Oysters and Ocean Acidification

South Sound GREEN

Background:

Oysters are an important marine shellfish that lives in local intertidal zones, or the areas on beaches between the highest and lowest tides. Healthy oysters offer many ecosystem services, from cleaning their aquatic environment as filter feeders to providing a source of food and jobs for humans. However, increasing ocean acidification from climate change threatens to harm shelled marine organisms like oysters, and Washington oyster farmers need to take creative measures to ensure their crop survives in future years.

In this activity, students will learn about the **environmental function of oysters**, understand the **negative impact of ocean acidification on oysters**, and complete a **guided oyster "dissection" to observe the inner and exterior components of a real oyster**.

Next Generation Science Standards:

- MS-LS2-4: *Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.***

Learning Outcomes:

- Oysters are native marine organisms that reside within the intertidal zone, a dynamic and biologically diverse ecosystem.
- Students will be able to argue how oysters provide many ecosystem services that benefit their surrounding environment, including humans.
- Ocean acidification is predominantly caused by climate change, and small changes to marine pH levels can negatively impact oysters and therefore other marine organisms as well.

Grade Level: 6th-8th

Lesson Leader: SSG educator (typically offered May-June)

Materials:

- Live oysters
- Oyster observation tools: trays, probes, etc.
- Newspaper/paper towels
- Gloves
- Slideshow and handouts
- Document camera

Career Connections:

- Oyster farmer
- Shellfish biologist
- Oceanographer

**NGSS Components:
Blue (Science and Engineering Practices) = Engaging in argument from evidence
Orange (Disciplinary Core Ideas) = Ecosystem dynamics, functioning, and resilience
Green (Crosscutting Concepts) = Stability and change

Interested in participating in an oyster lesson? Contact South Sound GREEN at SBishop@thurstoncd.com!