking them somewhere that they could be of use to someone else. (Please don't donate items that really should be disposed of.)



## Materials and Prep:

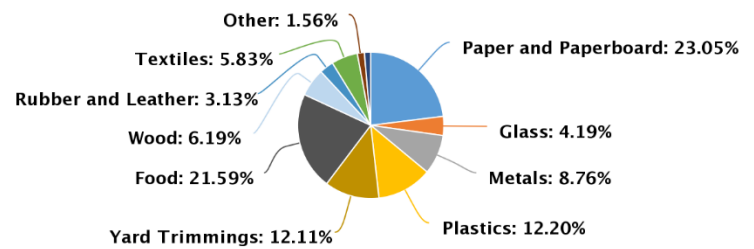
- ☐ Envelopes
- ☐ One copy of the item cards (attached) per envelope
- ☐ One set of recycling guidelines (can use your local guidelines or you can utilize the guidelines attached)
- ☐ One set of composting guidelines per envelope (attached)
- ☐ One table per group
- ☐ Can be done individually, in pairs, groups or adapted to be done as a whole class
- ☐ Answer sheet (attached)

## Mini Lesson/background information: What is a landfill?

1. Start by talking about waste. Start a discussion, what are things that you throw away?
  - Americans throw away about 5 pounds of trash per person per day. That trash has to go somewhere to make sure that it stays out of the environment. The most common place it goes is a landfill.
2. What are other places that trash/things you throw away might end up?
  - Landfills are important because they keep the environment clean, water from being contaminated and make sure that we aren't living in litter.
  - Landfills do fill up though and it is hard to find a place to put them because nobody wants them in their backyard.
  - Instead of putting things in a landfill you can think about your waste and reduce how much is being landfilled. This can be done by Rethinking, Reducing, Reusing and Recycling.
3. Brainstorm the kinds of things that you might see in the trash and then compare it to the MSW Generation Chart above.

**Total MSW Generated by Material, 2018**

292.4 million tons



## Whole Group Activity:

1. Break group into pairs or individuals and hand out envelopes
2. Each participant/group should lay out the cards that say *Landfill*, *Recycling*, and *Other* in front of them.
3. They should categorize each item in the envelopes into those three categories using what they have learned so far, the recycling guidelines and the compost guide
4. Have students discuss as they go through so that they can share new concepts and ideas
5. Note that some items can go into more than one category
6. The sorting activity should take about 15 minutes
7. Have students share any takeaways and noted patterns
8. Share the answers (if desired) at the end using answer sheet (attached)

## Assessment:

Allow for further discussion.

- Were there items that surprised anyone?
- Were there options not listed for disposal/diversion of some of the items?
- Are there things that happened here that could be implemented at their place of residence?
- What items did participants expect to see but did not?

## Extensions and Adaptations:

- Take a trip to a local landfill to see in person what the impacts of waste diversion could be.
- This can be adapted for younger participants by reducing the number of cards and frontloading by explaining all of the key concepts of recycling and composting.

- To make it more interesting you can add a category for composting, hazardous waste, alternative recycling (yard waste, scrap metal etc.) and any other concepts that you want covered. It is also a great place to introduce creative reuse.
- This can also be done by using tangible objects. Fill a plastic shoebox with items such as cans, candy wrappers, paper, and other items representing what goes in a landfill. Have participants sort the items and then put what they classified as landfillable items back in their plastic “landfill.” This allows participants to visualize actual reduction and the physical impact that waste diversion can have. This is great for more tangible learners, smaller groups or groups with more time.

## Learning from the activity:

- The items outlined on the cards are designed to illustrate the actual composition of a landfill
- Each item within the activity has been calculated to illustrate this
- Within the activity participants have been encouraged to think of ways to reduce landfill bound waste to try to reduce waste generation and landfill growth
- Discuss other options that are available for waste reduction
- Be sure to cover what could be done in the future

## Answer Key (What items go where)

| <u>Landfill</u>         | <u>Recycle</u>                  | <u>Other</u>                                     |
|-------------------------|---------------------------------|--|
| Facial Tissue           | Paper                           | Toilet Paper (into the toilet!)                  |
| Plastic Cup             | Cardboard Box                   | Book (donate if in good condition)               |
| Styrofoam Container     | Pringles Can                    | Chain Link Fence (scrap yard if you can)         |
| Car Bumper              | Newspaper                       | Car Muffler (scrap yard)                         |
| Straw                   | Magazine                        | Grass Clippings (yard waste)                     |
| Cheap Shirt with a Hole | Brochure                        | Christmas Tree (live) (Yard waste)               |
| Plastic Fork            | Jelly Jar (rinse it)            | Branches (yard waste)                            |
| Plastic Plate           | Glass Bottle                    | Leaves (yard waste)                              |
| Expired Yogurt          | Aluminum Can                    | Flowers (yard waste)                             |
| Chicken Bones           | Water Bottle (leave the lid on) | Wooden Pallet (wood yard if you can or reuse)    |
| Old Soup                | Detergent Jug                   | Leather Jacket (donate)                          |
|                         | Soup Can                        | Antique Dresser (donate)                         |
|                         | soda bottle                     | Dead Mums (yard waste)                           |
|                         |                                 | Old T-shirt (donate or use for rags)             |
|                         |                                 | Jeans that don't fit (donate)                    |
|                         |                                 | Shoes (donate or take to shoe recycling program) |
|                         |                                 | plastic bag (take back to the store)             |
|                         |                                 | Stale Bread (backyard compost)                   |
|                         |                                 | Banana Peel (backyard compost)                   |
|                         |                                 | Apple Core (backyard compost)                    |
|                         |                                 | Carrot Peel (backyard compost)                   |

