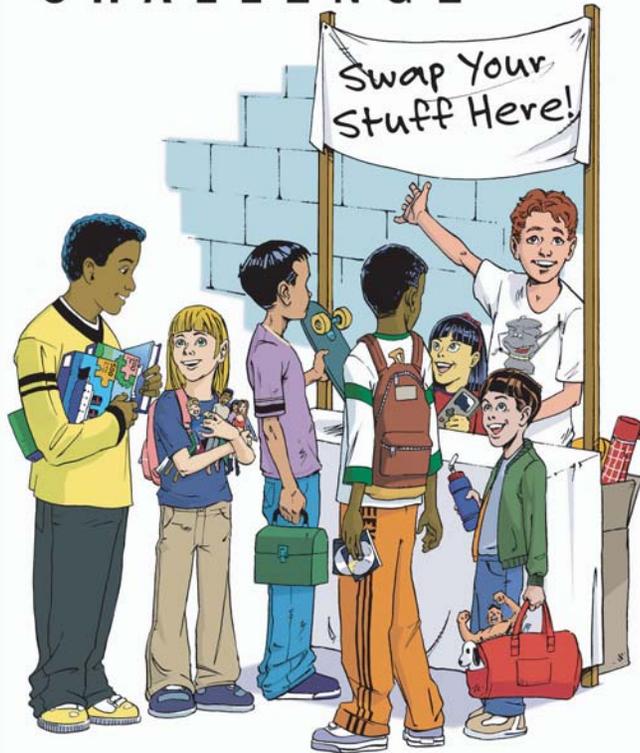


TrashMasters!™
REDUCE & REUSE
CHALLENGE



Intermediate Division
Manhattan Borough
Runner-Up

MS 224
Manhattan East School
for Arts & Academics

NEW YORK CITY DEPARTMENT OF SANITATION

2010 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, 2010

**Manhattan East
School for Arts & Academics, M.S. 224**

**Manhattan East: Cell Phones, Ink
Cartridges & Styrofoam, OH MY!!!**

**Reduce & Reuse Challenge
Golden Apple Awards Submission**



**Contest Coordinator: Julianne Corbalis
Manhattan East School
410 East 100th St, 5th Floor
New York, NY 10029
212-860-6047, (F) 212-410-0678
Liliana Sarro, Principal
Melissa Cancel, Assistant Principal
April 30, 2010**

2010 Golden Apple Awards Project Entry Judging Info

(This sheet prepared for judges' use by BWPRR; this is NOT the Entry Form)



ID Info: 10007
School: Manhattan East MS 224
Grade Division: IS
Borough: M

2010 Project Entries received for:

School Population: total # 270

TrashMasters! Super Recyclers Received:

Core Group:	Total Participating:

TrashMasters! Reduce & Reuse Challenge Received: 4/30/2010

25	270
----	-----

TrashMasters! Team Up to Clean Up Received:

--	--

Prior Year Entries:

08:SR-ru,09:SR-boro,RR-ru,GS

Golden Shovel Award contestant
 (for borough Master School Composter)

School Contact Information:

Contest Coordinator: Julianne Corbalis
Principal: Liliana Sarro
Address: 410 E 100 ST 5 FL
 New York 10029
Phone: (212) 860-6047
Coord Phone # (if different): 917-682-5495
Principal Email: LSarro@schools.nyc.gov
Coordinator Email: corbyteach@yahoo.com

REQUIRED for Super Recyclers only:

Custodian: Keith Nadine
Custodian's Phone: 212-996-5523

Comments (may not be relevant to judging)

DOE name: M.S. 224 Manhattan East School for Arts & Academics

Info Confirmed:

2010 G

**ATTACH TO
CONTEST ENTRY**



PROJECT ENTRY FORM

Copy and attach completed form to each project entry binder submitted.
Check website for deadline date: www.nyc.gov/wasteless/goldenapple

Golden Apple Awards
NYC Department of Sanitation
Bureau of Waste Prevention, Reuse and Recycling
44 Beaver Street, 6th Floor
New York, NY 10004
Fax: 212-514-7812 Phone: 917-237-5759
Web: www.nyc.gov/wasteless/goldenapple

Grade division (check only one): Elementary Middle High School

Note: Submit separate Project Entry Forms and contest binders if entering in more than one grade division.

School Number: 224 Borough: Manhattan District: 4 Region: 9

School Name: Manhattan East

School Address (including zip code): 410 E100th Street, 5th Floor
NY NY 10029

Phone: 212-860-6047 Fax: 212-410-0678

Principal: Liliana Sarro

Phone: 212-860-6047 Email: LSarro@schools.nyc.gov

Contest Coordinator: Julianne Corbalis

Phone: 917-682-5495 Email: corbyteach@yahoo.com

Contest (check only one):

Note: Submit separate Project Entry Form and contest binder for each contest.

TrashMasters! Super Recyclers*

TrashMasters! Reduce & Reuse Challenge

TrashMasters! Team Up to Clean Up

Project Title or Description (6 words or less):

Manhattan East: Cell Phones, Ink Cartridges &
Styrofoam, Oh MY!!!

Golden Shovel Award: We compost! Our project entry binder shows our indoor or outdoor composting efforts. Also enter this binder in the Master School Composter contest for our borough.

* For **Super Recyclers** only: Finalist schools will be inspected. DSNY personnel require access to all areas indicated in School Recycling Program Checklist (pages 4-6) to evaluate your building's recycling compliance.

School Custodian: _____

Phone: _____

Names of participating students, classes, and staff:

8th Grade Environmental Action
6L, 6J, 6K, 7D, 7E, 7F,
8A AB, 8C, 8G
All staff members

Student participation: core group # 25

Student participation: total # 270

School population: total # 270

**Manhattan East
School for Arts & Academics, M.S. 224**

**Manhattan East: Cell Phones, Ink
Cartridges & Styrofoam, OH MY!!!**

**Reduce & Reuse Challenge
Golden Apple Awards Submission**



Contest Coordinator: Julianne Corbalis

Manhattan East School

410 East 100th St, 5th Floor

New York, NY 10029

212-860-6047, (F) 212-410-0678

Liliana Sarro, Principal

Melissa Cancel, Assistant Principal

April 30, 2010

**Reduce & Reuse Challenge
2010
Table of Contents**

Tab 1 (Blue)	Summary of all projects and complete description of each individual project.
Tab 2 (Green)	Student work, photos, and testimonials of our school's cell phone/ink cartridge collection drive.
Tab 3 (Purple).....	Student work, photos and testimonials of our school's Styrofoam tray cafeteria collection.
Tab 4 (Orange).....	Examples of articles, supplemental activities, awards and projects from our Environmental Action Class this year (2009-2010).
Tab 5 (Yellow)	Standards Met

Manhattan East School for Arts and Academics
Trash Masters! Reduce & Reuse Challenge
Ink Cartridge, Cell Phone
& Styrofoam Collection Projects
April 2010
Teacher: Julianne Corbalis

Summary of All Projects and Complete Description

It feels good to know that many middle school-aged people have become awakened to how easy it is to reduce, reuse, and recycle even the most innocuous items. Over the past 3 years, the Manhattan East community has banded together to create, implement, and sustain award winning recycling and reusing programs in the areas of paper, cans, bottles, milk cartons, sneakers, clothing, as well as composting cafeteria lunches. Students, teachers, administrators, and custodial engineers have become more aware than ever that every potential piece of garbage can somehow be used again. It was a great challenge for the Manhattan East community to design another exciting, sustainable project, while continuing to maintain all of the current recycling projects. Perhaps the most obvious and far reaching project could have been to export our programs to schools that we share the JHS 99 building with. Sadly, that type of project was not possible this year for many reasons including one school closing, another being phased out, and a third, new school moving into the building next year. Instead, what we *have* done is work on perfecting our recycling programs, while adding two new projects to our repertoire: the *Ink Cartridge & Cell Phone Collection Drive* and *Styrofoam Tray Recycling* program in our cafeteria. These projects have kept the excitement of environmental studies fresh at our school, and have inspired both children and adults alike.

