

TrashMasters!
Team **Up** to Clean **Up**



High School Division
Queens Borough
Winner

Maspeth High School

2014 GOLDEN APPLE AWARDS

This certificate is awarded with the sincere appreciation and esteem of a grateful Department and City in recognition of your school's efforts to help make New York City shine.



City of New York
Department of Sanitation
Bureau of Waste Prevention, Reuse and Recycling
nyc.gov/recycle

NYC
Recycles

2014 Golden Apple Awards Contest Entry Judging Info

(This sheet prepared for judges' use by DSNY BWPRR)



ID Info: 14021
School: Maspeth High School
Grade Division: HS
Borough: Q

Golden Shovel Award contestant
(for borough Master School Composter)

2014 Project Entries received for:

School Population: total # 484

Core Group: **Total Participating:**

TrashMasters! Super Recyclers

Received:

TrashMasters! Reduce & Reuse Challenge

Received:

TrashMasters! Team Up to Clean Up

50

400

Maspeth Green Club Cleans Queens and Beyond

Received: 5/1/2014

Following two successful Golden Apple wins, the Maspeth Green Club completed another 14 projects this year. Gardening, neighborhood cleanups, and environmental advocacy projects included: ACE leadership training and Powershift conference; Onderdonk grounds cleanup; windowfarm hydroponic gardening; neighborhood cleanups; Million Trees giveaway campaign; daffodil planting; S.T.O.P. bags conference; sustainability calendar art contest; anti-litter public service announcement; Showtime documentary filming; recycling and composting; campus gardening and habitat construction; Eco-Schools USA audit completion and Green Flag designation; Scientist in Residence grant research; and science fair.involvement, and the support of numerous partners and community organizations.

Prior Year Entries:

12:TU-boro;13:RR-C

Current Prizes

14:TU-boro

School Contact Information:

Phone: 718-803-7100
Address: 54-40 74 St
Maspeth 11373

Contest Coordinator: Aaron Bell, advisor

Block&Lot: 4028030001
DOE Location: Q585
DOE Bldg: Q585

Principal: Khurshid Abdul-Mutakabbir

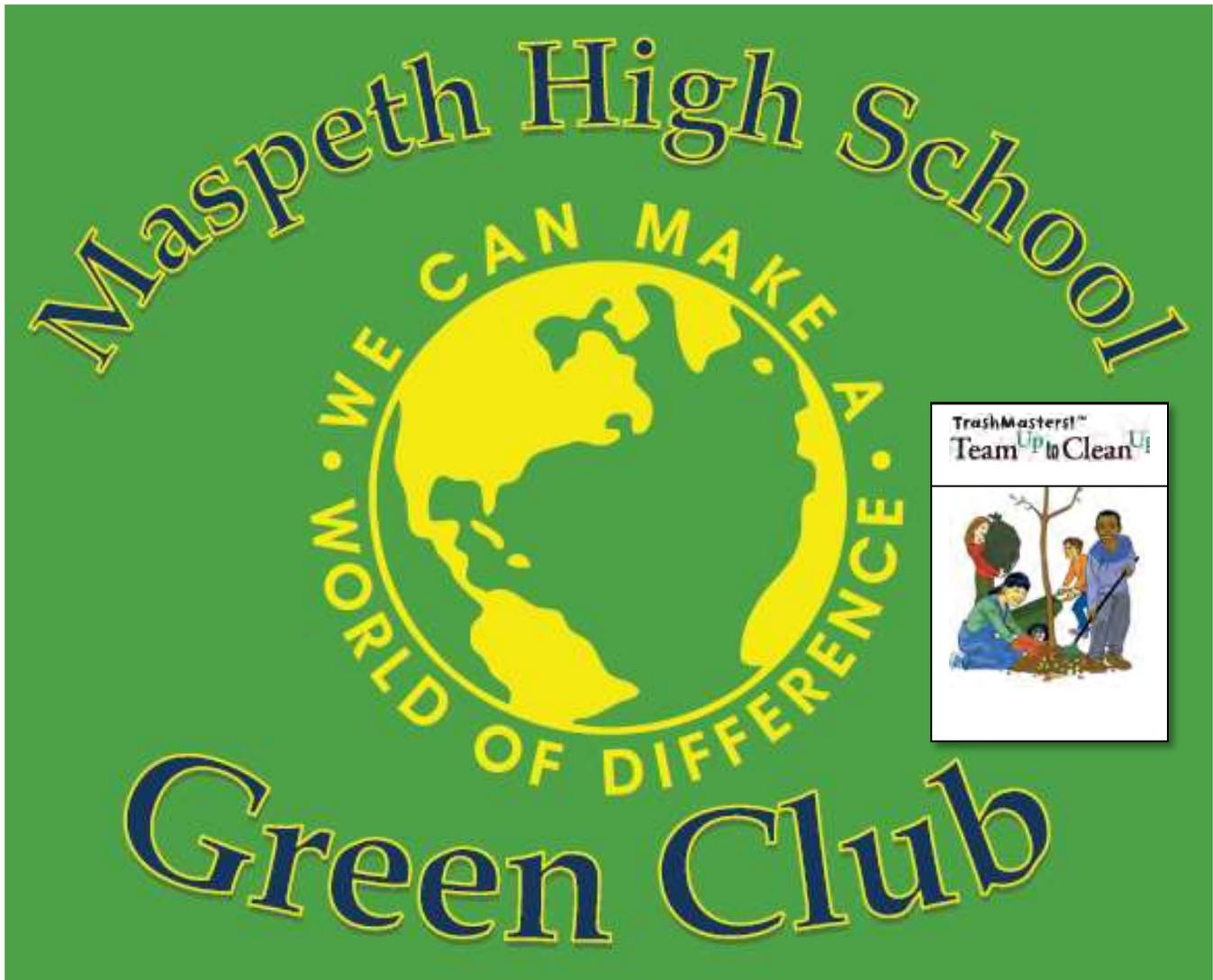
Sustainability Coord: Aaron Bell

REQUIRED for Super Recyclers only:

Custodian: STEPHEN SIGLER

Info Confirmed:

Team Up to Clean Up Contest: **Maspeth High School Green Club**



The Maspeth High School Green Club Logo

SCHOOL INFO

- School Number: Q585
- Official School Name: Maspeth High School
- Street Address, City, Zip: 54-40 74th Street, Maspeth, New York, 11373
- Phone # 718-803-7100, Fax # 718-803-7105
- Principal: Mr Khurshid Abdul-Mutakabbir, Phone #718-803-7100, kam@maspethhighschool.org
- Contest Coordinator: Aaron Bell, Maspeth High School Green Club Advisor and Biology Teacher, 718-803-7100, abell@maspethhighschool.org
- School description — See Below

Maspeth High School is the first public high school in the Queens community of Maspeth. The school benefits from a state-of-the-art facility constructed under the **School Construction Authority's Green Guidelines**. There are currently 750 students in grades 9-11 attending the school. Maspeth High School is one of five Eco-Schools USA Green Flag Awardees in New York City. The following is a description of the school.

OVERVIEW

We are a comprehensive high school that offers a diverse curriculum, many extracurricular activities and sports teams. Our mission is to introduce students to an understanding of the liberal arts and put them on the pathway to becoming lifelong learners with strong character.

COURSES AND PROGRAM HIGHLIGHTS

Program Highlights: Extensive Fine Arts program featuring Visual Arts, Music, Dance and Theater; Advisory, Career & College Counseling, Exploratory Learning

Our instructional model is based on the Greco-Roman Trivium. We emphasize memorization, logic and technical speech. Students at Maspeth High School will partake in the following classroom activities:

Socratic Seminar – Students will sit in a circle and have an additive dialogue where they will use a text (i.e. The Iliad, Satyricon) to back up their thought. Students will be assessed on their active listening, locution and organization of facts. Socratic Seminar will be used as summative assessments primarily in English and Shakespearean Theater classes.

Debate – At MHS we use debate in our History and Civics classes. Students will participate in Team Policy, Parliamentary and Lincoln Douglas style debates as a form of assessment. We adhere to same rules and regulations that are used in competitive debates. In debate, students will learn to use technical speech to further their arguments while rebutting the arguments of their competitors.

Declamation – Students at MHS will perform 3 declamation pieces per year. A declamation is public recitation of powerful, persuasive and often political speech (i.e. The Gettysburg Address by Abraham Lincoln).

Public Speaking – We strongly encourage public speaking at MHS. At our monthly town hall meetings, students will be encouraged to speak publically in front of the whole student body. Students will be routinely assessed on their speaking techniques and delivery. We will train students to be able to disseminate information using logic and reason and then speak using facts and figures in a public setting.

Hands on Science – Our science program at MHS will follow the sequence: Biology -> Chemistry -> Physics -> Astrophysics & Natural Cosmology. We also offer Earth Science, SAT Biology, AP Biology, AP Chemistry, AP Physics B and AP Physics C as electives. All of our science classes are 6 or 7 periods per week with hands on laboratory experience and inquiry work.

CONTEST ENTRY INFO

- Borough: **Queens**
- Grade Division (Elementary, Intermediate, High School): **High School**
- Contest Entry Title (10 words or less): **Maspeth Green Club Cleans Queens and Beyond.**
- Contest Entry Summary (in one short paragraph): **The Maspeth High School Green Club is honored to seek designation as a *Trashmasters Team Up to Clean Up* award winner as part of the Department of Sanitation's Golden Apple Awards. The club took on a wide variety of projects, from gardening to neighborhood cleanups to environmental advocacy. Following two successful Golden Apple years, Maspeth Green Clubbers again sought to improve all of the places entrusted to them, from their own school building and grounds to New York City and beyond. The club thanks the Department of Sanitation for helping it focus its efforts.**

STUDENT INVOLVEMENT

- Student Participation: Core Group #: **50**
- Student Participation: Total #: **400+**
- School Population: Total #: **750**

TEAM UP TO CLEAN UP PROJECTS

Project 1: ACE Leadership Training and PowerShift Conference

Project 2: Onderdonk Grounds Cleanup

Project 3: Windowfarm Hydroponic Gardening

Project 4: Neighborhood Cleanups

Project 5: Million Tree Giveaway Campaign

Project 6: Daffodil Planting

Project 7: S.T.O.P. Bags Conference Participation

Project 8: Sustainability Calendar Art Contest

Project 9: Anti-Litter Public Service Announcement

Project 10: Showtime Documentary Filming

Project 11: Recycling and Composting Continuation

Project 12: Campus Gardening and Habitat Construction

Project 13: Eco-Schools USA Audit Completion and Green Flag Designation

Project 14: Scientist in Residence Grant Research and Science Fair

Note: All projects served as important educational opportunities this year and are linked to standards of the New York State Living Environment Curriculum (available online at <http://www.p12.nysed.gov/ciai/mst/pub/livingen.pdf>). Please visit "educational components" at the end of this document to see how the MHS Green Club projects align to the curriculum.

Project 1: ACE Leadership Training and PowerShift Conference







Implementation

Why this: After a Spring 2013 visit to our school by ACE, the Assembly for Climate Education, to speak to Maspeth students about climate change, the Green Club was invited to participate in a leadership conference at the American Museum of Natural History in Manhattan. Representatives from ACE offered the MHS Green Club members a chance to complete team-building exercises with like-minded students, to discuss climate initiatives, and to visit the *Our Global Kitchen* exhibit to better understand the complex financial forces that drive the global food industry. This trip clarified for many students the relationship between consumers and the food they eat and demonstrated the benefits of locally-grown, sustainable harvests, **which proved valuable in the club's** later gardening projects. It also inspired me to purchase a WindowFarm hydroponic kit (see Project 3).

