

Northview Elementary

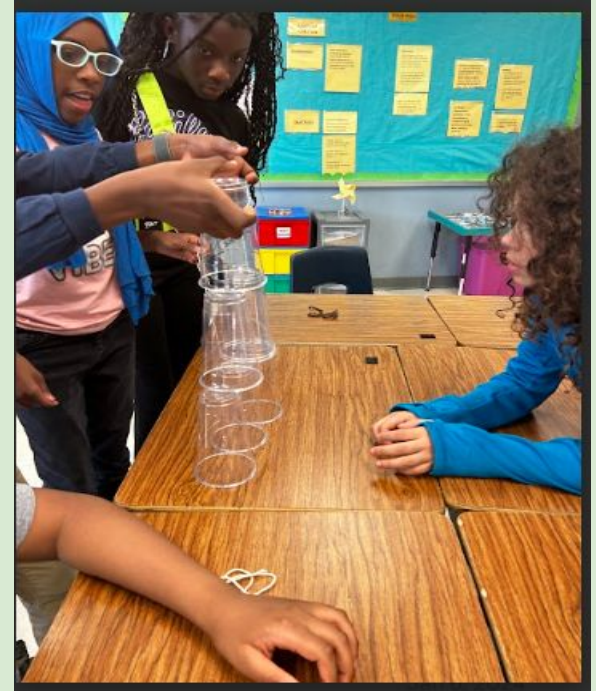
Energy Crew at Work

Student Green team members recognized the need for school wide recycling, and identified rooms requiring recycling bins. The students created a presentation to promote daily recycling at the school, and students in Prek-5th grade are recycling and maintaining a share food table in the cafeteria. 5th graders were introduced to renewable and non-renewable energy sources, and the forms of energy. The students identified a hand generated flashlight as a model to understanding energy transformation. The school has a garden, and the student green team located areas that were sunny, showed partially shaded, or full shade, for planting purposes, using UV bead bracelets. Student Green team members learn about sidekick circuits and learned how light transmitting diodes work. A group of English language learners in 5th graders, and the student green team members, learned about the water cycle actions, and explored each step through various events. The students gained new knowledge about the importance of water as a natural resource. Selected students represented 3rd-5th grade classes, and completed an energy audit with a NEED Project personnel, to learn energy conservation and energy efficiency. The school is planning an energy fair which will be led by the student green team members by May 2024



Advisor: Adebisi Babayemi

The Beginning: Student Green Team Members(SGT) Learning to Work Together



SGT is completing a No-Hands Cup Stacking Challenge to develop teamwork skills, and work on delegation, leadership, negotiating, problem solving, critical thinking, and collaboration.

Goal 1: To maintain school wide recycling

Activities and Tasks

- Received principal's approval and support for schoolwide recycling
- Student Green team(SGT) members completed a survey for recycling materials need
- SGT received instruction on recycling from the NEED curriculum
- The school requested and received recycling materials, and SGT distributed them to classes and offices
- SGT created a presentation to promote regular recycling, and shared the slides with the school
- Every grade level is recycling daily, and recycling classroom representatives are depositing items to a central location for pick-up

Energy Content and Resources

- Using and Saving Energy Guide Book from NEED Project
- Energy website www.Need.org
- Prince George's County Public Schools' (PGCPS) Green Center Personnel Support
- PGCPS Recycling Dept's Support

Student Leadership

- 625 students are engaged in the task
- 10 student Leaders supported their peers

Evaluation

- SGT assessed their learning and shared with the school
- A Google Slide presentation was created by SGT to support the knowledge gained

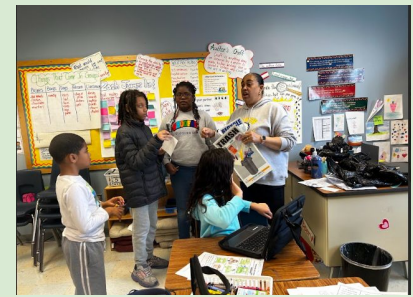


Camp Schmidt staff visits to teach and support the school's recycling efforts in the cafeteria.

