Student Empowerment Improves District Conservation Efforts

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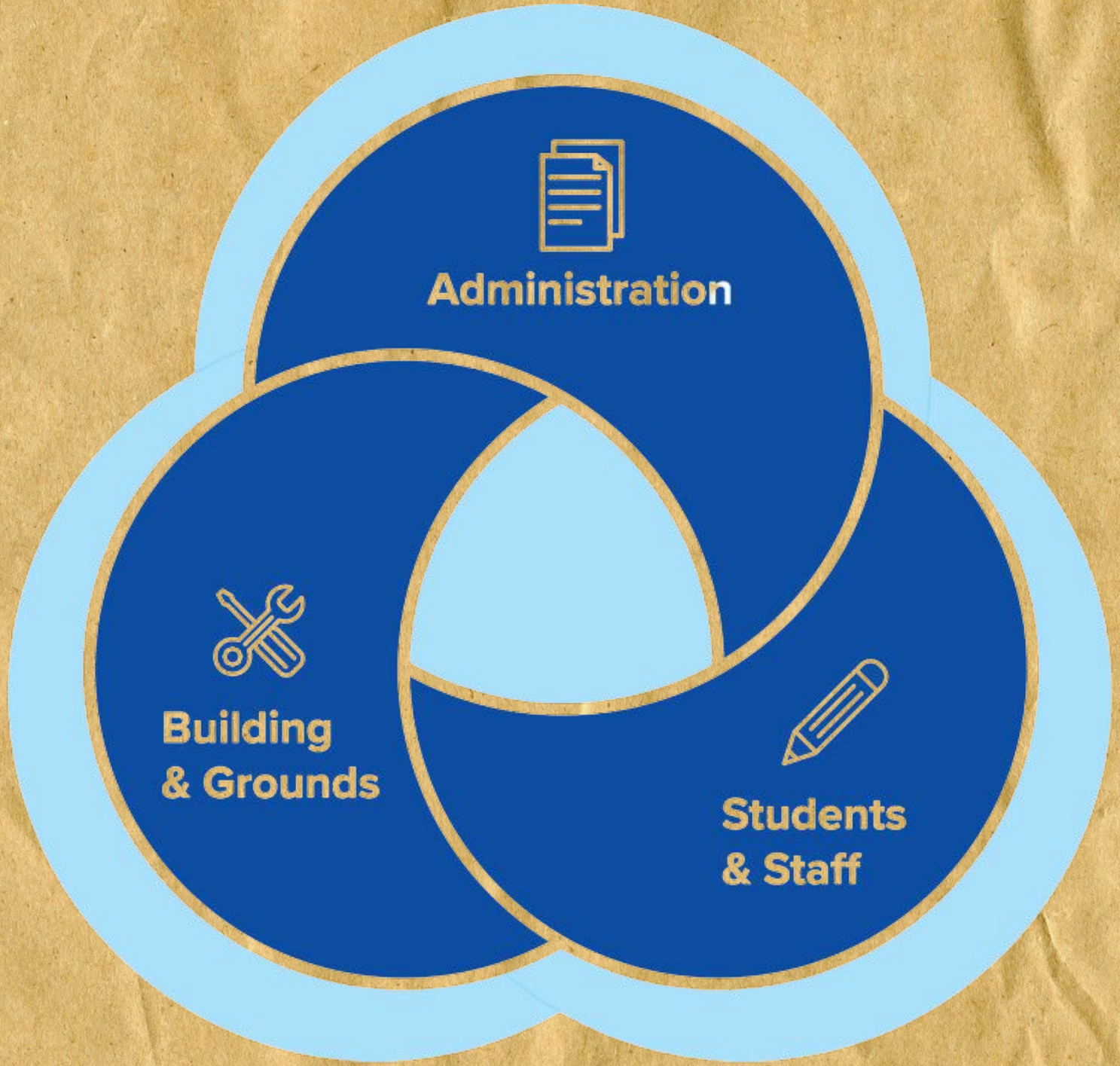
We would like to acknowledge the land and water in what is now called the United States of America. The University of Wisconsin - Stevens Point occupies the ancestral and contemporary lands of the Menominee and Ho-Chunk People. Please take a moment to acknowledge and honor the Menominee and Ho-Chunk land and the people who have worked to sustain it for many generations. Use the QR code in this slide to find and acknowledge the ancestral and contemporary lands that you occupy.

Native-Land.ca | Our home on native land


Administration
Building
& Grounds
Students
& Staff

Administration

Strategic Administration

- Prioritizes energy efficiency as a core objective
- Recognizes the potential for cost-savings, environmental benefits, and education opportunities
- Establishes a dynamic, cross-functional team to spearhead initiatives.

