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# Earthworm Dissection

## Purpose

To examine the external and internal structures of the earthworm, *Lumbricus terrestris*.

## Background

The earthworm belongs to the phylum Annelida, order Oligochaeta. Most members of the worm phylum are marine dwelling. The common earthworm is one of the few terrestrial species. Its value to man and the ecosystem is of considerable significance.

As you proceed through the examination and dissection of the earthworm, a variety of questions will be asked in order to point out key structures and stimulate discussion between yourself, your lab partner, and your teacher. Please read the appropriate sections in your text before coming to the laboratory. Use drawings from both the text and the lab to help you locate structures. Answer the questions in the lab while looking at your specimen. At the end of this exercise you will be expected to identify and state the functions of all major parts of the earthworm.

## Pre-lab Questions

1. What are the main differences between the flat, round, and true (segmented) worms?
2. What is meant by segmentation?
3. How are earthworms able to move? Explain.
4. Why is an earthworm considered to be a hermaphrodite?
5. What does an earthworm eat? How does its digestive tract handle the food?

## Materials

|                                      |                          |
|--------------------------------------|--------------------------|
| Dissecting pan                       | Fine dissecting scissors |
| Dissecting pins                      | Probes                   |
| Preserved earthworm                  | Forceps                  |
| Dissecting microscope (or hand lens) |                          |

## Procedure

Part 1. External anatomy.

1. Obtain your dissecting equipment and a preserved earthworm from your teacher. If the earthworm is removed from a container of preservative, rinse it off under the tap to remove any excess preservative.
2. Refer to diagrams in your textbook and lab manual to help in identifying structures. Examine the earthworm carefully, with both the naked eye and the hand lens.

Note that the body of the animal is made up of regular muscular divisions called **segments**, numbered from anterior to posterior. Specific segments are used as reference points during this dissection.

- a) Estimate the number of segments in your animal.
3. Locate the **anterior** end, where a small hood-like structure, the **prostomium**, overhangs the **mouth**. The mouth is found in the ventral side of the first segment.

