

Teaching, Learning, Sharing

A.K. Suter Elementary

Category: Elementary

Advisors: Deborah Pate and Cindy Bradley

When we began teaching the *NEED* program at Suter Elementary seventeen years ago, we never imagined the impact it would have on the future of our students and our community! We are pleased when former students write to us about their future as environmental engineers, or how they have designed their homes to be energy efficient. This makes us proud as we continue to teach about alternate energy sources.

This year we began by teaching students as much as we could using the energy resources from *NEED*. Students loved using the solar oven, making wind turbines, and were amazed at the solar panels. We invited the mayor of our city, Mayor D.C. Reeves into our classroom to demonstrate the many *NEED* activities we had done, and we asked questions about what our city is doing to conserve energy! To increase energy awareness in our community, we made placemats for a popular restaurant, designed bookmarks for the public library, put energy conservation messages on grocery store bags, and put an energy message on a popular grocery store marquee for everyone to see. Our energy conservation efforts continue to grow each year and once again we feel that we have accomplished our goals to teach others about energy the *NEED* way.

Goal 1: Increase Student Awareness Of Alternative Energy Sources.

Energy Content Activities:

1. Mrs. Pate and Miss Bradley will work together to teach 3rd, 4th, & 5th grade students about energy conservation.
2. Students will participate in hands on activities using NEED resources.
3. Students work together in small groups as they conduct experiments.
4. Parents and guest speakers will assist in student learning.

Student Leadership

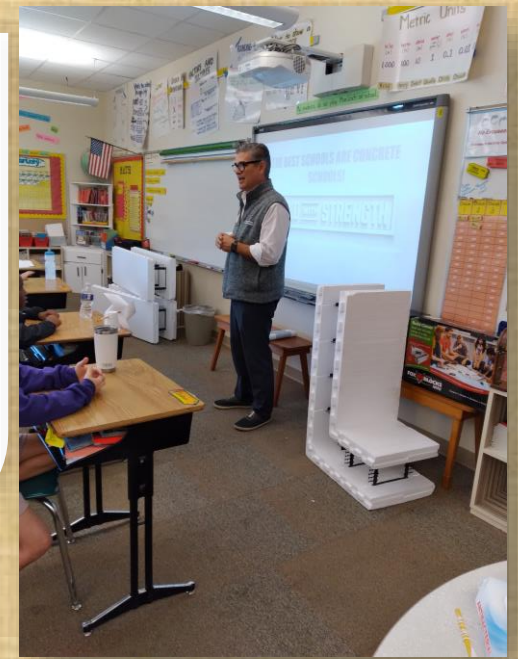
1. NEED students will plan, organize, and assist others in small group activities.

Resources

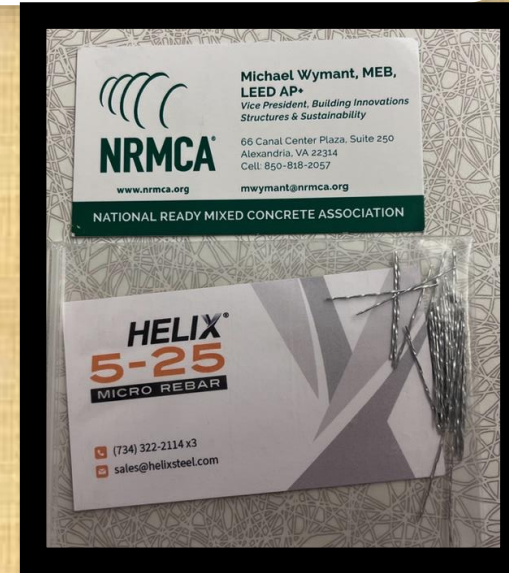
1. NEED Solar Kit
2. Energy from the Sun books
3. Wonders of Wind books
4. NEED Facebook page/www.NEED.org
5. NEED Energy on Stage book
6. NEED Science of Energy

Evaluation/Results Achieved

1. Class discussions have shown that students fully understand energy education.
2. Outcome of experiments resulted in student achievement and love of energy
3. Student cooperation and interest in activities allow students to teach others
4. NEED evaluations show growth in energy education
5. Science of Energy Elementary Poll.



