

THE PROJECT GREEN
CHALLENGE

SPACE DAY 22

Greener

BENJAMIN WONG
ROHAN REDDY
BENJAMIN YAO
ROBERT YU



TEAM NAME: ECOHAWKS
USERNAME: ECOHAWKS
EMAIL: ECOHAWKS2017@GMAIL.COM
SCHOOL: JERICHO HIGH SCHOOL

School Research

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HOW TO FIGURE OUT WHERE YOUR SCHOOL'S ELECTRICITY COMES FROM

By Mike Ewall, Energy Justice Network
www.energyjustice.net/campus/research.html

Is your school is public or private? Have electric utilities in your state been deregulated? The answers to these questions have a lot to do with whether you have a right to know the information you're seeking.

Your right to get information

If the school is public, you have a right to receive copies of information you're seeking (energy contracts or electric bills). If the school is private, you have no right to obtain this information.

Nearly all public schools are subject to *state* Open Records laws (sometimes called the Sunshine Act). These laws vary from state-to-state. There are very few *federal* public schools (these are all military academies). These federal schools will be subject to the national Freedom of Information Act (FOIA) rather than state laws.

We used several online sources to figure out how to investigate our school's facilities' environmental impact.

"Clean with products that have properties that minimize potential impact on human health in public buildings"

Green Clean Schools

Beginning eight years ago, Jericho Schools implemented green cleaning practices in the elementary schools with much success. In 2006, Governor Pataki issued Executive Order #134 directing all State agencies to clean with products that have properties that minimize potential impact on human health in public buildings. Jericho Schools, along with select other school districts on Long Island, has been at the forefront of this effort both inside and outside of all its buildings.

Geese Peace

We have implemented a program that is being used by the Nassau County Parks Dept. for the control of the Canadian Geese that frequent Jericho Schools property. During certain times of the year our properties will be patrolled at various times of the day by Border Collies with their handlers. **One of the most important aspects of successful geese control is to not feed the geese.** Your cooperation will be greatly appreciated.

Video Surveillance Cameras

The Jericho School District recognizes its responsibility to insure the safety, security and welfare of its students, staff and and visitors in school buildings and on school grounds. Our school district employs video surveillance systems as part of our comprehensive safety plan.

Lawn and Turf Applications

Jericho Schools use only non toxic methods for weed control and lawn fertilization.

From time to time an application of herbicide may be needed to be applied to the baseball field clay areas. In this event a good faith effort will be made to notify anyone who wishes to be on a 48-hour pre notification email list.

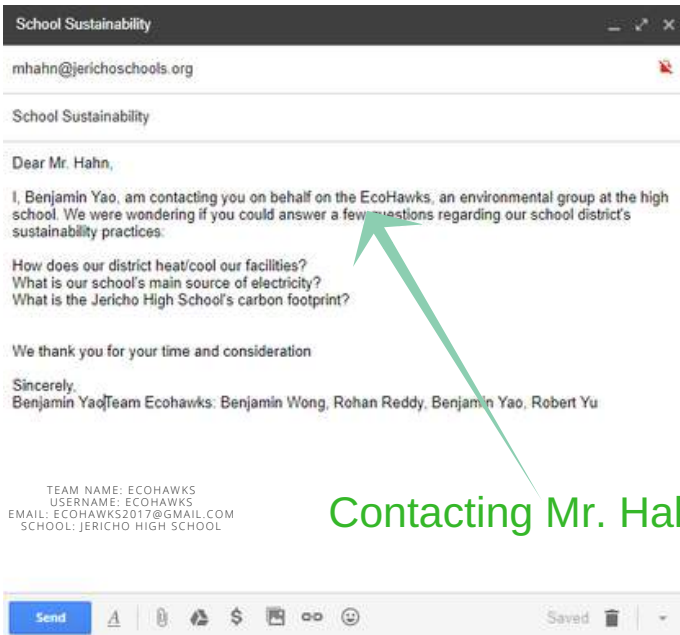
"Jericho Schools use only non toxic methods for weed control and lawn fertilization."

