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Team Up to Clean Up

High School Division
Bronx Borough
& Citywide Winner

DeWitt Clinton 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
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GOLDEN SHOVEL

Bronx Borough
Winner

DeWitt Clinton High School

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Created and funded since 1993 by the Bureau of Waste Prevention, Reuse and Recycling, NYC Compost Project provides compost outreach and education to NYC residents, community groups, and landscapers in all five boroughs.

GAA-GScert 06/14

2014 Golden Apple Awards
Contest Entry Judging Info

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

ID Info: 14023

School: DeWitt Clinton High School 440
Grade Division HS
Borough: X

☑ **Golden Shovel Award contestant**
(for borough Master School Composter)

2014 Project Entries received for:

School Population: total # 2746
Core Group: **Total Participating:**

☐ **TrashMasters! Super Recyclers**

Received:

☐ **TrashMasters! Reduce & Reuse Challenge**

Received:

☑ **TrashMasters! Team Up to Clean Up** 30 500

Growing the Clinton Garden Received: 5/2/2014

The Clinton Garden is at the heart of the school's sustainability efforts. Started in 2012, the Clinton Garden has doubled in productivity every year. Presently they grow food on 14 raised beds, providing experiential, hands-on learning for their students. They also compost in four different ways: they built a three-bin system, with a tumbler, using a plastic bin to cure the compost, and two indoor worm bins. English classes use the garden in their curriculum requirements; for example, the 12th grade visits the garden as a model of a small-scale eco-design project, and also uses it for their studies of Shakespeare. The garden's success rests upon deep student involvement, and the support of numerous partners and community organizations.

Prior Year Entries:
03:SR-hon;04:SR-wd

Current Prizes
14:TU-C,GS-X

School Contact Information:

Phone: 718 543-1000
Address: 100 W Mosholu Pkwy S
Bronx 10468

Block&Lot: 2032510201
DOE Location: X440
DOE Bldg: X440

REQUIRED for Super Recyclers only:

Custodian: James Rafferty

Contest Coordinator: Raymond Pultinas

Principal: Santiago Taveras

Sustainability Coord: Raymond Pultinas

Info Confirmed: 6/9/2014

Printed: 6/25/2014

DeWitt Clinton High School

100 West Mosholu Parkway South, Bronx, New York 10468 Tel: (718) 543-1000 Fax: (718) 548-0038

"Sine Labore Nihil" ~ Nothing is accomplished without hard work

Santiago Taveras
Principal

School Code: 10 X 440 Principal: Santiago Taveras stavera@schools.nyc.gov

Contest Coordinator: Raymond Pultinas
Title: Teacher, Advisor, Sustainability Coordinator, Gardener, Master Composter
Phone: 917 755 3559 (cell)
Email: RPultinas2@schools.nyc.gov
raypultinas@gmail.com

DeWitt Clinton is one of the last few remaining large high schools in the Bronx. In our school, 76% of students have Free Lunch, 17% of students are Special Ed and 22% of students are ELL. The DeWitt Clinton Campus now includes two new small schools: Bronx Collaborative and World View.

Contest Entry Info: Bronx; High School Division
Contest Entry Title: Growing The Clinton Garden

Contest Entry Summary: The Clinton Garden is at the heart of sustainability efforts at DeWitt Clinton High School. Its success rests upon deep student involvement and dedication and the support of numerous partners and community organizations. Yes, we compost.

Core Group: Environmental Affairs Club (30 per year); Student Participation: at least 500 per year; School Population: 2,746

