

Pre-lab Discussion:

Segmented worms live in many different environments, and most live in burrows or tubes. Why do you think they would want to hide in these burrows?

Earthworms get their oxygen by diffusion from the air through their skin. However, in order for the oxygen to pass through, their skin must be moist. If they dry out, they can not “breathe” and they die. Because of this, you should make sure your worm stays moist during the lab. Periodically add a few drops of water to your worm. Treat your worm with care and respect.

Question:

1. What are the external features of an earthworm? (Describe its body in several ways)
2. How does an earthworm respond to its environment?

Materials:

Earthworm, dissecting tray, paper towel, probe, light (ray box), cardboard, beaker of water with dropper

Procedure:

1. Place your worm on paper towel. Try to distinguish the front end (with the mouth) from the back end (with the anus). The front end is more pointed. Draw and label, or describe the front and back ends in the observation section
2. Pick up your worm and gently run your fingers along the underside of the worm. These are “bristles”. How does it feel? Record your observations.
3. Count (estimate) the number of segments your earthworm has. Record.
4. Take a section of paper towel and wet half of it. Then take your earthworm and place it in the middle, with its body stretched across both the dry and wet side of the towel. Observe and describe what happens. (It may take awhile.) Try placing the head facing the moistened side first, then place the head facing the dry side. Make sure the worm is stretched out. Record your observations.
5. Place a moist paper towel in the dissecting tray. Place the earthworm in the center of the tray. Cover half the tray with cardboard. Shine a light on the other half. After 5 minutes, note the location of the earthworm . Record your observations.
6. Take a probe and poke your worm in different regions: head, clitellum (thick segment), and the anus. Wait 1 minute between stimulations. Describe the earthworm’s response.
7. Tie your worm in a loose knot and describe its movements.
8. Say goodbye to your earthworm and place it in the container when your teacher comes to your desk.
9. Wash your equipment, hands, and desk. Return materials.

Observations:

1. External features: front end/back end	
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2. Bristles	
3. Number of Segments	
4. Movements with wet and dry paper towel	
5. Movements with light	
6. Movements with probing	
7. Movements with knot	

Questions:

1. How do you think the bristles help the worm?

2. Which type of environment did your worm prefer?
 - a) Moist or dry? _____
 - b) Bright or dark? _____
 - c) Why do you think the worm prefers these conditions?

Conclusion: (Answer questions 1 and 2 from the beginning of the lab.)