Porifera (Sponges) Lab

Part 1: Spicule identification

In your composition books set aside space to draw circles or other shapes used to depict a microscope coverslip. There are three different sponge microscope slides at each of the designated lab benches. For each lab bench record the following three things in your lab book.

1) Write down Phyla and Name of the Species

2) Draw a sketch of the image seen in the microscope (make sure to include what magnification is being used)

3) Identify the various VISIBLE parts of a sponge (spicules, ostia, ocula, collar cells, calcium carbonate skeleton)

Part 2: Filter Feeder Principles

Now even though these are bath sponges and not marine sponges the same principles apply for how sponges selectively absorb water/nutrients. So at your table you have a container fill of water and other various items. Follow the steps and record observations for each step in your composition notebooks.

Step 1: Place the dry sponge out on a paper towel and record initial observations about appearance.

Step 2: Place sponge gently on top of water, DO NOT press sponge down, just let it float/sit there for 3 minutes, and record what happens.

Step 3: Take sponge above water and squish water out of sponge so that it is lightweight and most of the water is no longer trapped inside. Let the sponge dry on the paper towel for 3 minutes.

Step 4: Hold sponge so only a small portion of the sponge is in the water, record what is happening.

Step 5: Squish entire sponge out, record how much of the entire sponge remained dry.

Laboratory Analysis Questions

1. What features does the bath sponge have and lack that gives it a soft sponge texture?
2. What is the function of pores in the sponge anatomy?
3. How do sponges receive water/nutrients?
4. After what you observed in lab, why do you think sponges come first in the phyla of marine invertebrates?