

THE PASSAIC RIVER ENVIRONMENTAL EDUCATION MONITORING ORGANIZATION

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In 2007-2008 academic year, students from 4 high schools in northern New Jersey participated in the “Passaic River Environmental Education Monitoring Organization” (PREEMO), which is coordinated by the Passaic River Institute of Montclair State University. These schools included Passaic Valley High School, in Little Falls, NJ, Barringer High School in Newark, Newark Academy in Livingston, NJ and Wallington High School in Wallington, NJ. A 5th high school, Montclair Kimberley Academy, joined PREEMO in the 2008-2009 academic year.

Using a waterbody within close distance to their school, PREEMO students studied water chemistry and aquatic benthic macroinvertebrates and their value as tools to assess the water quality. They learned how to conduct chemical water tests including dissolved oxygen, nitrates, phosphates, pH and conductivity. Dip nets, kick nets and leaf packs were employed to collect aquatic benthic macroinvertebrates. The students learned how to identify the benthic macroinvertebrates and their significance as indicators of water quality.

PREEMO participants are part of the NJDEP online volunteer water monitoring network. As part of this network, teachers and students input their water monitoring data into the NJDEP’s online database and can access each others findings.

Students at each school used their data to conduct a scientific study of an environmental issue. At the end of the year, the students from each school came to Montclair State University to present in-depth reports on their findings at the First Annual PREEMO Student Conference.

The program was evaluated by giving the students a written questionnaire with mostly open-ended questions. The evaluation was overwhelmingly positive about the value of the program: over 90% of the students said they would recommend it to other students. Numerous students made comments about the impact of participating in the program had on their knowledge, attitudes and behaviors regarding water issues, such as “before the PREEMO program, I didn’t even take any interest in the Passaic River and its watershed; however, now I know and understand about [them]” and “environmental issues aren’t just far-off, lofty problems like global warming or ocean dumping; there are lots of environmental issues in our backyard....”