Growing The Clinton Garden

I. Implementation

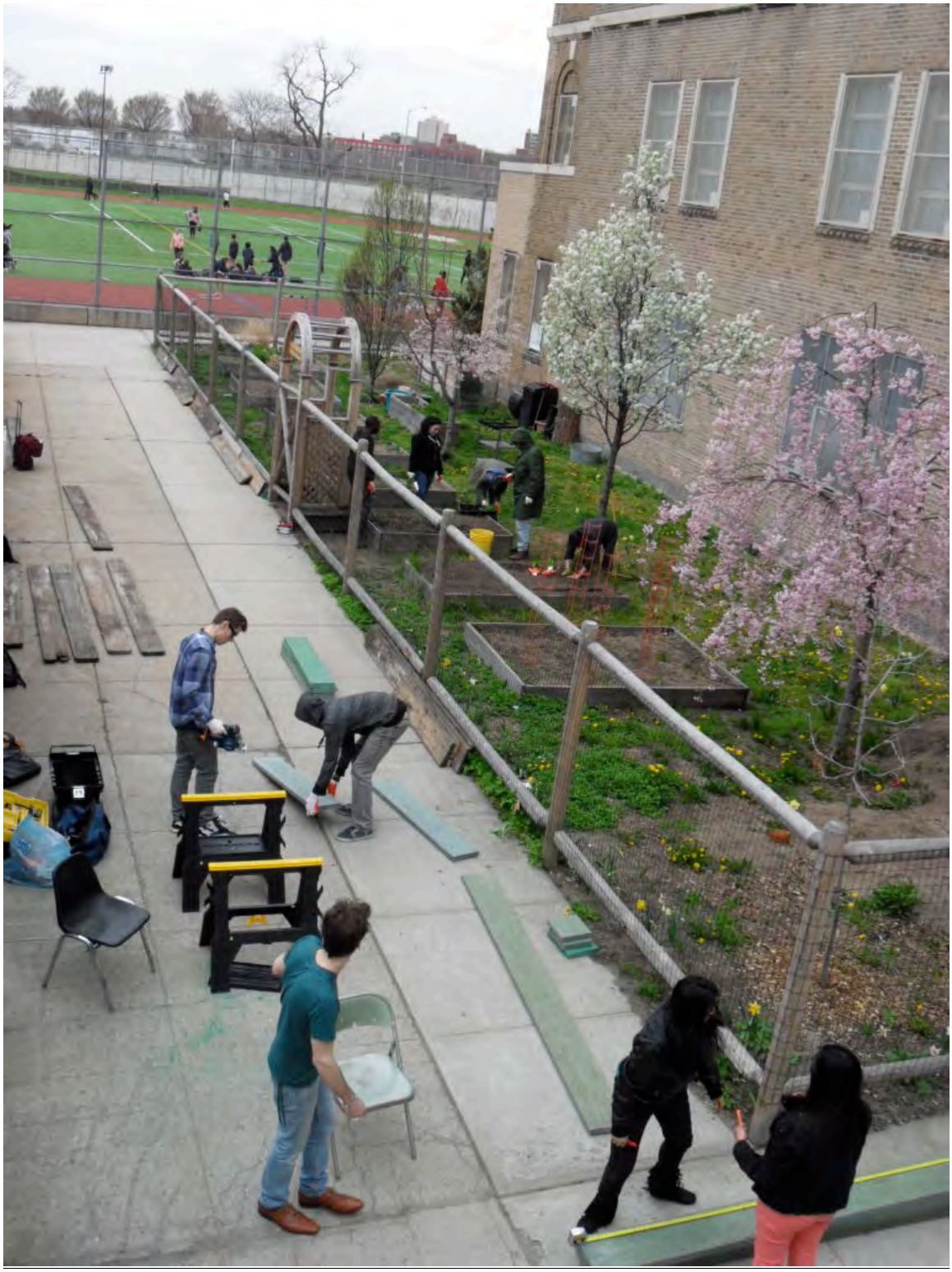
Why?

The Clinton Garden grew out of The Witt Seminar, an elective class that I began teaching the very year that metal detectors and scanners were introduced at DeWitt Clinton High School in 2005. The class quickly evolved into a class on student activism and advocacy highlighted by annual activist conferences and the publication of a literary magazine called the Magpie Witt Activism. By 2009, we decided as a class to focus on a single cause. It was legendary Bronx health advocate Meg Charlop who suggested that we start a garden to help educate students about food and how it is grown – where it comes from. The Bronx had the highest rate of obesity in the city and our own students reflected this reality as well as the less visible chronic problems related to diet, like diabetes and heart disease that Megan had first hand knowledge of as Community Health Organizer at nearby Montefiore Hospital.

