



# OC Green Team...

## Putting the *Green* Back on Galveston Island

Advisor:

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This school year has marked the 9th year anniversary since the creation of O'Connell's original **OC Green Team**. We have evolved, grown and made many changes over the years which has allowed for this year's project team to focus our emphasis on the promotion of a recycling culture in our school and community, while simultaneously finding ways to safely recycle observing Covid-19 protocols throughout our programs.

We have added new items which we recycle and reuse, not only are we recycling bottles and cans but have added grocery bags this year and we continue to collect newspapers for the local humane society. We have expanded our "Science Behind Recycling" program to include the incorporation of information on and actual collection of Nurdles on local beaches. We have shared what we have learned virtually with the community, helping to educate the community not only about the science behind recycling, nurdle collections, providing a place to recycle, incorporating education about the dangers of plastics in our ocean and climate change in our area, showing what they can do to make a difference in our community and our world. We have also continued to providing recycling pick up within our school and community through our relationship with the Galveston's own Farmer's Market when Covid-19 safety protocols have allowed, as well as added community events such as mass beach cleanups. We have promoted and expanded the idea of urban Gardening on the island, while sharing our garden's produce with those student's families in need. We have added a new raised garden to our gardening area. Each of the activities were proceeded by The Green Team participating in learning activities, field trips and virtual field trips to build our foundation of knowledge to enable us to share what we had learned with our community, both within school and beyond our walls to reach our community and those visiting for the events.



# Recycling Goals

- ❖ Goal: to promote a recycling culture throughout the entire school, providing more recycling bins , adding bins for materials not recycled before on our campus while getting buy in from the entire student body and staff while finding ways to keep it safer observing Covid-19 safety protocols while collecting and transporting recycling.





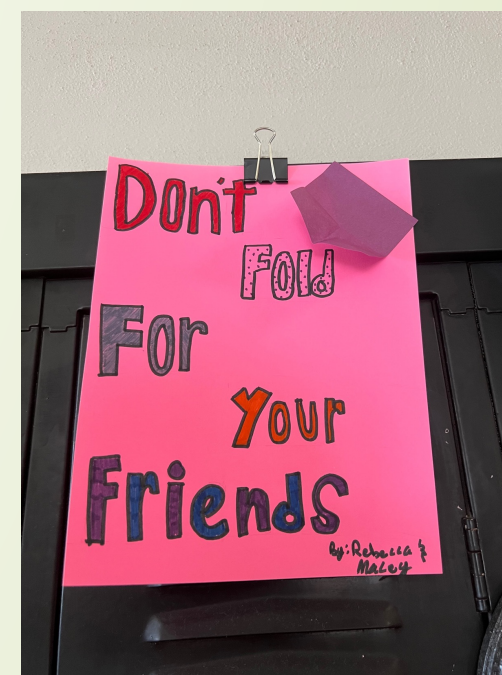
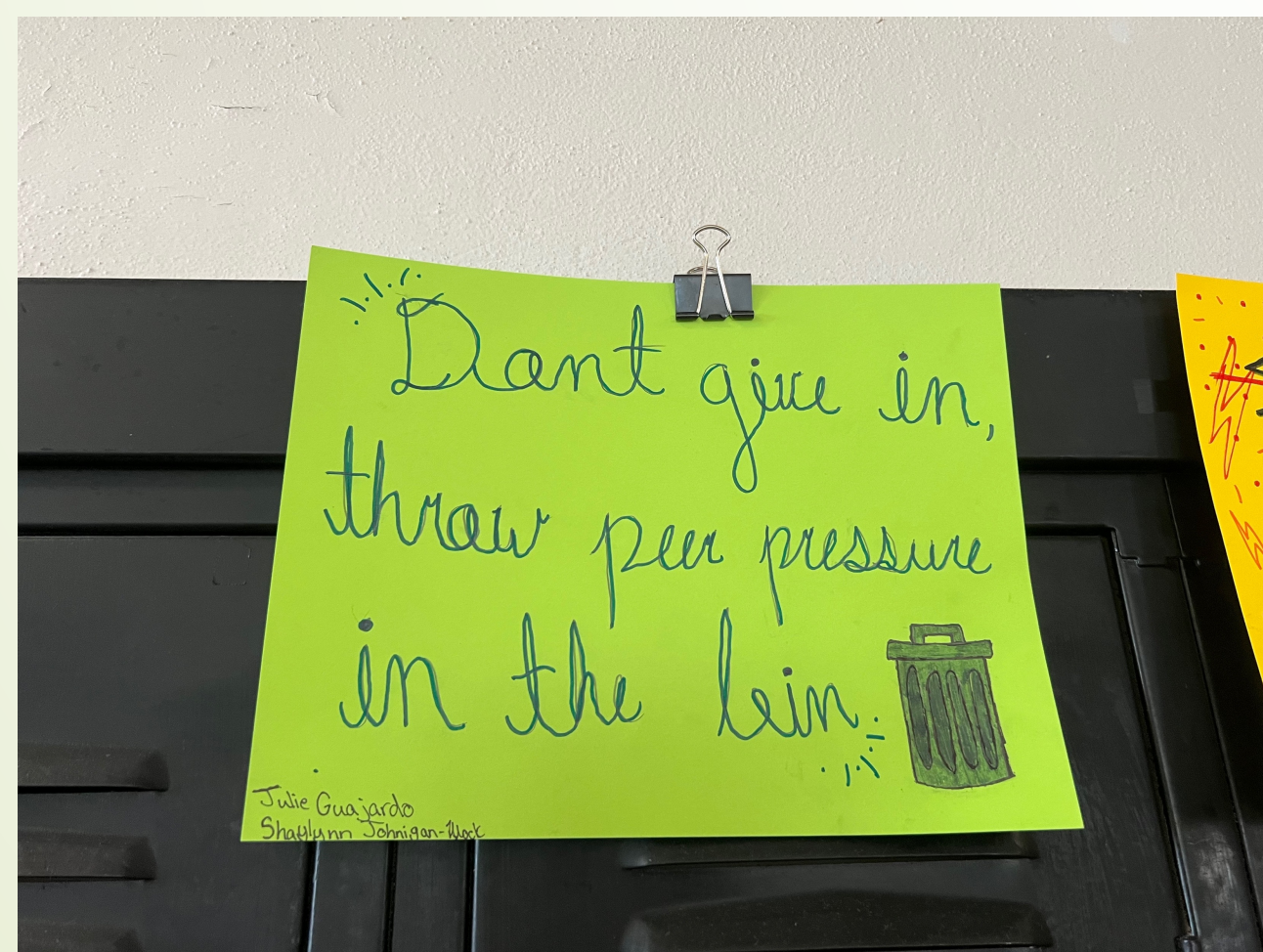
# Activities and Tasks

