

This is PART 2 of the project entry binder.

In order to display the full range of projects submitted for this contest, this school's project entry binder has been divided into two PDF files.

[Click here to go back to PART 1.](#)

Continue to the next page to see PART 2.



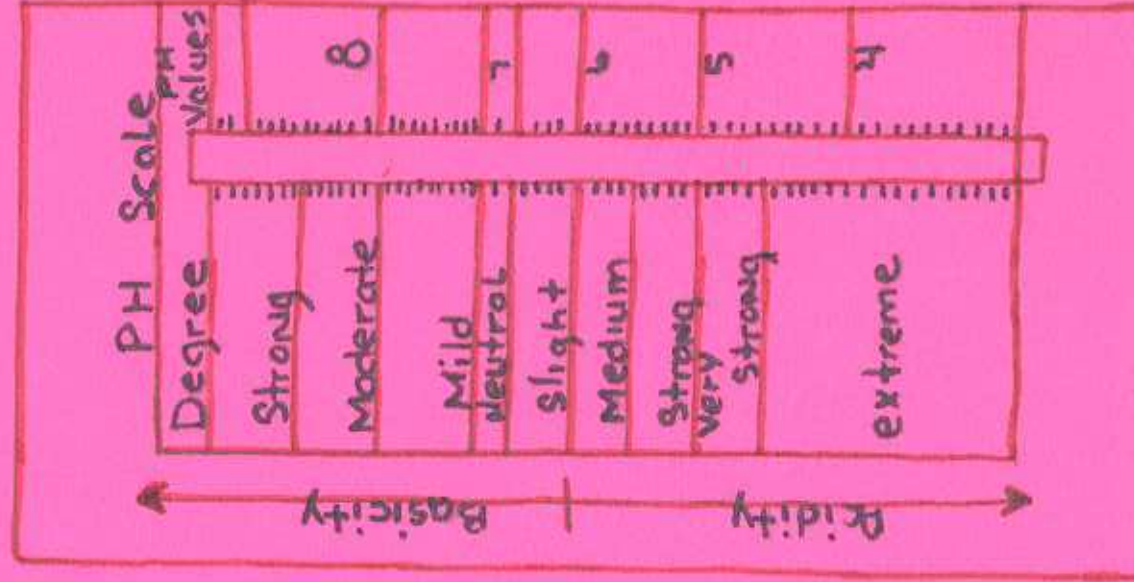
**HORTICULTURE
PERIOD 2**

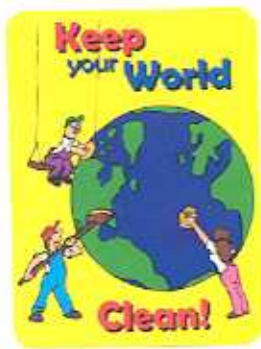
**SOIL TESTING
&
GRAPHING RESULTS**

Brandeis Students Collect Soil Samples



MORGAN
CHEATHAM







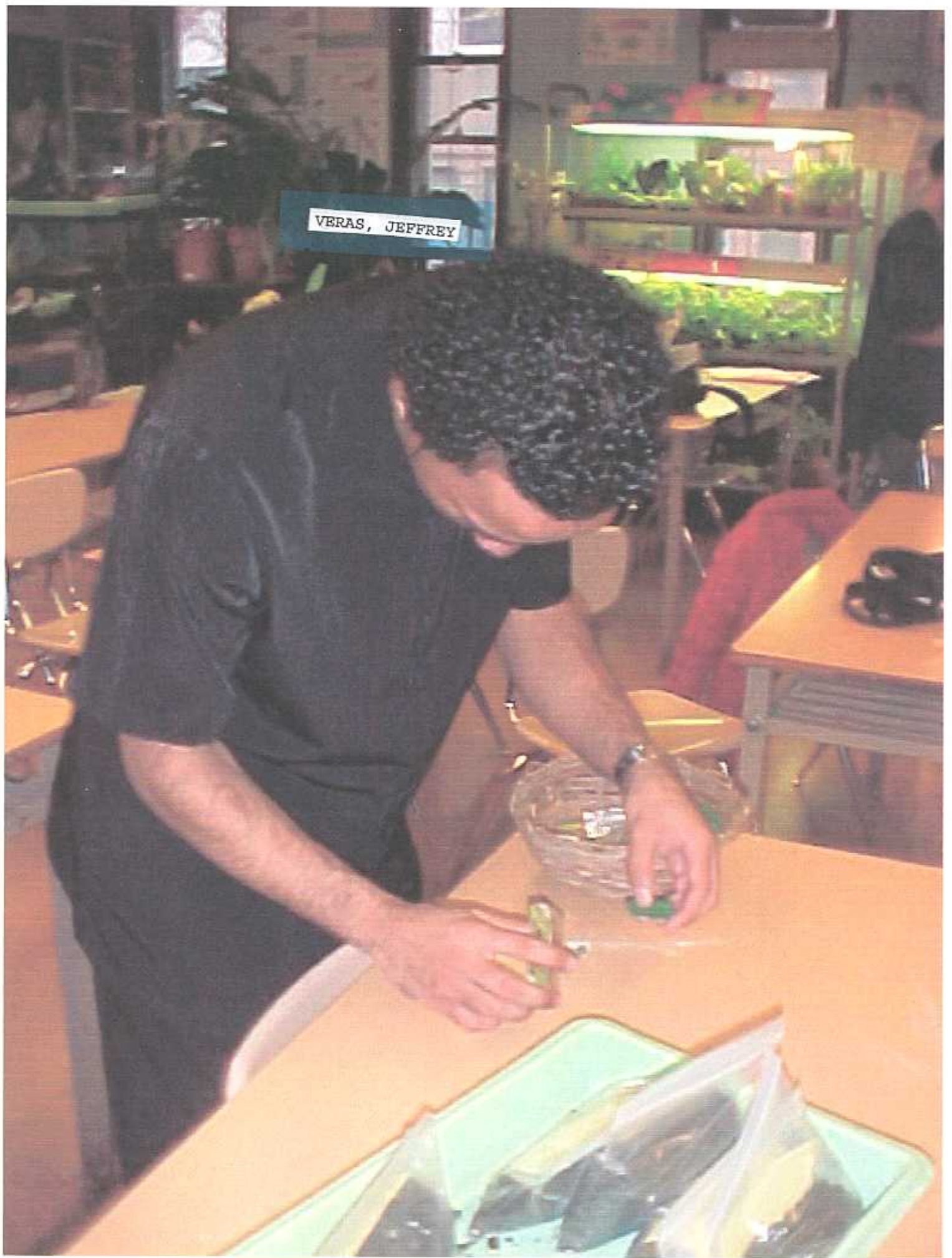
Soil Samples

- West 85th Street

- Baseline soil samples that measure existing Ph levels in the soil must be taken first.
- How will the introduction of recycled coffee grounds effect soil Ph levels?

