



KIDS ENVIRONMENTAL LESSON PLANS

This lesson plan developed by:



The World is YOUR Oyster

Overview:

This activity will introduce to students the contributions of oysters and oyster gardening to the estuary ecosystem and to the community.

Ocean Literacy Principles:

5. The ocean supports a great diversity of life and ecosystems
6. The ocean and humans are inextricably interconnected

Key Concepts:

- Inform student about fundamental facts about the biology of the oyster
- Inform student about the oysters beneficial role in a healthy estuary ecosystem
- Inform student oyster aquaculture and it's "community service" role

Materials:

- Seed oysters (at least 1 per student) any size (available from any local oyster grower any size will do but $\frac{1}{2}$ " or bigger is best)
- Prepared oyster related questions that will get answered in activity (see below)
- A table or floor to inspect oysters on
- Estuary to return the oysters back to propagate

Set-up Prior to Activity:

Procuring the oysters for the lesson (refrigerate them if necessary. Oysters will remain healthy for days when properly refrigerated).

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**Duration:**

45 minutes

Physical Activity:

Low

Background:

Oysters are water purifiers, filtering (eating) algae and sediments from the water. Clean, clear water is critical to the health of the estuary ecosystem. Aquatic vegetation (like eelgrass) cannot survive without sunlight. The oyster helps to clean the water so sunlight is available so the aquatic vegetation can grow. Aquatic vegetation is critical to estuary habitat because it provides habitat and feeding areas for a variety of marine organisms. Oyster reefs (colonies of oysters) provide ideal living and feeding grounds for a variety of marine organisms up and down the food chain including providing food for people (at the top of the food chain). Some people make a living from growing (aquaculture) and harvesting oysters.

**Activity:**

1. Spread out oysters on working table. Have students pick up and observe oysters. This will provoke curiosity and a flurry of questions will result which will lead off discussion about oysters, about growing food, about the estuary ecosystem, food chain, water quality, etc.
2. Encourage questions and answer the answerable questions. Make a list of the questions, which require more research (and follow up in a subsequent lesson).
3. When initial questions have been exhausted. Pull out prepared questions. The questions will be folded and placed in a hat (like a fortune in a fortune cookie). Randomly have students (one at a time) pull questions from the hat, have the student read the question out loud, try to answer the question themselves (and then help from the audience) and then the instructor can help answer and provide complementary information. Continue answering prepared questions from the hat.
4. After prepared questions and resulting discussion, finish lesson with “closing ceremony”. Have each student select an oyster. Ask them to make a silent wish on how they can make a positive impact on their oceans.
5. Have the students line up alongside the dock or seawall or edge of the estuary. Have the

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students reflect on their wish and then have them cast their oyster into the water (metaphorically sending their wish out into the universe to embrace) and propagating sustainable fishing, growing food, contributing to the health of the estuary.

Discussion:

Below are examples of the prepared questions we use at the Tabor Academy Oyster Farm presentations, but you can also research, develop, and customize your own questions too.

1. How long will Tabor keep the oysters in the Farm?
2. What will happen to the Tabor oysters once they are big enough?
3. Why did Tabor start the Oyster Farm?
4. How are oysters typically harvested when they are not cultured?
5. Will the Tabor oysters be eaten?
6. How do oysters reproduce?
7. How many oysters can you legally take with a Town of Marion shellfish permit?
What permits are needed?
8. What do oysters eat?
9. What months can you harvest oysters and why these months?
10. Where does the oyster seed (that we start our oysters from) come from?
11. What is the advantage of growing the oysters in floating bags rather than on the bottom (where they are found in the wild)?
12. Do oysters move?
13. How big do oysters get?
14. How fast do oysters grow?
15. How do you tell the difference between a male and female oyster?
16. How many oysters total are in the Tabor Oyster Farm?
17. How big is the oyster seed when it arrives from the hatchery?
18. What types of current research projects are being done with oysters at Tabor?
19. What do oysters like to attach to?
20. What is the legal size for an oyster in Marion?
21. How many other oyster farms does Marion have?



The World is YOUR Oyster (cont.)

**Resources:**

<http://www.taboracademy.org/Page/School-by-the-Sea/Oyster-Farm>

http://www.chesapeakebay.net/fieldguide/critter/eastern_oyster

http://animaldiversity.org/site/accounts/information/Crassostrea_virginica.html

<http://www.oystergardener.org>

<http://www.cbf.org/how-we-save-the-bay/programs-initiatives/maryland/oyster-restoration/oyster-gardening-program>

<http://www.inlandbays.org/projects-issues/oyster-gardening/>

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