

Westchester County Student projects Featured at UN Day program, October 20, 2019

Sunrise Movement: Andrew Basta, Mamaroneck High School
Sunrise is a movement to stop climate change and create millions of good jobs in the process. We're building an army of young people to make climate change an urgent priority across America, end the corrupting influence of fossil fuel executives on our politics, and elect leaders who stand up for the health and wellbeing of all people. We are ordinary young people who are scared about what the climate crisis means for the people and places we love. We are gathering in classrooms, living rooms, and worship halls across the country. Everyone has a role to play. Public opinion is already with us - if we unite by the millions, we can turn this into political power and reclaim our democracy. We are not looking to the right or left. We look forward. Together, we will change this country and this world, sure as the sun rises each morning.



Community Garden Proposal: Yonkers Partners in Education [Students: Darius, Denzel, Kaity, Nicole, Maria, Vraj, Lexamary, Kathleen, Joseph; project facilitators: Aman and Jake]

A group of YPIE students have collectively created a community organization called "Lil Planters". Their goal is to build a community garden to alleviate two problems in Yonkers: The presence of food swamps, which are areas that have access to food but where most available food is unhealthy; and the number of vacant lots throughout the city of Yonkers. "Our solution to these problems is to create a community garden in a vacant lot, which would help address the problem of food swamps, while also utilizing and beautifying a previously unused lot." They have identified a vacant lot on Riverdale Ave., where they plan to fabricate a community garden that would require little maintenance. "We would like to develop a 'food forest,' which is a low-maintenance sustainable plant-based garden for food production. We plan to test the soil, and we will add wood chips to suppress the growth of weeds. We may be planting chives, onions, garlic, and beets, which are easy to grow and are sustainable. Also, we plan to include perennial plants (such as raspberry, asparagus, blueberries, strawberry and others, as well as many different herbs) which will come each year. The entire garden is a shared community, as opposed to restricting harvest from an individual's plot. We will also plant perennial flowers along the borders of the garden to attract pollinators and improve the aesthetics of the plot." The students have put together a list of materials and costs, and have already attracted some sponsors. They could use help from volunteers who are willing to help with the garden. "We will have access to a large number of volunteers from high schools in Yonkers, as well as over 300 students in the YPIE program. The Lil Planters will also put in time to keep the garden well maintained and aesthetically pleasing."

Climate Stories Project: Berenice Tompkins is project manager of the Climate Stories Project (CSP). The project seeks to give a human face to the climate crisis by sharing personal narratives of how climate change is affecting our lives and using music and art to bring these stories to life. Berenice's facilitates student workshops where young people tell their climate stories and gather stories from members of their communities. Berenice will be recording climate stories at the CSP booth at UN Day today, so if you'd like to tell yours, stop by! We can offer you prompts - we all have a climate story to tell, no matter how small it may seem.



Berenice's climate storytelling work was inspired by her participation in three climate walks, one from Los Angeles to Washington, DC and two across Europe, where walkers stayed with local people and heard about how they were experiencing climate change. You can read more about these journeys on her blog, climatefootsteps.wordpress.com. Berenice also works with an organization that provides healthcare and housing to homeless New Yorkers, and she is interested in the relationship between climate change and social justice.



Assessing Water Quality in a Changing Climate: The Yonkers Blue Team, Sarah Lawrence Center for the Urban River at Beczak (CURB) [Lincoln High School Students: Daniel Castro, Ardit Berisha, John Lang, Jr., Delvis Dominguez, Jessica Batac. Advisers: Ryan Palmer, Dean Saghafi-Ezaz]

In summer 2019 10 high school students from Lincoln and Saunders High Schools joined CURB for a six-week paid internship focused on water quality monitoring and field and lab skills training, including completion of a study focused on the link between rainfall and fecal bacteria levels in the Hudson River. The Blue Team collected water samples from the Hudson River and analyzed them for fecal indicator bacteria, took chemical and physical measurements, and collected weather data including rainfall. The Team found a statistically-significant correlation between bacteria levels and rainfall that occurred the day of sampling or the prior day. Rainfall three days or more prior to sampling did not have a significant effect on bacteria levels. During sampling there were three known Combined Sewer Overflow (CSO) events from the Pump Station that discharged over 3 million gallons of partially-treated sewage and stormwater into the Hudson. The Blue Team was able to detect these discharges through changes in bacteria levels, sometimes within hours of the events, presumably due to dilution and tides. It is promising news that most of the samples were below or near EPA levels for safe swimming.

However, as climate change brings more intense rain, as predicted, such CSO events would occur more frequently and severely, which could damage the Hudson River ecosystem and pose a hazard to human health. Strategies that could help alleviate this: 1) Upgrading and fixing the current sewer system, including fixing leaking pipes, and separating combined sewers into separate sewers; 2) investing in green infrastructure that would reduce the stormwater that

gets into the sewer system. This could include changing local laws to require more greenspace in new developments, and encouraging investment in rain gardens, bioswales, green roofs, green walls, pervious pavement, and street trees.