Following the leadership training, Green Club member Iris Chen was selected as one of sixteen high school students in New York City (and sixty-eight nationwide) to join ACE at the national PowerShift Conference, a 10,000 strong gathering of individuals partaking in the grandest cleanup project of all: that of the Earth itself. The conference **focused on building momentum to "fight fracking, divest from fossil fuels, demand climate justice, and build a clean energy economy that works for everyone."**

What we did: The Green Club travelled by subway to the American Museum of Natural History in Manhattan. Maayan and Lana from ACE led the group to Central Park where they participated in team-building exercises alongside students from other schools. After a healthy lunch and discussion, the Green Club visited the *Our Global Kitchen* exhibit, which introduced students to applications of biotechnology in agriculture, threats to ecosystems as a result of **agriculture's** accelerating globalization, and displays of food cultures from around the world (past and present). The Green Club members sampled Aztec cuisine in the exhibition kitchen and learned how they could buy or grow heirloom varieties of vegetables that are not only tasty but also wellsprings of genetic diversity.

In October of this year, Iris Chen took an all-expense paid trip to Pittsburgh by bus with a select group of invitees from high school, joining thousands of college-age students advocating for climate solutions. There, she learned about climate change and the particular threats to clean water and air posed by fossil fuels, whether in the techniques humans use to obtain them (i.e. fracking) or in their consumption.

Project planning: Maayan Cohen, New York Education and Leadership Manager for ACE, orchestrated the leadership training and **timed the students' trip to coincide with the *Our Global Kitchen* exhibit at the AMNH.** This was fortunate, **as the exhibit's run at the museum ended less than three months later.** Maayan was also instrumental in encouraging Maspeth students to apply for the limited slots available for the PowerShift Conference. When Iris was selected, Maayan **coordinated Iris' trip to Pittsburgh.**

Student involvement: Sixteen students from Maspeth joined a handful of other students from New York City and Connecticut. Iris was the only Maspeth Green Clubber to be selected for the PowerShift Conference.

Promotion: The Maspeth community was excited to listen to a town hall presentation by Lana of ACE about climate change in the spring of 2013. After the presentation, the Green Club invited her to see its green initiatives. This set up a relationship that led to ACE inviting Maspeth students to the leadership training.

Collaboration: We were lucky to have ACE teach the Maspeth student body about climate change in an engaging way. They covered all expenses for the leadership training. They also paid all expenses (food, lodging, transportation, and admission) for Iris Chen's participation in the PowerShift Conference in Pittsburgh.

Analysis

What Worked: Iris came back from the PowerShift Conference with raised awareness about environmental concerns in America and around the world. She delivered a PowerPoint presentation to the Green Clubbers educating them about the dangers of hydrofracking and the campaign to divest from fossil fuels. Her leadership skills grew immensely, which not only helps the club but also prepares her for careers in which public speaking, debate, and advocacy are featured. The leadership conference at the American Museum of Natural History was likewise beneficial, as all in attendance felt more empowered about changes they can make at the school level or in their personal lives to make New York City a cleaner and more environmentally-friendly place. Students received aluminum water bottles that take plastic bottles out of the waste stream. The *Our Global Kitchen* exhibit demonstrated that food does not simply appear on grocery store shelves. Instead, a complex chain exists from farm to table that is governed by economics, industry, biotechnology, preference, and choice. Students were able to see the benefits of locally grown produce, as it reduces the consumption of fossil fuels in transport and packaging. I immediately purchased a Windowfarm for my classroom to grow vegetables hydroponically, offering a range of biology appropriate lessons. I also purchased heirloom seed varieties of rainbow chard and tomatoes from the Hudson Valley Seed Library. Not only are they delicious, they are genetically diverse, an advantage in this age of monoculture.

What Didn't Work: I was disappointed that despite a delicious lunch featuring healthy food choices such as hummus and whole grain bread, the Central Park location in which we picnicked for the leadership conference did not have recyclable containers to properly dispose of aluminum cans.

Applicability to other Schools: ACE can be contacted by any school in the DOE to set up a similar collaboration.

Measuring Success: During our Green Flag Ceremony this month, Iris delivered a powerful message about the Green Club's goals for the future, specifically highlighting the reduction of waste at our school. Many of her points were sharpened by her attendance at the National PowerShift Conference in Pittsburgh. The experience broadened her horizons and allowed her to see the possibilities of many people working together toward change. In the ultimate cleanup effort, students like her will make decisions about hydrofracking, the keystone pipeline, and shifts from a fossil fuel based economy to a renewable energy economy.

Project 2: Onderdonk Grounds Cleanup





Implementation

Why this: The Vander-Ende Onderdonk House in Ridgewood, Queens is the oldest Dutch Colonial stone house in all of New York City, and occupies land on the Queens-Brooklyn border that Peter Stuyvesant once granted in the mid-1600s. Construction began on the current structure in 1709. Today, the house and its grounds are an oasis in an otherwise industrial area. The two-acre Onderdonk property surprises many visitors in just how apart it feels, in both time and place. Chickens inhabit a coop on a sloping lawn with views to the Manhattan skyline. Tulips, daffodils, and an array of other flowers poke through the green in abundance. Despite its bucolic atmosphere, though, the Onderdonk House does face assaults from its surroundings and guests. Careless weekend wedding-goers leave beer caps in the grass. They join glass pieces that have occupied the site since it was a scrap glass business in the 1900s. Passers-by regrettably toss miscellaneous items over the fence because it is one of the few places in the area that offers open space.

The Key Club and Green Club wanted to team up to rejuvenate the property, keeping the New York City Landmark house and grounds a shining example of preservation in Queens.

What we did: The Maspeth High School Key Club and Green Club were first treated to a tour of the **Onderdonk's** rooms and the colonial artifacts housed within its museum space by curator Richard Asbell. Group members then split up into teams and set to work **cleaning the house's windows, removing litter from the surrounding grounds, raking** leaves, spreading mulch around its garden beds, and tidying up. At the end of a few hours, the students and teachers helped Richard Asbell and Ginny Comber secure the fence at the Troutman Street edge of the property. The fence had detached from a brick wall, leaving the grounds open to vandals and trespassers.

Project planning: Jessica Anderson, the advisor of the Maspeth High School Key Club, reached out to Virginia (Ginny) Comber and Richard Asbell of the Onderdonk House. Ginny planned the specific projects and provided refreshments to the Green Club and Key Club members. Richard gave students a tour of the house and coordinated the garden projects.

Student involvement: Fourteen students from two Maspeth clubs (Key Club and Green Club) joined forces to supply the Onderdonk team with a volunteer crew for the day.

Promotion: Ms. Anderson informed our club about the Onderdonk Cleanup plans.

Collaboration: The Maspeth High School Green Club has teamed up with the Key Club on a number of occasions. The two clubs share a community service focus and Key Club advisor Jessica Anderson is a motivated and enthusiastic planner. We hope to form a partnership with the Onderdonk staff to complete a cleanup once per year. **The Onderdonk's beautiful flower gardens are abuzz with life and provide inspiration and learning opportunities for the Green Club's aspiring gardeners.**

Analysis

What Worked: The Onderdonk House is a short bus ride away from the school and yet is a world away. The students earned valuable volunteer experience and saw how committed individuals can create a veritable refuge in the middle of an urban center.

What Didn't Work: I only wish we had more time at the beautiful site! We arrived in the afternoon and finished in the early evening.

Applicability to other Schools: Many parks and landmark sites in New York City would likely love to have volunteer help. **Contacting representatives of New York City's treasured locales is easy to do.**

Measuring Success: By the end of the day, bags of litter had been removed from the Onderdonk setting. The windows were glinting in the sun and the fresh mulch provided a renewed backdrop to the hundreds of flowers in the

gardens. The students, far from acting tired, told me "That was fun!" Ms. Anderson and I remarked that seeing students in action at a club event is often the best way to really get to know them. It is also one of the most rewarding aspects of teaching. Learning opportunities often arise in unexpected places, as they did when my students encountered a little brown bat suffering from the aftermath of white-nosed syndrome gripping a rope with its teeth just feet from the white stone of the Onderdonk. My students loved identifying flowers on site. They also observed the resident chickens feeding.

Project 3: Windowfarm Hydroponic Gardening





Implementation

Why this: After the Green Club's field trip to the American Museum of Natural History and its inspiring *Global Kitchen* exhibit, I purchased a four column WindowFarm online. The WindowFarm enables Green Clubbers and biology students alike to learn about food production, photosynthesis, and specific factors that affect plant growth. Many students love the WindowFarm because it doesn't involve soil. Plants are grown in a clay pellet substrate and receive all of their nutrients from a growth solution that is pumped to the top of the hydroponic columns with air pumps. This indoor gardening project reinforces my lessons and encourages commitment from the Green Club members; they are in charge of replacing the water in the reservoirs, carefully apportioning nutrient and supplement solutions, and tending to the plants. My students also periodically harvest the warm microclimate plants (red romaine, watercress, and red-veined sorrel). The freshness in taste is remarkable when compared to store-bought produce.

What we did: Students unpacked the four-column WindowFarm when it arrived at school. The out-of-box kit included four metal baseplates and frames, sixteen funnel-shaped planters, sixteen net cups, sixteen gaskets to seal the net cups into the planters, four reservoirs to contain water and nutrients, two air pumps with tubing, a mechanical timer, and clay pellets and coconut husk to serve as substrate. The students assembled the four towers, placed the warm microclimate plants at an angle in the clay pellets, and plugged the pumps in to send water steadily to the top of the vertical garden. They set the mechanical timer to keep the system running for fifteen minutes out of every hour, enough to keep the plant roots nourished. The students watched over a period of a few weeks as the hydroponically grown plants grew large (and delicious) leaves in their relatively small planters. They test the water from time to time with pH strips provided by WindowFarms.



Project planning: After seeing the WindowFarm on display at the *Our Global Kitchen* exhibit at the American Museum of Natural History, I was hooked on the concept. The curators of the exhibit had partnered with WindowFarms to grow fresh produce in a room using an LED array to power **the plants'** photosynthesis. The vertical towers are appealing to look at and remind me of future-forecasting experiments involving growing plants hydroponically in the limited confines of a space vessel. I searched for the name of the hydroponic system online and was directed to the WindowFarm website: <https://www.windowfarms.com/>. Various setups are for sale on the site; I chose a four-column Windowfarm for maximum effect as my biology classroom features lots of south-facing window space.

Student involvement: Approximately ten Green Club members set up the WindowFarm. Over two-hundred students have been taught about hydroponic gardening during biology lessons in the school day. A dedicated group of Green Clubbers tends to the plants after school and keeps the reservoirs at the appropriate volume, dilution, and pH. Many students have had the chance to sample freshly picked produce from the columns to experience the difference between store-bought, globally shipped greens and those available directly from a still-living plant.

Promotion: The WindowFarm is an everyday promotion for the Green Club. Students and staff members often see it and remark that it is not only functional, but beautiful.