A successful and sustainable school-based environmental education project is based on the principle that one can only work with what she has. This is especially true when we are talking about a New York City public middle school, where dreams are big and resources are limited. Keeping this in mind, when our principal, Ms. Liliana Sarro, approached me with regards to starting a cell phone and ink cartridge recycling collection, I immediately agreed to it. This particular recycling drive is especially well suited to the age of our students, since the majority of them have cell phones in their backpacks and printers in their homes. Plus the drive would serve two purposes: it would work to keep these items out of the garbage while raising a little money for the school. Students in the popular Environmental Action elective created posters that advertised the collection drive, including info such as where students and staff should

bring the items to be donated. 8th graders were offered community service hours (30 hours are required to graduate) in exchange for bringing in phones and cartridges, and for helping to sort them (see photos). The drive lasted about one month (longer than anticipated). The elective class then **separated, counted, and documented** their findings (see graphs). The students became very interested in the evolution of cell phones, and the various brands and carriers. In addition to organizing the cartridges and phones by brand, we also separated them into phones with and without cameras, and we sent those phones without cameras to a local domestic violence shelter to be repurposed and used in cases of emergency. At last count, the Manhattan East Ink Cartridge & Cell Phone Collection Drive took in over 100 items! And, even though this year's drive is officially over, we are still accepting donations. Overall, students had fun organizing and executing this project, as evidenced by our classroom discussions and their reflections included in this portfolio. We worked with what we had, and as a result, this collection drive will definitely become yet another sustainable part of Manhattan East's annual recycling efforts.

The second new project Manhattan East undertook this year was Styrofoam lunch tray recycling in the cafeteria. We decided to participate in this project for a number of reasons, most importantly because students have inquired about eliminating Styrofoam from our lunch experience since we began our recycling program, 3 years ago. It is not exactly easy to change a system that has been entrenched for decades, and since school lunch is out of our hands, run by offices at the Department of Education, this project seemed like it would go against our rallying cry: "Work with what you have." Regardless, last year I spoke with Principal Sarro about transitioning away from Styrofoam, towards trays made of sugar cane (another program that the DOE was piloting). I argued that we would be able to compost the sugar cane trays, (which are said to break down in a matter of weeks when composted) on the roof, in the seven brand new composting bins the Manhattan East Parent Association purchased during the summer. Our awesome principal even tried ordering thousands of trays for the 2009-2010 school year. Irritatingly, for Dept. of Ed bureaucratic reasons, the sugar cane trays did not become a reality when we got back to school in September of 2009. However, later on in the Fall of 2009, our cafeteria staff informed Principal Sarro that our school building (JHS 99) had been chosen by the city to pilot a Styrofoam lunch tray recycling program! While we didn't get our sugar cane compostable trays, it did seem *we would be able to reduce the number of Styrofoam trays that got dumped into landfills by the thousands*. The students of the Environmental Action elective were excited to participate in this program, often giving up their lunch periods to **collect, count, and report** on the Styrofoam lunch tray collection statistics (see chart). We used

our meeting time to research the history of Styrofoam, its uses, and its benefits and drawbacks. Still unsure of how environmentally friendly Styrofoam recycling actually was, I even e-mailed the NYC Bureau of Waste Prevention to get their take on the pros and cons of recycling cafeteria Styrofoam (see e-mail). Manhattan East students continue to collect for recycle their Styrofoam trays, though the life cycle and effects of Styrofoam are still not fully understood. On a more positive note, upon speaking with our excellent chef, Carmelo, I recently learned that the cafeteria has instituted "Trayless Tuesdays & Thursdays" – days that Styrofoam trays are replaced with a thin cardboard "boat" type of tray. While these new trays may be better for the environment, they do not seem to be as sturdy or as durable as Styrofoam, and in general sometimes create more of a mess due to leakage. Certainly, our Styrofoam tray recycling project is a work in progress. We will continue working on trying to find sustainable solutions to permanently move away from the use of Styrofoam trays with our administration, our fabulous kitchen staff, and of course, the Department of Education.

Both the cell phone & ink cartridge collection and the Styrofoam tray recycling were approached in an interdisciplinary fashion. Throughout the year students read and discussed various articles from the New York Times and did internet research concerning the topics they studied. They documented their knowledge by writing reflections about their experiences throughout each project. They graphed results and presented their findings orally and on hallway bulletin boards. By participating in the cell phone & ink cartridge collection and Styrofoam tray reduction project, Manhattan East students beyond our elective class were educated about the importance and necessity of not only recycling, but especially the practice of waste prevention.

**Did you know that you can raise
money for Manhattan East just by
donating used up ink cartridges
and old cell phones?!?**

**Drop off ink cartridges and cell phones ASAP to
Room 509 (Ms. Corbalis).**

ALL BRANDS ACCEPTED!!!

**Collection ends Friday, Feb. 12, 2010
Thanks!**

Tiasia Richards

1-27-10

8B - Environmental
Action.

19 cellphones and 16 ink cartridges were collected. In my opinion a lot more could have been collected if we would have motivated the students. I feel that we should have a competition for what ever grades brings the most ink cartridges and cellphones should win a trip or a party. So far its going well though we've earned 50\$ for recycling/reusing old cell phones + cartridges. So thats kind of good. I think we as a class should put more effort into this. Not force people to bring cellphones and ink cartridges, but just make it more noticed that we are trying to raise money. It is good though that we are doing this. Hopefully it will improve.



2913 Alder Ridge Lane Raleigh, NC 27603
Toll Free: (877) 987-3678 Fax: (866) 454-5439
www.inkjetsforeducation.com inkjetsforeducation@yahoo.com

Hi Liliana 😊 :

Enclosed you will find the information you requested regarding the Inkjets for Education Recycling/Buy-Back Program on Empty InkJet and Laser Cartridges as well as used Cell Phones. At a time when many schools and organizations are working on a limited budget this could be a wonderful opportunity for you.

We currently have "thee" definitive Cartridge Recycling Program:

1) We have the most aggressive buy-back prices in the industry (see attached Cartridge BuyBack Lists). We pay up to \$4.00 and our average payout per InkJet is more than \$1.50 each. We can also price-match if necessary.

2) We do not deduct for damaged or circuit-failed Cartridges. You will receive a full payout on all cartridges as long as you adhere to our packaging requirements. Please make sure all cartridges are on our Accepted Cartridge List.

3) You will receive a check within 3-14 days of receipt of your shipment.

4) We pay shipping on all "acceptable" Cartridges that are on our list, including Laser Cartridges. Many companies do not accept or pay shipping on Laser Cartridges.

5) We have a nice WebSite with numerous "downloads" to help you with your collection efforts as well as allow you to view our most current buy-back prices.

We are a very responsive and customer-friendly company. We look very forward to establishing a mutually rewarding business relationship with you and your school or organization. Should you have any questions, concerns or need references please call us. Please also feel free to check out our WebSite at www.inkjetsforeducation.com. Thank You and we look forward to working with you.

Sincerely,

 **Inkjets For Education**



Minimums :

Overall minimum of 30 acceptable cartridges total per shipment/return. This is a "minimum" only - you can package as many cartridges in one box as long as the box weighs less than 70 pounds.

Laser cartridges - Minimum of 10 (preferably much more) **acceptable cartridges** per box as long as the box weighs less than 70 pounds. Most Lasers weigh around 2 pounds so even up to 20 lasers in a box is fine.

InkJet cartridges - Minimum of 30 or more acceptable cartridges per box as long as the box weighs less than 70 pounds. Do not throw inkjets in a box loosely without the printheads being protected.

* If you are already sending 30 InkJets in a box you can add any quantity of Laser Cartridges to that box – as few as one.

