Lesson Plan: Compost, Kindergarten

Activity
Compost in a jar.

Introduction
Did you know that the food scraps from our snacks and meals do not belong in the garbage? This includes items like banana peels, apple cores, and watermelon rinds. These items should be placed in the green bin or backyard composter so we can turn them into a soil called compost. This soil is good for our plants and lawns, helping them grow and to stay healthy. In this lesson, students will identify what items can be placed in the green bin or in a backyard composter, and what happens to this material over time.

Curriculum Connections
The Kindergarten Program, 2016 (revised)

Overall Expectations
- 6. Demonstrate an awareness of their own health and well-being
- 13. Use the processes and skills of an inquiry stance (i.e., questioning, planning, predicting, observing, and communicating)
- 29. Demonstrate an understanding of the natural world and the need to care for and respect the environment

Learning Objectives
1. Define food scraps
2. Investigate how food scraps become finished compost
3. Rethink how food scraps are viewed and managed
4. Explore how composting contributes to a healthy environment

Materials Required (extension activity)
- Three clear glass or plastic jars with lids
- Soil
- Food scraps (fruits and vegetables). Note: Do not use meat or dairy products
- Brown garden waste (leaves) and / or paper
- Water (rainwater is a great resource for this activity)
- Scissors or a nail to poke smalls holes in the jar lid
- Three baking trays

The Regional Municipality of Durham - Waste Management Services
If this document is required in an accessible format, please contact schoolprograms@durham.ca

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Activity Instructions

1. The classroom teacher will bring three glass or plastic jars with lids into the classroom. This is a great opportunity to reuse common blue box items such as jam, pasta sauce, or pickle jars!
2. Food scraps can be brought in by the teacher or can be chosen from lunch and snack containers within the classroom. Apple cores and banana peels are easily recognizable by most students and would make a great choice for this activity.
3. As a class, discuss why fruits and vegetables a good choice for our snacks and lunches. Do we eat every part of an apple or a banana? What might be left over from the food that we do not usually eat?
4. Introduce the term food scraps to the class.

   Food scraps are the parts of food items that we typically throw away rather than eat. This includes things like fruit and vegetable peels, bones from the meat we eat, and eggshells.
5. Introduce composting.

   Composting is a great way to take our food scraps and turn them into soil that can be used in our gardens and on our lawns. We put our food scraps and dirty paper items (like used tissues and greasy pizza boxes) in the green bin or in our backyard composter instead of in the garbage.
6. Ask the class why it is important to put less items in the garbage? What might happen if we continue to create a lot of garbage? How would they feel if there was a lot of garbage around their home or school?
7. Explain that the class will be conducting an activity to investigate how food waste is composted to create soil. Anything that use to grow will break down over time if given the right environment.
8. Before getting started, predict what will happen to the food scraps in the jars. What do you think the food scraps will look over time? How long do you think it will take to see changes in the food scrap items?
9. Prepare the compost jars with the class using the instructions provided below.
10. When there are no visible food scraps remaining, dump the material out onto a baking tray to make observations. You should no visible food waste and no smell of rotting food should be present.
11. The final compost can be used in a classroom plant, in the school gardens, or at home for use in a houseplant, garden, or lawn.

How to prepare the compost jars

1. Poke a few small holes in the jar lids to allow air into the mixture.
2. Add soil to cover the bottom of the clear jars (about one inch).

3. Add a layer of food scraps (about one to two inches). Make sure to cut the food scraps into small piece to help speed up the process.
4. Add a layer of shredded brown leaves and / or paper (about one inch)
5. Add another layer of soil to cover the food scraps.
6. Repeat these layers until you have filled your jars.
7. Add water just enough to moisten the material. You do not want your compost to be too wet.
8. You may choose to add a small line at the top of the soil line to track the composting process. Add new lines over the course of the activity to track the process.
9. Choose a location to store your jars. Beside a window is a great option.
10. Make daily observations about the material in the jars.
11. If necessary, add additional water over time to ensure the material stays moist.
12. The time it takes to compost will vary depending on the items included. If apple cores and banana peels are cut into small pieces, you should have final compost in approximately three to six weeks.

Summary

Composting food scraps is a great circular approach to waste management, where resources are continuously used rather than being thrown away. By composting food scrapes, we can change how we view and managed these items - from waste to usable soil that can be used to grow plants and new food that we can eat and enjoy!

Expanded Curriculum Connections

The Kindergarten Program, 2016

6. demonstrate an awareness of their own health and well-being

- 6.1 demonstrate an understanding of the effects of healthy, active living on the mind and body (e.g., choose a balance of active and quiet activities throughout the day; remember to have a snack; drink water when thirsty)
- 6.2 investigate the benefits of nutritious foods (e.g., nutritious snacks, healthy meals, foods from various cultures) and explore ways of ensuring healthy eating (e.g., choosing nutritious food for meals and snacks, avoiding foods to which they are allergic)

13. use the processes and skills of an inquiry stance (i.e., questioning, planning, predicting, observing, and communicating)

- 13.1 state problems and pose questions in different contexts and for different reasons (e.g., before, during, and after inquiries)
- 13.2 make predictions and observations before and during investigations
- 13.3 select and use materials to carry out their own explorations

- 13.4 communicate results and findings from individual and group investigations (e.g., explain and/or show how they made their structure; state simple conclusions from an experiment; record ideas using pictures, numbers, and labels)

29. demonstrate an understanding of the natural world and the need to care for and respect the environment

- 29.2 describe what would happen if something in the local environment changed (e.g., if trees in the park were cut down, if the pond dried up, if native flowers were planted in the school garden)
- 29.3 identify ways in which they can care for and show respect for the environment
- 29.4 participate in environmentally friendly experiences in the classroom and the schoolyard (e.g., plant and tend to plants; use local products for snack time; properly sort recycling)