3rd graders are depositing recycled items in the classroom, and from there to the recycling depot for collection.



Student Green Team members are sharing a recycling bin and posters for trash and recycle with a 3rd grade teacher and her class

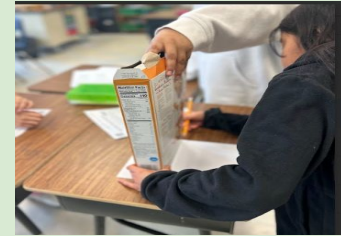


The 3rd grade teacher is sharing the recycling bin received and the posters.



5th grade Student Green Team members are preparing to distribute recycling bins and posters to every classroom based on the survey above which they completed.

Room Number	Recycling Bin Available	Recycling Bin Poster Available	Trash Bin Poster Available
249	X	X	X
236	X	X	X
247	X	X	X
238	X	X	X
205	X	X	X
218	X	X	X
216	X	X	X
213	X	X	X
210	X	X	X
240	✓	X	X
244	X	X	X
220	✓	X	X
208	X	X	X
203	X	X	X



4th graders created a box pinhole projector from a cereal box, to watch the solar eclipse on April 8, 2024.

Goal 2: To gain awareness of renewable and non-renewable energy sources and the forms of energy

Activities and Tasks

- Student Green team(SGT) members read and identified the 10 energy sources
- SGT recognized the forms of energy by using a hand generated flashlight, for energy transformations
- SGT and a 5th grade class explored solar energy with a UV bead activity in the garden, and other outdoor areas
- English language learner(ELLs) planted and watched lettuce growing from an hydroponic garden using energy sources

Energy Content and Resources

- The 10 Energy Sources from NEED Project
- Energy Games and Icebreakers(Energy Sources)
- Science of Energy from NEED Project(Forms of Energy, Energy Transformations)
- Hand Generated Flashlight
- What is Energy?/Types of Energy-Energy for Kids: Renewable and Non-Renewable Energy/Types of Energy -Energy Forms-Energy Sources and Uses-Youtube videos

Student Leadership

- 46 students were engaged in the task
- 11 Student Leaders who engaged in the task will lead an upcoming energy fair with energy games

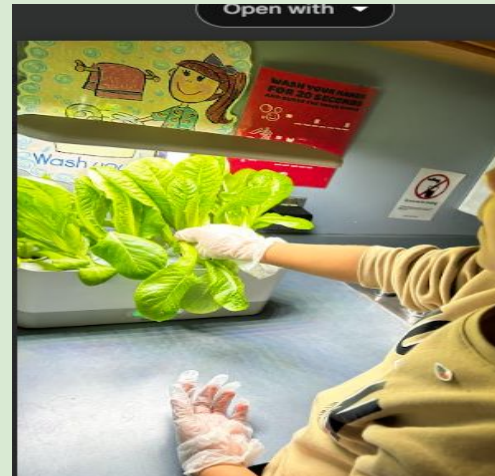
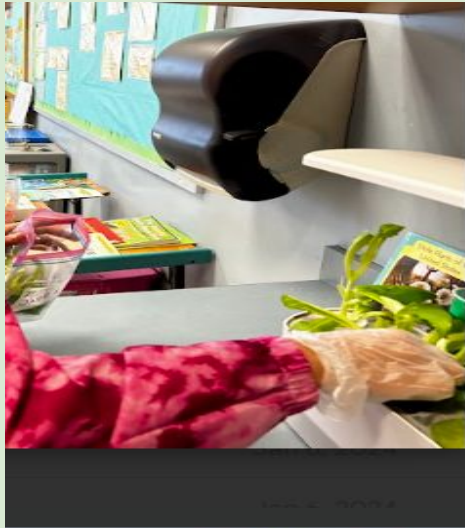
Evaluation

