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EDUCATION

# Decomposer Detectives

Students can find a decomposing tree or branch and become 'decomposer detectives' by studying the critters and processes involved in decomposition.

 Magnifying glass, clear container, garden gloves, nature journal (all optional)

 Grades: K-7  30-60 minutes

## Introduction

A multitude of living things (many too small to see) are feeding on dead trees and helping return nutrients back into the soil. This process of organic matter (plant or animal material) being broken down is called decomposition. Let's take a closer look!

## Directions

Carefully pick apart a section of an old stump or rotten log with a stick, a pocket knife or even a kitchen utensil. Explore the creatures you find within. Please be respectful of these busy decomposers.

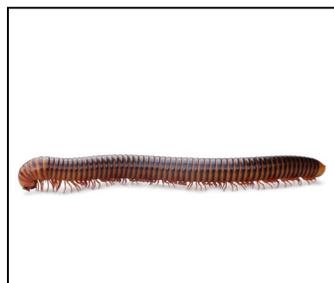
1. Find a decomposing tree, stump or branch. You can look for them in a local forest, your backyard or a garden box.
2. When you approach the stump, gently kick or nudge the tree in case there is a small critter in it. If it is a visible home to a squirrel or chipmunk move to another log.
3. Look around the area surrounding the rotting log. Do you see any paths? Can you see where the tree was once standing? How did it get here?
4. Observe the rotting log:
  - What does it feel like? Damp? Dry? Brittle?
  - Does it smell?
  - Can you see anything growing on it? Do you see any plants, moss, fungus or lichen?
  - Can you see trails from anything living in it?
5. Choose an area on the log to explore that will not destroy the critters' rotten log home. Be sure to leave most of the log as you found it.
6. Peel off some bark. What do you see underneath?
7. Pick apart some crumbly wood. Do you see centipedes, ants, fly larvae or sow bugs? What other critters do you see? If you see one, you can collect it for inspection in your container and then return it to its home.



*Ant*



*Fly Larvae*



*Millipede*



*Sow Bug*

8. Do you notice mushrooms, mould, or other kinds of fungi? They are part of the decomposer team as well.
9. Look under the log. Do you see any tunnels or holes?
10. Return the rotten log pieces back to where they were as best as you can.

## Reflections

Wonder together:

- How many things do you think are making a home in this rotting log?
- How would the world look different if there were no decomposers?
- What things do you think are working all around us that we do not see?

## Extensions

- Draw a picture of some of the critters you found.
- Write a paragraph from the perspective of one of the critters in the “log hotel”.
- Take photos of your exploration and make a poster about what you learned and have found.
- **Grades 2-5:** Watch **What are Decomposers?**
- **Grades 5-7:** Read this **Decomposers information sheet** from National Geographic

## Recommended books

**Grades K-3:**

- **What's Under the Log** by Anne Hunter
- **Log Hotel** by Anne Schreiber (You can hear a simple reading of this book **online here**)

**Grades 3-5:**

- **A Log's Life** by Wendy Pfeffer

Use page 3 to jot down what you discover!



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# Decomposer Detectives:

Decomposers and scavengers break down dead plants and animals. They also break down the waste (poop) of other organisms. How would the world look if there were no decomposers?

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Write a paragraph from the perspective of one of the critters in the “log hotel”.

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What things do you think are working all around us that we do not see?

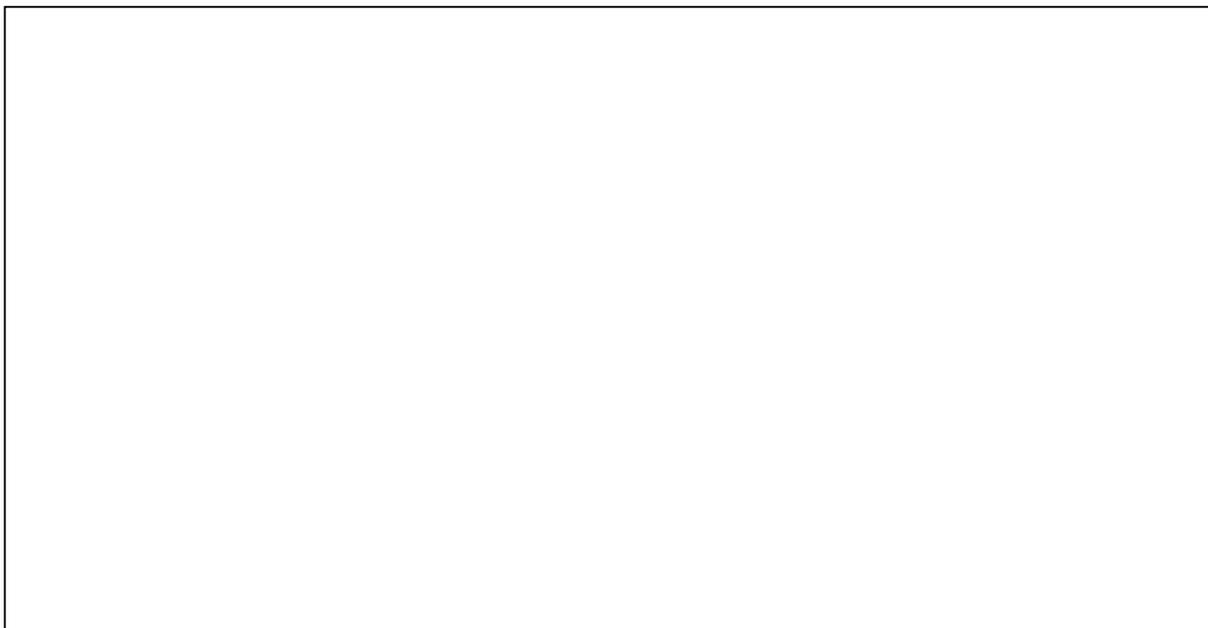
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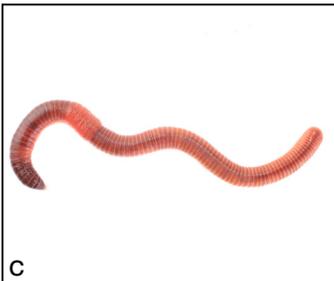
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Draw a picture of some of the critters you found and try to identify them:



# Critters

Can you draw a line from the critter to its name?



**Fly larvae**

**Centipede**

**Millipede**

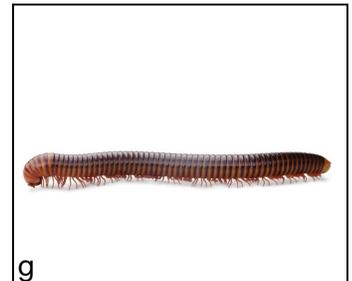
**Sow bug**

**Pill bug**

**Ant**

**Beetle**

**Earthworm**



Answer key: a: ant b: centipede c: worm d: pill bug e: sow bug f: fly larvae g: millipede h: beetle



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