Knowledge is Power

Ockerman Middle School

Advisor: Jennifer Davis

Summary

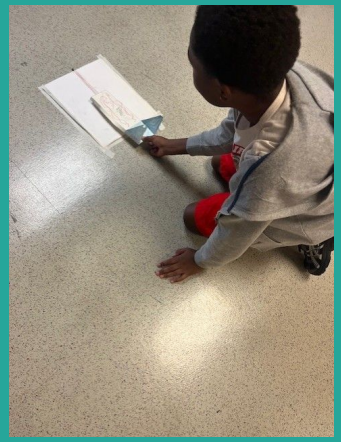
We learned about a variety of different energy topics:

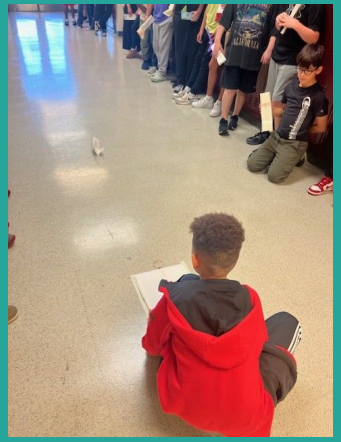
Potential & Kinetic Energy: We make paper skimmers and catapults to model elastic potential energy. We made paper roller coasters to model gravitational potential energy. Some students also made Rube Goldberg machines to model gravitational potential energy for the Greater Cincinnati STEM Collaborative 3D Printer Showcase at the University of Cincinnati.

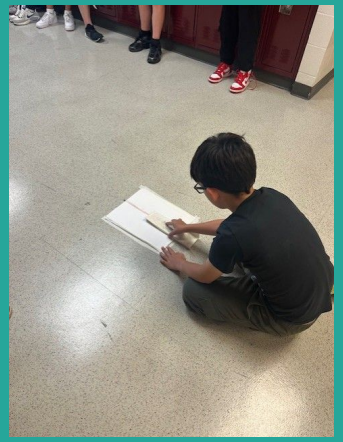
Energy & the Environment: We did a lot of NEED activities to learn about forms of energy, sources of energy, and ways we can make responsible choices about energy.

4H: We worked with our local 4H to learn about corn plastics, microgreens, using plants to lower energy demands, and how to plant a garden for local food.

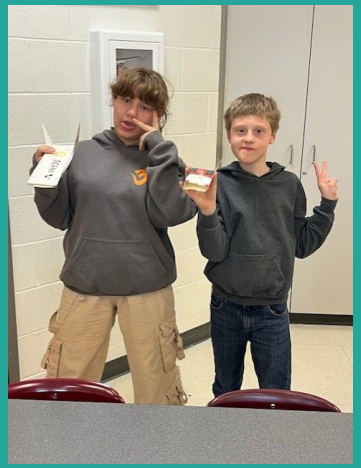
Potential & Kinetic Energy

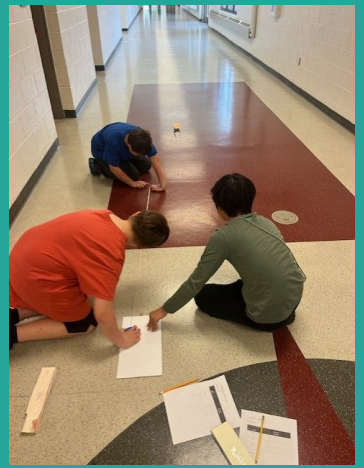




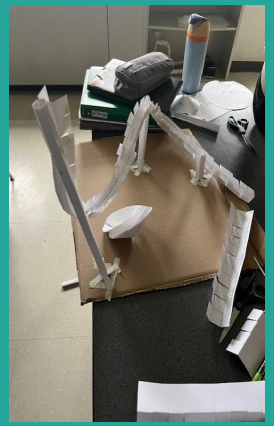


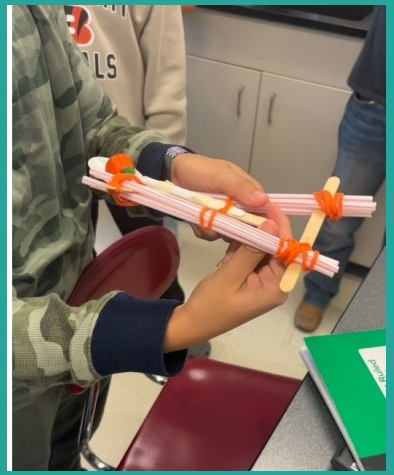
Skimmers use elastic potential energy.