ONLY SEND ONCE-USED CARTRIDGES THAT ARE ON OUR LIST – DO NOT SEND COMPATIBLE OR PREVIOUSLY REFILLED CARTRIDGES AS WELL AS “QUESTIONABLE” CARTRIDGES, RANDOM CARTRIDGES, OR CARTRIDGES THAT ARE NOT ON OUR LIST. THIS IS VERY IMPORTANT !!!

How To Package for Safe Shipment :

- Cartridges should not be touching each other and should therefore be individually wrapped. With InkJet cartridges we recommend using wrapping paper, newspaper, zip-lock bags, or bubble wrap. **Laser Cartridges should be wrapped with more than just a grocery store bag or the black bag that many cartridges come in.** We recommend triple wrapping each laser cartridge with newsprint or using bubble-wrap or if they are smaller lasers place them back in their original box.
- If you have 8 laser cartridges that are in their original box and all of the boxes are of a very similar size, then those boxes can be bundled and taped together. **DO NOT BE CONSERVATIVE ON TAPE AS LACK OF TAPE WILL CAUSE BOXES TO SEPERATE!**
- Boxes should be packed securely & tightly to prevent cartridges from being bounced around during shipment. Heavy corrugated boxes are preferred.

**** MOST IMPORTANTLY, CARTRIDGES SHOULD NOT BE DIRECTLY TOUCHING EACH OTHER ****

Lastly :

After box(es) are ready for shipment, please place our pre-paid label on the outside of the box(es). You can Call FedEx @ 1-888-777-6040 to schedule a Pick-Up or if FedEx delivers to your school or organization on a regular basis, simply give your box(es) to the driver next time they come to your location. FedEx will deliver box(es) to Inkjets for Education and shipping charges will be incurred by Inkjets For Education.

Don't forget to save your "shipper receipt" which can be peeled off the top part of your PrePaid label(s).

If you have any questions please feel free to contact us at Toll-Free 1-877-987- EMPTY (3678)

Tyler Jenkins

- A clear understanding of waste prevention

- Innovative or creative waste reduction ideas:

At my school, Manhattan East most of the children recycle and care about the Earth. The whole school recycles cans, bottles, and paper. I myself have been giving in newspaper for composting, in exchange for community service minutes. We've been recycling shoes, cellphones, ink cartridges, and paper. We fax and print on the back of paper. I think we are one of best recycling.

Melissa

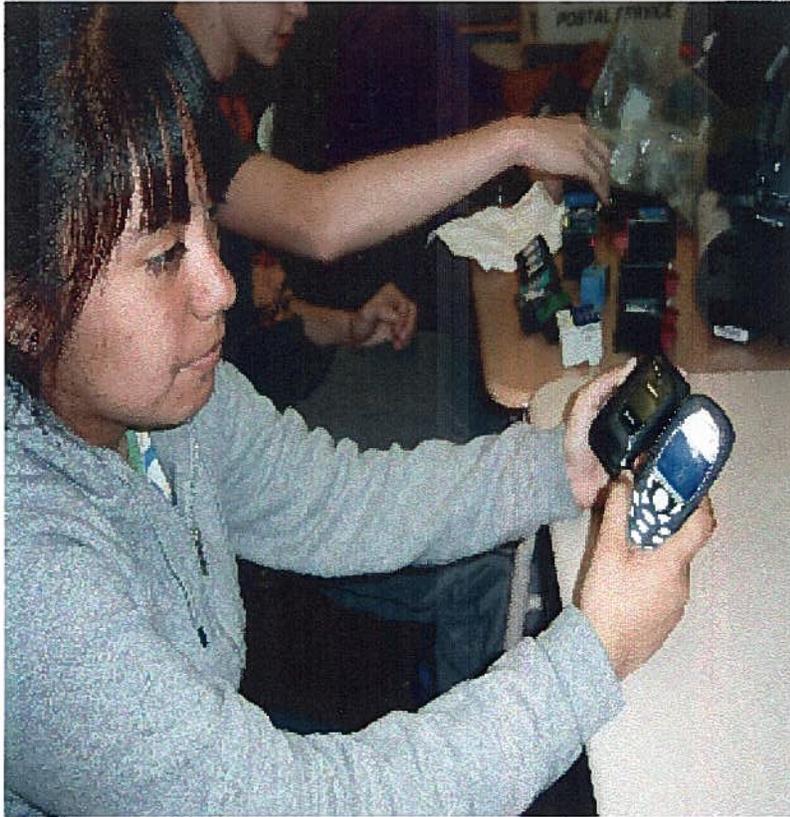
- a clear understanding of waste prevention
- innovative or creative waste reduction ideas.

Manhattan East has a clear understanding of waste prevention. We know that we need to reduce waste by reusing and recycling. In the lunch room, we put recycle bins to recycle styrofoam trays since styrofoam doesn't decompose. Since we share the cafeteria with other schools, they recycle too. Also, at lunch, sometimes students collect fruit waste for our compost bins. Teachers at Manhattan East recycle paper and some reuse folders. In drama, a parent made a prop out of ^{recycled} b-pack holders. In my school, we recycle cell phones and ink cartridges and raise money for the school. Manhattan East does many things to prevent waste.

Environmental
Action
members
sort ink
cartridges...

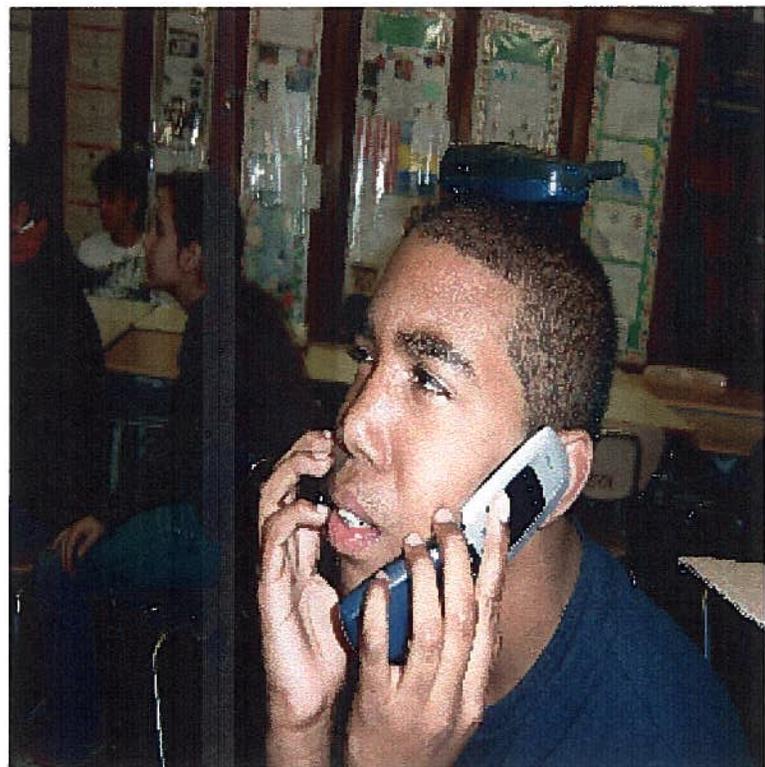


Donated
ink cartridges
from
students
and
teachers of
Manhattan
East.



Mayra poses with 2 different brands of cell phones.

