



SERT Flash

School Energy and Recycling Team



Revamping by De-lamping

B-CC High School Reduces Energy and Carbon Footprint

Are you looking for ways to improve your energy savings?

Alain Perron, building services manager, at B-CC High School, sought assistance from SERT to identify energy savings opportunities.

SERT recommended a best management practice called “de-lamping.” In an effort to conserve energy and provide appropriate lighting levels a light meter is used to measure foot candles, a unit of measure in lighting. When lighting levels in the classrooms exceed the recommended amount there may be an opportunity to remove one light tube and reduce energy consumption while maintain appropriate lighting levels. Before removing light tubes please contact SERT to measure lighting levels. You should not take lamps out of new fixtures under warranty. De-lamping is possible anywhere there is a fluorescent light fixture above an area that is not being used for active reading and writing or in areas where there is more light than needed. This could be: along windows, around doors, corners, over computers, televisions, hallways, and equipment.



Having seen the tremendous savings a building can accrue by de-lamping his former school, Takoma Park MS, Mr. Perron was eager to coordinate one of the most comprehensive de-lamping efforts in MCPS. Mr. Perron consulted with his SERT Facilitator, DJ Connelly, and they began to take light measurements around the building. Once Mr. Connelly confirmed that it was possible to reduce lighting levels without compromising lighting needs and requirements, building service staff member, Mr. Duane Chase, volunteered to de-lamp the school. Mr. Chase approached this large project with a positive attitude, understanding the impact it would have on the environment, the school, and all of MCPS. With efforts like these, MCPS is able to save thousands of dollars by reducing our electricity bills, our carbon footprint, and our consumption.

Did you know that approximately one-third (1/3) of a building’s electricity use comes from lighting? For a large school such as B-CC High School, de-lamping could save about \$8,000-10,000 per school year. Simple strategies and outstanding efforts like these help the county in more ways than one. Not only can we reuse the energy savings for other important academic programs, the conservation of energy is helping save natural resources, reducing our carbon footprint, and making our world a cleaner place to live! SERT would like to thank Mr. Perron for coordinating this project, the administrators at B-CC High School for green-lighting this project, and to Mr. Chase for his dedication in completing this project. Thank you B-CC Barons!



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Unique Situations – Unique Opportunities – Unique Solutions Edison High School Goes Above and Beyond



“Construction Materials Recycling Center” Made From 100% Recyclable Items

Looking for fun and creative ways to promote recycling at your school? Look no further than what the students and staff are doing at Thomas Edison High School of Technology. SERT Team Leader and Network Operations teacher, Jesse McGee, has installed an atmosphere of teamwork, accountability, and environmental stewardship throughout the school.

Offering unique courses from construction to cosmetology, Edison classrooms are filled with materials not normally found in a typical MCPS school. Although most of these materials can't be recycled in the paper or commingled bins, the staff at Edison has found other ways to recycle or reuse them.

Participating in a program-wide recycling campaign, the Carpentry class built a Construction Materials Recycling Center (pictured above). All other construction programs are responsible for maintaining the center and placing materials in the correct area for removal by SERT to the Montgomery County Recycling Center. Also, the Auto Tech program is recycling all tires, oil, car batteries, and all other parts are either reused or sent back to the manufacturer to be refurbished. Café Edison recycles all of their cooking oil, while the folks in the Network Operations program are eCycling (recycling electronics) and refurbishing used computers.

The SERT program staff would like to extend a sincere “thank you” to all staff and students at Thomas Edison High School who are implementing a culture of conservation and recycling responsibly and creatively.

