



Classroom Opportunities *GVSU Lake Michigan Center* GVSU Annis Water Resources Institute Muskegon, Michigan



The Annis Water Resources Institute (AWRI) offers free educational opportunities for K-12 classes in the Annis Educational Foundation classroom at the GVSU Lake Michigan Center in Muskegon. Through the support of the R.B. Annis Educational Foundation, AWRI offers multimedia classroom experiences at the Center where students can learn about the environment. Experienced instructors lead students through a variety of activities that address Michigan Grade Level Content Expectations and High School Content Standards. Programs are generally 1 to 2 hours long and are suitable for grades 4 through 12. Classroom activities can be in addition to cruises onboard our research and education vessels. Activities are based on programs such as Project WET (Water Education for Teachers), Michigan Environmental Education Curriculum Support (MEECS), Healthy Water Healthy People, and the Global Learning and Observations to Benefit the Environment (GLOBE) program.

Customized programs such as educator workshops, events for younger audiences, and tours for adult groups are available upon request. Check with AWRI about GLOBE, MEECS, Healthy Water Healthy People, WILD, Project Learning Tree, Population Connection, and Project WET teacher training at the Lake Michigan Center or your school. GVSU Graduate credit courses in Education 600 are offered in the summer at the Lake Michigan Center in Muskegon.

Typical Topics for classroom programs include:

Pre-Cruise Orientation/ Post-Cruise Wrap Up

Classes planning a trip aboard the GVSU research and education vessels are introduced to concepts that are part of the cruise. Hypotheses that can be tested on the cruise are explored as well as general concepts about water quality. This module can be one or two hours and is designed for students using the vessels. Students view living plankton samples under microscopes.

After a cruise, students graph and analyze water quality data as well as expand upon ideas from the cruise. This module can be one or two hours long. Students view living plankton samples under microscopes and explore water quality concepts.

Great Lakes Science: Invaders of the Great Lakes

Students explore the alien species that have invaded the Great Lakes and learn about life cycles. Additionally, food chains and food webs are explored. Other topics include how AWRI scientists study fish and how remotely operated underwater vehicles (ROVs) are used in research.

The Water Cycle and Watersheds

With attention to both natural and social science, students engage in activities such as the *Incredible Journey* (a water cycle game) from Project WET. Making a model watershed and learning about their own watershed are parts of this module. Students use clues from environmental measurements to guess locations in a watershed from which samples were taken.

Air Quality

How does a burning candle illustrate air pollution? What is ozone? What is the air quality index? What is global climate change? These are a few of the questions explored in this session that is based on the new Michigan Environmental Education Curriculum Support (MEECS) Air Quality Unit.

Ecosystems

Discover Michigan's ecosystems through hands-on activities from the Michigan Environmental Education Curriculum Support (MEECS) Ecosystem & Biodiversity Unit.

GLOBE Training

If you are a GLOBE school, come to the LMC to use our GLOBE equipment to learn new protocols or practice protocols. Also, we have co-sponsored week-long GLOBE training workshops and specialty for educators. We can come to your school to help you with GLOBE protocols.

Contact Janet Vail at (616) 331-3048 or vailj@gvsu.edu or www.gvsu.edu/wri/education for more information.