What we did

Jim Rafferty, the custodial engineer at DeWitt Clinton, first suggested the location for what we thought was the perfect garden spot. A narrow bit of lawn, 96' x 10' that runs along the south side of the gym building. Initially we had our hearts set on two large courtyards that had long been neglected and largely unused. Of course, the reason they were unused is because they are practically inaccessible. But we quickly fell for the "almost always full" sunlight gracing our present location. Montefiore donated soil and built our first four raised beds. The Parks Department initially advised us to use sheet mulching or lasagna gardening to start our beds and this started a pattern of willing assistance from numerous public and non-profit organizations ever since. In the Spring of 2012, we officially opened the garden and planted a Burr Oak in memory of Megan Charlop.

The Clinton has practically doubled in productivity every year and presently we grow food on 14 raised beds of various sizes. We use only organic methods and never use pesticides or herbicides. I purchased lady bugs to help fight off an infestation of aphids. We have also maintained a native plant garden largely through the support of the Butterfly Project annual give-away. We are very conscious of attracting pollinators to our garden and one of this year's goals is to certify our garden with the National Wildlife Federation as a Schoolyard Habitat. This Spring we have added a variety of berry bushes including gooseberry, blueberry, grape, blackberry and raspberry.



Project Planning

The Clinton Garden is an ongoing project and, as Sustainability Coordinator at DeWitt Clinton High School, I consider the garden to be at the center of our school's sustainability efforts. When I think about sustainability, I think about a host of issues that include food, energy, conservation, wise use of resources. Each year I've worked with students to set a number of goals. This year's are published at wittseminar.blogspot.com (We still have a couple of months but we're practically completed).

1. To continue to maintain and grow the Clinton Garden

The garden has become the heart, soul and nourishment of our club. It can become the site of a core curriculum of eco-literacy in our school because we have demonstrated through our hard work and commitment how a space in the school can thrive even when the school itself is teetering. The garden embodies the values of sustainability namely careful observation, thoughtful attention, mindfulness, patience, caring, respect, health and well being.

2. Develop an extensive plan for the garden expansion.

This includes use of permaculture principles and practices to grow fruit starting this spring. Blueberries, raspberries, grapes, gooseberries, strawberries and other fruit bushes will be planted along with native plants that are already flourishing in our garden. Additionally, planting annuals like tomatoes and squash will help transform The Clinton Garden into an edible forest. We are also going to pursue the idea of a fruit tree orchard on the West side of the gym building. What we still need are plans for student seating and an outdoor classroom space so that we can eventually make the garden a site of interdisciplinary learning.

3. Expand our composting stream to include collection and composting of cafeteria vegetable prep scraps.

Currently we have three methods for making compost. We have a three bin compost bin that EAC students built themselves and this is for composting garden waste. We have a tumbler for recycling vegetable scraps from the kitchen and we have several worm bins that also compost vegetable kitchen scraps. If anything has helped make our garden prosper it is the soil. We have never used any inorganic fertilizers or chemicals. The healthy food we grow comes from the way we feed the soil with compost. We currently have the capacity to compost our cafeteria's vegetable prep scraps.

4. Double our school's recycling of paper waste and finally educate students to comply with mandates and laws requiring the separation of recyclables.

Our goal in this regard is to become recognized as recycling champions who will educate fellow students about our obligations to be responsible for our school waste. We will work with Grow NYC's Bronx Outreach Coordinator for the Recycling Champions Program Ifeoma Nwoke on projects to educate our students. Our obligation is to save, reduce, recycle, upcycle, reuse as well as practice other habits of caring for our school and our environment.

5. Recruit students from throughout the Clinton campus regardless of grade, level, track or school.

To accomplish our many goals we need more positive student power. We need to recruit students who have a passion for the environment and not just a passion to socialize. We need student action and this will only come with greater numbers of active members.

6. Inspire environmental awareness presentations for fellow club members and active participation in events throughout the Borough and City.

