

Crunchy on the Outside, Soft and Squishy on the Inside—Designing and Constructing the Perfect Oyster Predator

Charting the Course

Students will generate examples of an oyster predator. They will describe the structural and behavioral adaptations that allow their fictional oyster predator to survive.

Background

Oyster predators can easily locate oyster prey and since oysters are not mobile once found there is no means for escape. However, the oysters thick shell presents a significant deterrent to oyster predators as they must first penetrate the shell before consuming the tissue. Successful oyster predators possess specialized adaptations that help them crush, drill, or open the shell exposing the meat within. Common oyster predators include snails, crabs, starfish, flatworms, and fish. (such as, cownose rays, oyster toadfish, flounder, drumfish).

Objectives / Students will be able to:

1. Demonstrate an understanding of the oyster's role in the food web.
2. Describe common predators of oysters.
3. Understand that organisms have adaptations that promote their survival as predators and prey.
4. Describe the structural and behavioral adaptations that allow organisms to survive.
5. Generate a model of an oyster parasite.

Procedure / Warm Up

Have a class discussion about food webs and the variety of ways that organisms interact in an ecosystem. Discuss the role of oysters as the first consumer of primary production and how energy is transferred through the food web. Engage students describing how an oyster protects itself from predators and how predators might be specially adapted to prey on oysters.

The Activity

Have students construct 2-D or 3-D models of fictional oyster parasites. Students must note (label or discuss) the structural and behavioral adaptations of the organism, which promote its survival.

Extensions / Have students report on oyster predators.

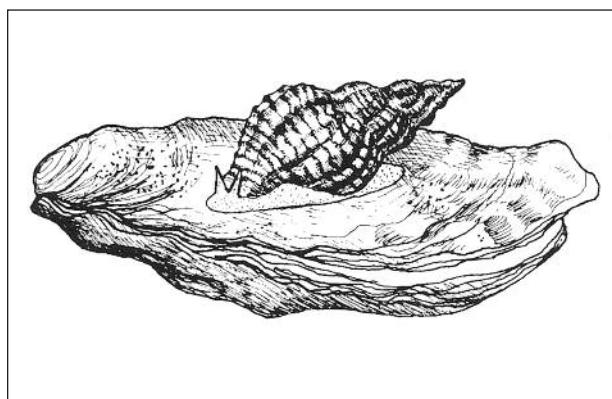


Figure 1: An oyster drill, a significant predator of the oyster.
Original drawing by Karin Grosz, courtesy of the Estate of Karin Grosz.

Activity 3.3

- Grade Level
3-5
- Subject Areas
Science, Language arts, Visual Arts
- Duration
One to two 40-minute class session
- Setting
Classroom
- Skills
Describing, constructing, creating, interpreting
- Vocabulary
Food-web, predator, prey, adaptation
- Correlation with Next Generation Science Standards
1-LS1-1, 3-LS2-1, 4-LS1-1, MS-LS2-2

Materials:

- Paper and drawing tools
- Assorted materials for 3-d models