Resource Mobilization

- Proactively seeks grants and funding sources to supplement energy-related budgetary allocations.
- Explores strategic partnerships to enhance capabilities and achieve ambitious energy efficiency targets.

Comprehensive Planning

- Ensures seamless integration of energy efficiency and sustainability goals into organizations policies.
- Embeds these goals in ongoing and future facility discussions.
- Allocates dedicated funds annually to fortify energy efficiency measures.

Building and Grounds

Energy-Optimized Operations and Maintenance

- Strategizes and implements operations and maintenance protocols geared towards minimizing energy consumption.
- Responsibilities encompass:
  - Thorough cleaning of filters.
  - Precisions tuning of equipment.
  - Rigorous commissioning of buildings.
  - Continuous monitoring and tracking of energy usage.

Proactive Infrastructure Enhancement

- Conducts regular audits of facilities to pinpoint areas for energy-efficient infrastructure improvements.
- Stays abreast of cutting-edge technologies to discern and adopt the most effective energy-saving practices.

Students and Staff

Renew Our Schools: Challenge Leadership

- Lead school-wide energy initiatives as committed advocates.
- Integrates the challenge into lesson plans to instill a culture of energy consciousness.
- Builds awareness and understanding of energy conservation principles.

Renew Our Schools: Strategic Coordination

- Coordinates and submits comprehensive school energy actions, ensuring alignment with the Renew Our Schools Challenge.
- Establishes and nurtures a dedicated school energy team for collaborative and sustained efforts.

How do you make this happen?

PARTNERSHIPS!

Focus on Energy©

- Reimburses the enrollment fee upon successful completion of the energy challenge.
- Compensates e-Gauge installation with a detailed invoice.
- Offers support with on-site school energy audits and Energy Advisor mentorship.

Wisconsin K-12 Energy Education Program (KEEP)

- Coordinates support for energy action initiatives.
- Extends assistant in lesson planning.
- Equips educators with comprehensive energy audit tools and expert guidance.

Resource Central

- Grants exclusive access to the Renew Our Schools portal for real-time tracking of challenge statistics and energy savings.
- Facilitates eGauge installation with comprehensive guidance, support, and educational background knowledge to empower participants.
- Provides regular updates and communication to keep participants engaged.
- Equips participants with valuable energy audit tools and curriculum.

What is Renew Our Schools?

Renew Our Schools is a powerful 5-week energy education competition that gets students and staff in schools across the nation excited about getting smarter about energy consumption. We combine technology and thoughtful inquiry based lesson plans to provide a hands on energy education.

Learn more about the program

Emily Drost Message Logout

RESOURCE central

RENEW OUR SCHOOLS

DASHBOARD COMPETITION RESOURCES SUPPORT MY ACCOUNT

Welcome, Sand Creek Elementary School

Welcome to your live competition dashboard! This is where you can track your progress, see how you're doing compared to other competitors, and access any important updates or announcements from the competition organizers. Good luck!

FA23 STAR Competition

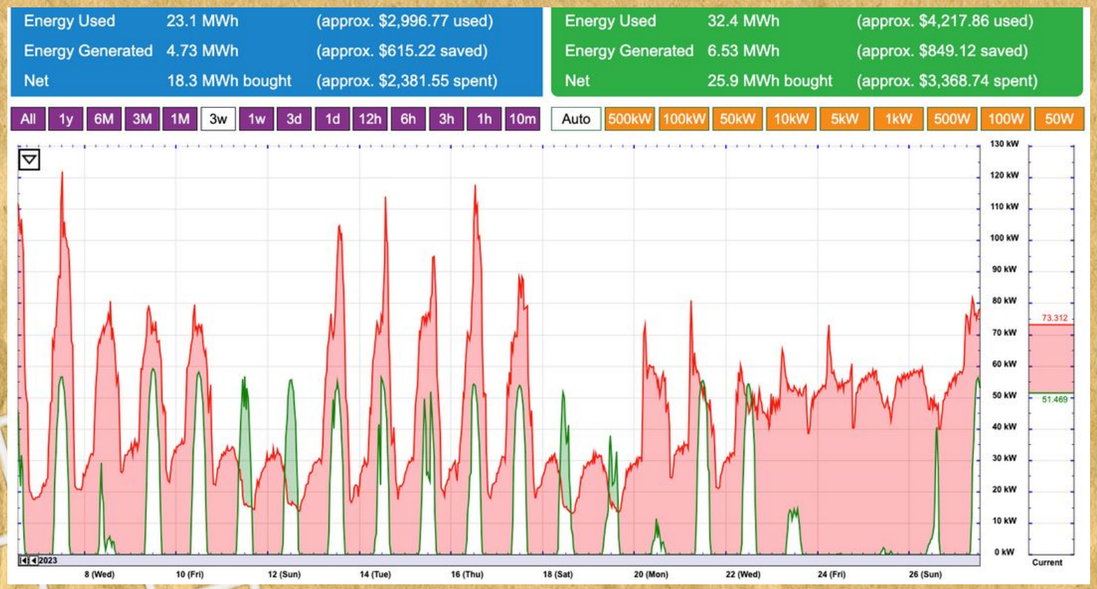
Your Fall 2023 STAR Competition ends on: **November 10, 2023**