- ❖ Obtained permission from Principal and the School Board
- ❖ Student sign up to be a member of the OC Green Team
- ❖ Learned about the science behind recycling, sources and forms of energy and how they relate to recycling and to climate change in our area in order to build a background from which to teach others
- ❖ Field trips to The Ocean Star Drilling Rig Museum Job Fair and about how the petroleum for plastics is obtained, and Careers in the energy industry, Zoom meeting with a former NASA engineer to learn about energy usage during space travel and how the job as a NASA engineer transformed into a job in the petroleum industry. Zoom Meeting with American Chemistry Society representative to learn about recycling in Space during the Apollo program and about the future plans for the Moon and Mars.
- ❖ Zoom Career Expos with the Offshore Energy Center to learn about different careers available in the offshore Energy Field
- ❖ Team Members chose jobs (checking recycling, making sure they were emptied in a timely manner, checked to make sure covid-19 safety measures were in place, taking to the various facilities to recycle according to material etc...) later carried out their jobs.
- ❖ Obtained new recycle bins through Pepsico Recycle Rally to be placed in more sites around the school.
- ❖ Distributed recycle bins around the campus, in the classrooms, cafeterias, gym, outdoor playing fields, garden, hallways (recycle bins for cans, bottles, paper, and for k-pod coffee filters and compost)
- ❖ Put up signs to promote recycling, around and on the bins
- ❖ learn about Nurdles,
- ❖ Collect Nurdles on the Beach
- ❖ share information about nurdles
- ❖ Created a Displays about recycling (Posters, Door Decorations, Display case Designs)
- ❖ Manned displays at the Open House , students were on call during the zoom meeting style open house to answer questions about the Science Behind Recycling and why it is beneficial specifically to our school.
- ❖ Collected the recycling from the bins and delivered to the appropriate facilities
- ❖ Followed up with thank you notes to the visitors and guest speakers





- ❖ Designs for recycling posters , displays and display cases promote recycling and energy education. In conjunction with our anti bullying campaign. Start by caring for self, others and the environment. Created Video advertisements for Vehicles with alternative fuel sources

