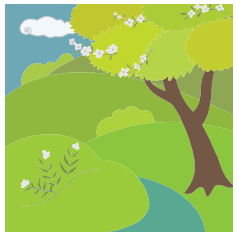
Outdoor Programs

The Friends of Lower Muskingum River would be happy to work with you to incorporate an outdoor component into any of our programs. The following programs will teach students about the techniques used by scientists to access water quality and are specially designed for the outdoors.

Water Chemistry

With this activity, students will visit a local stream and will learn how scientists use chemistry (pH, conductivity, turbidity, temperature) to access water quality.



Habitat Assessment

What are the signs that a stream has a good habitat for living organisms? In this activity, students will learn the techniques used by the Ohio EPA and local watershed groups to access a stream's habitat. Students will have the opportunity to visit a local stream and determine for themselves whether or not the area is a good habitat for organisms.

Assessment of Biological Communities

Scientists often examine benthic macroinvertibrates (aquatic insects) to determine water quality. Benthic macroinvertibates are good water quality indicators because some species are less tolerant to water pollution and usually are not found in bodies of water with poor water quality. In this hands-on activity, students will visit a nearby stream and collect aquatic insects. They will then classify the insects that they find to determine the quality of the water.

About the Friends of Lower Muskingum River

Friends of Lower Muskingum River (FLMR) is a partnership of organizations and individuals whose mission is to restore, protect and maintain the physical, chemical and biological integrity of the Muskingum River and to protect and promote its natural, cultural, historic and socioeconomic resources. FLMR has been a 501(c)3 tax exempt organization since early 2003. In conjunction with its partner agencies, FLMR is steadily increasing public participation, collecting and analyzing existing water quality and biological data, identifying issues and goals, and successfully seeking funding to restore the watershed to its highest ecological potential.

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FRIENDS OF LOWER MUSKINGUM RIVER

Educational Programs for Schools

Grades 7-12

Free educational programs presented by the Friends of Lower Muskingum River on the environment, water and soil issues, and conservation. All classroom programs are designed to meet the Ohio Academic Science Content Standards for grades 7-12.

Classroom Programs

All classroom programs are designed to meet Ohio Academic Content Standards. The grade levels indicated in this brochure are suggestions only. If a program interests you that is not indicated for your class's grade level, please do not hesitate to contact us. We would be happy to work with you to adapt any of these programs to fit the needs of your students or curriculum.

Clean That Water!

Grades 6-8: How do waste water treatment plants clean water for human use? With this activity, students will learn how water treatment plants work by designing, building, and testing their own water filter to clean polluted water. Cities have limited resources that can be put towards cleaning waste water. To simulate this issue, students will be faced with a certain number of constraints, such as limited materials and time, when designing their filter.

What's Under Our Feet? Understanding Ground Water Issues

Grades 7: Using a ground water model, students will learn about the issues surrounding ground water. They will also observe how different soil types impact ground water movement and how certain human activities can deplete or pollute ground water for an entire area.

The Continuous Cycle of Water

Grade 7: In what forms does water exist on Earth? Students will be able to answer this question after creating their own closed system in a jar and observing the water cycle in action.

Annoying Neighbors

Grades 9-11: Each student in the class has won a million dollars and a piece of land along the Muskingum River to develop in any way that he/she would like. How will he/she develop the property and what will be the impact of this development on the stream? In this exercise, students will get to see how the technologies and development that they chose for their land will have positive or negative impacts on the environment around them, depending on how they act.

Acid, Base, or Neutral?

Grades 9-11: With this activity, students will learn about what pH is and how to test for it. The program will include an activity to help students understand how the charge of the atom affects the pH of a substance. Finally, students will learn about how different human activities, such as mining and industry, can lead to acid rain and acid mine drainage and will be presented with potential solutions to this problem.

Mayhem in the Maldives

Grades 9-12: There is a controversy in the Maldives. A business group wants to open a new cannery on the island but this will significantly increase water demand and have negative impacts on other groups in the community. The island is completely divided about what should be done. In this activity, each students will take on the role of a community member on the island and debate for or against the construction of this cannery at a mock city council meeting. From this activity, students will learn about the economic and political issues affecting the environment and will get the opportunity to explore various science-related career paths.

Enviroscape

Grades 10-11: This program will use the enviroscape model to demonstrate the impact of point source and non-point source pollution on rivers and other bodies of water. Potential solutions to these issues will also be presented. Students will learn through this activity how humans' actions can negatively impact the environment and other species living in this world. In addition, they will learn how slight modifications can greatly reduce this impact.

Benthic Bugs

Grades 11-12: Learn how scientists study aquatic macroinvertebrates to determine the water quality of a body of water. In this hands-on activity, students will learn how to perform their own bioassessment of a mock, indoor stream and then will come to logical conclusions about the water quality of the stream they are studying.

Contact Information

For more information about any of the programs described in this brochure or to schedule a free presentation in your school, please contact Brenda Lazarus or Kristyn Robinson at 740-374-4170 or flmr@sbcglobal.net.