



The Kids Are Alright

Sustainable Practices in Schools

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Grants Program



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* 10th Anniversary Sponsor

Sustainable Jersey for Schools Supporters & Sponsors

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A Commitment to Sustainability

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New Jersey School Boards Association

Sustainable Practices in Schools
June 14, 2019



New Jersey School Boards Association

Sustainability: NJSBA's Goal

Advance student achievement by...

- ... *Enabling New Jersey schools to provide safe and healthy learning environments*
- ... *Enabling New Jersey school districts to lower operating costs and direct resources to the classroom*



New Jersey School Boards Association

Energy Savings

NJSBA's Alliance for Competitive Energy Services

- **\$225 Million+ in savings for local school districts over past decade**
- **Reduced-cost electricity and natural gas**



ACESplus

Consulting services on solar energy, building efficiency, and sustainable energy



www.aces-nj.com

NJSBA Sustainability Services

Aligned with Sustainable Jersey

- Professional development and consultation
- Sustainable Practices Workshops
- Policy Services
 - ‘Green’ purchasing
 - Conservation
 - Chemical management
 - Wellness, nutrition

Annually serve 100+ school districts



Staff dedicated to sustainable practices and STEAM education – unique among state school boards associations

NJSBA: A Commitment to Sustainability

U.S. Green Ribbon Schools

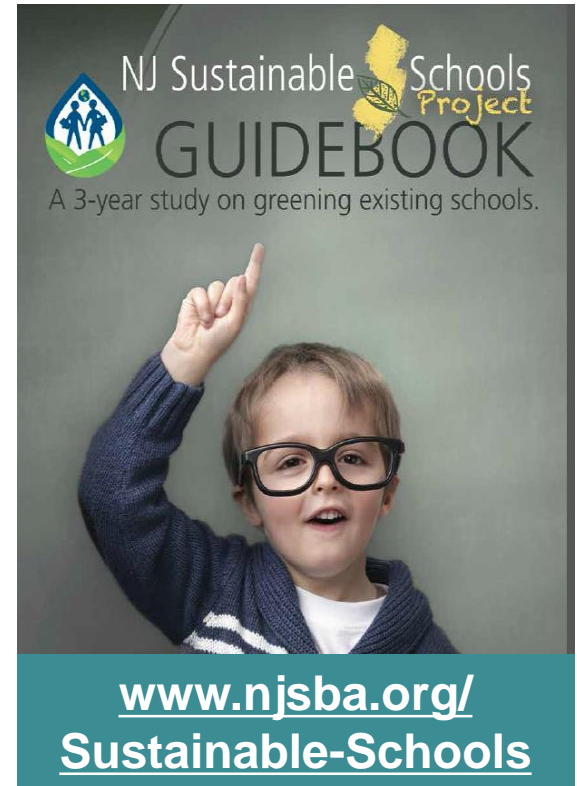
... *Long-term participant in USDOE's New Jersey selection committee*

N.J. Sustainable Schools Project

... *Greening older schools pays dividends to students*

Green Program of Study

... *Pilot program to develop high school curriculum on green careers*
... *Recognized by U.S. Green Building Council (N.J. Chapter)*



New Jersey School Boards Association

NJSBA iSTEAM Services

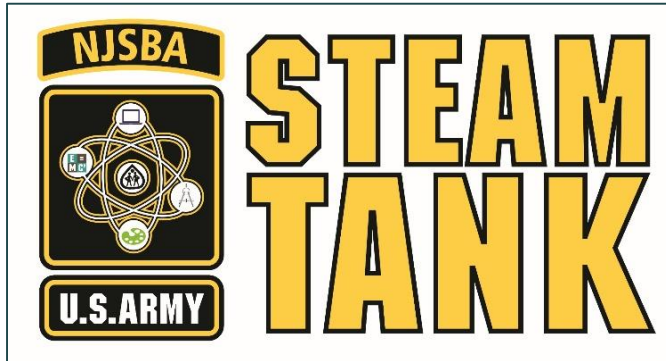
Transitioning from STEM, taught in silos, to an integrative delivery of STEAM education

- Training and consultation
 - *'Are You iSTEAM Ready?'* programs
 - Policy and strategy to integrate all elements of STEAM education throughout curriculum
 - *The 'A' in STEAM = The ARTS*, to engage students through design, creativity and innovation
-