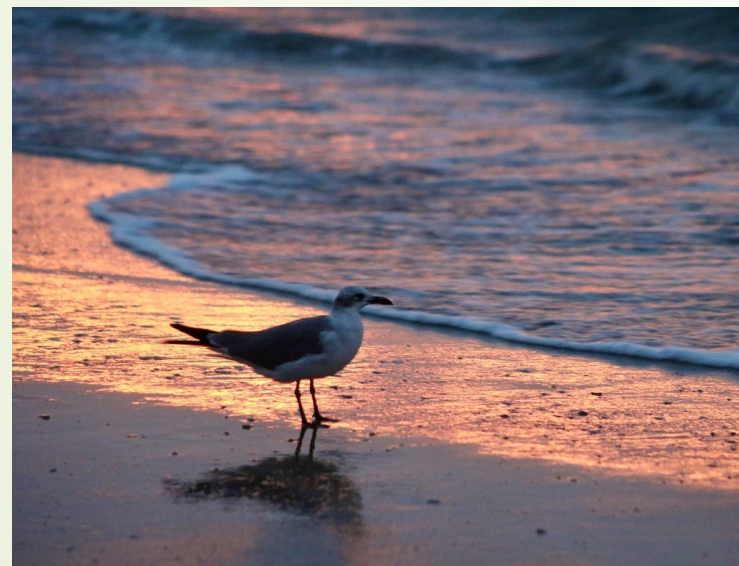




# Community Recycling Goals

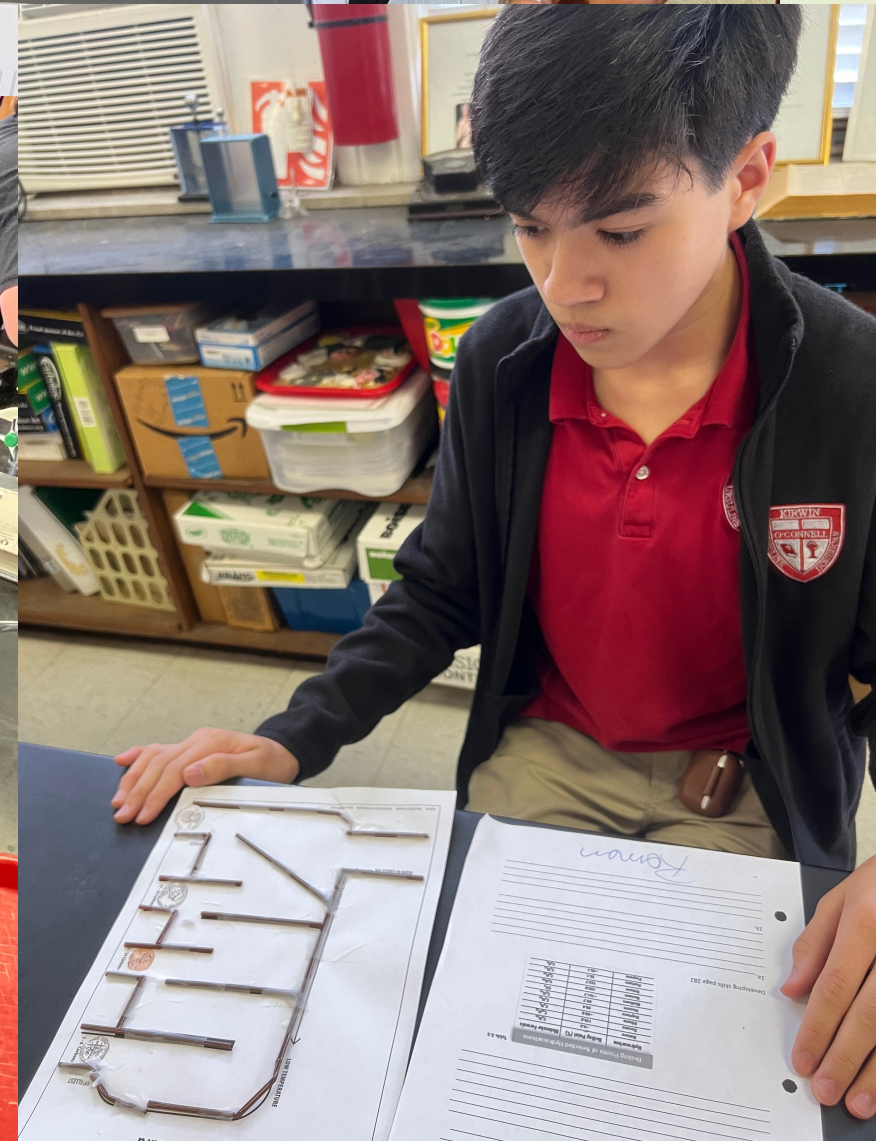
