



Creating an Alliance of Scientists and Educators in Virginia

Overview

This project confronts two critical obstacles to the advancement of public understanding of science. First, there is a need for K-12 teaching resources and professional development that will help teachers demonstrate scientific research practices and teach critical thinking skills. Second, while the best source of authentic, current, and topical research examples is scientists themselves, research scientists are often poorly trained to communicate their science to a broad audience. This project will fill both of the following needs:

- Enhancing K-12 science curriculum by providing teachers with resources that offer authentic examples of the research process and how science is applied to solve problems.
- Enhancing graduate students' science communication skills by providing formal training and an opportunity to translate their research into activities for secondary classrooms.

Anticipated Benefits

- Creation of a network that connects educators and researchers and helps foster the development and exchange of new educational resources.
- An increase in teachers' understanding of current scientific research and how to bring real-world examples into their classrooms.
- An increase in graduate students' understanding of educational pedagogy and how to create engaging lesson plans.

Project Location

Chesapeake Bay National Estuarine Research Reserve in Virginia

Project Duration

September 2015 to August 2017

Project Lead

Sarah Nuss
Chesapeake Bay National Estuarine Research Reserve and
Virginia Institute of Marine Science
(804) 684-7878 and
meguire@vims.edu

Project Type

Science Transfer – promoting the use of science

Project Partners

- Chesapeake Bay National Estuarine Research Reserve in Virginia
- Virginia Institute of Marine Science, Marine Advisory Services
- Virginia Sea Grant

Project Approach

Education specialists from the Chesapeake Bay National Estuarine Research Reserve in Virginia and the Virginia Institute of Marine Science's Marine Advisory Services are collaborating to create the Virginia Scientists and Educators Alliance. Modeled after a similar network formed in North Carolina, the alliance will connect educators and researchers through a variety of networking opportunities.

- **Graduate Student Training** – The project team will recruit up to 40 graduate students from a variety of universities who are interested in climate change, water quality, and other topics relevant to coastal systems. Local K-12 teachers will help train the graduate students in how to develop effective lesson plans.
- **Lesson Plan Development** – With guidance from the project team, graduate students will develop inquiry-based lesson plans related to their research interests. Mentor teachers from local schools will review, pilot test, and offer feedback on the lesson plans.
- **Sharing of New Resources** – A lesson plan expo will be held in spring of 2017 for up to 100 teachers from Virginia. In addition, all lessons will be compiled, made available to participating teachers, and promoted through future teacher programs.

Anticipated Products and Targeted End Users

- An initial workshop, culminating expo, and ongoing communication will foster collaboration between educators and researchers.
- A suite of inquiry-based, teacher-reviewed lesson plans will be available for K-12 teachers.

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 www.nerrs.noaa.gov or www.graham.umich.edu/water/nerrs.