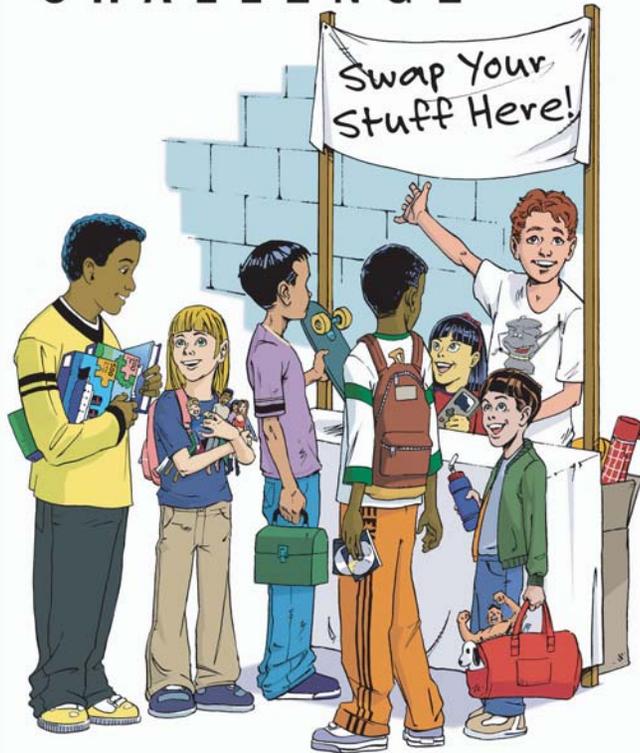


TrashMasters!™
REDUCE & REUSE
CHALLENGE



Elementary Division
Manhattan Borough
& Citywide Winner

PS 89 Liberty School

NEW YORK CITY DEPARTMENT OF SANITATION

2011 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, Michael R. Bloomberg, Mayor
Department of Sanitation, John J. Doherty, Commissioner
Bureau of Waste Prevention, Reuse and Recycling, Robert Lange, Director


John J. Doherty, Commissioner
June, 2011



Manhattan Borough
Golden Shovel Winner

PS 89 Liberty School

NYC COMPOST PROJECT
BUREAU OF WASTE PREVENTION, REUSE AND RECYCLING
NEW YORK CITY DEPARTMENT OF SANITATION

2011 GOLDEN SHOVEL 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 compost more and waste less.



City of New York, Michael R. Bloomberg, Mayor
Department of Sanitation, John J. Doherty, Commissioner
Bureau of Waste Prevention, Reuse and Recycling, Robert Lange, Director

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.



2011 Golden Apple Awards Contest Entry Judging Info

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



ID Info: 11011
School: PS 89 Liberty School
Grade Division: LM
Borough: M

Golden Shovel Award contestant
(for borough Master School Composter)

2011 Project Entries received for:

School Population: total # 525

TrashMasters! Super Recyclers

Received:

Core Group:

Total Participating:

TrashMasters! Reduce & Reuse Challenge

Received: 5/1/2011

525

525

Styrofoam KO'd; Composting OK'd @ 89

Spearheaded by the PTA, the PS89 Green Team has successfully eradicated Styrofoam trays from the school cafeteria for this school and IS 289, which shares the building, by replacing the Styrofoam trays with sugarcane pulp trays. The Green Team then embarked on an innovative pilot partnership with Holton Farms, a local CSA, to compost the trays. ALSO: Golden Shovel Award candidate.

TrashMasters! Team Up to Clean Up

Received:

Prior Year Entries:

first entry

School Contact Information:

Phone: 212-571-5659
Address: 201 Warren St
New York 10282

Contest Coordinator: Christa McDonald
Coord Phone # (if different):
Coordinator Email: CMcDonald@PS89.org

Block&Lot: 1000160221
DOE Location: M089

Principal: Veronica Najjar
Principal Email: VNajjar@schools.nyc.gov

REQUIRED for Super Recyclers only:

Custodian: Dave DiGiacomo
Custodian's Phone: 212-791-8071
Custodian's Email: CM089@schools.nyc.gov

Comments (may not be relevant to judging)

Note: this project was actually coordinated and submitted by PTA "Get Green" Team:
Diana Biagioli, 646-284-8021 / 212-608-5102 / dianabiag@me.com

Info Confirmed: 5/2/2011

5/5/2011



PS89 – Liberty School

201 Warren St
New York, NY 10282
Ph: 212-571-5659
Fx: 212-571-0739

Veronica Najjar, Principal
Ph: 212-571-5659 x
Email: VNajjar@schools.nyc.gov

Christa B. McDonald, Contest Coordinator
K Science Teacher
Ph: 212-571-5659
Email: CMcDonald@PS89.org

Borough – Manhattan
Grade Division – Elementary

Contest Entry Title – **Styrofoam KO'd; Composting OK'd @ 89**

Contest Entry Summary – The PS89 Green Team has successfully eradicated Styrofoam trays from the school cafeteria by replacing them with Sugarcane Pulp trays, and embarked on a ground breaking pilot partnership with Holton Farms, to compost the trays.

Student Participation: Core Group – 525
Student Participation: Total – 525
School Population: Total – 525



TrashMasters! REDUCE & REUSE CHALLENGE

April 2011

Waste Prevention Project

Project Description: STYROFOAM KO'D; COMPOSTING OK'D @ 89

The PS89 Green Team has successfully eradicated Styrofoam trays from the school cafeteria by replacing them with Sugarcane Pulp trays, and embarked on a ground breaking pilot partnership with Holton Farms, a Vermont farm that runs a CSA here locally, to compost the trays. A handful of other schools in NYC have switched to sugarcane trays, but what makes us different is that we have taken it one step further by piloting a way to compost the trays.

Students' diligent efforts and awareness in recycling drink cartons and trays have resulted in a dramatic reduction of trash in the cafeteria, leading to approximately \$777 per year saved on the cost of plastic garbage bags even without labor or any downstream savings included in the calculations. More details in "Project Analysis" section of the proposal.

