

Composting



Age Group: K-8
Child/Adult Ratio: 6 to 1
Take Away Artifact: Yes
Approximate Time: 1 hour
Divisions Covered: All

Materials:

Individual: One 2L bottle per student, soil, fruit and vegetable scraps, scissors (or hand saw), wood burning tool, spray bottle, 2-4 red wiggler worms per student, 1 cup pea gravel per student.
Large Group: Metal trash can, soil, fruit and vegetable scraps, cordless drill with large metal bit, pea gravel

Questions to Ask:

How do worms help the composting process? Why is it helpful to add compost to a garden?

Skills Required for Completion of Task:

Motor skills

- Bilateral upper extremity coordination
- Ability to manipulate small objects
- Hand-eye coordination
- Ability to grip objects
- Ability to stabilize objects/task

Process/Cognitive skills

- Ability to attend to task for greater than 5 minutes
- Follow multi-step directions
- Ability to sequence steps
- Ability to understand safety precaution
- Ability to organize or keep materials organized for task
- Ability to adjust to different workspace requirements

Social skills

- Ability to communicate and share equipment with peers/staff appropriately

K-8 Standards:

K.ESS3: Earth and Human Activity 3) Communicate solutions that will reduce the impact from humans on land, water, air, and other living things in the local environment.

1.LS2: Ecosystems: Interactions, Energy, and Dynamics. 3) Recognize how plants depend on their surroundings and other living things to meet their needs.

4.LS2: Ecosystems: Interactions, Energy, and Dynamics 3) Using information about the roles of organisms (producers, consumers, decomposers), evaluate how those roles in food chains are interconnected in a food web, and communicate how the organisms are continuously able to meet their needs in a stable food web.

STEAM Lessons

Composting



This activity would be appropriate completed by the following disciplines:

Occupational therapy, LCSW, Family Services, Industrial Arts

Instructions:

Watch: "Do the worm bin"

Individual Composters:

1. Using a sharpie write your name on your bottle (and that of your worms if you wish) cut the top off of the bottle (about 10-15 cm down) using scissors and or saw.
2. Using a wood burning tool melt 10-20 holes covering the bottle. Holes should be no bigger than one cm in diameter.
3. Place pea gravel in the bottom of the bottle. Alternate layering plant waste and soil, lightly misting between layers until reaching the top of the bottle.
4. Add worms (allow students to interact with and discuss worm life processes that will take place inside the bottle)
5. Place top back on bottle upside down.
6. Place in a warm (not hot) place.
7. Compost should be ready in 3-4 weeks.

Large Composter:

1. Drill 20-30 holes in the large metal trash can.
2. Place pea gravel in the bottom of can. Alternate layering plant waste and soil, lightly misting between layers until reaching the top of the can.
3. Add worms to the compost can.
4. Place in a warm but not hot place.
5. Compost should be ready in 3-4 weeks.

Care should be used with wood burning tool!