

Watershed STEM Spotlight

Environmental Science Center, Washington

Partnership with 21st Century Community Learning Center Sites

The Environmental Science Center worked with four [21st Century Community Learning Center](#) (21st CCLC) partners to facilitate virtual and in-person activities about native plants and habitat restoration. The Environmental Science Center conducted an in-person training with 21st CCLC educators in March 2022. Environmental Science Center staff had offered to implement a virtual training; however, 21st CCLC

staff thought an in-person training would be more beneficial and chose to delay until an in-person training could be held. To build relationships with the 21st CCLC staff throughout the project, Environmental Science Center staff attended the site coordinator's group virtual summer camp meeting in 2020, and then going forward, they attended 21st CCLC site coordinators' meetings on a quarterly basis.

About Environmental Science Center

The [Environmental Science Center](#) is a nonprofit organization that offers place-based education and environmental education programming for the community of south King County, Washington. Working with school districts, community-based organizations, municipalities, and individuals, the Environmental Science Center focuses on offering low- or no-cost programming in multiple languages to engage the community in outdoor, environmental education programming. The Environmental Science Center aims to establish an empathetic connection between community members and the coastal ecosystem so they can be stewards of the environment.

- **King County, Burien, Washington**
- **Miller-Walker Watershed**
- **449 elementary and middle school youth**
- **After-school, summer, and weekend field-trip programs and virtual activities**
- **Four 21st CCLC sites**



What Was the Project?

Environmental Science Center activities focused on supporting youth in exploring their natural environment. Specifically:

Virtual summer activities: Environmental Science Center staff developed kits that 21st CCLC staff delivered directly to youth's homes. Kits included a card matching game with macroinvertebrates and a watershed-themed drawing guessing game, among other resources.

Virtual school-year activities: While the COVID-19 pandemic restricted Environmental Science Center staff from conducting in-person activities, they facilitated a game about freshwater animals with youth via Zoom and Google slides, conducted a live-streamed Leaf Pack experiment based on Stroud Water Research Center's Leaf Pack Program, and conducted a live virtual dive with Pacific Marine Research to observe sea creatures.

In-person summer activities: Youth traveled on buses to local parks and museums, including Federation Forest Park, Seahurst Park, Saltwater State Park, and the Seattle Aquarium. Youth also worked on environmental action projects, such as pulling up invasive English ivy, constructing a pollinator garden, and starting to repurpose unused tennis courts at their site.

In-person school-year activities: Youth engaged in after-school activities, such as planning for their summer environmental action projects and activities about the water cycle, water physics, plant anatomy, habitat assessment, and birds.

In-person weekend activities: Environmental Science Center staff hosted youth and their families at their organization's location to explore the beach.



Youth traveled on buses to local parks to explore nature

Photo: Abby Pelko

Key Successes

Field trips were especially engaging since they introduced youth to new environments. Some youth who joined field trips had never explored the beach with a scientific perspective or even visited the beach. During field trips, 21st CCLC staff learned alongside youth. Youth also took ownership of their environmental action projects. At one site, youth were encouraged by their school's administration to "dream big." With this encouragement, youth reimagine an old tennis court. At another site, youth created a plan for a pollinator garden and took on the responsibility of weeding and mulching the space in preparation for planting.

"We have been able to continue to build institutional knowledge on creating afterschool programs, trying to make it fun, so that it's something that's exciting and engaging for kids."

—Katheranne Vivarelli, Marketing and Special Programs Coordinator, Environmental Science Center



Youth engaged in after-school activities, such as plant anatomy. Photo: Preston Slaughter

Lessons Learned

Through this program, the Environmental Science Center staff improved their ability to develop activities for the after-school context, a context in which they had limited prior experience. They learned about the importance of engaging youth in creative play in the after-school context and to leave ample time for learning outdoors and environmental action projects. Staff also learned to adapt to inconsistent attendance since 21st CCLC youth can select their after-school activities, and as a result, attendance can be sporadic. Finally, Environmental Science Center staff had not previously worked with after-school educators as much as they had with school-based teachers. So they learned about the need

to be flexible with after-school educators and the different lens that after-school educators bring to their work compared to school-based teachers.

Beyond the Grant

The Environmental Science Center has applied what they learned through this program to another grant, incorporating activities developed through this grant with other after-school sites. Environmental Science Center staff who served as educators in this program continue to use the skills they developed facilitating other after-school programming. They also keep in touch with staff from one of their 21st CCLC sites whose school they continue to work with through implementing school-day programs.

This project was funded under the Watershed STEM Education Partnership Grants program, a collaboration between NOAA, NAAEE, and the U.S. Department of Education to support enriching after-school programming at Nita M. Lowey 21st Century Community Learning Centers around the country. Learn more at: naaee.org/programs/eeblue/21CCLC.