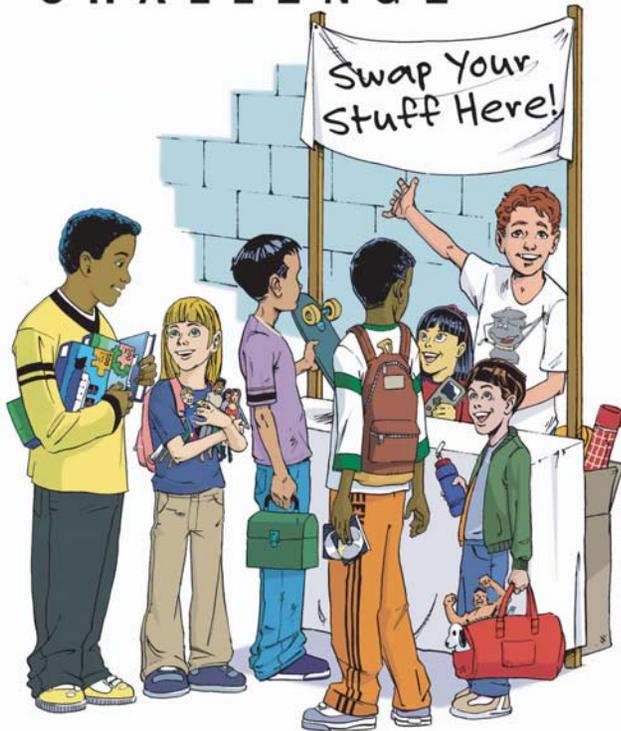


TrashMasters!™  
**REDUCE & REUSE**  
CHALLENGE



Elementary Division  
Brooklyn Borough  
Runner-Up

**PS 146**  
**Brooklyn New School**

# 2013 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/wasteless](http://nyc.gov/wasteless)



# 2013 Golden Apple Awards Contest Entry Judging Info

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



**ID Info:** 13024  
**School:** Brooklyn New School PS 146  
**Grade Division:** LM  
**Borough:** K

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

## 2013 Project Entries received for:

**School Population: total #** 620

**Core Group:**  **Total Participating:**

**TrashMasters! Super Recyclers**

Received:

**TrashMasters! Reduce & Reuse Challenge**

30

315

BNS Reduces and Reuses!

Received: 5/1/2013

At PS 146, we constantly challenge ourselves to improve and expand our sustainability efforts. Students learn to mindfully take responsibility for our natural resources, and to use and reuse wisely. We do whatever we can to reduce our impact on the Earth, learning and helping each other as we go, in grade-appropriate ways that are incorporated into the curriculum. Projects include: reducing lunchroom waste (pulp trays instead of Styrofoam, paper and cardboard, plastic bags, compostable food, trash bags, reusing juice pouches and other Beverage containers for art projects); "Resparkle Club", Recycling Olympics, annual EcoRama. This school is an NYCCP Compost Demo Site.

**TrashMasters! Team Up to Clean Up**

Received:

## Prior Year Entries:

13:RR-HM

## Current Prizes

13:RR-hon

## School Contact Information:

**Phone:** 718-923-4750

**Address:** 610 Henry St  
Brooklyn

11231

**Contest Coordinator:**

Barbara Taragan

**Block&Lot:** 3003690001

**DOE Location:** K146

**DOE Bldg:** K142

**Principal:**

Anna Allanbrook

**Sustainability Coord:**

Johanna Esteras

## REQUIRED for Super Recyclers only:

**Custodian:** David Carrigan

**Info Confirmed:** 5/10/2013

Printed: 6/26/2013

## COVER PAGE

<http://bns146.org/>

<http://bnsecorama.blogspot.com/>

## SCHOOL INFO

School Number: 146

Official School Name: The Brooklyn New School

Street Address, City, Zip: 610 Henry St. Brooklyn, NY 11231

Phone # (718) 923-4750, Fax # (718) 923-4780

Principal: Anna Allanbrook, [anna@bns146.org](mailto:anna@bns146.org)