2,340 board members participated last year



NJSBA-U.S. Army: A Unique Partnership for STEAM Education



2019

Fourth Annual Challenge

- **560 Teams Entered**
- **2,000 Students Engaged**



2018: Students from Moonachie's Craig School demonstrate the 'disinfecting towel heater'

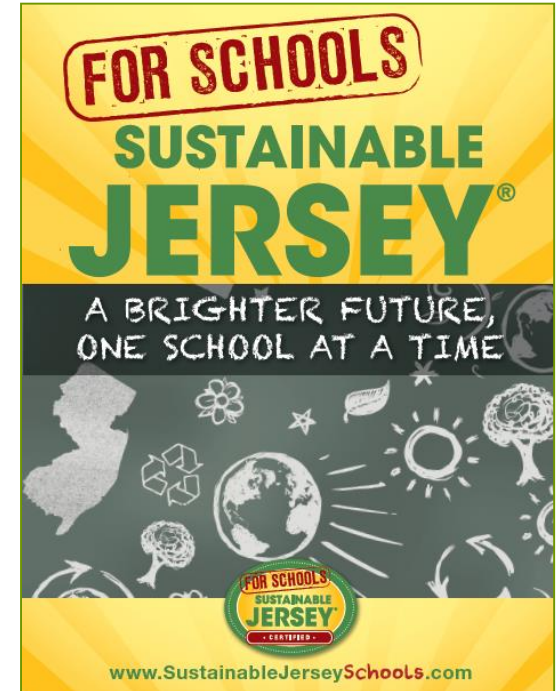


The 2018 STEAM Tank Challenge:

Creativity, Innovation, Sustainability

NJSBA: Our Commitment to SJS

- **Advances Public Education**
- **\$1.8 Million in Grants**
- **3,900+ Actions for the Environment, Students and Education Programs**
- **Resource for NJSBA sustainability training and services**



New Jersey School Boards Association

Sean Spiller
Vice President
NJEA



NEW JERSEY
EDUCATION
ASSOCIATION



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Supporting Healthy & Sustainable Schools



- Healthy Schools Now Coalition
 - Safe & Modernized School Buildings
 - Danger-free learning environments
 - Healthy air
 - Safe Temperatures

- Free walkthrough with industrial

hygienist to identify & address IAQ, mold, and building issues.



If families and school staff work together, mold-free schools are more likely and all will benefit. See the *Unite for Healthy Schools* factsheet for how to do this.

Molds are forms of fungi found both indoors and outdoors and people are exposed to them daily in the air we breathe. While molds play an important role in nature, by breaking down organic matter such as toppled trees, fallen leaves and dead animals, they can also be destructive to the structure of buildings and hazardous to health.

Sometimes molds grow excessively inside schools because of leaks, floods, high humidity and



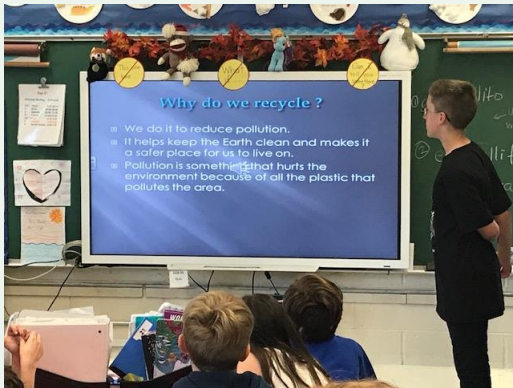
Supporting Healthy & Sustainable Schools



- Sustainable Jersey for Schools Program Underwriter since 2015
- \$1,000,000 to support a sustainable future for children and communities across the state
 - **\$720,000** in direct funding to schools through the Sustainable Jersey for Schools Grants Program

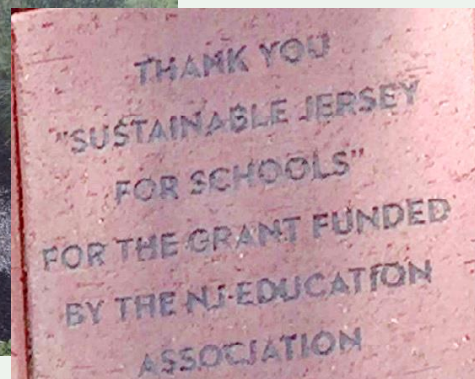
NJEA-Funded Grants

Grant	2015	2016	2017	2018	TOTAL
\$10,000	11	10	11	10	42
\$2,000	35	40	35	40	150
TOTAL	46	50	46	50	192



