



# New Jersey Green Schools Newsletter 6/11

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## Contents

**New Providence Middle & High School**  
**Nutley Green Schools**  
**Chatham High School**  
**Implementing the Green Schools Program – Elementary , Dr. Watson**  
**Highlights from End-of-Year Green Schools Celebrations**  
**Want a Free Computer & Electronic Recycling Program?**  
**Going Green and Loving It\$\$\$\$!!**

The 2010-11 school year saw the launch of many powerful Green Schools Programs in local schools across New Jersey. Extremely encouraging was the combination of breadth and depth to which the Green Schools resources have been deployed. Once again, the creativity, persistence and dedication of Green Schools Team members have wrought wonderful results. Thank you, everyone, for your significant contributions to a “greener” society and a healthier planet. *JB*

## New Providence Middle & High School

One example of such a powerful launch was sent by Kelly Hartford, 8<sup>th</sup> grade science teacher, in mid-February, who wrote:

We walked through school and did our energy audits with 2 teams of students. One team was some appointed students from the Science Club who are now forming a Green Schools Official Team. The other team was of high schoolers appointed from the Environmental Club.

After the audit, students emailed their spreadsheets (excel) and conclusions in word documents. Our team of adults analyzed the data in a meeting and came up with the idea of timers.

We spoke to cafeteria and maintenance and decided we will fundraise to change out some ballasts in the school. We also put 7 vending machines on Vending Misers, as well as all teacher laptop carts on timers for charging properly. The laptop carts will be charging at night for a few hours and then shut off for the remainder of the day. Then teachers won't have to be reminded continually to shut off their carts and we save electricity. This idea prolongs the life of the laptops as well since they are only to be charging for 2-3 hours at a time.

Our school is putting together an event with the new student teams to fund raise and to raise awareness over Earth Week (week of April 22). Students will be making posters and announcements, and we are looking into the idea of selling plants as well.

We (the adult Green Schools team) are in the process of choosing lessons for each subject area and giving them out to department heads to hand out to teachers at their meetings. We figured this would be the best way to get teachers to implement a good lesson into their curriculum. Social studies and foreign language so far have been our biggest challenges!

This is a rough outline of an update for New Providence School. We are looking forward to receiving our annual data and reading our charts to see where we can improve.

*\* T.E.A.C.H. funding was eliminated from the 2011 BPU budget, so the NJ Green Schools Program will not be able to offer this program to additional school districts for free as we have the past few years. Two districts, however, have pursued grants from other sources and we look forward to working with them in the coming school year along with a number of this year's programs.*

## Millville Green Schools Save Energy

A key component of the Green Schools Program is monitoring the energy savings that each school's team achieves and returning a portion of those savings to those teams to reinvest in their ongoing educational and energy saving efforts.

The results from the nine Millville Green Schools Teams for their 2009-10 school year are in. **Each school saved electricity**, from 0.8% to 9.4%, with the average total savings being 5.5%. After adjusting for weather, **four schools saved natural gas**, from 2.9% to 13.7%. By saving a total of 561,687 kWhs of electricity and 15,708 therms of natural gas, these teams kept 896,001 pounds of CO<sub>2</sub> from the atmosphere. In total the Millville Green Schools Teams saved the district \$100,051 in energy costs and received 25% of that amount, \$25,013, in refunds as a reward for their accomplishments. Congratulations to one and all!

## Nutley Green Schools

Kent Bania, District Science Coordinator, is the district contact for the Nutley Green Schools Program. Kent reported that many schools in the district raised awareness by having a "Go Green" theme day. The Green Schools committee at **Nutley High School** paired "Go Green" with St. Patrick's Day to raise awareness about how much energy is wasted, money is spent, carbon emissions/toxins are released, in the production of unnecessary/unused energy. Awareness T-shirts were sold around St. Patrick's day and the money raised was used for Green improvements around the school. Kent also shared the Green Schools Lessons with all science teachers for voluntary use in their own classes.

