

Phylum Annelida

Name _____
Date _____
Block _____

Annelids

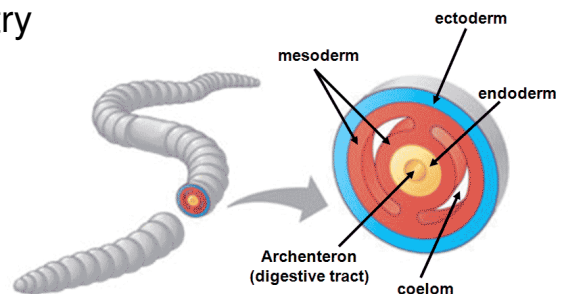
- Meaning: _____
- Common Name: _____
- Classes:
 - _____ – sandworms, bristleworms
 - _____ – earthworms
 - _____ -- leeches

Body Plan

- _____ – fluid filled _____ body cavity
- Segmented into compartments by septa
 - Segments marked by rings called _____
- _____ Symmetry

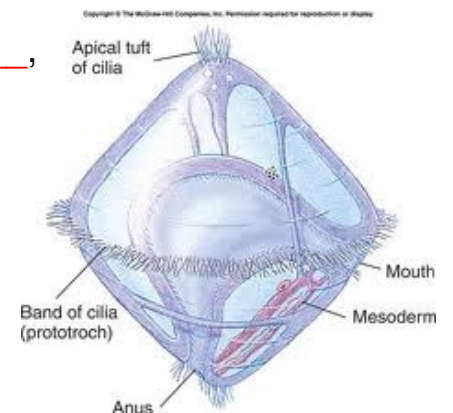
Tissue layers

- _____
- _____
- _____



Reproduction – Class Polychaeta (sandworms & bristleworms)

- _____ male and female organisms
- Fertilized eggs can develop into a _____, ciliated larvae called _____



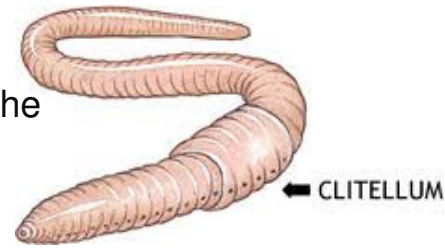
Reproduction – Class Oligochaeta & Hirudinea (Earthworms and Leeches)

- Sexual reproduction

- _____ with cross – fertilization at the _____

- **Clitellum** is a swollen segment which secretes a _____ that _____

_____ when they are laid

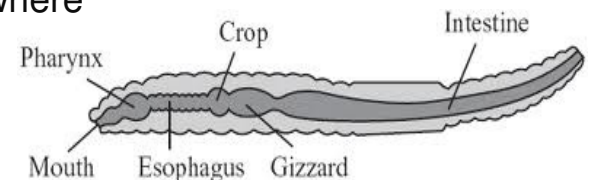


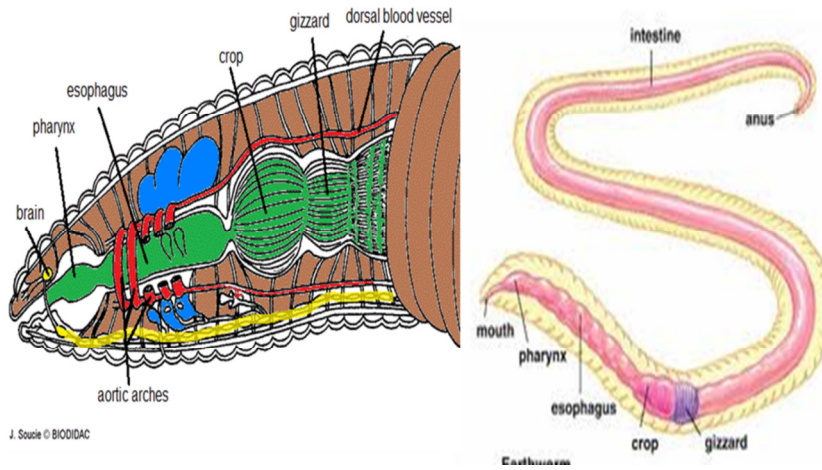
- Young develop _____ and leave it as fully formed worms
- NOTE: Earthworms are also able to _____ removed from the ends of the body



