



Climate Education for a Changing Bay Expansion

Overview

This project makes data and information compiled through the Chesapeake Bay Sentinel Site Cooperative readily available to ninth-grade earth science teachers to use in their classrooms and increase climate literacy. The project builds on a previous NOAA Bay Watershed Education and Training project titled, “Climate Education for a Changing Bay (CECB),” which provided watershed educational experiences integrated into the classroom curriculum for ninth-grade students in Gloucester County and Mathews County, Virginia. Through the current project, the Chesapeake Bay-Virginia Reserve is building on the strengths of the previous years of CECB to extend the reach into Middlesex County, while developing an alumni program to support the program in Gloucester and Mathews. All three counties lie within a region experiencing relative rates of sea level rise greater than the global average.

Anticipated Benefits

- Increased climate literacy of ninth graders in participating counties.
- Increased teacher awareness, knowledge, and confidence relating to climate science.
- Increased use of real-time reserve sentinel site data and climate science in classrooms.
- Meaningful watershed education experiences for students.
- Creation of a teacher-Chesapeake Bay-Virginia Reserve mentorship program.

Project Location

Chesapeake Bay-Virginia National Estuarine Research Reserve

Project Duration

June 2016 to May 2018

Project Lead

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Project Type

Science Transfer – promoting the use of science

Project Partners

- Chesapeake Bay-Virginia National Estuarine Research Reserve
- Gloucester County Schools
- Mathews County Schools
- Middlesex County Schools

Project Approach

Middlesex County will receive the full CECB program, including teacher professional development through informal meetings and trainings, an introductory classroom visit, schoolyard field experience, and an off-site field experience for the entire ninth-grade student population provided by Chesapeake Bay-Virginia Reserve education staff members. Meanwhile, Gloucester and Mathews County teachers will participate in a mentoring program, with the opportunity to receive updated training and data, and funds to continue offering CECB activities with their students.

The project approach includes three main components:

- **Climate curriculum in the classroom** – The CECB program will use data and information collected by the research and stewardship programs at Chesapeake Bay-Virginia Reserve to update the existing curriculum.
- **Classroom and field experiences** – Students from Middlesex County will participate in one classroom lesson, one schoolyard field experience, and one field experience off-site delivered by Chesapeake Bay-Virginia Reserve educators. Students from Gloucester and Mathews Counties will participate in classroom lessons and field experiences delivered by their teachers.
- **Mentoring** – Previous participants in the program will receive guidance, support, and stipends to continue the use of the curriculum both in the classroom and in the field. In the second year of funding, teachers from Middlesex County will also be included in the mentoring program, and all teachers will then be responsible for leading the classroom lessons and field experiences themselves with guidance from Chesapeake Bay-Virginia Reserve educators.

Targeted End Users and Anticipated Products

- Updated CECB curriculum for ninth-grade teachers in Middlesex, Gloucester, and Mathews Counties.
- Project presentation and findings at state or national education conference.

About the Science Collaborative

The National Estuarine Research Reserve System's Science Collaborative supports collaborative research that addresses coastal management problems important to the reserves. The Science Collaborative is managed by the University of Michigan's Water Center through a cooperative agreement with the National Oceanic and Atmospheric Administration (NOAA). Funding for the research reserves and this program comes from NOAA. Learn more at nerrs.noaa.gov or graham.umich.edu/water/nerrs.