Implementation

I. WHY THIS?

Styrofoam, actually polystyrene foam, is recognized as a possible human carcinogen and the fifth largest creator of hazardous waste by the Environmental Protection Agency; its toxic chemicals leach into the food it packages. Styrofoam production and use is illegal in Taiwan, Portland, OR and Orange County, CA. (<http://www.earthresource.org/>)

2. Styrofoam in a landfill takes anywhere from 50 years-to-forever to biodegrade!

3. NYC Public schools discard 850,000 Styrofoam lunch trays every day. At 80 trays per foot the daily stack is 2 miles high! 8.5 times the height of the Empire State Building!! (www.sosnyc.org)



II. WHAT DID WE DO?

Phase I – Eradicating the Styrofoam. The **PS89 Green Team** [a group of dedicated eco-conscious PS89 parents] worked with PS89’s Food Manager, Abdel Razik, to research the quantity of trays used monthly in the cafeteria and the cost to replace the Styrofoam trays with Sugarcane ones. Sugarcane trays are more expensive and the PS89 PTA would have to cover the difference. [\$8.38 per case per month/10 cases ordered per month, approx \$838–\$1000 per year]

Mr. Razik also devised ways to work the menu to use fewer trays thereby limiting the extra cost to the PTA and to further reduce trash. For example, he took two lunch items that were not popular and replaced them with simpler versions that could be served in pizza boats. Instead of turkey and gravy he now serves turkey on bagels or turkey wraps; and instead of lasagna he now serves pasta mixed with sauce.

We also contacted the tray vendor (Richard Lillien at Appco Paper and Plastics) for further information on the composition of the sugarcane trays.

A further source of information was the www.SOSnyc.com website run by Debby Lee Cohen. Information from Debby Lee and the website was used as a base for our proposal as well as for our promotional material.

Phase II – Composting the Trays. It became obvious very quickly, that composting the trays was a key component to this project because otherwise trays would be thrown out. While disposing of pulp trays in the trash is a much better option than Styrofoam in the trash, it negates the environmental advantage to some degree. Initially, we approached our neighborhood Battery Park City Parks Authority and asked if we could add our trays to their compost. While they were interested in the concept they were not yet set up to take on such a large project. We plan to liaise with them again when their composting system is established.

The team researched and contacted other schools and individuals for composting ideas, but it was Debby Lee Cohen from www.SOSnyc.org that planted a seed that led us to a source. She responded with some ideas that she and different schools had considered but it was clear nothing had been successfully attempted at this point. A comment she made struck a chord with the **Green Team**. “I have been dreaming of a school–farm partnership, where the farm’s empty truck hauls back compost (and trays) at the end of the day.”

We loved this idea and began researching that angle in earnest. We discovered that a Vermont Farm comes to our neighborhood each week as a CSA. We spoke with Adam Foreman, co–director and Jurrien Swarts, co–owner of Holton Farms, who were immediately interested in our proposal and literally overnight a partnership was created. Holton agreed to pick up the **PS89 & IS289** trays (we share the cafeteria) and to start a pilot composting project on their farm.



Holton Farms is a Vermont family farm run by eighth generation farmers. By practicing sustainable and organic farming methods, their farm produces a diverse selection of agricultural products on over 200 acres. They also partner with other local farmers and artisanal producers in Vermont and New York to offer an even wider selection of seasonal vegetables, fruits, meats, eggs, cheeses, breads, coffees, ice creams, and dairy products.

Their goal is to produce and deliver wholesome food with integrity directly to the consumer. Community building and social justice are very important to Holton Farms. They are focused on bringing people together, educating people about farming and food issues and providing families with access to affordable, healthy food.

What they do with the trays: Holton Farms picks up eco-friendly lunch trays on a regular basis from PS89 and back hauls them to their organic farm in Vermont for use in the farm's composting regimen. The make up of the trays makes them a perfect substitute for more expensive composting materials the farm otherwise buys to regulate pH levels. The organic compost is usable after approximately 3 months in their vegetable fields as fertilizer. Holton Farms then grows, harvests and delivers delicious organic vegetables back to the families of PS89 and other NYC customers who participate in their citywide customizable CSA delivery service.

With all the gathered information, our **proposal** was submitted to the PS89 Executive Board of the PTA outlining what was to be accomplished in Phases I and II. With the EB approval, the proposal was presented to the school parent body at the next PTA meeting on February 18, 2011. The proposal (attached at end) was approved for funding with no dissenting votes.

Sugarcane Pulp trays were introduced to the PS89 & IS289 cafeteria on March 2, 2011.

Based on our experience, we created a **step-by-step guide** on how to eradicate Styrofoam from your school cafeteria and look for composting opportunities which is included in this document.

III. PROJECT PLANNING & PROMOTION

1. PRESENTATION:

Before introducing the sugarcane trays to the cafeteria, the Green Team organized an educational presentation for the students. Business Partners, Elisa Chen, a former PS89 parent, and John Wang from Stotting Holdings LLC created and ran a power point presentation divided into three separate twenty-minute assemblies according to age: K-1st; 2nd-3rd; and 4th-5th grades. Using an overhead projector and fun images, they showed students how long different materials take to biodegrade and allowed them to participate by guessing and asking questions. A demonstration was also given to show how the students should **"Flip It, Tap It, Stack It"**.

A few slides from the educational presentation for students

What should we do with our



What was Wall-E trying to teach us?



We need to think about



How long does it take to



Newspaper?

Answer:
6 Weeks

How long does it take to



Plastic Bags?

Answer:
10-20 Years
(maybe)

How long does it take to



Aluminum
Can?

Answer:
80-200 Years

Why is styrofoam bad for the environment?

- If we throw it away, it does not break down for many
- If we burn it, it releases toxic gases.



Why sugarcane?

- Made from sugar production waste by product - going to throw it out anyway
- Annual renewable resource - grows every year
- Non-toxic - safe
- Biodegradable - decomposes in 60-90 days



2. INFORMATION:

The **Green Team** and students, including after-school students, decorated the cafeteria with “**Flip it, Tap it, Stack it**” signs. We have also installed step-by-step instructions [using both words and photos – for our younger learners] on how to dispose of the trays. The hallways and stairwells have information & signage made by both our team and students. Our bulletin board includes information about recycling; statistics about Styrofoam being used in NYC schools; and our other Green Initiatives.



Monthly newsletters are emailed home to the parent body apprising them of the initiative and explaining what their children are coming home and talking about. “**Flip it, Tap it, Stack it**”, is a cafeteria mantra these days!

One of the newsletters

PS 89 GETS GREENER!!!!

A SMALL CHANGE CAN MAKE A BIG DIFFERENCE!!!!