Digestion

- Eat leaf fragments, seeds, small animals, and protists
- Food;
 - Enters the _____
 - Gets pumped through the _____
 - Moves through the _____ by muscular contractions (_____)
 - Enters the _____ where it is _____
 - Moves through the _____ where it gets ground up into tiny pieces
 - Enters the _____ where _____ takes place
 - Undigested food eliminated through the anus



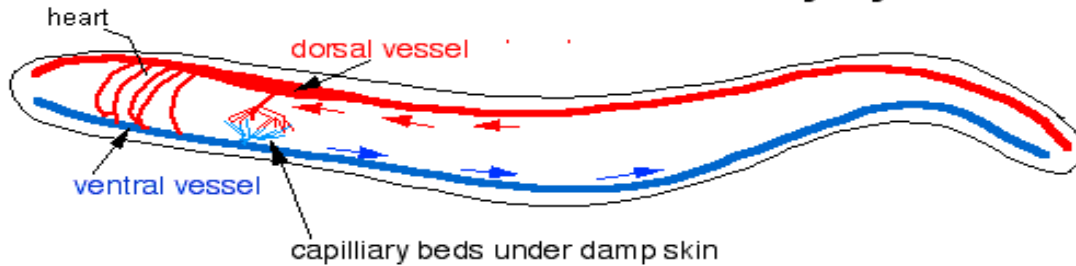


Circulatory System

_____ circulatory system with _____ that run the length of their bodies

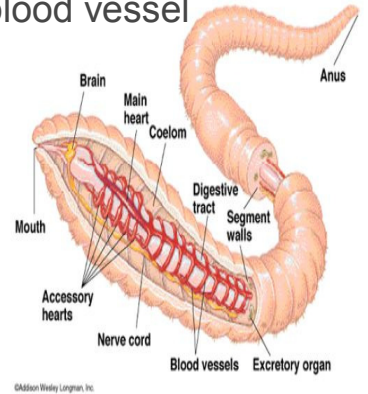
- Blood flows from the _____ end through the _____ blood vessel and returns through the _____ blood vessel

Earthworm - closed circulatory system



- Five _____ in the _____ act as _____ by contracting and forcing the blood into the _____ blood vessel

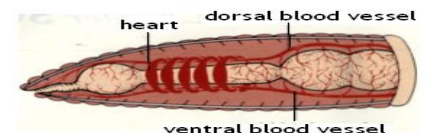
- Contraction of the muscles when the earthworm moves helps to move blood through the _____ back to the _____



- Dorsal & Ventral vessels branch into a network of _____

- Ring vessels _____ to the _____

- Blood contains;
 - _____ absorbed from the intestine
 - _____ (O_2 & CO_2)



Respiration

- No structure for respiration: gas exchange takes place

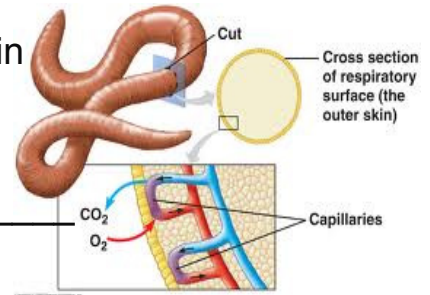
• Tiny vessels carry blood close to the skin's surface where