Nature Story Trails

Seth Boyden Elementary School in Essex County used their \$10,000 grant to create **nature story trails**. These trails act as a discovery and learning experience for students and are designed to teach children about the natural world and their role in protecting it. This project united the outdoor learning programs of the school's garden program and green team. Teachers also regularly integrate the trails into their curriculum.



Winter Garden Project

West Cape May Elementary School in Cape May County used their \$10,000 grant to create a **winter garden project**. This project extended the growing season and opportunities and outdoor classroom experiences for students by constructing a greenhouse. The project has enhanced the school curriculum, allowing students to learn about healthy eating, and established hands-on STEM curricula. It also united parents, teachers, and community members in the building of the greenhouse.



Green Spaces for Learning

Holland Township Elementary used their \$10,000 grant to provide **professional development** to teachers and other district staff to learn how best utilize the district's geodome greenhouse (also funded by NJEA). The greenhouse is now used by many; for example, the STEM teacher uses it for lessons, the special education teacher uses it as a sensory rich learning environment, and the PE teacher uses it to teach mindfulness. Supplies were purchased to supplement the greenhouse activities.



They bake cookies in their SOLAR OVEN!



Generously funded
by a grant from
Sustainable New Jersey
and NJEA

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The Importance of Water

Tabernacle Elementary School used their \$10,000 grant to fund a **water-focused campaign**. Eight water bottle refilling stations were installed and used to promote access to healthy water and the use of reusable bottles. The school's outdoor classroom was also expanded upon to include a native plant rain garden and a rain barrel that teaches students about water conservation. TES is a silver certified school.



Aquaponics in the Atrium

Middlesex City Vocational Technical Schools in Perth Amboy used their \$10,000 grant to create an **aquaponics garden in the atrium**. This project focused on water conservation, with additional materials, such as a rain cistern, being donated through the school's partnership with Rutgers Cooperative Extension Water Resources. Approximately 100 students were involved in the project, many of which are from the Green Team, Computer Assisted Design class, and Construction Technology class. Students now study the garden, where the waste produced by fish in the middle tank nourishes the plants that grow in the same water. The waste water is filtered naturally through the plant roots to be used again by the fish, making this project a great example of a symbiotic relationship that wastes no resources.



Digging in the Dirt

Schuyler-Colfax Middle School used their \$10,000 grant to **transform an overgrown and unused courtyard into an outdoor classroom complete with gardens for organic vegetables, herbs, and flowers.** The garden was designed, prepared, planned, and is currently maintained by students with special needs as part of their life skills class. These students use the new outdoor classroom to learn about the stages of growth and what it takes to maintain a garden. This project has created a sense of pride and achievement amongst the students who invested their time, effort, and ownership into the gardens.



**Before
and
After**



Eldridge Park Pedal Power

Eldridge Park Elementary School used their \$2,000 grant to purchase **two double-sided bike racks** that allowed more students to ride their bikes to school. At the Title 1 School, there were students who did not own bicycles and did not know how to ride them. In order to provide these students a way to learn, four bicycles and helmets were purchased and the physical education teacher worked with them to learn balance and eventually bike riding.



WHOLE Child Program

John Brainerd Elementary School used their \$2,000 grant to create its **WHOLE (Wellness and Health Obtained through our Learning Environment) Child Program**. The school purchased yoga balls, mats, and wobble chairs for exercise during the morning wellness program and indoor recess. Every morning, yoga is taught to twenty-four K-2 students. Overall the program has expanded the school's efforts to implement a growth mindset and 21st century learning environment throughout the school.



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Rethinking Recycling

Nixon Elementary School used their \$2,000 grant to develop a **robust recycling program** that includes an extensive educational component targeted to students, staff, and families. Students have taken ownership of the program, encouraging the entire school community to be good stewards. New, clearly-marked recycling bins have been provided and custodial staff have been trained to make sure that the recycling collected in classrooms, the cafeteria, and staff kitchen is properly disposed of. This ensures that the hard work of the students is not wasted. The school now serves as a model for all other schools within the district.