Contest Coordinators:

Barbara Taragan, Science Coordinator, [barbara@bns146.org](mailto:barbara@bns146.org), (718) 923-4750

Johanna Esteras, Sustainability Coordinator, [johanna@bns146.org](mailto:johanna@bns146.org), (718) 923-4750

### **School description: What other relevant information should the Golden Apple Awards judges know about your school community? Include size, location, population, special missions**

BNS is located on Henry Street in Brooklyn, on the edge of the Carroll Gardens neighborhood, right up against the BQE and the border of Red Hook. We are unique in that we are an unzoned, District 15 public school: families come from all over the borough to share in our tradition of progressive, project-based, public education.

BNS is committed to an interdisciplinary, inquiry-based curriculum that supports students in becoming independent thinkers and problem solvers. BNS was established in 1987 by parents and teachers who shared a vision of a child-centered school for a diverse student body - a school with a racial, ethnic, and economic balance. We have approximately 620 students in 25 classes pre-K through fifth grade. 50% of our students are females and 50% are males. Approximately 31% of our students are Black or African American; 31% are Hispanic or Latino; 8.1% are Asian; and 33% are White, Arabic speaking or other. About 22% of our students are at the poverty rate and eligible for free lunch.

Our school's experiential, hands-on learning model integrates beautifully with the environmentally friendly, sustainable initiatives described in this application. Our commitment to cultivating ways for our students to connect and care for the earth is expressed on a daily basis in multiple ways. We are excited to enter the Trashmasters!

Reduce and Reuse Challenge, and proud to present a few of the exceptional programs we are creating and practicing together.

## **CONTEST ENTRY INFO**

Borough: Brooklyn

Grade Division: Elementary

Contest Entry Title: The Brooklyn New School Reduces and Reuses!

Contest Entry Summary: At PS 146, The Brooklyn New School, we constantly challenge ourselves to create new ways to reduce and reuse. Students learn to mindfully take responsibility for our natural resources, and to use and reuse wisely. We do whatever we can to reduce our impact on the Earth, learning and helping each other as we go, in grade-appropriate ways.

## **STUDENT INVOLVEMENT**

Student Participation: Core Group: 315 students (3rd, 4th and 5th graders)

Student Participation: 620 students

School Population: 620 students

## **WASTE PREVENTION AND REUSE PROJECTS**

### **Lunch Room Recycling**

Our Lunch Room Recycling program is multifaceted. We target a multitude of recyclables and reusables. In 2006, we began recycling drink containers, including metal, glass, and cardboard cartons. In the years that followed, we went on to recycle paper, plastic bags, aluminum foil, and compostable food waste.

Here are our average daily numbers:

Paper/cardboard: 1 bag

Cans/plastic/cartons: 1 bag

Flip/Tap/Stack tray system: 1 bag

Food scraps: 2.5 gallons

Trash bags: 3-4

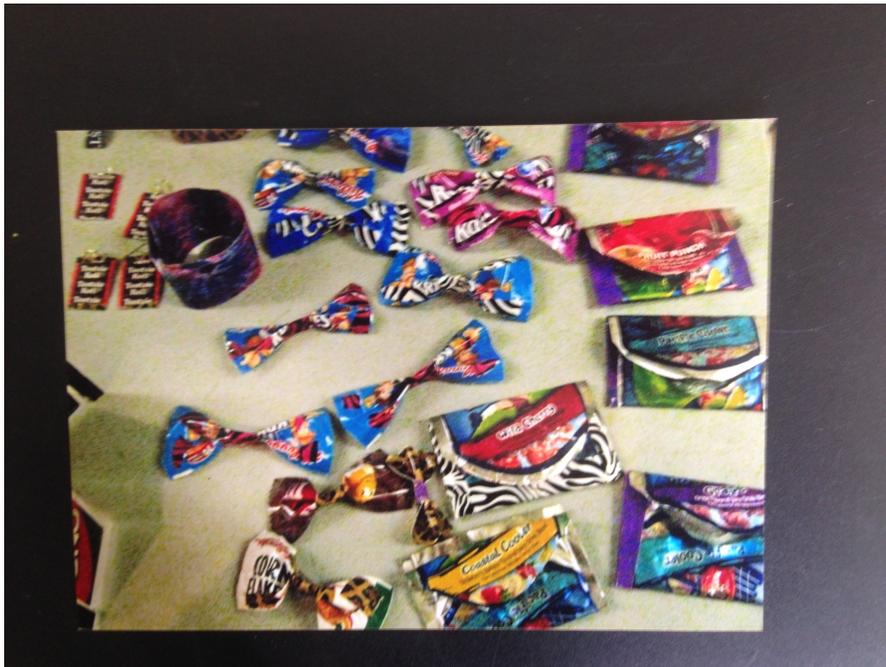
**For each project you initiated, briefly describe and document the following:**

