



Michigan Sea Grant College Program

Enhancing Environmental Literacy

Surrounded by four of the five Great Lakes, Michigan is at the heart of the largest surface fresh water system on Earth.

Through research, education and outreach, Michigan Sea Grant is dedicated to protection and sustainable use of the Great Lakes and coastal resources.

Michigan Sea Grant, a cooperative program of Michigan State University and the University of Michigan, is part of the National Sea Grant College Program. The network of 33 university-based Sea Grant programs in coastal states across the country is administered through the National Oceanic and Atmospheric Administration (NOAA). Federal funds are matched with funds from state, tribal, business and other non-federal sources to carry out the programs.

Michigan Sea Grant researchers, Extension educators and other specialists provide information about Michigan's coastal areas to residents, educators and stakeholders through publications, websites, displays, special projects, workshops and presentations.

Learn more at:
www.michiganseagrant.org

ISSUE

Michigan is the Great Lakes state, yet Great Lakes literacy among both youth and adults is low and physical access to the lakes is a challenge for many Michigan residents. As future decision makers, youth must gain knowledge needed to make informed and responsible environmental decisions. Michigan Sea Grant enhances science, technology, engineering, and math (STEM) skills in many ways.



MICHIGAN SEA GRANT ACTION

Michigan Sea Grant is a leader in Great Lakes literacy and science education, helping to create a network of educators, students and informed citizens who share their knowledge of and commitment to Great Lakes stewardship with others.

Our Great Lakes Education Program has provided classroom and vessel-based education for students in southeast Michigan since 1991. The program engages students in grades four and above, both in the classroom and on a schoolship. It includes classroom lessons and an entire day in the field — half a day on a Michigan Sea Grant educational vessel and half on shore learning about coastal ecology. Teachers, adult chaperones, and volunteers also participate in the lessons.

The award-winning program, in cooperation with the Huron-Clinton Metropolitan Authority, integrates elements of geography, history, biology and physical sciences in each of its components.

- In the classroom, students learn about concepts such as the aquatic food web, the water cycle, the roles of oxygen and carbon dioxide, and the effects of invasive species.
- An educational cruise either on the Clinton River and Lake St. Clair, or on the Detroit River and Lake Erie provides an opportunity for hands-on experience: students examine plankton and benthic samples, test water clarity, practice marine knot tying, take air and water temperature readings, and more.



- On shore, Lake Erie or Lake St. Clair Metropark Interpreters lead investigations of marshlands plants and animals using water samples, taxidermic mounts, trail walks and/or live animals.
- As a follow-up to their field day, students conduct experiments with data they collected and discuss what they learned.

In addition, Summer Discovery Cruises use the same schoolships to offer informal education opportunities to all ages. They offer a wide variety of environmental education topics for discussion while enjoying time on the water.

IMPACTS

Great Lakes Education Program:

- Since 1991, our Great Lakes Education Program has served more than 110,000 students, teachers and adult chaperones – many experiencing the Great Lakes for the first time.
- In 2016 alone, the Great Lakes Education Program involved 117 classrooms and included 3,327 students, 116 teachers, and 435 adult chaperones.
- In evaluations, most participating teachers report they feel a greater responsibility for the Great Lakes, and many now involve their students in Great Lakes stewardship activities,
- Student evaluations also demonstrated a high confidence in science knowledge and an affinity for science.



Summer Discovery Cruises:

- A total of 55 Summer Discovery Cruises were conducted in 2016 involving 1,037 learners, of which 91 percent were adults and 9 percent were under 18.
- Participants came from 14 Michigan counties, Alabama, Missouri, Illinois, and Canada.
- A total of 171 hours of instruction were provided to the participants, providing a total of 3,215 education contact hours.

PARTNERS

- Huron-Clinton Metroparks
- Macomb County
- Michigan State University Extension
- Michigan Department of Natural Resources
- National Oceanic and Atmospheric Administration

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