Dear families of PS 89,

March 2011

The PTA's *Get Green!* Committee would like to share some great *Get Green!* news.

A big, new environment-saving initiative:

STYROFOAM TRAYS ARE OUT OF OUR SCHOOL CAFETERIA!!!

Styrofoam, actually polystyrene foam, is recognized as a possible human carcinogen and the fifth largest creator of hazardous waste by the Environmental Protection Agency; its toxic chemicals leach into the food it packages. Styrofoam production and use is illegal in Taiwan, Portland, OR and Orange County, CA. (Earth Resource Foundation.) That is good enough for us!

SUGAR CANE TRAYS ARE IN OUR SCHOOL CAFETERIA!!!

The new trays are made from sugar cane and wood pulp.

An environmental educator will be coming to PS 89 on March 1st to explain to the students the importance of this change and how to dispose of food waste and trays for maximum recycling and possible composting. Our School Food manager, Abdel Razik has been wonderfully supportive and dedicated to this change, helping us to make the switch effectively and economically. Thank you Abdel!

Ongoing earth-friendly programs:

- * Plastic bottle caps continue to be collected in the lobby and mailed to Aveda cosmetics for use in packaging. These caps would ordinarily be separated from your recycled plastic bottles and thrown into landfill! Thank you Leslie Kramer Gallagher.
- * Household batteries are also collected and sent away to Battery Solutions to ensure toxic chemicals do not leak into our water systems! Thank you Ellen Hunter Vercesi and Lesa Tinker.
- * The Wearable Collections' van pulls up at PS 89 the first Monday of every month to cart away clothes, shoes, stuffed animals for reuse or recycling, sparing landfill tons of waste! Thank you Betsy McClelland.
- * Paper recycling bins are in every classroom and hallway! Ask your child how much paper goes into the recycling bins instead of the trash cans!
- * Reusable snack and sandwich bags by Snack Taxi are available for purchase from the PTA, making your child's lunch a greener one, free of petroleum-based plastic bags! Thank you Diana Biagioli.
- * Stylish PS 89 accessories keep you green: travel coffee mugs; canvas tote bags; and aluminum water bottles are available for purchase.

Beyond PS 89, but oh-so-easy to do:

- * Your number 5 plastics (yogurt and take-out containers) are collected at Whole Foods for **preserve products**. Keep them out of landfill. And no, the city does not recycle number 5 plastics.
- * Your plastic bags (including dry cleaning and mail packages) are collected by Whole Foods for manufacturing highway construction barriers. Keep them out of our beloved trees' branches!

Look for news on a special Earth Day Family Friday April 29th.

3. SUPERVISION:

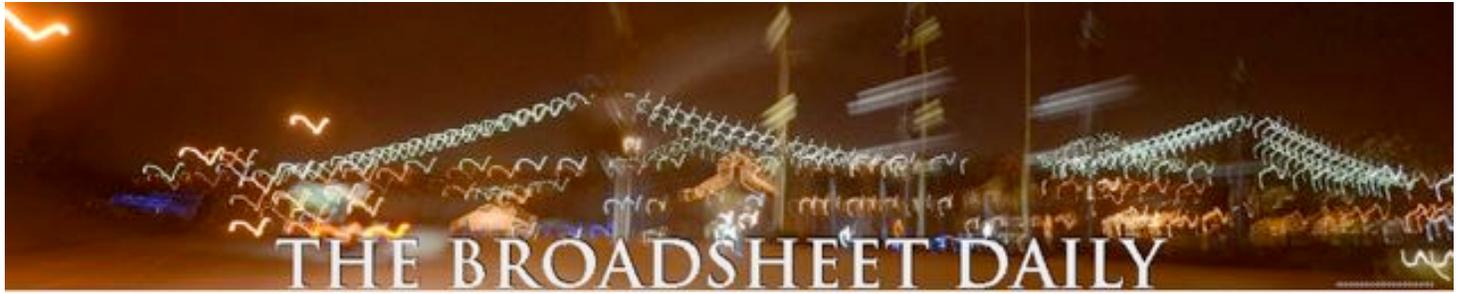
The **Green Team** is a regular presence in the cafeteria overseeing the “**Flip it, Tap it, Stack it**” routine which, aside from ensuring the trays are not thrown out, includes pouring liquid leftovers into the slops bucket and placing drink containers in the recycling bin. Students are diligent with their recycling routine and if a friend needs help or a reminder a comrade is nearby.



4. MEDIA:

Our local newspaper “The BPC Broadsheet” came to our school and interviewed students and our Green Team and published an article on March 8 2011.

http://web.me.com/broadsheet/Broadsheet/Home/Entries/2011/3/8_March_8_2011.html



http://web.me.com/broadsheet/Broadsheet/Home/Entries/2011/3/8_March_8_2011.html

March 8 2011

Save a Life, Plant a Tray

New Programs in BPC School Lunchrooms Keep Carcinogens Out of the Food Cycle

Paper recycling in New York City schools has been a feature of school life since the Department of Education (DOE) developed its green-school guidelines in 2007. But Battery Park City schools are taking the urge to go green a step further. As of last Wednesday, the Parent-Teacher Association (PTA) of P.S. 89 is sponsoring a program in the school's cafeteria that bids farewell to Styrofoam trays in the school's hot-lunch program, replacing them with recyclable, biodegradable, eco-friendly trays made from sugar cane and wood pulp.



The PTA launched the program on last week with a school-wide assembly led by an environmental educator who explained the importance of this change and how to dispose of food waste for maximum recycling. Styrofoam, made from polystyrene foam, is recognized as a possible human carcinogen and is cited as the fifth-largest creator of hazardous waste by the U.S. Environmental Protection Agency. In addition, its toxic chemicals leach into the food it packages.

As the program kicked off on March 2, the PTA's green-team parents, Diana Biagioli, Carolyn Happy, Anita Sirsi, Lesa Tinker, and Amy Whitman, dedicated time to helping the children "flip, tap and stack" their recyclable trays, as well as empty their milk cartons, and recycle the paper containers. In three lunch periods alone, the cafeteria would normally go through 12 garbage bags of waste. However, in the first three lunch periods of the new recycled tray program, the first three garbage bags were each less than one-third full.

Students interviewed by the Broadsheet knew they were doing something good for the environment, but they're still learning to go through the motions of it. For that reason, the PTA green team will be on hand throughout the month to help train the children.