# General Recycling Guidelines

**DON'T TANGLE OR CONTAMINATE**  
**RECYCLE MORE**  
**FOR A GREENER STATE**



**PLASTIC**  
Bottles, tubs, jugs and jars



No caps, lids or pumps      Empty and rinse

**METAL**  
All cans



Empty and rinse

**GLASS**  
Bottles and jars



No metal lids      Empty and rinse

**PAPER**  
Paper and cardboard



Flatten cardboard

**KEEP THESE OUT!**



- ⊗ Aerosol cans
- ⊗ All batteries (car, lithium, etc.)
- ⊗ Ceramic items
- ⊗ Clothing or textiles
- ⊗ Diapers
- ⊗ Disposable cups (plastic and paper)
- ⊗ Electronics
- ⊗ Food-tainted items
- ⊗ Hazardous waste
- ⊗ Household glass
- ⊗ Medical waste
- ⊗ Plastic bags/wrap
- ⊗ Scrap wood
- ⊗ Shredded paper
- ⊗ Styrofoam/peanuts
- ⊗ Tangles (cords, hoses, wires, etc.)
- ⊗ Tires
- ⊗ Toys

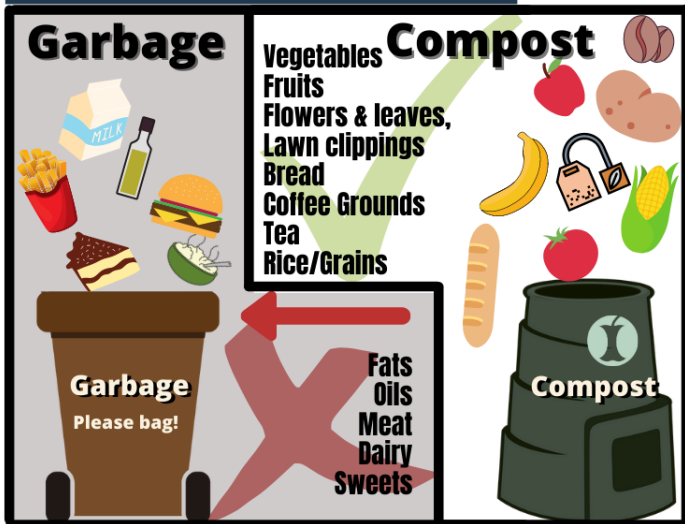
**PLEASE DON'T BAG YOUR RECYCLABLES!**



# General Compost Guidelines



Americans waste one pound of food per person, per day. Composting reduces food waste, helps your garden and is good for the environment. You can have a simple pile in your back yard, or a fancy store-bought bin but no matter what, you are helping make a big difference!



Getting started is simple!

1. Pick a location and container (or pile)
2. Add the right food scraps
3. Make sure it doesn't get too wet or too dry
4. Turn it to give it oxygen and keep the microbes happy
5. Have patience!

Organic materials such as fruits and vegetables, peels, scraps and yard waste can go in the compost. Never put any meat, fats, oils, sweets or grease in your compost!



# Landfill



This is a highly engineered site designed to hold garbage without compromising the surrounding environment. Trash is buried and materials slowly decompose but can release greenhouse gasses.

# Recycling



This is what should go in your green cart so that they can be sorted and made into new things. You can recycle Plastic bottles, jars jugs and tubs, Paper, Metal food and drink containers and Glass bottles and jars.

# Other:



Could the item be:

**Recycled not in your cart:** like

grocery bags can go back to the store

**Donated:** Is it in good shape? Could someone else use it?

**Composted?** Could you put it in Backyard Compost or yard waste?

## Paper



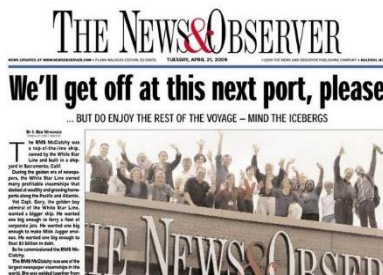
## Cardboard Box



## Pringles Can



## Newspaper



## Magazine



## Facial Tissue



## Toilet Paper



## Book



## Brochure



**Jelly Jar**



**Glass Bottle**



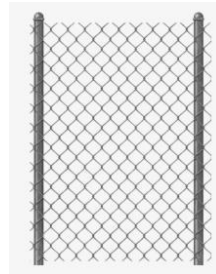
**Aluminum Can**



**Car Muffler**



**Chain Link Fence**



**Water Bottle**



**Detergent Jug**



**Plastic Cup**



**Styrofoam Container**



**Car Bumper**



**Plastic Plate**



**Grass Clippings**



**Branches**



**Leaves**



**Flowers**



**Christmas Tree (live)**



**Banana Peel**



**Plastic Bag**



**Chicken Bones**



**Apple Core**



**Stale Bread**



**Soda bottle**



**Carrot Peel**



**Expired Yogurt**





**Old Soup**



**Antique Dresser (still working)**



**Wooden Pallet**



**Leather Jacket**



**Cheap Shirt with a Hole**



**Jeans that don't fit**



**Old T-shirt**



**Shoes**



**Straw**



**Plastic Fork**



**Soup Can**



**Dead Mums**

