

ENVIRONMENTAL EDUCATION ADVISORY COUNCIL (EEAC)

ENVIRONMENTAL EDUCATION PROJECTS FORUM (The Forum)

## REPORT ON FORUM WORKSHOP 6

4/20/2023

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The EEAC Program Committee held Forum Workshop 6 on February 15, 2023, 5:30-6:30 PM on zoom. Fifty-six people registered for the workshop; 34 participated in the discussion groups and plenary time.

## INITIAL PLENARY SESSION

The workshop began with a welcome from EEAC Vice Chairperson and Program Chair Robin Sanchez and EEAC Program Committee and Forum zoom organizer Bethany Kogut. They introduced the EEAC Steering Committee members present. Robin reviewed the agenda for the workshop and then EEAC Steering Committee member Mike Zamm focused on a brief explanation and history of the Forum.

This included an overview of the Forum's evolution from the movement to infuse environmental concepts into the New York State Education Department Syllabus and Curriculum (1982-1995) and the effort to motivate colleges of education in New York State to integrate environmental education into their teacher preparation programs ([Teacher Environmental Education Preparation-TEEP](#), 1999-2010 and 2016-present). As the Forum grew out of the TEEP workshops in 2016-19, TEEP has become one project of the Forum as discussed in Forum workshops in 2021 and this year. The Forum has grown into a network of environmental educators and environmentally related professionals working to create and implement systemic

projects that establish environmental/sustainability education in schools and non-formal settings in NYC and its immediate region.

Mike Zamm described current Forum projects. The [Syllabi Bank](#), a collection of courses in environmental education available online for those colleges of education and other teacher training institutions that want to expand the infusion of environmental concepts into their teacher preparation programs, is the main manifestation of the original TEEP venture. As of this writing, over 2,500 downloads of courses have occurred from educational institutions throughout the U.S. and the world, although only a few New York State colleges of education have utilized the resource.

The “weather stations in schools” project, done in cooperation with the [NOAA Cooperative Science Center for Earth System Sciences and Remote Sensing Technologies at City College](#), has installed weather stations in 25 NYC schools with more on the way.

The precept that “all persons have a right to learn how nature works” was formulated at [Forum workshop 5](#). The Forum committee responded by creating a multi-faceted project which included motivating a significant number of people to vote for the [environmental rights amendment to the New York State Constitution](#) which states that “Each person shall have a right to clean air and water and a healthful environment.” [The amendment was overwhelmingly approved by the voters in November 2022](#).

Another aspect of the “learn how nature works” project is participation in the Climate Resilience and Education Task Force’s development of an online platform on climate change education that can be accessed by schools, teachers, students, policy makers and citizens. A Forum representative has been active on the platform committee and has been effective in ensuring that more climate change education in teacher preparation programs is included in the committee’s recommendations.

The final current Forum project is the [database on environmental resources \(environmental education clearinghouse\)](#) which is an online source of curricula, programs, professional development opportunities, field trips and materials for teachers and their students.

# DISCUSSION GROUPS

Participants then went into breakout rooms on Zoom to discuss possible project ideas.

## GROUP 1 - Engaging Youth in Systems Thinking

Facilitator: Eliza Brenman, Manager of Education and Training, NYC Department of Education, Office of Sustainability

Note taker: Fran Agnone, EEAC Steering Committee

General Question: How can we help youth explore service systems in the community with the goal of developing plans to achieve net zero emissions?

Specific Questions:

1. What are specific service systems in communities and how do they work?  
Examples: electricity, heating, transportation, food, waste removal, communications, water, housing, open space, safety, public health.
2. How can each be structured/delivered in a way that addresses climate change and that involves youth?

\*The group can focus on one, two or three systems; you don't have to address each one.

IDEAS FROM DISCUSSION: Tours of energy systems such as boiler rooms, school solar panels; connect with Con Ed for career development; in each topic or service area how can we help youth and the public understand how things work—weather stations, electricity, green infrastructure, car charging stations, waste treatment plants, food distribution centers.

REFLECTION: What gaps are there in this area where new programming and partnerships are needed? What are our next action steps as individuals and organizations?

MAJOR PROJECT: High School students take tours of energy systems through Con Ed, other deliverers of energy with possible career links.

## GROUP 2 - Developing A Climate Action Plan With Consideration for Environmental Justice

Facilitator: Beau Morton, Director of Environmental Health and Education, WE ACT for Environmental Justice

Note taker: Amanda Levy, NYC Department of Health, Chair of EEAC

General Question: What are the factors that should be considered when evaluating whether a climate change action plan is fair and comprehensive with respect to environmental justice?

Specific Question:

1. What strategies can community organizations and schools take to implement an environmental justice based action plan?

IDEAS FROM DISCUSSION: We must first get schools to commit to focusing on climate change, not always an easy task; particularly complex with K-2 students since we don't want to introduce any anxiety producing subject matter; storytelling can be effective especially if it connects with personal experiences of younger children. In general, community based partnerships are important in starting an environmental justice based climate education/action plan.