Certification Efforts Manager

Pequannock Township High School hired a **certification application and efforts manager** who was responsible for supporting the school's efforts to achieve certification. The manager developed relationships with community members to assist the school with its sustainability initiatives. The Pequannock Township High School received Bronze Certification in August 2018. A district-wide Green Fair, led by the manager, was held and showcased over 25 school and community vendors. In addition, the manager led a waste audit carried out by the green team. The partnership with the Morris County Municipal Utilities Authority (MCMUA) led to the school being awarded two Environmental Excellence Awards.



Miller School Clean Air Awareness Program for EHT Schools

Dr. Joy Miller School used their \$2,000 capacity building grant to form a **Clean Air Awareness Program** to be implemented in all the schools within Egg Harbor Township School District. Custodian and administrative offices handed out educational materials, and the art and science teachers ran an air quality education poster contest. PE teachers and nurses expanded indoor clean energy and asthma education. News releases promoted the success and provided air quality education to the rest of the community. The synergy between students and school employees has made for a very successful program. Since this program was launched, all 10 EHT schools are certified asthma friendly and fly air quality forecast flags.



Bringing Recycling into the Classroom

Charles L. Spragg Elementary School used their \$2,000 capacity building grant to give their first graders an opportunity to learn about **recycling** and why it is important through hands on experiences, including a tour of the Atlantic County Utilities Authority (ACUA) and lesson plans that involved recycled objects. The first graders not only were able to practice recycling in their school, but were able to see where their recyclables go after they place them in the bin and how they can be converted into different useful objects. Funds were also used to purchase Eco Mats for the school that are made of 100% recycled drink bottles and eco-friendly trash can liners.



Game Creation with Robots

Mount Hebron Middle School used their \$2,000 capacity building grant to purchase the materials needed to maintain the **Game Creation With Robots elective and Robotics Club**, which use robots as a STEM educational tool to teach programming, teamwork, and problem solving. Almost 200 students have been exposed to this 21st-century way of learning. The progress of this elective has been recognized by BirdBrain Technologies, the mother company of the Finch robot. 15 students participated in a videoconference with one of the primary programmers of the company, Dr. Bambi Brewer. During the conference, students were asked to discuss their game concept, problems that they had to solve, their programming, and other meaningful and applicable topics. In order to engage the rest of the school community, the middle school brings the robots to two of the elementary schools in the district to encourage an interest in robotics and technology.



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Three Bridges School

Readington Township
New Jersey

How did we get involved? Why did we think we were green?

- Multi-year process
- Started by board members, Green Committee
- Beginning stages spearheaded by policy and facilities manager
- Became a SEE school district then continued energy program on our own

Board Policies

- Indoor Air Quality Standards 7421
- School Integrated Pest Management Plan 7422
- Green and Healthy Schools Cleaning Policy 7423
- Energy Conservation 7460
- Idle-Free School Zone 7471
- Wellness Policy/Nutrient Standards 8505
- Sustainability Policy 7461

Used the Application as a Self-Assessment

- Found gaps and made plans
 - Identified areas we really didn't even consider
 - School Climate
 - Physical Health of students and staff
 - Community Outreach (fundraisers)
 - Community Involvement (community garden, parent volunteers, parent is a weatherman)
 - Transportation
 - Lunch menu – food offered