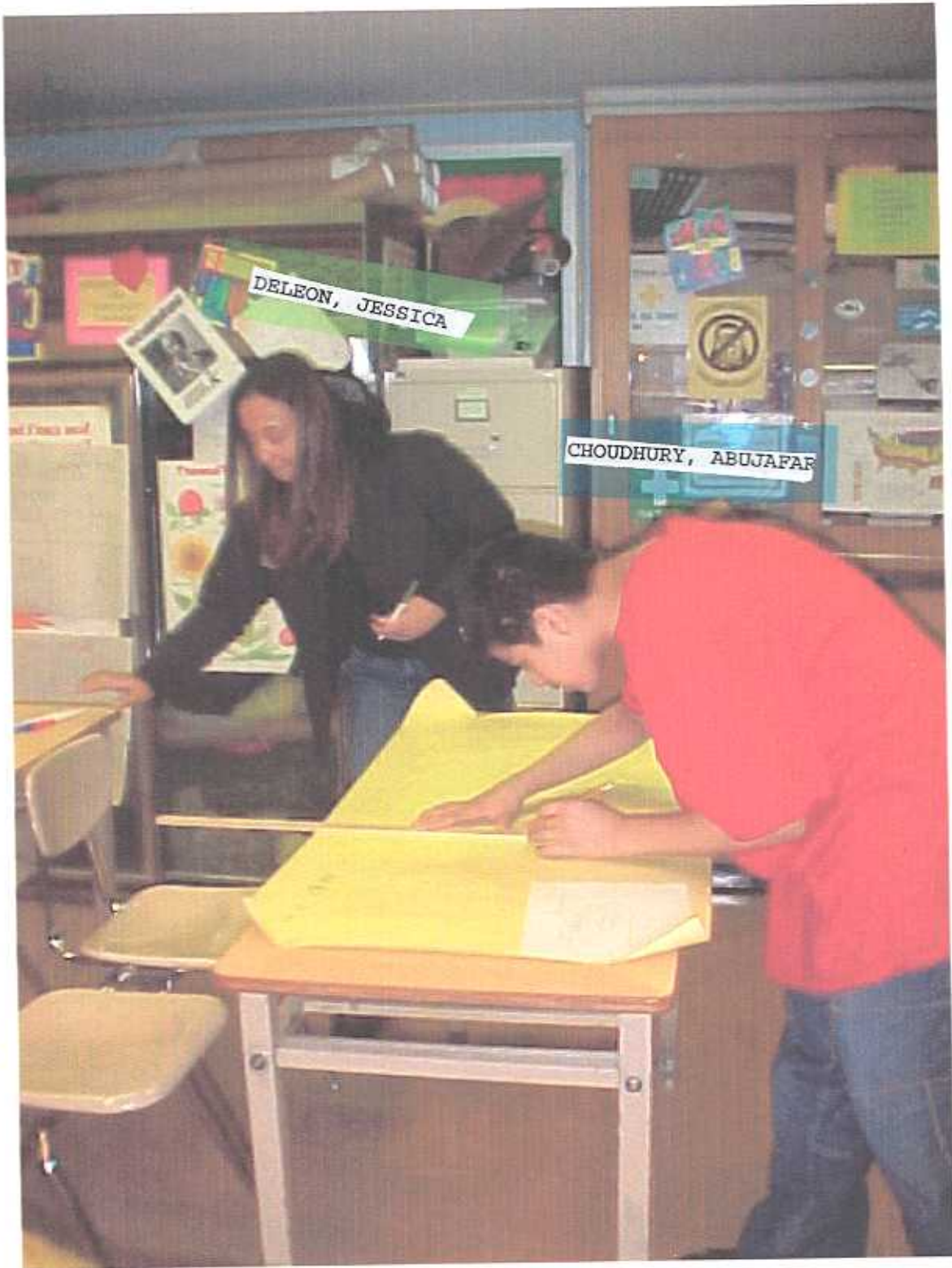


VERAS, JEFFREY





OUR DATA



DELEON, JESSICA

CHOUDHURY, ABUJAFAR



**HORTICULTURE
PERIOD 6**

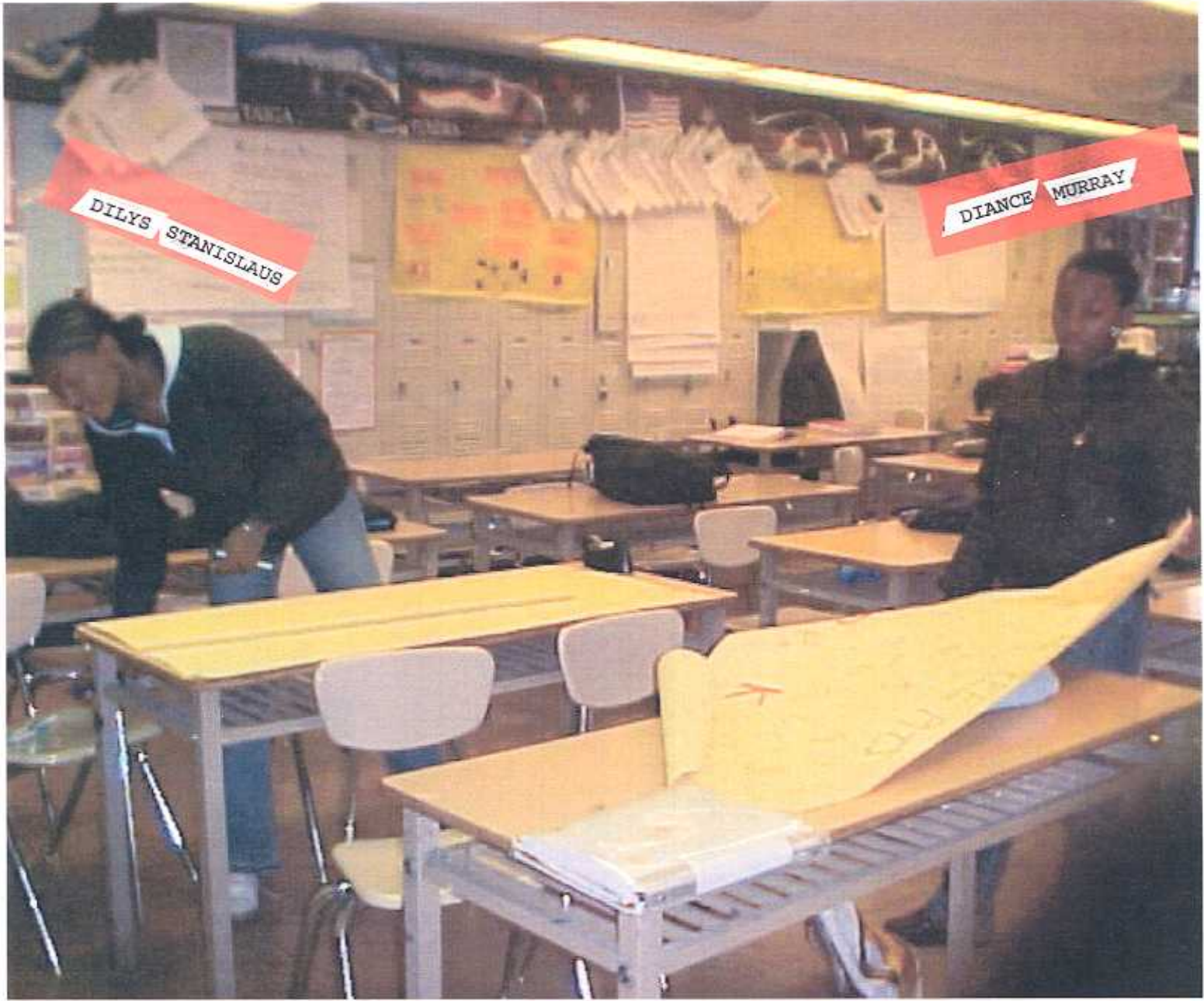
SOIL TESTING

&

GRAPHING RESULTS

— Ph Scale —



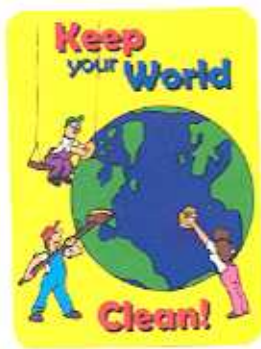


DILYS STANISLAUS

DIANCE MURRAY

**HORTICULTURE
PERIOD 6**

**PUTTING OUR COFFEE GROUNDS
TO THE TEST
IN THE