Saw Mill River Flood Abatement: Groundwork Hudson Valley Green Team [Students: Jalen Sermon, Gorton H.S., Pedro Tavares, Roosevelt H.S.; Belinda Asare: Mercy College; adviser Victor Medina]



Groundwork Hudson Valley's Green Team has worked over the past few months on a flood abatement project along the Saw Mill River. The goal of this was to engage community members in restoring an ecologically sensitive site by removing invasive plants, and replacing them with native plants, (black willows, button bush and dogwood) in the hopes of providing habitat to native wildlife. These plants, namely the willows, can safeguard against flooding during excessive rain and extreme weather events, they assist in purifying water by absorbing and toxins or excess nutrients, before they enter the river and stabilizing the banks of the river helping to mitigate erosion and flooding events. Green Team students developed a school program, presented at School-13 and Gorton High School to help grow the willows to be planted and engage their peers in making Yonkers a more climate resilient city.

Testing thermal performance of Solar Cookers. Solar Cookers International [student volunteer Arun Raman; adviser Alan Bigelow]



Photo: Left: Fun-Panel; Center: PEP Test Station; Right: Parvati

Solar cooking is an innovative development, harnessing solar energy for use in cooking food and pasteurization of water to make it safe for drinking; however, commercially available solar cookers are at times prohibitively expensive for many in the developing world. Furthermore, while open-source solar cooker designs are available, few have been tested for thermal performance

according to international standards. This research represents the first attempt to investigate the cooking power of open-source solar cooker models in comparison with commercial solar cookers. Testing was performed by Arun Raman, an SCI volunteer, on two open-source solar cooker designs—Parvati and Fun Panel — according to the ISO-recognized protocol using SCI's Performance Evaluation Process. The results were compared with existing preliminary results for a selection of commercial solar cookers. The outcomes demonstrated that the Fun Panel cooker outperformed the estimated standardized cooking power (in Watts) of commercial reflective-panel solar cookers of similar size and design by 15.3%, while the Parvati cooker lagged behind its counterpart by 59.2%. The estimates were derived from commercial cookers tested to date. Arun won first place in the field of energy for his study "Testing the Thermal

Performance of Open-source Solar Cooker Design Relative to Commercial Cookers” at the Mercer Science and Engineering Fair. His research has been accepted for poster presentation at the Solar World Congress, 2019. He is a senior at West Windsor-Plainsboro High School North.



Video Earth Sustainability: Chanya Holness graduated from Woodlands High School in 2016 and is currently a junior at Stony Brook University (part of the SUNY system). She has produced a very professional 5-minute video on Earth Sustainability that UNA is featuring in our UN Day program. She is pursuing a major in sociology and a minor in professional writing. She will graduate in May 2021. Chanya has previously interned at Greenburgh Town Hall, The New York City Office of Senator Kirsten Gillibrand, and My Sister’s Place. After completing her undergraduate studies, she hopes to continue her education in public policy or law. UNA-Westchester recognized her as a rising star when she was still in high school. View her video at:

(<https://mail.google.com/mail/u/0/#inbox/FMfcgxwDrHwHbPVzFSMMGHMRtNZQwqzg?projector=1>)

Adalinda Sustainable Fashion: Kristen Pereira and mini-models Nevaeh Qune and Miracle Rose. We are a Sustainable Fashion Platform. We provide the infrastructure to designers in a way that elevates their business to the next level. By leveraging visual presentations such as live events and social channels. We connect sustainable fashion designers to their ideal client.

We envision a world without waste and freedom for all human beings. We do this through an unconventional process and grounded in the spirit of community. We focus on global sustainable awareness and education on how we wear and produce clothes.

Reducing Plastic Pollution: [Marissa Glaze, Mount Vernon Magnet School, Boys and Girls Club; Adviser: Sandhya Subbarao] Marissa Glaze is the 2019 Youth of the Year and serves as the Youth Ambassador of the Boys and Girls Club of Mount Vernon. She is a Sophomore at Mount Vernon Magnet School for the Performing Arts.



Learning about the harmful impact of plastic on our planet’s oceans compelled Marissa, who grew up in Jamaica and its blue waters, to act on her values. She uses her platform as Youth of the Year to affect change within her community. She has run educational presentations for younger members of the club, collected signatures, and petitioned her County Legislator to take action on climate change, organized neighborhood clean-ups, and spoken out against single-use plastic products on social media. If you are on the Southside of Mount Vernon, you might see Marissa walking the street and picking up plastic bottles on her way home from school. She takes these bottles to a recycling facility every weekend. Stop and say hello to Marissa. The passion in her voice to limit the plastic destruction of our oceans may inspire you to reduce, reuse, and recycle plastic to preserve our planet for future generations.