

## Lesson 5: Literature Connection: Diary of a Worm

### Grade Level:

3rd Grade

### Concepts Taught:

Listening skills, sentence writing

**Activity Time:** 10–15 minutes to read/discuss book; 30 + minutes for puppet making

### Essential Questions:

- How are worms beneficial to soil?
- How are worms helpful in a compost pile?

### NC Core/Essential Standards:

ELA: Key Ideas/Details: 2, 3, 5; Integration of Knowledge/Ideas: 9; Text Type/Purpose: 2; Comprehension/Collaboration: 1a-1d, 2; Science: 3.L.1.1  
Visual Literacy: 3.V.2.1; 3.V.2.2; 3.V.2.3; 3.V.2.4

### Materials:

Book: *Diary of a Worm* by Doreen Cronin

small brown paper bags (lunch bag-sized) for each student

glue

Scissors

construction paper

crayons or colored pencils



### Objective:

After reading (or listening to) *Diary of a Worm*, students will create their own diary of a worm and recognize the importance of worms in creating soil and compost.

### Procedure:

Read aloud *Diary of a Worm* to students, paying attention to the following details:

**March 20-how does the worm help the earth breathe?** (By turning the soil over, allowing air into the soil so that roots can get oxygen)

**April 15-at the bottom of the left-hand page, the worm has a note to "eat all your trash." Why is the worm eating trash?**

**June 5-the worm is now eating macaroni. What does this tell us about their diets?** (They are opportunistic feeders, meaning that they'll eat just about anything.)

**July 28-Why can't the worm chew gum?** (Even though he's "eaten" just about everything else, there are some foods that worms don't like, and they also don't have teeth. This is reinforced on July 29.)

Look back at the various references to worm anatomy-May 15, May 28, June 15, July 29.

### Making the worm puppet:

1. Discuss how the worm moves. Like our muscles, a worm's muscles help it to move. The worm contracts one section of muscles after another, moving down its body, to make its body move. This can be compared to sports fans doing the "wave." The muscles contract one after the other sequentially down its body.
2. Using the side of the paper bag that does NOT have the flap, have students pick three days of the year to write a diary from a worm's perspective. They will pretend that they are worms and in one or two sentences for each day, describe what they are doing. Emphasize that their writing should be from a worm's point of view and have activities and comments that a worm would have. Sentences should demonstrate correct grammar, punctuation, point of view (first-person), and tone.

## Composting in the Classroom

### Extensions/Modifications:

1. Students can share their diaries with the class, and diaries can be hung in the classroom from the ceiling or a string so that both sides are visible.
2. Students can examine live worms obtained at a bait shop or dug from the ground. Have students measure the length of their worm and identify their parts.
  - Can you find eyes, ears, nose, or a mouth? Why or why not? Worms do not have eyes. Instead, they have special cells near their head that can sense light.
  - Worms do not have noses. That might be why they eat just about anything.
  - Worms do not have ears. In order for them to detect danger and to help them move, worms have tiny hairs called setae all over their body.
  - When a predator such as a bird walks over them, the tiny hairs can sense the vibrations as the bird walks, and they are sometimes able to get away.
  - Worms do have mouths that are covered by a flap of skin that looks like a big upper lip.

Have students visit <http://www.urbanext.uiuc.edu/worms/index.html> to learn more about worms and their life histories.

## Lesson 6: Building a Mini Composter

### Grade Level:

3rd Grade

### Concepts Taught:

Composting, time lapse

### Essential Questions:

- How long does it take for compost to decompose, or rot?
- What items decomposed the fastest? The slowest?

### NC Core/Essential Standards:

Science Objective 3.L.2.2

### Materials:

Two emptied and cleaned water bottles (one for mini composter, one for mini landfill)  
soil (can be dug from school grounds or potting soil)

**Objective:** Students will conclude that composting is a way to recycle plant and animal material

### Procedure:

1. Explain to students that they will be able to view composting in the classroom on a small scale. Show students the materials collected.
2. Using scissors and following the diagram, cut off the top two inches (below the mouth) of the bottle. Save this portion for later. It will be used in step 6.
3. In the bottom of the bottle, place 1" of soil. Do not compact the soil.
4. Place the food scraps on top of the soil and cover with another 1" of soil.
5. Using scissors carefully poke 5-7 air holes in the top (cut off) portion of the bottle.
6. Use the masking tape to secure the two sections of the bottle, being careful not to cover the air holes with the tape.
7. Place the bottle in a sunny place that is not too hot or too