WEST 84TH STREET TREE PITS**



NASHEA MCCLARIN,

SASHA MCCLARIN,

DILYS STANISLAUS,

BERRIOS, MELISSA

PH TESTING SOIL/COFFEE MIXTURE



**HORTICULTURE STUDENTS
PERIOD 8**

W 84th St.

Soil Sample Tree Pits

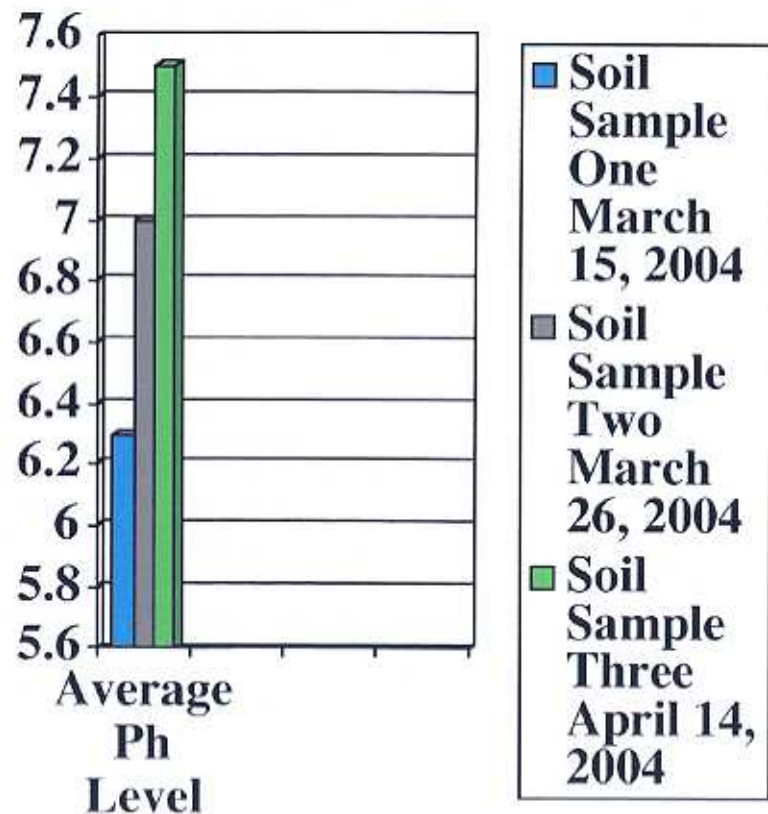
| Tree Pits | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|
| Ph | 6.5 | 6.0 | 6.5 | 6.0 | 6.0 | 6.5 | 6.5 | 6.5 | 7.0 | 6.5 | 6.5 | 6.0 | 6.5 | 6.5 |

