

The Great Lakes face many threats—invasive species, pollutants, and climate change, among others. Unfortunately, decision makers, along with the general public, may not have a good grasp of how these waterbodies function or understand their value. The lakes are also underrepresented in textbooks and other educational resources. A more Great Lakes-literate public could better contribute to the sustainability of 20% of the world's freshwater. Illinois-Indiana Sea Grant's (IISG) strength is providing cutting-edge, science-based information to address complex problems—we are committed to opening knowledge doors for teachers and students in the region.



## CREATING A REGIONAL EDUCATOR NETWORK

The Center for Great Lakes Literacy (CGLL) brings together Sea Grant education specialists in the region to coordinate hands-on professional development workshops, educational resources, and networking opportunities among educators, scientists, and residents. IISG is a pivotal member of CGLL, providing a critical link with EPA, which has supported the center since 2010. Through workshops and engagement with schools, CGLL curricula and programs have been integrated by teachers throughout the Great Lakes.

## EDUCATORS ONBOARD FOR SCIENCE

CGLL's signature program is the weeklong Shipboard Science Workshop—every summer, about 15 educators work side-by-side with scientists on the *Lake Guardian*, an EPA research vessel. Teachers explore aquatic sciences and learn about Great Lakes and ocean literacy activities that they can bring back to their students. They also build lasting networks with educators and scientists. After participating, educators frequently describe organizing field trips, incorporating new curricula, and bringing real-world Great Lakes issues to the classroom.

## STUDENTS ENGAGE IN REAL-WORLD SCIENCE

When students can collect and analyze data from local waterways, it helps them understand the real-world application of what they are learning. In partnership with EPA, IISG coordinates the Limno Loan program through which educators can borrow a Hydrolab, equipment used by scientists to monitor water quality. When engaging their students with the Hydrolab, most educators spent extra time teaching about aquatic science—up to three weeks! Altogether, since 2011, more than 10,000 students have engaged with the Hydrolab.

## STUDENTS AND SCIENTISTS MEET VIRTUALLY

The Scientists to Students program provides an opportunity for students to virtually talk with Great Lakes scientists, often engaged in research aboard the *Lake Guardian*. Through videocasting, students in the region can learn about the scientists' work and ask questions about aquatic science, careers, and life on a ship. An Indiana high school teacher shared that "It helped students see potential careers and meet people who actually worked in places we had previously read about."

## NEW CATALOG OF CLIMATE LESSONS

To highlight Great Lakes and Midwest climate resources, we created an educational toolkit of lessons and activities on the topics of weather, climate, and climate change. Teachers—whether licensed professionals, parents, or home school tutors—can use the search function to filter by grade level, specific weather and climate topics or geographic locations, learning mode, and more. Many of the resources in this curated catalog can be used as-is or adapted for virtual learning and at-home teaching environments.

## WORKSHOPS INSPIRE STUDENT STEWARDSHIP

IISG has a long history of collaborating with local and regional partners, Great Lakes Sea Grant educators, and teachers in the region to develop curricula on a variety of Great Lakes topics, including aquatic invasive species, safe medicine disposal, and environmental cleanup projects. We train teachers at numerous workshops, who then bring back new knowledge and activities, including stewardship ideas, to their students. Students are inspired to engage their communities on water issues and take action to make a difference.

We engage with about

**330** teachers

and reach

**16,800**

students every year.

## MORE RESOURCES

To prepare students as engaged members of their communities, IISG's education resources connect them with real-world tools and information on critical Great Lakes issues.

### Helping Hands: Restoring Great Lakes Habitat

Students can engage in stewardship in Great Lakes communities where large-scale environmental cleanup projects are ongoing.

### The Medicine Chest

High school youth can learn the harmful effects of improper disposal of medicines and what they can do to help.

### Lake Michigan by the Numbers

Students can use real-time buoy data to understand Lake Michigan conditions and issues.

See more at [iiseagrant.org/education](http://iiseagrant.org/education)

