

Ocean Acidification

Effects on Organisms & Solving an Environmental Challenge

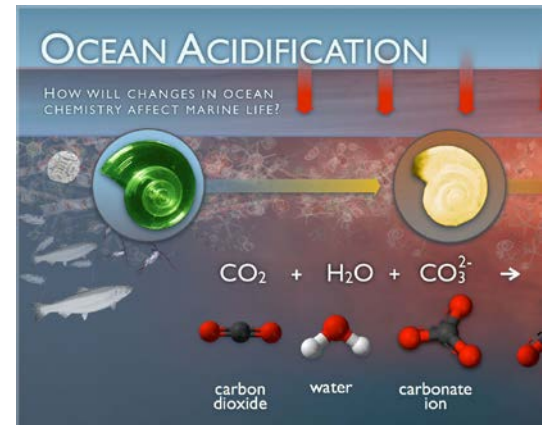
Overview

Through hands-on investigations and some brief readings, students explore the causes and effects of ocean acidification. They learn that some shell building organisms are and will be negatively impacted by ocean acidification. Additionally, students use ideas of cause and effect as the basis for developing solutions to a real-life problem faced by oyster farmers in one community.

Learning Outcomes

Students will be able to:

- Describe, using evidence from classroom investigations, how pH affects the ability of some marine organisms to build shells.
- Describe, using evidence from readings and observation, direct and indirect effects of ocean acidification on organisms.
- Work in a small group to design a solution for shellfish growers facing ocean acidification.



NGSS and Climate/Ocean Literacy Connections

Disciplinary Core Ideas:

- MS.ESS3.C Human impacts on Earth Systems
- MS.ETS1.B Developing Possible Solutions
- HS.ESS3.D Global Climate Change
- ETS1.B Developing Possible Solutions

Science and Engineering Practice:

- Planning and Carrying out Investigations
- Constructing Explanations
- Designing Solutions

Crosscutting Concepts:

- Cause and Effect
- Stability and Change

Ocean Literacy Principles

- 6.d. Humans affect the ocean in a variety of ways.
- 6.e. Changes in ocean temperature and pH due to human activities can affect the survival of some organisms and impact biological diversity.

Grade Level

Middle School
High School



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