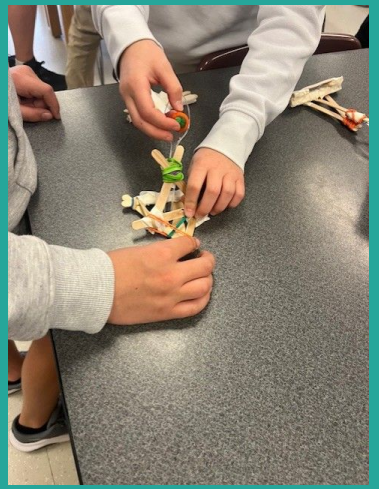


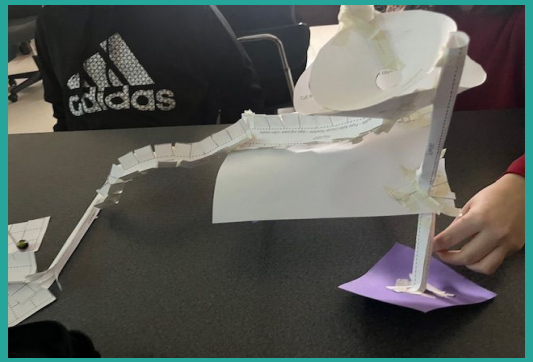


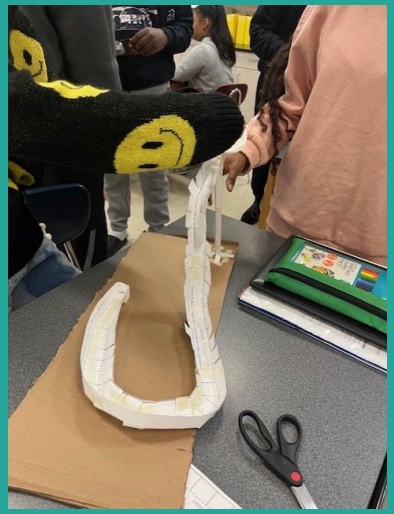
Catapults & Paper Roller Coasters

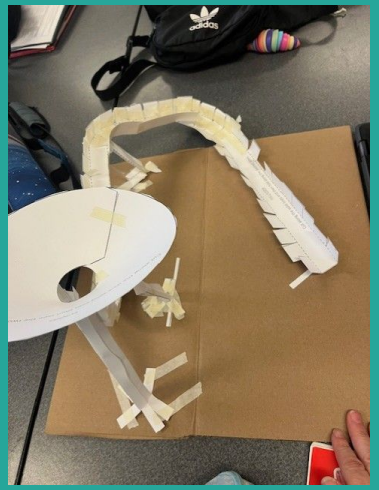












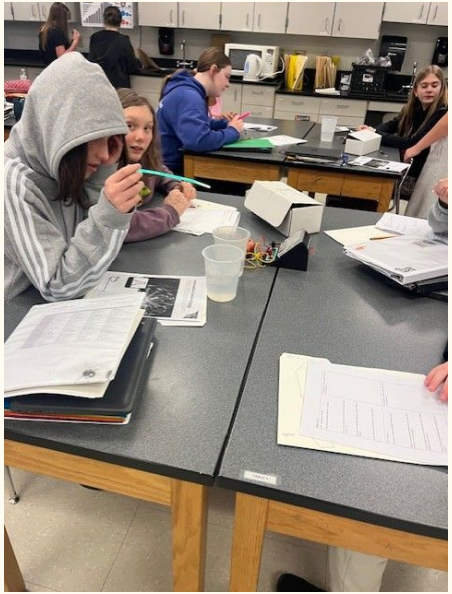
3D Printer Showcase

3D Printer Showcase

Evening with the Arts

Families that attended the Evening with the Arts also learned about circuits at the Energy Club booth.