N N3

P P4

K K4

WEST 84TH STREET SOIL SAMPLES

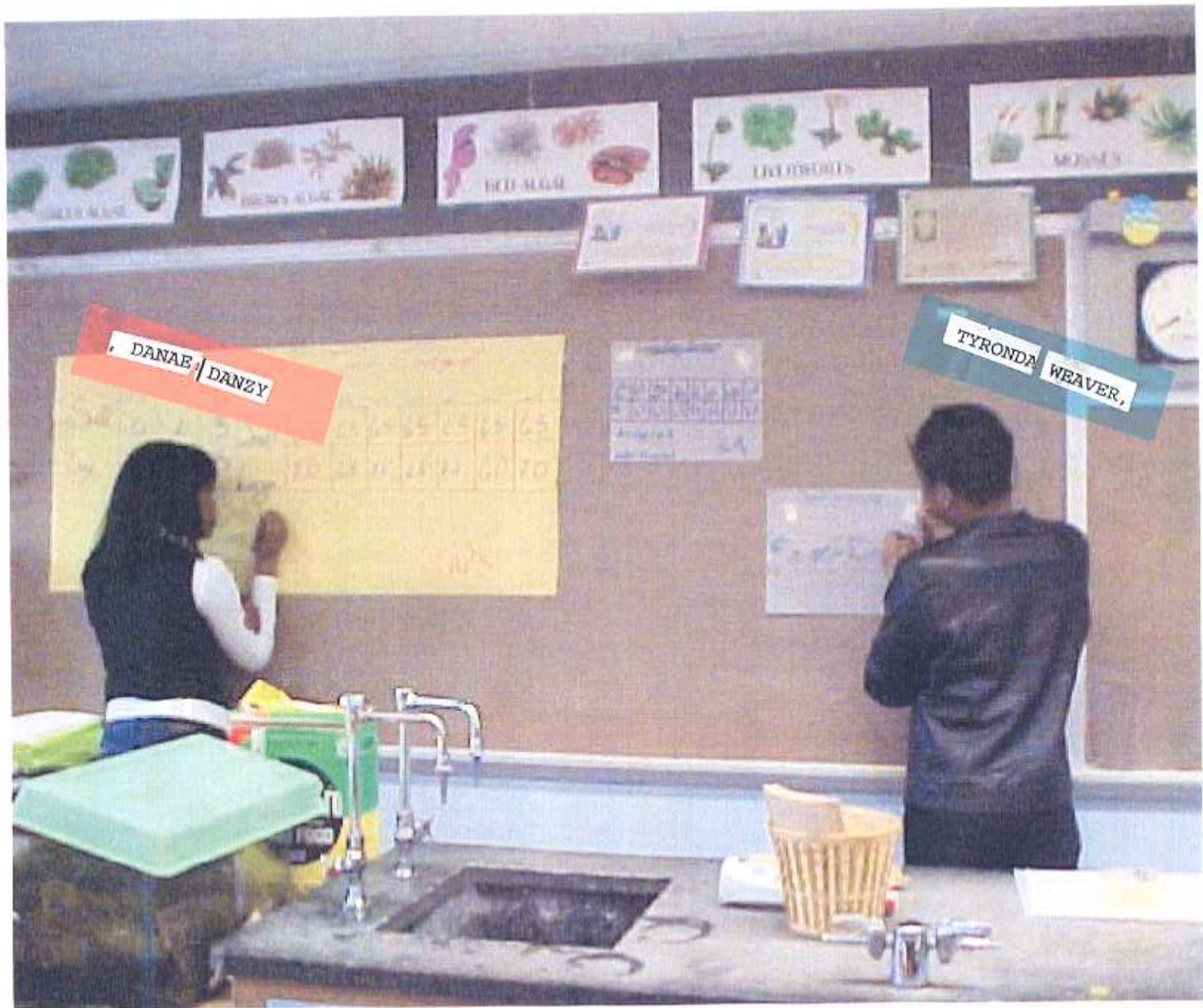


- Students added recycled coffee grounds from neighborhood sources to Brandeis tree pits
- Students tested Ph levels in soil over a 30 day period.
- Students graphed the soil change results.



**HORTICULTURE
PERIOD 8**

GRAPHING RESULTS



DANA E / DANZY

TYRONDA WEAVER,

Soil Test Samples - Inner Courtyard

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|-------|-----|-----|-----|-----|-----|-----|-----|
| Small | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Large | 7.0 | 6.5 | 7.0 | 6.5 | 7.0 | 6.0 | 7.0 |

| | N | P | K |
|-------|---|---|---|
| Small | 0 | 2 | 3 |
| Large | 0 | 3 | 3 |

Small Average/pH: 6.5

Large Average/pH: 6.7

Large Inner Courtyard

| Coffee Type | Janet | Starbucks | W. 85th St. | W. 84th St. | Cafe | Parsky | Lenny's |
|-------------|-------|-----------|-------------|-------------|------|--------|---------|
| pH | 6.0 | 6.0 | 6.5 | 7.0 | 7.5 | 6.5 | 6.0 |

Average : 6.5



Period 8
3/29/04 (4 days later)





**STUDENT
INTERVIEWS**

WITH

**OUR NEIGHBORHOOD
COFFEE SPONSORS**

Janet's

Community Participant Questionnaire



1. What is your name? JANET
2. What is the name of the company or store that you work for? PARISIAN
3. How long have you been employed by this company or store? 12 yr.
4. What are your duties and working hours like? MANAGER
50 hrs.
5. What is your ethnic background and/or country of origin? ASIAN
6. Where do you live in the city or surrounding area? Jersey
7. Do you have any interest or background in gardening? YES
8. Have you heard of the *Team Up to Clean Up* program? NO
9. Have you heard that coffee grounds can help improve soil quality? Do you think there is some truth to this idea? YES . YES
10. What are some things that you would like to learn about gardening, recycling, and other means to beautify the city?

GARDENING

PARISIAN DELI

ATM • HOT & COLD SANDWICH • FREE DELIVERY





OUR SPONSOR

**STARBUCK'S
WEST 86TH STREET
&
COLUMBUS AVENUE
NEW YORK CITY**





FREE

**GROUNDS
FOR YOUR
GARDEN**

Community Participant Questionnaire

Reduce
Reuse
Recycle



1. What is your name?

CARMEN RIVERA

2. What is the name of the company or store that you work for?

Board of Education NYC / Brando's Cafe

3. How long have you been employed by this company or store?

22 years

4. What are your duties and working hours like?

IN charge of entire cafe
- order food/supplies - student statistics
- track money

5. What is your ethnic background and/or country of origin?

Puerto Rico

6. Where do you live in the city or surrounding area?

City Island

7. Do you have any interest or background in gardening?

I love that
- big garden at my house

8. Have you heard of the *Team Up to Clean Up* program?

No

9. Have you heard that coffee grounds can help improve soil quality? Do you think there is some truth to this idea?

Yes I knew - in Puerto Rico
we use that

10. What are some things that you would like to learn about gardening, recycling, and other means to beautify the city?

I like gardening, sports, dancing
(softball team, garden etob)