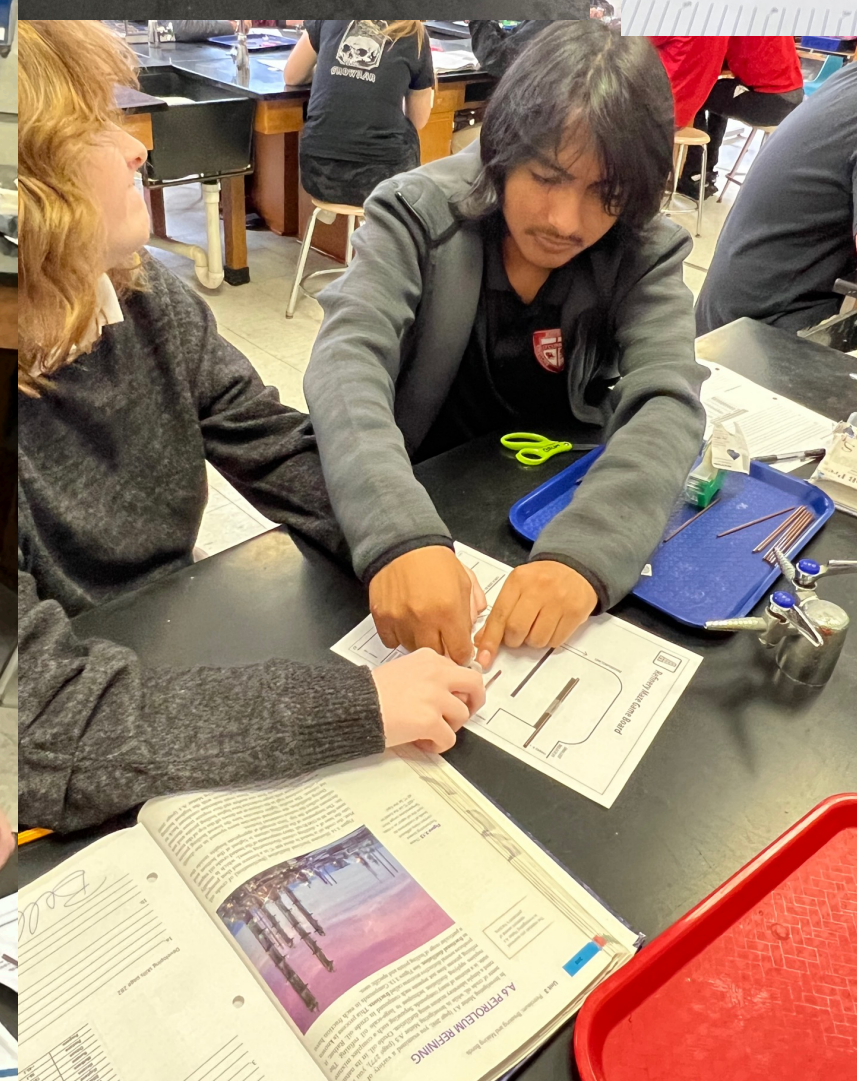
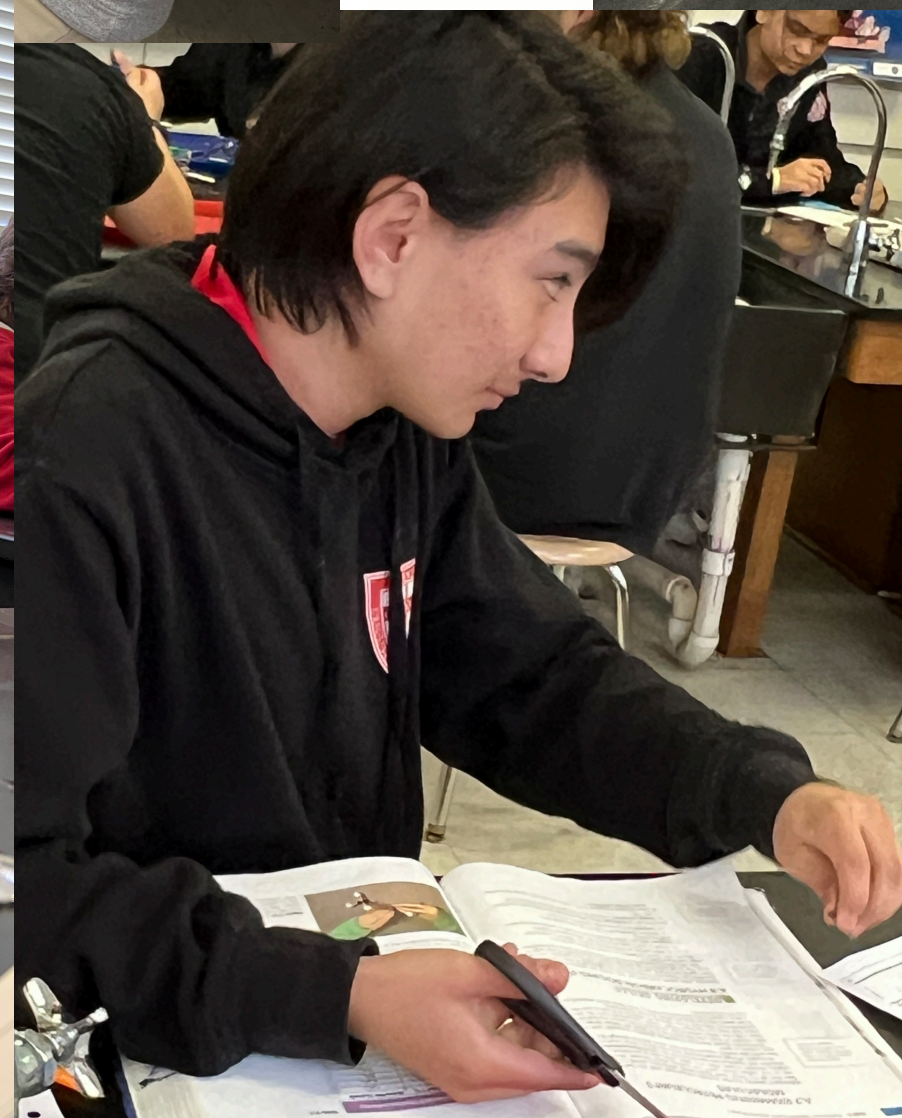