Energy & the Environment

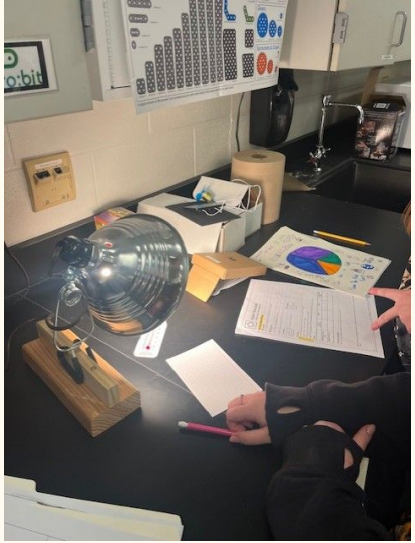


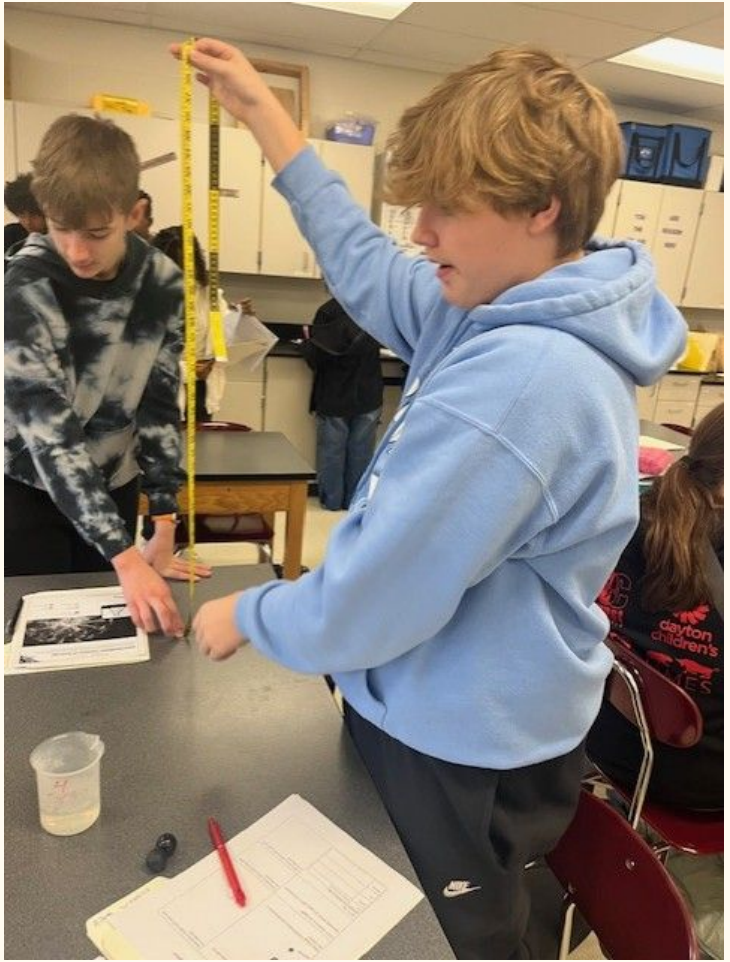
NEED Activities:

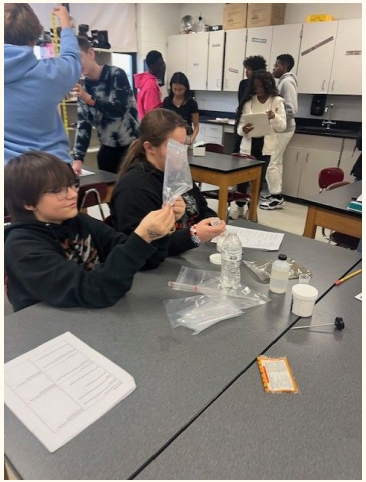
Energy Bingo
Forms & Sources : Forms of Energy, Forms & Sources, Energy Flow, Energy Transformations, A Cool Coal Story, Forms of Energy Fun, Energy Scramble
Electric Connections
Energy in the Balance
Energy Roundup
Science of Energy
Energy Source Expo