into and out of the body
- The earthworm

to allow diffusion of

across its skin
 - Have a

to keep water in



Excretion

- ---

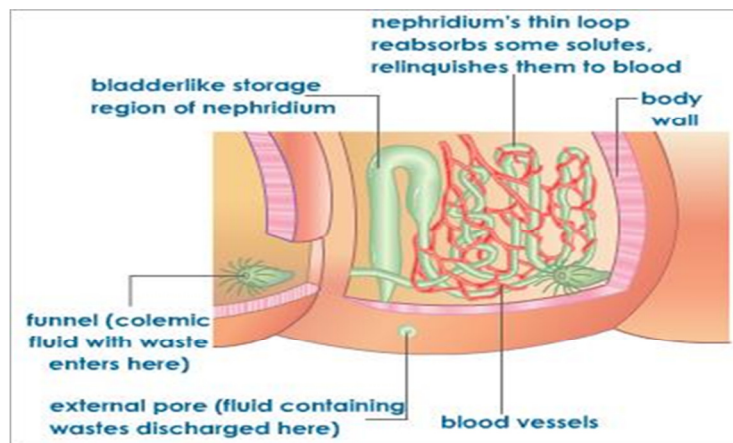
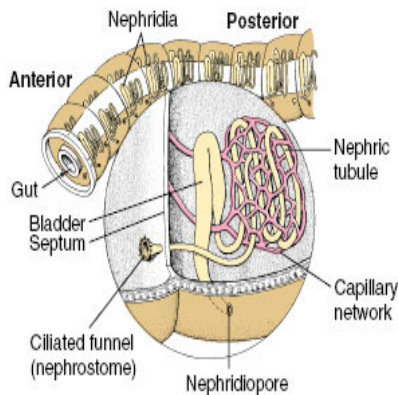
exits the body via the

- Cellular waste eliminated by

 - Have a pair of nephridia (singular: nephridium) in each segment
 - Nephridium consist of a ciliated

that moves waste from

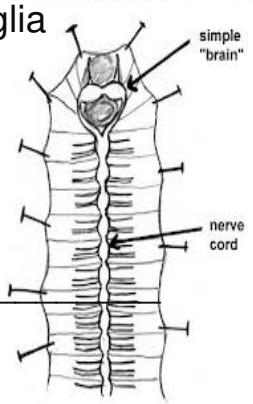
through a long tube to the outside



Nervous System

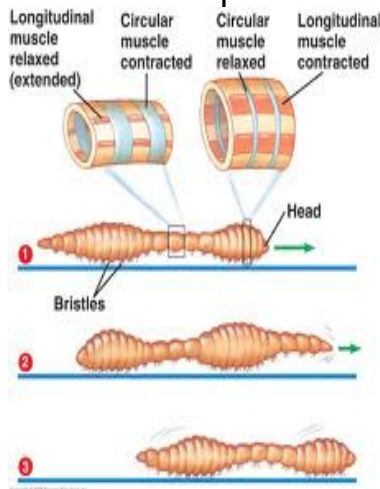
- More _____ than unsegmented worms
- Large _____ with many peripheral ganglia
(_____)
- Ventral nerve cord runs the length of the worm, giving rise to _____
- Have _____ that respond to _____

The Nervous System of the Earthworm



Muscular System (Movement)

- **Two** major groups of muscles
 - _____
 - _____
- **Circular muscles** run in circles _____ the body of the worm
 - When they _____ they make the _____
- **Longitudinal muscles** run from the _____ of the worm to the _____
 - When they _____ they make the _____
- They move by squeezing the circular muscles of each segment to make their body _____, then they _____ with their _____ called _____ and contract their longitudinal muscles so their body is pulled up to their _____ (front) end
- The above process can occur at several places along the body at the same time



Unifying Characteristics of Annelida

- Have a _____ (body cavity which allows them to have true organ systems and muscular layers)
- Posses _____ digestive & circulatory _____ as well as defined nervous and excretory systems
- No developed _____ system as they exchange O₂ and CO₂ via moist epidermis (skin)
- Are segmented into a sequence of compartments by _____. Segments are marked by rings called annuli
- Reproduce sexually and some asexually by _____ and _____
- Are _____ with cross fertilization
- Are found in terrestrial, freshwater and marine environments
- Can range in size from less than _____ (the seep tube worm)