

*Bremen Elementary School's
Energy Eagles
present...*



Community Energy Response Team:

Transferring Energy Back to Our Community

In response to a horrific tornadic event that devastated our school community, the Energy Eagles switched gears to serve our community as the Community Energy Response Team! Our team learned about sources of energy (specifically non-renewable sources) and electricity generation as a direct result of this event. We wanted inform our friends and neighbors as well as supply them with life saving supplies that do not require batteries or electrical outlets. We collected donations of hand crank and solar powered flashlights, weather radios, and charging stations for phones and tablets.

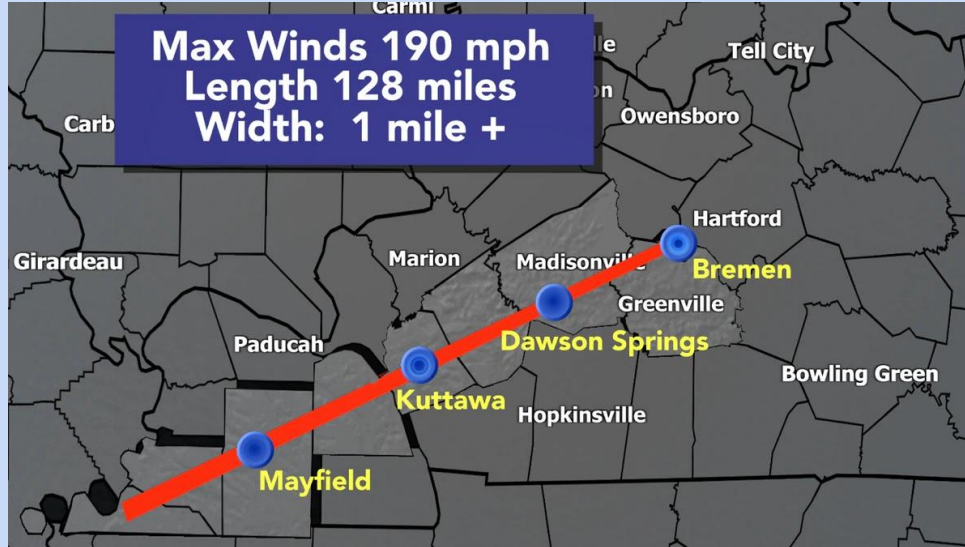


Advisors: Mandy Toomey & Emily Gardner

The Day Our Bremen Community Changed...



Click the play button to view below to learn more about the December 11, 2021 EF4 tornado that hit our area.



The Community Energy Response Team (aka Energy Eagles) devises a plan to help our friends and neighbors!

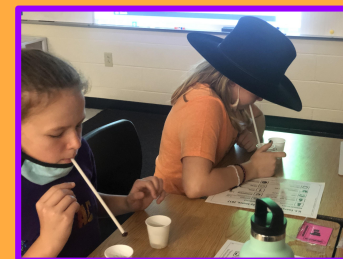
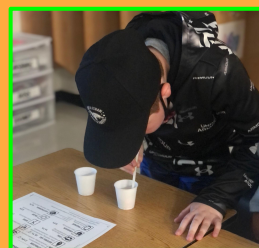
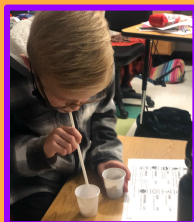
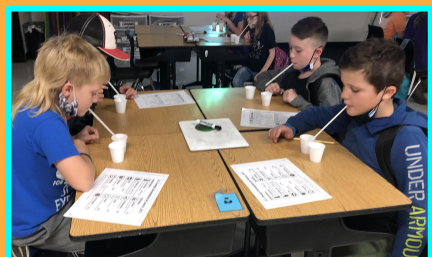
Prior to the December 11th tornado, we had already started learning about energy forms, sources, conservation and efficiency. We were starting a completely different community project, but when the tornado tore through our town, we decided we needed to inform our community about alternative energy sources that would be available if they lost power. Some of our friends and neighbors were without power for over a week!



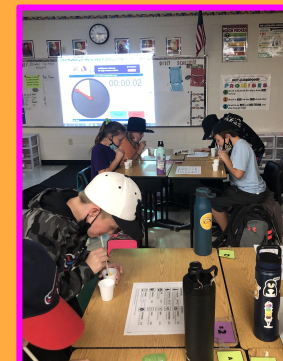
This is a photo taken as the tornado approached our small community of Bremen, Kentucky.