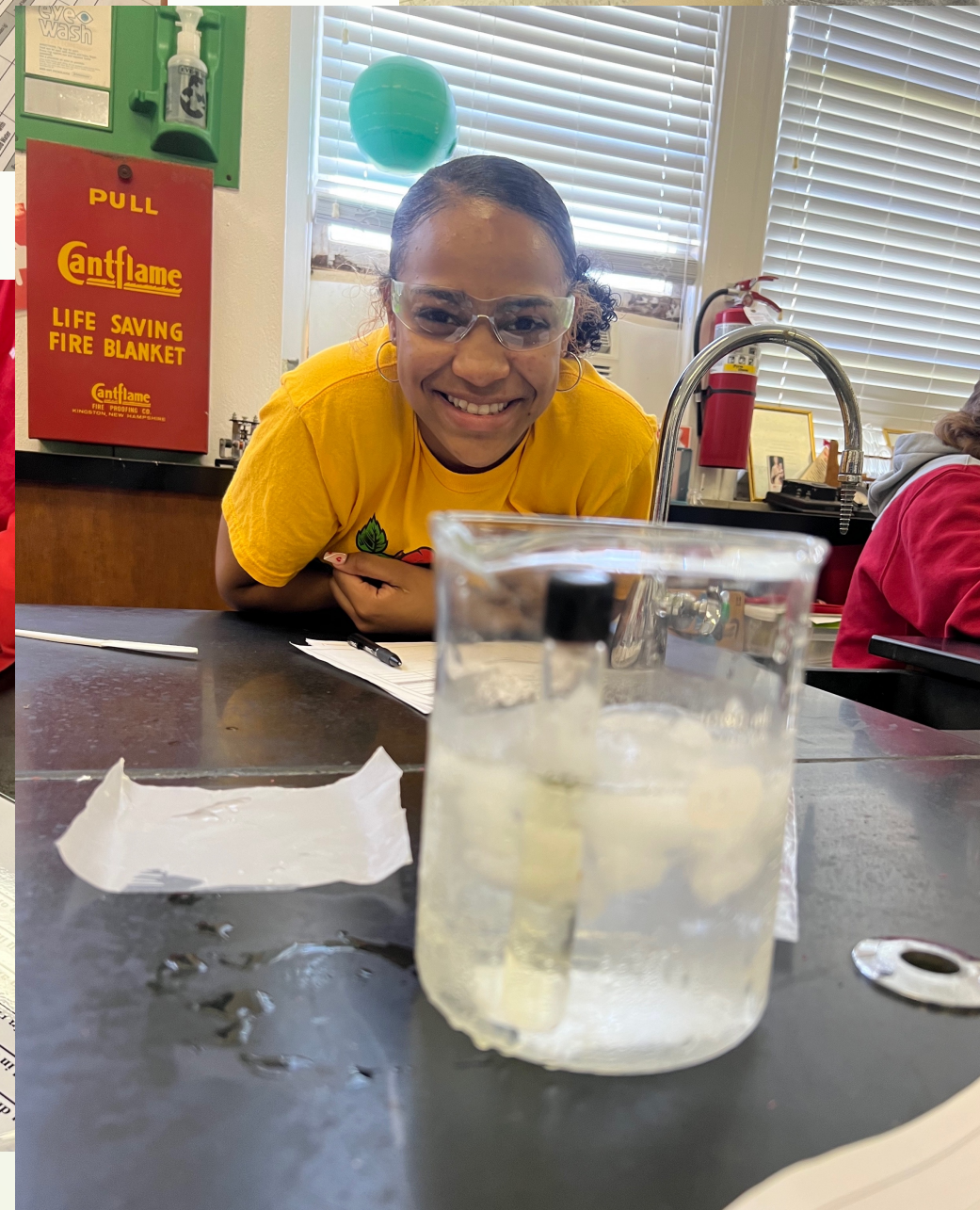
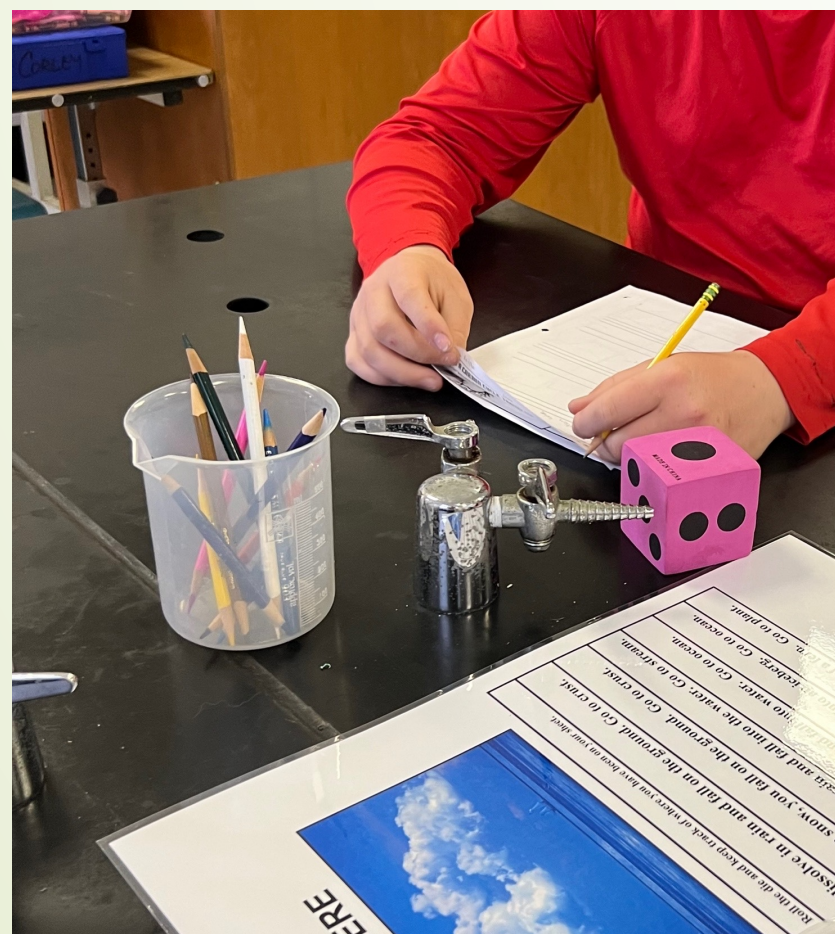
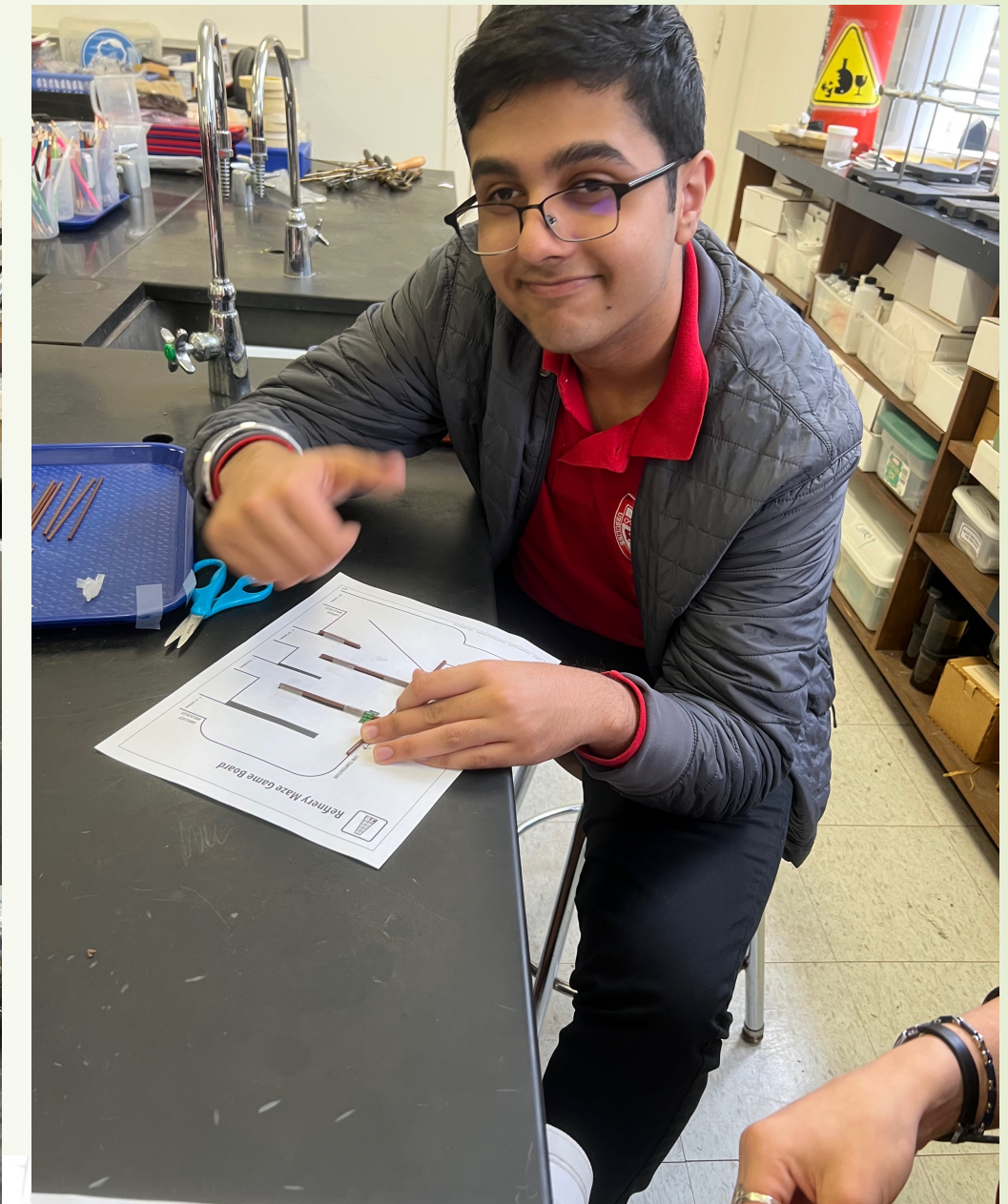
