

Thursday, February 9th – Professional Development Institute

Environmental Film - Who Killed Crassostrea Virginica? The Fall and Rise of Chesapeake Bay Oysters

Michael Fincham, Maryland Sea Grant College.

9:00am-11:00am and 1:00pm-3:00pm

Location: UMES

The Chesapeake was once home to the richest oyster grounds in the world. The native oyster, *Crassostrea virginica*, built massive reefs and filtered vast reaches of the Bay, removing algae and sediment. Now those reefs are gone. The historic fishery is a mere shadow.

This documentary, presented by Michael Fincham veteran filmmaker at MD Sea Grant College, details both the poignant destruction of a fabled fishery and the prolonged scientific inquiry into the origins of a killer parasite. Come learn about the history of the oyster fishery and the unique intersection of science inquiry and art.

Follow the Drop of Water

Erol Miller, Northwood High School, Montgomery County, MD

Alexander Chen, Urban Studies and Planning Program, University of Maryland

9:00am-11:00am and 1:00pm-3:00pm

Location: UMES

This hands – on workshop will demonstrate activities designed to introduce 9th grade students to the principles and practices of environmental studies. The activities will integrate Google mapping products with Fieldscope, a web based mapping analysis tool supported by National Geographic and available US Census data. Students will use the Fieldscope software to trace the path of a drop of water as it flows from their school to the Chesapeake Bay, as well as identify the watershed it crosses. In turn, students will learn how to access available census data and describe the population characteristics of its residents in the watershed. In addition, students will learn how to identify specific land uses that directly impact the quality of the drop of water. Finally, students will learn how to make field observations and take water samples of streams where the drop of water enters. These results will be uploaded to the Fieldscope site to share . Participants will replicate the different modules which will be developed for classroom use. They will become familiar with how to integrate available online mapping and data resources to engage students in the study of their environment. The modules are designed so that they can be modified for local study.

Which Way to the Oyster Bar?

Adam Frederick & Jackie Takacs, Maryland Sea Grant College Extension Program.

9:00am-11:00am and 1:00pm-3:00pm

Location: UMES

Oysters have been around for millions of years - they were used for food, tools, weapons and decoration. During the early 1600s in the Chesapeake region, oyster bars were so numerous and large, that they were reported as navigation hazards by Captain John Smith. Today, the state of the oyster fishery in the Chesapeake has dwindled to less than one percent of its historical mass. Learn about key reasons for this decline and hands-on activities related to the following topics:

- Overharvesting • Disease
- Anatomy • Ecology
- Sedimentation and pollution

Do You Ever Wonder if Your Seafood is Safe?

Dr. Salina Parveen & Seafood Technology Specialist, Tom Rippen, UMES

9:00am-11:00am and 1:00pm-3:00pm

Location: UMES

This session will cover seafood safety programs at UMES' Center for Food Science and Technology. Researchers and Sea Grant Extension work together to identify potential problems and seek solutions. Topics include an overview of university outreach programs with the seafood industry and studies with

oysters and the blue crab industry. Presentations will include classroom, laboratory tour and demonstrations of traditional and molecular techniques for tracking bacteria in the environment.

Building Climate Understanding

Bart Merrick, NOAA/NCBO

Full Day Workshop 9:00am-4:00pm

Location: Oxford Cooperative Labs

Climate change is the most important environmental issue of our time. Overwhelming trends illustrate this change and the wide-ranging impact on society and the environment from the melting of ice sheets to sea level rise, ecosystem changes, alterations in the ocean chemistry and global water supplies. The U.S. is already facing the impact of climate change and the Chesapeake Bay Region is particularly vulnerable. Learn about key aspects of climate change, access teaching resources and experience hands-on activities to explore changing climate issues.