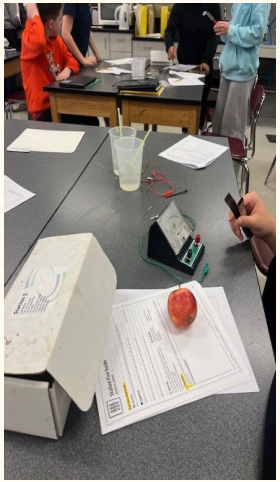
Energy & the Environment

Science of Energy



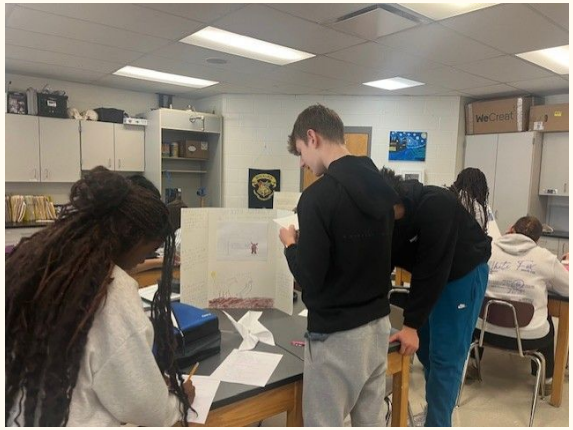




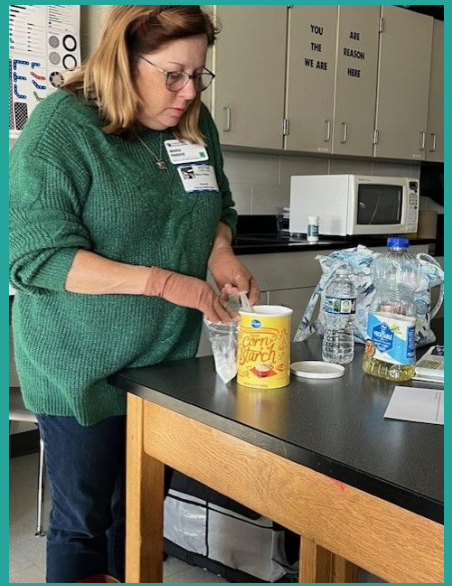


Energy & the Environment

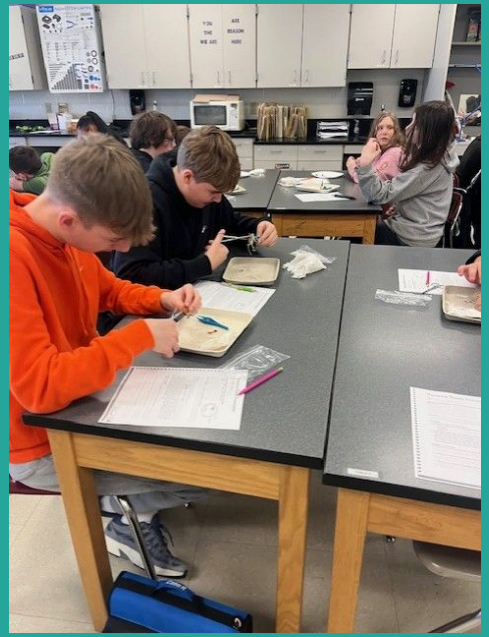
Energy Source Expo



4H



Making corn plastic



Learning about seeds

Growing local food

4H

Growing Microgreens

Reflection

Science of Energy: What was your favorite lab station? Why?

“Station 5, because it is neat to see how we use an everyday object like an apple could actually create a flow of electricity to power a small clock or light.”

“Stations two the Exo and Endothermic Chemical Reactions because i think it was fun to see the reactions and how the temperature changed”

“station 4, I liked how the spring or wire popped back up when you out it in the hot water”

Which of the following other activities was your favorite? Why?

IElectric Connections: “ liked this because it was surprising to see how much we rely on natural gas for electricity compared to other sources”.

“Energy Bingo. It was fun getting to know other people.”

Intro. To Energy Packet: :Because it helped me know all of of energy sources and things I didn't know about”

Reflection

Energy Source Expo: What energy source did you learn/teach? List 1 interesting fact you learned about YOUR source of energy.

“Wind energy one interesting fact is wind turbines can be over 600 feet tall”

“Coal takes over millions of years to form”

“Hydropower and one thing I learned was it the world's largest renewable source of electricity.”

“My source was uranium. I learned that it is radioactive.”

“Natural gas, I learned that it is used a lot in the US.”

Energy Source Expo: Expain something that you learned about another energy source (not yours).

“Wind power uses wind turbines that can be harmful to birds and other flying animals.”

“I learned that geothermal energy comes from the heat trapped inside the earth. its really cool tyhat we can use steam from underground to spin turbines and make electricity.”

“Solar is the fastest growing renewable (in the US) and most abundant source of energy on Earth”