- SGT assessed their learning and engaged in teacher's questioning and peer discussions
- 5th grade students identified an energy source (solar), and an energy form (thermal) through observations made indoors and outdoors

form

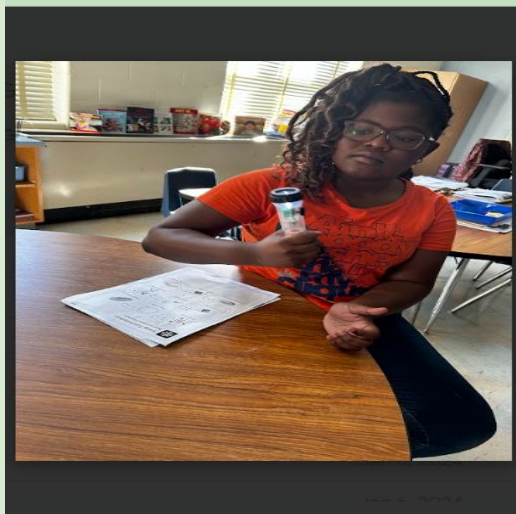


5th graders grew vegetables with a hydroponic garden. Students observed an energy form, thermal.





Student Green Team members are in the garden to identify sunny, partially shaded, and fully shaded areas of the garden. The information will be used to plant vegetables in May.



5th grade student experienced the use of motion energy to gain light from a hand generated flashlight,



5th grade students learned about energy transformations, and they all used the hand generated flashlight. The students were introduced to the UV beads activity, and they were ready to view it outdoors.

Goal 3: To learn about sidekick circuits and recognize how light transmitting diodes work

Activities and Tasks

- **Student Green team(SGT) members read and followed directions to create sidekick circuits**

Energy Content and Resources

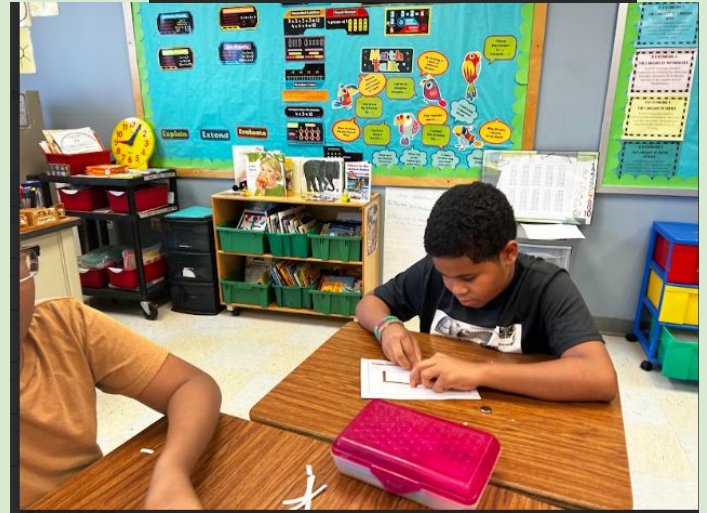
- **Sidekick Circuits Sampler by NEED Project**
- **The Power of Circuits-Youtube video**

Student Leadership

- **11 Student Leaders who engaged in the task will model the sidekick circuits at the upcoming energy fair**

Evaluation

- **SGT assessed their learning, and engaged in peer discussions, and teacher's questioning**
- **Students showed understanding of how light works**



Student Green team members worked on the sidekick circuits to show how light is transmitted..

Goal 4: To learn about the water cycle and its importance as a natural resource

Activities and Tasks

- Student Green team (SGT) members completed a Water and Energy KWL Chart
- SGT and a group of 5th grade English language learners (ELL) read and identified each step of the water cycle and learned it is an important natural resource
- Students watched videos to support the new knowledge
- Students completed a bottle water cycle experiment to observe the process
- Students represented the water cycle on a plate with illustration, to portray their understanding
- SGT used vocabulary words from the water cycle worksheet to complete a written explanation of the water cycle
- ELLs engaged in a total physical response (TPR) exercise to represent and have peers identify the water cycle key vocabulary words

