Student Data Sheet 1
Build a Better Filter

The oyster is a filter feeder. This means an oyster feeds by straining matter and food particles from water, and as a result, helps to filter out sediment and other particles that cloud the water column of the Chesapeake Bay. The oyster takes a stream of water into its shell, removes phytoplankton (plant plankton) by sucking it into the mouth, and then digesting it inside the stomach.

In small groups, you will plan and present a diagram for a simple filter that will best clean dirty water. Once the blueprint has been approved by the instructor, teams collect the appropriate materials, build their filter, and test it with 2 cups of dirty water.

Diagram of our filter:

Materials we will use:

Material	Purpose

Amount of water we filtered in five minutes: _____ ml

Clarity of our filtered water:
_____bad _____fair _____good

Reflection:

1. Did you use ideas from other water filtration systems?

2. What criteria did you use to determine whether your filter was effective?

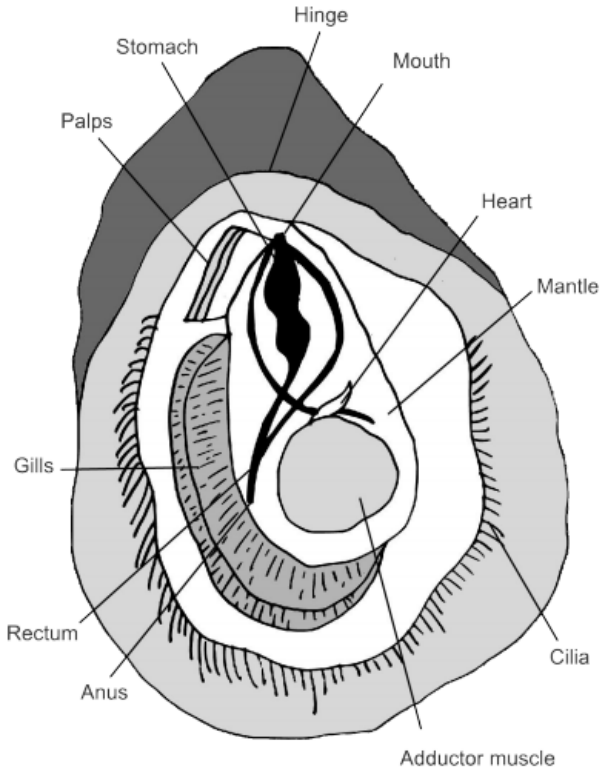
3. What were the results of your filtration system?

4. How would you change your design to be more effective?

Student Data Sheet 2
Oyster Dissection

(From: http://estuaries.noaa.gov/teachers/pdf/06_oysters_tg.pdf)

How does the oyster survive in the intertidal zone? If it's a marine animal, how does it survive out of the water when the tide goes out? And the oyster doesn't move around. It's attached to the rocks or other shells beneath it. So how does the oyster get its food? How does it reproduce?



Procedure

1. Examine the external anatomy of the oyster and take notes on the shape, color, and texture of the oyster's shell.
2. Locate the following parts of the oyster anatomy on the diagram and on your specimen. Write a brief description of each part to help you identify the anatomical features of an oyster and what the function of each body part might be.

Adductor muscle

Mantle

Palps

Mouth

Gills

Cilia

Heart

Stomach

Rectum

Anus

Student Data Sheet 3
Oyster Reef

Organism Description	Identification	Organism Adaptations	Sketch/Drawing

1. Was it easy or hard to find the organisms living on the oyster shell?

2. What external characteristics did a lot of the organisms share?

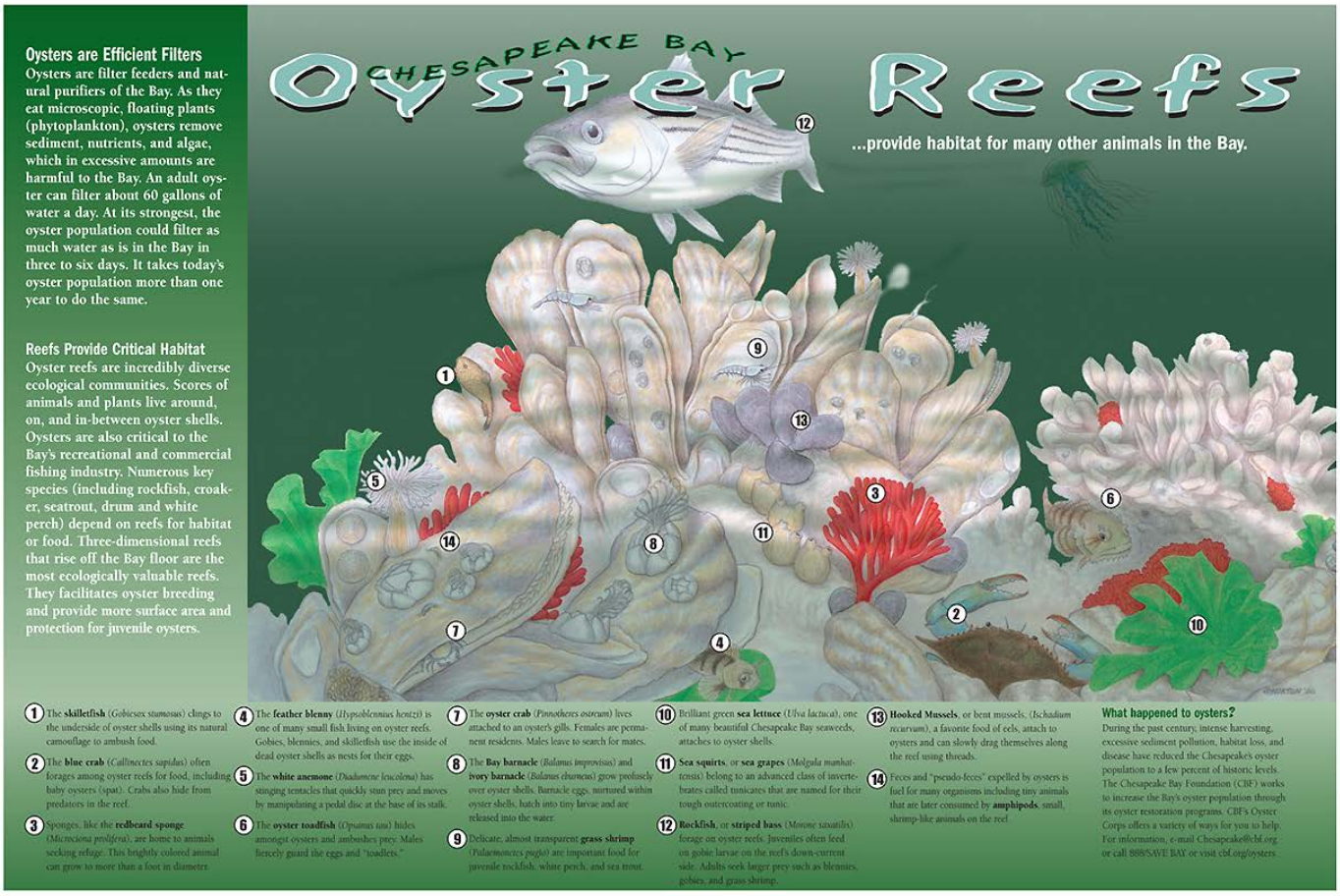
3. What is the difference between sessile and motile organisms?

   Name an example of each.

   How does being sessile or motile affect their survival in an estuary?

4. What does the oyster reef provide for these organisms?

5. Why are oysters important to the Chesapeake Bay?



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