3	375	24
CURRENT POSITION	YOUR TOTAL POINTS	ACTIONS COMPLETED
View leaderboard	View competition page	See remaining actions

View all **School Energy Actions**

Enter **Energy Data Journal**

Energy Monitor



“The eGauge gives us real time data so kids can see if their energy efforts are working. It is real obvious during our 1 minute blackouts that our energy consumption is going down.”

-October 2023 Participant

Points

The school with the most points at the end of competition wins.

Schools earn points by completing School Energy Actions.

Prizes

It's not a competition without prizes. Participating schools have multiple opportunities to win cash prizes and more!

Teaching Standards

"Science Inquiry - Employ simple equipment and tools to gather data. Use appropriate mathematics with data to construct reasonable explanations. Communicate about observations, investigations and explanations. Engineering and Technology - ask questions, make observations, and gather information."

-May 2023 Program Participant

Student Led Exploration

SPARK

Introductory competition; no smart energy monitor required

STAR

Requires a real time energy monitor; designed to be repeated year after year

SUPERNOVA

Our “Coming Soon” competition designed for older students to predict energy behaviors

“Students got competitive and began finding their own ways to conserve energy.”

School Energy Actions

Schools earn points by completing School Energy Actions

Over 30 School Energy Actions to complete

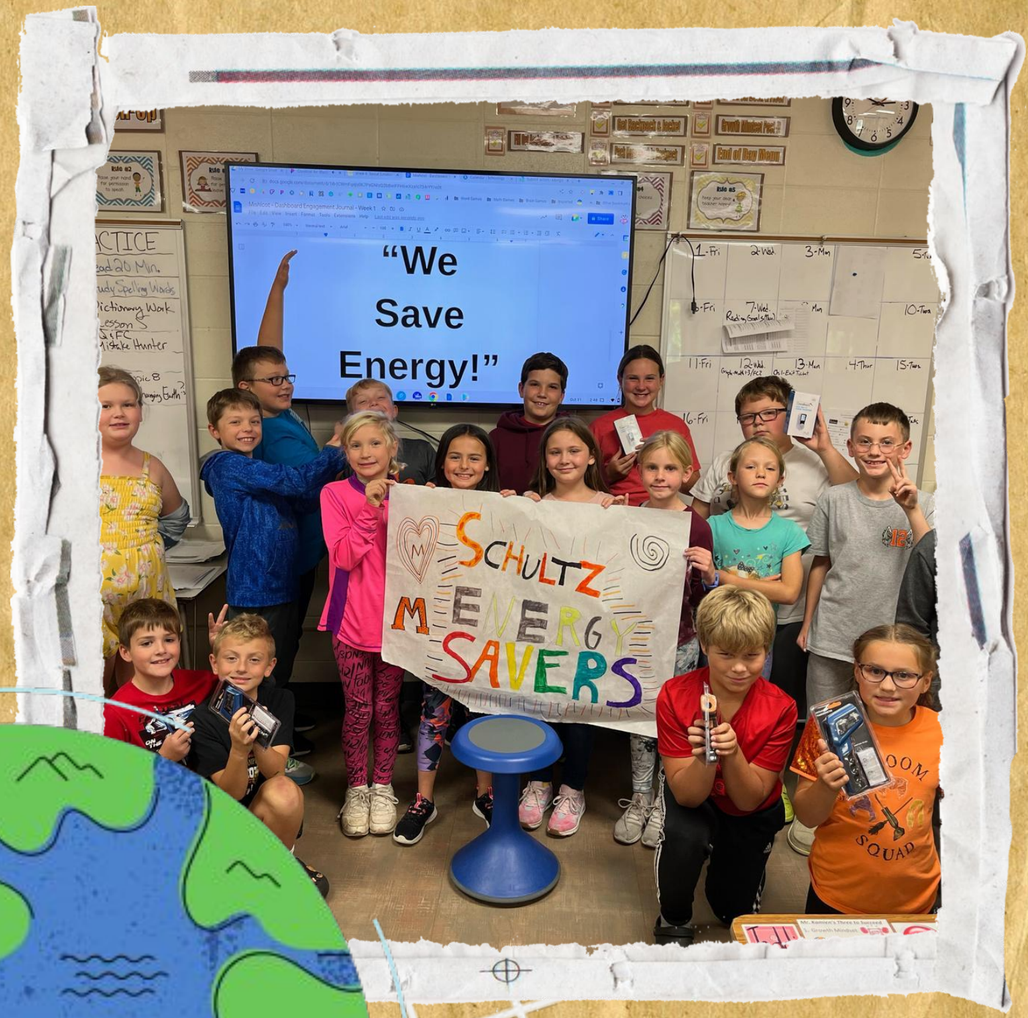
Energy Savings used in the event of a tie

3217

Completed School Energy Actions

“We tried, notice, wonder, remind, for all of the energy questions. I think the answers they discovered will have a larger impact on them.”

