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nourishing minds, bodies, and communities

Compost Stew, Part I

Theme

Composting

Subjects

Science

Prep Time

20 Minutes

Learning Environment

Classroom/Garden

Lesson Time

50 Minutes

Grade

K-5

Role of Teacher

Classroom management

Materials

Ingredients

- N/A

Equipment

- Book: *Compost Stew: An A to Z Recipe for the Earth* by Mary McKenna Siddals

Background Information

- Compost is organic matter that has been decomposed into a product called humus that is used as a soil amendment or organic fertilizer due to its high nutrient content.
- Compost is generally comprised of the greens and the browns. The greens contribute the nitrogen and are generally vegetable scraps and grass clippings. The browns contribute the carbon and are dried leaves, small sticks, cut-up cardboard, and generally anything brown and dry.
- When the greens and browns are mixed together, wetted, left to decompose for long periods of time and occasionally stirred, compost is created!
- Compost is an excellent soil amendment in organic farming and gardening. Compost adds NPK to the soil (Nitrogen, Phosphorous, and Potassium) and helps fruits and vegetables get all of the nutrients they require to grow large and healthy, without added chemical fertilizers.
- Compost is a way of recycling our natural waste. By composting, we are creating a closed loop food cycle. A closed loop food cycle happens when the excess food we produce is not wasted, but added back into the soil that creates more food. Just as we recycle glass, plastic and metal to create new glass, plastic and metal, so too are we recycling food to create more food.

Topics / Goals / Learning Objectives

- To understand what compost is and its role in organic gardening.



- To explore an existing compost bin.
- To contribute to an existing compost bin.
- To understand the relationship between composting and recycling.

Opening / hook

Welcome to the garden! Today we are going to be learning about compost! Who knows what compost is? Composting is like cooking stew. First, we add all of the ingredients, then we let it cook for a while, and at the end we have a finished product called compost. But what are the ingredients for compost? I brought a book with me today that will help answer our questions called “Compost Stew: An A to Z Recipe for the Earth”. Would you like to read it together?

But before we begin reading, what do we already know about compost? (Allow time for brainstorming.)

Wow! You guys already know so much! Let’s start reading and discover even more about compost. When we’re finished, we’re going to explore our own compost bin here in the garden. Here we go!

Procedures / Activities

1. Prep:
2. Welcome students to the garden (or classroom if beginning in the classroom). Have students sit in a circle.
3. Introduce the lesson with the Opening (above).
4. Read the story and allow time for the students to share their reactions.
5. Now that we know what goes into our compost, what are ways we can add to our compost piles in our everyday lives? How can we contribute at school? How can we contribute at home?
6. Keeping our ingredients for compost in mind, what do you think it means to have “green” ingredients and “brown” ingredients? Explain that the green ingredients, such as vegetable scraps, add nitrogen to the compost pile, while the brown ingredients, such as dried leaves and cardboard, add the carbon.
7. Pass out compost ingredients to the students (i.e. pictures of cardboard, leaves, grass clippings, vegetable scraps, etc.). Place two bowls at opposite sides of the front of the classroom or learning space in the garden. Have the students determine whether their ingredient is a green or a brown ingredient and place it in the corresponding bowl. For example, a student holding a banana peel would add it to the green ingredient bowl, while a student holding a cardboard egg carton would add it to the brown ingredient bowl. When every student has placed their ingredient in the correct bowl (be sure to address students who put their ingredient in the wrong bowl and explain why) demonstrate that we mix the greens and the browns by mixing them together and that this is compost! Have the students form a line, and on their way to the garden allow each student a turn to mix the bowl of pictures of green and brown ingredients.
8. When you reach the garden, before exploring the compost, explain that the compost bin has 3 stages. The first stage is for all of our new vegetable scraps and dried leaves and cardboard to begin their decomposition. The second stage is the halfway mark in our compost’s lifecycle where most ingredients are broken down but some are still recognizable. The third stage is our finished compost that has turned into soil and that is ready to be sifted and added to our garden beds.
9. Conclude by opening the floor for questions and comments. After all questions have been answered and comments addressed, let the students know that next class we will be creating our own compost!



Extensions / Adaptations / Games

- Students can create a list of ways to compost at school and at home, either in their own notebooks, or on the chalkboard as a class.
- Students can create a list of the “greens” and the “browns”, either in their own notebooks, or on the chalkboard as a class.