Collaboration

- Teachers
- Home and School Association
- Facilities
- Community

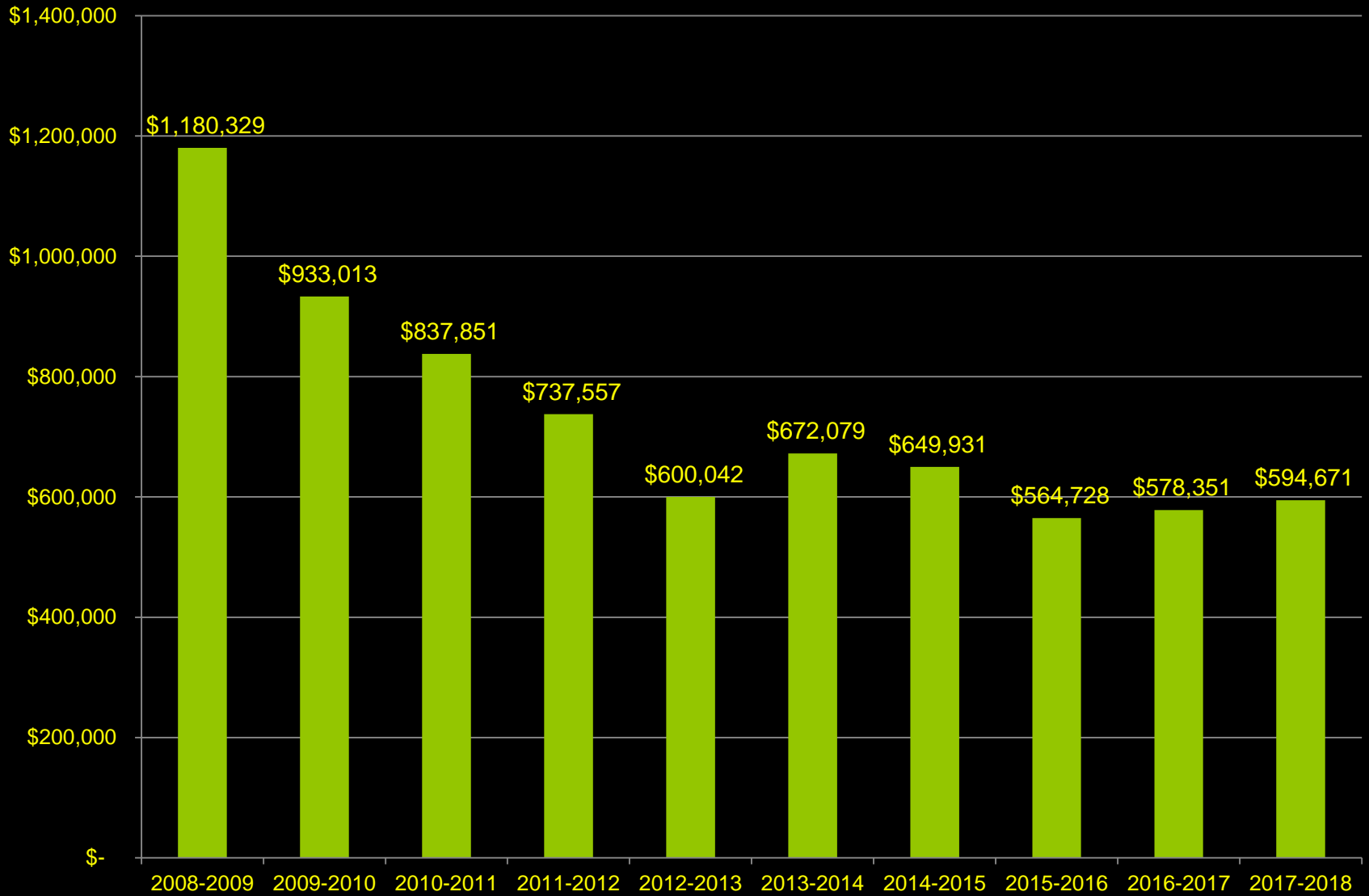
Energy Efficiency Program

- Reduce energy usage
 - Behavior and people
 - Operations and building
- Use renewable energy sources
 - Solar panels to generate electricity

Results

- Avoided cost of \$421,000 in five years of energy program
- No large capital investment
- Student and staff involvement and awareness
- Use as a springboard for recognition

District Energy Costs - Historical



TIPS for Getting Started

- Use application to self-assess with a team
 - Include people from other departments
 - Think about including a member of school safety team, buildings and grounds, nurse, math/science supervisors, teachers, physical education teacher, parents, transportation representative (separate in depth meetings help – then whole group)

