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There are outstanding environmental programs taking place in schools all over the country, and the environmental law firm of Manko, Gold, Katcher & Fox, LLP (MGKF) is proud to collaborate with 6abc and Wawa in recognizing schools in the Delaware Valley for their sustainable efforts to support their communities since 2006. Past winners include:

**2018:**  
***Penns Grove High School***

***Carneys Point, NJ***



The environmental program at Penns Grove High School was formed in response to the presidential memorandum initiated by former President Barack Obama to promote the health of pollinators. They contribute substantially to the U.S. economy and are vital to keeping fruits, nuts and vegetables in our diets. The Penns Grove pollinator garden helps counteract the loss of not only butterflies but honey bees, native bees, birds and bats.

Through Monarch Watch, a citizen project and affiliate program with the Kansas City Biological Survey, 30 students have learned how to grow both the host plant (milkweed) and nectar plants from seed. They rear the monarch caterpillars indoors, hand-feed the emerging adult monarch and tag the discal-cell position on their hind wing to release the butterflies for Monarch Watch ([MonarchWatch.org](http://MonarchWatch.org)) scientists to track their migration to Mexico.

***Archbishop Damiano School***

***Westville, NJ***



The Archbishop Damiano School (ADS) horticultural program exposes about 150 students with developmental disabilities to hands-on learning every year. Horticultural therapy uses gardens and plants to help with physical, developmental and/or emotional healing. The ADS accessible gardens improve sensory experiences and promote hands-on learning with the use of fragrance and herbs, cutting flowers, koi ponds, and wildlife gardens with birdhouses grown from birdhouse gourd seeds. The therapeutic benefits of horticulture for people with physical, developmental, emotional, mental

and social challenges have been well documented. In addition to stimulating the senses, garden therapy tends to release stress, alleviate depression, improve creativity, promote positive emotions and improve motor skills.

The ADS accessible gardens also focus on sustainability. They employ a composting and recycling program using recycled K-cups to plant new seeds in addition to a composting program that enriches garden soil using kitchen waste. ADS's organic garden practices are evident in all of their composting practices and throughout their program.

The garden also allows the students to connect with community members by growing, harvesting, and preparing nutritious food in school with a focus on sustainability. Students can take home fresh, local, free product in addition to providing vegetables to the local food pantry. This is all achieved while helping students understand environmentally sustainable practices for future generations.

**2017:**

***Upper Merion Area Middle School***

***King of Prussia, PA***



As part of the 8th grade Science curriculum involving Sustainability, Upper Merion Area Middle School partnered with Riverbend Environmental Education Center to immerse 8th grade Science students in a yearlong project learning about Sustainability through Aquaponics. In the first half of the school year, approximately 300 8<sup>th</sup> grade students were divided into 12 small companies to create and manage a basil lemonade business. The companies were divided into divisions: CEO, Aquaponics Farming, Production, Distribution and Marketing, Finance, and Risk/Waste Management. Students were completely

responsible for every aspect of the project including: cleaning/maintaining the aquarium; growing the basil; creating a recipe from scratch; determining the environmental impact of all aspects of the business; creating a marketing plan; using a fixed budget to determine costs/profits based on the recipe and sales; and identifying ways to mitigate possible risks. Halfway through the project, 16 professional experts from each field met with the student divisions to provide feedback for their business.

***Las Américas Aspira Academy***  
***Newark, DE***

The Outdoor Learning Environment at Las Américas Aspira Academy started one year ago. There are many aspects of the program that include a natural playground that a group of 8th graders has worked on throughout the school year. The student teams focused on design, budget, finance and publicity in a team effort that led to the installation of this project and native perennial plants around the school campus in March 2017. With their unique school setting of an industrial park, the Aspira Academy campus includes a stormwater retention pond and a good deal of blacktop. Their mission was to create an environment where student learning can extend outside of the classroom and wildlife can thrive.



In addition, there is a Monarch Waystation that was installed last Spring when about 20 of Aspira Academy students had the opportunity to tag and release over 25 monarch butterflies. They are currently working with [MonarchWatch.org](http://MonarchWatch.org) to track the migration of those butterflies to their overwintering site in Mexico and make a cultural connection as a majority of the school population is Hispanic. There is also a Helping Hands Garden maintained and harvested by 100 Kindergarteners, then donated to the Brandywine Zoo for animal enrichment.

