

Phylum Platyhelminthes

Flatworms: Platy = flat, Helminth = worm

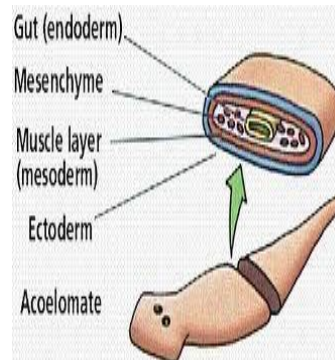
Name _____

Date _____

Block _____

Body Plan

- 3 true cell layers
 -
 -
- _____ Symmetry
- No segmentation



Digestion - Parasitic

- Can feed on _____ fluids
- Simple digestive tract
- Tapeworms eat host's _____ food
- Often have hooks/suckers on their _____ to attach to intestines of host & absorb the nutrients that go by

☞ Digestion – Free Living

Free-Living

- Usually _____, or scavengers
- Pathway: mouth → pharynx → gastrovascular cavity → intestines
- Nutrients _____ through intestinal wall into surrounding body tissues

☞ Digestion

Planaria (Free living)

- A muscular tube, the pharynx, is extended out through the _____
 - The food is _____ through the _____ and passes into the _____
 - GVC forms the _____ with many branches that run the entire length of the worm
 - Intestines secrete _____ that break down food (extracellular) so that it can be absorbed by _____ into all body tissues

Digestion

Tapeworm:

- Intracellular digestion: tapeworms absorb the _____ of their hosts, so they have no need of a mouth or digestive system

Circulation & Respiration

- No specialized _____ systems
- Flat enough to rely on simple DIFFUSION for these tasks
- GVC ensures no tissue _____ is far from food or O₂

Excretion

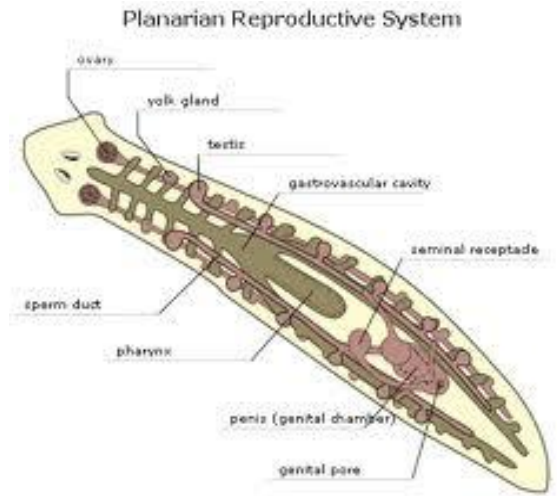
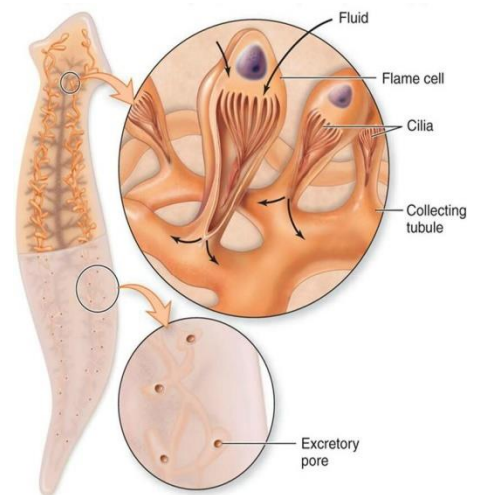
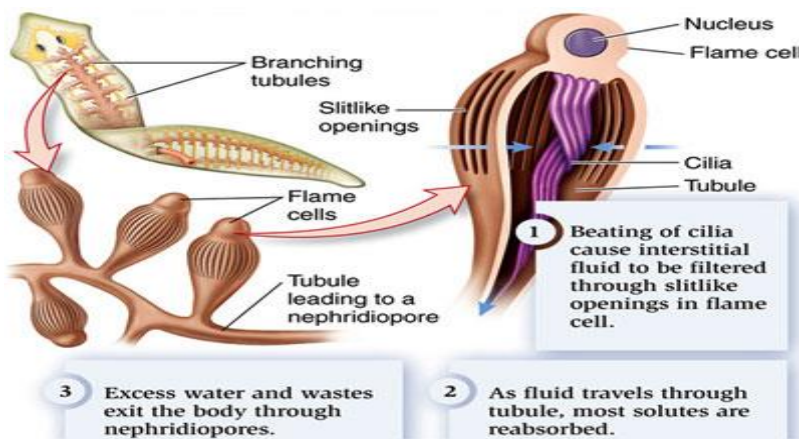
- Use diffusion to get rid of _____
- Expel _____ food materials through their mouths (like cnidarians)
- Have no anus