Collaboration: I have the American Museum of Natural History and the curators of the *Our Global Kitchen* exhibit to thank for the instant inspiration. I rarely experience a "must-have" moment as acutely as I did the day I saw the WindowFarm on display in one of the world's most famous museums. WindowFarm inventor Brita Riley conducted a Kickstarter campaign to bring the commercial design to market; the design was refined by years of crowdsourcing.

Analysis

What Worked: The WindowFarm is an educational tool and an inspirational tool. It demonstrates every day how plants grow, something I can incorporate into biology lessons about autotrophic nutrition, heterotrophic nutrition, and ecology. Rather than be forced to choose between days (or weeks) old greens packaged wastefully in plastic at many Queens supermarkets, students see with the WindowFarm Kit a clear alternative: vegetables can be grown on a small, sustainable scale AND taste better!

What Didn't Work: Following the first planting, the roots of the plants started to grow out of the net cups into the planters, clogging the flow of water. This caused water to accumulate in the planters and then to flow onto the classroom surfaces. Fortunately, I had a plastic pan placed below the metal frames to prevent damage to the wood below. Occasional trimming of the plant roots prevents this problem. After the club's second planting, I hurriedly tried to plug the air pump cords into a classroom outlet. In my haste, I pulled one column of plants too far from its center of gravity which caused the column to fall over, knocking into a second column. This resulted in an hour of cleanup.

Applicability to other Schools: The initial cost of a four column WindowFarm complete with plants is approximately \$400. One column Windowfarm bundles are \$200, so there is savings in buying the four-column kit.

Measuring Success: There is something very satisfying about indoor gardening, especially using unconventional hydroponic techniques. My students routinely get to enjoy the most local of locally grown produce. I love that the plants continue to produce leafy greens for months on end, fulfilling a role as a daily occurring and replenishing farmers' market. The vertical gardens have a small footprint and maximize space efficiency.

Project 4: Neighborhood Cleanups





Young And Old Pitch In For Spring Cleaning At Elmhurst Intersection



Over 20 people, both young and old, put their muscles to work cleaning the street and walls at 57th Avenue and 80th Street in Elmhurst last Saturday, Apr. 12. Many of those at the event were from the Juniper Juniors, an offshoot of the Juniper Park Civic Association, and the Maspeth High School Green Club. (photo: Marcin Zurawicz)

Implementation

Why this: For the third year in a row, the Maspeth High School Green Club teamed up with the Juniper Park Civic Association and its youth volunteer arm known as the Juniper Juniors to perform community cleanup projects. Juniper Juniors coordinator Len Santoro twice oversaw cleanups of the heavily travelled corridor near the intersection of 57th Avenue and 80th Street in Maspeth. The first cleanup took place in September, focusing on removing litter and fallen brush still left over from previous storms such as Hurricane Sandy. The second cleanup took place in April. For that event, the Green Club again removed litter but also participated in graffiti removal. The club loves collaborating with other civic groups to complete community service and to beautify the neighborhoods of Queens.

What we did: On Saturday, September 28th, 2013, approximately thirty students, a record for the Green Club, joined forces with the Juniper Park Civic Association, the Juniper Juniors, and neighborhood volunteers to clean up the strip of land across from Elmhurst Park. The park, in the location once occupied by the infamous Elmhurst Gas Tanks, is a popular destination on the Maspeth/Elmhurst border. **The surrounding streets suffer from the park's** popularity however. Cars line up to park along 57th Avenue adjacent the park and in the shadows of the Long Island Expressway, with people frequently dumping garbage along its length. The club removed dozens of bags of garbage then raked the still green grass. Large fallen organic debris was also piled up for collection.

In April, the Green Club returned to the site for a second cleanup. Once again the club was well represented with about fifteen student and parent volunteers joining other community volunteers on the first day of April vacation. They collected even more garbage from the strip of land, amassing a large pile of trash bags filled with refuse. The club focused less on organic material like fallen branches and more on discarded plastic, of which there seemed no end. A volunteer from the New York City Parks and Recreation Department joined the Green Club, the Juniper Juniors, and the Juniper Park Civic Association to complete the entire length of the avenue from 80th street to 74th street. The bridge over the rail line had been heavily targeted by vandals. The club helped repaint the bridge as well as to paint over graffiti on the walls of the raised Long Island Expressway.

Project planning: Len Santoro contacted me by email for both cleanups, continuing a strong partnership between two groups in Maspeth that both care deeply about the community's maintenance. Len supplies rakes, shovels, garbage bags, gloves, paint, paintbrushes, rollers, and any other necessary equipment for cleanup projects.

Student involvement: To have thirty students give up a beautiful September Saturday morning and afternoon to take part in the first cleanup was wonderful. It was a weekend record for us but also showed the growing strength of the MHS Green Club as a community service organization at our school. Many upper-class students that had not been involved with the club came out for the first time during that weekend. Despite having half the numbers for the

second cleanup, this was perhaps equally remarkable, as many students gave up the first day of their school vacation to participate.

Promotion: Len often notifies me about planned cleanups weeks in advance. This gives me time to announce the Saturday cleanups to the Green Club members and to distribute DOE permission slips. I in turn tell my students about the cleanup activities, letting them know that they can participate whether they are in Green Club or not.

Collaboration: The Juniper Park Civic Association's partnership with the Maspeth Green Club is one of the club's strongest. Teenagers in the Green Club get to simultaneously see role models in action (the adults who volunteer their time to beautify the neighborhood) and serve as role models for the middle school age Juniper Juniors.

Analysis

What Worked: The land opposite Elmhurst Park had a total facelift as a result of the efforts of the Juniper Park Civic Association and the Maspeth Green Club.

What Didn't Work: The simple fact that the club had to return to the site indicates how much stress it is under. Even after removing dozens of bags of garbage from the land on the first occasion, the club piled up dozens more the second time. The first cleanup featured an unhappy surprise. Many of the volunteers were exposed to the oils from poison ivy or poison oak and had the blisters to show as signs of their labor!

Applicability to other Schools: Assembling a team of student volunteers is relatively easy, especially with the guidance of a community group as dedicated and organized as the Juniper Park Civic Association. To incentivize the cleanups, students at Maspeth High School earn community service hours for their participation. All Maspeth High School students must complete fifty hours of community service before they graduate.

Measuring Success: Each cleanup was a tremendous success because a severely littered area underwent a complete transformation. Each time I thought that the strip of land was beyond help, Green Clubbers showed that it could be made to match the beauty of Elmhurst Park across from it, which is regularly cleaned. I told a photographer for Eco-Schools USA that I was nevertheless discouraged because even days after the cleanup, litter was strewn about over recently beautified land. She told me that I have to think positively; neighborhood cleanups like this *are* making a difference and that New York City is slowly emerging from decades of mistreatment. When groups collaborate to serve as stewards in a neighborhood, great things are possible!

Project 5: Million Tree Giveaway Campaign









Implementation

Why this: Council Member Elizabeth Crowley and her staff members organized a pair of *Million Tree Giveaway* events in Queens: one in Forest Park in the fall and one at the Maspeth Federal Savings Bank in the spring. The club, having assisted Councilwoman Crowley before (ex. Maspeth Recycling Fair), was eager to help out again. MillionTreesNYC is an ambitious private and public project and **plans to add one million trees to New York's urban forest in just ten years.** It is the perfect program for the Maspeth Green Club as it upholds the school's core values of truth, goodness, and beauty and aids in our knowledge of maintaining and renovating green spaces. Over its lifetime, which can far exceed that of a human, a donated tree will act as a carbon reservoir, removing the greenhouse gas carbon dioxide from the atmosphere while supplying life-giving oxygen to it. The tree will also provide shade to keep people and buildings cool, not to mention improve the aesthetics of an area.

What we did: On October 5th, the Green Club joined Council Member Crowley's office and members of the New York Restoration Project to donate one hundred trees to New Yorkers. Green Clubbers Samira, Anny, and Mikayla registered individuals to take home one of four tree varieties: Sweetbay Magnolia, American Hazelnut, American Plum, and Eastern Redbud. Their peers Enrique, Derek, Chastity, Thomas, and Xinyi helped distribute the trees to the eager registrants. The event took place in Forest Park on a beautiful autumn day between the George Seiffert bandshell on one side and the Forest Park greenhouses and carousel on the other. There was no better place to feel the magnitude and worth of a tree donation than amidst towering oaks that are part of one of New York's largest and finest parks, much of its terrain covered in its namesake. The fall foliage was spectacular.

On March 22nd, just the third day of spring, fifteen Green Club students rejoined Council Member Crowley's staff and the New York Restoration Project to supply New Yorkers with an additional hundred trees. They were lucky to have the help of volunteers from the Maspeth Federal Savings Bank and the use of their expansive parking lot. Green Clubbers gave away Atlantic White Cedars, Sweetbay Magnolias, Japanese Lilacs, and Cornelian Dogwoods.

Project planning: Katherine Mooney, the deputy chief of staff for Councilmember Crowley, contacted me to have the Green Club serve as volunteers for the tree giveaways.

Student involvement: Eight students and five teachers participated in the fall *Million Trees* event. Fifteen Green Clubbers participated in the spring event.

Promotion: For both tree giveaways, Council Member Crowley's office worked with the New York Restoration Project to create a flyer to notify residents.



Collaboration: The New York Restoration Project is one of the private partners of MillionTreesNYC. They secured the trees for each giveaway. Their expertise about trees, from the planting process to the particular space, water, and light requirements of each species, was pivotal to the success of the event. It was also educational, allowing a biology lesson to take place in a spontaneous way in the real world. I am grateful to have the support of Council Member Elizabeth Crowley and her staff. She frequently organizes green events for the club to be part of. Chaperones Fabian Suarez, Jaclyn Reyes, and Brandon Weinberg from Maspeth High School and Adriana Celis from I.S. 73 organized a picnic for the students.

Analysis

What Worked: Seeing so many people smile to take home a “free tree” was rewarding. The hope is that they will be responsible enough to deliver on their promise to care for their adopted trees and to plant them in areas of New York City that offer the appropriate microclimate. Students in the Green Club learned valuable lessons about tree species, seeing first-hand the difference between angiosperms (flowering plants) such as the Sweetbay Magnolia and gymnosperms (cone-bearing plants) such as the Atlantic White Cedar. The Green Club was able to take a number of trees back to campus to plant on our grounds. As an added bonus, the club visited Strack Pond in Forest Park following the tree giveaway there, picking up litter left on its banks and enjoying its wildlife.

What Didn't Work: Both tree giveaways were well attended. Even so, many registrants grumbled when they were told that they had to wait for an hour or more to take home a second tree.

Applicability to other Schools: The Million Tree Giveaway campaign is going strong. Other schools can contact the New York Restoration Project to participate in a scheduled event or to devise their own giveaway.

Measuring Success: This spring, the Maspeth High School Green Club was thrilled to see its Sweetbay Magnolia budding. Trees such as this bring lasting beauty to New York City while doing the environment a favor.

Project 6: Daffodil Planting



Implementation

Why this: Jessica Anderson, Maspeth High School Key Club advisor, secured a box of 200 daffodil bulbs from Maryanna Zero, a member of the local Kiwanis Community Board. The Key Club and Green Club had hoped to team up again to plant the bulbs in autumn in a sliver of Green Streets space under the Maspeth welcome sign on Grand Avenue. A prior commitment kept Ms. Anderson from participating but a large number of Green Clubbers turned out for an after-school planting in November.

