

Name: KEY



Shape of Life

SHAPE OF LIFE: PLATYHELMINTHES

1. True or False: Flatworms are closely related to the first hunting animal. True

2. What four environments can a flatworm survive within?

Land, oceans, freshwater, and inside the bodies of other animals

3. Observe the brown planarians as they swim. How would you describe their movement on the sea floor?

They are gliding efficiently and smoothly

4. Primitive worms were the first animals to develop a centralized nervous system.



5. What can the eyes of a flatworm sense?

The can sense the intensity of light and the direction from which it came.

6. The nervous system sends signals to a sturdy set of muscles.

7. In addition to muscles, what other structure do planarians have to move?

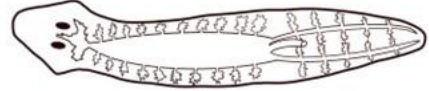
Thousands of cilia

8. These ancient worms were the first organisms to have sense organs in stereo.

*Note: **Stereo** means that input is directed through two sources (ex. Two eyes instead of one).

9. Where is the mouth of the flatworm located?

On the underside of its body



10. What is the function of the pharynx?

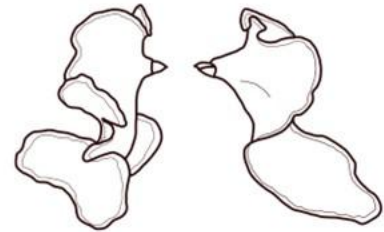
The pharynx extends during feeding and sucks down the prey.

11. True or false: The digestive system of a flatworm extends through its entire body. True

12. What type of fertilization happens within flatworms? Internal

13. Describe how the two flatworms in the video mated.

The flatworms utilized penis fencing. Each flatworm has two penises on the underside of their body at the middle, which they use to try and stab the other flatworm. The first flatworm to stab the other delivers its sperm through the opponent's skin.



14. Why didn't each flatworm want to be the mother? Carrying eggs expends valuable resources

15. What does it mean to be hermaphroditic?

Hermaphrodites are animals that have both male and female sex organs.



16. Why is being hermaphroditic an advantage?

It maximizes the chances of finding a mate to reproduce (each animal just needs to find another member of its species; not specifically a male member or a female member).

17. Flatworms were the first animals to actively pursue **food** and **sex**.

18. The most powerful beasts still have which two to three characteristics of a flatworm?

Flatworms and modern day hunters have bilateral symmetry (efficient movement), a head with a brain, and senses in stereo.

FLATWORM ANIMATION: TAPEWORM

19. How long does the video claim a tapeworm can grow to be inside the human intestines? **60 feet**

20. Why do tapeworms have hooks and suckers?

They use the hooks and suckers to latch into the intestinal wall, where they make more tapeworms.



21. Each segment of a tapeworm produces both **sperm** and **eggs**.

22. The number of eggs produced by one tapeworm exceeds the number of...

Human beings on Earth



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