

Name: _____

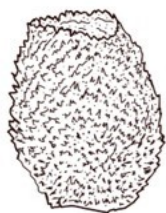


SHAPE OF LIFE: SPONGES

Shape of Life

1. When did life on Earth first appear? _____

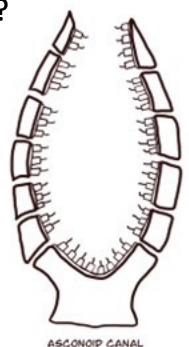
2. Describe the living things that existed before there were animals on Earth.



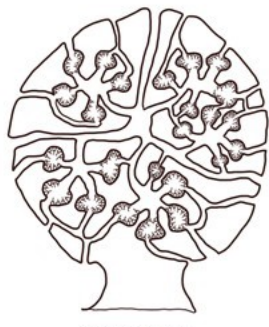
3. Are sponges ancient or relatively new organisms compared to other life on Earth?

4. True or False: Sponges all take the same shape. _____

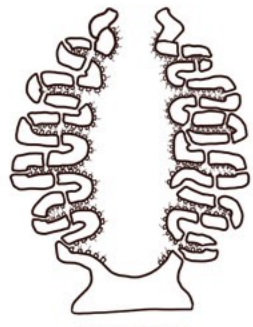
5. The video discusses sponges with pores (ostia), canals, and digestive cavities. Circle: which sponge canal system was described?



ASCONOID CANAL



LEUCONOID CANAL



SYCONOID CANAL

6. How many species of sponges have been discovered and described so far? _____

7. Circle the environments that a sponge can live in.

warm saltwater

cold saltwater

freshwater

on land

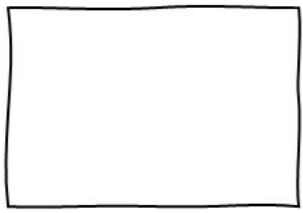
8. What happens if you cut a section of a sponge off?

9. What happens when a sponge is passed through a sieve?

10. What protein holds the cells of a sponge together (and is also found in all animals on Earth)?

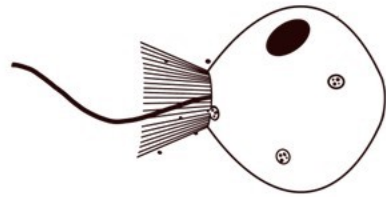
11. In addition to soft collagen, what are the sharp, crystalline structures embedded in a sponge that give it rigidity and form?

12. In the box, sketch one of the spicules that you saw displayed in the video.



13. How does a sponge feed?
14. To get one ounce of food, how much water does a sponge have to pump? _____
15. What happened when the biologists injected colored dye into the water outside of a sponge?
16. If you put your hand above the osculum (large opening at the top) of a sponge, would you feel water flowing out or flowing in?
17. As the video takes you on a journey through the canal system of a sponge, record one interesting observation or quote.

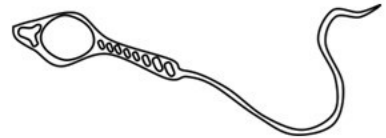
18. How do choanocytes power the pumping action of a sponge?



19. Other than feeding, what other function does the pumping of a sponge have?

20. What was the first animal to reproduce using sperm and eggs? _____

21. Do all sponge sperm successfully fertilize the egg of another sponge? Why or why not?



22. Conclusion Question: What are two pieces of evidence that you observed in the video that support the classification of sponges as animals?

23. Conclusion Question: Why would life on land be impossible for a sponge?