"application of herbicide may be needed to be applied"

As we navigated out school district's website, we had an *extremely hard* time finding information regarding energy usage, sustainability, or our footprint. After only finding information regarding herbicide usage and cleaning product usage, we decided to draft an email to our school's facility's director...

Contacting School Facilities Director

+ Peer
Response!



After emailing our school facilities director, we also asked our local community members and students if they had any answers to the questions. We learned that our school has implemented *motion-sensor lighting*, so that lights are not kept on when people are not in classrooms. We also realized, with the help of our peers, that our school has implemented *water bottle refilling stations* to encourage re-using water bottles. Regarding energy, some students stated that while our school is taking steps towards more renewable sources of energy, our school's energy sources are mostly found in non-renewable sources. Another student stated that she noticed our school often uses our air conditioning and heating system *excessively*. Nevertheless, it is nice to know that our school is taking *baby steps* towards *sustainability and clean energy usage* and that we are participating in this gradual movement.

Sustainability Research

12 of the Most Healthy and Sustainable College Cafeterias

Big-name schools are overhauling their food services by buying local and organic ingredients, catering to vegetarians, composting waste, saving energy and much more.

We gathered information from .gov and .edu websites to find out what *other schools* have done to become sustainable (particularly cafeterias)



Campus Cafeteria Serves As Sustainable Model for Energy-Efficient Food Service

Unlike the less-than-appealing, traditional cafeteria you may have eaten at in school, the state-of-the-art Café at the U.S. Department of Energy's National Renewable Energy Laboratory (NREL) campus, which opened in 2012, is breaking stereotypes from aesthetics to energy-efficient design.

In addition to meeting staff needs as the primary dining location to grab snacks and eat lunches on the Golden, Colorado, campus, the 12,140-square-foot building is a model for how a high-performing food service facility seamlessly integrates energy efficiency technologies, sustainable operations, and solid business practices.



NREL Café boasts energy efficiency features such as walk-in coolers and freezers that are equipped with door alarms, and LED lights connected to occupancy sensors that turn on and off automatically.

Photo by Dennis Schroeder, NREL 2/10/17

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Minimizing Waste and Water

- In support of NREL's lab-wide near-zero waste initiative, the Café encourages recycling and composting.
- The Café's vendor implements its own food waste reduction program that tracks, measures, and categorizes types of food waste daily at each station. All results are submitted to NREL's sustainability group on a quarterly basis.

We also researched about how to make classrooms efficient.

With dozens to hundreds of classrooms in our district, a small change in every classroom can have magnifying effects.

Energy Efficiency in the Classroom

15. **Let in the Breeze** Turn off heating or cooling units and open the windows when the weather is nice. Enjoy the fresh air!
16. **Power Down** Turn computers off instead of putting them in sleep mode when leaving school, you can reduce energy use by nearly **40 percent!**
17. **Don't Block the Airflow** Books and other bulky items absorb warm and cool air coming from heating and cooling units. Be sure to keep vent areas clutter free to maximize efficiency.
18. **Stop Leaks** Heat can escape through windows. Have students determine areas of energy loss by creating "**draftmeters**" made from thin plastic wrap and pencils. Create a lesson where students use draftmeters to identify leaks. Report major leaks to your custodial staff for repair.
19. **Create "Green Teams"** Student jobs make cleaning up the classroom easier. Put students in "green teams" and use the last 5 minutes of class to power down computers, close the blinds, check faucets, and sort recycling.
20. **Conduct and Energy Audit** The National Wildlife Federation provides resources online to guide you and your students in an **energy use assessment** of your school. After the assessment is complete, students put their knowledge to work by creating and activating an Energy Action Plan meant to provide realistic solutions to your school's specific needs.