**2016:**  
***The Academy of Notre Dame de Namur  
 Villanova, PA***

The Academy of Notre Dame was recognized for their contributions to the school's cross-curricular initiative, Project Stream. With the theme "Water Sustains All Life," every academic area, from science and mathematics, to art and religion, explored issues related to water scarcity, safety, and sustainability. Students in the religion department explored global issues of water poverty while science and mathematics students conducted flow rate and water quality studies on the Darby Creek and monitored water quality in partnership with the Darby Creek Valley Association. Senior level art students studying microscopic water samples created drawings similar to artist renderings seen in scientific textbooks. Middle school art students explored Gyotaku, a traditional Japanese art of printing images of fish from an actual fish.



***Winslow Township Middle School***

***Atco, NJ***

At the Winslow Township Middle School in Atco, NJ, teacher Ross Cruz developed an environmental STEM course that mirrors the community's farms. Students have created sustainable hydroponic systems in their classroom where they test the nutrients in the system and have plants, fruits and vegetables growing through the year. Using an engineering design process, they solve real world environmental-based design challenges ranging from repurposing non-recyclable K-Cups into seedling starter pots to using household items to create hydroponic systems that can grow plants in areas with limited water and land use.



**2015:**

***George W. Nebinger School***

***Philadelphia, PA***

George W. Nebinger was recognized for their entire campaign -- “Go Green – One Team One Planet”. The school supports physical health, social health, the environment and an outdoor learning laboratory that is a great benefit to students, families and the community. They are focused on establishing awareness of the Delaware Estuary with various programs. They implemented stormwater infrastructure to reduce runoff and installed a rain garden. Students are responsible for monitoring soil and watering needs and keeping debris out of the rain garden, which is part of a curriculum developed by the Phila. Water Dept. The students are also involved in experiential learning at Phila. Water Works Interpretive Center. Even though they are based in an urban setting, the school has beautiful vegetable gardens and murals, including a mosaic, created by students with a teaching artist from Partner Philly Magic Gardens that depicts the Delaware Estuary. Nebinger focuses on up-cycling projects and recycling of materials as well as the culinary and nutrition curriculum that adds to the value of their food garden.



***The Douglass School***

***Wilmington, DE***

The Douglass School in Wilmington, classified as at-risk for completing high school, provides educational studies that include therapeutic programs. Students learn transferrable soft skills to build potential for employment through a program called S.a.L.T. – Students-serving- society and Learning Too. It is a multi-level program that includes planting and harvesting vegetables through a partnership with Healthy Foods for Healthy Kids. In addition to working in the garden, the students are involved in cooking by making healthy salads for the school community. They also prepare baked goods for sports program. S.a.L.T. focuses on developing Social Interactive Skills, Community Engagement, Health Awareness, Energy Conservation and Efficiencies, Mentoring and Educational Encouragement.



**2014:**

***The Pathway School***

***Norristown, PA***

The Pathway School supports children who have complex learning, emotional and behavior needs (including Autism, ADHD, Anxiety Disorder, Learning Disabilities and more.) Their horticultural program began in 1961 as a way to teach employability skills to students. The program has grown from a beautiful garden to a vegetable garden and greenhouse used for cooking, science classes and more.



***South Philadelphia High School***

***Philadelphia, PA***

South Philadelphia High School (SPHS) partners with Lower Moyamensing Civic Association (LMCA) on this program created to address the lack of green space and fresh food options in South Philadelphia. The SPHS garden involves the work of over 200 students in biology, math, culinary arts, engineering, English, English for Speakers of Other Languages (ESOL) and special education as well. The gardens involve all aspects of the curriculum and have expanded to support many neighborhood programs.



**2013:**

**Central Bucks West High School**

**Doylestown, PA**

The Central Bucks High School West Life Skills Support Class is a special education program for students with intellectual disabilities and focuses on teaching domestic vocational and social skills in authentic environments. Their program encourages healthy eating habits while teaching realistic life skills to students. The Life Skills participants, with the support of regular education students, built and installed raised bed gardens in the school's courtyard. Then they planted vegetables and flowers like tomatoes, cucumbers, basil and peppers that were used to prepare salads and soups for their lunches. They cut and delivered the zinnia flowers they planted to staff. Funds from this award will be used to expand the garden and develop a Piedmont forest area for environmental education. The educators who were recognized are Todd Cantrell and Mike Castelli.



