

Sponges & Cnidarian Worksheet

Though plant-like in appearance, sponges are actually one of the most primitive animals in the sea. The phylum Porifera contains about 10,000 different species. In the ocean, live sponges can be found in an infinite variety of colors and shapes. Most of them are relatively small, but some varieties can grow to over 6 feet in diameter. Sponges differ from all other marine invertebrates in that they have no true tissues or organs. Their structure is composed of simple groups of cells. In spite of what cartoonists continue to portray as a real living sponge - Sponge Bob is NOT a real sponge - sadly he is a synthetic sponge and does not show the true characteristics of a real sponge.

Sponge Basics:

1. Describe the animal known as a "sponge"
2. Where are sponges found?
3. What is the scientific term for sponge?
4. The tiny pores which cover a sponge are called what?
5. What is the function of the oscula?
6. Where are collar cells located and what are the two functions of these specialized cells?

Where:

Function 1:

Function 2:

7. Jellylike cells or _____, takes the food to other cells within the sponge.
8. The "skeleton" of the sponge is composed of tiny needle-like splinters called _____, a mesh of protein called spongin, or a combination of both.

9. What are the two functions of spicules?

Function 1:

Function 2:

10. List and describe the two basic types of sponges:

Type 1:

Type 2:

11. Draw a barrel sponge.

12. Draw a tube sponge.

13. Draw and label a [cross section](#) of a typical sponge.

Sponge reproduction:

14. Explain the process of [reproduction](#) in the sponge: be sure to use the following terms in your description: hermaphroditic, gamete, spawn, planktonic larvae.

Sponge Defense:

15. List 4 ways sponges [defend](#) themselves.

a.

b.

c.

d.

Human Uses:

16. How are sponges used by [humans](#)?

17. How can sponges be used in [medical applications](#)?

Status & Threats:

List 3 reasons why sponges are [threatened](#)

a.

b.

c.

Cnidarians: Jellyfish, coral, hydra & sea anemones

The Phylum Cnidaria (Coelenterata) contains about 9,000 species of hydras, jellyfishes, sea anemones, corals, etc. Cnidarians are large and beautiful water organisms. Their cells are organized into distinct tissues, and their nervous system controls all activities of the organism.

Cnidarian Basics:

19. Cnidarians are very diverse in form. What is the common adaptation, which unites them into the common group of Cnidaria?

20. What language was the word Cnidaria derived from and what does the word mean?

21. Where are Cnidarians found?

22. List the four groups of Cnidarians and a brief description of each.

a.

b.

c.

d.

23. Describe the type of symmetry exhibited by Cnidarians.

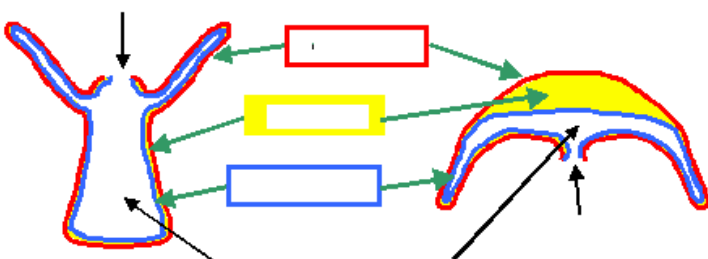
24. What do Cnidarians eat?

25. How do Cnidarians eat?

Body form:

26. Describe the two basic body plans of Cnidarians; explain how they are different from one another.

27. Label the cross-section of the two forms of Cnidarians:



Flashy Features:

28. What are [nematocysts](#)?
29. List [4 functions](#) of nematocysts.
- a.
 - b.
 - c.
 - d.
30. Where are the 2 [main locations](#) of nematocysts?
- a.
 - b.
31. What causes a Nematocyst to [discharge](#)?
32. How often can the mechanism in the nematocyst be [triggered](#)?
33. Draw and label the [stages](#) of a Nematocyst discharge.

Human Uses:

34. How do [humans](#) use cnidarians?

Status & Threats:

35. How do humans place the [survival](#) of cnidarians in danger?

The Most DEADLY: The BOX Jelly Fish

36. What is the [genus/species](#) name of the box jelly fish.
37. What are 2 other [common names](#) of the box jelly fish.
- a.
 - b.
38. Make a [physical description](#) of the box jelly fish.
39. According to the map, [where](#) does the box jellyfish live?