Energy Content and Resources

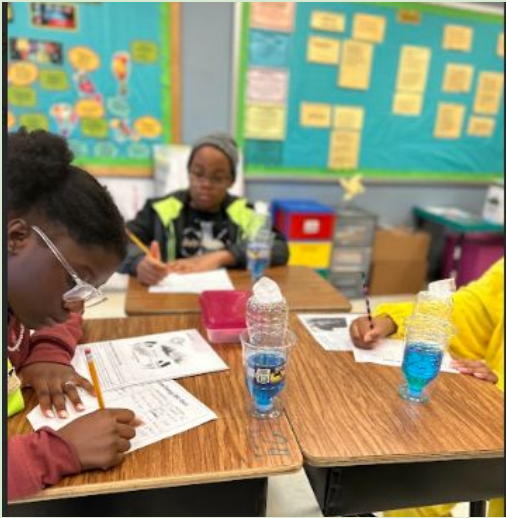
- Wonders of Water-NEED Project
- Water Cycle in a Bottle Experiment
- Water Cycle on Paper Plate Illustration
- The Water Cycle-YouTube video

Student Leadership

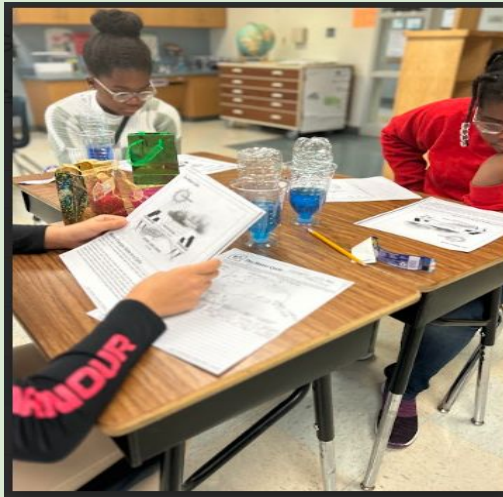
- 21 Students were engaged in the task
- 11 Student Leaders modeled the paper plate water cycle illustration for ELLs

Evaluation

- SGT assessed their learning through peer discussions, the water bottle experiment, water bottle illustration on paper plate, and the response to a writing prompt
- ELLs in 5th grade assessed their learning through their presentation of the water cycle key vocabulary words with TPR, the water bottle experiment, water bottle illustration on a paper plate, and a writing assessment with word bank



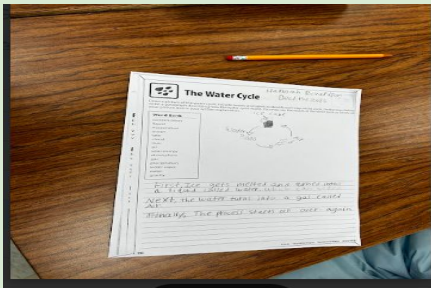
Student Green Team (SGT) members are responding to a the KWL chart after the bottle water cycle experiment.



SGT members are reading about the water cycle from the Wonder of Water guide.



The water cycle was depicted on a paper plate and the stages are labelled by a SGT member.



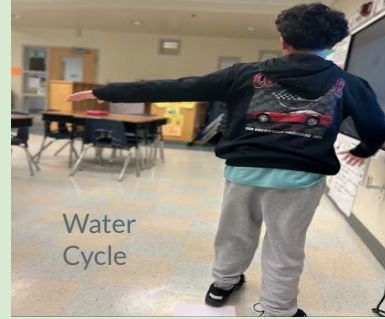
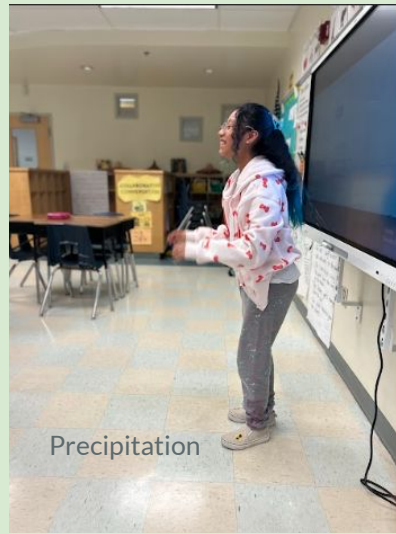
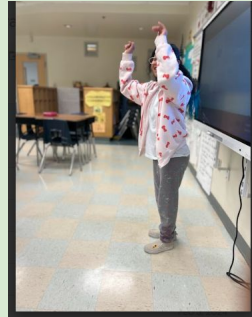
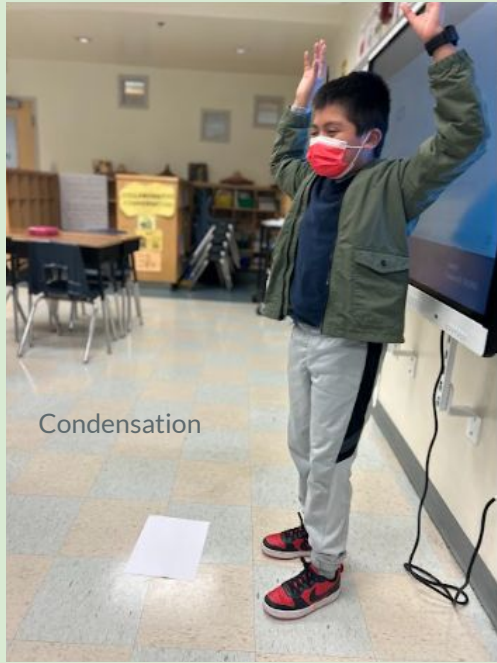
SGT member's writing response on the water cycle.