Ms. Biagnoli said the program is funded at a rate of about \$80 per month by the PTA. She and the other PTA green team members thanked P.S. 89 food manager Abdel Raznik for continually finding ways to make the cafeteria produce less waste. For example, he uses paper boats for pizza on Fridays and produces a trayless lunch on Tuesdays.



Neighborhood school P.S. 276 is also thinking about the environment. Their cafeteria uses paper boats instead of trays whenever possible, and their PTA is looking into the same type of recyclable trays that P.S. 89 has. In addition, some elementary school children act as recycling monitors during lunchtime and all children have the option of attending the Environmental Club during recess. Erica Weldon, parent coordinator for P.S. 276, said "it's amazing what the little kids know. I'll often ask them what to recycle."

Outside of Battery Park City, the DOE sponsors a push to use paper containers, rather than polystyrene trays, in city schools. In an illustration of how small things add up, the DOE estimates that this program alone diverts approximately 2.4 million polystyrene trays from landfills every month.

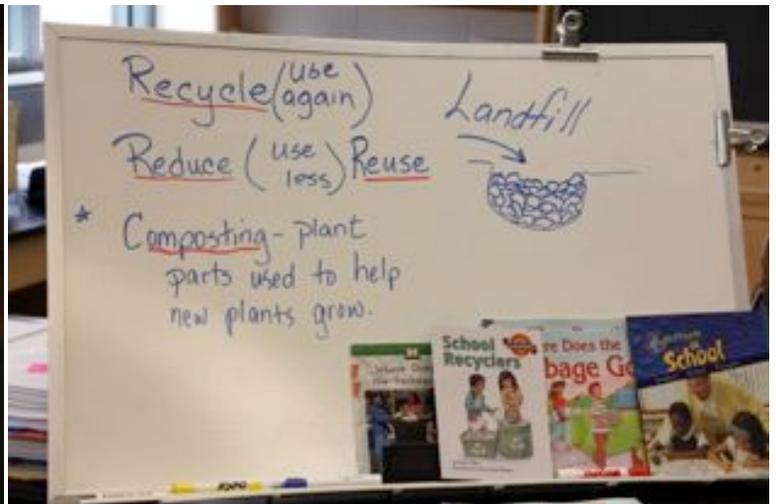
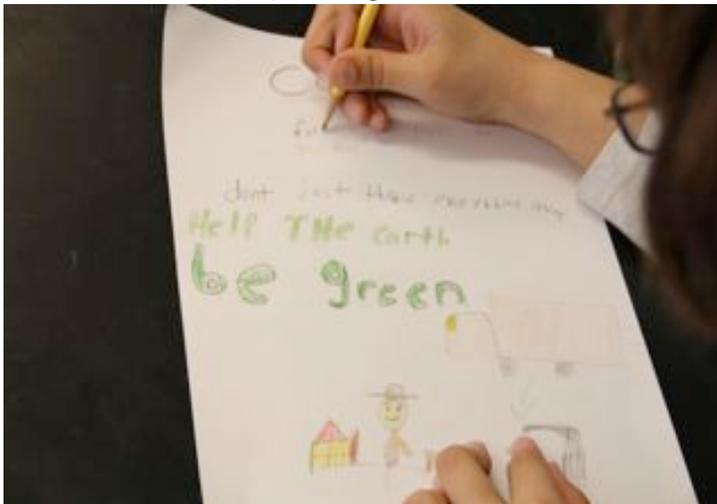
Dianne Renzulli

photos by Dianne Renzulli

IV. EDUCATIONAL COMPONENTS

1. Classroom work pertaining to recycling and composting has been taking place in the Science rooms. Students have been given lessons and the task of being ambassadors for the younger grades. Our 2nd graders have created posters to share with and educate the Kindergarteners. They feel very proud to be able to help them understand the importance of this project.

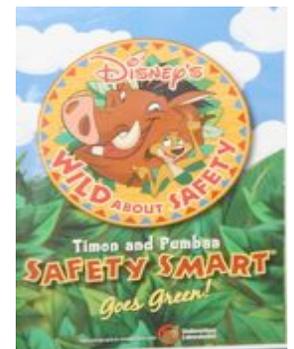
Posters created by 2nd graders



Kindergarteners receiving posters from 2nd graders and reading books about recycling



2. A very engaging short Lion King video on recycling – Timon & Pimbaa Safety Smart Goes Green – has also been shown to students of all age levels, which continues to explain & explore the issue of recycling.
3. General Ed teachers have continued the lesson in their classrooms as well as conducting practice runs in the cafeteria of the “flip it, tap it, stack it” lunch routine.
4. Andrea Hewitt, 1st grade teacher, is in discussions with Holton Farms to make a presentation to the 1st graders to enrich their yearly Spring “Farmer’s Market Study” for Social Studies. This culminates in a Farmer’s Market run by the 1st graders in our schoolyard and Holton Farms has agreed to participate.



Note: Learning Standards include 6.1f a,b [grade 4, Unit 1]: how students observe that when the environment changes, some plants and animals survive and reproduce, while others die or move to new locations and; 7.1 a,b: how humans have changed their environment over time. 7.1 a,b [grade 5, Unit 4]: similar topics as well as discussions where human activity has had a beneficial or harmful effect on other organisms.

There are no lesson standards in the DoE curriculum that directly relates to recycling. However all the students and faculty were involved in this initiative.

PS89 has had ongoing green initiatives of varying degrees many years, so students are constantly made aware of how important it is to recycle.

Christa B. McDonald, K-Science Teacher

Kindergarten RRR Lesson 4/27/11 PS89

A. Read Aloud: Little Green Books, "Don't Throw That Away!" by Bergen/Snyder

B. Discussion:

a) Review that our choices in our everyday lives impact the Earth as a whole.

- Earth made up of living things

- All living things need:

a) air to breathe }

b) water to drink }

c) food to eat }

d) shelter to live }

provided on/by earth

b) How can we make choices about our trash to protect and respect the Earth?

Child generated ideas { - "Tap it, Stack It" in lunchroom
{ - Reuse plastic bags
{ - re-gifting or donating our toys
{ - double sided use of paper

c) "Our PS89 2nd grade students have made each one of the Kindergarten students a poster to take home to remind the K-studetns how to make 'earth-friendly' choices at school and at home!"