Community Participant Questionnaire

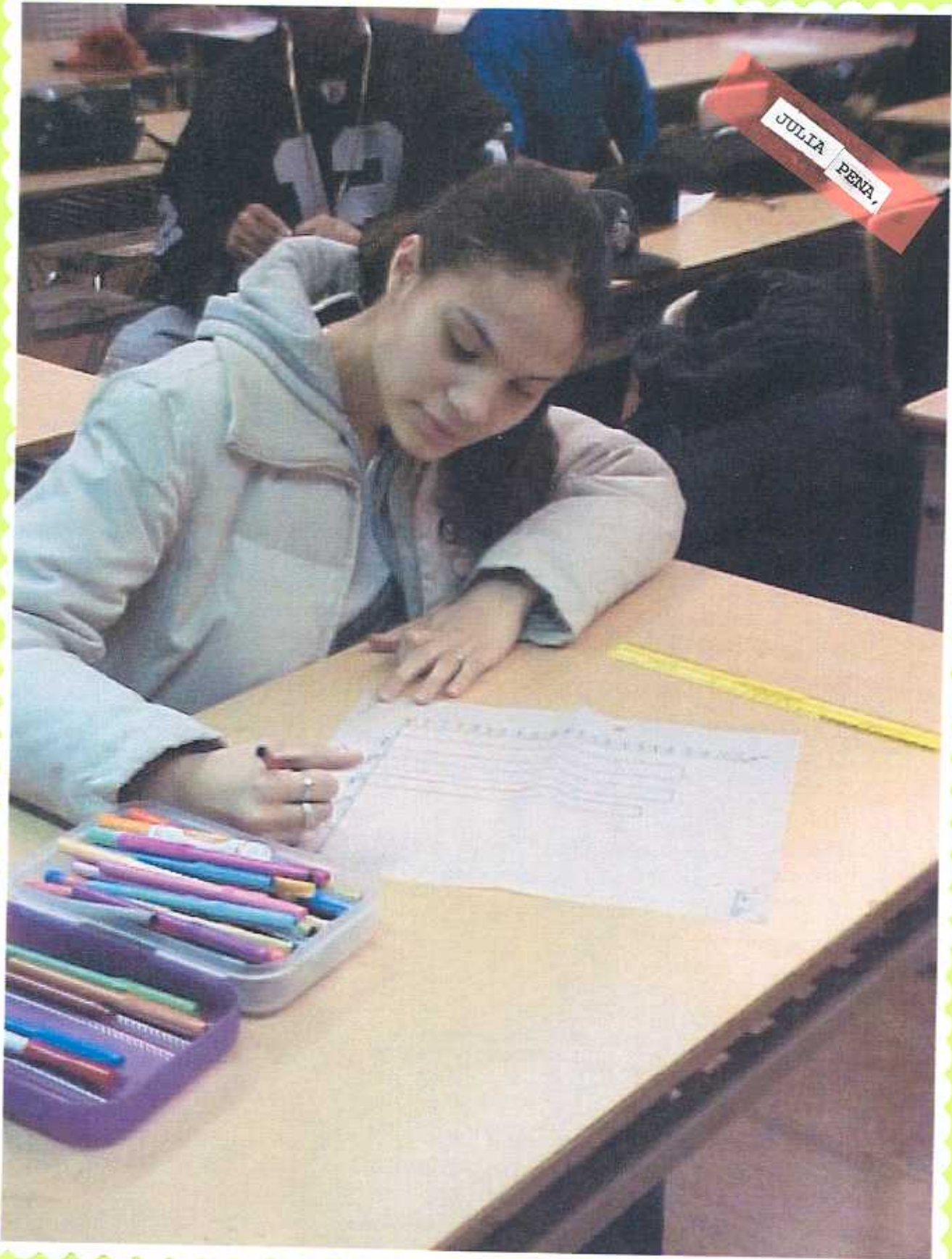
1. What is your name? *Jeanel ORIS - Beguerra*
2. What is the name of the company or store that you work for? *Starbucks*
3. How long have you been employed by this company or store? *2 years*
4. What are your duties and working hours like?
5. What is your ethnic background and/or country of origin?
6. Where do you live in the city or surrounding area? *East Side*
7. Do you have any interest or background in gardening? *Yes*
8. Have you heard of the *Team Up to Clean Up* program? *Yes*
9. Have you heard that coffee grounds can help improve soil quality? Do you think there is some truth to this idea? *Yes*
10. What are some things that you would like to learn about gardening, recycling, and other means to beautify the city?

**LOUIS D. BRANDEIS
HIGH SCHOOL**

CAFÉ STAFF

&

Period 2 Coffee Collectors





**HORTICULTURE
STUDENT
INVOLVEMENT**

**WITH
PARENTS & FACULTY
ON**

**“HOW TO USE COFFEE AS A
COMPOST AT HOME”**

**OPEN SCHOOL NIGHT
MARCH 25TH, 2004**





HOW TO OBTAIN RED COMPOSTING WORMS

Carolina
2700 York Road
Burlington, North Carolina 27215
Phone 336-584-0381
Fax 336-584-3999

Worm Box, Bedding,
Food & RED WORMS



Council on the Environment of NYC
51 Chambers Street
Room 228
New York, N.Y. 10007
Phone 212-788-7900
Fax 212-788-7913
Email conyc@cenyc.org

RED WORMS are available to buy at the FARMERS GREEN MARKET/E.14ST & UNION SQUARE
Wed./Fri./Sat.
Greenmarket Booth

YOU CAN ALSO BUY A LARGE RUBBERMAID BOX AND PUNCH HOLES FOR AIR TO ENTER THROUGH THE TOP.

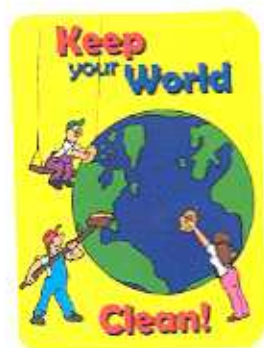
KITCHEN FOOD SCRAPS CAN BE GIVEN TO THE WORMS. JUST REMEMBER "NO FLESH PRODUCTS" !

Nasha & Sasha Answering Questions



**HORTICULTURE
STUDENTS**

**RESPONSES
TO
THEIR PROJECT**





Grounds For Improvement!

Have you ever had a project to do and when you sat down and thought about it you really didn't want to do it? But then there was something that made the project be prominent and you said to yourself "you really want to do it"? Well, that happened to me.

In my horticulture class, Ms. Mulholland told us that we were going to be doing a project about composting coffee indoors. At first I didn't want to do it because I thought it was going to be boring. I mean who really want to learn about composting coffee grounds to see if it ^{would} help our plants grow. But then I thought to myself and remembered what plants and trees do for us. They help to keep the air clean by removing poisonous gases, like carbon dioxide. They also give us food in the form of fruit and nuts. They provide habitat for all kinds of animals from insects to birds to small mammals. Then I thought to myself "hey why not do it and give back."

But before we could start our project, we had to do some research on composting coffee grounds. Then we sent a couple of e-mails to some people at Cornell University stating that we need some help and information about composting coffee grounds. They were very nice and send us some very helpful information.

The next day we went outside and took soil samples from six different tree pits. Then we went to the cafeteria and got coffee grounds samples. We then mixed the coffee grounds with the soil to see if it would lower or raise the pH level.

As a result of this, a lot of good things resulted from this. Starbucks has adopted our horticulture program. People in our school and community have helped and supported us all the way. I am so proud of myself that I took the time and did the things I was supposed to do to help Ms. Mulholland and Mr. Frampton succeed in this breathtaking project!

Leslyn Caleb

Beautifully written
I am very proud of you!

My experience in the Team Up to Clean Up experiment on Grounds for Improvement has been excellent. In this experiment my group and I collected coffee grounds ^{ed} mix with our school's soil to see if the soil would improve. In this experiment, I was able to develop social skills and skills in science. Our experiment, ^{ed} Grounds for Improvement, has been a great experience for me.