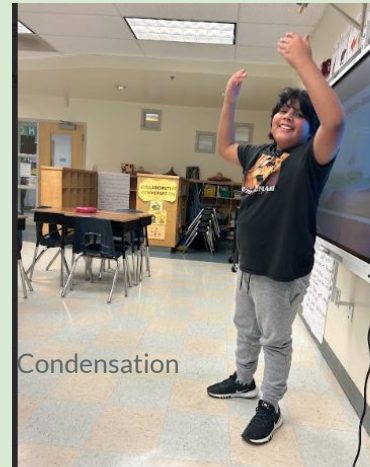
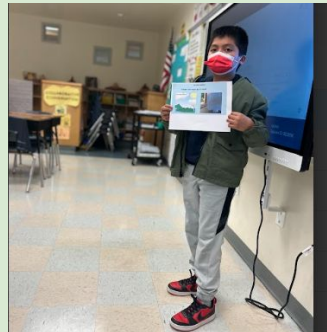
A 5th Grade ELL is labelling the water cycle bottle.



SGT member is reading to respond to the water cycle writing prompt.



5th grade English language learners applied total physical response to portray a stage in the water cycle. The peers guessed the vocabulary word. The presenter then read the meaning of the vocabulary word.



Goal 5: To engage in an energy audit to learn if our school is portraying energy conservation and energy efficiency

Activities and Tasks

- **24 students were selected to represent 3rd-5th grades**
- **Students met in the library, boiler room, and a classroom, for instruction**
- **A NEED personnel led the energy audit**
- **Students measured electricity and water temperature**
- **Students used measuring equipments and learned about an energy monitoring tool**

Energy Content and Resources

- **NEED Monitoring and Mentoring Guide**
- **Thermometer , Light Meter, and Kill A Watt Meter-NEED Project**
- **Student Audit Recording Form from School Energy Experts-NEED Project**

Student Leadership

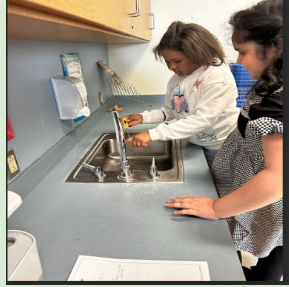
- **24 Students were engaged in the task**

Evaluation

- **Students successfully completed an Energy Conservation vs. Efficiency Worksheet to identify the terms**
- **Students completed a Student Audit Recording Form which informed them on energy use and waste at school**
- **Students will determine if the school is conserving energy after applying the Kill A Watt Meter to monitor energy use at a later date**



Student Green Team (SGT) members are in the boiler room learning about the different functions.



SGT members are checking the water temperature with a digital thermometer.



Students are receiving instruction . asking questions, and responding to questions about energy measuring and mentoring , from a NEED personnel.



A SGT member is using a Light Meter to measure light.



SGT are measuring objects with an Infrared thermometer.