MAJOR PROJECT IDEA: How can we help youth and the public understand how things work, e.g., how a school-based weather station, an electric charging station and specific green infrastructure techniques work?

## GROUP 3 - Exploring Connections Between Green Infrastructure and Climate Resilience

Facilitator: Alisen Downey, Green Infrastructure Planning and Partnerships, NYC Department of Environmental Protection (NYC DEP)

Note taker: Ray Pultinas, James Baldwin Outdoor Learning Center, EEAC Steering Committee

General Question: What activities and materials can be used to help students understand the importance of green infrastructure in addressing climate change?

Specific Questions:

1. What are the most significant green infrastructure techniques and how do they work?

2. How can schools implement some of these techniques?
3. What techniques integrate green infrastructure and resilience?

IDEAS FROM DISCUSSION: Develop a resource guide of green infrastructure places that are open to having kids visit; students take tours of green infrastructure throughout the city; students build model watersheds; DEP has a public map of all green infrastructure in the city; EEAC gathers locations of green infrastructure sites that allow students/schools to visit, e.g., botanical gardens; [ArcGIS DEP](#) Green Infrastructure tours; [NYC Virtual Water Tour](#) with a stewardship section; Green Infrastructure Education Model-DEP; Arbor Day; Harbor Protectors—stewardship, catch basin cleanup and stenciling, rain garden care, shoreline cleanups.

MAJOR PROJECT IDEA: Develop a citywide tour with virtual and in-person components of green infrastructure replete with a resource guide and public map available to all New Yorkers.

## GROUP 4 - Improving Public Education on Climate Change With Youth Engagement

Facilitator: Elissa Teles Munoz, Coordinator, National Wildlife Federation's Climate and Resilience Task Force

Note Taker: Dan Tainow, NYC Department of Parks and Recreation, EEAC Steering Committee

General Question: How can we improve on current efforts to educate the public about climate change and how can students be involved in that effort?

IDEAS FROM DISCUSSION: Student newsletter or newspaper, print and/or online, on climate change; students host community workshops; a [YouthCaN](#) type conference such as the ones held at the American Museum of Natural History, on climate; students design lessons on climate; development of storytelling workshops.

MAJOR PROJECT IDEAS: Create a student newspaper on climate change with online and print versions, to be disseminated to the public.

Organize a YouthCaN conference on climate at the American Museum of Natural History (AMNH) with representation from many countries similar to the YouthCaN conferences on environment coordinated by Millard Clements of NYU, Jay Holmes of the AMNH's education staff and others for many years.

## FORUM 6 PROJECTS SUMMARY

### Specific Projects

- High school students take tours of energy systems, e.g., an electric power plant, through Con Edison, other deliverers of energy, with career links.
- Project to help youth and the public understand how things work, e.g., a school based weather station, an electric car charging station, specific green infrastructure techniques.
- Develop a citywide tour with virtual and in-person components of green infrastructure replete with a resource guide and public map available to all New Yorkers.
- Student newspaper on climate change.
- A YouthCaN conference on climate.

### An Integrated Project Strategy

- Develop a basic course on “How Things Work” which would teach participants how the following operate:
  - A school based weather station
  - An electric car charging station
  - An electric power plant with different fuels
  - A boiler
  - A photovoltaic solar energy electricity system
  - A wind based electricity system
  - A solar hot water and/or space heating system
  - Various green infrastructure techniques such as a bioswale, rain garden and rainwater harvesting system
  - Other systems

This could be a course for teachers with variations for students and the general public. It could include some of the specific project ideas above such as tours of energy systems, virtual and in-person green infrastructure tours, public maps, etc.

This is an idea that was first suggested in the early-mid 1990’s by the EEAC Steering Committee. There was an attempt to set up a course at NYU for teachers on “How Things Work” for which they could earn credits towards licensing requirements, but the cost of the course was high when compared to other options available to NYC teachers at the time and the project was never completed.

Developing such a project at this point in time would take a team of educators working with the Environmental Education Projects Forum to successfully implement. This endeavor could have a significant impact on environmental education in NY.

## FORUM 6 PROJECTS FOLLOW-UP

Six participants from the February 15 Forum workshop met on 3/30/2023 to discuss the ideas described above. The six attendees, who responded to an email sent to all those who were involved on 2/15/2023, were Bethany Kogut, Ray Pultinas, Robin Sanchez, Dan Tainow and Mike Zamm from the EEAC steering committee and Nikki Alexander from NYC DEP.

They narrowed and amended the list of projects listed above to two choices:

- High School students take tours of energy systems, e.g., an electric power plant, through Con Edison, other deliverers of energy, with career links;
- A YouthCaN Conference on “How Things Work”. This wouldn’t have to be international in scope like the original YouthCaN conferences but could focus on NYC and the region.

Based on additional feedback from the EEAC steering committee we decided to focus on the YouthCaN Conference on “How Things Work”. This project will be added to the set of projects currently being implemented by the Environmental Education Projects Forum. We invite all those in the EE community to participate.

Submitted by [Mike Zamm](#), EEAC - the Forum