There were many steps my group and I had to follow in order to successfully do our experiment. First my group and I collected some soil around our school's community. We then went from store to store collection coffee grounds. By doing this I was able to learn how to professionally present myself to other people to get things I need. After we collected the coffee grounds my group and I tested the soil with the soil testing kit. After testing the soil we mixed the coffee grounds with the soil. A couple of days later we retested the soil and we got the same results as our previous testing. After following these steps my group and I concluded that coffee grounds may have an effect on soil, but it might take more time to improve the soil.

This experiment has been a great experience for me. Although coffee grounds had no effect on the soil, I did learn how to properly communicate with other individuals and I also learned how to go about doing a science experiment. My experience doing this project has been great.

Shanell Werts
Mrs. Mulholland p.d 2
3/31/04

*I am glad
you enjoyed
learning something
new in science*



Jean Darius

Ms. Mulholland / Mr. Frampton

4/1/04
Hort. pd. 2

My experience on the "Grounds for Improvement" project was a very educating and a fun miniclude through nature. Mr. Frampton and I used coffee grounds from the Cafeteria, Janket's, Lenny's, Starbuck's, and West 85th Deli to cover certain pits of soils outside. The purpose for using these coffee grounds on the soil, was to lower the pH level on the soil. Before we put the coffee grounds on the soil, we tested it for it's pH level. Most of the results were about 6.5 which is a little acidic. I personally feel like I ^{was} contributing to nature and my environment.

Yes you are!

Sabrina Quiles
Period 2



March 30 2004
Ms. Muholland

During the time period I have been working on this project, I have experience and learned many things. I learned how important it is for us to know our soil, to know how much nutrients it has and what type of fertilizer to use to better the soil for our plants. I learned why coffee beans are important to our environment; it helps put nutrients back in our soil. I experience how to test soil for its nutrients, we have to test its Ph. By doing this we know how much nutrients it has. I mixed coffee beans with the soil to improve its nutrients. My experience was an interesting one I have no complaints.

During this experience I gain a new interest in learning about our environment, how it works and how we can improve it. By us doing little things as checking the soil daily, making sure our plants have enough water, sun and nutrients we can make a big different in our environment. Part of this project was to get coffee grounds from different places. For example we went to Star Bucks, Lenny's, Janet's deli grocery and finally we picked up coffee grounds from our school cafeteria.

I enjoyed this project very much. Everything that I learned in this project will help me in my future. I will make sure my surroundings are better. I learned how to appreciate nature and what it does to make our environment better for us to live in. I am grateful for my teacher Ms. Mulholland for introducing me to a new interest. I would have never thought that I would have a slight interest in trees or nature in general. I took a great benefit from this project, its something that I would carry and remember for the rest of my life.

FACULTY & STAFF

RESPONSES
TO

GROUNDS FOR
IMPROVEMENT

PROJECT

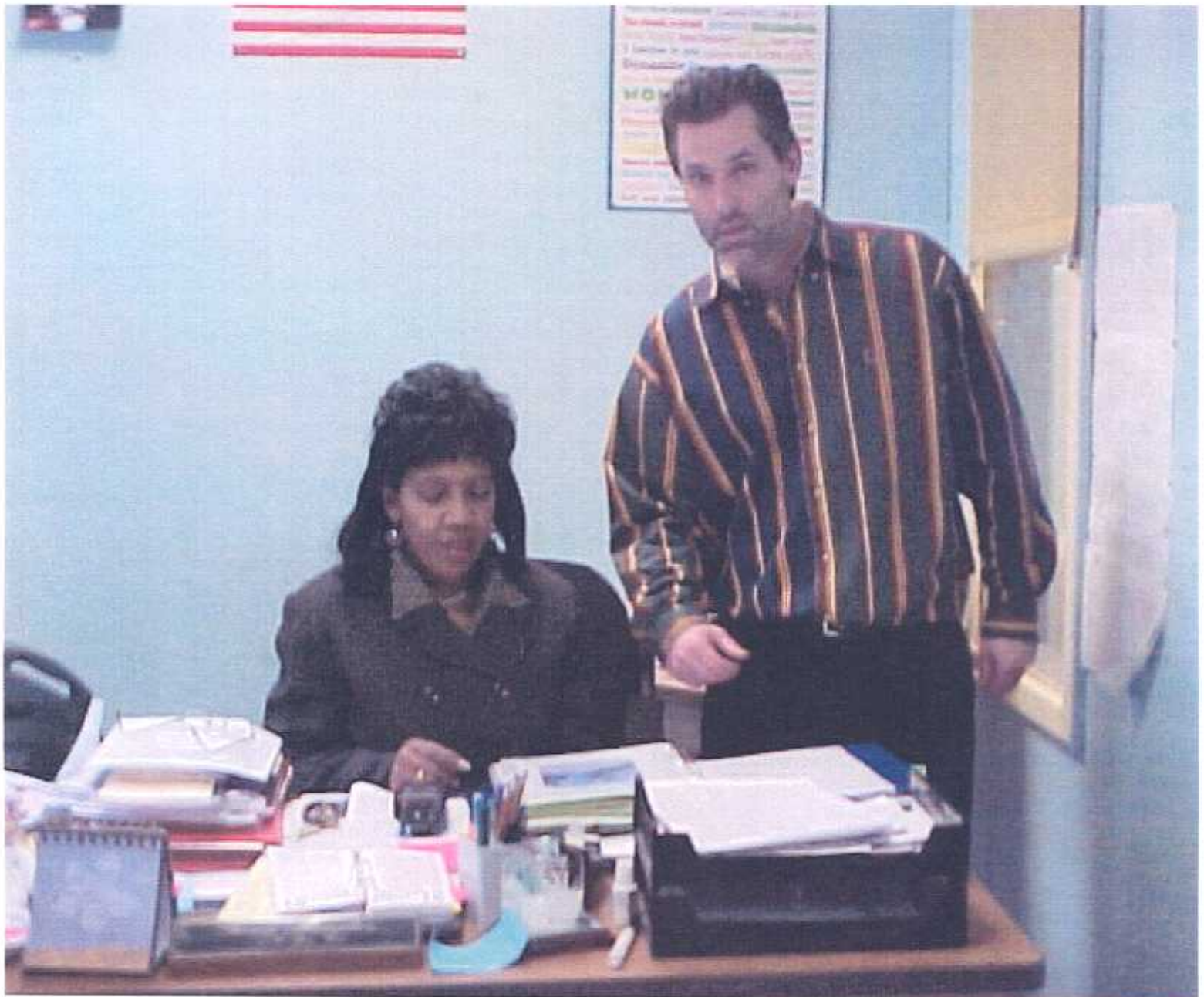


**You
did it!**

**Dr. Messineo explains our project to
Ms. Lisa Morris, Principal for a Day**



Ms. Hamilton, Assistant Principal Special Ed. & Mr. Frampton evaluating our Team Up Project