C. Activity: (at tables)

a) Each table will be able to look through these posters and enjoy them and learn from them.

b) You may discuss the poster with the people at your table.

c) You will be given a picture of fish that live in a HEALTHY OCEAN environment.

Color them in and add other living things so we can appreciate how our choices can help keep the oceans healthy.

D. Hands-On Reinforcement:

a) Teacher walks around with artifacts from ocean for children to touch (shells, sea stars, horse shoe crab skeletons)

E. Closing/Assessment

a) Students summarize what R.R.R. stands for (Reduce, Reuse, Recycle) and give examples of how they do this at school and home.

b) Share their ocean posters and point to the living parts (fish, coral, etc.)

Name And Ocean Life



Draw some other animals that live in and rely on the ocean.

Diane Reed-Paly, 1st-5th grade Science Teacher

2nd Grade, Conservation, Recycling, and Composting

4/4/11

PS89

Conservation, Recycling, and Composting

Lesson Plan and Resources

Goal– The second grade classes will create science posters for the kindergarten classes that demonstrate their working knowledge of our school’s programs and teach the kindergarten classes about an important part of our school community.

Day One– Students will share their ideas on the conservation, recycling, and composting programs at our school. We will brainstorm ways to support our programs focusing on the need to educate our youngest students. The students will look through the conservation books (listed below) in pairs to deepen their background knowledge. The words recycle, reduce or composting will be highlighted as the main ideas to be used on the posters. Paper and colored pencils will be distributed. Students will be encouraged to include words and drawings on their posters but to remember the target audience and keep them simple.

Day Two– We will review the concepts of recycle, reduce and composting together. The students will be asked to retell examples they have seen of these programs in their classrooms and homes. Then the students will review last week’s work looking for good ideas and clear messages in a gallery setting. Students will then have time to edit or complete their work from last week.

Day Three– Christa will take the posters into the Kindergarten science classes and review the three main messages of recycle, reduce and composting. Posters will be left in the kindergarten classes as reminders of how our school community participates in conservation and green programs.

Where Does the Garbage Go? by Paul Showers

We Can Recycle by Jim Fremont

Where Does All the Garbage Go? by Linda Johns

School Recyclers by Susan Dillon

We Can Recycle, and Recycle by Dermont McCleary

Earth Friends at School, Reduce, Reuse, Recycle by Francine Galko

V: STUDENT INVOLVEMENT – also see 1 – 4 in “IV: EDUCATIONAL COMPONENT”

1. Student recycling monitors are being implemented into the cafeteria. The 5th grade students will earn Community Service credits for this. The Principal plans to initiate this in the spring.
2. Afterschool students have created posters to hang throughout the school.



3. Interestingly, we have overheard student lunchtime conversation [of all ages] such as the discussion about which is the best lunchbox or reusable water bottle; whether leftover lunch should be thrown out or taken home; and, our personal favorite, whether or not the sugarcane pulp tray can be eaten!

One of the parents said: "I finally know what went on at school. Both of my boys came home talking about the presentation, recycling, the new trays, and getting Styrofoam out of our school. They never tell me what happened at school." Salley Whitman (2nd and 3rd grade parent)

One kindergartener said, "We don't want the earth to look like Wall-E's Earth?"

A fifth grader came to us at lunch and told us (did not ask) that we should have a box to collect all the sporks and other plastic utensils [we told him we were working on it].

4. Students have become very conscious of the amount of trash involved with lunch. On a daily basis, they offer ideas on what we should recycle next and how to go about it. Before the school year ends, we are going to have a lunch-off – "Who produces the least trash, School Lunch Kids [SLK's] or Home Lunch Kids [HLK's]?" Judging by their engagement at lunch we believe it will be well received.

5. The Green Team created leaves out of recycled paper bags. Each student received a leaf and was asked to write a green tip or an environmental fact and to decorate it. These leaves are now displayed throughout the school.



VI. COLLABORATION:

1. SCHOOLS:

- PS89 has assisted PS/IS 276, our BPC neighborhood school, in their switch to pulp trays and connected them to Holton Farms who will now also recycle their trays along with ours.
- We have had continued communication with IS289, with whom we share the building and cafeteria, and they have enthusiastically joined in this initiative.
- During our research we contacted Helen Greenberg, a parent at the East Village Community School, who guided us in the process to switch to sugarcane trays. We also contacted and visited PS111 where the Principal Irma Medina, and Nicole Miller generously shared their information on how they switched to Styrofoam trays as well as allowed us to view their recycling system at work in the cafeteria.
- We have initiated discussions with the 9th Grade Bio/Chem & Environmental Club teacher, Ms Kong, at our downtown Millennium High School regarding farming, composting and Styrofoam lunchroom situation.
- As a result of the article on our initiative in the “The BPC Broadsheet”, we have just been contacted by Pam Fryer from the Municipal Building in Gilbert, Arizona, who is interested in discussing the process to eradicate Styrofoam from their school system. We are eager to assist them.

2. SCHOOL FOOD OFFICE:

- We have and continue to work closely with the schools Food Manager Abdel Razik, the Kitchen Staff, janitors and the lunchroom staff, fine-tuning the recycling system and creating an environment that encourages the students to participate.
- While researching the project, the Green Team obtained information from Shaunette Oudkert [School Food, District 2 Supervisor] and Kathy Condon [Food Regional Director for District 2]. More recently, we have started discussions with Stephen O’Brien [School Food Director of Food and Food Support] on possibilities for future tray & lunch improvements.

3. OUTSIDE OF THE SCHOOL SYSTEM:

- Our key collaboration has been with Holton Farms. They have not only agreed to pilot this composting project, but they immediately jumped on board to help our neighbor PS/IS 276 school and our 1st grade Farmer's Market study.
- Another key contact has been Debby Lee Cohen, www.SOSnyc.com, who has given us prompt information whenever we asked and even came to visit our school.

VII. OTHER:

1. FUNDRAISING:

- The Green Team has also addressed the issue of fundraising to further support this cause. We accomplish this ongoing cost by selling environmentally friendly "Snack Taxis" (to replace sandwich and snack plastic bags); and reusable water bottles throughout the school year. This is an ongoing drive. [about \$1000 to date]
- The Green Team's long-term goal is to find a sponsor to fund the cost of the trays and ideally other green initiatives. The team has already identified a possible corporate sponsor and is exploring other local corporations and environmental grants.

