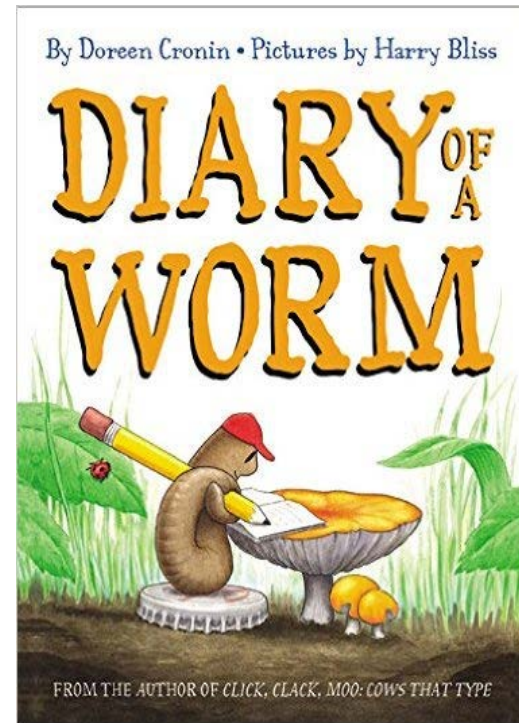


**April 2016 Book of the Month**  
**Diary of a Worm**  
**By: Doreen Cronin**

This is the diary of a worm. This hysterical worm lives with his parents, plays with his friends, and even goes to school. But unlike you or me, he never has to take a bath, he gets to eat his homework, and because he doesn't have legs, he just can't do the hokey pokey – no matter how hard he tries.



**Fun Facts:**

1. Earth worms eat almost anything that was alive, as long as it is dead when they eat it.
2. The myth of both parts of a worm surviving when it has been cut in two is not true, only the part with the head attached will survive.
3. Earth worms use their skin to breath and do not have lungs.
4. The average life span of a worm is 4-5 years.
5. There are around 2700 different types of worms.
6. One acre of land can contain around 1 million worms.
7. Worms are cold blooded and can have between 1 and 5 pairs of hearts.
8. Worms have the ability to eat their own weight in a day.
9. If a worm becomes dehydrated and its skin dries out it will die.
10. Worms are hermaphrodites and have both male and female organs.

## Activities

### **Dancing Worms: Science Experiment:**

This simple science experiment uses baking soda and vinegar to make gummy worms dance. Ingredients: Gummy Worms, Baking Soda, Vinegar, Cutting Board, Knife (adult supervision), 2 clear cups

1. Cut the gummy worms in quarters.
2. Have students measure 3 tablespoons of baking soda and stir gummy worms into a cup with 1 cup of warm water.
3. Mix 3 worms (12 cut pieces) into the baking soda and water mixture.
4. Wait 15 minutes for the worms to soak in the solution.
5. Fill the second clear glass with vinegar.
6. After the 15 minutes, fish the worms out with a fork and add them to the vinegar.
7. The worms should start making bubbles and then begin rising to the top and dropping to the bottom.
8. After experimenting, have students try again with less worms in the cups. (Less is more and will be more active with less worms in the cup).
9. Students can observe and write observations in science notebooks.

### The Science Behind It

When you add the worms soaked in baking soda, the acetic acid in the vinegar reacts with the bicarbonate in the baking soda. When an acid and base react, carbon dioxide gas bubbles form. These gas bubbles form on the gummy worm, and as the gas bubbles rise to the surface, they pull the gummy worm up with them, making them wiggle and dance. As the gas bubbles burst, the worm falls back down until enough bubbles form to pull it back up. The bubbles will continue to form until all the baking soda on the worm is used up and the worm will stop wiggling.

### **The Anatomy of a Worm:**

Just like we have names for the different parts of our body, so does a worm.

1. Draw a worm in your notebook and label all the parts you know. For example, where is the worm's head?
2. After you draw your picture and include the parts. Students can visit [University of Illinois Extension Worm Anatomy](#)<sup>1</sup> to explore all the parts.

3. Make another drawing below your first one and label it according to what you just learned.
4. Test your knowledge using the [University of Illinois Extension Worm Parts Quiz](#).<sup>2</sup>

### **Make a Compost Bag:**

Have students make their own compost bags by using the following materials: a medium sized Ziploc style bag, a hole punch, 1 cup of damp soil (you can take it out of your home flowerbed), some food that a worm would like, 3-5 worms (you can get them from your flowerbed or buy them at a bait store with mom or dad's help).

Observe your materials:

- Use your magnifying glass to look at your soil.
- Draw a picture and color it to show what you see right now.
- Do the same thing with your worm food.
- How does the soil feel? Record your ideas in your notebook.

Assemble your compost bag:

1. Punch 4-6 holes in the top half of your Ziploc (near the zipper).
2. Fill the bottom of the bag with the damp soil.
3. Add worm food.
4. Carefully transfer worms into your compost bag.
5. Close zipper on bag carefully.
6. Maintain your compost bag.
  - Keep the soil moist (not wet) with aged water (water you let sit out in an open container overnight from the faucet to get rid of the chlorine).
  - Store your bag in a cool, dark place.

Observe your worms at work:

- Watch the worm food in your bag and write in your notebook about what is happening.
- Include drawings as well as writing about what you are seeing.
- After 3-4 weeks you will notice major changes in the worm food.
- Remove some of the soil and look at it with a magnifying glass. Record what you notice.
- Compare your drawings now to the ones you made at the beginning of your study.
- Write about what you notice.

- How does the soil feel now? Record your ideas in your notebook.

### **Links:**

#### **National Geographic Kids: Earthworms**

[http://kids.nationalgeographic.com/animals/earthworm/#earthworm\\_1\\_closeup.jpg](http://kids.nationalgeographic.com/animals/earthworm/#earthworm_1_closeup.jpg)

### **Sources:**

#### **Activities**

1. <http://extension.illinois.edu/worms/anatomy/index.html>
2. <http://extension.illinois.edu/worms/anatomy/anatomy7.html>

<http://www.can-do.com/uci/ssi2001/soilandworms.html>

<http://www.can-do.com/uci/ssi2001/soilandworms.html>

<http://www.playdoughtoplato.com/kids-science-dancing-frankenworms/>