We invited our Mayor in to talk with us about our Recycling Program and how our county is conserving energy and using alternative energy sources.



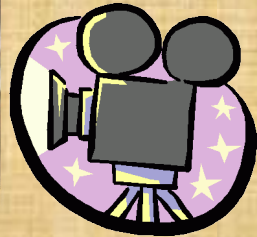
We took a field trip to the Roy Hyatt Environmental Center to learn how they conserve energy and help with land conservation.



We invited Mr. Wymant, VP of Building Innovations Structures & Sustainability, to talk with us about energy efficient building with Insulated Concrete Foam.

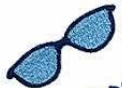
LIGHTS, CAMERA, ACTION!

We performed Harry Potter and the Windy Chambers for several classes at school!

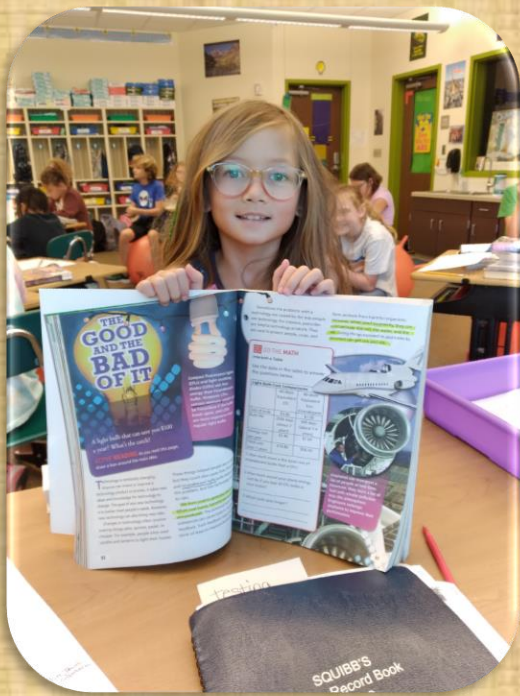


ICF kit donated by a parent.
Students loved building sustainable,
energy efficient structures.




No Autographs,
please!

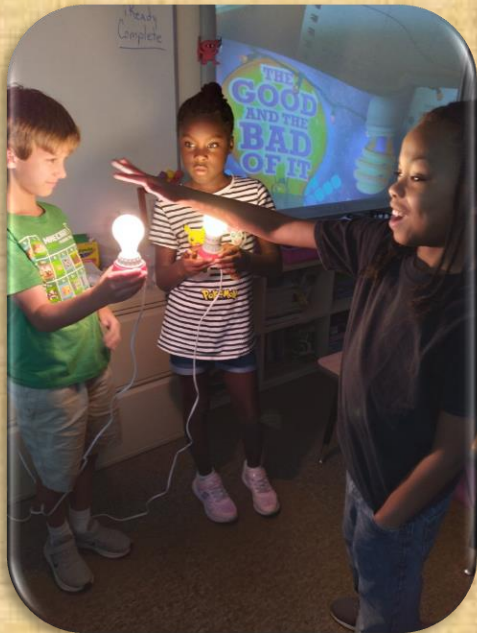
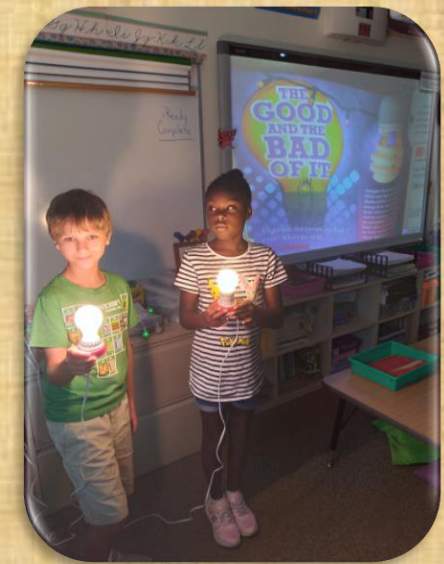