Louis D. Brandeis High School
145 West 84th Street, New York, N.Y. 10024

Dr. Eloise Messineo, Principal

1-917-441-5600

1-212-877-1959 Fax

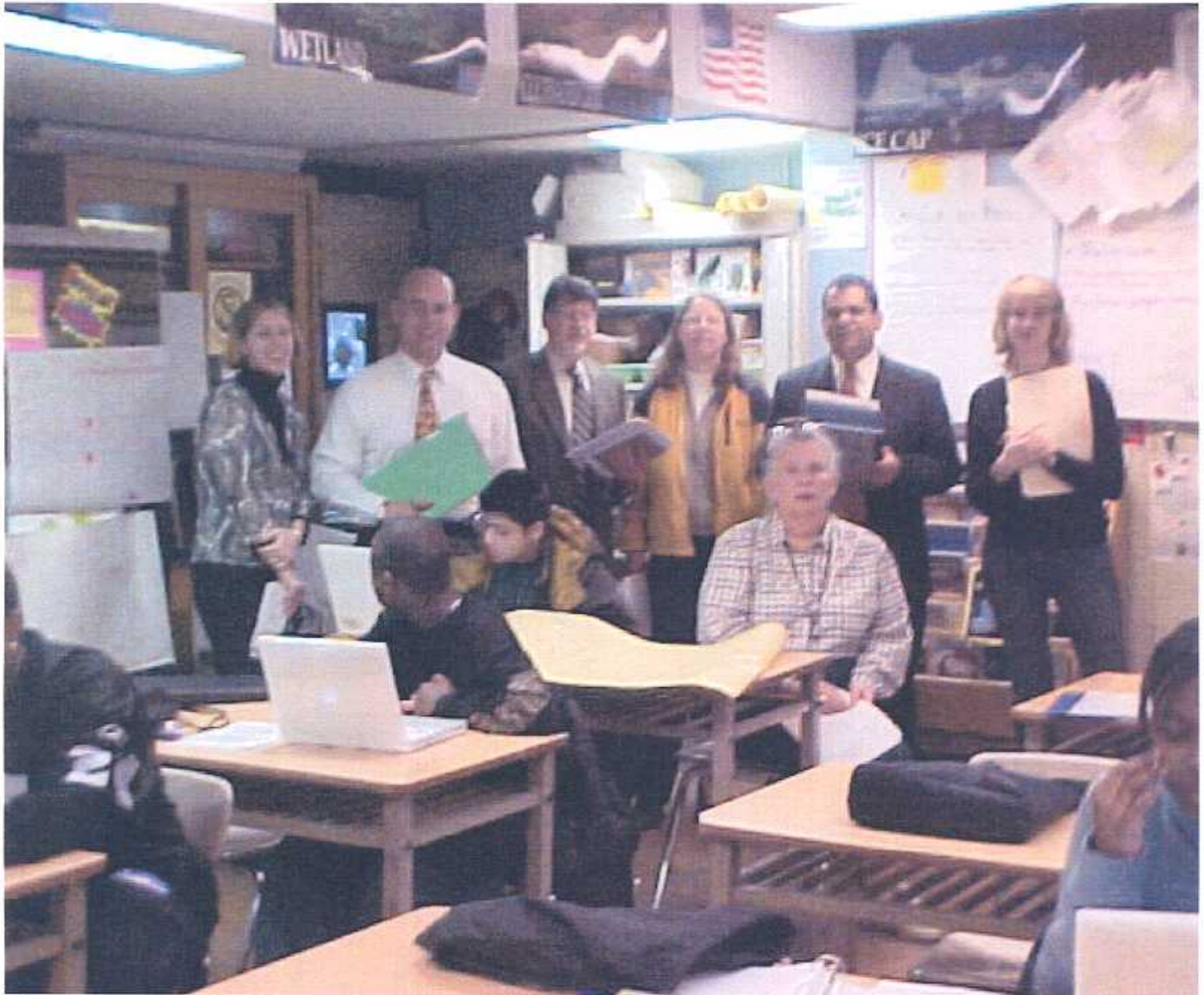


Grounds for Improvement

I observed Christine Mulholland's students many times while they were working on the Grounds For Improvement project. The entire project was an extremely interesting process to watch as a first year teacher. The students worked extremely hard throughout the entire project from idea, to research, to implementation. The most exciting thing about observing the students while they worked on Grounds for Improvement was seeing the level of interest that they had on the topic and the pride that they were able to complete what they viewed to be a difficult task. At every point throughout the process, the students were fully engaged and interested in what they were doing. They truly seemed to enjoy themselves while also diligently working on the project. I think that the students working on Grounds for Improvement will always remember and treasure the experience of completing this project, and that they will forever be able to have pride in the amount of and level of work that they did to see the project through from idea to completion.

Vanesa Spiguel
Science Dept.

**Mr. Arocho, Assistant Principal Science,
Mr. Raab, Region 10 &
Our Science Dept. Teachers**



**Walk through and Science department evaluation
of our Team Up Project**

Louis D. Brandeis High School
145 West 84th Street, New York, NY 10024
Dr. Eloise Messineo, Principal
1-917-441-5600



To: Christine Muholland
Ref: Walk through
Date: Friday, April 02, 2004

Thank you for being a participant of the walkthrough visit the Science Department conducted with Mr. Carl Raab, Science Supervisory Consultant – Region 10.

Your students were engaged in a project where their enthusiasm and interest was easily visible. Your students were utilizing technology to analyze data from soil tests that were conducted on tree pits, the school garden and the inner court yard soil samples. Students were gaining mastery in Microsoft Excel, PowerPoint and Word applications in their preparations for the culmination of their project. Your class room was an abundantly print rich environment with tons of samples of student work from their recent findings.

The five teachers and representative from the Regional Superintendents Office participated in the walkthrough had nothing but praise to offer at your class room and the teaching and learning environment which you have fostered and developed.

Thank you once again for your passion and commitment to Louis D. Brandeis High School.

Sincerely,

Antonio E. Arocho
Assistant Principal of Science Education



LOUIS D. BRANDEIS H.S.

145 West 84th Street – New York, NY 10024

Phone (917) 441-5600 Fax (212) 877-1959

Dr. Eloise Messineo, Principal

To: New York City Department of Sanitation

Re: "Team Up to Clean Up"

Date: April 14, 2004

As the instructional leader for mathematics education at Louis D. Brandeis High School, I am extremely pleased with the students in **Ms. Christine Mulholland's** *Horticulture Inclusion* class.