We need to consider ourselves a work group involved in educating each other during club meetings about relevant environmental issues that affect our lives. In addition we need to inspire participation not only in our own club sponsored events but in events sponsored by our allies like GrowNYC, Friends of Van Cortlandt Park, Bronx Green-Up, Greenthumb, Bronx River Alliance, and Bronx Council of Environmental Quality and others.

7. Raise funds and write grants to support and expand the garden and for our annual EAC overnight trip.

Since the spring of 2010 we have raised at least $10,000 for the garden through grants and generous donations. For over ten years we have done an overnight trip. Last spring ten members of the EAC went to Hawthorne Valley Farm, a working, biodynamic farm with an awesome learning center. We need to continue to raise money for our garden expansion and our club's activities and trips.

8. Plan our next Harvest Celebration event on October 3 that will include a Garden to Café prepared meal for students using vegetables from our own garden and a greenmarket for faculty and students.

Though we can't feed everyone from the garden we can provide a meal for our students and we could also sell locally grown and purchased vegetables for our community. This year, our Harvest Celebration will be held on October 3 and negotiations are under way to have this be our Harvest Sale Day as well. Perhaps we could also provide guided tours of The Clinton Garden.

9. Plan to participate in the Big Apple Crunch on October 24th.

What will it sound like if everyone in our building bit into a fresh apple at noon on October 24th? Let's participate in this activity.

10. Certify our garden with the National Wildlife Federation as a Schoolyard Habitat.

We have witnessed countless varieties of butterflies, goldfinches the color of canaries and hummingbirds in our garden. We need to provide these and other creatures a safe haven in our busy world.

11. Continue to think Big, think critically, and anticipate unintended consequences and contingencies.

I guess that's my problem. I like to think big. I haven't shared half of my ideas, but with our new administration in place and with the assurance that change is on the way, who knows how far we can go? I intend that this blog will document our progress on these and additional goals that surface along the way.

Student Involvement

The Clinton Garden has been student centered from the beginning. At first, it was students from the Witt Seminar who planted and maintained the garden. I have also involved my senior English classes. In the 2011-2012 school year, for instance, I was a recipient of a grant from the Health Department to run a campaign on healthy eating. My Advanced Literary Criticism class had wonderful real-life experiences planning and conducting workshops on health issues, holding cafeteria events including tastings of plant-based meals in collaboration with New York Coalition for Healthy School Foods. We staged a cafeteria "sit-in" that we dubbed "Occupy Lunch, Period!"

When the successful Witt Seminar was abruptly cancelled due to budget cuts in 2011, I volunteered to become advisor of the Environmental Affairs Club (EAC) and it is this group that has taken over stewardship of the garden. Not only do these young environmentally conscious students maintain the garden, they have also presented on their efforts throughout New York City including the annual Grow to Learn Conference at Hostos, Bronx Parks Speak Out at Lehman College and Sustain-a-Mania in Queens. Our EAC students have a solid and reliable reputation with NYC Compost Project, Garden To Café, Recycling Champions and Grow NYC and all our partners. You can ask anyone who we've collaborated with and they would tell you how wonderful these students are. Finally, EAC members have run five successful Harvest Sales selling locally grown produce purchased from Greenmarket, Co. as well as our own Clinton Garden produce to raise over $1,500 for our annual overnight trips.

Promotion

Like any active organization, we are constantly promoting what we do. For promotion highlights, please read our extensive story at our virtual Witt Seminar on Sustainability in Schools at wittseminar.blogspot.com for this site has been a forum to share and disseminate my own and my students work in the garden. There you can find the link to "Make it Better" the youtube video that students were able to

create in collaboration with the John Lennon Educational Tour Bus. Here are some slides of additional promotional campaigns.

Collaboration

We have been fortunate to have collaborated with Montefiore Hospital, Citizens Committee of New York City, Change By Us, NYC Compost Project in the Bronx, Grow NYC, the Custodians and Cleaners of DeWitt Clinton High School, Grow to Learn, Garden to Café, Bronx Green Up, National Wildlife Federation (We are and Eco-School), IOBY, Teachers College, Columbia University, The Alumni Association of DeWitt Clinton High School, The Michelle Walrath Foundation, Behind the Book, The Osborne Association, Recycling Champions Program, New York Coalition for Healthy School Foods, and many others. Our partners have donated money and expertise. As I have often said, and truly believe, when you start a garden, things will happen.