“This really involved the whole school in thinking about energy use and reduction.”



School Energy Actions

- **Learning**

"Students had NEVER thought about some of these issues."

- **Teaching**

"Students enjoyed researching and then teaching to other classrooms. They learned the most from these mini-sessions."

Teacher Guide

Lesson Plan

Lesson Plan

STAR PROGRAM: TEACHER GUIDE

RENEW OUR S
Get smart about ene

TIMELINE

This is a suggested timeline — complete actions in a sequence that makes sense for your school. Earn points to win the competition by completing School Energy Actions!

	GUIDING THEME	SUGGESTED SCHOOL ENERGY ACTIONS
PREVIEW	Understanding eGauge	Preview all SEAs and explore tools. Explore school audit. Introduce competition to class — learn how to read an eGauge
WEEK 1	Looking at Data	Energy Data Journal®, Start School Audit, Create a team, *Kill-o-Watts*
WEEK 2	Understanding Weather Variables (comparing daily temps with Energy Usage)	Energy Data Journal®, Submit School Audit, Daily Announcements, Using a Light Meter
WEEK 3	Understanding the Systems (exploring daily HVAC schedules)	Energy Data Journal®, Set Goals, *eGauge De Energy Savings Hour, Homeroom Competitio*
WEEK 4	Individuals as Energy Stewards (Comparing to Baseline)	Energy Data Journal®, *Energy Saving Weeke Staff Meeting Presentation and Signs/Poster Switch Covers*
WEEK 5	Leadership for Change (Comparing to Baseline)	Energy Data Journal®, *Engage an Expert, Students as Teachers*
WRAP UP	Leaping Forward	Reflection and Program Feedback

Resource Central has a library of resources in the portal for "Learning Beyond Renew Our Schools" lessons and activities. Check them out!

STAR PROGRAM

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Get smart about energy

SCHOOL ENERGY ACTIONS

School Energy Actions, or SEA's, are your team's roadmap to a successful competition. With your class, create a plan for which SEA's you will complete during the competition. At the end of the competition, we will ask you and your class to reflect on how the competition went. REMEMBER! Renew Our Schools is meant to be completed every year! Each class will approach the competition differently, and likely achieve different results.

DOING THE ACTIVITY

1. **Introduction** Browse the Renew Our Schools portal with your team. Talk about all the possible ways to earn points in this competition. Remember, you win the competition by saving energy and by earning the most points.
2. **Review** the different types of School Energy Actions Which are you most excited about? How do they fit into the classroom or club time available to your team?
3. **Either work collaboratively** in your team to determine which SEAs you are going to complete, or present to your team which SEAs you, the instructor has chosen for them.
4. **Record** your selected SEAs and completion date goal on the SEA Tracker if you are going to use it.
5. **Record** the 3 SMART goals your team chose and post them as a visible reminder in your classroom or meeting space.
6. **In the final week** of competition, complete the reflection SEA and accompanying survey.

OBJECTIVES

- Score points by completi School Energy Actions an making submissions in th
- Students will determine t required to reach their 3 SMART goals
- Submissions are graded b Our Schools and the Lead is updated in real time

PORTAL SUBMISSION

Submissions are made in t Renew Our Schools portal logging in and browsing to Competition section. There required School Energy Ac to be eligible for the grand MAKE SURE YOU COMPLET REQUIRED SEA'S.

HELPFUL TIPS AND T

- Introduce the competitio your class before the com officially begins.
- Engage other teachers, classrooms, and administ much as possible.
- Let your students lead th learning by selecting SEA questions, and setting go
- Take advantage of Mini-Ch to win additional prizes.
- Plan to participate again

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STAR PROGRAM

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Get smart about energ

CREATE A TEAM

Empowerment is a foundational concept in the Renew Our Schools competition design. When students feel more ownership over their learning and environment, the experience will be more meaningful. A meaningful and engaging experience results in greater student-driven interest and quality of work produced. We know we're preaching to the choir! Gather the group of students (and staff, if possible) who will be the primary participants in the Renew Our Schools competition. Give the team a name! Make sure your name reflects your team's uniqueness.