Tyler takes an important call about recycling 😊



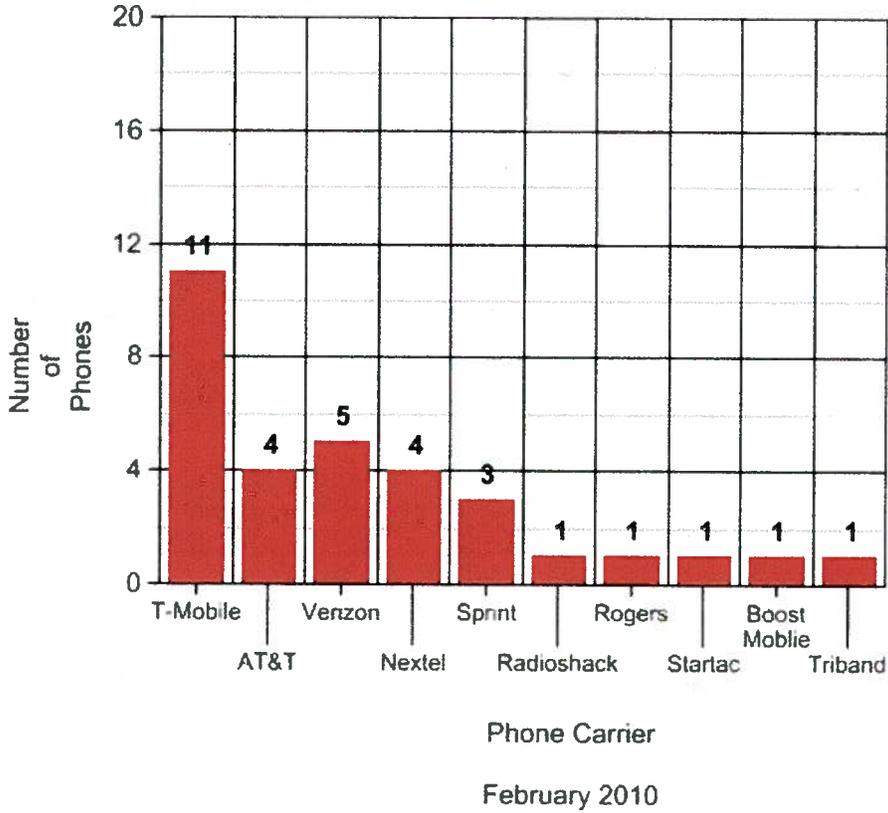
Eric Adolphus
88

1/27/10
Environmental Action

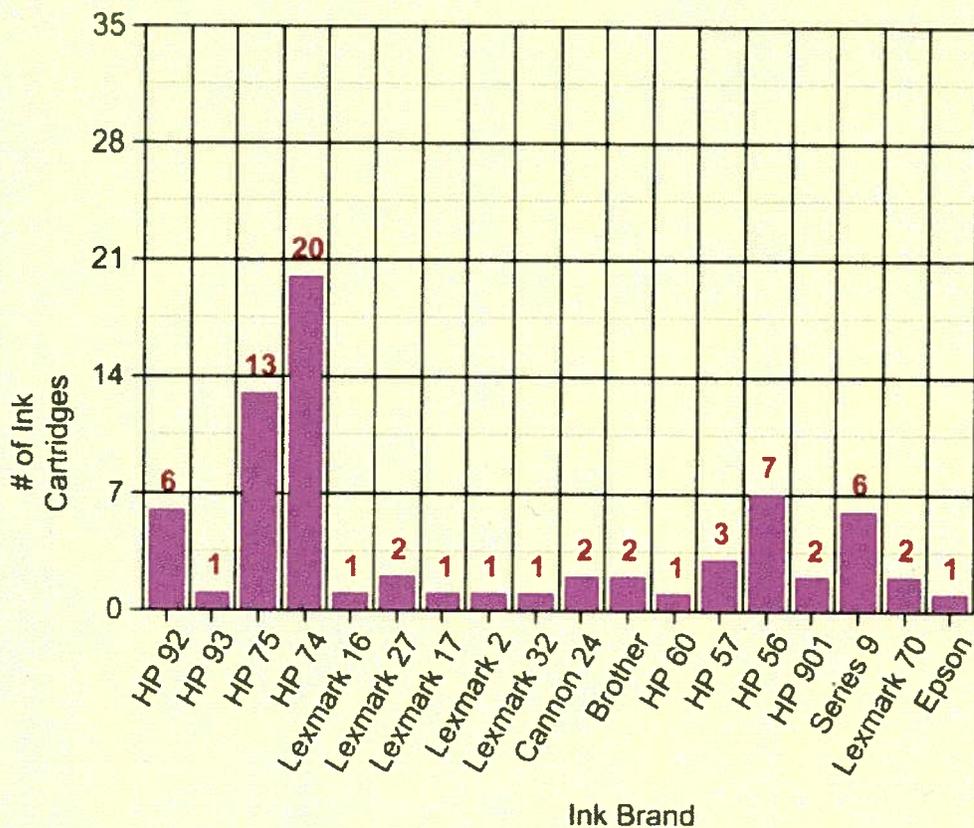
Recycling Reflection

The cellphone and ink cartridge recycle drive has been going pretty well so far. I think this collection drive is a really good thing, we're eventually just going to throw out our used ink cartridges and old cellphones so I think it is great that our ink cartridges aren't going in the garbage, instead they're being recycled, and our school is getting money in the process. So by doing this, not only are we saving the environment, our school is making money in the process, what is working is that if an 8th grader brings in an ink cartridge or cellphone, we get half an hour of much needed and valuable community service. I think by doing this, we are especially encouraging 8th graders to bring these items in, 8th graders need 30 hours of community service to graduate, and every minute helps. I do think this recycling drive does have room for improvement, I think to encourage the whole school to bring in ink cartridges and cellphones, we should have some sort of recycling competition, between each grade. The winner of the competition could get a pizza party or a small field trip. I think a lot more people would bring these in if there was some type of reward. Overall, I think this is a really good idea, and we should continue to collect.