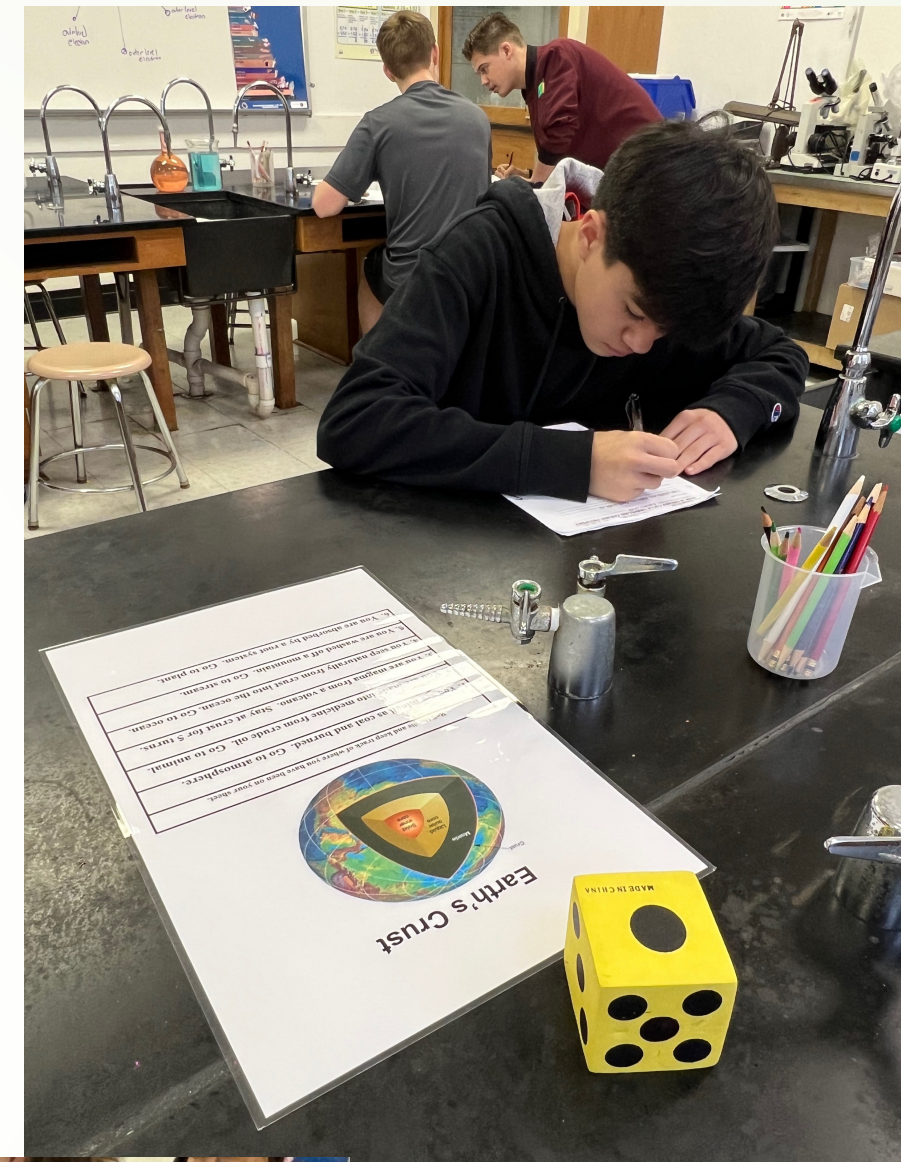
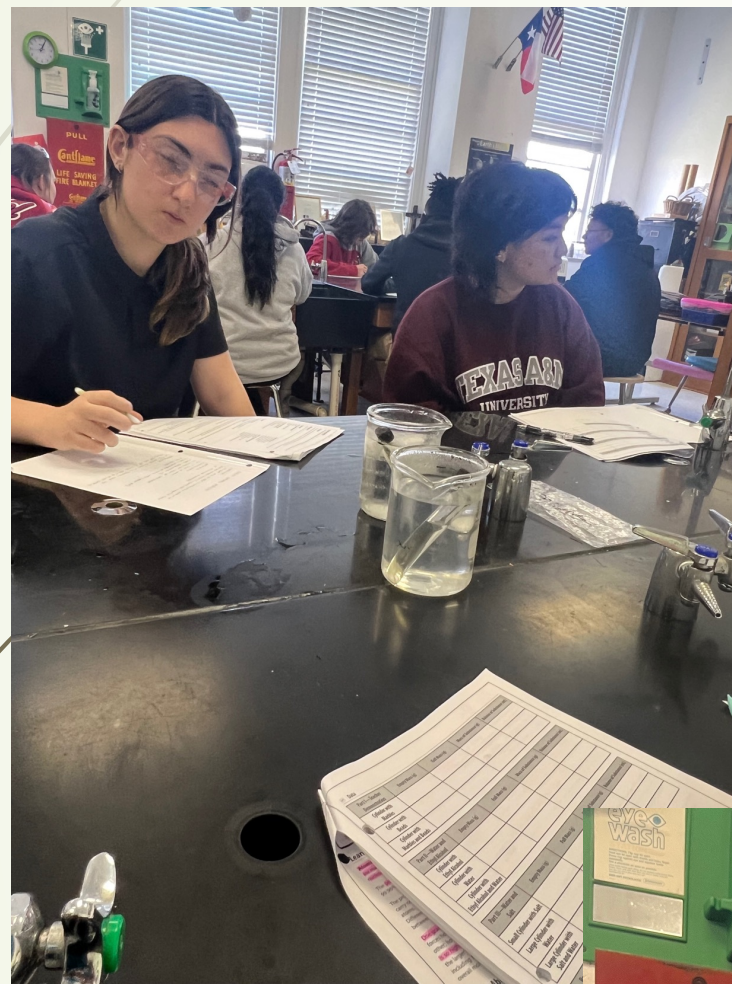


