

Lehigh Valley Greenways Conservation Landscape SUCCESS STORY

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Cardinals to Caddisflies: Environmental Field Trips for Urban Students (Awarded 2016)

SUMMARY

Our grant introduced Allen High School students to hands-on environmental monitoring techniques in local ecosystems, through analysis of stream macroinvertebrates, bird banding, and native plantings. Our activities combined classroom information, informational videos to prepare the students for their field trip activities, and follow-up in-class and online work to allow them to analyze the data they collected. Thus, these activities were sustained interactions of the students with environmental and scientific information. Because grant activities involved local ecosystems and were conducted at a local college, the students could see the importance of these issues in their own backyards and were encouraged to pursue higher education and careers in environmental and scientific fields.

FUNDING

Grant Award:
\$8,000.000

Match:
\$12,889.62

Total Project Cost:
\$20,889.62

PARTNERSHIP IS KEY

Muhlenberg College provided rooms, equipment and materials, personnel, and volunteers. Wildlands Conservancy provided field site access (Pool Wildlife Sanctuary), rooms, and personnel. William Allen High School provided the students as learners, and their teachers donated time to creating new lesson plans and activities.



CHALLENGE

Children today, particularly teenagers, spend less and less time outdoors connecting with nature, and more and more time with electronic devices. Consequently, even most high school graduates know little to nothing about the constituent organisms that determine the health of ecosystems. This problem is enormously exacerbated for students in urban environments. Our grant aimed to promote students' desire to spend time in natural environments, learning about ecological and conservation issues and about job opportunities in those fields, and how they can aspire to, and achieve, those jobs.



SOLUTION

The student participants in our grant were from the AP Environmental Science and the AP Biology classes at William Allen High School in Allentown. Therefore, many of these students are from low-income urban environments and under-represented minorities in the sciences. These students are ones who are unlikely to have many connections with nature and ecology without our current program. The activities brought them to spend one entire day at Pool Wildlife Sanctuary, working with streams, birds, and plants. Then the students spent an entire day at Muhlenberg College examining stream invertebrates under microscopes, working with data spreadsheets to examine their data, examining preserved bird specimens, and taking a tour of the college campus, discussing challenges of attending and transitioning to college. These activities allowed students to experience nature in the field and hands-on, but also allowed them to collect their own data to be used in the classroom and (with bird banding) collect data that is of use to the larger scientific community. These activities promoted the students' confidence in their scientific abilities.

RESULTS

To assess the program we gave the teachers and students evaluation forms. Here are some of the comments:

"My goal was to get the students outside and collecting data and doing science so this project was a perfect experience for myself and the students." (one of the teachers)

"We got to actually collect data of our own and calculate it rather than calculating someone else's. I felt like an amateur scientist."

"Birds are awesome!"

"Going into the creek helped connect to my classroom work."

"Lehigh Parkway water is [really] clean considering the abundance of caddisflies and isopods"

"I learned that starlings are pretty friccin' neat regardless of them being an invasive species."

"I feel like I know what to expect in college. This was a great experience."

The field trips were held October 13-14, 2016 and 55 high school students attended and 32 Muhlenberg students volunteered.

Contact



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