Following their initial Green Schools Workshop in mid-December, the **Spring Garden Green Schools Team** initiated their program with their fifth graders, the school's highest level. By early March they were then ready to extend their "Go Green Initiative" school wide with an **assembly** featuring their school's "seniors." A Fifth grader, Stella Dabrowski-Wheeler, was publicly recognized for her winning poster design featuring a smiling globe in the shape of an apple, whose by-line is "Save The Planet. Make Green a Habit." Every student and teacher also wore tee shirts featuring this design. The program featured both student and adult presentations on why and how to save energy and "go green."

The entire school sang "**Energy Song**," by Jim Farrell, which begins:

*Energy, energy There's enough for you and me  
If we don't use it carelessly we can save our energy  
Energy, energy Save an ocean Save a tree  
We can do it easily If we save our energy...*

(full lyrics & chords at [www.farrellworks.com/kids/energy/Song.shtml](http://www.farrellworks.com/kids/energy/Song.shtml))



The program concluded with the Spring Garden School  
**GO GREEN CHEER**

LET'S GO, LET'S GO  
THIS IS WHAT WE KNOW  
LET'S GO, LET'S GO  
THIS IS WHAT WE MEAN  
LET'S GO, LET'S GO  
SGS GOES GREEN  
SO SCREAM AND SHOUT  
WHAT THIS IS ALL ABOUT  
LET'S GO, LET'S GO

THIS IS WHAT WE MEAN  
SGS GOES GREEN  
NOW STAND AND SHOUT  
WHAT SGS IS ALL ABOUT  
SGS GOES GREEN  
NOW STAND AND SHOUT  
WHAT SGS IS ALL ABOUT  
SGS GOES GREEN  
YEA!

It's clear that Green Schools' seeds are blooming at Spring Garden School.

### **Chatham High School**

The Chatham High School Green Schools Team has had a unique feature this year. Yes, they identified how Green Schools concepts and activities can fit into the existing curriculum, namely in the electricity unit of Physics, in AP Environmental Science, and in Earth Science, which studies renewable/nonrenewable energy, the relationship between humans and the environment, home energy auditing, and pollution in the atmosphere. They were also able to incorporate Green Schools in their Environmental Club's efforts to change teacher and student behavior through educational videos and other outreach activities. But this is the first time that the New Jersey Green Schools Program is aware of that a student undertook a year long independent energy efficiency project as a final **authentic assessment** for a course. "Sophie S.," a Chatham freshman, did so for Honors Earth System Science, utilizing the infrared thermometer from the Green Schools Tool Kit.

In response to the question -- What are several different factors that can affect the temperature of a room or a door? -- Sophie discussed combinations of insulation and materials, room dimensions, windows, and types of lighting. She then hypothesized which of three rooms and which of four doors would have the coldest temperatures over a three month period of observations. She discovered one hypothesis was confirmed and the second was not, explaining the different results. She observed how such knowledge was useful in mitigating the impacts of climate change and concluded with recommendations for how to improve future data collection. Sophie did a lot more thinking about her final assessment than this writer recalls having done for final exams! Nice job, Sophie.

### **Implementing the Green Schools Program – Elementary, Dr. Watson**

Two PowerPoint presentations given by GS teams at last February's mid-year meetings give very good overviews of how teams have implemented their Green Schools activities in their schools. Following is the presentation from **Southern Boulevard School** in Chatham. Since the **Mountain Park School** (Berkeley Heights) presentation was unusually self-explanatory as well as visually engaging, we've **posted it separately at [www.globallearningnj.org/Mt\\_Park\\_School\\_Berkley\\_Hts.pdf](http://www.globallearningnj.org/Mt_Park_School_Berkley_Hts.pdf)**.

### ***Green Schools Program for Southern Boulevard School, Chatham***

#### ***School Wide Activities***

- Completed walk through energy audit checklist, created suggestion list
- "Green Tip" section in our weekly SBS Express newsletter (suggests energy saving tips)
- Incorporate "Going Green" into library puppet show

- Earth Day activities (Mascot-Kermit, “It’s really easy to be green”\*)
- Recycling program/ Collecting food waste for composting
- “Walk to School Day” (no idling...)