DOING THE ACTIVITY

1. **Introduction** Ask each student to brainstorm a list of possibilities.
2. **Students share** ideas with their peers and record ideas on white board.
3. **Discuss** which names best communicate who you are as a team/school community.
4. **Vote** on your team name and write down the winning name on a paper or poster.
5. **Post** your team name in your classroom or hallway to inform the entire school about your participation in the competition.
6. **Take a photo** with at least 1 student and your team name poster.

Optional: On the back of your team name or a separate paper, collaborate to determine 3-5 norms you agree to follow as a team.

Examples: be respectful to all students, carefully use toolkit items to ensure our safety, set an example for the school, be respectful when approaching others, come with a positive attitude, bring ideas to share, be prepared.

OBJECTIVES

- Students will collabora select a team name tha their uniqueness

PORTAL SUBMISSION

Submit a picture of your with one student holdin team name on a paper o

COMPLEMENTARY SCHOOL ENERGY AC

- Set Goals
- eGauge Demonstration
- Students as Teachers

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Data Collection

- **Energy Analysis**

"Students really had to learn how to use the meters and then carry through with the actual audit"

- **School Monitoring**

"The fact that you can isolate energy use data down to a day, hour, or weekend really lets kids explore the energy use during a certain event or time frame at school. They all know when there are sporting events that keep them at school until late so they seem interested in comparing those times to nights when there isn't anything going on.

3%

Average Energy Savings per School

Rebound energy use is to be expected

Annual participation is critical

Stronger District Involvement

Data Collection

Let your students collect the data you need to be successful at your job!

School Involvement

Renew Our Schools get's the whole School involved!

Support District Initiatives

An easy way to let the schools support what's happening at the district level

Save Money

"It led to our hallway de-lighting campaign (saving $1200 annually)"

Three School Success Stories

- **Oconomowoc High School - Place based learning leads to better Advanced Placement Environmental Science test scores**
- **Evansville High School - Egauge data leads to school energy efficiency improvements and community outreach**
- **Lourdes Academy (elementary) - Energy education translates across all age levels**

Three School Success Stories

- Oconomowoc High School - Place based learning leads to better Advanced Placement Environmental Science test scores
- Evansville High School - Egauge data leads to school energy efficiency improvements and community outreach
- Lourdes Academy (elementary) - Energy education translates across all age levels

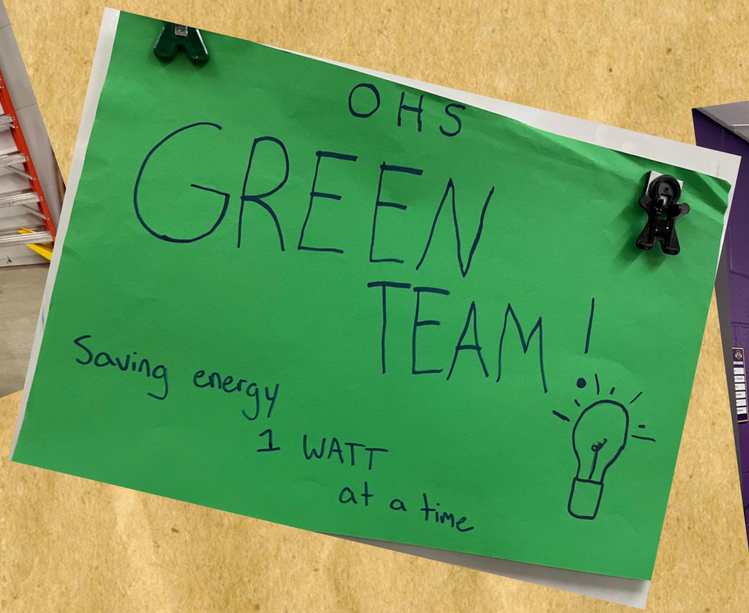
Oconomowoc High School

Place based learning leads to better AP Environmental Science test scores

Reporting Category Type	Reporting Category	# of Questions	Group	State	Global	Notes
Units	Energy resources and consumption	10	8.0	7.9	7.5	↑ Above State and Global
Big Ideas	Energy Transfer	10	10.1	9.9	9.9	↑ Above State and Global
Question		Max score	Group	State	Global	Notes
Design an investigation		10	3.7	3.6	3.3	↑ Above State and Global
Analyze environmental problem & propose a solution (using data or representation)		10	4.2	3.9	3.5	↑ Above State and Global