What we did: On a Wednesday after school, Green Clubbers joined with a representative from Maspeth Federal Savings to dig over one hundred holes in a Green Streets Triangle at the junction of Grand Avenue and Flushing Avenue. The students followed planting instructions to ensure the bulbs were placed at the correct depth and distance from each other. With the winter solstice **approaching, the sun set early in the club's endeavors, forcing the Green Clubbers to finish their work as dusk advanced.** A short time later, the area's first freezing weather set in, making the timing of the trip perfect.

Project planning: Ms. Anderson bought gardening trowels for the club. With rainy weather hindering our plans for a few weeks, we organized to plant the bulbs a bit later than is customary, finally deciding on a Wednesday in November. Many Green Clubbers signed permission slips to walk down Grand Avenue from campus to plant the bulbs on Maspeth's major artery.

Student involvement: Sixteen Green Club members joined me and Ms. Evanisko, my biology colleague, to plant dozens of daffodil bulbs near the welcome sign.

Promotion: Once again, the power of verbal promotion was demonstrated. As a result of inclement weather, the fall planting date was pushed back on more than one occasion. **Fortunately, with less than a week's notice, many Green Clubbers** were able to get a permission slip signed to participate in the daffodil planting.

Collaboration: The MHS Key Club and the overseeing Kiwanis board were once again great partners for the Green Club.

Analysis

What Worked: The Green Club members showed great resolve in getting the daffodil bulbs planted despite delays and the threat of an approaching cold snap.

What Didn't Work: With darkness arriving early, the students were not able to plant all two hundred bulbs at the chosen location. Those that were left over were planted in the early spring at Maspeth High School but likely did not receive the proper environmental triggers, namely cold temperatures, to beautify the Maspeth campus like they did at the Green Streets triangle.

Applicability to other Schools: Andrew Barrett of Green Thumb School Gardens, an arm of the New York City Parks Department, sends valuable tips, resources, and events information to school gardeners by email. Contacting him in the autumn months can bring daffodil bulbs to any school.

Measuring Success: When I drove by the triangle in April and saw the whole space aflame with yellow and white daffodil blossoms, I knew the Green Club members had succeeded in their mission to beautify their community. Their hard work required some patience; bulbs placed underground in November had waited out the winter months and served as a signal flare of spring by April.

Project 7: S.T.O.P. Bags Conference Participation







Implementation

Why this: Maspeth High School students earned the greatest participation plaque at the 2013 Ban The Bags Conference hosted by the Hewitt School and the Green Schools Alliance. In 2014, Maspeth students reconvened at the rebranded S.T.O.P. Bags Conference, set again to make New York City a cleaner and more sustainable place. The Green Club members love to step out of neighborhood boundaries to tackle problems of greater scope. By signing up for S.T.O.P. Bags, they joined an advocacy movement that promises to position New York City, already a world leader in finance and culture, higher up the scale among global counterparts in green initiatives. Standing for Students Take On Plastic Bags, the conference this year focused on legislation that will not outright ban plastic bags (a hopeful second step) but instead will impose a ten cent fee on all single-use disposable plastic bags in New York. In other cities in America, such legislation has prompted a significant and lasting shift in consumer behavior. Even small fees attached to “throw-away” bags discourage buyers from acquiring them at checkout, leading to cleaner city streets. In the Green Club’s many cleanup projects, plastic bags are ubiquitous, certainly the most prominent of all forms of litter. As a result of thinner-than-paper consistency and sail-like profiles, plastic bags are also one type of garbage that can escape unwittingly into the environment rather than be cast aside deviously. They clog drains, they snag high in tree tops, they spoil lawns, they pile into corners, and eventually they degrade, but far from naturally. Most of the time they transform into millions of rounded plastic fragments that end up swirling ocean currents, then in the food chain, then in us, causing harm everywhere they go. The Green Club is determined to not just clean them from its campus and surrounding streets, but to prevent them from ever reaching these places. New Yorkers use 5.2 billion plastic bags a year (100,000 tons!), spoiling its environment and taking a financial toll as well. It costs the city \$10

million dollars annually to haul the used plastic bags to landfills. This team up to clean up project might just be the most impactful one we undertook.

What we did:



On March 1st, twenty-two students met chaperones at the Grand Avenue/Newtown subway stop along Queens Boulevard. Mr. Brandon Defilippis, a Maspeth High School Earth Science teacher, was instrumental in helping out for the day. The team arrived at the Hewitt School on 75th Street between Madison and Park Avenue before the official conference start time and had time to enjoy food and beverages provided by the school. When the conference got underway, the MHS Green Clubbers were surrounded by other students sharing their hopes for change, some from public schools but most from renowned private institutions in New York City. The day began with a viewing of the six minute short film *The Immortal Plastic Bag* by Joseph Harvell, Aaron Reiss, and Jamie Hefetz, which specifically

highlights the strain plastic bags have placed on New York City's environment, recycling infrastructure, and finances. Rapper and environmentalist AshEl "Seasunz" Eldridge welcomed the student activists in attendance and was followed by Keynote speaker Ron Gonen, the Deputy Commissioner for Recycling and Sustainability, who helped motivate students to participate in the legislative movement to curb plastic bags. After, students split up into about ten groups of mixed affiliation. Maspeth Students were able to meet other students from across the city in small group settings in separate rooms to develop persuasive speeches on the issue. Students in each room were matched with two coaches, many from environmental backgrounds, to hone their presentation skills. **Each room's coaches selected a finalist who went on to speak in front of the full audience and a panel of judges, among them Gale Brewer, the Manhattan Borough President.** Here is an incomplete list of the judges and coaches:

Judges:

- Gale Brewer (Manhattan Borough President)
- Lisa Bloodgood (Community Liaison & Environmental Advisor for CM Stephen Levin, Dist. 33)
- Eric Goldstein (Natural Resources Defense Council)
- Ya-Ting Liu (NY League of Conservation Voters)
- Saleen Shah (Citizens Committee for NYC)

Coaches:

- Lily Belanger (Program Director, No Impact Project)
- Jordan Christensen (Citizens Campaign for the Environment)
- Tim Clare (Surfrider Foundation)
- Ashel Eldridge (Environmental educator and entertainer)
- Gala Narezo (Activist and Plastic Bag Mandela Artist)
- Veronique Pittman (Green Schools Alliance)
- Eadaoin Quinn (Education Coordinator for SIMS Municipal Recycling)
- Jennie Romer (Environmental lawyer and founder of plasticbaglaws.com)
- Leslie Mintz Tamminen (Ocean Program Director, 7th Generation Advisors)
- Logan Welde (Staff Attorney, Clean Air Council of Philadelphia)

Maspeth High School students Lulu Zhou and Thomas Farrell were chosen to speak as finalists in front of the conference attendees in the Hewitt gymnasium. Both delivered their messages with poise, and Lulu earned runner-up recognition from the judges. At the end of the conference, AshEl performed *Plastic State of Mind*, which has developed into a viral video on YouTube. **That brought the crowd to their feet.** Pizza in the Hewitt School's Green Flag Cafeteria followed. The club enjoyed a quick excursion to Central Park before heading home on the subway.



Project planning: Joan Wolff of the Hewitt School contacted me directly to have Maspeth Students return to the second plastic bag conference, for which she was lead organizer. She and her team created a top-notch program; it was informative, entertaining, and participatory. Without stating it, Common Core standards of learning were very much present in the day's agenda. I appreciated that S.T.O.P. Bags focused on the voice of the students rather than

asking them to merely listen. The judges, coaches, and visitors (ex. Emily Fano of Eco-Schools USA), were an inspiration to my students.

Student involvement: For the second year in a row, Maspeth had the largest number of participants at the conference. Twenty-two students chose to spend their Saturday learning about, and then speaking about, one of New York City's most pressing environmental issues. I was very proud. To see Lulu Zhou recognized as a runner-up in the company of students from the top private schools in New York demonstrated Maspeth's commitment to public speaking.

Promotion: The Hewitt Schools and the Green Schools Alliance used social media, the press, flyers, and even students dressed in plastic bags street-side to encourage people to attend the S.T.O.P. Bags conference. Having AshEI perform brought energy and fun to the event. Ban The Bag attendees received emails and EventBrite invitations to electronically register for the event.

Collaboration: The Hewitt School is a leader among New York City schools when it comes to environmental advocacy. Maspeth High School is grateful to them for organizing conferences for two years running. The Hewitt School's facilities are a showcase of their green initiatives as well; the cafeteria recycling and composting program can be used as a model for schools around New York City, whether public or private. The Green Schools Alliance, co-host of the event, is a powerful organization that gets its strength not from private sponsors but from member school involvement.

Analysis

What Worked: No matter how many community cleanups the Green Club participates in, greater issues lurk below the litter. After all, if plastic continues to be treated as a throw-away convenience, it will continue to pour onto the streets and foul the beauty of New York City neighborhoods. Legislation that tackles the source of the problem instead of attempting to ameliorate the symptoms of the problem is now necessary. Students learned life lessons by attending the S.T.O.P. Bags Conference that they can use in the short-term (ex. public speaking exercises at school) or in the long-term (in their careers or in their civic commitments). Council Member Crowley, who represents our legislative district, already supports a ten-cent bag fee. The Green Club Members wrote her a letter anyway.

What Didn't Work: I would have liked to see more New York City politicians in attendance at the event. Students were informed by the environmental coaches how to take their messages to their district council members. I would have preferred to see the district council members at the event to hear the messages as they were formed.

Applicability to other Schools: The Hewitt School invited all DOE schools to the event. Although very few of them participated, those that did were part of one of the most significant environmental campaigns undertaken in New York. It is my hope that more students realize the power of their opinions. Had all public schools sent just one representative to the S.T.O.P. Bags Conference, a more resolute message would have been sent to the council members voting on legislation.

Measuring Success: Venturing from room to room during the small group presentations, I was excited to see students of diverse backgrounds, ages, and confidence levels expressing their thoughts, encouraging each other, and sharpening their speaking skills. The benefits of such a gathering might not be fully evident today, but they will present themselves over the students' lifetimes. A bill was introduced at the end of March but has not yet been voted on. The greatest success will be if New York City joins other large cities in America (Los Angeles, Washington DC) to institute a bag fee. Even better would be if New York bans the bag, something San Francisco has already accomplished.

Project 8: Sustainability Calendar Art Contest





Implementation

Why this: As Maspeth High School's sustainability coordinator, I receive the DOE Sustainability Initiative Newsletter which provides information about upcoming events and contests. Sharon Jaye, Director of Sustainability at the Division of School Facilities in the Department of Education, notified all sustainability coordinators about a calendar contest, and I forwarded the details to my students. I was also sent a copy of the 2012-2013 sustainability calendar, which hangs proudly in my classroom. Featured in it are winning art pieces from students of all grade levels in New York City. Here are the details as provided by email:

For the third year, the DOE is conducting an energy conservation artwork contest. This competition is open to all NYC DOE schools from all grade levels (K-12). Fifteen pieces of original art will be selected that best illustrate how energy can be saved through efficiency and conservation in our schools. The goal of the contest is to create a dialogue and encourage students, teachers, and administrative staff to save energy through art. A twelve month calendar will be produced with two runner ups, a winner for each month of the school year, and a Grand Prize winner for the calendar cover. Prizes will be awarded to all 15 winners. Click [here](#) to see last year's calendar. The final art work will be selected based on the design's message, subject relevance, and artistic originality.