Manhattan East Phone Recycling Drive



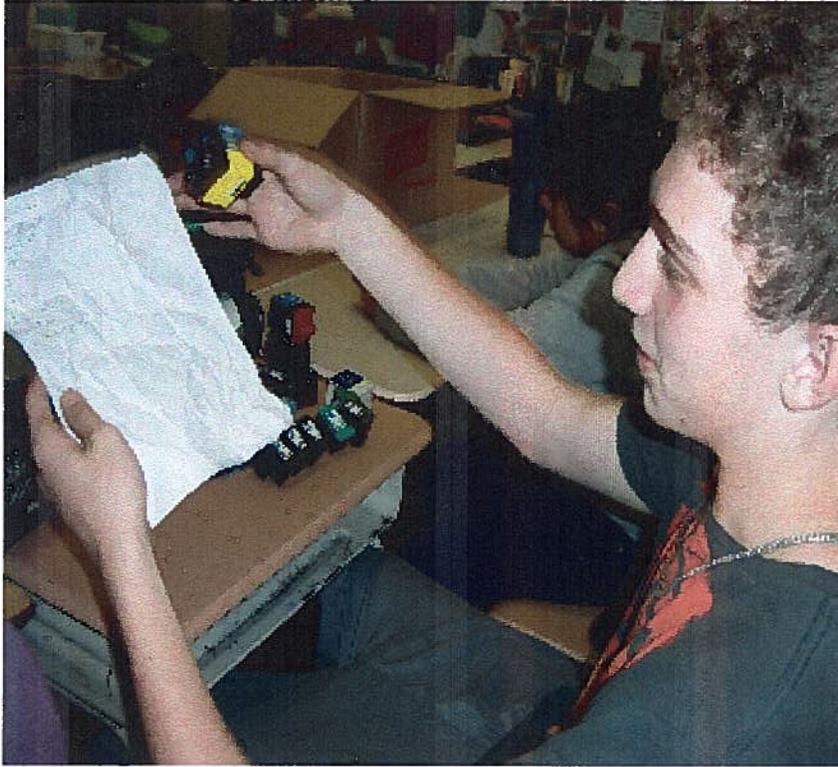
Manhattan East Ink Cartridge Donations



February 2010

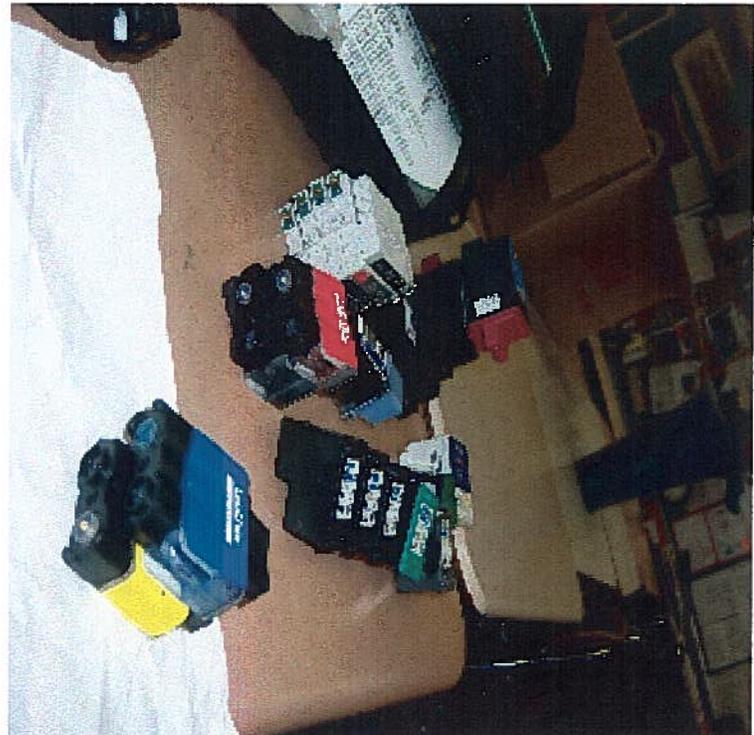
Ink Cartridges

	<u>HP</u>	<u>Lex.</u>
1. HP 92		
2. HP 93		
3. HP 75	92	16
4. Lexmark K16	93	27
5. Lexmark K27	75	27
6. Lexmark K27	74	17
7. Lexmark 17	75	2
8. HP 74	74	32
9. "HP" 75	74	
10. Lexmark K2		
11. Brother		
12. Canon 24		
13. HP 75		
14. HP 74		
15. Lexmark 32		
16. HP 74		



Demetrius records the brand name of an ink cartridge.

so many ink cartridges, so little time!

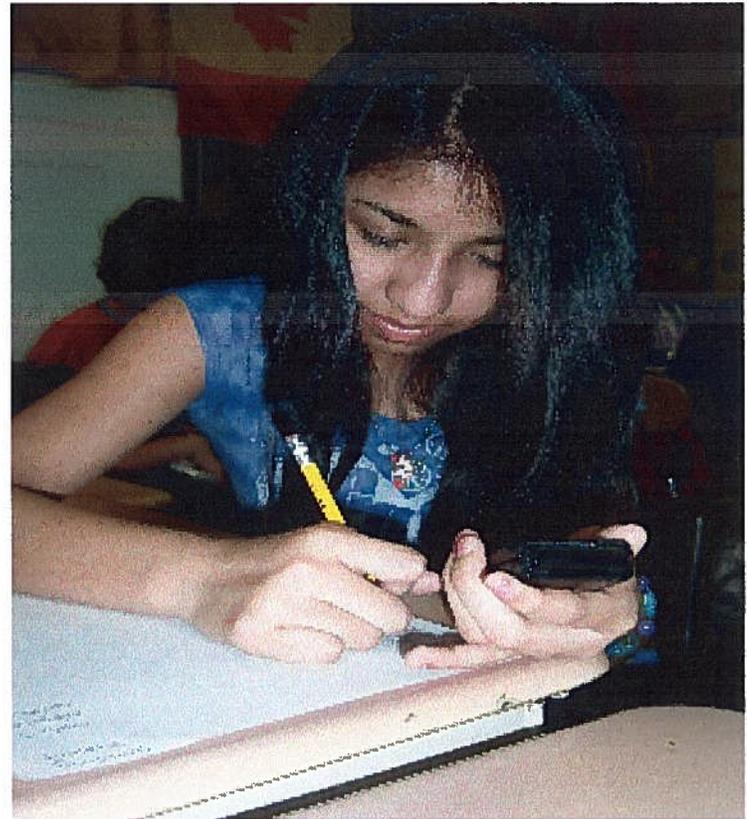


2010



Brenda works hard to record her findings

Najene is a beautiful recycling model!



Styrofoam

1. What is styrofoam?

A light resilient foam of polystyrene, expanded polystyrene foam, that is used in packing materials and cups.

2. What are some uses of styrofoam?

It is most likely used as plates, cups, and packing materials such as packing peanuts.

<https://engineering.purdue.edu/MSE/AboutUs/GotMaterials/Manufacturing/sieckmann.html>

3. Why is styrofoam considered “bad” for the environment?

Styrofoam is resistant to photolysis or breaking down and it is also lightweight which means it is now all over the waterways. Also if you burn Styrofoam it releases a gas which can effect the nervous system.

http://greenliving.lovetoknow.com/How_Styrofoam_is_Bad_for_the_Environment

4. How is styrofoam recycle?

A lot of people dont recycle they just burn the styrofoam, that might seem safe but it l'snt this causes a gas which can effect the nervouse system.

<http://www.greenlivingtips.com/articles/218/1/Recycling-styrofoam.html>

5. What are some alternatives to using styrofoam?

6. Other interesting Styrofoam info?

Styrofoam

1) What is styrofoam?

Styrofoam is a man/chemically made material. It is made with polystyrene which is made of petroleum.

2) What are some uses of styrofoam?

Styrofoam can also be used as cups, lunch trays, packing peanuts, explosives like napalm and hydrogen bombs.

<http://www.greenlivingtips.com/articles/218/1/Recycling-styrofoam.html>

3) Why is styrofoam considered "bad" for the environment?

Styrofoam is bad for the environment because it takes a very long time to break down or decompose and if animals can accidentally eat it and it might get stuck in their throats. It may starve them because it will block their digestive system also.

4) How is Styrofoam recycled?

5) What are some alternatives to using styrofoam?

An alternative to using styrofoam would be "Puffy Stuff". It is a biodegradable material that can be used as lawn fertilizer and breaks down into proteins when it comes in contact with water.

6) Other interesting styrofoam info?

a) myth: if you combine EPS (Expanded Polystyrene Foam) with PMS (gasoline) you get a good glue

b) Place called Publix in Macon, GA has collected styrofoam for many years.

c) Scientists at Sony discovered that you can disintegrate styrofoam by spraying it with limonene.
<http://earth911.com/blog/2009/03/09/recycling-mysteries-styrofoam/> (Same for #'s 5 &6)

Melissa Morelli
Environmental Action

Styrofoam

1. What is styrofoam?

Styrofoam is a trademark of the Dow company, and the material of styrofoam is called polystyrene. Polystyrene is made of petroleum.

2. What are some uses of styrofoam?

Styrofoam is used as packaging peanuts, lunch trays, and even some explosives.

3. Why is styrofoam considered “bad” for the environment?

Styrofoam is bad for the environment because it takes a very long time to break down, and animals may eat it and die. Styrofoam is also very flammable.

4. How is styrofoam recycled?

You can recycle styrofoam by dropping off your styrofoam at Drop-off sites where they recycle it for you.

5. What are some alternatives to using styrofoam?

you can use styrofoam in craft shops.

6. Other interesting styrofoam info?

Web sites (Sources)

1. <http://www.greenlivingtips.com/articles/218/1/Recycling-styrofoam.html>
2. <http://earth911.com/blog/2009/03/09/recycling-mysteries-styrofoam/http://earth911.com/blog/2009/03/09/recycling-mysteries-styrofoam/>

Styrofoam

1. What is styrofoam?

Styrofoam includes a variety of building materials (including insulated sheathing and housewrap), pipe insulation, floral, and craft products.

