

# Worthington City Schools and Ohio Energy Project Encompassing Energy Excellence

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The goal of this partnership is to empower students, teachers, schools, homes and community members through professional development, materials and energy education programs to understand the roll of energy in their lives.

# Goal One - *Leadership*

Middle and high school students had the opportunity to receive training and to practice leadership and communication skills at a half day workshop. In addition, students learn and practice hands on energy and efficiency lessons that are Ohio Department of Education specific for fifth grade students.

## **District Participation:**

- 2 high schools
- 3 middle schools
- 9 elementary schools

## **Student Leadership:**

- 75 high school leaders trained
- 71 middle school leaders trained

## **Resources:**

- NEED Energy Carnival
- OEP hands-on Exploration Stations

## **Evaluation:**

- 7 teachers led Leadership Summit teams
- High school and middle school leaders impacted 535 5<sup>th</sup> grade students



# Goal Two – *District Wide Energy Education Programs*

Promoting quality energy education programs for Worthington students.

## **Energy Content Activities:**

- OEP hosted school based Energy Workshops at nine elementary buildings. This allowed 5<sup>th</sup> grade students in the district to participate in 60 minutes of hands on energy explorations.
- Students rotated through 10 stations concentrated on the physical science topics of light, sound and forces and motion which are the content standard topics prescribed by the Ohio Department of Education.

## **Student leadership:**

- 146 student leaders were trained

## **Resources:**

- OEP hands-on activities for light, sound and motion.

## **Evaluation:**

- Worthington 5<sup>th</sup> grade students had the opportunity to learn about energy at the Workshops.
- The average knowledge gain on the pre vs. post poll was 15%

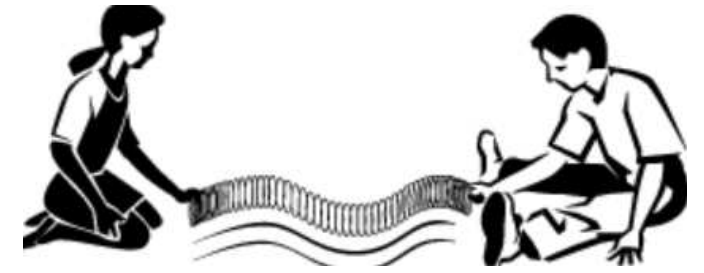




# Kids teaching kids.



# 5<sup>th</sup> grade Energy Workshops



“So engaging! Hands on activities that got all students doing science.”  
 Emily McMullen  
 Granby Elementary

School	Number of students	Pre-poll average	Post-poll average	% gain in knowledge
Bluffsview Elementary	65	80%	90%	13%
Brookside	34	67%	82%	22%
Colonial Hills	57	66%	93%	29%
Evening Street	66	87%	90%	4%
Granby	57	87%	87%	0%
Liberty	50	80%	94%	17%
Wilson Hill	77	69%	78%	13%
Worthington Estates	69	61%	84%	37%
Worthington Park	60	80%	89%	11.25%



# Goal Three – *Professional Development*

Promoting energy education to Worthington educators by providing them with excellent professional development opportunities and up-to-date resources.

## Energy Content Activities:

- Energy Blitz: Day and a half tour of Ohio energy sites with on-site experts
- Energy Tour: Three day tour of Ohio energy sites with on-site experts
- Grade Level Training: Grade specific half day learning sessions geared to match the energy curriculum for grades 3, 4, 5
- E<sup>3</sup> Smart Program: Energy Efficiency - 8 teachers participated

## Student Leadership:

- 524 students involved in the E<sup>3</sup> Smart Program installed energy saving devices in their home.

## Resources:

- OEP curriculum and training kits
- 3<sup>rd</sup> grade – Sources of Energy, States of Matter
- 4<sup>th</sup> grade – Electricity, Circuits, Thermal Energy
- 5<sup>th</sup> grade – Light and Sound
- E<sup>3</sup> Smart curriculum and home energy kit



# Goal Four – *Promote Real World Application of Energy Concepts*



OEP encourages Energy Projects at the Worthington District Science fair.



- Through the sponsorship of the **Outstanding Energy Award**, students are motivated to further explore and the application of energy by designing a Science Fair Project

Pictured: Jessica, a 3<sup>rd</sup> grader at Evening Street Elementary School, won the Outstanding Energy Award for her project exploring air pollution and vehicle exhaust.



# Goal Five – *Community Engagement/Energy Efficiency*

Promoting energy education to Worthington educators by providing them with excellent professional development opportunities and up-to-date resources.



## **ENERGY CONTENT ACTIVITIES:**

- Four schools with eight teachers were trained and received materials for the E<sup>3</sup> Smart program.
- 524 students received an energy efficiency kit through the E<sup>3</sup> Smart program and installed them at home. This also included a home energy audit.

## **STUDENT LEADERSHIP ACTIVITIES**

- Students put classroom labs into practice with a “school to home” approach teaching their families about energy efficient measures being installed at home.
- Students also conducted an energy audit and identified one behavior they could change to save energy.

## **EVALUATION**

- Efficiency kit installations provided residents with a 268.6 potential megawatt/hours of electricity savings.
- Students potentially impacted 1,572 family members.