Contest Rules:

1. All entries should be submitted on an 8.5 x 11 standard white paper, oriented in landscape format (horizontally).
2. All entries must have clearly written on the back: student name, grade level, and school name. Entries missing or with illegible information will be disqualified.
3. All entries must be submitted with a completed and sign Release Form (**attached**). Entries missing the release form will be disqualified.

Special thanks to DCAS Energy Management Office for funding the competition.

Creating artwork that has the potential to hang in every single school building in the New York City offers a powerful platform for the Green Clubbers to deliver a message about their green initiatives!

What we did: On two consecutive Wednesday afternoons, Green Clubbers designed, drew, and colored art on 8.5 x 11 inch computer paper. The single common thread between them was to illustrate how energy can be saved through efficiency and conservation. The Green Club members were very creative in developing a focus for their art; some chose to draw compact fluorescent bulbs, some drew gardens, some included written energy saving tips and some drew montages showing a number of scenes.

Project planning: Very little planning was necessary for this project. I wished to have my students learn more about making New York City a cleaner, more environmentally-friendly place through a creative process, and this was the perfect opportunity to do so. Before students created their artwork, we had a group discussion about energy conservation practices which I wrote on the board for them to use as inspiration.

Student involvement: About ten students submitted finished artwork. I sent the artwork to Laura Iannaccone by mail. She and a team spent days examining the artwork and judging the pieces for their message and artistic merit. 10th Grader Thomas Farrell, who had spent extra time at home to complete his piece, was thrilled to learn that his art was selected as one of 15 winning designs for the 2014-2015 NYC DOE Sustainability Calendar. This was a tremendous honor as we learned there were more than 1,200 pieces of art submitted from all five boroughs and all grades. Thomas, his family, and I attended an award ceremony at Tweed Courthouse, the headquarters of the DOE and Chancellor Farina. Thomas spoke for a few minutes about his art, mentioning the symbolism present and his contributions to Green Club. He took home a certificate, his artwork in a black frame, and an iPad. 9th Grader Kurt Kyle Juanillo was one of about 80 finalists in the contest, also a great achievement!

Promotion: Next year, Thomas and fourteen others will be ambassadors for the environment among New York City school children. His art will be featured in June of the 2013-2014 Sustainability Calendar. It is ideal that the last month of the school year and the one **that marks the entrance to summer will have Thomas' art and environmental message associated with it!** Central to Thomas' piece is his self-portrait holding a seedling. Perhaps his image will encourage some of the million students enrolled in New York City public schools to participate in a gardening project of their own.

Collaboration: Many thanks go to the judges that handled 1,200 student art entries. Sharon Jaye and Laura Iannoccone of the Division of School Facilities were both tremendously helpful in answering questions about the contest and in setting up the award ceremony.

Analysis

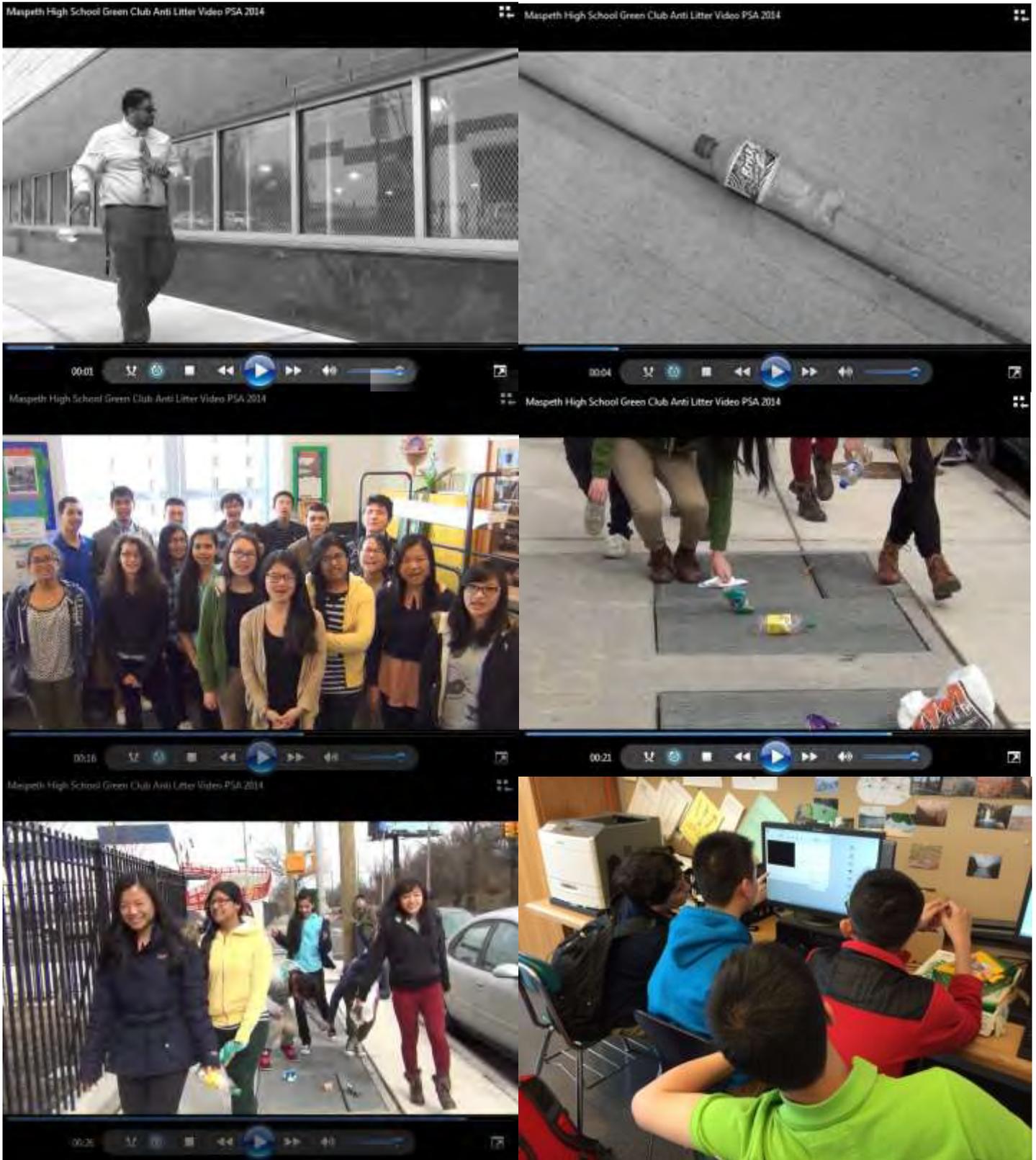
What Worked: Thomas and his family were thrilled to receive the news about his winning entry. It offered Thomas a chance to clarify his stance about energy conservation using a medium that he is obviously gifted in (Thomas also designed the logo for the Science Club at our school). As I spoke to his parents about, sometimes the most meaningful educational experiences happen outside of the normal school day. Thomas put hard work into his piece and will now be rewarded for it when it is featured in over 1800 schools.

What Didn't Work: A few students didn't have time to finish their designs during the two hours I allotted.

Applicability to other Schools: The calendar contest, now in its third year, has grown in popularity. More and more schools and students are submitting artwork, assuring that the calendar's art is of the highest quality and relevancy. Students do not have to be enrolled in art schools or art programs to get involved.

Measuring Success: Some would say that printing calendars for almost 2000 schools is a wasteful practice. I counter that calendars displaying sustainability tips yearlong are just the answer to wasteful practices. The calendar entries connect with students, providing clear and visual techniques that help to keep New York City a cleaner place. Thomas will have a lifelong memory of his achievement and is now all the more likely to sustain his message as he grows into adulthood.

Project 9: Anti-Litter PSA



Implementation

Why this: For the third year in a row, the Green Club developed an anti-litter public service announcement for the New York City Parks and Recreation Department's video PSA contest. Winners, chosen by NYC Parks officials, have their videos featured at the summer outdoor movie series. At the school level, the club hoped their PSA would inspire fellow students to more actively take part in litter removal.

What we did: Four groups wrote script outlines for this year's PSA. The Green Club read the scripts and voted to choose the concept they wanted to take part in a week later. Green Club member Daisy Criollo conceived the winning idea for her team.

The PSA starts with Mr. Stephan Singh, the dean of Maspeth High School, tossing an empty drink bottle on the sidewalk. A black and white close-up shows the bottle rolling on its own over the concrete. Green Club member Jesselle Ramirez enters the scene as Pharrell William's "Happy" plays. Not seeing the bottle on the ground, she trips over it, which prompts the music to shift to a somber melody. The Green Club members appear and announce, "Don't Litter. Be Happy. Brought to you by the Maspeth High School Green Club." The 30 second video concludes with Pharrell's tune resuming while Green Clubbers pick up trash from the sidewalk. The Maspeth High School Green Club logo appears at the very end.

Project planning: In prior years, I oversaw the planning and conceptualization of the PSA. This year, I left the framework, the filming, and the editing up to the students. The students took one afternoon to write scripts and completed filming the following week using two Sony cameras. Green Clubber Enrique Zheng used a classroom computer and Microsoft MovieMaker to construct the final product.

Student involvement: Every element of the video was designed and realized by the Green Club students. Seventeen students appear in the PSA. Student Luis Escobar does not appear as he was behind the camera. Enrique Zheng did a masterful job editing. Jesselle's walk was slowed down to perfectly synch to the carefree and fun rhythm of "Happy." Daisy Criollo is to thank for developing an idea that is short yet powerful.

Promotion: It would be wonderful to have the PSA featured in the summer outdoor movie series. That would certainly expand the reach of the Maspeth High School Green Club.

Collaboration: Win or lose, the anti-litter PSA contest sponsored by the New York City Parks and Recreation Department is always one of the most enjoyable events for the MHS Green Club.

Analysis

What Worked: The Anti-Litter PSA was once again a chance to articulate our stance on litter, which continues to mar the Maspeth neighborhood and New York City in general. Though thirty seconds is not a lot of time, much can be said in a condensed timeframe. As with the S.T.O.P Bags conference, this cleanup effort focused on prevention.

What Didn't Work: It was hard to "fake" tripping. Jesselle was a true sport, doing multiple takes to make her scene as realistic as possible. She came away with a smile but scuffed the knee of her pants in the process. Some of the concepts we didn't try would have required more than thirty seconds.

Applicability to other Schools: High School age students can submit their own anti-litter PSA to the Green Teens of the New York City Parks and Recreation Department. These are the eligibility requirements posted on the website (<http://www.nycgovparks.org/programs/recreation/teens/anti-litter-psa>): "Teens ages 13-17 who are participating in video programs or school/community teen programs are eligible. The video must be no longer than 30 seconds. The video must creatively encourage the public not to litter and to use the appropriate receptacles to discard garbage and recyclables in our parks and green spaces."

Measuring Success: The Green Club now has three anti-litter videos to its name. The public service announcements capture the club in a moment in time and are great ways to see how the club and individual members have grown! They are succinct representations of many hours of hard work. If just one person watches this year's edition and thinks to pick up some litter as a result, the club's effort has paid off.