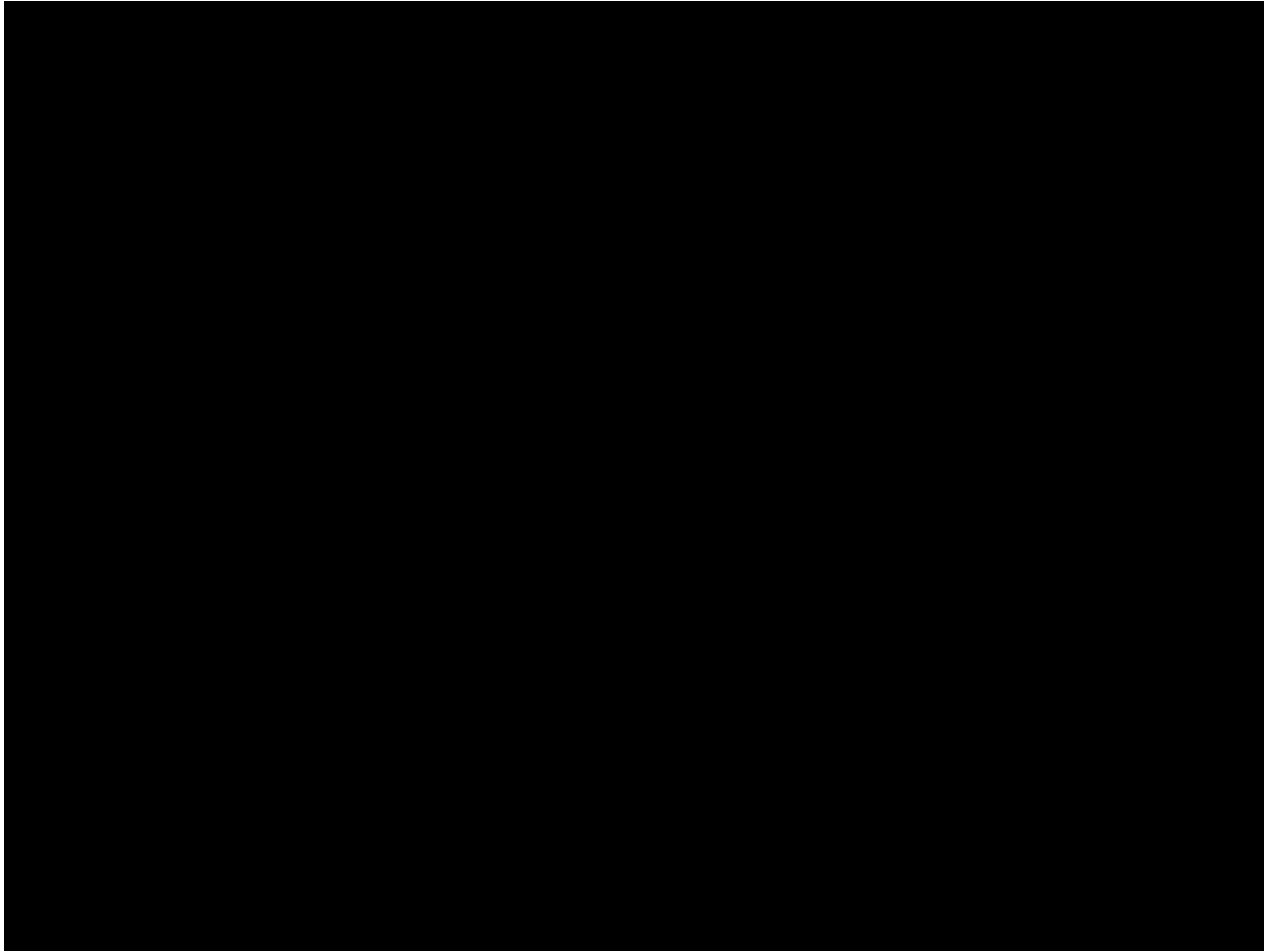
Think Child Centered

- Ownership for Children
 - Garden (water, weed, plant, harvest)
 - Recycle and monitor each other
 - Go Green Tiger Team
 - SEE Squad, Student Voice
 - Classroom recycling, composting
- Morning announcements
 - Green Tip of the Day
- Green Week
- Contests - Fundraisers

Recognition

- All schools certified through Sustainable Jersey for Schools program (2015, 2018)
- Two schools Energy Star certified
- Three Green Ribbon Schools
- Three River Friendly schools
- Two Eco-Schools Green Flag awards

Watch Us in Action



□ <https://vimeo.com/92727492>

Contact Information

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Sustainability at Long Branch Public Schools



SUSTAINABILITY

LONG BRANCH PUBLIC SCHOOLS

"WHERE CHILDREN MATTER MOST"



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