

4-H Clover Kids Lesson Plan - Composting

Lilly and Ella from the Mahaska County host site created a lesson plan that can be used for a 4-H Clover Kids session. This activity was designed to follow the structure of a Clover Kids lesson, but can be adapted and used for any group (it is aimed at K-3rd-grade students).

Learning Goals

- Learn what composting is and why it is important.
- Learn the role of earthworms in the decomposition process.
- Create a compost cup so the students can observe composting in action.
- Be able to identify the difference between garbage, recycling, and compost, and know items that go in each.

Materials

- Snack with organic waste (suggestions listed below)
- Books about Earthworms and Composting
- 12-16oz clear plastic cup
- Plastic wrap
- Soil
- Rubber bands or tape
- Materials to decorate cups (optional)
- Demonstration compost bin with worms and magnifying glasses (optional)

Lesson Flow

1. Snack: as the students are arriving. (15-20 minutes)
2. Physical activity: You may start while students are finishing up their snack, and have them join in as they get done. (10-15 minutes)
3. Read *Diary of a Worm* or another book. A fiction book works well here to transition from eating and playing to preparing for the lesson. Ask questions as you read and have a brief discussion to lead into the lesson. (10 minutes)
4. Discuss composting and the role of worms before beginning the activity. (5 minutes)
5. Create the compost cups. (10-15 minutes)
6. Observe worms in the compost bin (if using). (5-10 minutes)
7. Read a non-fiction book related to the topic. (10 minutes)
8. Read a third book and/or play the sorting game as time allows.

For larger groups, we split them in half after discussing composting and worms. One group would create their compost cup while the other group would observe the worms and read a non-fiction book. As long as every student can make their compost cup, steps 6-8 are flexible in how you want to do them.

Activity instructions

Snack: Create a 'compost cup' where the food has some organic waste (strawberries, clementines, bananas, sunflower seeds, peanuts). Have them save the scraps and napkins to put into cups to use for the activity. You can also get granola or cereal to supplement, as long as they have one or two items they can use for composting.

Physical activity: If it's nice, go outside and have them look for things for their activity later (tell them to find leaves, grass, or anything natural). Otherwise, you can do a game indoors that will help them get some energy out.

Books: Any book on composting that you have on hand will work. We used *Diary of a Worm* by Doreen Cronin, *It's a Good Thing There Are Earthworms* by Jodie Shepherd, and *Compost! Growing Gardens From Your Garbage* by Linda Glaser.

Main activity: Creating the 'Compost in a Cup'.

1. If not already done, have the students place their napkin and food scraps from their snack into the plastic cup.
2. Add about $\frac{1}{4}$ cup of soil and 1 TBSP of water to the cup. You may need to add more or less soil depending on the amount of food scraps they have.
3. Cover the cups with plastic wrap and seal with a rubber band or tape. Rubber bands will likely work better because they will need to remove the cover and reseal later.
4. Instructions are attached separately for how to care for their compost cup after they take it home.

A link is pasted below for where we got the idea, and with more detailed instructions if needed.

<https://thehappyhousewife.com/homeschool/compost-cups-science-project/>

Supplemental activities:

1. Garbage Sort - assign each student one or two recyclable, compostable, or non-biodegradable/landfill items printed out on cardstock (attached separately) and have them take turns sorting into piles. Give them a moment to decide which

category/bucket they belong to, and then they can help each other move to the correct place. There are two ways to complete this activity, depending on group dynamics. You can have them complete the activity silently to encourage critical thinking during teamwork, or you can have each student decide where their item goes, and they can discuss the decision as a team. Let them know if they are correct or not after they are done sorting and discussing. Feel free to add additional items for larger groups or to extend the activity.

2. Worm observation - we did this activity several times over a month, so we had a tub filled with soil, organic matter, and live earthworms that we took care of to demonstrate composting in action. If you are only planning on doing this lesson once or if you don't have access to the materials, this activity is optional. We let them touch the worms and use magnifying glasses to observe the different parts of the worm and their movement.