Project 10: Showtime Documentary Filming

JAMES CAMERON, JERRY WEINTRAUB & ANHOLD SCHWARZENTRUBER PRESENT

YEARS OF LIVING DANGEROUSLY

The biggest story of our time.

SHOWTIME

SHOWTIME SERIES MOVIES SPORTS COMEDY REALITY/DOCS | FREE PREVIEW

Years of Living Dangerously

About Video Episode Guide Community

Sundays at 10 PM EST/PT

"THE MOST IMPORTANT PREMIERE OF 2014"

- The Huffington Post. Watch what the critics are saying about Years of Living Dangerously.

▶ WATCH VIDEO



Implementation

Why this: Emily Fano, the Outreach Manager for the National Wildlife Federation's Eco-Schools USA program, let me know about an exciting opportunity to collaborate with the Showtime Channel by participating in their *Years of Living Dangerously Documentary* series. The National Wildlife Federation was chosen as the educational partner of *Years*. Emily put me in touch with Carey Stanton, Senior Director for Education and Integrated Marketing for the NWF. When I called her at her office in Austin, Texas over April vacation, I didn't imagine that in less than a week she would join the club in New York City to film with renowned actor and environmentalist Matthew Modine.

This is what the Showtime website has to say about the 9-part television series: "This groundbreaking documentary event series explores the human impact of climate change. From the damage wrought by Hurricane Sandy to the upheaval caused by drought in the Middle East, YEARS OF LIVING DANGEROUSLY combines the blockbuster storytelling styles of top Hollywood movie makers with the reporting expertise of Hollywood's brightest stars and today's most respected journalists."

What we did: The Green Club was filmed for two hours in my classroom and in the Maspeth building with actor Matthew Modine. During the filming, Green Club members first watched an early-airing of the first episode of *Years of Living Dangerously*. They then spoke about their Eco-Schools USA projects and previous Golden Apple projects. Mr. Modine, a gifted speaker and real-life enactor of environmental projects, shared his thoughts with the club. He assisted in planting one of the MillionTreesNYC trees, a dogwood, on campus as part of the filming.

Project planning: Emily Fano gave me Carey Stanton's contact. After a single phone call, Carey had booked a flight to New York and organized the filming. She supplied the Green Clubbers with a pizza dinner at the end of the filming.

Student involvement: Almost twenty students were part of the filming.

Promotion: Should clips of the filming be featured on Showtime's *Year of Living Dangerously*, the Maspeth High School Green Club has the potential to demonstrate its commitment to the environment to a huge TV audience.

Collaboration: This was a momentous occasion for Maspeth High School and for the Green Club. By taking part in the filming, we can reach far beyond our New York City confines and help to deliver a message of sustainability to millions.

Carey Stanton's National Wildlife Federation's profile page shares this: "Carey was the principal curriculum developer, advisor and faculty for the launch of the Honorable Al Gore's Climate Project in the United States and Australia which trained more than 1,000 volunteers to give his presentation, the basis for An Inconvenient Truth, to over two million people."

The Showtime Channel's *Years of Living Dangerously* team is a veritable who's who in Hollywood. James Cameron, Jerry Weintraub, and Arnold Schwarzenegger are producers for the project. Harrison Ford, Lesley Stahl, Don Cheadle, Matt Damon, America Ferrera, and Jessica Alba are among its correspondents.

Matthew Modine, perhaps best known for his role in Stanley Kubrick's *Full Metal Jacket*, took time out of his busy schedule to give motivation to the Maspeth Green Clubbers and participate in the filming.

Analysis

What Worked: The club participants had a wonderful time experiencing a dose of Hollywood in their very own high school. They spoke about cleanup projects, carbon dioxide emissions, and climate change, demonstrating their biology learning while showcasing their activism. Matthew Modine, citing influential environmentalists from present times and past times, talked about how "when we throw something away, there is no away." He encouraged the Green Clubbers to find their voice and to act in the name of the environment today. Postponing action or leaving it to future generations is just the sort of living dangerously the series hopes to dissuade.

What Didn't Work: The NWF had hoped to include the MHS Green Club in a component of the documentary series about deforestation and palm oil plantations. Currently, many products American consumers buy contain non-sustainably harvested palm oil, a result of vast plantations that have displaced biodiverse tropical rainforests. With time running out in the two hour filming, the club members did not get to discuss sustainable agriculture in detail. We hope to take a field trip to Purchase, NY before the year is out to visit with the CEO of PepsiCo to convince the company to use sustainably harvested palm oil in their products.

Applicability to other Schools: Our past projects for the Golden Apple Awards and for the Eco-Schools USA Green Flag put the Maspeth High School Green Club's name out there to be discovered by the NWF and Showtime.

Measuring Success: However Showtime chooses to use the footage captured at our school, the filming was a resounding success. It was an honor to welcome a celebrity to Maspeth, to plant a tree with him, and to hear his thoughts about environmental advocacy. It was great to show Mr. Modine around the school grounds the club has worked hard to beautify and the luminous hallways we are proud to call home. Carey Stanton was a tremendous help.

Project 11: Recycling and Composting Continuation





Implementation

Why this: The Green Club's box top program has vastly reduced the classroom waste that heads to landfills. This year, the Green Club noticed that litter accumulates in shared spaces such as hallways, the cafeteria, and the auditorium because the recycling stations there are not as well marked as those in the classrooms. After installing two large capacity compost bins outside last year, our compost program is also going well. We still wanted to improve on it.

What we did: Mr. Douglas Von Hoppe, Maspeth High School's librarian and library club advisor, is a strong advocate for green improvements. He donated a circular compost bin to the school to join the two bins the club purchased from Brooklyn Botanic last year. Students can compare the two systems side by side. Doug, noting that organic materials were being wasted, installed small compost containers for coffee grinds and tea bags in the school's staff lounges with the help of Green Clubbers Linh and Tiffany.

The Green Club purchased green and blue Slim Jim recycling containers for the shared use spaces to take the place of undifferentiated gray ones that matched the color of the trash containers and did not have a side-printed recycling symbol. With the recycling badge clearly marked and container appropriate plastic box tops, these Slim Jim containers are already making a difference in student recycling compliance and cleaning up the school.

Project planning: The Eco-Schools USA consumption and waste pathway focused our recycling and compost projects. 9th Graders Calvin Huang, Hang Chen, and Enrique Zheng contributed hours of their time to the recycling program. Librarian Douglas Von Hoppe reached out to the Green Club to help us further our composting goals.

Student involvement: Calvin, Hang, and Enrique installed the new Slim Jim containers around the school. Green Club President Jia Chen and fellow club member Ymani created green laminated signs to go above the recycling areas. They read: "Maspeth High School Recycling Center. Please Do Your Part! Reduce, Reuse, Recycle." The entire student body of Maspeth High School is cooperating in separating recyclables from disposables, both in classrooms and public spaces.

Promotion: The updated recycling and composting containers send a message that our school is serious about cleaning up! They promote themselves.

Collaboration: Mr. Stephen Sigler, the head custodian at Maspeth High School, has been immensely helpful in overseeing the recycling program at our school. Phil, Chris, Kevin, and Joe on his staff are always pleased to assist me when I have questions or concerns.

Analysis

What Worked: Maspeth High School could not have earned a Green Flag Award this year without a commitment by the majority of users in the building to the recycling program. It is great to see bottles and cans that might have been destined for a garbage bin in another school properly placed in a blue recycling container at Maspeth. The box tops in the classroom are now accompanied by Slim Jim Box Tops in the shared spaces of the school, which are often the most heavily used. Signs and recycling symbols clearly mark our recycling areas now.

What Didn't Work: Recycling compliance in the cafeteria remains sub-par. Next year it is my hope that teachers assigned to cafeteria duty will volunteer in the first few weeks to monitor the disposal of lunch waste and recyclables. Styrofoam is another problem. One thing we learned from our visit to the Hewitt School is that biodegradable materials can be used in the place of eco-hazardous Styrofoam. **Our cafeteria participates in "Trayless Tuesdays" but it would be satisfying to move toward "Trayless Maspeth."** The school hopes to also be part of an Organics Collection pilot already slated to come to the Maspeth community. Our composting program, however noble, does not have the capacity to handle all of the cafeteria's food waste.

Applicability to other Schools: All schools, no matter their budget, can seek to improve their recycling profile. Even commonly consumed school materials, like copy paper boxes, can be given a new life as box tops or paper recycling containers. Composting is a wonderful way to recycle organic waste while learning about how bacteria and fungi carry out the process of decomposition.

Measuring Success: One day soon, I hope to see our curbside waste completely sorted with mixed paper free of contamination. Until then, the Green Club members are proud to have improved the school's recycling program each year of its existence.

Project 12: Campus Gardening and Habitat Construction





Implementation

Why this: The Green Club sought to make its exterior grounds as beautiful as its interior space. With indoor gardening fully underway, the Green Club wanted to grow vegetables and flowers outdoors. This promised to offer a larger return than the classroom gardening projects and show passers-by that Maspeth High School is truly a believer in its core values "Truth, Goodness, and Beauty." The club is also eager to show off student-led gardening.

What we did: This spring, the MHS Green Clubbers carried out a number of gardening and habitat projects around school. During the end of April vacation, committed members placed mulch around the trees along 74th Street. The tree boxes greet visitors to Maspeth High School as they approach its entrance and have in the past served unfortunately as depositories for cigarette butts from careless humans. They also accumulate pieces of plastic courtesy of the wind-tunnel force winds that blow beneath the Long Island Expressway underpass. The Green Club students first removed all signs of refuse before surrounding the trees with mulch.

Club members then turned to the task of gardening, placing eight tomato plants within metal frames along a narrow south-facing (and as a result, extra sunny) strip adjacent 57th Avenue.



When school recommenced, the Green Club members created a raised flower bed using rectangular stone blocks in the school's southwest corner. This site regrettably served only a short time as the home to the Green Club's greenhouse, which was erected in the fall but destroyed by wind before winter set in. The club made the best of the newly opened up space by planting ivy, geraniums, and tulips in the attractive raised bed. Along a nearby fence line, they planted a rose bush, creeping phlox, and decorative grasses. They capped off the corner project by placing a bird feeder filled with songbird mix in a tree; it is already a stop for neighborhood birds.



In the rear of the school the club positioned a second bird feeder high on a fence and planted sunflowers that had been grown as part of a project for the science fair (grown alongside two trees that were planted in the fall during the Million Tree Giveaway project). The recently mulched tree boxes out front all received hardy, shade-tolerant plants.

Project planning: My mom, Irene Baldwin, came down from her upstate home in Cambridge, New York 200 miles away to help with the gardening project. We visited Home Depot together to purchase the plants and bird feeders. Her home is beautifully landscaped and her expertise on plants proved invaluable. It was a pleasure to introduce her to my student volunteers and have her share her wisdom with them.

Student involvement: More than thirty students helped with the gardening projects at the school. From windy cold days in which we measured the dimensions of our future garden spaces to sunny vacation weather in which small teams strategically branched off to beautify the school grounds, Maspeth Green Clubbers have committed their time and labor continuously. A small dedicated group of 9th graders even volunteered to water plants each day after school!

Promotion: The new vegetable gardens, flower beds, and bird feeders at Maspeth High School better demonstrate the educational focus of the biology department and help show off our campus as an eco-friendly, beautiful shared space.

