



## Mini Environmental Education

River by river and stream by stream, Pre-K-12 environmental education projects are helping to raise public awareness about the health of streams, rivers, and the Chesapeake and Coastal Bays and about the steps that can be taken to restore and protect them. Through this program, the Trust seeks to increase student awareness and involvement in the restoration and protection of the Bay its local streams and rivers through increasing student access to programs that provide meaningful outdoor learning experiences.

## Windsor Hills Elementary Middle Schoolyard, Stream and Community

60 students from Windsor Hills Elementary Middle School experienced outdoor learning through a series of interconnected field experiences in a local park, which culminated in the expansion of a student-led schoolyard native habitat project.



The Parks & People Foundation (PPF) engaged 60 seventh grade students at Windsor Hills Elementary Middle School. Students were taught about Baltimore's urban ecology and the issues affecting the Chesapeake Bay and Baltimore.

had been planned, designed, and installed in 2014-2015.

In the 2015-2016 school year we continued maintenance on the habitat and added another 117 new perennials in addition to constructing a hoop house for vegetable gardening. Upon completing the habitat planting, students discussed the difference between the area before and after the planting, including the benefits of storm water mitigation.

**60** students participated

**7** trees planted

**125** pounds of trash removed

**117** native plants planted

**100** publications produced

After students learned about their watershed's health, they took a field trip to Gwynns Falls/Leakin Park to assess the health of the sub-watershed in which they are located, Dead Run. Students broke into three teams to survey the biological, chemical, and physical parameters of Dead Run, which they then compared to their research findings.

Upon returning to their class after field investigations, student teams shared their results and compiled data to get the entire image of Dead Run's environmental health. Students then conducted service learning to make a positive impact on the watershed. Service learning was focused on the Windsor Hills schoolyard habitat that



## Essential Elements

**Issue Definition:** *“How is our schoolyard connected to the health of water resources in the Windsor Hills neighborhood, in Baltimore City and the Chesapeake Bay, and what can we do in our schoolyard to help the Chesapeake Bay?”*

Students visited the Parks & People Ecology Center for a hands-on introduction to the concept of a watershed and the significance of the Chesapeake Bay. Students learned about the history and current state of the bay and the Gwynns Falls stream, urban stormwater issues relevant to Baltimore (sewage overflows, impacts of impervious surfaces, etc) and the path water travels.

**Outdoor Field Experiences:** Students assessed the health of the sub-watershed in which they are located, Dead Run stream within the 1,200 urban woodland habitat, Gwynns Falls/Leakin Park. Small groups of “experts” responsible for each parameter (biological, chemical, physical) shared their results with the rest of the class. Key topics included: what they observed, how it determines stream health and why it is an important parameter to test.

**Student-led Action Projects:** Students designed and installed an addition to the native habitat restoration started in the 2014-2015 school year. As an addition to the 2014-2015 habitat project, this project will continue to develop the outdoor learning space in a sustainable way. In addition to the native habitat, students allocated an area of their habitat for a community garden where neighborhood residents are welcome to grow and harvest their own fruits and vegetables.

**Synthesis & Conclusions:** Students worked on creative arts/language arts projects that detail what was learned and how the project benefits the school community, the Gwynns Falls stream and the Chesapeake Bay. Student made signs that were installed around the action project space to identify the area and provide learning opportunities for other classes who will use the space.



Students collect macroinvertebrates during their stream investigation.

CBT Funds Awarded:	\$5,000
DNR:	\$245
EPA:	\$1,194
Parks & People:	\$1,400
Tree Baltimore:	\$350
<b>Total:</b>	<b>\$8,189</b>

## Project Partners:



**PARKS &  
PEOPLE**  
FOUNDATION



**MARYLAND**



**DEPARTMENT OF  
NATURAL RESOURCES**