2. What are some uses of styrofoam?

Styrofoam can be used to transfer a box or pile of a really large items that isn't manageable to ten thousand little bits scattered over the landscape. It can also be used to keep breakable items such as glass from being scratched or broken.

3. Why is styrofoam considered "bad" for the environment?

Styrofoam cups does no dissolve into the Earth, unlike anyother materials. It just sits there. This is negligent to the environment. You can recycle Styrofoam, but it is difficult to and takes a long time.

4. How is styrofoam recycled?

Styrofoam is commonly used is packing materials like peanuts. It can also be reused in expanded foam, like in food trays.

5. What are some alternatives to using styrofoam?

Some alternative in using styrofoam are paper and cardboard. They can be recycled and have less of an impact on the environment.

6. Other styrofoam info

Styrofoam can be used for many things. One guy made a replica of his face out of styrofoam. Another person made a life size humor out of styrofoam!

Cindy You
8C
Styrofoam

1. What is styrofoam?

Styrofoam is also known as polystyrene and it is made from petroleum. Petroleum is a type of chemical and is highly flammable.

2. What are some uses of styrofoam?

Styrofoam are used for packing shipped items to protect it from breaking and It is used as lunch trays.

3. Why is styrofoam considered "bad" for the environment?

Styrofoam is bad for the environment because it takes a really long time to break down. If any animal swallows a piece of styrofoam, it blocks the digestive system and will cause starvation. Since the styrofoam is made out of flammable chemical, benzene, it can polluted the air when the people burn it and it's bad when touch raw meat.

4. How is styrofoam recycled?

Some people recycle styrofoam by reusing them. Most people reuse styrofoam by using them for packages. Some people burn the Styrofoam to get rid of it.

5. What are some alternatives to using Styrofoam?

When you use a styrofoam, don't just throw it away. They could reuse it. People can bring their own plates or forks around, so they don't need to take another plates. If you have left over peanut Styrofoam in the ups box, you can bring it back to the UPS store so they can reuse it.

6. Other interesting styrofoam info?

Styrofoams can't be recycled like normal plastics could. There's a Global Recycling group in Jamaica, Queens. They recycle lunch trays and other types of styrofoams. If you put polystyrene in gasoline it turns into another type of substance.

Websites

1. <http://www.greenlivingtips.com/articles/218/1/Recycling-styrofoam.html>

2.

http://www.midweek.com/content/columns/entrepreneurs_article/a_green_alternative_to_styrofoam/

3.

http://search.earth911.com/?what=Styrofoam&where=Manhattan%2C+NY&max_distance=25&country=US&province=NY&city=Manhattan®ion=New+York&latitude=40.7834345&longitude=-73.9662495&family_id=9&list_filter=locations

Sidnei Webb
EnviromentalAction

1. What is styrofoam?

Styrofoam is extruded polystyrene (a plastic made from oil) and is a closed cell foam.

2.What are some uses of styrofoam?

Styrofoam can be used for housing insolation, packaging, styrofoam trays and maybe even to fill up a beanbag chair, by using the little styrofoam peanuts that come in packaging.

3. Why is styrofoam considered "bad" for the environment?

Non-Biodegradable or can't break down, is one reason why styrofoam is bad for the environmental.

4.How is styrofoam recycled?

You can't really recycle styrofoam but you can reuse it by putting it in boxes for packaging or you could burn the styrofoam to get rid of it.

5. What are some alternatives to using styrofoam?

Instead of using some people could get a material that is biodegradable to use to create take out food containers, cups, packaging, housing insolation and lastly, school lunch trays. A material you could use is corn plastics. You can use a fungus that uses perlite, which is volcanic rock to help the fungus grow, as an alternative for styrofoam.

6.Other interesting Styrofoam info?

Some cool things you could do with styrofoam is by making little toys or ornaments out of it. Styrofoam takes up half of one percent (.5%) in the entire New York City waste.

Some Websites

<http://building.dow.com/media/what.htm>

<http://www.thriftyfun.com/tf000309.tip.html>

<http://www.greenlivingtips.com/articles/218/1/Recycling-styrofoam.html>

http://www.midweek.com/content/columns/entrepreneurs_article/a_green_alternative_to_styrofoam/

<http://www.earthresource.org/campaigns/capp/capp-styrofoam.html>

<http://greeninc.blogs.nytimes.com/2009/04/13/using-fungi-to-replace-styrofoam/>

Jannel Tillman
Environmental Action

Styrofoam

1. What is styrofoam?

Styrofoam is a trademark in the Dow Company. Styrofoam is made up of polystyrene. Polystyrene is a plastic made from petroleum and is also very flammable.

2. What are some uses of styrofoam?

Some uses for styrofoam are for packaging materials, food trays, cups, plates, and even explosives.

3. Why is styrofoam considered “bad” for the environment?

Styrofoam is considered “bad” for the environment because it takes a really long time to break down. It is also “bad” because there aren’t many available places to recycle styrofoam.

4. How is styrofoam recycled?

Styrofoam can be recycled by taking your styrofoam to drop-off sites in your area. Another way in recycling styrofoam is by participating in a mail-back program like the Alliance of Foam Packaging Recyclers. If you have packaging peanuts you can donate them to shipping stores like UPS that will reuse the material.

5. What are some alternatives to using styrofoam?

Some alternatives to using styrofoam are to use it in craft shops. Instead of just throwing it away you can create different pieces of art.

6. Other interesting styrofoam info?

Some interesting information about styrofoam is that it is not only used as trays but as explosives. Styrofoam can be turned into hydrogen or napalm bombs.

Sources

<http://www.greenlivingtips.com/articles/218/1/Recycling-styrofoam.html>

<https://engineering.purdue.edu/MSE/AboutUs/GotMaterials/Manufacturing/sieckmann.html>

<http://earth911.com/blog/2009/03/09/recycling-mysteries-styrofoam/>

Manhattan East Styrofoam Trays Collection, December 2009

**Total students in cafeteria at time of collection: approximately 250
(an excerpt)**

Dec. 1 = 71 Trays!

Dec. 2 = 71 Trays!

Dec. 3 = 87 Trays!

Dec. 4 = 117 Trays!

Dec. 7 = 97 Trays!

Dec. 8 = 110 Trays!

Dec. 9 = 48 Trays :(

**MS 224 / Julie Corbalis - Styrofoam recycling info**

Wednesday, December 16, 2009 5:23 PM

From: "Most, Mary" <mmost@dsny.nyc.gov>**To:** "julie corbalis" <corbyteach@yahoo.com>**Cc:** "Aaron, Marni" <maaron@dsny.nyc.gov>, "Magoolahan, Brian" <bmagoolahan@dsny.nyc.gov>, "Bessel, Eric" <ebessel@dsny.nyc.gov>, "MacBride, Samantha" <smacbride@dsny.nyc.gov>

Hi, Julie – I'm sorry, just Tuesday I requested from School Foods but have not yet received any information on this "demonstration" program currently operating at about 40 NYC DOE schools.

You will do best to identify and contact the company that is conducting this demonstration program for details on what they're doing with your trays. I'm sure they are eager to tout the practicability of Styrofoam recycling in NYC's schools, whereas DSNY does not have similar enthusiasm for this type of effort. Shipping truckloads of lightweight expanded polystyrene, or the compressed pellets, to distant factories where the plastic is reformed into another single-use product that will end up in a landfill is generally considered by environmentalists to be a "greenwashing" solution: the transport and processing is expensive, unsustainable, and not environmentally friendly. In fact, some will tell you that Styrofoam makes a terrific inert "clean-fill" component for landfills, and all agree it is certainly valuable in waste-to-energy scenarios, since it is a petroleum-based product. The viability of arranging for separate collection of these trays from our 1200 schools is unlikely, and would put more trucks (diesel fumes, fuel consumption) on our streets. Anyone undertaking a comprehensive life-cycle analysis would not find it promising.

