

# Supporting educators to increase environmental literacy



## Educator resources and opportunities

Sea Grant programs support education by providing resources and opportunities created by an network of expert educators.

- Lesson plans
- Teacher workshops
- Educational materials
- Place-based education field trips

## Subscribe to “Scuttlebutt” to discuss marine science education



Scuttlebutt is the national listserv for educators and scientists interested in

talking informally about ocean education ideas, issues and questions. To sign up scan the QR code or visit <https://masweb.vims.edu/bridge>

For Sea Grant, supporting educators is an essential part of promoting environmental literacy. Since being established in 1966, Sea Grant has enhanced education by developing ocean, coastal and Great Lakes curricula and professional development programs.



**798,428**  
K-12 students  
reached through Sea  
Grant educators\*

The Sea Grant model of integrating research, outreach, and education uniquely positions Sea Grant Educators to be leaders in coastal communities. Educators' expertise in both science and education in addition to Sea Grant's affiliation with research universities results in an exceptional ability to connect current science with students of all ages.

## Partnership Highlight: The Bridge Website

The Bridge Ocean Science Education Resource Center is an online clearinghouse for accurate, high quality marine educational content. The Virginia Institute of Marine Science manages the Bridge with support from Sea Grant and the National Marine Educators Association.

Visit The Bridge at <https://masweb.vims.edu/bridge/>



**11,000**  
visitors to Bridge pages  
per month\*



**1,300**  
resources for teaching  
ocean science\*

**More information at [seagrant.noaa.gov/education](https://seagrant.noaa.gov/education)**

\*Reported in June 2019 for work completed Feb 2018 to Jan 2019



## Building relationships between educators and research scientists



Bottom trawling is one research activity educators may experience as part of Shipboard Science.

Photo: Center for Great Lakes Literacy

- The Center for Great Lakes Literacy, a consortium of seven Sea Grant programs, conducts an annual weeklong Shipboard Science workshop that provides educators an opportunity to work side-by-side with scientists aboard a research vessel. Teachers explore lake ecology, geology, geography, and chemistry. They learn about resources to help bring Great Lakes and ocean literacy activities to their classrooms, and build networks with educators and scientists.
- In 2018, 14 teachers participated in the workshop and brought the concepts back to their classrooms, reaching 2,145 students.

## Bringing project-based learning to the classroom through aquaculture



Maryland Sea Grant's Aquaculture in Action engages students in project-based learning using classroom aquaponics systems. Photo: Maryland Sea Grant

- With the adoption of the Next Generation Science Standards, teachers are seeking high-quality professional development programs focused on project-based science curricula. To address this need and generate student interest in aquaculture careers, Maryland Sea Grant's Aquaculture in Action teaches educators to build and operate classroom aquaponics systems. In 2018, they taught 12 teachers across a network of schools that support 22 projects. Through the projects, 1,400 students gained skills in biology, chemistry, math, nutrition, engineering, and technology.

### Promoting environmental literacy with digital media



Delaware Sea Grant's Project VIDEO (Virtual, Interactive Dark Energy Outreach) has made it possible for educators to explore the diversity of microbial life living below the ocean floor from their classrooms. Project VIDEO has free online resources including their award-winning 15 Second Science video series and longer episodes of Dive Deeper featuring research scientists. They also have virtual reality tours of laboratories.

### Connecting students with their environment



Pennsylvania Sea Grant, in partnership with the Erie Times News, produces an environmental newspaper page. Stories about local, regional, and global environmental issues, research, and educational programs reach students in classrooms throughout the Erie, PA school district each Tuesday during the school year. In 2018, 141 teachers in 75 schools used the pages in their classrooms, reaching over 6,000 students.

### Researching how K-12 education affects parents



North Carolina Sea Grant funded a study that found educating children about climate change can foster awareness among their parents. The researchers helped middle school teachers incorporate climate change curriculum into their classrooms and surveyed the students and parents afterwards to measure their concern about climate. Parents whose children received climate education showed increased concern about climate.