Oconomowoc High School

Place based learning leads to better AP Environmental Science test scores



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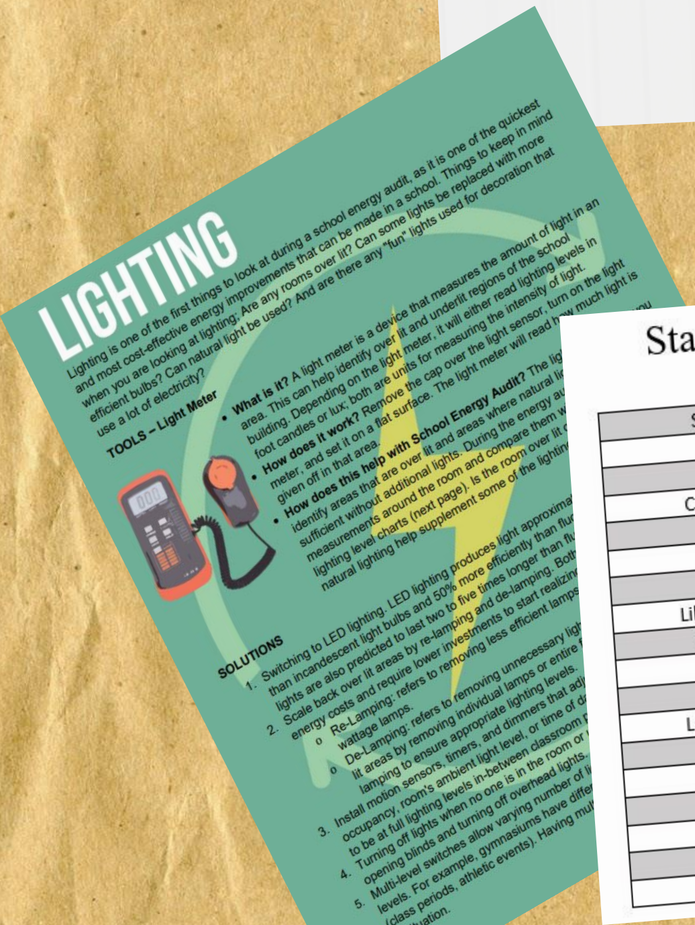
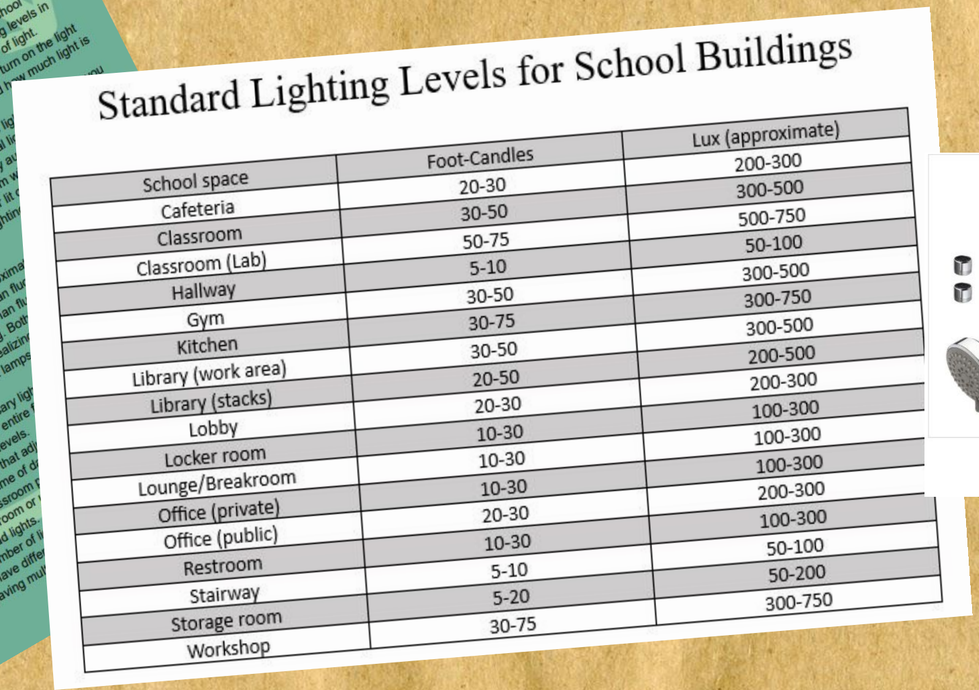




Standard Lighting Levels for School Buildings

School space	Foot-Candles	Lux (approximate)
Cafeteria	20-30	200-300
Classroom	30-50	300-500
Classroom (Lab)	50-75	500-750
Hallway	5-10	50-100
Gym	30-50	300-500
Kitchen	30-75	300-750
Library (work area)	30-50	300-500
Library (stacks)	20-50	200-500
Lobby	20-30	200-300
Locker room	10-30	100-300
Lounge/Breakroom	10-30	100-300
Office (private)	10-30	100-300
Office (public)	20-30	200-300
Restroom	10-30	100-300
Stairway	5-10	50-100
Storage room	5-20	50-200
Workshop	30-75	300-750

