

Part 2 (Day 2): Internal Anatomy

- ✓ Place the specimen in the dissecting pan DORSAL side up
- ✓ Locate the clitellum and insert the tip of the scissors about 3 cm posterior.
- ✓ Cut carefully all the way up to the head. Try to keep the scissors pointed up, and only cut through the skin.
- ✓ Spread the skin of the worm out, use a teasing needle to gently tear the septa (little thread like structures that hold the skin to organs below it)
- ✓ Place pins in the skin to hold it apart

A) Reproductive System

The first structures you probably see are the **seminal vesicles**. They are cream coloured and located toward the anterior of the worm. These are used for producing sperm.

- ✓ Use tweezers to remove these white structures from over the top of the digestive system that lies underneath it.

B) Circulatory system

The **dorsal blood vessel** appears as a dark brownish-red vessel running along the intestine. The **heart (or aortic arches)** can be found over the esophagus (just posterior to the pharynx).

- ✓ Carefully tease away the tissues to expose the arches of the heart, they run across the worm. If you are careful enough, you can expose all 5 of them

The **ventral blood vessel** is opposite the dorsal blood vessel, and cannot be seen at this time because the digestive system covers it.

1. On your student diagram handout use the **bold** terms to label the diagram (use the bold words from above)
2. Does the earthworm have a closed or open circulatory system?

C) Digestive System

The digestive system starts at the mouth. You will trace the organs all the way to the anus and identify each on the worm.

Find the mouth opening, the first part after the mouth is the pharynx, you will see stringy things attached to either side of the pharynx (pharyngeal muscles). The esophagus leads from the pharynx but you probably won't be able to see it, since it lies underneath the heart. You will find two structures close to the clitellum. First in the order is the crop, followed by the gizzard. The gizzard leads to the intestine which is as long as the worm and ends at the anus.