What I hate about the question of Styrofoam lunch trays is that I find myself defending single-use Styrofoam, when the real solution is to avoid using lunch trays unnecessarily, or instituting the equipment and systems necessary for multiple-use washable trays – which isn't going to happen.

Styrofoam constitutes about ½ of one percent (0.5%) of NYC's waste, compared to Recyclable Paper which comprises about 23% of NYC's waste, and the recyclable plastics that DSNY collects comprises about 2.14%. See [what's in NYC's waste \(pie charts\)](#) at: http://www.nyc.gov/html/nycwasteless/html/recycling/wcs_charts.shtml BWPRR encourages schools to focus their enthusiasm instead on recycling the mandated materials for which there is already a collection infrastructure and recycling markets in place.

I'm sorry I'm unable to provide the type of information you're seeking. I'd love to see the results of your students' research.

Mary Most

Public Information & Outreach Specialist

recycle more, waste less!**NYC Department of Sanitation**

Bureau of Waste Prevention, Reuse and Recycling

44 Beaver Street , 6th Floor

New York , NY 10004

t: 917.237.5622

f: 212.514.7812

e: mmost@dsny.nyc.govw: www.nyc.gov/wastelessw: www.nyc.gov/stuffexchange

Alisha Aquino

In Manhattan East the students are very involved in recycling materials. We recycle paper and have a bin only for paper. We have a can and bottle bin. At lunch time we also have a bin for milk cartons alone that are finished. We also recycle lunch trays. After we finish eating, we throw our trash away in one trash can, then dispose our lunch trays in another. We are so used to recycling it just seems so normal. The teachers also recycle paper and reuse them. They print their information on one side, and the other side of the paper there is used work. It just feels right to recycle and that we are making a difference in the world.

Sep. 16, 2009
5th Floor Recycle Assessment
Environmental Action

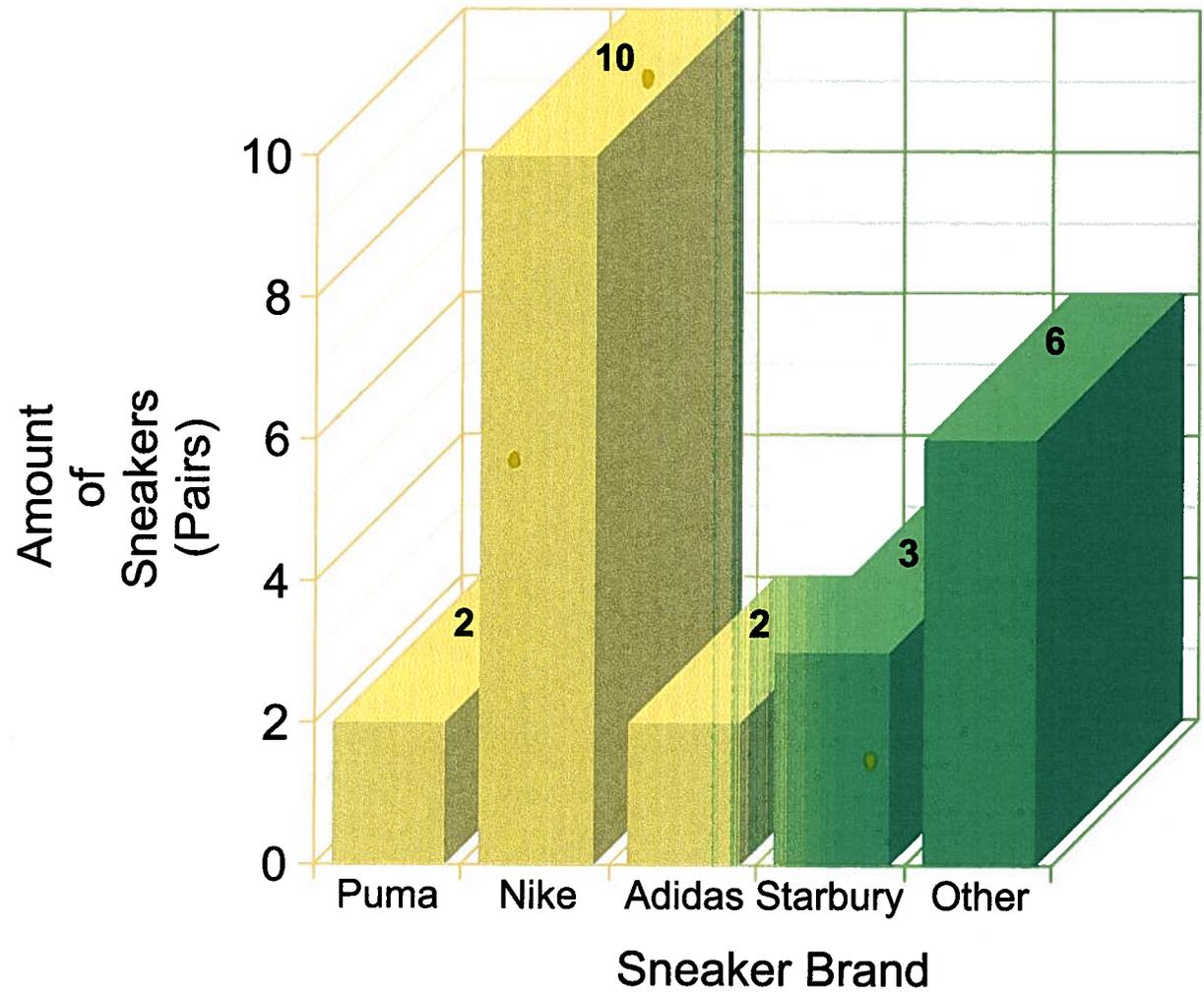
Name of Monitor	Classroom	Status
1. Bryan	Music, 502	Music room needed sticker
2. Cindy	Music, 502	
3. Sidnei	505, 506	505 needed sticker
4. Mayra	505, 506	
5. Melissa	504, 507	
6. Azeem	504, 507	
7. Ulices	508, 510	
8. Jonathan	508, 510	
9. Philly	511, 512	
10.	511, 512,	
11. Brenda	513, 514	Science Lab needed sticker And no bag
12.	513, 514	
13. Tiasia	Sarro, Big Office	
14.	Sarro, Big Office	
15. Kenya	Cans bottles by Office	
16. Tyler	564 (Heinsohn), Gym	
17. Evelyn	Ocasio, 509	

How do we plan on improving the separation of recyclables at Manhattan East?
 It was difficult to see how classroom was going at this point because our custodian had already collected the recycling for today.

September 30, 2009

Name of Monitor	Classroom	Status
1. Bryan	Music, 502	Music room needed sticker
2. Cindy	Music, 502	
3. Sidnei	505, 506	505 needed sticker
4. Mayra	505 (Rangel), 506 (Barnes)	
5. Melissa	504, Ms. V 507 Art	
6. Azeem	504, 507	
7. Ulices	508, 510 Math, Cosby	
8. Jonathan	508, 510	
9. Philly	511, 512	
10. Cindy	511, 512,	
11. Brenda	513, 514	Science Lab needed sticker And no bag
12.	513, 514	
13. Tiasia	Sarro, Big Office	
14.	Sarro, Big Office	
15. Kenya	Cans bottles by Office	
16. Tyler	564 (Heinsohn), Gym	
17. Evelyn	Ocasio, 509	

Sneakers Collected March/April 2010



Nike Reuse-a-Shoe Drive



Sneaker
recycling
(and annual!)





Nike Reuse-A-Shoe Drive!



Don't throw your old sneakers away!!! If you do, they'll sit in a landfill for a hundred years! Instead, donate them to Nike-Reuse-A-Shoe, which will take your kicks and recycle them into basketball court and track turf!

How cool is that!?!

There is a box in the main office on the 1st floor - just drop them off in March or April!