Through their "**Grounds for Improvement**" Project, the students have successfully integrated the math standards throughout their project. Among them are:

- **Conceptual Understanding** - comprehension of mathematical concepts, operations, and relations.
- **Procedural Fluency** - skill in carrying out procedures flexibly, accurately, efficiently, and appropriately.
- **Strategic Competence** - ability to formulate, represent and solve mathematical problems.
- **Adaptive Reasoning** - capacity for logical thought, reflection, explanation, and justification.
- **Productive Disposition** - habitual inclination to see mathematics as sensible, useful and worthwhile, coupled with a belief in diligence and one's own efficacy.

In addition, the students become actively involved with technology.

Technology is broader than the use of hardware. It includes any innovative strategy that will provide students more time with high quality curriculum and with opportunities to learn.

In summary, my kudos to Ms. Mulholland and her students for finding creative ways to integrate math and technology in their exciting science project.

A handwritten signature in black ink that reads "Gene Manchand".

Dr. Gene Manchand
Assistant Principal – Mathematics

*A Open Letter to Our Students
From
Mr. Frampton & Ms. Mulholland*

When you enter any type of competition you are always hopeful that you may win, but in this case we have already won.

Mr. Frampton and I are so proud of your efforts not only in the pursuit of academic excellence but also for the bonds and team effort which you have exhibited over this term in preparing for this year's Team Up to Clean Up entry.

It is very exciting watching young people becoming enthusiastic about the possibilities of how an academic project will culminate. Mr. Frampton and I are so grateful that you let us lead you through this process to a successful end.

THIS IS YOUR PROJECT

BE VERY PROUD OF YOUR WORK!

Because

The Faculty of Louis D. Brandeis High School

Is

MEETING THE
STANDARDS FOR

THE
GROUNDS
FOR
IMPROVEMENT

PROJECT



GROUNDS FOR IMPROVEMENT TECHNOLOGICAL COMPONENT

HARDWARE

Students utilized the following hardware tools:

16 iBook G3 Macintosh laptop computers that were wirelessly connected to a T3 internet server.

Hewlett Packard wireless laserjet printer

Polaroid PhotoMax PDC 2050 Digital Camera

Sony MiniDisc Digital Camera

Cannon SureShot Film Camera

PROGRAMS AND APPLICATIONS

Students made use of the following programs and applications:

Microsoft Word

Microsoft PowerPoint

Google internet search engine

Yahoo email accounts

iphoto digital photography program

Learning Standards for New York State

Health, Physical Education, and Home Economics

Standard 1: Personal Health and Fitness

Students will have the necessary knowledge and skills to establish and maintain physical fitness, participate in physical activity, and maintain personal health.

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.

Mathematics, Science, and Technology

Standard 1: Analysis, Inquiry, and Design

Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions.

Standard 2: Information Systems

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

Standard 3: Mathematics

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: Science

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: Technology

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

Standard 6: Interconnectedness: Common Themes

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: Interdisciplinary Problem Solving

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

English Language Arts

Standard 1: Language for Information and Understanding

Students will listen, speak, read, and write 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 that follows the accepted conventions of the English language to acquire, interpret, apply, and transmit information.

Standard 2: Language for Literary Response and Expression

Students will read and listen to oral, written, and electronically produced texts and performances from American and world literature; relate texts and performances to their own lives; and develop an understanding of the diverse social, historical, and cultural dimensions the texts and performances represent. As speakers and writers, students will use oral and written language that follows the accepted conventions of the English language for self-expression and artistic creation.

Standard 3: Language for Critical Analysis and Evaluation

Students will listen, speak, read, and write for critical analysis and evaluation. As listeners and readers, students will analyze experiences, ideas, information, and issues presented by others using a variety of established criteria. As speakers and writers, they will use oral and written language that follows the accepted conventions of the English language to present, from a variety of perspectives, their opinions and judgments on experiences, ideas, information and issues.

Standard 4: Language for Social Interaction

Students will listen, speak, read, and write for social interaction. Students will use oral and written language that follows the accepted conventions of the English language for effective social communication with a wide variety of people. As readers and listeners, they will use the social communications of others to enrich their understanding of people and their views.

Languages Other Than English

Standard 1: Communication Skills

Students will be able to use a language other than English for communication.

Standard 2: Cultural Understanding

Students will develop cross-cultural skills and understandings.

The Arts

Standard 1: Creating, Performing, and Participating in the Arts

Students will actively engage in the processes that constitute creation and performance in the arts (dance, music, theatre, and visual arts) and participate in various roles in the arts.

Standard 2: Knowing and Using Arts Materials and Resources

Students will be knowledgeable about and make use of the materials and resources available for participation in the arts in various roles.

Standard 3: Responding to and Analyzing Works of Art

Students will respond critically to a variety of works in the arts, connecting the individual work to other works and to other aspects of human endeavor and thought.

Standard 4: Understanding the Cultural Contributions of the Arts

Students will develop an understanding of the personal and cultural forces that shape artistic communication and how the arts in turn shape the diverse cultures of past and present society.

Career Development and Occupational Studies

Standard 1: Career Development

Students will be knowledgeable about the world of work, explore career options, and relate personal skills, aptitudes, and abilities to future career decisions.

Standard 2: Integrated Learning

Students will demonstrate how academic knowledge and skills are applied in the workplace and other settings.

Standard 3a: Universal Foundation Skills

Students will demonstrate mastery of the foundation skills and competencies essential for success in the workplace.

Standard 3b: Career Majors

Students who choose a career major will acquire the career-specific technical knowledge/skills necessary to progress toward gainful employment, career advancement, and success in postsecondary programs.

Social Studies

Standard 1: History of the United States and New York

Students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points in the history of the United States and New York.

Standard 2: World History

Students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points in world history and examine the broad sweep of history from a variety of perspectives.

Standard 3: Geography

Students will use a variety of intellectual skills to demonstrate their understanding of the geography of the interdependent world in which we live—local, national, and global—including the distribution of people, places, and environments over the Earth's surface.

Standard 4: Economics

Students will use a variety of intellectual skills to demonstrate their understanding of how the United States and other societies develop economic systems and associated institutions to allocate scarce resources, how major decision-making units function in the United States and other national economies, and how an economy solves the scarcity problem through market and nonmarket mechanisms.

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.

Note:

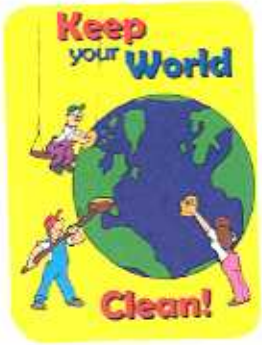


Indicates standards met by students who worked on this project... "Team Up to Clean Up"

How does your Garden Grow?



Mr. Tony Cooper



Our Custodian



**Ms. Mulholland receiving a call from
Mary Most of the Dept. of Sanitation telling her
that the project was dropped off at 44 Beaver
Street on April 16th, 2004 on time.**