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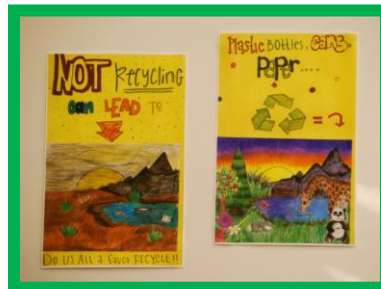


John F. Kennedy High School Students Build Green School Club



John F. Kennedy High School Students (L-R)
Alfena Johnson, Brian Chambers, Amanda Dotson, Mary Guenther, and Jainaba Fye

Raising awareness with regard to the environment is the main objective for John F. Kennedy High School's (JFKHS) **Green Schools Club**. The club promoted and conducted a school wide poster contest to get the students excited and involved with their new mission. The **Green Schools Club** thought that by having student-made posters hanging throughout the school it would help increase their recycling rates and create awareness.



John F. Kennedy High School winning posters

Congratulations go to Alfena Johnson for winning the poster contest! Alfena created two beautiful posters encouraging others to recycle. The winning poster has become the official **Green Schools Club** poster this year.

SERT staff were invited out to participate in an awards ceremony where Alfena received a certificate as well as a small monetary gift.

Now that a winning poster has been selected and the prize given, the hope is that more students will be inspired to join the JFKHS **Green School Club** and help keep JFKHS **Green**.

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Northwest High School is always looking for new ways to save energy!



The Administrative Team at Northwest High School helps make the difference
(L-R) Mr. Tim Britton, Mr. James D'Andrea, Mr. Matt Niper, and Mr. John Robertson

The administration at Northwest High School actively leads and supports comprehensive energy conservation efforts throughout the school, starting with Ms. E. Lancellotti (Lance) Dempsey, principal. Northwest High School leads the way in pro-active energy conservation strategies that SERT recommends to all schools—turn it off when not in use.

Mr. Michael W. Bednarcik, physical education resource teacher at Northwest High School, turns off the lights in the main gym, as well as auxiliary gyms, when the students are using the outside fields or when there are no scheduled classes. Mr. Bednarcik pointed out that it only requires a few minutes for the lights to come up to full brightness; he merely turns on the lights five minutes before a class begins. This effort helps reduce the waste that keeps Northwest High School in the running for SERT awards.



Mr. Mike Bednarcik
PE Resource Teacher

The average high school gym costs between \$1,800 and \$3,000 to power the standard gym lighting. Thanks to Mr. Bednarcik and the entire team at Northwest High School we are reducing energy use, greenhouse gas emissions, and our operating costs.

Individual efforts make a difference—it can be you!

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Keepin' it Green at Paint Branch High School



Paint Branch High School is our newest high school awaiting Leadership in Energy and Environmental Design (LEED®) certification. LEED is a rating system for buildings that measures energy and environmental performance.

When a LEED-certified building is delivered, the occupants engage in energy and environmentally-aware behavior that enhances the efficiency of the building.

One of the many green features of this building is outdoors—the parking lot features designated preferred parking spaces for carpoolers and hybrid vehicle drivers demonstrating Montgomery County Public Schools' commitment to keeping our environment clean and reducing carbon emissions. By incentivizing these parking spaces, we are promoting the use of alternative fuel vehicles and carpooling while reducing pollution and our carbon footprint. This is a feature everyone can strive to use. These special benefits make a difference when engaging occupants into environmentally-aware behavior.

Another exciting feature is the green rooftop. During the summer months, the temperature of a conventional flat rooftop can soar up to 140°F – hot enough to fry an egg. By contrast, a green roof is much cooler and reduces the demand for air conditioning. Green rooftops are also environmentally beneficial as they are a pervious surface and absorb rainwater that would otherwise become stormwater runoff. The green roof is accessible by students and staff through an Art classroom, and is used as an outdoor classroom extension, providing an opportunity to experience the benefits of a green rooftop.

The school also is equipped with a geexchange heating and cooling system. Geexchange systems heat and cool the school by pumping water through a closed loop system into the earth. Basically, this system uses the constant temperature of the earth as a heat source in the winter and a heat sink during the summer – versus outside air. Each classroom has the ability to adjust their classroom temperatures with individual controls providing a variance of 3-4 degrees.