## **IMPLEMENTATION**

**What type of waste did you target for reduction, prevention, or reuse in this project?**

Our PTA purchases pulp trays instead of using the DOE supplied Styrofoam Lunch Trays, preventing pollutants from entering our ecosystem. We also recycle cans, plastic, cartons, cardboard, and juice packs.

Over the last 8 years, we have worked to improve the expediency and effectiveness of our recycling programs. We have significantly reduced our daily trash output, and we utilize recycled and cleaned juice packs, plastic bags and other items for creative projects throughout all grade levels.



*Student-made wallets and bows, created from recycled juice packs.*

**Why this?**

**Pulp Trays:**

Three years ago, in 2010, students were inspired to take on a variety of environmental issues. As part of their efforts, Earth Week was born. Think Earth Day, but multiplied by 5! One group of 5th grade students was upset about the use of Styrofoam lunch trays, so they researched the issue and learned that pulp trays were a more environmentally

friendly option. They demonstrated to the school community that unlike Styrofoam, pulp trays were recyclable, and didn't pollute the environment. They even made "paper" out of the pulp. They went on to research the cost differential between pulp and styrofoam, and wrote up a detailed proposal. The PTA agreed to fund the pulp trays. Our entire school community is proud of this continued choice, and our 5th graders have inspired our sister middle and high school, The Brooklyn School for Collaborative Studies, to come on board as well. They share our lunchroom, and they are using pulp trays, too.

### **Recycling:**

Sustainability and respect for others and the environment is a key component of the BNS community, so the evolution of our recycling program has become integral to our engaged education. Our school looked closely at the waste generated during lunch periods, and began to formulate how to better recycle and reuse. When we realized how much less trash we were sending to landfill - from 12 to 3-4 bags per day! - the students knew they had to continue to refine and grow the program.



*Part of our student-designed, Lunch Room recycling station.*



*Our recyclers in action!*

**What type of waste did you target for reduction, prevention, or reuse in this project?**

We set out to reduce all of our lunch room waste, and to reuse and recycle whenever possible. We targeted:

- Styrofoam
- Paper and cardboard
- Plastic Bags
- Compostable food
- Juice Pouches and other Beverage containers
- Trash bags

**What did you do? How did you reduce?**

We put students in charge. With the help of Johanna Esteras, our Sustainability Coordinator, as well as our lunch room monitors, each upper grade student (grades 3, 4, and 5) is responsible for working at the recycling station for one week. Three volunteers from each class work to guide all students to the appropriate trash or recycling can, to stack the pulp trays, and to decide which foods are compostable. The students also helped design our recycling and composting stations, and to refine the process as better and more efficient ways of doing things are discovered.

Each September, we begin with our most experienced recyclers, the 5th graders, and we rotate grades throughout the year. If you were to visit and observe our monitors in

action, you would witness an extraordinary level of ownership, knowledge and pride in our program.