Rethink: Area #1



CAFETERIAS

Our school's cafeteria has a lot of room for improvement regarding sustainability. Our food is not grown locally, and seems to be frozen. In addition our food waste is disposed through a regular trash system, where the otherwise compostable waste is suffocating in the landfill, releasing methane gas. A great alternative to this would be growing as much food as possible at our schools gardening spaces. As our district's middle school has a gardening club and high school has an environmental club, our school is definitely not lacking in the power of people. It's very possible for our school to start growing food on campus or even obtain food from local sources.



The Jericho High School Cafeteria

Although our school has recycling bins, composting bins are also of great needs. In the cafeteria, the majority of waste is compostable food waste and lunch trays: all of the cafeteria trash can be easily separated between wrappers and compostable organics. There is even an anaerobic digester just miles away from our school, where organic waste can be broken down into natural fertilizers and energy. This energy could even return to our school, creating a full cycle!

Rethink: Area #2

CLASSROOMS

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After researching for a few hours, we came up with key components to a sustainable classroom. According to energy.gov, "energy for lighting accounts for about 10% of your electric bill". Although our school has motion sensor lighting systems, our school still needs more efficient CFL or LED lights. Lighting dimmers can also be a way to save energy. Also, teachers and students should be informed that a great source of lighting is right outside the classroom windows: the sun. Nearly every classroom in our school has a full wall of windows that can be used to bring in an enormous amount of light with ZERO carbon footprint! In addition, our school heating/cooling systems should be modified. These systems are often used excessively and not controlled. Moreover, the temperature of an individual classroom varies through out the school, depending on a variety of factors. Instead of having on heating/cooling control unit, teachers should be able to appropriately set room temperatures.

Finally, our school classrooms can be powered by alternative sources of energy instead of relatively more environmentally-dangerous sources. In the aforementioned paragraph, our school has a bunch of alternative sources of energy to choose from, such as the anaerobic digester, which would ideally be powered by our school's organic waste!

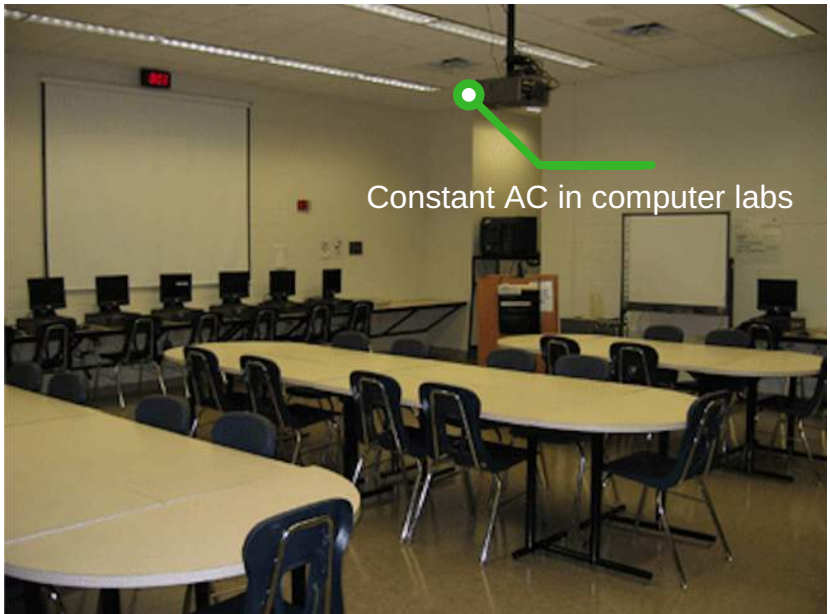


A Math Classroom in Jericho H.S.

Rethink: Area #3

COMPUTER LABS

Our school has several computer labs that are, justifiably, over cooled with air condition on a year-long basis. In addition, as many know, technology consumes a ton of energy. Our school's computer's are left on all day, regardless if people are using them or not. These two problems can be solved by more efficient cooling systems: ex: water cooling computer systems and automatic computer shut down after a student is done using the computer. This would cut down the electricity usage of computer labs by at least 50%



Constant AC in computer labs

The High School Library Computer Lab