**Millersville Receives $399,719 Federal Grant**

**April 29, 2019 – Millersville, PA** - Thanks to the National Science Foundation (NSF), Millersville University has received a $399,719 grant to support a large-scale national curriculum project for middle school science students.

The "Watershed Awareness using Technology and Environmental Research for Sustainability (WATERS)” project is under the direction of Dr. Nanette Marcum-Dietrich, educational foundations professor.

Millersville is part of a $2 million overall WATERS grant. At Millersville, the grant will teach a systems approach to problem solving through hands-on, inquiry-based learning activities based on real national and local data to explore local watershed issues. Marcum-Dietrich will lead the project research to investigate the impact of integrating purposefully designed inquiry, Universal Design for Learning technologies, and career-oriented activities in a diversity of middle school science classrooms. The project will also fund a full-time graduate assistantship and will support undergraduate student research projects.

“Engaging our students in hands-on experiences is one of the hallmarks at Millersville University,” says Dr. Daniel Wubah, president of Millersville. “The WATERS project is an excellent example of giving our students the ability to assist in educational research for a national STEM curriculum project.”

“Everyday water glasses are filled from a tap, toilets are flushed, laundry is washed and bathtubs are filled without a thought to how the water got there, where it goes when it leaves, or who assures that it is safe. Globally, there is a clean water crisis,” says Marcum-Dietrich.

The National Academy of Engineering lists clean water as one of 14 “Grand Challenges” in urgent need of engineering solutions.

 “We need to prepare students for STEM careers related to water because there are many career opportunities available for students with diverse interests that require different levels of education, including high school and certificate programs, technical college and apprenticeships, undergraduate and graduate degrees. The WATERS project engages middle school students in local watershed challenges using geospatial analysis powered by national and local data. Using inclusive tools and technologies, we want to broaden participation in STEM careers related to our most valuable resource – water,” says Marcum-Dietrich.

The goal of the WATERS project is to develop and test a student-centered, universally accessible middle school curriculum for learning water concepts and promoting water career awareness. To accomplish this goal, the project will develop and implement a 12-session curriculum unit that will engage students in use of Geographic Information System (GIS) applications and modeling based on data collection within local watersheds. It will also use UDL technologies to broaden inclusivity among learners, and engage nine experienced pilot teachers in co-designing and improving the curriculum over the three-year development period.

**About NSF**The NSF supports research, innovation and discovery that provides the foundation for economic growth in this country. By advancing the frontiers of science and engineering, our nation can develop the knowledge and cutting-edge technologies needed to address the challenges we face today and will face in the future.

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