2. OTHER GREEN INITIATIVES:

The PS89 Green Team has numerous other green initiatives in place for the student/staff/parent body. These include:

- the collection of batteries to be recycled properly rather than dumped in landfill (179,000 tons go into landfill annually);
- a bottle cap collection for Aveda which they reuse for their products;
- Snack Taxi reusable lunch & snack bags to encourage our students to reduce waste in their home lunches;
- Wearable Collections: the first Monday of each month families can bring any worn, torn or old clothing to school for collection where it is distributed to families in need or used for insulation or sofa stuffing etc etc.

Project Analysis:

A. WHAT WORKED AND WHAT WE ARE WORKING ON

1. The most surprising result of this initiative has been the immediate and dramatic reduction in trash. Previously four lunch shifts would generate 8-12 bags of garbage, and now they are generating between 2-4 bags per day (about 3/4 less garbage). The only bin that has increased in volume is the drink cartons recycling bin.

Janitors now make 1 daily trip to the garbage compactor instead of the two to three trips they used to make. Consequently, we've earned a lot of welcome smiles from the staff for this.

Here are some calculations based on the figures provided by the janitors. At this point we can not quantify other savings in labor or reduced trash. But undoubtedly this will have an impact.

Direct Savings from Trash Reduction

	Before	After
Cubic Yards per Day	2 or 3	1
Bags required per cubic yard	7	7
Days	185	185
Costs	\$1,295.00	\$518.00
Savings		\$777.00

(Does not include labor, or any other downstream savings)

Bags cost \$40 per 100

2. Another remarkable outcome has been the increased awareness and enthusiasm from the student body. They go home and talk about it and then we hear it from their parents. In the lunch room, they are proud of what they and their school are accomplishing and often offer tips on what we should be doing better or next: collecting the sporks and the #5 plastics and not throwing out so much food.
3. The school educational, cafeteria and janitorial staff welcome this initiative and support us whenever possible. From the beginning, we asked them for ideas and opinions on what we were doing and the result has been a great partnership.
4. The teachers have incorporated "Flip it, Tap it, Stack it" into their curriculum. The janitors and cafeteria staff help us improve the recycling system and respond positively to our needs and new ideas.
5. The biggest success was finding Holton Farms to pilot the key element of the initiative – composting. We were successful in this because we were both eager to help each other. Since they already work locally and want to expand, a partnership with a local school gives them more exposure and publicity for their CSA. In addition, they have set themselves a mandate to help the communities in which they work. Thus, this helps them achieve that goal.
6. As far as we know, no other school in NYC has been successful in starting any such pilot.
7. Presently, Holton Farms is manually shredding the trays. The plan is to raise \$2,000 for a shredder to shred trays collected from both buildings (PS89/IS89 and PS/IS276) more effectively. The Green Team has identified one possible corporate sponsor and an online organization that posts local environmental projects to find donations (ioby.org). We are presently working on this. If successful, the school would be the actual owner of the

shredder and lease it to the farm for a low nominal amount. In the future, Holton may choose to buy the shredder from the school and the money would be reinvested in green initiatives.

8. Continuing to improve our trash recycling layout is one of our goals. Making everything as simple and routine as possible, but keeping it fresh and exciting.

Abdel Razik, PS89 Food Manager, said recently: "The kids should enjoy going there. Eating in the cafeteria and going to recycle the trash should always be a fun and enjoyable part of their day!"

"My kids came home and asked to have school lunch from now on because it looks so much fun to Flip It, Tap it Stack it." Susana, parent of K and 2nd graders.

9. Figures obtained from Mr Razik show an increase of approx 38% in school breakfast and lunches combined since we switched to Sugarcane Trays. More details attached.

The image displays two side-by-side spreadsheets titled "Sales and Meal Counts" for PS 089. The left spreadsheet covers the period from 1/1/2011 to 1/31/2011, while the right spreadsheet covers 3/1/2011 to 3/31/2011. Both documents are divided into sections: I. Operating Revenue, B. Participation, and III. Credit. Section I shows revenue from various meal types (Free, Reduced, Paid) for Breakfast and Lunch. Section B details reimbursable and non-reimbursable meals. Section III shows credit earned and expended. The right spreadsheet shows a clear increase in meal counts and revenue compared to the left one, particularly in the Participation section.

10. We are actively researching ways to expand our initiative to include:

- composting food scraps (researching farmer's market options)
- collecting number 5 plastics (possible relationship with wholefoods).
- reducing home lunch trash – since the tray switch over, the home lunch kids are producing the most trash

B. APPLICABILITY TO OTHER SCHOOLS:

If other schools are interested in adapting this project to their school, we have created a step-by-step guide [see attachments]. While it is difficult to predict the long-term sustainability of the initiative, we do know now that it is not only possible but imperative to recycle/compost the sugarcane trays and not throw them out.

Any school that is exploring making the switch needs to consider the cost difference between the pulp and Styrofoam trays. Right now, pulp is more expensive than Styrofoam and the school will have to fundraise to cover the cost difference. Hopefully, as more schools make the switch, the pulp tray costs will go down and the price difference between the two types of trays will eventually become irrelevant in the discussion.

The key to implementing this project is to find the right partner who is not only willing but able to try it out. Holton Farms already drives to Battery Park City on a weekly basis and thus they are able to pick up the trays weekly or bi-weekly [we store the well wrapped and boxed used trays in our walk-in fridge to avoid critters] without much effort – as we have been doing since the inception of the project. Holton Farms is run by young, progressive farmers who view their work in a holistic way. They don't just want to make a profit but they endeavor to make a difference in the communities they work as well as in the world at large. We will keep revisiting this partnership and the initiative as a whole to fine-tune it and make it long-term sustainable.

C. MEASURING SUCCESS:

The amount of trash was reduced from 8–12 bags a day to 2–4 as per the janitors of our school. **That means from 1110–1480 less garbage bags per year!** Direct savings from switching to sugarcane trays are around \$777 per year, without taking into account labor or any downstream savings.

Besides, the project was met with a great enthusiasm from the school staff, parents and children. The teachers are implementing environment-conscious educational activities into the existing curriculum, while the kids are happily recycling and offering new ways to reduce trash.

