



Rouge Education Project

The Rouge Education Project is a unique opportunity coordinated by Friends of the Rouge for elementary through high school students and educators to monitor the Rouge River. Funded, in part, by the Rouge River National Wet Weather Demonstration Project, the Education Project combines water quality testing, watershed education and computer networking to encourage students to affect change in their communities. This interdisciplinary focus centers around the components of research/data collection and problem solving/action taking.

Research/Data Collection

When studying rivers, data collection is done through water quality testing. It is important to measure the quality of a river over time to detect changes that have occurred in the ecosystem. The Education Project studies the river's water quality through nine indicators:

- Dissolved Oxygen
- Fecal Coliform
- pH
- Biochemical Oxygen Demand
- Temperature
- Total Phosphate
- Nitrates
- Turbidity
- Total Solids



Water quality sampling on the Rouge River.

Aquatic insects are also a useful indicator of water quality. Pollution reduces the number of species in the water by eliminating organisms that are sensitive to changes in water quality. In general, the greater the variety of aquatic insects, the more stable the water quality.

Water quality is also affected by how the surrounding land is developed and managed. The Education Project discusses how various land use practices affect the quality of the Rouge.

The data collection component also includes students' thoughts, feelings, and images that occur during their experience with the river. These informal observations are important because they often motivate students during the problem solving/action taking component.

THE ROUGE RIVER PROJECT
A WORLD CLASS EFFORT



BRINGING OUR RIVER BACK TO LIFE





Problem Solving/Action Taking

The Rouge Education Project not only tests rivers to determine the water's health, but also prescribes "treatment" or courses of action. Students, teachers and citizens team up to develop plans to improve the quality of the river. This component provides another opportunity for experience beyond the typical classroom setting.

The problem solving component encourages students to expand the scope of study beyond that of pure science and begin to perceive the river as artists, business persons, community leaders and citizens. The Education Project calls for skills used in science classes like ecology, biology or chemistry, as well as language arts, social studies, and other classes.

How it started

The Rouge Education Project is coordinated by Friends of the Rouge and was started in 1987. A Rouge River Advisory Group was formed to help guide the development of this program. The advisory group consisted of local officials, teachers, curriculum coordinators, Friends of the Rouge, water resource professionals, and educators from the University of Michigan, School of Natural Resources. This group was instrumental in identifying teachers and developing goals for the program. Participation has grown from 16 schools in its first year, to its current number of nearly 100 participating schools.

Curricula

Elementary through high school students can participate in the Education Project. Curriculum is provided that is designed to help teachers meet MEAP objectives.

Elementary

Lesson plans and materials are available for elementary schools on the following topics:

- Physical Factors of the Stream
- Temperatures
- Dissolved Oxygen
- BOD (Biochemical Oxygen Demand)
- pH Testing
- Aquatic Organism Identification

High School and Middle School

Curricula for high school and middle school students is based on the book *Field Manual for Water Quality Monitoring: An Environmental Education Program for Schools* by Mark Mitchell and William Stapp. This book instructs students on how to sample and measure nine water quality indicators. It also describes how aquatic insects and land use practices relate to water quality.

Computer Networking

Students use the Internet to share their water quality data throughout the watershed and around the world. Australia, Brazil, Italy, Japan, France, and Germany are just a few of the countries participating in this computer networking program.

To become involved in the Rouge Education Project, call (313) 792-9626 or visit the Rouge Education Project web site at <http://www.motor-city.com/rouge>

**Friends
of
the ROUGE**

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If you have any questions about the Rouge Education Project DemoInfo or the Rouge Project, in general, please call the Rouge Hotline at (888) 223-2363 or visit our web site at <http://www.rougeriver.com>.

