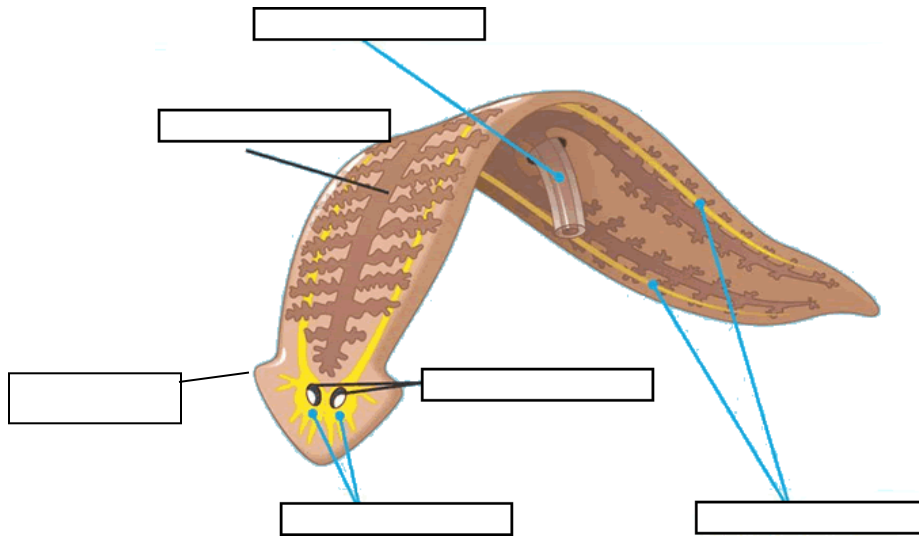


LAB: Observing Planarians

Part 1A: Anatomy of your worm

Directions: Label the planarian's structures with the terms above.



Directions: In the next few sections, you will be observing planarian responses to stimuli.

Define stimulus: _____

Define response: _____

Watch the video, "[How Planarian Eat](#)," also posted on the science web site. Next, your teacher will place portions of hard-boiled egg yolk in the main container of Planarian. Record observations below.

How do the planarian react? Do they move towards or away from egg yolk? Does it take awhile or do they quickly move?	
Describe how it eats.	
Where is its mouth located?	
What is the name of the feeding tube?	

1. **Measure your planarian.** You can do this by first placing a thin ruler under the petri dish. Then, remove some of the water in the dish with a pipette and wait for the worm to stretch out. Measure the length of the worm in *millimeters*. When finished, replace the water if needed (SPRING WATER ONLY).
2. **Write the length on the board.** When all the lengths are written down, determine the average planarian length for your class.

TABLE 2: Planarian Observations

Characteristics of all flatworms		
1.	2.	3.
Type of Symmetry:		
Sketch the planarian. Label the eyespots and auricles. Label the anterior (front) and posterior (rear) ends.		
Length of your planarian in millimeters (mm)		Class average length of planarian (mm)

Table 3: Planaria Movement and Behavior

Movement	
Location Preference	
Reaction to Current: Describe its body movements	
Reaction to Light: Does it move towards or away?	

Table 4: Handedness- Is your worm right or left-handed?

Trial 1	Trial 2	Trial 3	Trial 4	Trial 5
Based on your trials, is the worm right-handed or left-handed?				

Define Hermaphrodite: _____

Define Regeneration: _____

Define stem cells: _____

Make a Prediction: How long do you think it will take (in days) for your planarian to completely regenerate? _____

Draw the worm and a **dotted line for the type of cut** you will do for this experiment: Horizontal? Vertical? Near the head? Multiple cuts?

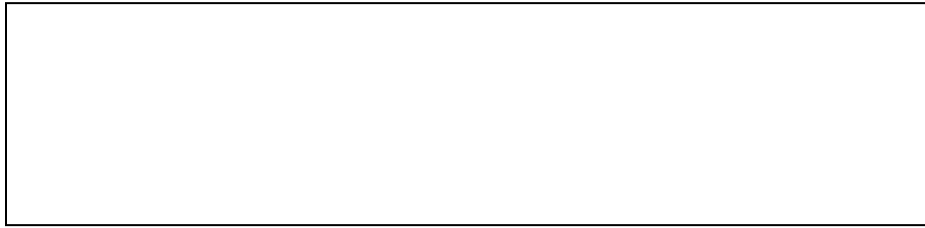


Table 5: Regeneration Observations

DATE	QUANTITATIVE OBSERVATIONS	QUALITATIVE OBSERVATIONS

ANALYSIS:

Was your prediction correct?

What does your worm look like now?

Formally stated conclusion:



Directions: Answer the following questions

1. What type of symmetry does the dugesia have?

- radial bilateral asymmetry

2. What term is used to describe how a planarian can regrow its body parts?

- regeneration fission cephalization

3. Which of the following is associated with the planarian's nervous system?

- flame cells diffusion ganglia

4. Asexual reproduction can occur through a process called:

- transverse fission binary fission cocooning

5. A hermaphrodite is an animal that:

- can asexually reproduce can regenerate has both male and female parts

6. The dugesia belongs to the phylum:

- platyhelminthes planaria turbellaria

7. How could a person catch a dugesia?

- using a net to siphon them from the surface of the water
 using a hook and raw liver to attract them

8. An animal that has no internal body cavity to hold organs is called a(n):

- turbellarian hermaphrodite acoelomate

9. How does the dugesia obtain oxygen?

- diffusion through gills with its flame cells

10. The dugesia will tend to stay in what areas?

- dark light warm