- ❖ To share information with the community about the science behind recycling, the problems of Nurdles on our beaches and promote recycling within our community



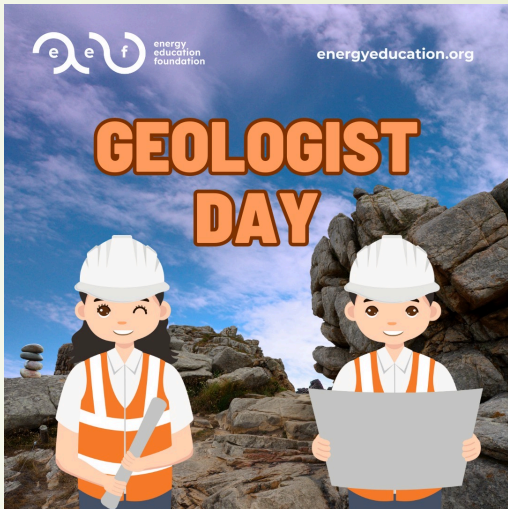


# Learning about Energy and the Carbon cycle





# Exploring Energy Related Career Opportunities participated in various virtual job fair and informational talks and did research online







# Garden Goals

- ❖ Use the outdoor Garden Classroom for more classes as a learning space , and increase our gardening area size by adding a new raised garden and starting our Music in the Garden Program
- ❖ Researching the best urban gardening techniques and crops to grow on the island while maintaining social distancing. Sharing what we have learned about gardening on the island especially with our research on soils done to put in the new raised garden area.





# Activities and Tasks

- ❖ Research urban gardening techniques to see investigate will work best on the island
- ❖ Build a new raised garden area to add to our gardening space
- ❖ Trying out the researched gardening methods testing them to see which work best in our school garden.
- ❖ Testing of soil with the Agriculture extension agency and Texas A&M to add soil to new raised garden area
- ❖ Master Gardeners and local farmers visiting in order to share knowledge and help evaluate the garden
- ❖ Coordinated with the community and gathered horse manure to use as fertilizer as well as expanding our worm farm and composting at school
- ❖ Gathered ashes from community campfires, using them to adjust the pH of the gardens soil
- ❖ Planted and harvested crops (researching and replanting after the hard freeze)
- ❖ Designed cooking classes that included urban farming techniques and taught attendees how to prepare the food grown
- ❖ Using Solar Ovens to prepare produce grown in the garden
- ❖ Sent home produce with students in need of food
- ❖ Making sun hats from newspapers and sharing hat making techniques while studying sun safety
- ❖ Added a new section to our school garden(put in new raised beds)
- ❖ Distributed food to those in NEED in conjunction with the local food bank and Catholic Charities
- ❖ Shared information at the open house
- ❖ Promoted more classes using the gardening space with our Music in the Garden

