

## Teachers partner on Chesapeake Bay Watershed education pilot



*Students explore outdoor habitats during a Meaningful Watershed Environmental Education (MWEE) lesson (more [photos](#)).*

Sonia Saunders, a fifth grade teacher at **Brandywine Springs School** in the **Red Clay Consolidated School District**, is excited to be involved in a program that provides Delaware students field experience opportunities using the Chesapeake Bay Watershed.

In partnership with teachers from the **Caesar Rodney**, **Indian River**, and **Red Clay Consolidated** school districts, Saunders and other members of Delaware's NextGen Teacher Leader writing team were charged with designing the first instructional components of the program, called Meaningful Watershed Environmental Education (MWEE) lessons.

“MWEEs make strong connections across subject areas and reflect an integrated approach to learning,” Saunders said. “The content is authentic and engaging, and addresses rigorous academic standards while also encouraging personal and civic responsibility.”

The MWEEs provide students an opportunity to engage in outdoor habitats that border the Chesapeake Watershed, which is suffering from nutrient and sediment runoff, area growth, air pollution and decreasing fish and shellfish populations. Delaware is one of six Chesapeake Bay Watershed states working to improve these conditions. The lessons highlight for students the needs of the watershed, and participating students gain hands-on experience outside the typical classroom to further their understanding of science.

The program is being piloted in grades 5, 8, and 10 in the Caesar Rodney School District. Each outdoor habitat is designed by the state’s Children in Nature Coalition and aligns to a school’s needs and available resources. Delaware Nature Society and the Delaware State Parks provide training and support to educators delivering MWEEs. Greenery for the habitats is provided by the Delaware Department of Natural Resources and Environmental Control (DNREC).

“Students are excited because they know that they are the next generation scientists,” Saunders said. “Already they feel the energy and the sense of urgency to take action to ensure a healthy and protected environment for our future.”

MWEEs tie into the schools’ existing science curriculum to ensure Delaware’s science curriculum aligns more strongly to the Next Generation Science Standards (NGSS). For example, one MWEE asks students to pour water on various surfaces in the schoolyard, and observe how water behaves and interacts with those surfaces, Saunders said.

“The students learn first-hand about absorption, runoff, and puddling, which leads them to then think of ways they could alter the design of the schoolyard to increase the utilization of fresh water,” Saunders said.

NGSS encourages students to apply what they learn in the classroom to solve real-world issues that benefit themselves and their communities. MWEEs also serve as field experience for the students, which is a component of NGSS.

Delaware was a lead state partner in the development of the Next Generation standards, which emphasize inquiry, engineering design and understanding the broad concepts that are common to all scientific disciplines.

“What we’re doing through NGSS is different. We know it works,” said Michael Watson, chief academic officer of the Delaware Department of Education. “Students are becoming more curious about their surroundings. They’re digging in deep on topics using research and experimentation.”

To continue ensuring that science education in Delaware is student-focused for all students, Delaware has been investing deeply in NGSS and helping districts and schools promote science education further than ever before.

In addition to the MWEEs, Delaware is entering its third year of the NextGen Teacher Leader program, which has guided nearly 200 Delaware teachers as they work to align science instruction to NGSS.

This year, 21 NextGen team leads – including Saunders – are participating in a year-long professional learning opportunity to help guide the NextGen teacher leaders and support additional NGSS-based instructional models for use in Delaware classrooms. Last month the NextGen team leads kicked off this experience at a weekend-long retreat in Lewes.

“Giving students enhanced opportunities to deepen their understanding of science didn’t happen by chance,” Watson said. “All of these accomplishments have been driven by teachers working collaboratively – over time – and promoting the type of deep learning in students that extends well beyond the classroom.”

*This program is looking for a second district participant for the 2017-2018 school year. Interested Delaware districts must be located within the Chesapeake Bay Watershed. For more information, contact [jonathan.wickert@state.de.us](mailto:jonathan.wickert@state.de.us).*