Educational Component

The Clinton Garden has achieved its initial purpose. Students can visit the garden and see real vegetables growing abundantly. Each year, I have learned more about gardening and I have shared this knowledge with students. I am personally invested in learning how to grow food mostly because I have a family and we care about what we eat and take the time to prepare our own food from scratch. For instance, I'm a baker who bakes all of our family's bread but we also ferment, sprout and preserve in our home. As an educator, I can't help but share what I know and what I know a lot about is food. I readily share bread that I make with my students in the garden or prepare kale chips from the kale we grow in order to expose students to healthy snacks many have never tried before.

The garden provides learning in our school that is experiential, hands-on, and informal. I believe that schools need to provide more of these kinds of opportunities for students. But I also respect the need for enhancing the curriculum at our school and hope that our garden is utilized across disciplines and aligned with the common core. The strategy that my wife (also a teacher at DeWitt Clinton) and I have used to keep the garden relevant in our own discipline of English/ Language Arts has been to integrate the garden into our school's 12-grade curriculum. For instance, as the

literary task for English 8, students need to complete the Eco-Design Project that has them argue for an eco-design solution to an environmental problem. Students visit the Clinton Garden as an example of a small-scale eco-design project as indicated in the following lesson plan:

Week-At-A-Glance				
Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
Gallery walk Post-Tempest Projects Students help encourage next steps by commenting on transition projects	Exploring a small scale ecological design project: The Clinton Garden	Examining a medium scale ecological design project: Sustainable South Bronx (Majora Carter TED talk)	Experiment with a large scale ecological design project: The NYC transportation system (Part A: Intro to designs)	Experiment with a la scale ecological desi project: The NYC transportation syste (Part B: Case scenari

Lesson Overview:	Students this week are being immersed in examples of small, mid-size and lar scale ecological designs starting from small to large. Today's tour of the Clint Garden will be introduce students to a local, community generated communit garden on our own campus.
Common Core Standards Addressed:	RI.11-12.3 Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas or events interact and develop over the course of the text. RI. 11 – 12.7 Integrate and evaluate multiple sources of informati presented in different media or formats (e.g. visually, quantitativel as well as in words in order to address a question or solve a problem.
Assessment used:	Worksheet, question and answer, discussion.

Lesson AIM:	How is the Clinton Garden an example of a small scale ecological design project?

Do Now:
Why do school gardens matter? What difference do they make?
Lesson Procedure:

Student activities:	**Teacher notes:**
Students will be given an excerpt from the Clinton Garden Opening program and asked to read and fill out worksheet containing comprehension questions for homework. Comprehension questions might include: Where is the garden and what was there before it was created? Who has been involved in the creation and maintenance of the garden? What were some of the challenges in creating the garden? How were they overcome? How does the garden improve the school environment? What does it add to students' education? Before heading down to the garden, students have students brainstorm ideas for why school gardens matter. Answers might include: It gets students outdoors It is an interdisciplinary space, just like the real world Gardens allow for wonder and hands on learning We can learn how food grows and be humbled by the process It promotes thinking about nutrition and food systems Students learn skills from leadership and teamwork to community engagement and activism It adds to the school environment Escort students to Clinton Garden, and ask them to take notes on what they notice through direct observation. Encourage students to share observations. At the end of the visit, ask students to recall the definition of an "ecological design project". Then ask them to draw from the background information and their direct observations to explain how the Clinton Garden is an example of an ecological design project. Closing/Checking for understanding :	

Checking For Understanding: **(What questions need to be answered by students as evidence for understanding of the material?)**		
Do school gardens make a difference? If so, what difference do they make?	What principles of ecological design are applied in the garden?	What places do you know of where garden can happen? What would be needed in order fo garden to be created?