Collaboration: A satellite of the District 75 John F. Kennedy School (Q721) is housed on the second floor of Maspeth High School. Pat Watson, a science teacher at the school, reached out to me at the start of last year and our partnership has blossomed along with our flowers! She and I work together on a number of projects, but our biggest collaborative goal this year has been to grow plants from seeds that we then plant in the school gardens. We have plans to build more raised beds using donated lumber and soil from Home Depot.

Analysis

What Worked: As I told participating Green Clubbers, many New York City residents miss out on the feeling of soil against fingertips or the scent of flower blossoms warmed by the sun. My students might live in an urban mecca, but are treated to a bit of countryside right outside the school doors. The students are increasing their activity level, demonstrating responsibility in their caretaking roles, and learning valuable lessons about agriculture and horticulture. Birds are already visiting the bird feeders. We ordered binoculars to begin to classify them.

What Didn't Work: A week after planting, New York City faced a dangerous dry spell with no rain, low humidity, and whipping winds. Twice, carelessly thrown cigarettes ignited the mulch the Green Club had placed around the trees. Fortunately, the janitorial staff at MHS put out the first fire. The Elmhurst Fire Department had to be called to put out the second. Thankfully, the trees and flowers were spared.

Applicability to other Schools: For the price of many not-so-useful items on ShopDOE, schools can buy live plants that beautify a school for extended periods.

Measuring Success: Many people walked past the young gardeners of the Green Club during their beautification efforts and said with a smile, "Nice job! It looks great!" New York City's future can be greener and more beautiful because of the skills they are learning.

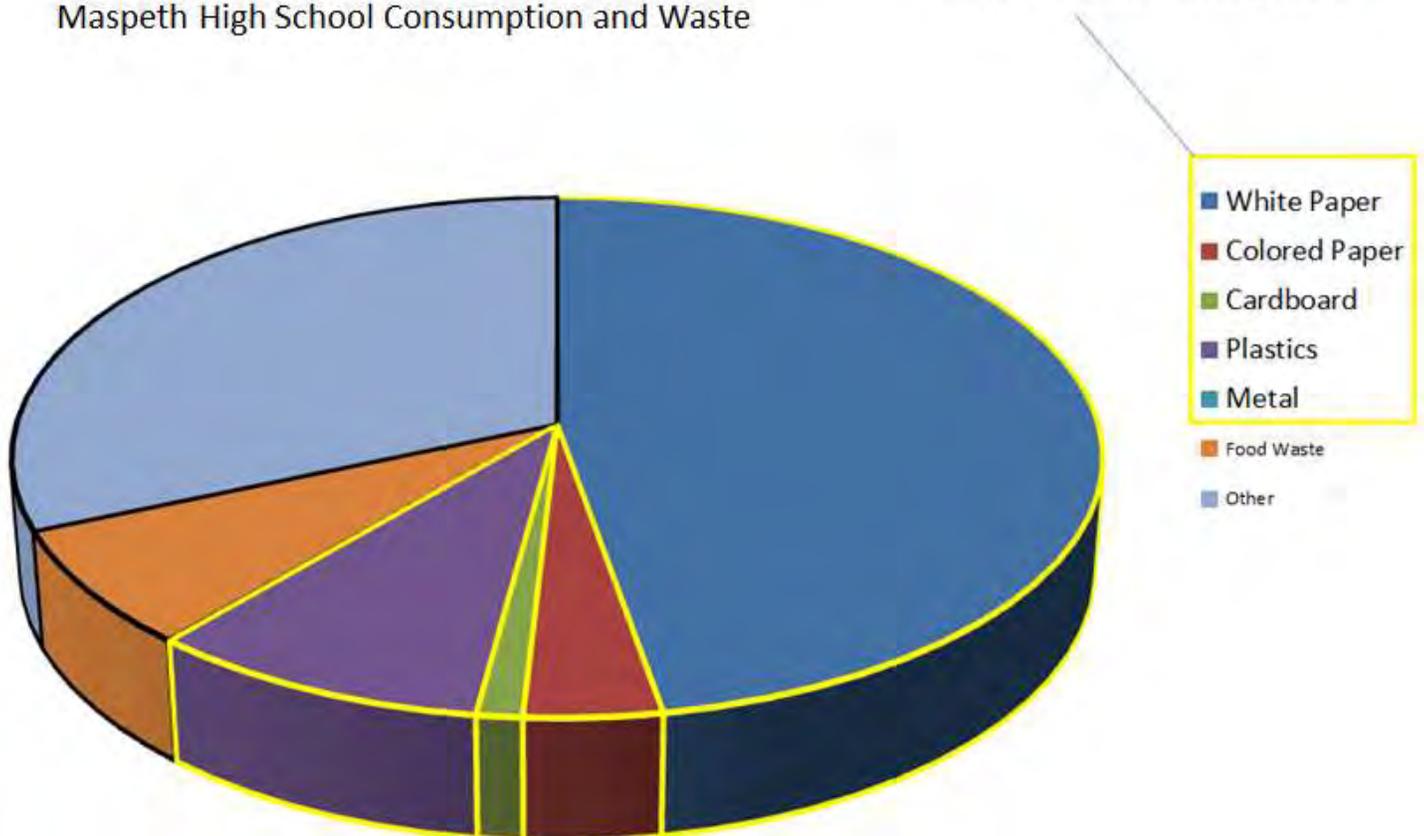
Project 13: Eco-Schools USA Audit Completion and Green Flag Designation





Recycled at Maspeth High School

Maspeth High School Consumption and Waste



Implementation

Why this: The National Wildlife Foundation's Eco-Schools USA Program resembles the DSNY's Golden Apple Program because it provides a framework to focus the club's activities. The club chose to tackle a number of Eco-Schools pathways to attempt to earn a Green Flag, the organization's top honor. Even the unfinished pathways exposed deficiencies in our school environment that the Green Club was then able to correct.

What we did: The Green Club completed three pathways to earn Green Flag status, becoming just the fifth Green Flag School in New York City and twenty-fifth in the nation. The pathways were: water, consumption and waste, and energy. For each pathway, the Green Club members completed audit forms by measuring a wide array of metrics. For example, they tabulated the electricity consumption of every room in the building by measuring the wattage and usage times of the rooms' electronic devices. They also measured the liters of water consumed at the school per month and determined the mass of waste by category.

Armed with quantified data, the club then developed action plans to make the school a cleaner and more sustainable place.

Project planning: Jia Chen, president of the Green Club, orchestrated the Green Flag campaign and wrote the first drafts of the action plans. I submitted the final application.

Student involvement: For a good part of the winter months, the entire Green Club was devoted to measuring or calculating data to complete the audit forms. They split up into a number of teams of four or five to do so.

Promotion: Maspeth High School's recognition as a Green Flag school is sure to bring the Green Club more opportunities in the future. Connections are made quickly in the eco-community.

Collaboration: Emily Fano, Outreach Manager for the National Wildlife Federation's Eco-Schools USA Program, encouraged the school to apply and was tireless in keeping up with our projects and achievements. She is a great collaborator! It was an honor to welcome Curtis Fisher, Northeast Regional Director for the NWF, and his family to the school to celebrate the school's Green Flag. Council Member Elizabeth Crowley and State Senator Joe Addabbo spoke at the celebration as well. Thanks go out to Mr. Mario Matos, Maspeth Operations Manager, for making the event run smoothly.

Analysis

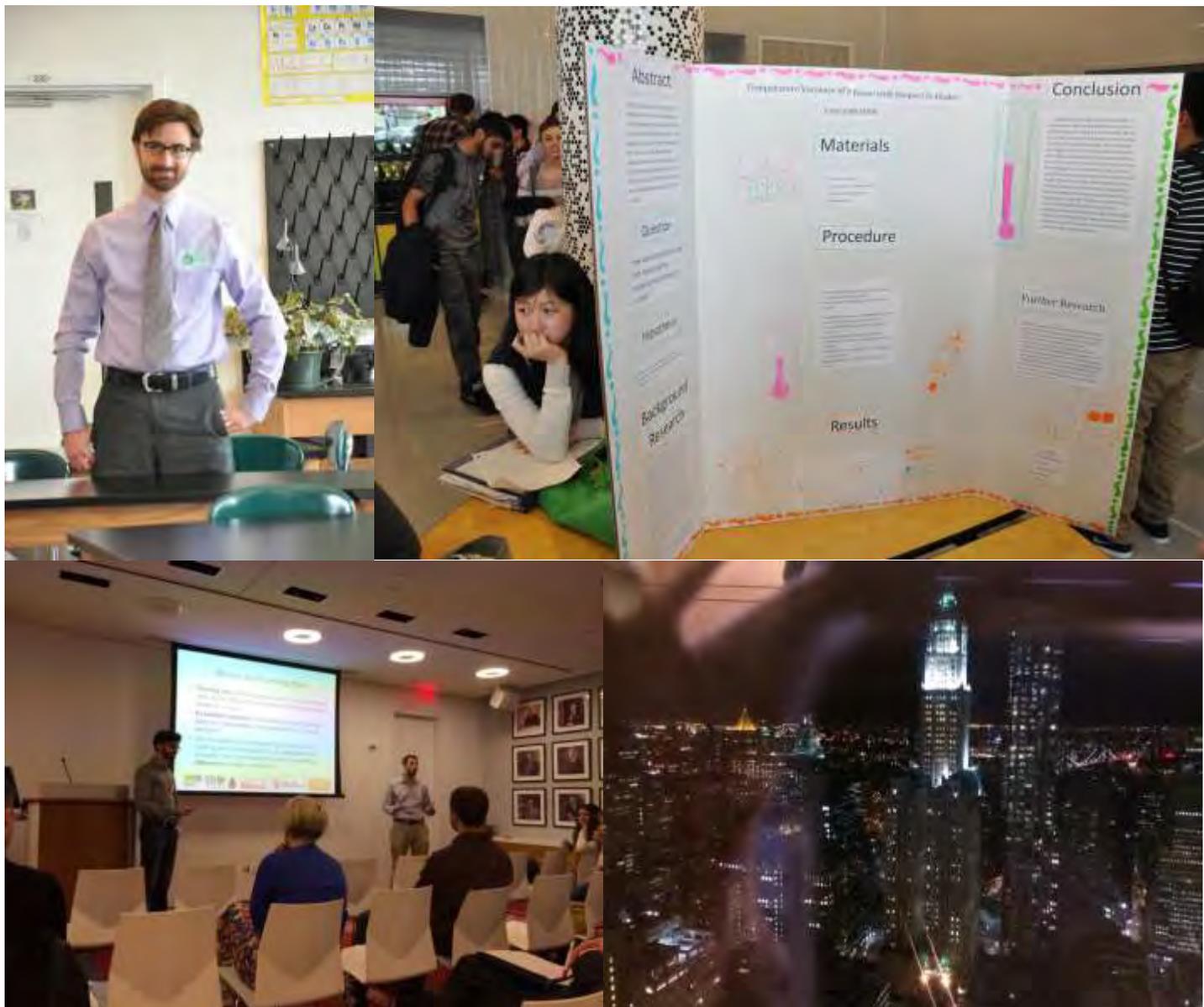
What Worked: All of the pathways assisted us in realizing our goals for the year. Many of them benefited our projects for the Team Up To Clean Up campaign.