### **Classroom Activities**

- Energy audit in each classroom (**checklist** created from audit – see page 7 below)
- Individual lessons (teacher picked)
- Green Team leaders (assess/check classrooms at the end of each day, rotate or have as a class job, use checklist)

### **Energy Conservation at SBS**

- Lighting
  - Cafeteria: two sets on for morning and after school enrichment; one set off until lunch
  - Basement Hall: one set turned on, one set off all day
  - Library Hallway: one bank of lights on, one left off
  - Library/Tech Room: alarm off in morning, one row of lights on in library to let staff know alarm is off
  - Gym: one set of lights on in the morning, three others left off until school day starts
  - Changed T12 to T8 fluorescents (More efficient)
  - 75 watt incandescent lights switched to 20 watt energy smart light bulbs
- Gym heat blowers on a 6 hour timer
- All bathroom lights and SmartBoards are checked – look for the off position every night by custodial staff
- Freezer in basement unplugged, only used 1-2 times per year

***\*It’s really easy to be green.***

*It’s really easy to be green.  
By only using what you need.  
It will save this earth indeed.  
It’s really easy to be green.  
Just turn the light off will you please.  
Use only water that you need.  
Recycle paper, save some trees.  
Go green like Kermit join with me.  
It’s really easy to be green.  
We can do it you and me.  
Southern Boulevard School*

## **Highlights from End-of-Year Green Schools Celebrations**

### **William Woodruff School, Berkeley Heights**

We had our big celebration during Earth/Arbor Day and also had Green Assembly on St. Patrick’s Day to talk about water conservation. We did many things for Earth/Arbor Day ....Earth/Arbor Day Poster Contest, Earth Friendly Inventions, Earth/Arbor Day poetry, special assembly, presentations by the Green Team, songs about the earth, dedicated a tree, 4-H tree steward program, planted flowers around the building, Lights Out on 4/29, planted veggies and flowers in memorial garden.

Thanks

Pattty Gasparini, Principal

## Woodbine Elementary School

We completed our year end activities. Our school focus this year was about energy. Grades 3-5 received a mini-grant from Atlantic City Electric. They visited the ACMUA and saw the wind farm, solar panels and gas harvesting from the landfill. Then we completed a two part community night. Grades 3-5 had displays in the cafeteria where parents could visit various models of alternative energy and a **power house**\*. Middle school students hosted a community night where they showcased their tech skills regarding energy. G&T students built an **energy wall** with topics that included: Climate change, energy it takes to make a pencil, how to use landscaping to conserve energy, energy tips around the house, and energy use by the school.



Video reports are posted at [www.schooltube.com/videosearch?q=woodbine+elemen](http://www.schooltube.com/videosearch?q=woodbine+elemen) From the Energy Wall

### \*Power House

- *Solar power: The solar panels in the roof of the power house capture the sun's energy and convert it into electricity. These panels are similar to the solar panels that were recently installed at our school.*
- *Passive solar: The black water tank on the roof of the house absorbs the sun's energy and heats water stored in the tank. The greenhouse absorbs the sun's energy and can heat the interior of the house. In addition you can grow plants, fruit and vegetables in the greenhouse.*
- *Solar furnace: uses the sun's energy and curved mirrors to generate energy that converts water into steam that spins turbines which generate electricity. Our model demonstrates how curved pieces of foil can significantly increase temperatures by focusing the sun's rays on an object.*
- *Wind power: the fan blades (turbine) are moved by the wind. This movement turns a shaft attached to a magnet. The magnet rotates surrounded by a coil of wire, generating electricity that is carried away from the wind turbine by wires. In our demonstration, we power the wind turbine using solar panels.*
- *Hydrogen power: Hydrogen does not exist as an element in nature. It is always part of a compound. In order to generate hydrogen for fuel cells(to power cars), you can use a process known as electrolysis. You pass electricity through water to separate the hydrogen from the oxygen and capture the hydrogen. In our power house, the electricity for this process comes from the solar panels.*
- *The power house shows ways that we can save money on energy generation while reducing carbon emissions(carbon footprint). Cutting carbon emissions is important in reducing the effects of global warming.*

Woodbine Elementary School

Anthony DeVico, Teacher

## Mountain Park School, Berkeley Heights

We actually just completed our celebration by kicking off our first annual "Clean Up Mountain Park Day" at our school, where the students cleaned every nook and crannie around the grounds. We are also continuing our ongoing fundraisers in order to raise money to plant ground cover around the back of our building. This area has been bare for quite some time and needs some love and care, which will include bird feeders and plants to prevent erosion. That fundraising is coming along slowly but surely. Our most recent fundraiser included making bracelets out of recycled materials (soda tabs and pringles containers).

