



PROJECT OCEANOLOGY



Salt Marsh Transect Study: High School NGSS Alignment

Overview

This 2.5-hour shore program is designed to give students the opportunity to explore the chemical, physical, and biological characteristics of the marshes of Bluff Point State Park or Barn Island Wildlife Management Area. Your students will lay transect lines along various points of the marsh and work in teams to quantify the abundances of animals and vegetation, peat depth, elevation, and water chemistry. At the end, the student teams will come back together with us to discuss what they have learned about the physical and biological structure of the marsh. We will also lead a discussion of the ecosystem services provided by the marsh.

Alignment with NGSS (High School)

Performance Expectations

HS-ESS2-1: Develop a model to illustrate how Earth's internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features. *Students will collect data on the structure of the salt marsh and will construct a scaled model of the salt marsh using the data that they collected using the 'ColorMe Marsh!' post-program activity.*

Science and Engineering Practices

Developing and Using Models: Develop a model based on evidence to illustrate the relationships between systems or between components of a system. *Students will collect data on the salt marsh and make observations about how the different components of the marsh interact or might be related to one another.*

Crosscutting Concepts

Stability and Change: Change and rates of change can be quantified and modeled over very short or very long periods of time. Some system changes are irreversible. *Students will collect data on the peat depth of different points along the transect. Peat is developed over time, showing the resilience of the salt marsh.*



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Disciplinary Core Ideas

HS-ESS2-A Earth Materials and Systems: Earth's systems, being dynamic and interacting, cause feedback effects that can increase or decrease the original changes. *The students will use what they have learned from the salt marsh transects and modeling activity to make predictions about what will and could happen to the marsh and areas protected by the marsh over time and/or in the event of certain changes (i.e. climate change, a big storm, the marsh gets paved over, etc.)*