**Abington High School**

**Abington, PA**

Abington High School's H2O for Life Club continuously educates citizens of all walks of life about local and global water issues. Originally there were 10 members of the Club and now, six years later, there are 80 active members. They have a "Watershed Citizenship" class and do community outreach to encourage others (of all ages) to be prudent in the way water is used.

They hope everyone will take seriously the responsibility to create storm sewers in neighborhoods, to discard litter and cigarette butts properly, as an example. Members of the club teach "Watershed Citizenship" in elementary schools, at Rotary Clubs, colleges and universities including the University of PA and Cabrini College and even museums like the Fairmount Water Works Interpretive Center. It is their mission for all people to have access to safe, affordable and sustainable drinking water and to ensure a health tomorrow. The teacher who was recognized at Abington is Mary Rodgers.



**2012:**

***Williamstown Middle School***

***Williamstown, NJ***

The Williamstown's Middle School's winning program, under the leadership of Janet Mead and Sandy Keen, developed the Community of Caring Gardens. This was established as a means to invite the public into the school to work with students to build character education through caring for the environment. Since then, they have also developed courtyard gardens, including a memorial pond which has become the centerpiece of an outdoor classroom. Their next endeavor will include a community vegetable garden whose harvest will be donated to a nearby senior citizen complex. Students have already designed cold frame boxes and a soda-can solar heating system from recycled materials to extend the typical growing season.



***Hatboro-Horsham Senior High School***

***Horsham, PA***

At this school, the Jarrett Nature Center (JNC) serves as their outdoor classroom. The center, which includes a pond, outdoor seating, signage for each major habitat, handicapped access to the pond, and an observation platform in the marsh for study purposes, is available to the community and all district schools to enhance lessons. With their award monies, Hatboro Horsham students will work with the JNC to plan, implement and monitor the install and impact of a rain garden. Community members will also be involved in the planning and planting of native plants. Teachers will be able to use the rain garden as a way to educate students about native plants, rain gardens, runoff prevention, and water quality monitoring.



**2011:**

***Charles F. Patton Middle School***

***Kennett Square, PA***

The Charles F. Patton Middle School's winning program is part of the Patton Project conceived by Family and Consumer Science teachers, Betsy Ballard and Kimberly Hisler. The students built raised beds and a greenhouse outside the school and, after planting the beds, donated nearly 50 pounds of vegetables to the Chester County Food Bank. The needs of the Food Bank has grown 40 percent in the last year alone. County-wide, one in 10 people go without a meal on a daily basis. The project continues to support as many people as possible, with healthy, nutritious options.

***Father Judge High School***

***Philadelphia, PA***

At this school, the students, led by teacher Nora Kasper, built a wind turbine which produces 500 watts of power. The turbine power illuminates a memorial that has been erected on the front lawn of the school to honor the graduates who lost their lives in service to others. Certainly combining education and community service, Father Judge's program is another excellent example of the outstanding work being done in schools.

**2010:**

***The Epiphany of Our Lord***

***Philadelphia, PA***

The Epiphany of Our Lord School's project demonstrated the effective reuse of 600 empty gallon milk jugs to construct a "reading igloo" located in the school's library providing a visual demonstration of the importance of reducing, reusing and recycling.

***Abraham Lincoln High School – Horticulture Academy***

***Philadelphia, PA***

Abraham Lincoln's High School's Horticulture Academy students achieved recognition for successfully operating a retail flower shop and managing a new greenhouse whose clients include community organizations, neighbors and various aspects of the school district.

**2009:**

***St. Francis Xavier***

***Philadelphia, PA***

St. Francis Xavier students participate in an "Art Garden" program with the Philadelphia Museum of Art and the Pennsylvania Horticultural Society. The goal is to train the eye to recognize and appreciate natural beauty. This year the students are replicating Monet's Japanese Bridge working with an architect, Edward Bell, who is designing the bridge and helping students build the bridge over a pond that they are



constructing in the garden. The entire school (235 students) will be planting seedlings for the garden. We'll also see posters and picture frames on the fence on Pennsylvania Avenue that passersby look through to see the beauty of nature that relate to art (like Van Gogh's irises) with a frame designed with this same flower. The poster next to it explains how nature and art are intertwined.