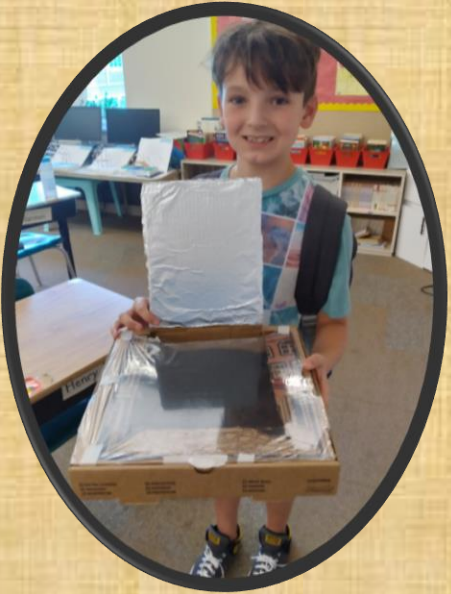


Hover over the picture below to hear Colton teach our Mayor about saving energy.



We learned about energy efficient light bulbs. We even taught the Mayor about them!



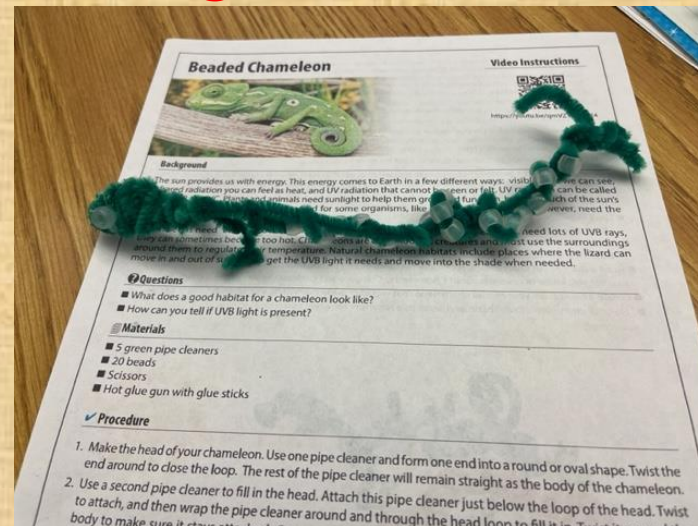
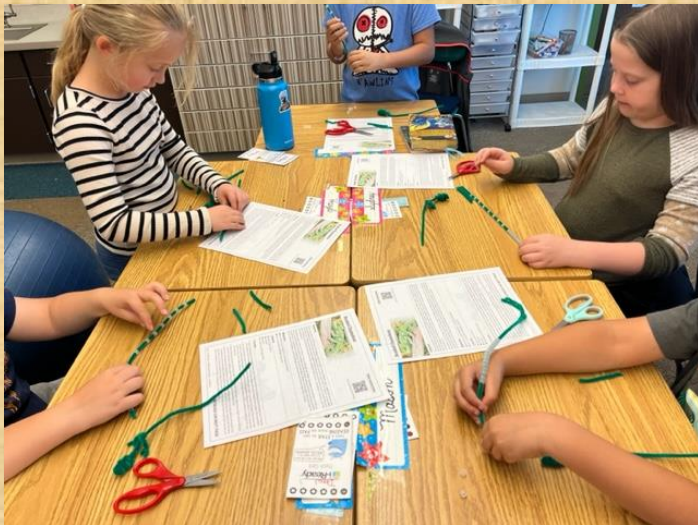


Who could resist
making cookies
using Solar
Energy with our
Solar Ovens!





UV beads were so much fun! We made bracelets and shared them with other classes. We LOVED making chameleons!



NEED provided us with fun activities!



Solar Panels

Watch our races below!





Great Energy Rock Performance!!

We learned about different types of energy through Rock Music! We made our own instruments and performed for several classes at our school!



