

Going Green in Twenty Nineteen



Brought to you by the 2019 Hawken Middle School Energy team

Hawken School

“Going Green in Twenty Nineteen”

Project led by the Hawken Energy Team

Advisor: Peter Thomas



This year's project was led by Hawken middle school students, the self-styled “Energy Team”. They began by attending a Youth Summit leadership workshop in October 2018, at the Exploration Gateway, Canton, Ohio. They then put these skills to work at the November 2018 energy workshop back at Hawken School, leading the fifth grade students from Cleveland's Citizens' Academy, throughout the event, along with Sue Tenney from OEP.

Back at school, the team helped conduct a community science night for several hundred visitors in January, 2019, complete with speakers, energy demos, the energy bike and numerous hands-on energy activities. They also conducted an energy carnival for all our fourth grade students in the following month.

As part of our community outreach, we used our innovation lab to produce jigsaw puzzles that feature the ten top energy sources in Ohio. We based this on a zentangle project that a number of OEP schools helped us create, and used the final image on our puzzle pieces. The puzzles will be available to schools participating in this year's OEP Energy Celebration.

All our Hawken 8th grade students conducted the NEED pre and post polls for energy use. We all studied energy for 8 weeks, culminating in a wind turbine challenge at our school. Four winning teams will go on to showcase their turbines at a Cleveland State University KidWind challenge in May, 2019.

GOAL #1: To establish and train this year's team at Hawken middle school, teaching our community about energy issues



To establish a team of students that learned leadership, teamwork, presentation skills and energy concepts in order to facilitate a series of energy education events.

ENERGY CONTENT ACTIVITIES: Our team volunteered to travel to the Exploration Gateway Center in Canton, Ohio, in October, 2018 to attend the Youth Summit workshop with students from other area schools

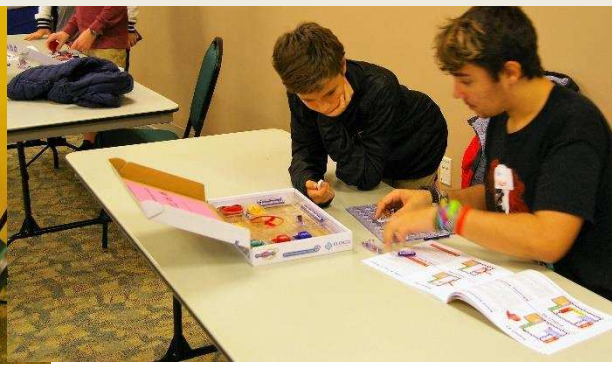
STUDENT LEADERSHIP: Ten students volunteered to meet in our “energy team” club. This team made the commitment to raise awareness of energy issues at our middle school throughout this school year, and traveled to Canton, Ohio, to attend the Energy Summit

RESOURCES: Willing students, Ohio Energy Project materials, NEED curriculum materials, Energy bike

EVALUATION: Our team changed in composition as the year progressed, but seven of the original team continued their work throughout this school year, taking part in our activities inside and outside school. The students from Citizens’ Academy who attended our workshop showed positive gains in their polls.



Energy Summit, Canton, Ohio



GOAL #2: To promote energy awareness in our school community



To make lower and middle school students at Hawken School more knowledgeable and aware of energy issues

ENERGY CONTENT ACTIVITIES: The green team helped lead a science evening at Hawken middle school on January, 2019, where lower and middle school students and their families attended to learn more about energy transformations through hands-on activities. The team also hosted an energy carnival in February, 2019 at Hawken school for all our fourth grade students.

STUDENT LEADERSHIP: All students in the energy team volunteered their time to help plan and lead these events

RESOURCES: NEED energy materials, especially the energy transformation lab activities, energy carnival games plus the energy bike and several other NEED activities

EVALUATION: Feedback from visitors and students was overwhelmingly positive, so we plan do both events again next year



Community Science Night at Hawken School



Energy Carnival for Hawken School Fourth Graders

GOAL #3: To promote energy awareness outside our own school and take the show on the road



To reach out to others outside our own school and community to help them understand energy issues

ENERGY CONTENT ACTIVITIES: Our energy team helped to host an OEP energy workshop for a local school, held at our own campus., with the OEP staff