**Planaria have:

- _____ that cap the ends of _____ (a tubular network)
 - Flame cells have _____ that beat and cause water to move through the flame cell into the tubular network

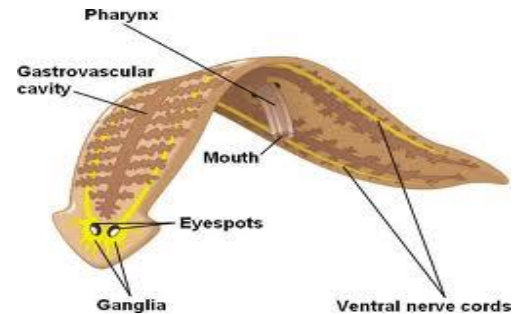
- The tubes empty to the external through _____

- Function to get rid of water and some waste



☞ Nervous System – Free Living

- Two anterior _____ serve as a simple brain (_____)
- One or more _____ -
- _____ - cells sensitive to chemicals
- Statocysts
- Ocelli



☞ Nervous System - Parasitic

- Far less sophisticated than free-living species
- Don't need much since they just need to find a place to hang-on!!

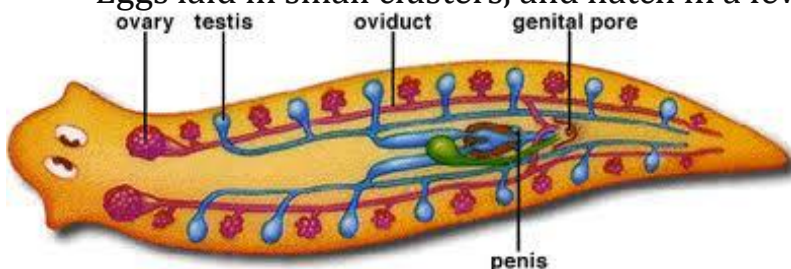
☞ Locomotion

- **Cilia** – on _____ help them _____ through water and along the bottom
- **Muscle Cells** – Longitudinal and circular muscles, controlled by _____ system, allows for _____
 - React to environment

☞ Reproduction: **Free-Living**

Sexual: Most are hermaphrodites

- Two worms will _____ and _____ (Internal fert)
- Eggs laid in small clusters, and hatch in a few weeks

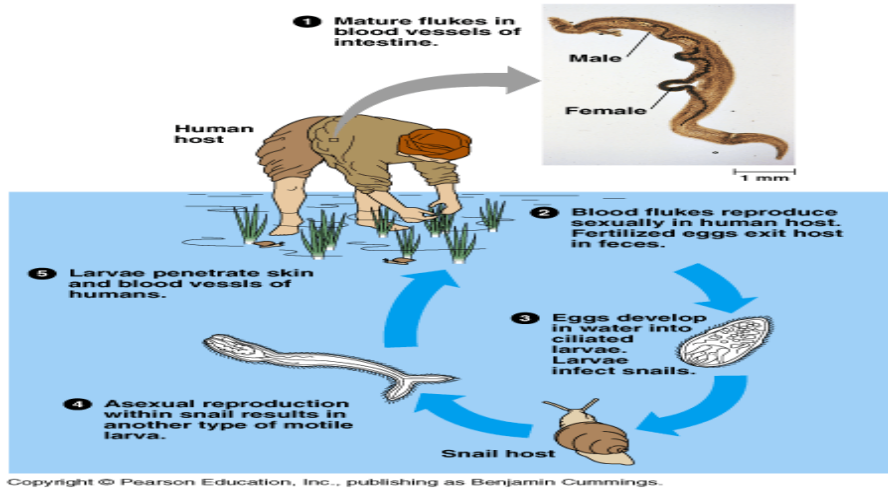


Asexual: by _____ – pulling itself into anterior and posterior ends

- Each portion _____ the missing part

☞ Reproduction: Parasitic

- Have complicated life cycles: See text p. 687



☞ Platyhelminthes - Classes
(A.K.A. Flatworms)

CLASSES:

○ *Turbellaria*

○ Ex: _____

○ *Trematoda*

○ Ex: _____

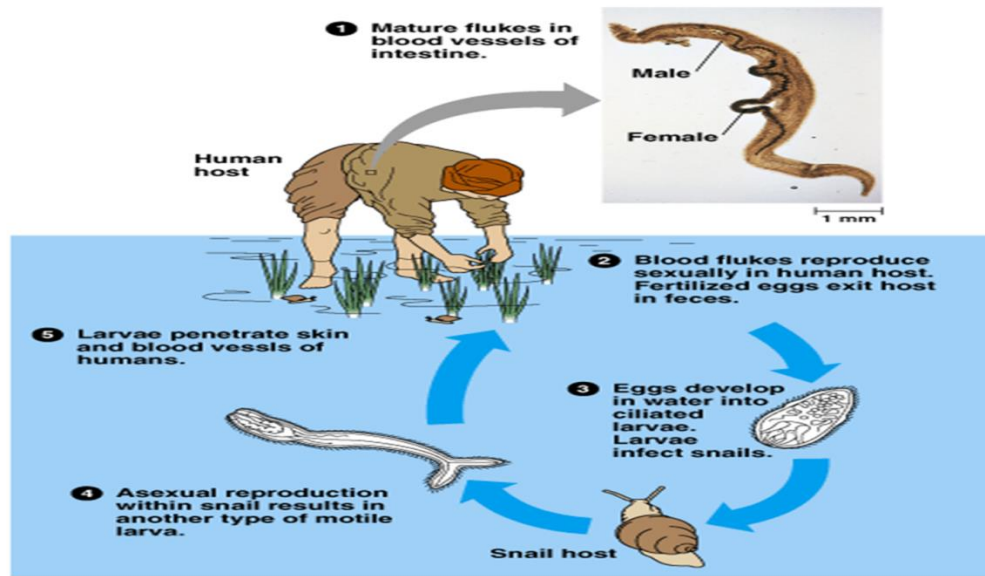
○ *Cestoda*

○ Ex: _____

☞ Class: Trematoda

- Parasitic flatworms, also called “**flukes**”
- Complicated life cycles, with at least _____ hosts (see p.687)
- Lay so many eggs that the host’s intestines’ blood vessels can _____, setting eggs free through host’s feces
- In North America, most flukes only infect fish and birds as their primary hosts

☞ Class: Trematoda



- Parasitic flatworms, also called “flukes”
- Complicated life cycles, with at least 2 animal hosts (see p.687)
- Lay so many eggs that the host’s intestines’ blood vessels can burst, setting eggs free through host’s feces
- In North America, most flukes only infect fish and birds as their primary hosts

☞ Class: Turbellaria

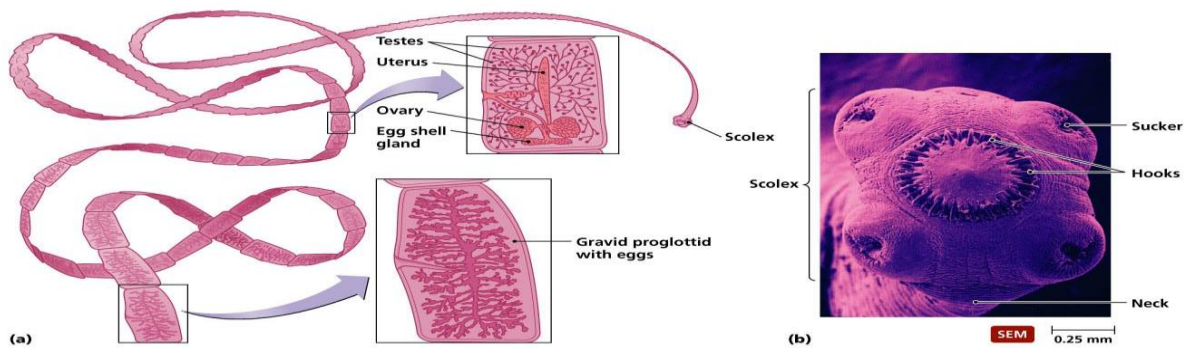
Planarians

- “Cross-eyed” _____ worms
- Vary in colour/form/ & size
- Usually less than 1cm long, but can be more than 60cm long in tropics!

☞ Class: Cestoda

Ex. **Tapeworms**

- Long, flat, parasitic, simple worms
- Head called “_____”: has suckers and a ring of hooks
- Absorb host’s digested food
 - Hosts lose a lot of weight, become weak
- Grow from an area in their neck region, constant division into sections called “_____”
 - Proglottids contain _____
- Proglottids get fertilized, _____, burst to release eggs, and leave through host’s excretion system.



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∞ Unifying Characteristics of Platyhelminthes

- **Exhibit** _____
- **Nervous system with cephalization at the head end**
- **Possess a Gastrovascular Cavity (GVC) and primitive organ systems for** _____ **and** _____
- **Do not have a circulatory or respiratory system but do take in ____ through their body surface**
- _____: **can reproduce sexually or asexually by regeneration**
- **Are** _____
- **Found in marine, freshwater and damp terrestrial habitats**