

Green Team – Ecological Restoration of Plaster Creek

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Introduction

Plaster Creek, though its watershed is home to many potential stewards in Grand Rapids, is the most polluted creek in West Michigan. The Green Team, a branch of Plaster Creek Stewards, is a group of students that work during the summer with a focus on research, education, and working directly to restore Plaster Creek. The team works toward this goal through urban green infrastructure, utilizing native plants to manage stormwater. Three Calvin students, Yeri Kim, Benjamin Steenwyk, Rachel Warners, and eight high school students living in the Plaster Creek watershed were hired by PCS this summer to work and learn together. The group was mentored by Gary Warners, a local middle school science teacher. Nearby in Rockford, another Green Team for the Rogue River worked to maintain their watershed and joined the Plaster Creek team occasionally for projects.



Green Teams after a tree planting in Rockford

Our Work

We worked alongside the high school students of the Green Team with our mentor Gary Warners on various Plaster Creek Projects. We joined them in restoring our watershed through native landscaping, meeting community leaders, hearing about environmental careers, and learning in the classroom about watershed ecology. A key focus of our work is to develop personal relationships with the students. To be an open and relatable resource of what college life is like and our journeys to get there. During our days together we learned about each other's diverse backgrounds, cultural nuances, passions, preferences, dreams, and plans for the future. To conclude each session, photos and stories articulating the experience and the importance of our work were presented at a finale dinner for the students and their families. Students received awards and plants highlighting and affirming their unique personal characteristics. Through this work we became better at learning through listening and leading by example. We hope the students leave this experience with a better understanding of restoration, a pride in their positive environmental impacts, and a confidence to pursue college and possibly an environmentally conscious career.

Projects

Seed Collection

Collecting seeds is the first step in plant propagation, students learned how to ID and harvest seeds. These seeds will be grown at Calvin and transplanted by next year's Green Team for future restoration in the watershed.

Native Plant Identification

Flashcards in the classroom, field identification with the flashcards, seed collection, native plant presentation.



Left: Students shadow and assist in cancer research
Right: Students learn to collect native seeds

Rain Gardens and Bioswales

These are methods of green infrastructure that process stormwater using plants. These-bowl shaped gardens catch runoff that would otherwise pollute the creek. Together we worked on planting and maintaining these gardens with Michigan native plants.

Research Shadow Day

For one day each session, students were matched with Calvin researchers to learn and participate in the research process for a college.

Catalyst Partners

We performed maintenance on a bioswale and native landscaping around Catalyst, an environmental consulting business in downtown Grand Rapids. During our visit, we received a tour of the most highly LEED-certified building from president Keith Winn.



Left: Students maintaining a green space
Right: A coastal clean-up on the shore of Lake Michigan

Beach Clean-up Day

Through a beach clean up day we were able to observe the connections of our ecosystems. Plaster Creek flows into the Grand River which then flows into Lake Michigan. Through this day the students were able to see a broader scale of what we are working toward.

Green Team Student Reflections

"There's something so special about working so hard that you fall asleep as soon as your head hits the pillow. That opportunity, paired with an amazing group of people who are willing to both have a serious conversation and be productive in the environment makes work not even feel like work. Quite simply, it's a joy. Each work project and opportunity for an educational lesson came with its own fun. I never dread going to work. I realized one day while moving a wheelbarrow full of mulch, that we are how change begins. Everybody wants to save the world, but I believe we can only inspire others through education and restoration to bring the world down a path to a brighter future. This opportunity taught me that change begins with tiny people in tiny places with big dreams, and change isn't so bad after all."

-Mariah, 2019 GT Student

"I didn't know that you could work so hard and have so much fun at the same time"

-Ellie, 2019 GT Student

"Being able to learn outside of the classroom, in the field was really cool. I really enjoyed learning the names of plants I would see everyday that previously I wouldn't think anything of"

-Luke, 2019 GT Student



The Green Team

"It was really cool meeting new people from different backgrounds and being able to work alongside one another and make new friends."

-Thomas, 2019 GT Student

"Doing meaningful work with other people with similar interests has been a highlight of my summer and a really good opportunity to see what going into this type of field would be like,"

Natalie, 2019 GT Student Mentor

"I really liked catching toads and frogs at work. Through the work we have been doing we are helping promote a healthy environment for them."

-Maya, 2019 GT Student

"It was really hard work, but good work"

-Sam, 2019 GT Student



Green Team planting a rain garden within the Plaster Creek Watershed

Calvin Mentor Reflections

"While we grow in relationship with each other here, we also get the opportunity to spend time participating in the watershed. We find caterpillars and wasps and amazing patterns on leaves and crawfish in the creeks and have the opportunity to help these students cultivate a care for the land and see first-hand the importance of its protection and restoration which is truly an honor as a mentor."

-Rachel, 2019 Senior at Calvin

"Working as a mentor for such a caring and motivated crew this summer was an energizing experience and gave me a new hope for the future that we can restore what we have broken. Change is possible if the action is there to push it forward."

-Benjamin, 2019 Junior at Calvin

"Working with the Green Team and installing curb-cut rain gardens has been an amazing experience that has helped me set a trajectory in what I hope to direct my life towards: engaging with the local community, sharing lives with the youth, and implementing groundwork, such as installing hands-on rain gardens"

-Yeri, 2019 Senior at Calvin

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