

ECS Learns about composting!

January 18th 2016

Length

Four 30 minutes classes

Audience

3-5 year olds at the Mayerson JCC Early Childhood School in four different classrooms. Altogether includes approximately 60 preschoolers.

Context

Starting at the beginning of the 2017 year the Mayerson JCC Early Childhood School will be composting their food scraps from their snack time to help create beneficial nutrients for their garden. This activity will help introduce the idea of composting to the ECS children as well as teach them what food scraps they can use in their composter.

Goals:

- Children will be able to distinguish the difference between recycling, trash and composting.
- Children will be able to recognize that everyone contributes to trash created.
- Children will be able to identify that composting is beneficial for their garden.

Learning Outcomes

- **Jewish:**
 - Students will learn about the overall Jewish value of Tikkun Olam.
 - Students will associate composting and recycling with the Jewish value of Bal Tashchit.
- **JOFEE Ethics:**
 - **Earth Care** – Children will start thinking about and learning that diverting trash from the landfill helps heal the Earth.
 - **People Care** – Children will learn that not only does our choice to compost divert trash from the landfill to help out the earth, it also helps everyone on earth not deal with the effects of garbage i.e.: polluting waterways, global warming.

Description:

Through a small discussion and watching a Curious George video, the children will learn about how everyone produces trash and ways to keep said trash out of the landfill. The children will learn about composting and how it will benefit their garden. Each child will then get a piece of trash to separate into a trash bin, recycling bin or composting bin. While they are separating trash into the compost bin they will be making their own composter out of a soda bottle to keep for their classroom and watch the compost turn to fertilizer. We will then gather together for a wrap up where they will see some broken down compost and hear what they will keep from their class to put in the composter outside.

Prep:

Materials:

- iPad with Curious George video “Mulch Ado about Nothing”. From 3 min to 4:05 min mark. <https://www.youtube.com/watch?v=65q1URtJ1us>
- 2 litter bottle precut, soil on the bottom and holes in it according to instructions for “Composting in a Bottle”. See attached instructions
- Magnifying Glasses
- Duct Tap
- One jar or more, depending on group size, full of already made compost
- Spray Bottle
- Collection of compostable materials to be added to the bottle during sorting game. See attached instructions for “Composting in a Bottle” to see what materials can be used.
- Collection of recycling and trash materials to be used during the sorting activity. See attached list of options.
- Two bins to simulate a trash bin and recycling bin

Timetable

00:00-00:02 - Settling in

00:02-00:10 – Introduction

00:10-00:23 – Sorting Game and compost maker

00:23-00:30 – Look at compost and wrap up

Description

00:00-00:02 – Settling in

- *Enter the classroom and have the children sit down in the front of the classroom with instructor in front.*

00:02-00:10 – Introduction

- *Chat with the children using the following prompting questions about the path a piece of trash travels from home to garbage pile.*
- **Ask:** What is trash?
Where do we put trash?
Who can name one thing you throw away in the trashcan?
What happens to trash after it gets put into the trashcan?
What are ways we can keep trash out of the garbage pile?
Make sure the children mention recycling and reusing.
- **Explain:** There is a Jewish value of Tikkun Olam which tells us that we need to repair the world and keep it holy. The amount of trash that is sitting on the earth is growing day by day and some of it takes a long time if ever to get rid of. Trash can seep into our water and contaminate it as well as it creates gases that

contribute to global warming. As part of the Jewish value of Bal Tashchit, do not waste, we want to make sure we reduce the amount of trash that goes to the landfill. Recycling and reusing materials are ways to divert our trash from going into landfills but there is also another way to do this and that's called composting. Compost is nature's way of Bal Tashchit. It turns trash into rich nutrients called fertilizer which can then be used in a garden.

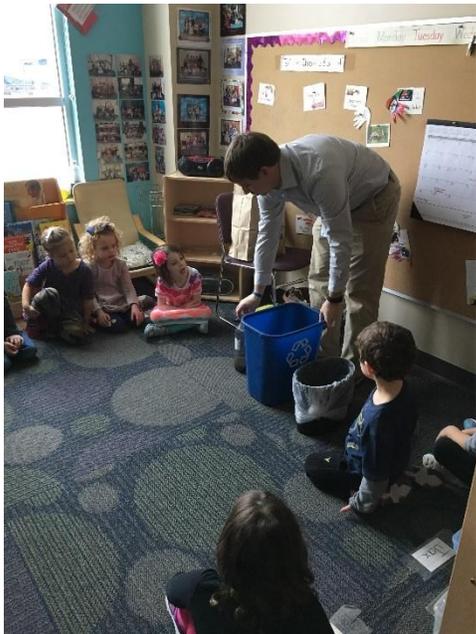
- **Show** the Curious George video to describe what can be composted and what can't.