Also, I asked all the 5th grades to enter the **Energy Conservation Contest** that was offered to many counties in NJ, where they were to write poems about energy. Two of my students came in first and second place\* and will be receiving certificates and checks shortly. I will be receiving the same check amount as the students, so I have donated this back to the Green Schools Committee to aid in covering costs for the planting, and bird feeders.

So all in all it has been a very busy time around here, and celebrations and environmental awareness have become part of the Mountain Park attitude.

I thank you for all you've done to raise conservation awareness, as I believe this has been a life lesson that the students, parents, and staff will carry with them for years to come.

Carla Pastore, Teacher

### **MaryKay Mc Millan School, Berkeley Heights**

MaryKay Mc Millan School already celebrated their end of the year celebration in April . Our entire school gathered together at our monthly community celebration and celebrated Earth Day. We spoke about the ways we are saving energy in school and at home. We used Offalot in our presentation and the children loved it. A kindergarten teacher (Mrs. Poage) made signs with her class and asked parents to turn off their cars when picking up or dropping off their children. This concept was well received and the parents are now turning off their cars while waiting in line. Thank you for being a great resource!

Karen Twill, Teacher

#### ***Our Solar World \****

*(End Rhyme Poem)*

*by Brendan*

*Watch the blazing Sun rise and fall,  
Creating light, heat and power for all.  
Without solar energy from the Sun  
Our shining world would be done.  
This energy star is free of course  
Making life on earth a brilliant Force!*

#### ***Pure Beauty\****

*By: Jimmy Pitingolo*

*Earth, a wonderful place,  
putting smiles on every face,  
giving beauty everyday,  
makes me want to go play.  
Saving electricity is grand,  
keeps fossil fuels in the land.  
Turn off lights, computers too,  
conserving is not hard to do!*

### **Want a Free Computer & Electronic Recycling Program?**

Our thanks go to Jay Eitner, Assistant Principal at Long Valley Middle School, for bringing to our attention the services of Advanced Recovery, Inc. Their ad states:

No trucking or labor cost. No hidden fees. We accept all equipment. Even equipment not covered under the new Computer and Recycling Bill. We also offer Premium Services [on a paid basis and]...will purchase your metals. E-mail or call for our current pricing: Robert Travers, Sales Manager, at 845-858-8809 or [travers@advancedrecovery.com](mailto:travers@advancedrecovery.com)

### **Going Green and Loving It\$\$\$\$!**

This catchy title is a regular feature in **Ocean Waves**, the newsletter of **Ocean Academy, Cape May County Schools for Special Services**. Their March issue featured another grant from the NJ Smart Start Buildings for T-5 lamps in both pool areas and a reminder to “keep lights off when out of the classroom for more than 10 minutes and computers on sleep mode when not in use for an extended period of time.” The June issue commended school members for better use of the “lights off” policy. “Staff and students report that they are Going Green at home by becoming more aware of turning off electrical gadgets when not in use.” That issue concludes by commending their principal for being a part of “lights off” – always great to see that administrative support!

# Classroom Walkthrough Energy Audit Checklist

Southern Boulevard School, Chatham

Room # \_\_\_\_\_

LIGHTING	YES	NO	COMMENTS/SUGGESTIONS
Lights off when room is unoccupied			
Day lighting used instead of overhead lights			
Adequate light switch controls to turn off banks of lights as needed			
Fixtures are clean to allow light through			
Light levels are appropriate			

COMPUTERS, PRINTERS	YES	NO	COMMENTS/SUGGESTIONS
Computers turned off when not in use (end of the day)			
Monitors turned off when not in use			
Power save settings activated on computers			
Power strips used for easy turn-off			
Computers sleep or hibernate vs. using screen savers			

HEATING, VENTILATION, AIR CONDITIONING (HVAC)	YES	NO	COMMENTS/SUGGESTIONS
Ventilation units clear of obstruction (books/papers)			
Windows and doors are closed when heating or cooling equipment is operating			
Thermostat set at a constant temperature			
No air leaks around doors or windows			