*A Lunchroom Recycling Program volunteer presenting the bowl of edible, recycled snacks!*

Many of the materials we recycle are actually reused at special events, as part of our "Resparkle Club", or in the classroom. These are just a few examples: juice pouches are turned into wallets; plastic bags are braided into jump ropes at our yearly Health and Science Fair; and milk cartons are turned into paddle boats by our Kindergarten students.

**Project planning. Your objectives, and the planning and organization that drove this project.**

Over the years, as we've learned more about environmental and climate science, our students, faculty, staff, parents and community members have come together in a variety of ways to create these and other projects. We have a Sustainability Coordinator, an incredibly engaged and involved Science Teacher, a Green Committee of parents and staff, and an aware and interested student body.

Our objectives are to improve upon what we already have, expand those programs, and create new initiatives that reflect the school's unique commitment to sustainability and environmental stewardship. We want to teach our children and families that caring for the environment can be integrated into the way we teach, learn, and live our daily lives.

**Student involvement. All student efforts to plan and implement the project. Include activities conducted by classrooms, cluster, grade, school wide, team, club, or after school program.**

The students take an enormous amount of pride in the work they do to implement this program. Volunteers in the lunch room take their jobs very seriously on any given day, and the younger kids love creating wallets and jump ropes and art from recycled materials.

Each grade level contributes in their own ways, and there is an after school workshop that cares for the gardens, tree pits and compost.

Additionally, volunteers continue to care for our yard and trees during the hot summer weeks, visiting our school and keeping our efforts going, so there is continuity when school begins again each September.

**Promotion. Efforts to promote this project, such as announcements, memos, flyers, posters, letters, web pages, skits, songs, assembly programs, media coverage, or other special events.**

During the first 2 years of the program, BNS hosted 3 Town Hall meetings during each school year, to introduce students and staff to the initial recycling and composting programs. These events are no longer necessary, as the programming is an embedded part of the school culture, and the training happens as the skills are passed on from student to student. The upper grade students guide the younger students in the process while working their shifts at the recycling stations. Colorful, eye-catching, student-made banners and signs fill our lunchroom.



*The lunchroom in action, with signs overhead.*

We have special events throughout the year. We do beach clean-up projects, a Recycling Olympics, and Our EcoRama event are annual opportunities to celebrate all we've learned and accomplished related to sustainability.



*Last year's EcoRama poster.*

We have a regularly updated web site, which documents many of our sustainability related projects. We regularly send out updates to the entire school population, sharing in the excitement and accomplishment of our students' efforts. Again, here is the link for your perusal: <http://bnsecorama.blogspot.com/>

**Collaboration with other schools, professionals, businesses, or community organizations on this project. Did you solicit donations or help?**

In the early stages of our programming, we met informally with a few other District 15 schools, a number of times, to share ideas and best practices.

We solicited our PTA for help in paying for the Pulp Trays.

**Educational components. Include learning standards met, lesson plans, and exemplary samples of student work.**

Sustainability is immersed in all of our curriculum from Pre-K through 5<sup>th</sup> grade. Our curriculum reflects a wide variety of environmental education, all of it weaving together and tying back to the importance of our Lunch Room Recycling Program and Composting Program. At BNS, social studies and science are at the core of an interdisciplinary inquiry-based curriculum that supports students in becoming independent thinkers and problem solvers. All of our teachers teach science, with the support of two staff members: a science teacher and an environmental educator. We use a variety of NSF supported curriculum including FOSS, STC, and Insight.

In Kindergarten, as part of their study of trees and wood, students use harvested rainwater to irrigate the tree pits around the school that they plant and maintain. They also engage in an intensive study of birds, including NYC pigeons.

Our entire 1st grade is involved in a year long, Green Spaces study, and they participate in a First Farmers program. We conduct assessments, informal and formal, throughout the school year. Students express their understandings through drawings and writings and class discussions. Can they tell why green spaces are important to people? Can they name the parts of a plant? Are they willing to taste new foods? Can they distinguish between a basil leaf and a spinach leaf by smell? Can they act out the life cycle of a plant? Can they tell you how to care for a tree pit or a plant bed? Or tell you how it feels to be a farmer? These are some of the questions that we use to evaluate the effectiveness of our teaching. At the end of the year, During our June Earth Day Event, EcoRama, our First Farmers help out sharing their experiences as farmers and whipping up a delicious dish such as kale chips. Our First Farmers are amazing teachers and stewards of the Earth.