Types of disaster preparedness items to run on solar and hand crank energy!

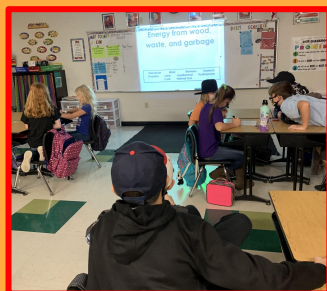




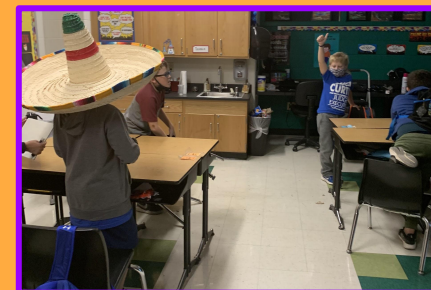
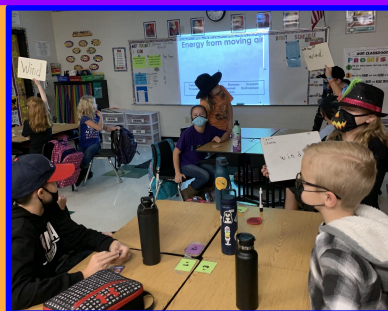
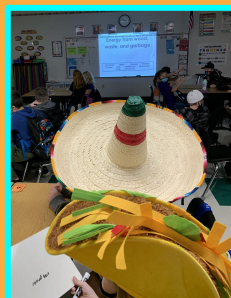
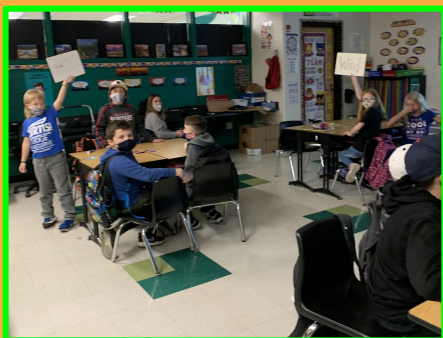
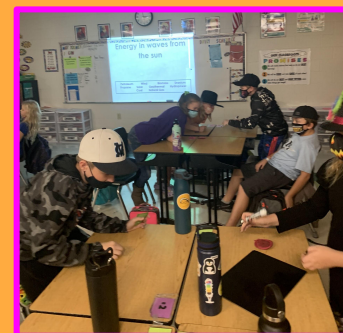
We learned about renewable and nonrenewable resources by competing in "Candy Collector!" We then looked at information about how much of each resource is used in the United States! It was eye opening how much we depend on nonrenewable energy sources!



Goal 1 : Learning about Energy

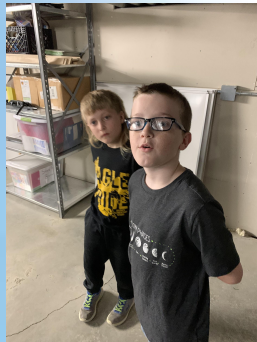


We put the knowledge we learned in Candy Collector to the test and played a game in groups to identify renewable and nonrenewable energy sources by symbols or pictures, and then by definition!

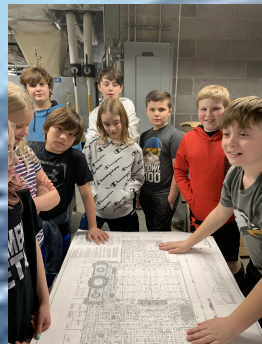


Investigating Energy Inside Our School

The Energy Eagles flew into the mezzanine of our school building to investigate our schools energy source. We learned our school uses **GEOTHERMAL** energy! It made our energy hearts happy to know that we are using a non renewable energy source!



We also looked at our schools blueprints to determine how the lighting and electrical outlets are arranged. We discussed AC and DC electrical circuits!



Goal 1

Learning about Solar Energy and Solar Panels



In each picture you can see our BES energy team testing miniature solar panels on our school playground to decide where the optimal location would be to put a solar panel.

Solar panels collect clean, renewable energy in the form of sunlight and convert that light into electricity which can then be used to provide power for electrical loads.

