

Sponges

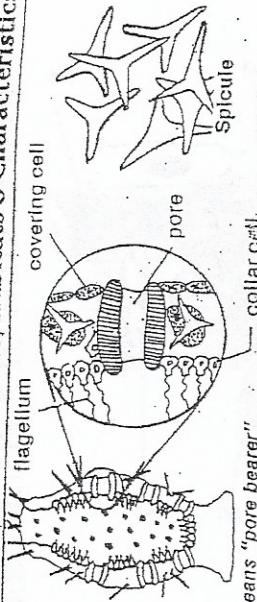


Wandering Cell

Kingdom: Animal

Phylum: Porifera (por-uh-er-uh) means "pore bearer"

Members, Habitats & Characteristics

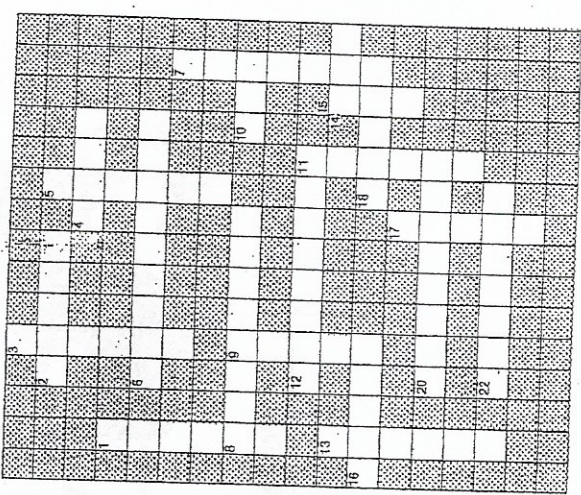


If you were to drop red dye next to the sponge, you would see it go in the sides of the sponge and come out the top. This is because the flagella, or little whips on the collar cells, pump water in through the pores and then out through the opening at the top of the sponge. This brings in food which is trapped and digested by the collar cells and picked up by the wandering cells.

The cells in a sponge are not organized into tissues. We know this is true because solenostelians can squeeze a sponge through a piece of silk and separate it into individual cells. After three weeks, the cells will reorganize themselves into a working sponge all by themselves! No other adult animal can do this.

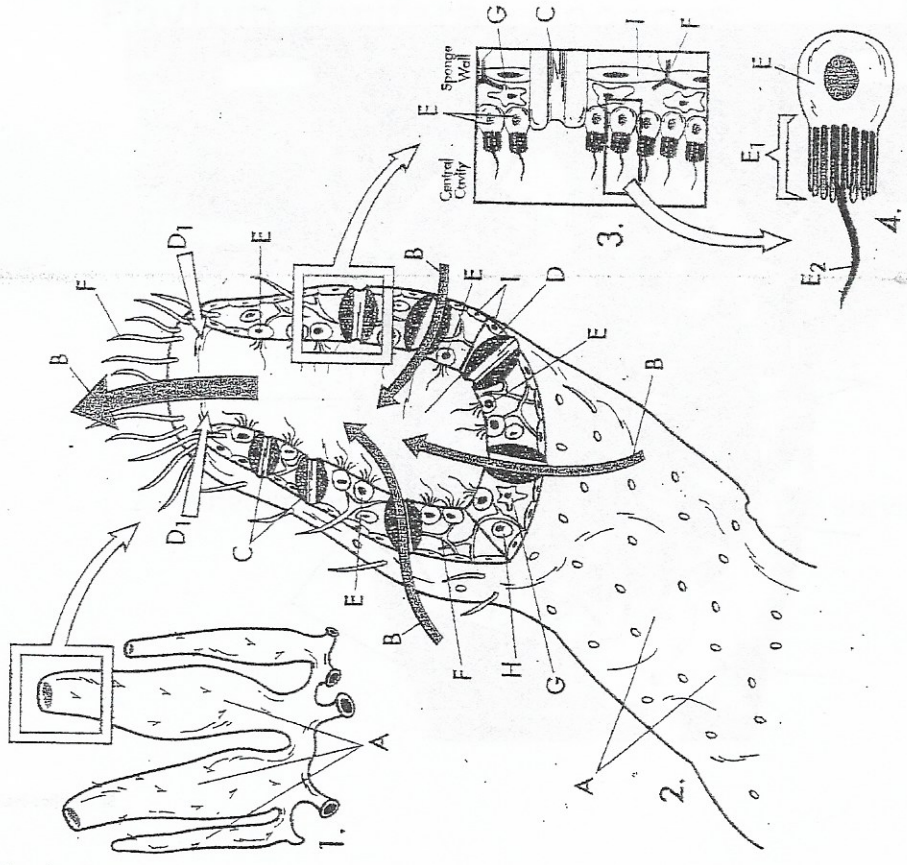
From the drawing above, you can see that the body of the sponge is made up of two layers of cells. The outer cells are covering cells and inner cells are collar cells. In between is a jelly-like layer. It contains wandering cells which carry food to all parts of the sponge. It also contains spicules which provide support.

