



TEACHING GREEN

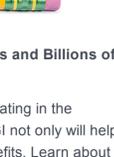


TOM WOLF, GOVERNOR • PATRICK MCDONNELL, DEP SECRETARY

Welcome, Educators!

During these great summer days, I hope you're getting opportunities to simply enjoy and be restored by Pennsylvania's many outdoor wonders, even as you no doubt are thinking ahead to the fall.

Thank you for all you do to foster environmental literacy and stewardship in Pennsylvania. — Bert Myers, Director, Environmental Education and Information Center, DEP



Air Quality

Capping Carbon Pollution from Power Plants Would Save Hundreds of Lives and Billions of Dollars in Pennsylvania

Governor Tom Wolf has made reducing air pollution from power plants by participating in the Regional Greenhouse Gas Initiative (RGGI) a top climate priority. But joining RGGI not only will help Pennsylvania slow climate change; it'll bring a range of health and economic benefits. Learn about a [new analysis by DEP](#) that shows that cutting power plant emissions of carbon dioxide and other pollutants, such as nitrogen oxides and sulfur dioxide, could save the lives of 639 Pennsylvanians by 2030 and reduce asthma and bronchitis. Participating in RGGI could also drive up economic activity in Pennsylvania by billions of dollars and create tens of thousands of jobs.



Grants

2020 Environmental Education Grant Recipients Announced

Big congratulations to 55 projects that received more than \$434,000 in 2020 DEP Environmental Education Grants in June. Grants went to schools and colleges, environmental and community organizations, and conservation districts for projects addressing Environmental Justice (EJ), climate change, and water quality.

Thirty-nine projects with a local community focus received grants of up to \$3,000. Fifteen projects that have a broader or statewide reach received grants of up to \$20,000. The Pennsylvania Envirothon, which engages students and teachers at the local, state, and national levels, received a grant of \$78,297. [See the list of projects.](#) Learn more about the [Environmental Education Grants Program.](#)



“Not only is every region of the state represented, but 77 percent of the grant funding supports 33 projects that will engage Pennsylvanians who live or work in EJ areas, as DEP continues to strengthen its outreach and partnership with EJ communities.”

DEP SECRETARY PATRICK MCDONNELL

Success Stories from 2019 Environmental Education Grant Projects

Reading Area High School: Living Learning Laboratory Project Earns National Award

Reading High School used its Environmental Education Grant to renovate an underused courtyard into a Living Learning Laboratory. Key to success: The Green Team. These teachers, administrators, and facility managers met regularly to plan construction and identify ways to meaningfully engage the school community. For example, they surveyed department heads to identify how the courtyard renovation could best suit curriculum needs. An advertised Build It Day generated broad interest.

Students' active participation was crucial. The Eco Club presented the project to school board members, generating valuable support. In fact, the students' actions resulted in Reading High School's achieving a National Wildlife Federation's Eco-Schools USA Bronze Award!

Opportunities for teacher professional development, including sample lessons for using the courtyard, will be provided when school resumes.



Reading High School students created a bulletin board to showcase their new status as an Eco School. Left to right: Mary Ann Boyer, Jeannine Michel, Eco Club students, Shannon Ruane, and Ann Sellers.

Philadelphia Solar Energy Association: Junior Solar Sprint Educates Both Students and Teachers about Solar Power

The Philadelphia Solar Energy Association (PSEA) used its Environmental Education Grant for its annual Junior Solar Sprint, an initiative that provides teacher trainings and educational resources and engages middle school students in hands-on solar energy education. The Philadelphia School District provided solar car kits for every student whose teacher completed one of PSEAs three teacher trainings.



With the 2020 event cancelled due to COVID-19 restrictions, PSEA invited students to submit a video of the solar-powered cars they built. A Certificate for Innovation, Technical Accomplishment and Perseverance went to every student who submitted a video. Teachers have reported students are enthusiastic about solar energy. Teachers are interested in resources and ideas for expanding classroom content to include solar energy and climate science.

Green Valleys Association of Southeastern PA: Water Works Program Emphasizes Interactive Learning

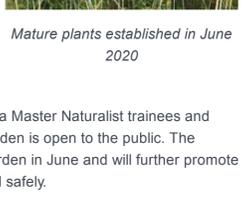
The Green Valleys Association of Southeastern PA, Inc. used an Environmental Education Grant to engage 262 fourth-grade students at Owen J. Roberts School District in Chester County in the 2019-2020 Water Works program. The program was packed with informational large- and small-group interactive activities held in 2019. For example, students used Google Earth to view water flow and flora and fauna of the local watershed; had fun using props, such as a giant toothbrush and large "raindrops," during the clean water demonstrations; and enjoyed studying live macroinvertebrates, indicators of water quality.