The switch to sugarcane trays created a buzz in the neighborhood resulting in an article in the local newspaper and several enquiries from another school wishing to create a similar change.

Attachments:

1. Letter from Principal
2. Initiative Proposal
3. Step-by-Step Guide & Research Conducted to Switch to Sugarcane trays & Composting
4. April 2011 Newsletter from The Green Team



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Veronica Najjar, Principal

April 12, 2011

To Whom It May Concern,

More than a year ago, a group of environmentally conscious parents came to me to talk about a new kind of cafeteria tray, which they wanted to bring to PS 89 as a replacement for the white Styrofoam trays that we were using in our lunchroom. The "sugarcane tray" project was in its infancy, and these parents worked very hard to gather information from schools around the city on how the trays could be implemented at PS 89.

The parents, who organized themselves into the PS 89 "Green Team," had to go through a long process, seeking the approval from principals of both schools(our building houses both PS 89 and IS 289); from the executive boards of both PTAs; and then from the parent bodies of both schools. Even before they had finished this part of the project, the Green Team had begun fundraising.

When the trays were about to be delivered this spring, the parents came to me again to discuss the education that would be put into place to support the school's transition to the new trays. They had already contacted an environmentalist to speak to the different grades about recycling in general, and more specifically, how these new sugarcane trays would reduce the garbage generated in the lunchroom each day. They hung posters around the school with the magic words - "Flip it, Tap it, Stack it" - which have become the cafeteria mantra.

During the first weeks that the sugarcane trays were introduced, the parents on the Green Committee were a constant presence in the school, helping the students become accustomed to the new procedures. They continue to work in the lunchroom three days a week. To re-enforce the educational component of the project, they asked PS 89's science teacher to conduct lessons on recycling, and encouraged the classroom teachers to continue this education with their students. The teachers in the younger grades did "dry run" demonstrations in the cafeteria, so that their students would be familiar with the new system.

Because of the passion and commitment of these PS 89 parents, the transition to the sugarcane trays has been incredibly smooth. Our custodians are thrilled at the reduced waste, and our students are proud of their contribution toward making PS 89 a "greener" school. I have been very happy to support this effort by the PS 89 PTA.

Sincerely,

Veronica Najjar

“Get Green – Cafeteria” Initiative Proposal

Initiative: GET GREEN – CAFETERIA! – October 31, 2010

Proposed Time: 2010-2013

Type of Initiative: PS89 PTA'S GET GREEN COMMITTEE!

Description: Working towards the future, The PS 89 PTA's Get Green! Committee is excited to join the growing movement to get Styrofoam out of our school.

Our vision is to equip and educate the students/staff with tools they will need for a healthier and greener future!

PHASE I: To replace the environmentally harmful Styrofoam trays with pulp trays. These pulp trays are made mostly of sugarcane and are 100% biodegradable.

New York city now has citywide “Tray-less Tuesdays”. The city used to need 4,250,000 Styrofoam trays/week and “Tray-less Tuesdays” has reduced this number by 600,000/week. Some cafeterias, including ours have “Pizza boat Fridays” whenever possible—further reducing the number of Styrofoam trays used.

PHASE II: The PS 89 PTA's Get Green! Committee is pursuing the possibility of composting the pulp trays and leftover food by setting up a composting-recycling system in the cafeteria. We will accomplish this by educating the student body and staff. These changes will substantially reduce the cost of trash pick-up while helping the environment.

[Refer to the “Requirements” section for more details]

PHASE III: Replace plastic utensils with biodegradable alternatives.

Costs: - Phase I: Approximately \$ 83.80/month [\$838/year] and would not exceed \$1,000/year. [PS89 figures]
- Phase II and Phase III costs are not included.

Additional Expenses: None anticipated at this point for Phase I. Phase II may incur some costs and Phase III will require additional costs that we will research/review and perhaps have donated by a sponsor in the future.

Requirements: We will need to educate the cafeteria staff, aides and the students on the disposal of the trays to maximize their positive effect on the environment. We plan to train volunteers to instruct the younger children for a period of 1 to 2 weeks. Volunteers would ideally include IS and PS 5th graders to help them supplement their community service. We are presently working with the director of Horticulture, T. Fleisher, Educational Programming Staff at the Battery Park City Parks Conservancy, as well as John Wang (Director of Stotting Renewables) to train the volunteers and students.

Initiative Funding: PS 89 PTA will fund this initiative. Our goal is for the first order of pulp trays to be used on December 1st, 2010. Additional funding for IS 289 pulp trays will be underwritten by the IS289 PTA.

Evaluation Summary: Figures were obtained from Abdel AbdelRazik, Food Manager at PS89.

PS89: Trays needed 2 -3 days/week

- Mr Abdelrazik is already trying to use fewer Styrofoam trays by planning menus accordingly.

Styrofoam trays: \$ 6.51/case of 250

Pulp trays: \$14.89/case of 250

- PTA pays the difference of \$ 8.38/case every month
- Approximately 10 cases of trays are ordered every month for PS89.
- PTA would pay approximately \$83.80/month OR between \$838.00 and \$1,000/year.

Misc. Info:

- No trays are used or needed for breakfast.
- Enough Styrofoam trays are left to cover the month of November so we would start in December.
- Every month we would have to provide the Food Office with a check for the number of cases Mr AbdelRazik orders.
- Trays are 100 % biodegradable: made of 85% sugar cane pulp; 12% wood pulp; 3% starch.
- Schools that have successfully switched to pulp trays include the East Village Community School, PS94 and the Children's Workshop, all three of whom share one building. In addition, PS111 and PS190 (both in district 2) have also made the switch.
- PS/IS 276 is in the process of making the change to pulp trays.
- The IS289 Board is very interested in joining our initiative. They would pay approximately \$41.90/month (\$419.00/year) and are also bringing it up to their Executive Board this month.
- **Getting Styrofoam out of schools is a present trend.** Please see attached facts from SOSnyc.org or for more information refer to their website. SOSnyc (**Styrofoam Out of Schools NYC**) is a grassroots organization, working to find solutions to end the use of Styrofoam lunch trays in NYC. This website contains citywide information on the movement to get rid of Styrofoam trays, as well as a step-by-step guide on how to do it (refer to the "Take Action" link on the top green line). New York City Public Advocate, Bill de Blasio, State Senator Liz Krueger, and Assembly member Brian Kavanagh launched a Statewide campaign to end government use of Styrofoam on Earth Day 2010 (April 22) and are featured on this website.
- John Wang (Director of Stotting Renewables) would conduct presentations in the auditorium to educate/train students on the positive effects of this initiative as well as the negative effects of doing nothing. The presentations may take 30-45 minutes. He is providing this service at no cost.

