

Decomposition Lesson

Grade Level: Adaptable for 2-5
Total Lesson Time: 45 minutes



Lesson Overview

This lesson continues the theme of the nutrient cycle by teaching students how nutrients enter soil through the process of decomposition. Students are introduced to compost and decomposition through a series of exploratory activities. Access to a compost pile and worm bin is necessary for two of the activities in this lesson. See 'helpful hints' for sources of information to create classroom worm bins.

Objectives

Students will:

1. Understand basic processes of decomposition and nutrient cycling (Science F.4.4; Ecology/Environment E.4.1)
2. Know the role worms play in decomposition (Science F.4.4; Ecology/Environment E.4.1)
3. Explain the process and benefits of composting (Science F.4.4)
4. Recognize a pattern and relationship between stages of decomposition (Math A.4.1)

Preparation

1. Purchase or prepare applesauce ahead of time
2. Collect items from compost pile that represent different stages of decomposition
3. Prepare worm bin

Materials

Food (per class of 20)
Homemade applesauce
(with local apples)
Graham crackers
Plates and napkins

Supplies

Decomposing items from
compost pile – 3 stages
Worm bin
Photos – 6 stages of
pumpkin decomposition
from Pumpkin Circle by
George Levenson

Helpful Hints

- Wonderful information about composting in schools including with worm bins: <http://compost.css.cornell.edu/schools.html>
- Instructions for creating a simple worm bin (with photos): <http://whatcom.wsu.edu/ag/compost/Easyworm-bin.htm>

Suggested Books

- Diary of a Worm by Doreen Cronin

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REAP Food Group:
www.reapfoodgroup.org

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Procedure

Introduction

Review the previous Roots to Fruit Apple Lesson by asking students to share what they learned.

You may want to introduce the first activity by telling students they will learn what happens to apples when they fall to the ground and rot, or when we throw food scraps on a compost pile.

3 Stages of Compost

Show students a few items from a compost pile representing different stages of decomposition. Ask students to identify the items.

- Some things 2-3 days old
- 2-3 weeks old
- Months old, from the bottom of the pile

Ask students to try to explain what is happening to the items from the compost pile, or tell students that the composting items are turning to soil. Examples could include banana peels, melon rind, eggshells, and leaves from a home compost pile.

Decomposition Theater

Six students volunteer to hold photos representing different stages of plant life and decomposition. We used six photos of a growing pumpkin plant and a decomposing pumpkin, from the book Pumpkin Circle, by George Levenson (Tricycle Press, Toronto/Berkeley; 2002).

Line up students in random order and ask the rest of the class to put the stages in proper order. Since this represents a cycle, there is no necessary beginning or end. Discuss this with students after they line up the photos.

Decomposition Song

Listen and sing along to “Decomposition” by “Solar” Steve Van Zandt of the Banana Slug String Band. Many great food and plant related songs, including “Decomposition” are available on CD from the Banana Slug String Band at www.bananaslugstringband.com.

Worm Bin Observation

Students sit in a circle around the worm bin. Give them some small pieces of food such as cabbage and ask students to feed the worms. Allow students, a couple at a time, to dig around in worm bin with hands or spoons. Explain that the worms eat the fruit and vegetable scraps we give them and return the nutrients to the soil. Worms and other insects play an important role in creating healthy soil, which in turn helps produce healthy food and people.

Snack Time

Have students wash hands and serve applesauce and graham crackers for snack. Eat and enjoy.

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