Here is an example of a recent activity sheet for connecting the garden to our study of Shakespeare's The Tempest, also in English 8:

E8 w/ Mr. Pultinas First Trip the Clinton Garden
Lesson # 19: How can we utilize our senses to perceive the 4 elements in the garden?

Name_____ Date: 3/20/14

Use your five senses (taste only in the metaphorical sense today please) to make and record observations about where each of the elements exists in the garden. Be detailed and describe what you observe using figurative language, comparisons and your own unique way of describing your experience in the world.

Water (Note: While water is not necessarily visible from the garden, the Jerome Park Reservoir is nearby and even if it wasn't, there is moisture. What parts of the garden seem to hold the most moisture, why do you think that is? What are the driest parts of the garden? Why might some parts of the garden be drier than other parts?)

Earth (Note: Of course scientists might regularly observe variations in soil types from one region to another or even from one locality to another. But under this category, you don't have to stop after describing the soil or earth and what it might feel like. What observations can you make about the plant and animal life you see in and around the garden?)

Air (Note: breathe, sniff, feel the breeze. Take deep breathes – we are intimate with the air – it flows in and out of us without our knowing. What is it like out here as opposed to being inside in our classroom.)

Fire (Well, certainly there is no fire – thankfully – in the garden- but there is heat. How warm is it today? Is the sun out? Also, there are processes that take place in the garden that generate heat. Do you know what they might be?)

For Homework # 19 tonight, write a brief report on your visit to the garden today using your observation notes. In your "write-up" include descriptive language and detailed observation. Also, state a preference for one of the elements even if it was not so apparent during today's visit. Explain your preference.
We will return to the garden after Spring Break and do a similar exercise.
Ultimately, this writing will be preparatory for Portfolio Assignment # 2 (TBA)

And the follow up assignment:

E8 w/ Mr. Pultinas Portfolio Assignment # 2 – first draft due Monday, April 28

Why does the Clinton Garden matter?

Prompt: Focus on one of the elements and the problems associated with that element in our current age of climate change and global warming. For instance, consider air quality and outdoor learning (air), capturing storm water run–off (water), soil fertility and healthy food production (earth), sources of energy (fire). How does the Clinton Garden address the problem and what are the solutions that it offers or could potentially offer? Consider the role that the Clinton Garden currently plays in our school as well as its potential role in the future. You may use one or two cited references to further your understanding of the problem, but your overall purpose in this paper is to persuade your readers that the Clinton Garden matters. If you don't think the Clinton Garden matters, you may also argue this point in your paper.

Based on your observations and thoughts on the garden from our March 20 visit and from today's second visit, write a 1-2 page typed (12 pt. font, double-spaced, 1" margins) on the prompt above.

II. Project Analysis

<u>What worked</u>

The garden works. It is a beautiful site on our campus and I take pride when I see our principal Santiago Taveras show the garden to school visitors. Each week during the growing season from 12 to 25 students from the EAC club gather in the garden to dig, plant, harvest, prune, etc. – real hands on learning. We have a busy after school campus with excellent playing fields and so students will often wander in to the garden out of curiosity and wonder. Sometimes they have questions about what they could eat, but mostly they come to observe a little piece of protected nature.

English classes come to tour the garden as part of their curriculum requirements and some teachers from other departments take classes to the garden as well.

We have learned first hand the generosity of our partner community organizations.

<u>What didn't work</u>

I've always envisioned the garden to be used as an outdoor classroom across disciplines. Thus far, I feel the garden has been underutilized by teachers of classes in the disciplines of math, science, social studies, even health.

We are doing our best to change this. For instance, on June 5, there will be a special professional development provided to our teachers at the New York Botanical Gardens made possible by a Wellness Grant. We are hoping that this training will inspire teachers to use the garden as an outdoor laboratory and resource. We have

good reason to believe that this will transpire, especially since our school is reorganizing in September of 2014 and we will be starting a STEM Small Learning Community with a focus on Sustainability and Agriculture.

