



Earthworm Dissection Write-Up

TEACHER ANSWER KEY • Drawing location checklist

External Drawing — Earthworm—Lateral View

Label: Mouth, Anus, Metameres, Clitellum, Setae, Dorsal, Ventral, Anterior, Posterior

EXTERNAL DRAWING — check all nine labels

Mouth / anterior: front end. Anus / posterior: rear end.

Dorsal: darker upper surface. Ventral: lighter lower surface.

Clitellum: thickened band closer to the anterior end.

Metameres: repeated body segments. Setae: tiny lateral / ventral bristles.

Look for a lateral view, clear leader lines, and colors based on the specimen.

Internal Drawing — Earthworm—Dorsal View

Label: Pharynx, Esophagus, Septa, Hearts, Seminal Vesicles, Crop, Gizzard, Stomach, Intestine, Ventral Nerve Cord, Nephridia, Coelom

INTERNAL DRAWING — anterior at left in this worksheet

Pharynx → esophagus → crop → gizzard → anterior intestine (“stomach”) → intestine.

Hearts: five pairs of arches around the esophagus; seminal vesicles: whitish sacs nearby.

Septa: partitions between segments. Coelom: cavity around the internal organs.

Nephridia: small whitish tubules along lateral body-cavity walls.

Ventral nerve cord: below the gut; show where intestine is moved / removed.

“Stomach” is the anterior intestine, not a separate third pouch.

Accept “not observed” as directed; assess honest observation, not artistic skill.

Materials Needed: Gloves, dissecting tray, scissors, probe, 10–15 pins, an earthworm specimen, and colored pencils. Use the protective equipment required by your teacher.

Procedure Summary

1. Use the dissection guide, website’s diagrams and photos to help locate the external structures listed above.
2. Place the specimen dorsal side up in the tray. Pin the anterior and gently straighten & extend the worm pinning posterior end.
3. Make a shallow snip, opening the epidermis about 1 inch posterior to the clitellum. Avoid damaging the internal organs.
4. Carefully extend the cut along the dorsal surface anteriorly toward the mouth.
5. Use the probe to gently separate the septa from the body wall. Pin the body wall open to expose the internal structures.
6. Use the dissection video, reference diagrams and photos to help identify the internal structures listed above.
7. Complete both drawings and label the listed structures. Use colored pencils to represent the anatomical colors you actually see. Reference diagrams and photos may show different colors from your preserved specimen. Mark required structures you cannot locate as “not observed.”

Clean Up

8. Place the specimen and tissue in the bag or container provided, following your teacher’s disposal instructions.
9. Return all pins. Clean and dry the scissors, probe, and tray as directed.
10. Wash your hands thoroughly with soap and water.

Think About It

11. How does the earthworm’s segmented body help it move through soil?

Segments lengthen and shorten in waves; setae grip the soil, and coelomic fluid supports movement.

12. Why is it useful to study both a real specimen and a reference diagram?

The specimen shows real structures and variation; diagrams clarify structures that are hard to identify.