Researching Disaster Preparedness Items Related to Renewable Energy!

Once we understood more about renewable energy, we decided it was time to look for items that would be useful to our community in the event of another natural disaster.



Items That We Found That Would Be Helpful:

- Solar & Hand Crank Radios
 - Solar & Hand Crank Flashlights
 - Portable Washing Machines
 - Solar Portable Chargers
- And a lot more!



Goal 1



Making Pamphlets



Why?

We made pamphlets so that each person that got a donated item would know about the item they had been given.

Who for?

These pamphlets were given to students and people in the community that received one of the donated natural disaster preparedness items.

What's included?

Part of our team wrote explanations about solar panels and how they collect solar energy and transform into electricity. We also told that is a renewable energy source and that when it ran out of energy to simply put the solar panel in the sunlight to recharge!

Other members of our team wrote about hand cranked electricity and process in which electricity was generated simply by turning the crank on the item.

A hand crank is a gear motor. It has permanent magnets and a heavy coil of wire inside. To use it you simply turn the crank to start charging the phone's batteries. While the voltage generated will vary depending on how quickly you turn the crank, built-in voltage regulators will maintain a steady current. The longer you crank, the more power you generate. These items were donated to The BES Energy Eagles



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These items were donated to us the Energy Eagles!!! Thank you so much for all of your help!!!!



Goal 1

Goal 2: Spreading the Word About Our Project! Asking for Donations!

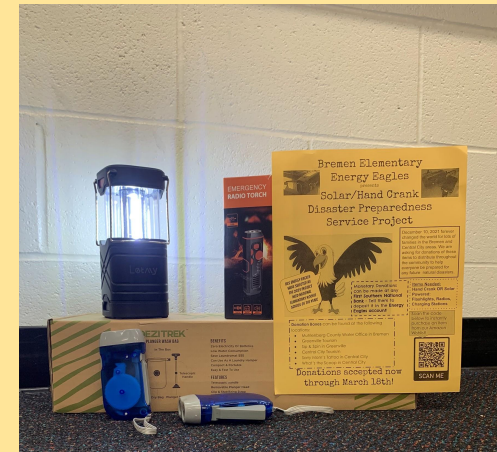
Renewable Energy Disaster Relief Fliers

We researched on Amazon and created a wishlist of items that we felt would be helpful to people that are impacted by severe natural disasters.



These fliers were posted around Muhlenberg County so that everyone could see that our energy team planned to help the community that we love. The fliers included a description of our project, how they could donate money, where they could take their donated items throughout the county, and a QR code to make a quick purchase directly from our Amazon Wishlist.

Here is one of our fliers with a few of the items that were donated.



The donation boxes were used to help get donations in case of another natural disaster.

Donation Boxes

LOCATIONS

- Muhlenberg County Water Office in Bremen
- Greenville Tourism Office
- Sip & Spin in Greenville
- Central City Tourism Office
- Sorry Mom's Tattoo in Central City
- What's the Scoop in Central City

We all worked as a team to make a colorful and eye catching design.



Goal 2

Energy Eagles take to the air...by radio!



Writing Our Radio Public Service Announcement

Once our PSA group was created, we flew to work writing our script. We knew the important information that needed to be included. Now we had to write out words and add some eagle pizzazz to our information. We assigned parts and practiced a lot to get it just right! We were able to record our whole commercial in one take! It was really cool to hear our voices on the radio!



*Recording for our radio debut! Press the play button to see a video of us recording our PSA!



*Writing and practicing our PSA



Goal 2

Here comes the donations!

Most of our donations were bought directly from our Amazon Wishlist! We did receive money donations which were used to buy more items from our list.



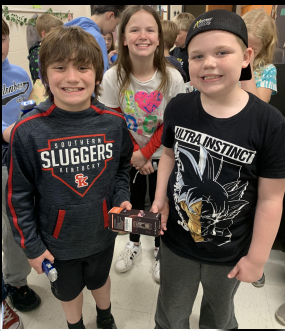
We collected a total of over

60

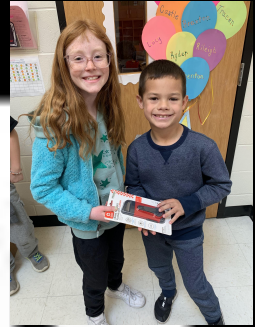
different items!