Second graders study the history of New York City by going “back in time”. They design solutions to living on an island using technology from the 1600’s including collecting, filtering and transporting drinking water. Science connections include “inventing” water wheels, using pulleys, and experimenting with water and air pressure. As part of Getting Wet and Dirty, they work with fifth graders to design and build models of rainwater harvesting systems.

African biomes are the focus of third grade curriculum. Students calculate rainwater amounts and compare them to the average rainfalls in African rain forests, savannas, and deserts. They write to rural students in Malawi to find out about their water sources and in turn communicate about NYC’s water sources.

Fourth graders study the woodlands and waterways of New York State. They raise and release trout through the “Trout in the Classroom” program. In science, they learn how to do water quality testing including an exploration of pH, dissolved oxygen, and turbidity. They also learn about the water cycle and land-water connections. The RRS will broaden and deepen this water study as they test the harvested rainwater and compare its qualities to rainwater runoff and a nearby polluted body of water: The Gowanus Canal. They will report their findings to the first grade farmers.

The focus of our fifth grade science and social studies curriculum is how citizens can work together to solve problems. The overriding theme of our science study is climate change—connected to that is a study of weather, chemistry, electricity, and alternate sources of energy including water and wind. The fifth graders are the leaders in this school-wide project as they are the ones who research, design, build models with their second grade buddies, and eventually construct a rainwater harvesting system. They are also the leaders of the Lunch Room Recycling Program.

## **PROJECT ANALYSIS**

### **What worked? What were the most successful aspects of this project?**

The Brooklyn New School was featured in an EPA Region 2 Sustainable School Webinar Series on the topic of Reducing Waste in Schools ([http://www.epa.gov/region02/webinars/pdfs/Cafeteria\\_Waste\\_Webinar.pdf](http://www.epa.gov/region02/webinars/pdfs/Cafeteria_Waste_Webinar.pdf)). Our system works now because we engaged in a process of trial and error. For instance, we learned that our students were much more productive and efficient paper and cardboard recyclers once we put a lid with a slit on the bin, with clear signage and lettering. Once the bin no longer looked like a trash can, everyone stopped loading the recycling bin with trash!

### **What didn't work? What were the least successful aspects of this project?**

We have not yet found a permanent compost facility that will take our pulp trays. In 2011, we participated in the Gowanus Canal Conservancy Pulp Tray Compost Program along with other neighborhood schools, but this is no longer viable. The program could not process the volume of trays they were receiving without an industrial chipper. If they are able to get up and running and process a higher volume of trays, it would be ideal, because being able to compost trays locally is better for the environment. We hope to be able to participate in the Department of Sanitation School Compost Pilot Program in the near future as an alternative.

### **Applicability to other schools. What advice would you give to other schools with similar populations who want to replicate your project?**

BNS had the opportunity to share the recycling program with our sister school, The Brooklyn School for Collaborative Studies (BCS), a middle and high school housed on

the upper floors of our building. They observed our Lunch Room Recycling and Composting program and decided to adopt it for their lunch periods.

Some of the advice we give other schools looking to start a program of their own is to give students as much ownership of the project as possible, and to start small and to learn from what doesn't work along the way.

**Measuring success. Describe how you measured the success of your project.**

One way we have measured the success of our project is by the reduction in daily large trash bags we send to landfill. We have reduced from 12 bags per day prior to the implementation of the project, down to 3-4. We are incredibly proud of this, and aware of our small but meaningful contribution to less trash truck idling on the streets and less trash and plastic in our landfills.

**Explain any impact on the students or community.**

The impact on our students is extraordinary in what will hopefully, one day, be an ordinary way: they take for granted that they have a personal responsibility to care for the environment. This is evident in how they move through the recycling system in the lunchroom, the recycling tips and tricks they bring home to their parents, and the way they care for everything they grow and harvest in the yard.

