

The Oysters as a Community (2 types of hands-on activity for kids)

Upon arrival at the pier, pull up a crate (a green plastic milk box) with an oyster community. Put a tote tray underneath the crate to capture any escaping living things.

We can also bring a tank with the creatures needed in it. They can observe from the live tank.



1. Discover the neighbors of the oyster.

Have the students observe, identify and describe the different types of living things that exist in the oyster community. Use the oyster crate or tank as your study center.

2. Demonstrate the effect of erosion and sedimentation on an oyster community by doing the following experiment.

- Place an oyster in an observation aquarium.
- Take a sample of extremely muddy water (using a jar and pour it over the oysters).
- Set up a second observation aquarium with just muddy water.
- Observe the aquarium and the oyster at the end of the class.
- Discuss the following questions with the students:

What effects might the sediment have on the life of the oyster? *The sediment could cover over an oyster or an oyster bar and actually smother the oyster by clogging its gills.*

Why is run-off a problem? *Run-off or water coming off the land usually carries sediment and pollution with it. Both sediment and pollution affect the living things in the water such as oysters.*

What are the leading contributors to the run-off problem? *The use or abuse of the land around a body of water is the major cause of run-off. This could include clearing away trees or paving an area.*

Has the water quality improved since the beginning of class? *The sediment probably has settled down on the oysters due to gravity resulting in a clearer aquarium. The oyster can also filter out sediment.*

How might the oyster, being a filter feeder, be able to assist in the filtration of the bay's waters? *Oysters are capable of filtering water as they remove algae and other living things as part of their diet as well as sediment particles.*

Oyster Restoration Observation (2 types of hands-on activities)

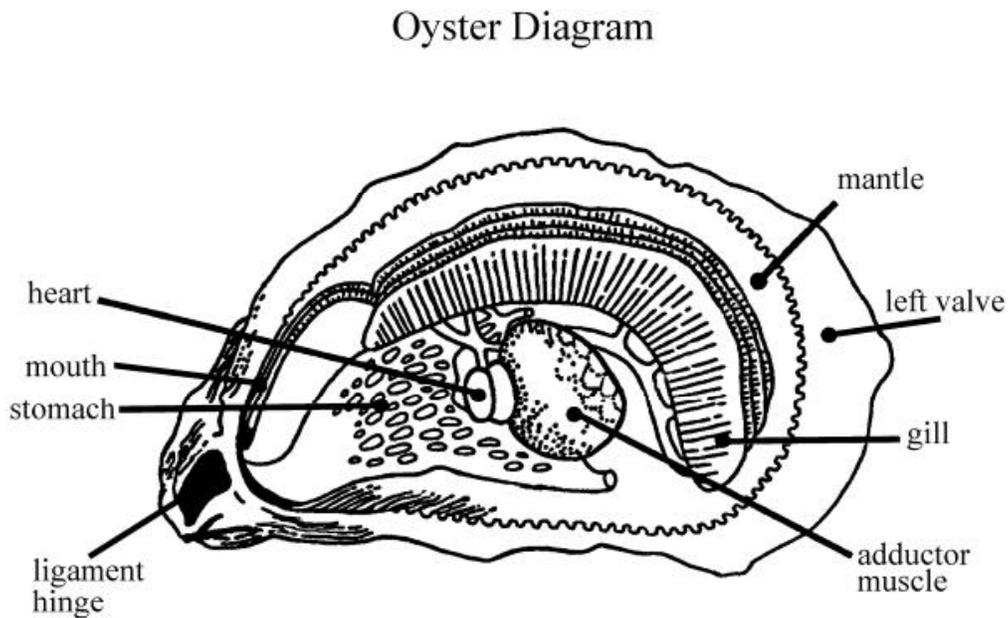
- Divide the students up into small groups.
- Pull up an oyster bag. Give each group 10-15 oysters. Tell the students **do not** try to open the oysters. If the oysters are forced open, they will die. Remind them also that the oyster are very sharp on the edges. Be careful how you handle them.
- You can also have the students measure some of the oysters so you can point out that they are not of legal size to harvest until they reach 3" in length. We can give them those little blue DMF measuring tapes.



Oyster Anatomy (1 type of hands-on activity for kids)

1. Hold up an oyster and discuss how oysters (as invertebrates) are adapted to the environment.
 - a. **What** is the purpose of the shell? *The shell is the only support and protection for the oyster. Oysters do not have a backbone and are called invertebrates. The shell is also a mini-habitat for other living things to grow.*
 - b. **How** might temperature or salinity affect the oyster? *Oysters cannot survive if the water temperature is too warm. Oysters also prefer slightly salty to salty water and cannot survive in fresh water.*
 - c. **Can** an oyster move? *A mature oyster with a shell cannot move and is restricted to its location on the oyster bar. An oyster in its larval stage can move with the currents and tides hopefully finding a hard surface to attach itself.*
 - d. **How** does an oyster eat? *Oysters are filter feeders. As they pump water into their shells, the gills filter out microscopic food particles such as algae and some sediment.*
2. **Now open an oyster and let the kids touch and see.** Identify parts of the oyster, ex. the gills and mouth. Mention this is how they filter water like what they saw in the tank with the muddy water. Suspended food (plankton) and particles are trapped in the mucus of the gills are transported to the mouth, where they will be eaten.

Fig. 1: Parts of an Oyster



Oyster Life Cycle

Life cycle chart came from <http://www.mdsg.umd.edu/oysters/garden/seed.html>