Some other green features include: low emissivity treated windows, motion/occupancy-sensory lighting, recycled content playground equipment, rain gardens, white reflective (albedo) rooftop, low-flow water fixtures, and light-emitting diode (LED) exterior lighting.

To keep the building green and efficient, we rely on our students and staff to be environmental stewards. The exceptional Green Team at Paint Branch High School conducts various activities around the school to promote energy conservation and increase recycling awareness. The team collects recyclables twice every week. The students participate in making energy and recycling posters. The energy "Police" conduct routine inspections to ensure that computers and lights are turned off when class is not in session. The team also runs 30-second Public Service Announcements in the morning to further reinforce the importance of conservation.

In support of the LEED application, the Green Team is busy engaging the building users, students, staff, and community members into environmentally-aware behavior. Way to go Green Team!



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Springbrook HS Science Teacher, Ms. Diane Niedzialkowski is installing floor lamps in computer labs at Springbrook HS

The Springbrook High School Green Team and Environmental Science class students, under the guidance of science teacher Ms. Diane Niedzialkowski, are working to make a difference to help preserve our environment. The students are in the process of adding energy-efficient floor lamps, supplied by the SERT office, to all computer labs at Springbrook HS. The expectation is that when students are working in the labs they will use these 23 Watt lamps vs. overhead lighting. The floor lamps come with Compact Fluorescent Lamps (CFL)! Using the floor lamps to provide lighting for the computer labs, instead of using the overhead fluorescent lighting, will reduce the electricity used by ~ 85% -- imagine the benefits.

This strategy and use of technology saves a tremendous amount of energy and reduces the schools overall carbon footprint. Other benefits include reducing eye strain sometimes resulting from the glare from the overhead lights. This is a great example of *sustainability in action*: environmental, economical, and social benefits are all covered by this strategy.

WOW moment: When installing the floor lamps one student working at a computer station was overheard saying “Wow, this is really cool. I love these new lights”GO BLUE DEVILS!

If you and your SERT/Green Team are interested in installing floor lamps in your school computer labs, please contact the SERT office for more information at 240-314-1090 or e-mail SERT@mcpsmd.org .

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Cafeteria Tray Reduction Efforts

Did you know that select high schools are participating in a pilot program to reduce the number of trays currently being used in our cafeterias?



Select high schools are participating in a “reduce your use” pilot and are making significant progress in reducing the number of cafeteria trays used on a daily basis. Some schools have totally eliminated the use of these trays during breakfast or on certain days while others are working on changing behaviors by making it less convenient to access trays during lunch and breakfast.

Ms. Laura Reese, cafeteria manager at Bethesda Chevy-Chase High School (HS) is currently working on a reduction plan called “No Tray Tuesday” where on selected Tuesdays trays are not used at all in the cafeteria. To promote this program the school broadcasts a video made by students on tray reduction to remind students that food will not be served on trays that particular day. All other times, the trays are placed away from the main serving area. A student standing in the serving area will have to make a conscious effort in order to obtain a tray.

Wootton HS is proud of their reduction efforts. Cafeteria Manager, Ms. Sharon Forbes, places a few trays out at each time and they are placed away from the main serving area. According to Ms. Forbes, they have seen significant reduction in the use of these trays at Wootton HS compared to the same time last year.

Blair HS and Seneca Valley HS have stopped serving breakfast on trays. During lunch, the trays are placed behind the serving counter and cafeteria workers will hand out a tray if asked.

Clarksburg HS and James H. Blake HS have reduced their use by eliminating the use of trays when serving breakfast.

Each of us can do our part to reduce our use in school, at home, and in the cafeteria! Be part of the solution and use only what you need.

Is your school currently participating in a “reduce your use” effort? Please contact SERT office at 240-314-1090 or e-mail us at recycling@mcpsmd.org to share your strategies so we can share your success with all of MCPS.

Together, we can make a difference!

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