Goal 2

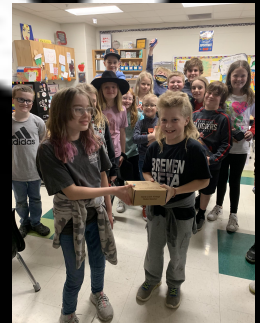


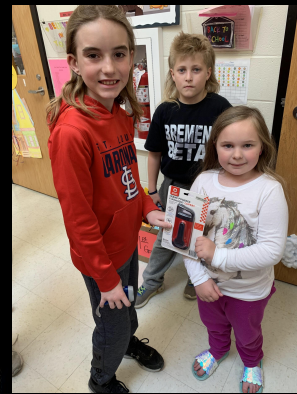
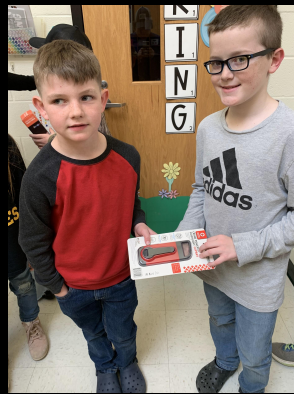


Even though most of our homes were not destroyed by the tornado, we all have someone we love and care about that did lose their homes or loved ones. We wanted to share energy love to let them know that we care!

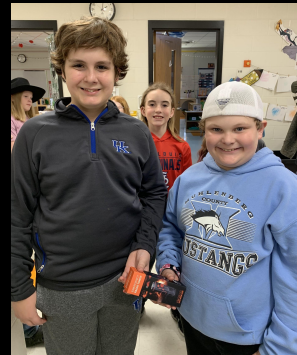
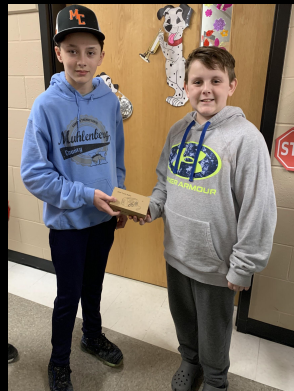
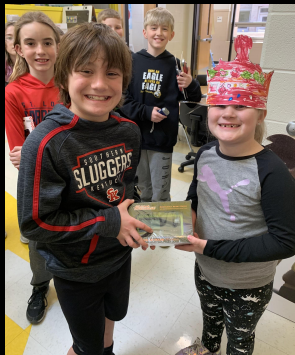
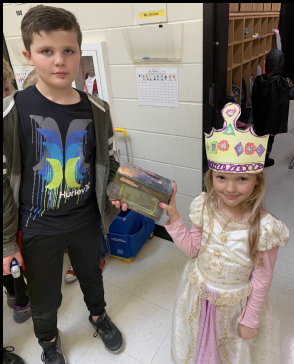
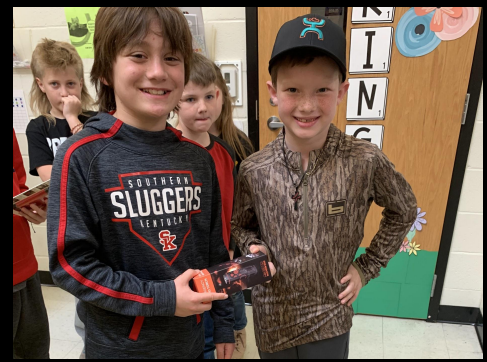


Goal 3 - Sharing Energy Love to Our Friends and Community





CA! CAW!



Goal 3



Distributing Items to the Bremen Community

All of the items that people have donated to the Energy Eagles were distributed to the community members that were impacted by the tornado. They have appreciated the items that were donated.

The Energy Eagles hope that the items that were donated and distributed make our community feel safer and more prepared for any future natural disasters.



Students presented items to Mrs. Ashley Romans (Bremen Elementary Family Resource Coordinator) to distribute to community members.



Goal 3

The Community Energy Response Team (Energy Eagles) Reflects on our Journey this Year



As a team, we learned that energy comes in many different forms. Sources of energy can be renewable or nonrenewable. We learned that our school is doing our part by using geothermal energy! One of our goals as a student energy team is to spread awareness about energy conservation and efficiency. Our project this year met this goal and more! We were able to help our community be prepared for any future natural disasters. Our team is amazing and our year together has been epic!