- **Delamped overlit hallways. Removed 219 25-watt T-8 fluorescent lights. Hallways are still at the top end of standard lighting levels for schools.**
- **Community outreach drive for district families to take advantage of free efficiency items for their home (LED light bulbs, low-flow shower heads, and pipe, window and electrical outlet insulation)**

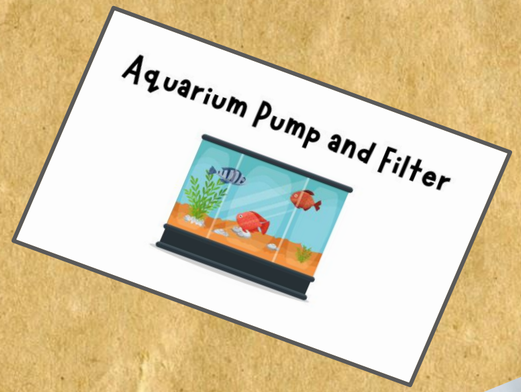
Free Energy-Saving Packs | Focus on Energy

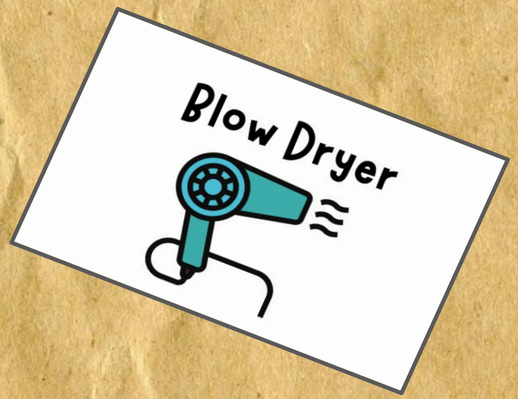
Evansville High School

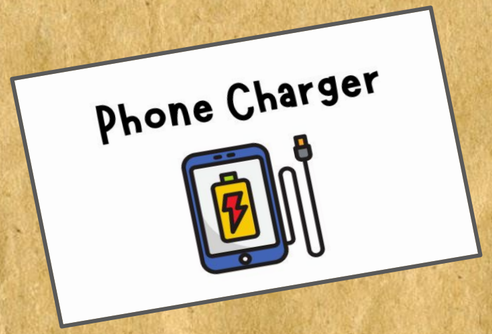
Egauge data leads to school energy efficiency improvements and community outreach

Match the appliances below with the watts they consume.
In a classroom setting, each student is assigned an appliance and the class as a whole works together to order themselves from least to greatest number of watts consumed.