00:10-00:23 – Sorting game and compost maker

- *Make sure all recycling, trash and composting materials start in one bag together to simulate a garbage bag.*
- **Explain** that they will now try their hands at sorting through garbage.
- **Tell** students you will give each of them an item from your "trash bag" that they will put into one of three bins: compost, recycling, or trash. For all of the trash that goes into the compost bin we will be putting it into a soda bottle to create a classroom composter to watch how it breaks down over the next couple months.
- **Distribute** the trash, one to each student.
- **Call** on one student at a time to place their trash into the correct bag. If the child has an item that goes into the compost bin add it to the compost soda bottle. Make sure to mist each layer with water after putting it in the soda bottle.
- **Guide** them to put their item into the proper bag by reiterate what types of materials go into what bag ie: Saying something like "Remember, water bottles go into the recycling." "Food waste goes in the compost." Or "Meat goes into the garbage"
- **Ask** all of the students if they agree with the sorting or not.
- **Repeat** until all children have sorted out their trash.
- **Conclude** by saying "You all did a great job today. I can see that you are all going to be VERY good at composting and recycling!"

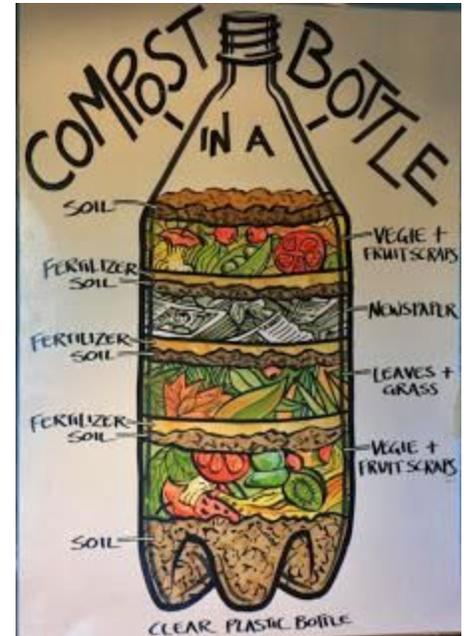
00:23-00:30 – Look at compost and wrap up

- **Gather** the group for a wrap up
- **Pass** around a jar or more, depending on size of group, with some compost in it and a magnifying glass. Have them look in the jar for a couple minutes and see what they can see.
- **Explain** that they might notice little bugs in the compost that helps eat the trash and turn it into fertilizer. We like to call these bugs FBI's which stands for fungus, bacteria, and invertebrates. These are things like mushrooms, worms or spiders. These bugs help eat the trash to turn it into fertilizer
- **Inform** the children they will begin to compost their food scraps from snack time. These will then be put into the black composter to start creating fertilizer to use in the garden.



Instructions for Compost in a Bottle

- Clean the plastic bottle well. Cut the bottle around the top where the top meets the straight part of the bottle. This makes it easy to put composting inside. Leave a small part to act as a hinge.
- You will need a mix of green and brown materials from list below as well as some soil. You can use a layer of fertilizer mixed with the soil, like in the image to the right, but it can be done without fertilizer as well.
- Fill the bottom of the bottle with soil
- Poke small holes in the bottom of the bottle, size of a thumbtack, where the initial layer of soil is in order to have oxygen flow in the bottle.
- Alternate layers between green and brown materials. See image as an example.
- While alternating layers, spray each layer with a little bit of water. Do NOT soak. Only a fine mist spray.
- When the bottle is full tape it shut.
- Mark the side of the bottle with a permanent pen at the top of the compost to watch the materials shrink
- Leave in a sunny area like a windowsill and watch it decompose



Examples of Brown Materials

Wood Shavings
Small Wood Chips
Newspapers Strips
Pieces of Egg Cartons
Straw
Dried Leaves
Grass Clippings

Examples of Green Materials

Banana Peels
Apple Cores
Carrot Peelings
Orange Peels
Coffee Grounds
Tea Leaves

Examples of Items used for Sorting Game

List of Recyclable Materials

Water Bottle
Envelope
Magazine
Pizza Box
Glass Jar
Glass Bottle
Soda Can

Example List of Trash

Plastic wrap
Tape
Wrapping paper
Napkins
Hanger
Diaper
Wax Paper
Styrofoam