STEP-BY-STEP GUIDE & RESEARCH CONDUCTED TO SWITCH TO SUGARCANE TRAYS & COMPOSTING:

A school that wants to switch to sugarcane trays can use this as a general guideline and adjust it to their circumstances and needs. For example, if your school is not in District 2, you will need to find out whom to call for step 1.

1. Emailed and phoned School Food Office: Kathy Condon and Shaunette Oudkerk at District 2 Food Office to get estimates on extra costs of trays and information about the process.
2. Phoned the vendor, Appco Paper, to get more exact information about the trays and their composition.
3. Discussions with PS89 School Food Manager, Abdel Razik:
 - collected figures on trays used per month by both schools and cost of trays
 - planned logistics and a new recycling system to set up in the cafeteria
 - worked closely with cafeteria and janitorial staff so we could work in partnership with them during the changes (asked for their opinion and ideas).
4. Researched other schools that had already made the switch: East Side Community School and PS111 and visited the latter's cafeteria.
 - emailed them regarding how they had switched, what had worked and what had not.
5. Researched SOSnyc website for information and guidance. There is a wealth of regularly updated information on this website.
6. Discussions with school administration about our goals and obtained approval.
7. Wrote a proposal to the PS89 PTA Executive Board and obtained their approval to fund the project. Brought the proposal to the PTA body and obtained approval.
8. Discussions with IS 289, with whom we share the cafeteria. Attended their PTA meeting to present our proposal and answer questions. Obtained their approval. They agreed to pay their share of the extra cost of the sugarcane pulp trays.
9. Consulted with Elisa Chen and John Wang from Stotting Renewables regarding conducting an educational presentation for the students before the switch to Sugarcane trays. They have graciously agreed to allow any other school to use their Power point presentation with their names attached to it. At this point, they will not be able to present it themselves.
10. The Green Team and after school students made signs and informational material to distribute throughout the school. A newsletter was sent home to inform parents of the change.
11. Set up new recycling system to facilitate the process in the cafeteria.
12. Organized constant supervision during the first two weeks to ensure that the children understood and followed the new system. Ongoing supervision 2-3 times per week for maintenance. Fifth graders will be trained to do some supervision in the coming months.

13. Discussions with Battery Parks Conservancy regarding composting the trays locally (they were not ready to take this step with us at this point).
14. Researched other options for recycling/composting the trays: Local farmers' markets; local Wholefoods; local CSAs (Community Supported Agriculture).
 - Holton Farms, a CSA that works locally agreed to pilot an initiative with us.
15. While this research was taking place, we started fundraising through sales of snackTaxis and water bottles.
16. Attended neighbor school, PS/IS276, PTA meeting as part of partnership.
17. Attended Green Schools Alliance for further information
18. Continue to research long term funding for the extra cost of the trays and a shredder - as well as other green initiatives.
19. Presently researching ways to make our school even Greener by possibly composting the food matter and collecting and recycling the surplus plastic from school and home lunches.

The latest newsletter from the “Green Team” presenting the results of the projects to the parents

PS 89 GETS EVEN GREENER!!!!

A SMALL CHANGE CAN MAKE A BIG DIFFERENCE!!!!

Dear families of PS 89,

April 2011

The PTA's *Get Green!* Committee is thrilled to report MORE *Get Green!* news.

Our recent assemblies dedicated to the switch from Styrofoam trays to sugarcane ones were a great success. The kids had challenging questions and thoughtful comments. We are hearing conversations in the cafeteria about the biodegradability of plastic, aluminum and glass. The students pull the straws out of their milk and juice boxes before recycling them! There is also continued curiosity about the edibility of the trays. This we discourage!

Thank you to John Wang and Elisa Chen [a former PS89 parent] for their excellent presentation.

As you have hopefully read in the eBroadsheet [March 8], our switch to sugarcane trays has dramatically decreased the quantity of garbage produced by PS89 & IS289! The cafeteria normally uses 12 large garbage bags during one lunch period for both schools. Since the implementation of the new tray program -- in which only food and wrapping waste goes into the trash and the trays are stacked for recycling -- only one to two garbage bags are filled! Thank you Dianne Renzulli [PS89 parent] for your excellent reporting.

Another thanks is due: our Cafeteria Food Manager, Abdel Razik works creatively to stretch out our inventory of the sugarcane trays. As your kids well know Trayless Tuesdays and Pizzaboat Fridays are standard tray-free days. Abdel also puts together menus to use “boats” another couple of days a week.

Thank you school lunch kids for following the **flip it! Tap it! Stack it!** steps so well! You are taking special care of our planet!

Now here's a challenge for the home-lunch kids: can you bring a **Litter-less Lunch** to school? Start with a thermos or reusable bottle in place of that foil juice pouch (cannot be recycled!) or your juice/milk box. For the next step, your *Get Green!* Team is here to help. We have noticed lots of tinfoil and plastic bags filling the trash cans. Parents, check the signs around school or ask your children how long it takes for those items to biodegrade. Haven't you been meaning to buy a pair of jazzy Snack Taxi sandwich and snack bags, \$9 & \$7 respectively? They are a sensible alternative to single use lunch bags – good for the earth and your wallet! They are machine washable too. Please contact Carolyn Happy, crlynhappy@yahoo.com for a description of our new inventory and to purchase a set. Send a check in your child's backpack; make the check payable to PS89 PTA with Snack Taxi in the memo; Carolyn will return the goods via backpack too. Look for Snack Taxis whenever PS 89 merchandise is being sold.
P.S. Clearly label all reusable lunch materials and check the lost and found.

***Looking ahead to **Green Family Friday on April 29th, to celebrate Earth Day** we are sending home brown paper leaf cutouts. Families, please write your favorite green tip or an environmental fact, add a little decoration and return the leaf to school. That's right, over 500 leaves with inspirational and thoughtful environmental ideas on them will be hung throughout the building! PS 89 will start to look like a tree house!

There is much more brewing in the months ahead for the *Get Green!* Team. If you would like to join our efforts, please do not hesitate to contact us.