Life Sciences 11 Platyhelminthes Lab Name:

**Purpose:**

1. To study the body structures of phylum Platyhelminthes.
2. To investigate how endoparasites are modified to their way of life.

**Materials:**

Microscope and *Planaria (class tubellaria),*  *Chonorchis (class trematoda)*, *Fasciola hepatica* (class trematoda) and *Taenia (class cestoda)* scolex, proglottid slides

**Method:**

Part 1: Class Tubellaria: *Planaria:*

1. View the *Planaria* slide and do a drawing, labeling the following (if visible):

**Anterior Posterior Right Left Head Eye spots Auricles Mouth Pharynx Gastrovascular cavity**

Part 2: Class Cestoda: *Taenia*

1. Observe the preserved *Moneizia* (sheep tapeworm) specimen in the class.
2. Examine the slide of the scolex of a tapeworm. Do a drawing and label the hooks and suckers.
3. Sketch a proglottid. Label the genital pore, ovaries and testes.

Part 3: Class Trematoda: *Clonorchis* (Chinese Liver Fluke)

1. Examine the slide *Clonorchis*: the Chinese Liver Fluke and do a drawing labeling the following:

A= **oral sucker**  B = **gastrovascular Cavity**

Class Trematoda: *Fasciola hepatica (common liver fluke)*

1. Examine the slide *Fasciola hepatica* and do a drawing labeling the following:

A= **Oral sucker** B = **ventral sucker**

**Analysis:**

1. A human tapeworm can be as long as 60 feet! How is this possible when the human intestine is only about 20 feet long?
2. What is the function of the hooks and suckers on the scolex?
3. In what ways is *Clonorchis* similar to *Planaria*? In what ways are they different?
4. What do each of the germ layers develop into?
5. In what ways are flatworms more advanced than the cnidarians?
6. Name the characteristics of the phylum Platyhelminthes:
   1. Type of symmetry
   2. Body Plan
   3. Type of digestive system
   4. Type of nervous system

1. Explain or define these terms:
2. Hermaphroditic
3. Ladder-type nervous system
4. Flame cells
5. Regeneration
6. Compare the structure of *Taenia*, an endoparasite, with a *Planaria*, an active free living predator in a table like the one below:

**Table 1**: Free Living VS Endoparasite

|  |  |  |
| --- | --- | --- |
|  | **ENDOPARASITE*: Taenia*** | **FREE LIVING: *Planaria*** |
| **Body Structure** |  |  |
| **Eyes** |  |  |
| **Nervous System** |  |  |
| **Digestive System** |  |  |
| **Reproductive System** |  |  |