STUDENT LEADERSHIP: All events were student-run – the Hawken workshop was also hosted by Sue Tenney and the OEP, with the help of our energy team members

RESOURCES: Ohio Energy Project materials, NEED curriculum materials, Energy bike

EVALUATION: The students who attended both workshop also completed pre and post energy polls. Feedback from teachers at both events was excellent. **The students from Citizens' Academy improved their score from 36% (3.6/10) on their pre-poll average to 60% (6/10) on their post-polls on our program day, which is a significant improvement**



Energy Leadership Workshop with Citizens Academy



Energy Leadership Workshop with Citizens Academy



GOAL #4: To increase our knowledge of renewable sources and to promote their use

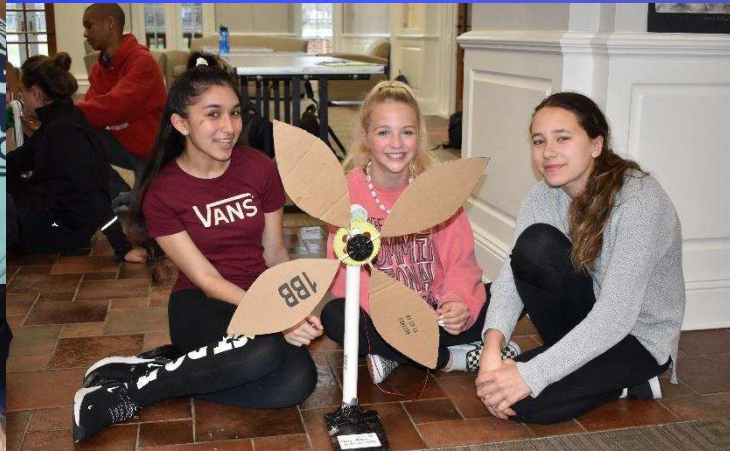
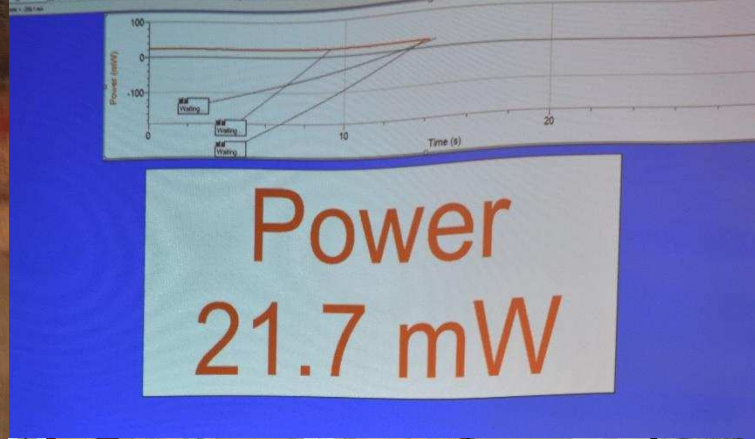
To promote the use of renewable energy in our community

ENERGY CONTENT ACTIVITIES: All 8th grade students studied energy for a quarter of the year, ending it with the KidWind Challenge – a program that has teams of students design and build small scale working wind turbines.

STUDENT LEADERSHIP: All teams were student-led, and 6 teams will continue to compete at the next level at the Cleveland State University KidWind Challenge in May, 2019 at the 2019 Future Earth event

RESOURCES: NEED curriculum materials on renewable energies, plus KidWind and Vernier materials

EVALUATION: The 73 students in our 8th grade improved their performance on the Secondary Energy poll from a 39% pre-poll average (7.7/20) to a 69% (13.7/20) post-poll average score. Each wind turbine team was also given a comprehensive judges' evaluation as part of our wind turbine symposium



Wind turbines at Hawken School



Poll results

73 Hawken 8th grade students took the NEED energy poll (20 questions).

Their score increased from a 39% pre-poll average to a 69% post-poll score

60 fifth graders from Cleveland's Citizens' Academy took our own 10 question poll

Their score increased from a 36% average to a 60% average score

Do you like jigsaw puzzles?

Complete the zentangle puzzle and then identify the top ten energy sources it represents.....





Thanks for watching our power point!