Applicability to other schools

I believe that The Clinton Garden stands as an example of the power of an idea. It started with a simple plan: if you show students how food is grown they might learn to appreciate it and begin to care for what they eat. This simple idea has transformed the space of a school.

The advice I would give to other schools is to get a garden started, but be willing to devote time (even during the summer) to maintaining and growing it. Once the garden is established it will grow. It will attract not only nature – birds, pollinators, seeds – it will also attract community and support from community organizations if you nourish and allow these relationships to grow.

Measuring Success

We weigh our vegetables to measure our success. We count the number of classes that visit the garden. These kinds of measurements can be found on the blog. But I believe the true measure of our success is in the number of students that are devoted to the upkeep of the garden. It is measured in the responsiveness of students who are willing to try the parsley and those who I see protecting the bee rather than freaking out when they see it. It is in the little things: the custodian who complements me on being the only one teaching the kids something about agriculture, the student who asked me just today whether its true or a myth that plants like manure. Although I am well aware of the need to keep numbers, I am qualitatively oriented and I could say without reservation that The Clinton Garden has made a noticeable difference on our campus.

Future Plans

Aside from our unquenchable desire to continue to maintain and grow the garden, we have initiated a campaign to create an outdoor classroom. The time has come to expand The Clinton Garden by creating an outdoor classroom incorporated into what we propose to become The James Baldwin Memorial Outdoor Learning Center, a landmark site for urban environmental education in the Bronx and New York City. The dedication of this site to the memory of an alumnus whose courageous thoughts on inclusion, politics, race, gender and identity are part of our national heritage lends an appeal that will attract visitors.

For more information on this plan, please follow the link to our IOBY campaign found at the top of our blog (wittseminar.blogspot.com) or go to:

https://ioby.org/project/james-baldwin-memorial-outdoor-learning-center-clinton-garden

III. We Also Compost

Our school's indoor and outdoor composting efforts

In the Spring of 2012, students from the EAC, The Environmental Affairs Club, along with folks from the NYC Compost Project built a 3-bin compost system by hand. Students learned to use power tools safely and execute a complex design.
We rely on compost to nourish our completely organic garden.

At DeWitt Clinton, we continue to compost in at least four different ways. In addition to our 3-bin system we have a tumbler that we use for household/kitchen food scraps, an enclosed plastic bin that we use to cure the compost from the tumbler, and we have two worm bins that we keep indoors.

Collaborations

Since becoming a Master Composter in 2012, I have maintained a strong relationship with the New York City Compost Project in the Bronx. My final project for certification was to help build and oversee the construction of our 3-bin system. To fund this project we applied for and won a grant from Change-By-Us and administered by Citizens Committee.

Compost Education Efforts

In 2012, EAC students and I helped organize and run our first a Worm Bins Made Easy Workshop at DeWitt Clinton High School in collaboration with the New York City Composting Project in the Bronx. This workshop was open to and attended by students and members of the community.

In the Fall of 2013 we hosted a Compost Made Easy Workshop and became one of 16 official Compost Demonstration Sites in the Bronx. This event was also open to and attended by the public. We are eager to host more workshops in the future. In the meantime, I make it a point to educate my own EAC students and student visitors about compost.

How our composting efforts will continue

We need more compost for our growing garden. Though we have constructed the 3-bin compost system, our present system is primarily utilized in composting garden waste (trimmings, weeds, potted soil, unused vegetables, leaves, etc.). We currently do not have the capacity to increase our production of compost that can be made from cafeteria kitchen waste. We see an opportunity to increase our compost by developing a system to compost vegetable waste from the cafeteria kitchen as well as coffee grounds from at least six school offices. For this reason, we recently applied for and were awarded a Community Composting Grant from Citizens Committee of New York City.

Replication

I see composting as essential to gardening as well as an essential sustainability issue. While I anticipate organics collection by the Department of Sanitation at our school in the next couple of years, I will still compost on site because it is a process that students need to know about. My students are fascinated by compost.

My advice to other schools is to connect with the New York City Compost Project. This team has been invaluable in providing us with working knowledge and exemplifying a professional commitment to sustainability issues of all kinds.