## **Interboro High School**

Interboro High School developed a student-mentoring program created to persuade kindergarten students and their community to appreciate the natural world within the community and to embrace wildlife and habitat conservation. Interactive programs included creating recycled birdfeeders, developing a seed company business and working together on creating habitats.



## **Propect Park, PA**



**2008:**

***Cedarbrook Middle School***

***Wyncote, PA***

Cedarbrook's project included analysis of various sections of the Tookany Creek watershed, a portion of which runs through their school's campus. Students were taught a variety of research skills in order to determine specific threats to the watershed including: chemistry analysis to study macro invertebrate (small organism), taking community inventory (studying what species live in the environment), and the usage of maps and aerial photos, all of which helped them identify the different ways human beings impact the watershed.



***Gateway Regional High School***

***Woodbury Heights, NJ***

Gateway's project includes a 1,000 gallon fish tank, where tilapia fish are raised to provide natural fertilizer for the hydroponically grown herbs and greens. During the award presentation, students explained the various parts of the project and provided samples of freshly grilled tilapia fish and pesto sauce made from fresh basil grown in the hydroponic garden.



**2007:**

***W.B. Saul High School of Agricultural Sciences***

***Roxborough/Philadelphia, PA***

W.B. Saul High School was honored for removing the lead from the lawn of Miss Ruth Battle, 84. They developed a Community Phyto-Remediation Project and studied how to remediate this residential lawn. This project teaches students how to determine toxicity levels within the soil and use phyto-remediation, a process used to decontaminate polluted soil, to decrease traces of lead and return the soil back to acceptable levels.



***Sadie Tanner Mossell Alexander***

***University of Pennsylvania Partnership School***

***West Philadelphia, PA***

The Sadie Tanner Mossell Alexander University of Pennsylvania Partnership School was selected for its efforts to restore the grounds surrounding their school on a 4.3 acre Urban Arboretum. Students and teachers have been working to create an outdoor classroom where they study storm water management and much more. This is also a resource to the West Philadelphia neighbors.



**2006:**

***Friends' Central Middle School***

***Wynnewood, PA***

Friends' Central Middle School was selected for its impressive efforts in improving the environment through weekly service projects created in social studies and science classes. As environmental stewards, Friends' Central has been committed to these programs over the last six years, and the school has implemented dozens of projects such as Sustainable Schools, Stream Bank Restoration, Keeping it Green, Graffiti Removal, Recycling and Lot Restoration. The Sustainable Schools project was conducted by Friends' students who developed a survey and analyzed the results of actual environmental practices at 20 other Friends' schools throughout the country. In this case, the grant will be used to publish additional results and other brochures and educational materials.

In addition, through their strong commitment to beautifying the community, they have raised thousands of dollars to purchase plants for other schools and community organizations. They have also shared their water testing equipment with inner city schools. Part of the award money will be used to replenish Friends' nursery with native plants and to restock the water testing equipment. The school's composting project will provide mulch for the plants and save space in landfills.



***Camden High School***

***Camden, NJ***

Camden High School was selected for its current BEES program (Building Environmental Education Solutions) in which students study a different local environmental issue for an entire school year. The work of the high school students has been worthwhile for all the grade levels benefiting the high school students as well as local middle and elementary schools. For example, the students' study of the dangers of pesticides was shared by the high school students with 7<sup>th</sup> graders from local public middle schools. In turn, the 7<sup>th</sup> graders taught 2<sup>nd</sup> graders from local elementary schools about the dangers of pesticides.

Other BEES projects included participation in a weekly radio program heard on National Public Radio (NPR) called "Living on Earth." Students produced radio commentaries and feature stories for air on NPR. Through the BEES program, Camden High School built alliances that shared their environmental concerns with community organizations such as the Delaware Riverkeepers Network,

the Audubon Society, the NJ Tree Foundation and Wild Jersey, Camden County Parks, and NJDEP Watershed Management.

The \$5,000 grant will be used by Camden High School to provide transportation for students to visit more environmental sites that could include the Camden County Municipal Authority and the Forsythe Wildlife Refuge. It will also pay stipends for services of organizations and professional outside experts to work with students.