Our community walks by our school and on a daily basis observes healthy trees, clean and cared for tree pits and in the Spring, flowers growing where students have planted bulbs. Neighbors share in the benefit of less trash pick-up noise and emissions at our

large building, and of students who carry their commitment to environmental stewardship out into the community at large.



*Students caring for the trees and tree pits that surround our school.*

**Future plans. How would these prize funds be used to further enhance your school recycling program, waste prevention initiatives, or beautification projects?**

There is so much we want to do. As we dream about winning these prize funds, we consider these to be worthy ways of using them:

- We want to relieve the already overburdened PTA from having to pay for the pulp trays. We are so grateful that they have supported this effort, but we would use some of the funds to pay for a year's supply for the 2013-14 school term.
- We would like to purchase new recycling containers for the classrooms and hallways. Solidifying our paper recycling program is a big goal for BNS, but we need supplies in order to do it effectively.

- We would use funds to create permanent, effective signage over recycling receptacles in the hallways.

- There are always improvements and repairs needed at our outdoor compost facility. Some of the prize funds would be dedicated to this wonderful program.

- We want to expand our gardening to a neglected area that borders our school, at Cole Street. We want to provide more container gardening and opportunities for our students to engage in the process of growing and harvesting food. We also know how much this would beautify an unsightly part of the neighborhood.

## **SCHOOL COMPOSTING PROGRAMS**

**Golden Apple Award entries with composting programs may be entered in the Golden Shovel Award competition for your borough's Master School Composter, selected by the NYC Compost Project.**

**To enter, check the box "We Compost" on the Reduce & Reuse Challenge Contest Entry Submission, and include answers to the following questions in your contest entry:**

**Describe your school's indoor and/or outdoor composting efforts.**

### **BNS Compost Program**

The Brooklyn New School Compost Program is very successful. We recycle 75 % of our cafeteria food waste, and we have a designated area in our school yard for composting.

We use 4 Earth Machine Bins ([http://www.earthmachine.com/the\\_earth\\_machine.html](http://www.earthmachine.com/the_earth_machine.html)), which require minimal maintenance.

We also use 2 large vermicompost bins. Worm composting (vermicomposting) is a natural and efficient way to "recycle" our organic school cafeteria waste rapidly, while producing high quality compost soil. These are self-contained bins and nearly odorless. We also distribute and support small classroom worm composting bins.

Composting just happens here at BNS. It's so integrated into our school days, it's become a very accepted and informal practice. Students and staff join in the work during morning drop off, throughout the day, and during the after school program.

**Describe collaborations with outside organizations, including compost education.**

Matt Sheehan, our former Sustainability Coordinator, completed the NYC Master Composter training, and the sign pictured below indicates that we are a designated composting site. People from other schools and from the neighborhood regularly stop by, to learn about our system and to drop off their bags of compost!



**Explain if and how these composting efforts will be maintained on an ongoing basis.**

Our system is working; we will continue the process our compost the way we've been doing it. We hope to expand the program with more compost bins. We constantly use our compost. It enriches the tree beds that surround our school, and we use it in our container gardens in our yards.



*Some of the delicacies that benefit from our wonderful compost. This lettuce will be harvested on Farm to Table day and enjoyed!*

**Could your school's composting efforts be replicated by other schools with similar populations? Please explain.**

Absolutely! Our system is very simple, safe, and accessible. It's easily maintained, doesn't attract vermin, inexpensive to build, and our plans are documented for sharing.

As previously mentioned, we are an official NYC Compost Project Demonstration Site, so we are ready and willing to share our experience and our process.

We would like to thank you for considering our Reduce and Reuse Challenge/Golden Apple Awards entry. We are encouraged by your support of essential programming across the city. If you choose The Brooklyn New School as a recipient, we will be incredibly motivated to strengthen and expand our dedication and our efforts. We will make you proud!