THE 10 ENERGY SOURCES	
RENEWABLE Fuels that can be easily made or replenished, we can never run out of renewable fuels.	NONRENEWABLE Fuels that cannot be easily made or replenished, we can run out of nonrenewable fuels.
BIOMASS Anything that is alive, or anything that was alive a short time ago is called biomass. Trees, crops, garbage, and animal waste are all biomass. Most of the biomass we use for energy today is wood.	COAL Coal was formed millions to hundreds of millions of years ago from plants. Coal is often shiny, black rock. Coal is a fossil fuel that we burn for energy.
GEOTHERMAL Geothermal energy is heat from inside the Earth. The inside of the Earth is very hot. Sometimes this heat comes near the surface. We can use this heat to warm our houses. We can generate electricity with it.	NATURAL GAS Natural gas is a mixture of gases we can cook, heat, or burn. We often add an odor to it so we can smell it. There is a lot of energy in it. You can burn it to make heat. Natural gas is a fossil fuel.
HYDROPOWER Hydropower is energy created by moving water. Moving water has a lot of energy. We use that energy to generate electricity.	PETROLEUM Petroleum is a liquid that is found underground. Sometimes we call it oil. Oil can be as thick and black as tar or as thin as water. Petroleum is a fossil fuel that has a lot of energy we release when we burn it.
SOLAR The sun provides lots of energy to the Earth. We call it solar energy. It comes from the sun to the Earth in rays. The energy from the sun makes corn, wheat, and other plants grow.	PROPANE Propane is the gas we use to fuel our backyard grills and water heaters. You cannot see it, smell it, or taste it, and you can't burn it to produce heat energy. Propane is a fossil fuel.
WIND Wind is moving air. We can use the energy in wind to do work.	URANIUM Uranium is a mineral found in rocks in the ground. We use uranium atoms to release energy in nuclear power plants.
*FOSSIL FUEL: Turned into hundreds of millions of years ago from the remains of living organisms. The plants and animals stored their energy when they were alive from the sun. It was stored in them when they died.	



Wonders of the Wind

We made
wind turbines!

VIDEO BELOW!



Learning about renewable & nonrenewable resources

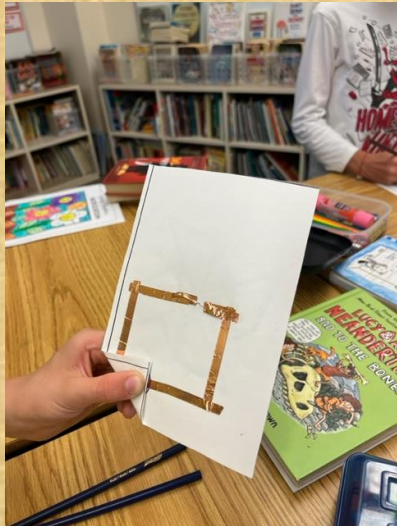


Watch our
video here!



We helped out with our school's Science Team to teach kids about energy. We placed 1st and 3rd at the competition!





Goal 2: Increase Community Awareness By Sharing What We Have Learned.

Energy Content Activities

1. Students will decorate “Energy Savers” grocery bags for Publix and Apple Market encouraging recycling.
2. Students will make bookmarks with energy messages for local our public library and our school library.
3. Students will design/decorate energy placemats for Georgio’s Pizza, a popular local restaurant.
4. 3rd/4th/5th grades will invite our Mayor, D.C. Reeves to our school to learn what our city is doing to save energy and to show him our energy activities.
5. Students will share NEED activities with other classes at our school.

Student Leadership

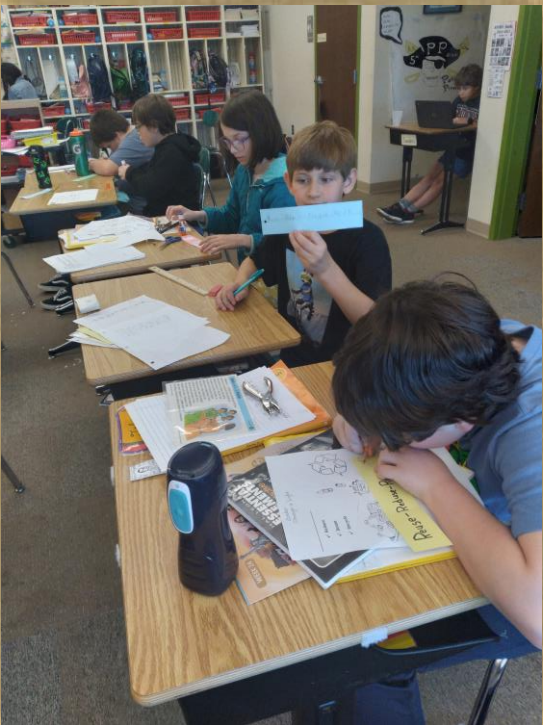
1. NEED students will teach other students about energy.
2. Students will lead group activities.
3. Students will educate their families and involved them in activities.