**ALL BRANDS ACCEPTED!
NO DRESS SHOES, BOOTS, OR FLIP FLOPS.**



**City of New York
Parks & Recreation**
Michael R. Bloomberg, Mayor
Adrian Benepe, Commissioner

**City of New York
Urban Park Rangers**
Sarah Aucoin, Director



Program Confirmation Form

Thank you for your program booking with the Urban Park Rangers. Please review this confirmation and invoice. If any of the information is incorrect please call 311 and ask for the Urban Park Rangers or call Marta Arroyo at 1-866-692-4295 for assistance

program title / description	8019	date / time	location	staff
CONSERVATION: KEEP IT WILD		Wednesday, November 18, 2009	Dana Discovery Center	SC
		start end		
		1:15 pm ~ 2:45 pm		
The Natural Classroom				

contact	C1074	school
name: Julie Corbalis		name: Manhattan East School
phone: (907) 682-5495		address: 410 East 100th Street
email:		
grade:		city: NY st: NY zip: 10029
		phone: 917-682-5495
		region:
		students: 20

Total due: **\$100.00**

Certificate of Award

This Certifies That

Isabel Coss

Has earned special recognition and is hereby granted this Certificate of Award for

Radical Recycling!

In Witness Whereof our signatures are hereto affixed.

Given this 14 day of APRIL two thousand and TEN

Globalis

Another
elective
dedicated to
recycling!

Read, Relax, Recycle Elective, 2009-2010

I was in the elective Read, Relax, and Recycle. We were recycling by bringing books in from home and giving them to Ms. Lutz. We gave them in to Ms. Lutz because she was the teacher for the elective. I brought in two books from home that my family and I did not need. Now my classmates use the books and they enjoy them. If I didn't bring the book in it would just be somewhere at home not being used. But now it is being read & enjoyed. ☺

By: Bryan

Lost & Found Clothing Recycle 2009

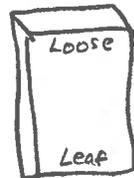
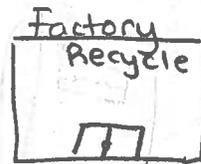
In the fall of 2009, one class period that we had we used to organize the lost and found. We took clothes from the past couple of years and sorted them. In the mix there were jackets, T-shirts, shoes and accessories. We put them into 6 garbage bags and took them to the salvation army to donate. This is considered recycling because we were able to keep them out of the landfills and helping out poor people.

2009

AND ON



Cans
and
Bottles
too



Manhattan * East
Recyclers

Mayra Bravo

Designs
for
aloth tote
bag

LOVE THE



EARTH

GO GREEN

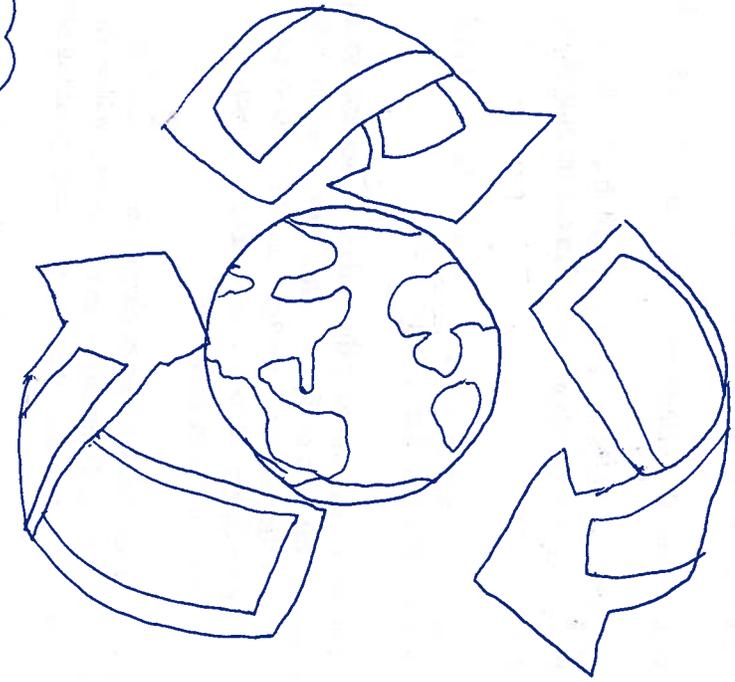


2010

SAVE THE
WORLD

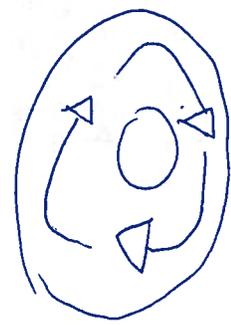
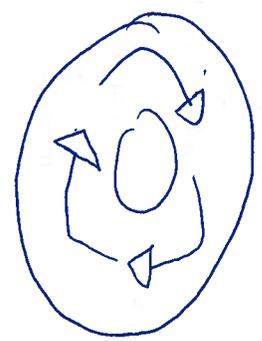
ENVIRONMENTAL
ACTION

Recyclers

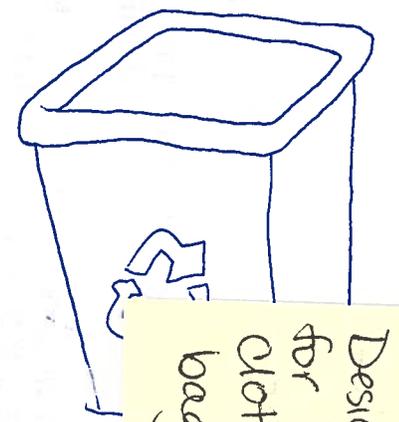


of

2



9



Designs
for
cloth tote
bags

Manhattan East

New York State Learning Standards
Manhattan East Reduce & Reuse Challenge 2009-2010

(Adapted from <http://usny.nysed.gov/teachers/nyslearningstandards.html>)

Social Studies

Standard 5: Civics, Citizenship, and Government

Students will use a variety of intellectual skills to demonstrate their understanding of the necessity for establishing governments; the governmental system of the United States and other nations; the United States Constitution; the basic civic values of American constitutional democracy; and the roles, rights, and responsibilities of citizenship, including avenues of participation.

Manhattan East students have learned that they have a responsibility to their city, state, country and planet, to recycle. They have learned that there are laws mandating recycling, and those laws exist to ensure everyone's well being as citizens.

Physical Education

Standard 2: A Safe and Healthy Environment

Students will acquire the knowledge and ability necessary to create and maintain a safe and healthy environment.

Standard 3: Resource Management

Students will understand and be able to manage their personal and community resources.

Manhattan East students have learned how to create and implement a recycling program that contributes to maintaining a safe and healthier environment in their community school.

Mathematics, Science and Technology

Standard 2: Students will access, generate, process, and transfer information using appropriate technologies.

Standard 3: Students will understand mathematics and become mathematically confident by communicating and reasoning mathematically, by applying mathematics in real-world settings, and by solving problems through the integrated study of number systems, geometry, algebra, data analysis, probability, and trigonometry.

Standard 4: Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.

Standard 5: Students will apply technological knowledge and skills to design, construct, use, and evaluate products and systems to satisfy human and environmental needs.

Standard 6: Students will understand the relationships and common themes that connect mathematics, science, and technology and apply the themes to these and other areas of learning.

Standard 7: Students will apply the knowledge and thinking skills of mathematics, science, and technology to address real-life problems and make informed decisions.

Throughout the school year the Environmental Action elective has researched the history of environmentalism and recycling. We have graphed our recycling totals, and used our findings to improve our current program.

English Language Arts

Standard 1: Students will read, write, listen, and speak for information and understanding.

As listeners and readers, students will collect data, facts, and ideas; discover relationships, concepts, and generalizations; and use knowledge generated from oral, written, and electronically produced texts. As speakers and writers, they will use oral and written language to acquire, interpret, apply, and transmit information.

Students have read articles pertaining to recycling, listened and viewed videos, and discussed and reflected on what they learned. We are constantly communicating in written and verbal ways.