Google Earth

Westmoreland County Conservation District: Pollinator Garden, Ready for Learners

The Westmoreland County Conservation District used an Environmental Education Grant to construct a nearly one-acre native plant pollinator garden to educate the community. They worked with County Parks and Recreation to prepare the site in summer 2019 and planted seeds in October. In the winter, they created a brochure on the importance of pollinators, threats to their survival, what the public can do to help pollinators, and where to go for more information. This spring, they added mature plants to the seedlings and installed an educational signage.

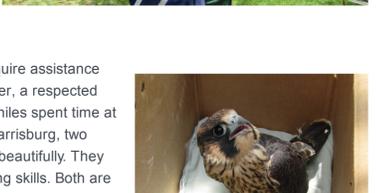


Mature plants established in June 2020

Although COVID-19 has suspended plans to have Pennsylvania Master Naturalist trainees and others deliver in-person education programs, the pollinator garden is open to the public. The Conservation District sent out a newsletter article in June and will further promote the garden to the public once in-person education can proceed safely.

Harrisburg Falcons

The 2020 Harrisburg Falcon Watch and Rescue started at the end of May, when the three peregrine falcon eyasses began showing signs of fledgling. Forty-one dedicated volunteers, wearing masks and practicing safe social distancing, were stationed in shifts around the Rachel Carson State Office Building (RCSOB) here in Harrisburg to observe and lend any needed assistance. All told, they put in 826 hours in 16 days, spread over three and a half weeks.



Per standard procedure, fledglings that require assistance are transported to Red Creek Wildlife Center, a respected wildlife rehabilitator. Each of the three juveniles spent time at the rehabilitator. Upon being returned to Harrisburg, two fledglings (one male and one female) flew beautifully. They continue to fly well and improve their hunting skills. Both are expected to leave Harrisburg by the end of the summer.



The third fledgling didn't fare as well and, during a flight attempt, disappeared from sight. The Watch and Rescue team, comprised downtown Harrisburg, but couldn't locate it. This was a difficult moment for our volunteers as, since 2000, only a handful of fledglings from RCSOB have disappeared. Still, 2020 must be considered a success, adding two more high-flyers to Pennsylvania's population of the state-threatened peregrine falcon.

Volunteers Sue Hannon and Jane Barnette deserve a special shout-out for the many hours they spent during the 2020 Falcon Watch and Rescue. Their dedication is exemplary.

Education Standards

At the direction of the Pennsylvania State Board of Education, the Pennsylvania Department of Education has developed a comprehensive plan to update state academic standards for Science and Technology and for Environment and Ecology. Standards provide the basis for curriculum development and instruction in schools.



The plan includes reviewing the state's current standards, outlining the various components that must be addressed when updating the standards, and developing a proposed timeline for making the changes.

The board approved 18 individuals, including a DEP Environmental Education and Information Center representative, to serve on the Steering Committee. Sixty education professionals were selected to serve on the Content Committee. Earlier this year the Department of Education held a series of 14 engagement sessions, attended by more than 900 stakeholders, to receive feedback from educators, parents, and other community members on current research and best practices regarding the Science and Technology standards and the Environment and Ecology standards. Standards committee members will consider the information when drafting the revised academic standards.

Stay in the know: Track updates to the standards revision process on the [Department of Education web page on the standards.](#)

Water

2020 Integrated Water Quality Report: The Go-To Resource for Pennsylvania Water Data

DEP recently launched the [2020 Integrated Water Quality Monitoring and Assessment Report](#), the authoritative source on the health of Pennsylvania's 86,000 miles of streams and rivers and more than 160,000 acres of lakes. Educators can take advantage of this new resource to develop a field experience or action project as part of a Meaningful Watershed Educational Experience. A map viewer lets you zoom down to individual stream or river sections and get data on impairment status, pollutant levels, restoration progress, and more. The report was published in draft form, and public comments are invited.



"Healthy Waters, Healthy Communities" Shares Tips and Shows Benefits of Improving Water Quality in Pennsylvania's Part of Chesapeake Bay Watershed

DEP recently launched its first watershed-focused website: ["Healthy Waters, Healthy Communities: Reducing Runoff Pollution in Pennsylvania's Share of the Chesapeake Bay Watershed."](#) Meaningful Watershed Education Experiences and other tools for teachers are included, and a York County science teacher talks about how planting a stream bank buffer grows students into environmental stewards.

Top tips and printable handouts show what farmers, municipal leaders, business owners, and residents can do to reduce runoff. "Deep dives" explore the contributions that outdoor recreation and agriculture make to Pennsylvania's economy, the positive impacts that green infrastructure has on business, and the vital connection between trees and water quality.

"Test Your Water Smarts" invites you to see if you're as smart about water quality as the eastern hellbender, the Pennsylvania state amphibian. Hellbenders seek the healthiest waters to live.



Super excited about this, just seeing students work. It gives students ownership.

In DEP's "Healthy Waters, Healthy Communities," high school teacher Mark Lentz talks about how planting trees grows students' power to make a difference.