Resources

1. NEED Solar Kit
2. Energy from the Sun books
3. Wonders of Wind books
4. NEED Facebook page
5. NEED Energy on Stage book
6. NEED Science of Energy

Evaluation/Results

1. Student participation in hands on activities resulted in students telling others about energy.
2. Project assessment by teacher resulted in knowledge of energy
3. Student interest in hands on activities encourages students to share information with others.



This public library
has 3,000-4,000
visitors per week!

We made bookmarks
for our local public
library **TWICE** this year!
We focused on
Reduce, Reuse,
Recycle!





Over 10,000 cars EACH DAY travel past this sign on our busy Scenic Hwy.



We decorated grocery bags for Publix and Apple Market encouraging people to recycle and be cautious with their energy usage.



This Publix has about 5,000 customers A DAY! They loved our energy messages.



Apple Market gets 1,000 customers a day to see our messages.



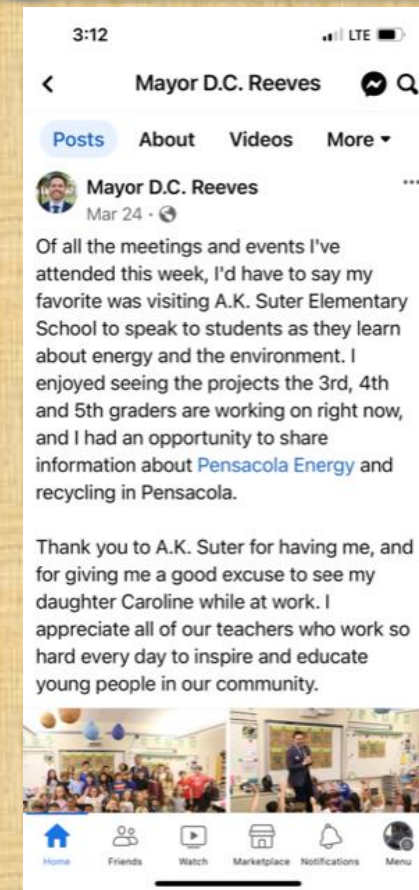
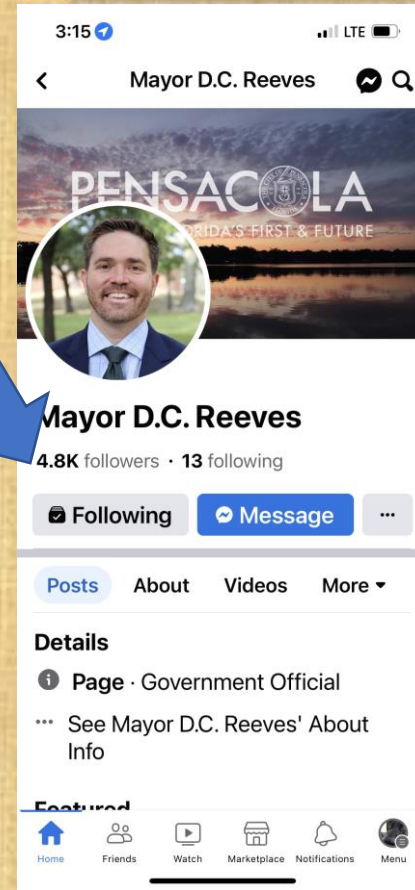
Placemats for our favorite pizza restaurant encouraging recycling!!



These laminated placemats see about 500 customers A DAY!



We've gone VIRAL!!!



This has been a busy year of teaching energy conservation. We have spread the word near and far, and seen results when our students grow up to be environmental engineers and protectors of our environment. Thank you to NEED for designing an exciting hands-on curriculum for students to learn about energy.

Thank you from A.K. Suter Elementary!