5 watts	24 watts	100 watts	800 watts	1,200 watts







5 watts

24 watts

100 watts

800 watts

1,200 watts

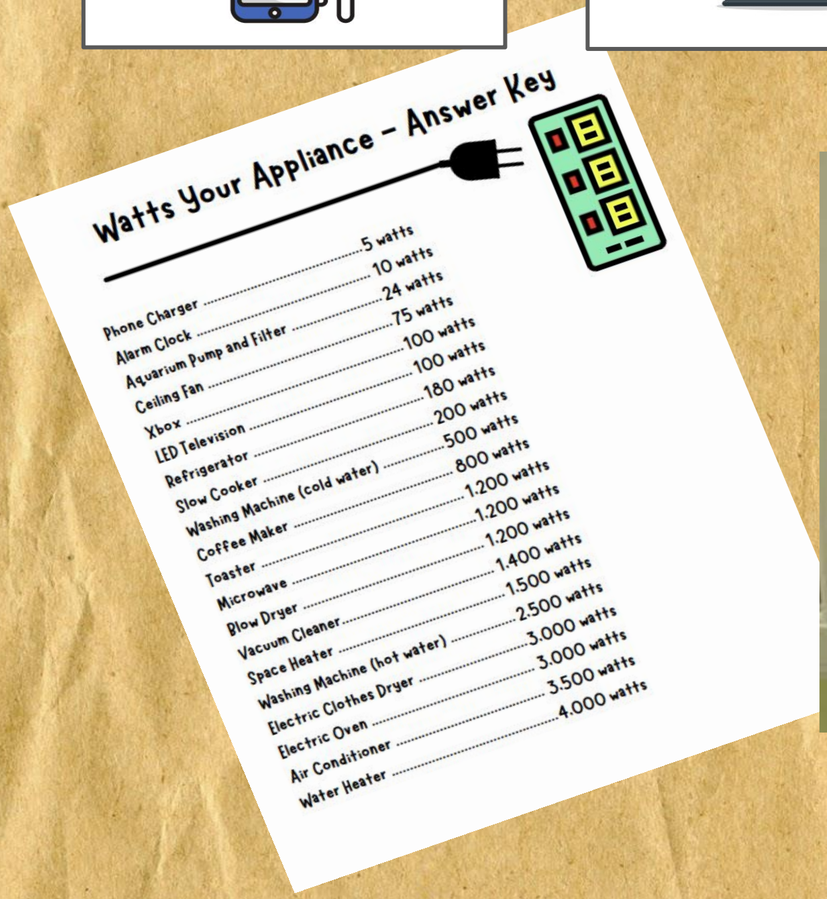
Phone Charger

Aquarium Pump and Filter

Xbox

Coffee Maker

Blow Dryer



Watts Your Appliance – Answer Key

Phone Charger	5 watts
Alarm Clock	10 watts
Aquarium Pump and Filter	24 watts
Ceiling Fan	75 watts
Xbox	100 watts
LED Television	100 watts
Refrigerator	180 watts
Slow Cooker	200 watts
Washing Machine (cold water)	500 watts
Coffee Maker	800 watts
Toaster	1,200 watts
Microwave	1,200 watts
Blow Dryer	1,200 watts
Vacuum Cleaner	1,400 watts
Space Heater	1,500 watts
Washing Machine (hot water)	2,500 watts
Electric Clothes Dryer	3,000 watts
Electric Oven	3,000 watts
Air Conditioner	3,500 watts
Water Heater	4,000 watts

Watts Your Appliance (uwsp.edu)

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Lourdes Academy

Energy education translates across all age levels

- School wide kick off event - “Ready to Renew” skits from National Theatre for Children.
- Energy conservation poster contest and distribution
- Tour of University of Wisconsin Oshkosh’s biodigester located within walking distance of Lourdes Academy

Lourdes Academy

Energy education translates across all age levels

Lourdes Academy won $4,700 between STAR and Alumni Renew Our Schools competitions. They are contemplating using their winnings as seed money for a solar array at their school.

8 SCHOOLS FROM 8 UTILITIES

149,941 KWH ENERGY SAVED

EQUIVALENT TO:

272,404 MILES DRIVEN BY A GASOLINE PASSENGER VEHICLE

RENEW OUR SCHOOLS

WISCONSIN FALL 2023

ENERGY SAVINGS COMPETITION

[Greenhouse Gas Equivalencies Calculator | US EPA]

GALLONS OF GASOLINE SAVED 11,957

CARBON SEQUESTRATION FROM 1757 TREE SEEDLINGS GROWN FOR 10 YEARS

12,925,816 SMART PHONES CHARGED

234,264 LBS OF CO_2 SAVED

119,028 LBS OF COAL AVOIDED

THE STUDENTS, TEACHERS, AND STAFF INVOLVED SHOULD BE PROUD OF WHAT THEY HAVE ACCOMPLISHED. THANK YOU FOR HELPING OUR SCHOOLS AND OUR PLANET.

- LEARN ABOUT ENERGY in a place based format
- REDUCE ELECTRICITY CONSUMPTION
- REDUCE CARBON FOOTPRINT
- SAVE MONEY

Free Wisconsin K-12 Energy Education Program (KEEP) resources to support using your school building as an energy educational tool.

Energy Audit Best Practices Guide keep-energy-audit-best-practices.pdf (uwsp.edu)	Energy Audit - Lighting keep-school-energy-investigations-lighting-worksheet.pdf (uwsp.edu)	Energy Audit - Appliances/Loads keep-school-energy-investigations-plug-load-worksheet.pdf (uwsp.edu)
Energy Audit - Temperature keep-school-energy-investigations-temperature-worksheet.pdf (uwsp.edu)	Watts Your Appliance? Watts Your Appliance (uwsp.edu)	Energy Scavenger Hunt Energy Scavenger Hunt - University of Wisconsin-Stevens Point (uwsp.edu)

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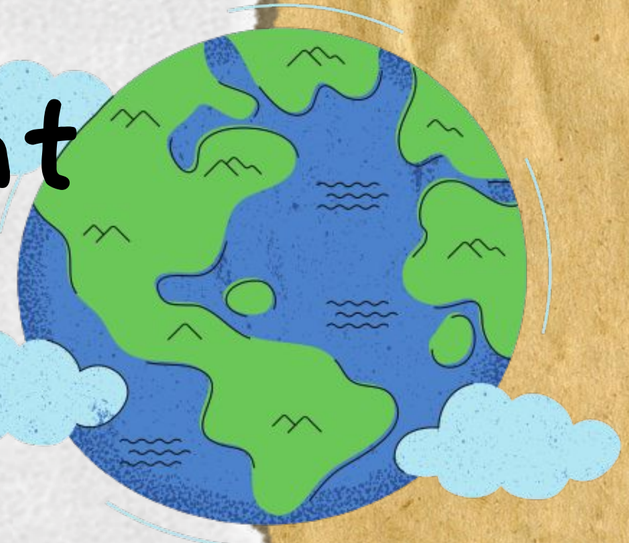

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to access these slides and contact presenters