

## Forwood garden promotes real-world science instruction



*A student plants in Brandywine School District's first sensory garden at Forwood Elementary.*

On a Saturday morning in late April, **Forwood Elementary School** staff, students and their families gathered to plant **Brandywine School District's** first sensory garden.

The garden, part of Forwood's Green Ribbon Schools project, was designed to stimulate its visitors' senses and includes flowering plants with smells and colors to attract bees, beetles and other pollinators. Singing birds have a new solar bath and nesting boxes now line the back field. Soon, a wind sculpture will allow guests to feel and also see the breeze.

"Schoolyard habitat programs like our sensory garden are part of our school's efforts to go green," said fourth grade teacher Leona Williams, who worked with Delaware Nature

Society (DNS) naturalists to help design the garden. “The sensory garden will also serve as an outdoor classroom for science, mathematics, writing, and drawing classes.”

Williams is the Brandywine Teacher of the Year and one of [Delaware's 2018 District/Charter Teachers of the Year](#). She is a Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST) award finalist and a NextGen Teacher Leader.

In anticipation of the garden, students at Forwood were actively engaged in outdoor education throughout the year. Williams partnered with Forwood’s school counselor, Catherine Ward, to establish a student garden club. Members of the club researched pollinators to better understand their habitats and food requirements. They then created wanted posters to share with all Forwood students with more information on pollinators and their role in fruit and vegetable development.

Members of the garden club and the school’s science club participated in the Great American Backyard Bird Count. Forwood’s fourth and fifth grade students additionally planted 14 trees with the support of the Delaware Forest Service to further improve the school’s canopy for wildlife. In November, DNS certified Forwood Elementary as a wildlife habitat under the National Wildlife Federation guidelines.

“Outdoor education is another way Delaware educators are providing students an integrated approach to learning,” said Michael Watson, chief academic officer and associate secretary at the Delaware Department of Education. “Schools that align lessons in gardens and other outdoor areas to Delaware’s rigorous standards are allowing students to gain hands-on experience outside the typical classroom. This experience elevates learning and allows students to acquire new skills they can then apply now and throughout their lives.”

Beginning in the fall, Forwood's sensory garden will elevate science instruction in areas like plant life cycles, ecosystems, and insects. Students will have an opportunity to measure plant heights and record observations in their real environment, Williams said.

These types of opportunities align to the Next Generation Science Standards (NGSS) that Delaware adopted in October 2013. Delaware was a lead state partner in the development of the standards, which emphasize inquiry, engineering design and understanding the broad concepts that are common to all scientific disciplines. NGSS helps districts and charter schools set the expectations for what students should learn in science and know by the end of each grade level.

At the school level, much of the work around transitioning to NGSS is being led by Delaware's 200 NextGen Teacher Leaders. For three years, the department has provided an ongoing professional learning opportunity to these educators, who meet monthly to learn about NGSS and how to use a system of classroom assessments to support student learning. NextGen teachers also receive leadership training on adult learning and coaching skills to support the work of leading the NGSS transition back in their schools.

Delaware educators are working collaboratively to create a system of NGSS assessments that will measure students' true science mastery. This next generation of tests goes beyond multiple choice and short answer to include innovative items such as hybrid models where students manipulate materials and data offline and then provide responses on a computerized platform.

The enhanced assessment will replace the state's current Delaware Comprehensive Assessment System (DCAS) science exam for grades 5, 8 and 10. This month the department released a request for proposal for a company to design the field test set to be operational in the 2017-18 school year. Delaware's new science assessment will launch in the 2018-19 school year.

“With the help of the Delaware Science Coalition and partner organizations, the department has been investing deeply in NGSS and supporting districts and schools as they promote science education more strongly than ever before,” Secretary of Education Susan Bunting said. “Forwood and other schools are using real-world applications to elevate student learning, thus changing the landscape of what defines classroom instruction.”

Forwood is a member of the Pathways to Green Schools program through the Delaware Valley Green Building Council. This program provides grants, one-on-one support, and expert resources to K-12 schools in Delaware that are committed to becoming healthier, more sustainable, and more energy efficient.

In May, Forwood Elementary and **Caesar Rodney School District’s Postlethwait Middle School** earned Green Ribbon Schools awards from the U.S. Department of Education for their work reducing environmental impact, improving health and wellness of students and staff and providing effective environmental and sustainability education. Forwood’s sensory garden was part of the school’s application. Forwood and Postlethwait were among only 45 schools, nine districts, and nine postsecondary institutions honored nationally for this award.

“We look forward to continuing to educate our students and developing a love of nature outdoors,” Williams said.

Forwood’s sensory garden was funded primarily through a grant from Delaware Sustainable Energy Utility through the Delaware Valley Green Building Council. Additional funding came from the First State Resource Conservation & Development Council and the Brandywine Education Foundation. Numerous green efforts at Forwood, including the sensory garden, also received funding through the school’s Parent Teacher Association

Teachers interested in establishing school gardens are invited to attend the Delaware Nature Society's [Awesome Herbaceous Plants and Working with Water](#) presentation on July 26 in Wilmington. Registration is required, but fees will be waived for Delaware teachers. Future school gardening and environmental programming opportunities are available with the following organizations:

- [Delaware Association for Environmental Education \(DAEE\)](#)
- [Delaware Children in Nature](#)
- [Delaware Nature Society](#)
- [Delaware Valley Green Building Council](#)

Find more photos of Forwood's sensory garden [here](#).