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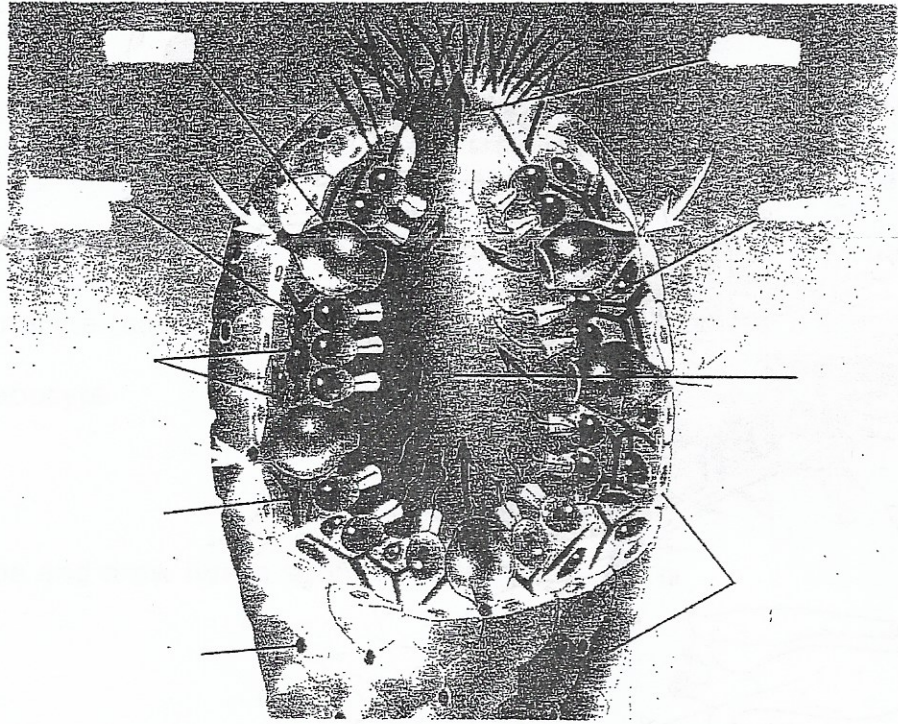
- ACROSS**
- break down cell with a flagellum
 - ocean living animals in phylum Porifera
 - Tissues are made from _____ kingdom we are learning about group
 - Most sponges live in the _____ middle " _____" layer like _____ cells
 - _____ cells carry food around.
 - support structures
 - Sponges have _____ cell layers.
 - _____ pump water through the pores.
 - ocean
 - flagella
 - Water comes in here.
 - phylum of sponges
 - Sponges are _____

Phylum Porifera



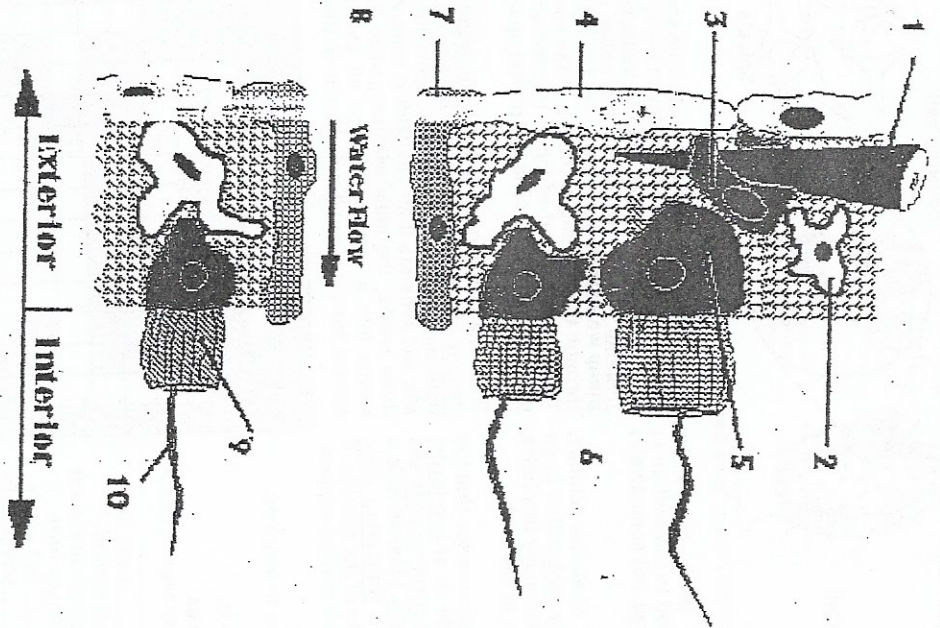
- Phylum Porifera
- Sponge Colony.....A
 - Water Flow.....B
 - Incurrent Pore.....C
 - Spongocoel.....D
 - Flagellum.....E₁
 - Spicule.....F
 - Amoebocyte.....G
 - Egg Cell.....H
 - Epidermal.....I
 - Excurrent Pore (Osculum).....D₁
 - Collar Cell (Choanocyte).....E
 - Membranous Collar.....E₁

The Anatomy of a Sponge



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MICROSCOPIC VIEW OF A PORIFERAN WALL



Phylum Porifera - Sponges

Name:

Date:

Block:

1. Describe how water moves through a sponge.

2. What important roles does water play in the survival of a sponge?

3. How do sponges reproduce?

4. What material(s) gives a sponge its support and structure?

5. Match the terms on the left with the definitions below.

_____ Osculum

_____ Spicules

_____ Pores

_____ Choanocyte (collar cells)

_____ Amoebocyte

- a. Water moves into the central cavity through these small openings.
- b. Spike-shaped structures that make up a simple skeleton.
- c. Large opening at the top of the sponge where the water exits.
- d. Specialized cells that move around within the walls of the sponge, making spicules and digesting and transporting food.
- e. Cells that use flagella to move water through the sponge to trap food.

6. Describe and draw how a sponge feeds.

7. What triggers a sponge to produce gemmules?