What Didn't Work: Some pathways such as school grounds and biodiversity were started but not finished. They nevertheless provided valuable data that were used for our gardening and beautification projects. The biodiversity team catalogued the number of species living on our relatively small campus. With scant organisms to identify, they stopped the pathway but became determined to provide better animal habitats. This gave rise to our bird feeder and flower bed project. The school grounds team used Google Earth and a good dose of their math skills to determine the square meters available for gardening.

Applicability to other Schools: The number of participating schools in the Eco-Schools USA program continues to grow. This link provides useful information: <http://www.nwf.org/Eco-Schools-USA/Become-an-Eco-School/Pathways.aspx>

Measuring Success: We are proud recipients of an Eco-Schools USA Green Flag, joining schools we hope to partner with.

Project 14: Scientist in Residence Grant and Science Fair



Implementation

Why this: Steven Motschwiller, a first year physics teacher at Maspeth High School, wrote a scientist-in-residence grant and was the only first year teacher to be awarded one this year as a result of the strength of his writing and aspirations. **Here is more about the program:** "The Science Alliance of the New York Academy of Sciences and the New York City Department of Education are pleased to announce the Scientists-in-Residence program. Students who are exposed to science through active and inquiry based learning techniques are more likely to succeed and engage in science. An extremely effective active learning strategy for engaging students is to have them conduct authentic, hands-on scientific research. The Scientist-in-Residence Fellowship Program intends to enhance these science projects by matching a scientist with classrooms that will conduct authentic research. The scientist will work closely with 1-2 cooperating teachers at selected NYC public schools to develop and implement rigorous, inquiry-based science research programs for at least one class of students."

What we did: Steven was paired with Columbia physicist Dr. Daniel Sinkovits. Together they helped one of Mr. Motschwiller's research physics cohorts conduct original research on the heating and cooling systems of Maspeth High School. In April, on the same day of the school's Green Flag Ceremony, students presented their research to the student body and community as part of Maspeth High School's inaugural science fair. This research will be used to correct imbalances in temperature school-wide.

Project planning: Mr. Motschwiller and Mr. Sinkovits guided the students as they designed their own experiments, conducted research, and wrote first-rate scientific journal format reports.

Student involvement: Some of the MHS Green Clubbers assisted in the data collection.

Promotion: The science fair was a great showcase for our school community.

Collaboration: The Scientist-in-Residence Fellowship Program is made possible by the Science Alliance of the New York Academy of Sciences and the New York City Department of Education.

Analysis

What Worked: The science fair, organized by chemistry teacher Grace Polson, was a huge success. This was partly due to the strong contributions of the students that examined Maspeth's heating and cooling systems as part of the Scientist-in-Residence Program.

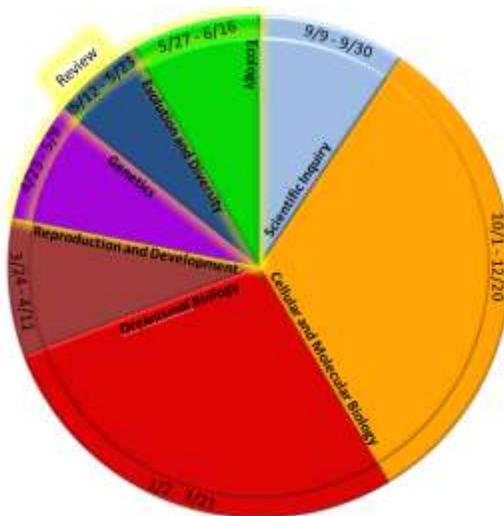
What Didn't Work: Some of the areas of the school were off limits to the student researchers (ex. the school roof). Some of the rooftop units baffled even the engineers from the School Construction Authority.

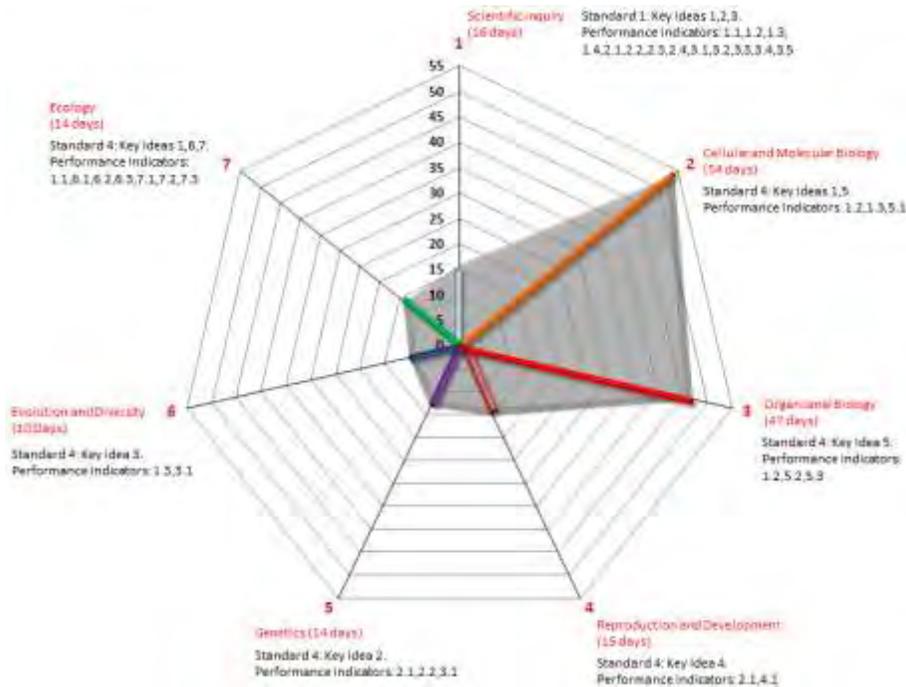
Applicability to other Schools: Every year a number of scientists are assigned to DOE schools. The application process is extensive.

Measuring Success: Much of the success of this project is yet to be determined. One of the most valuable aspects is that students at Maspeth High School got to how science works, from start to finish!

Educational Components

I've referenced every Green Club project listed above in my biology lessons. Likewise, I've referenced components of the New York State Living Environment Curriculum for every one of the Green Club trips or projects. Aligning the two is easy – there are abundant teachable moments in all of the projects, as you can read below.





Project 1: ACE Leadership Training and PowerShift Conference: 7.1c Human beings are part of the Earth’s ecosystems. Human activities can, deliberately or inadvertently, alter the equilibrium in ecosystems. Humans modify ecosystems as a result of population growth, consumption, and technology. Human destruction of habitats through direct harvesting, pollution, atmospheric changes, and other factors is threatening current global stability, and if not addressed, ecosystems may be irreversibly affected.

Project 2: Onderdonk Grounds Cleanup: 5.2a Homeostasis in an organism is constantly threatened. Failure to respond effectively can result in disease or death. 5.2b Viruses, bacteria, fungi, and other parasites may infect plants and animals and interfere with normal life functions.

Project 3: Windowfarm Hydroponic Gardening: 5.1a The energy for life comes primarily from the Sun. Photosynthesis provides a vital connection between the Sun and the energy needs of living systems. 5.1b Plant cells and some one-celled organisms contain chloroplasts, the site of photosynthesis. The process of photosynthesis uses solar energy to combine the inorganic molecules carbon dioxide and water into energy-rich organic compounds (e.g., glucose) and release oxygen to the environment.

Project 4: Neighborhood Cleanups: 7.2a Human activities that degrade ecosystems result in a loss of diversity of the living and nonliving environment. For example, the influence of humans on other organisms occurs through land use and pollution. Land use decreases the space and resources available to other species, and pollution changes the chemical composition of air, soil, and water.

Project 5: Million Tree Giveaway Campaign: 6.2a As a result of evolutionary processes, there is a diversity of organisms and roles in ecosystems. This diversity of species increases the chance that at least some will survive in the face of large environmental changes. Biodiversity increases the stability of the ecosystem.

Project 6: Daffodil Planting: 6.1e In any particular environment, the growth and survival of organisms depend on the physical conditions including light intensity, temperature range, mineral availability, soil/rock type, and relative acidity (pH).

Project 7: S.T.O.P. Bags Conference Participation: 7.3a Societies must decide on proposals which involve the introduction of new technologies. Individuals need to make decisions which will assess risks, costs, benefits, and trade-offs.

Project 8: Sustainability Calendar Art Contest: 7.2c Industrialization brings an increased demand for and use of energy and other resources including fossil and nuclear fuels. This usage can have positive and negative effects on humans and ecosystems.

Project 9: Anti-Litter Public Service Announcement: 7.1b Natural ecosystems provide an array of basic processes that affect humans. Those processes include but are not limited to: maintenance of the quality of the atmosphere, generation of soils, control of the water cycle, removal of wastes, energy flow, and recycling of nutrients. Humans are changing many of these basic processes and the changes may be detrimental.

Project 10: Showtime Documentary Filming: 7.3b The decisions of one generation both provide and limit the range of possibilities open to the next generation.

Project 11: Recycling and Composting Continuation: 6.1a Energy flows through ecosystems in one direction, typically from the Sun, through photosynthetic organisms including green plants and algae, to herbivores to carnivores and decomposers. 6.1b The atoms and molecules on the Earth cycle among the living and nonliving components of the biosphere.

Project 12: Campus Gardening and Habitat Construction: 1.1b An ecosystem is shaped by the nonliving environment as well as its interacting species. The world contains a wide diversity of physical conditions, which creates a variety of environments.

Project 13: Eco-Schools USA Audit Completion and Green Flag Designation: 1.1c Science provides knowledge, but values are also essential to making effective and ethical decisions about the application of scientific knowledge.

Project 14: Scientist in Residence Grant Research and Science Fair: 1.3a Scientific explanations are accepted when they are consistent with experimental and observational evidence and when they lead to accurate predictions. 1.3b All scientific explanations are tentative and subject to change or improvement. Each new bit of evidence can create more questions than it answers. This leads to increasingly better understanding of how things work in the living world.

Future Plans

The Green Clubbers have abundant hopes for the future, both near-term and long-term. They want to build a permanent greenhouse that can stand up to the winds that seem particularly fierce along the Long Island Expressway corridor. Speaking of winds, the club plans to install its own rooftop weather station to record the latest wind speed, air temperature, barometric pressure, and humidity. They will use the weather station to chart long-term patterns that might better illustrate the effects of climate change in Maspeth. A digital globe will hopefully one day display such patterns for all Maspeth High School students to view and learn from. The Green Clubbers plan to build additional raised beds with Ms. Watson's students. They will continue to participate in neighborhood cleanups and attend conferences. What is beautiful is that the future is far from set! The club looks forward to the future, whatever obstacles may lie in the way, with optimism.

Overview

The Green Club would like to thank the DSNY for awarding schools with Golden Apple Awards. The fourteen projects covered in detail above were born out of the hard work of the Maspeth High School Green Club members and the entire Maspeth High School community under Principal Khurshid Abdul-**Mutakabbir's** tutelage. Many of the projects **were made more successful because of the club's prior TrashMasters campaigns.** **New York City, a place of cultural and economic riches,** nevertheless suffers at times from a lack of environmental prioritization among its inhabitants. Educational opportunities are abundant too and I am confident that with young people like the Maspeth High School Green Club members who frequently *teamed up to clean up* this past year, **New York's future is** in good hands.