

Paddle– to–the–Sea

COSEE Great Lakes uses *Paddle-to-the-Sea* as a working theme for its program approach and sequence. An award-winning children's book by Holling Clancy Holling, *Paddle-to-the-Sea* is about the voyage of a carved wooden Indian in a canoe, set adrift in snow melting into Lake Superior. Paddle winds its way through the culture, environment, and geography of the Great Lakes region to cross the Atlantic Ocean.

Six decades of young readers have absorbed this remarkable story and we use it now to guide the COSEE Great Lakes to its connection with the sea. Following the book, the project will deal with progressions:

- From freshwater to saltwater,
- From watershed to sea,

...and with progress:

- From historical water quality issues to current challenges,
- From traditional science methods to Great Lakes Observing System (GLOS) technology,
- From fragmented management to an ecosystem approach.

Changes over time and changes over distance characterize the content and methods of the COSEE Great Lakes.

Program Staff



For information about COSEE Great Lakes, go to <http://coseegreatlakes.net> or call 614.292.8949. For information about specific state activities and events, contact the following program representatives:

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Excellence in Great Lakes and Ocean Sciences Education

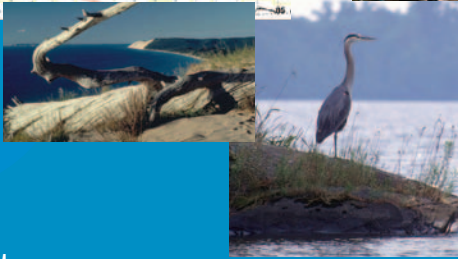
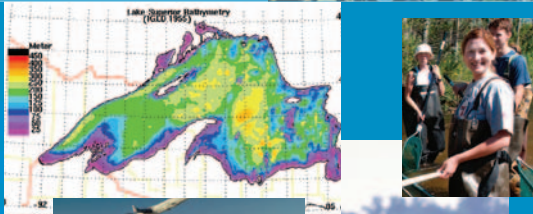
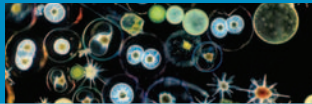


<http://coseegreatlakes.net>

COSEE Great Lakes

COSEE (Centers for Ocean Sciences Education Excellence) is a network of 10 regional centers in the U.S. that promotes partnerships among research scientists, educators, and students to effectively bring an understanding of ocean sciences to the public.

Sponsored by the National Science Foundation (NSF), the National Oceanic and Atmospheric Administration (NOAA), and the Great Lakes Sea Grant Network, COSEE Great Lakes was created in 2005 to connect formal and informal educators, students in grades 4-10, and the public with the science of the Great Lakes and world oceans. From 2005 to 2010, more than 2,000 teachers will enhance their Great Lakes/ocean science knowledge and develop working relationships with more than 350 researchers.



Partners

COSEE Great Lakes is a network of universities, educators, and public outreach specialists throughout the Great Lakes region. Program partners include Sea Grant programs from Illinois-Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin. Additional research support comes from NOAA's Great Lakes Environmental Research Laboratory (GLERL) and Michigan's Cooperative Institute for Limnology and Ecosystems Research (CILER).

Annual Activities

- Lake Exploration Workshop. Week-long summer workshop in an informal science education setting. Topics include coastal processes, climate and weather, life in the water, hydrology and remote sensing, special habitats and current issues.
- Lake Guardian Workshop. Week-long, on-the-water workshop aboard the USEPA research vessel, R/V *Lake Guardian*.
- Marine Immersion. A scholarship program that provides up to 20 teachers each year with a stipend to support professional development in marine science.
- Teachable Moments. One-day symposia for teachers to learn about current issues during summer or the school year.
- LimnoLinks. Scientist interactions with educators and students via workshops, "house-calls," and at the International Association for Great Lakes Research meeting.
- Great Lakes/Ocean Science for Public, Media, and Schools. Public events through project collaborators, featuring an Inland Seas Science Seminar series.
- Teaching with GLOS. Educational materials to facilitate use of buoy, satellite, and other observations of oceans and Great Lakes.
- Engaging Teachers in Curriculum Development and Enhancement. Teachers examine Great Lakes curriculum materials and assist in developing a new *Fresh and Salt* curriculum.
- COSEE Great Lakes On-line. Information via coseegreatlakes.net to promote program activities, provide access to Great Lakes curriculum materials, and host ecology course materials for teachers and students.
- Student Connections to Great Lakes/Ocean Science and Research. O'LAKERS group field trips, Student Summits, and a Great Lakes ecology course for high schools.



To learn about opportunities with COSEE Great Lakes

go to <http://coseegreatlakes.net> or mail this form to:

COSEE Great Lakes
c/o Ohio Sea Grant College Program
The Ohio State University
1314 Kinnear Road
Columbus, OH 43212-1156

Name _____

Street address _____

City _____ State _____

ZIP _____

E-mail address (print clearly) _____

() _____ () _____
Phone Alternate number

I am a Teacher Grade(s) _____
Subject(s) _____
 Scientist/researcher
Research topic(s) _____
 Informal/outreach educator
Facility or program _____
 Media communicator for _____
 Other _____

I am especially interested in (*check all that apply*)
 Workshops Scientist-teacher collaboration
 Online learning Great Lakes/ocean science learning
 Student opportunities Instructional materials
 Informal events Other _____