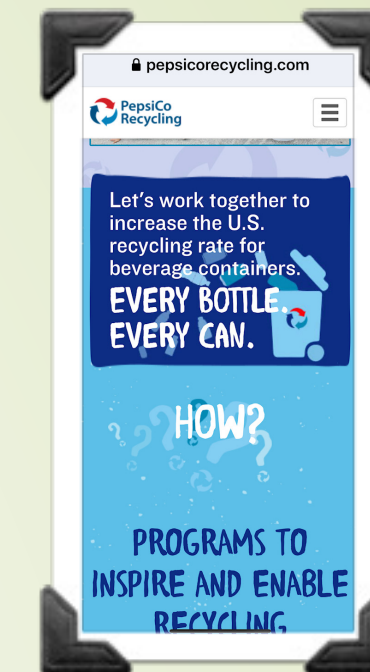
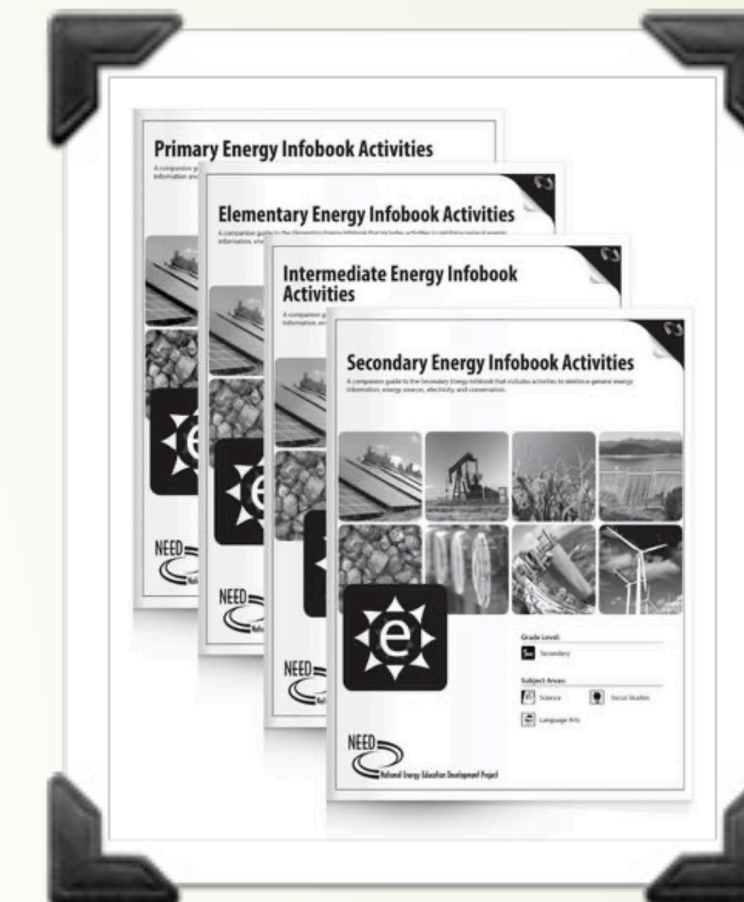
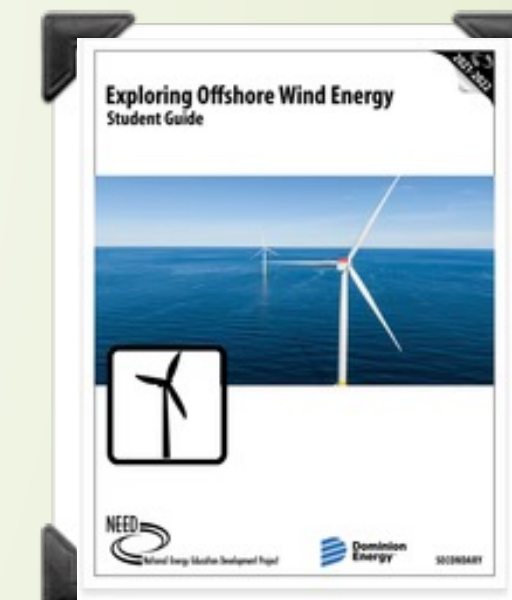
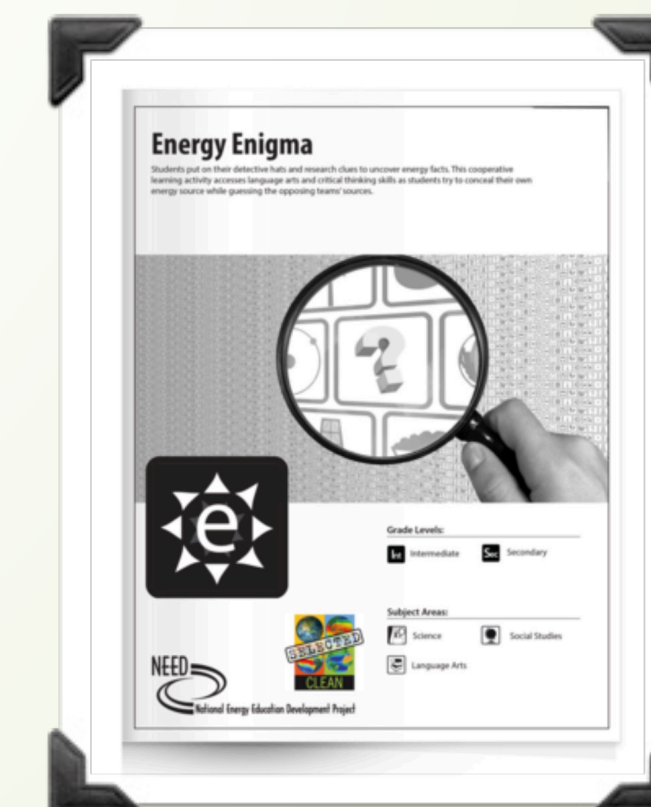
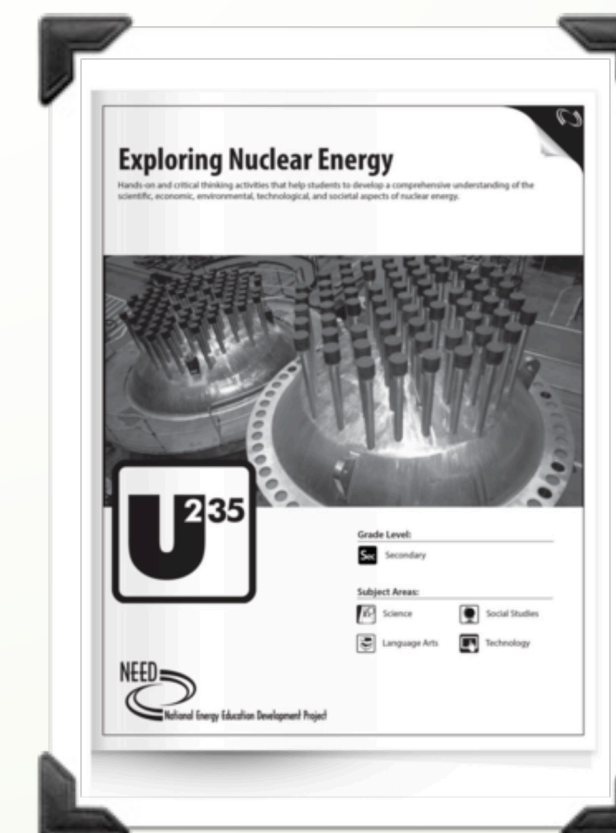




# Energy Content

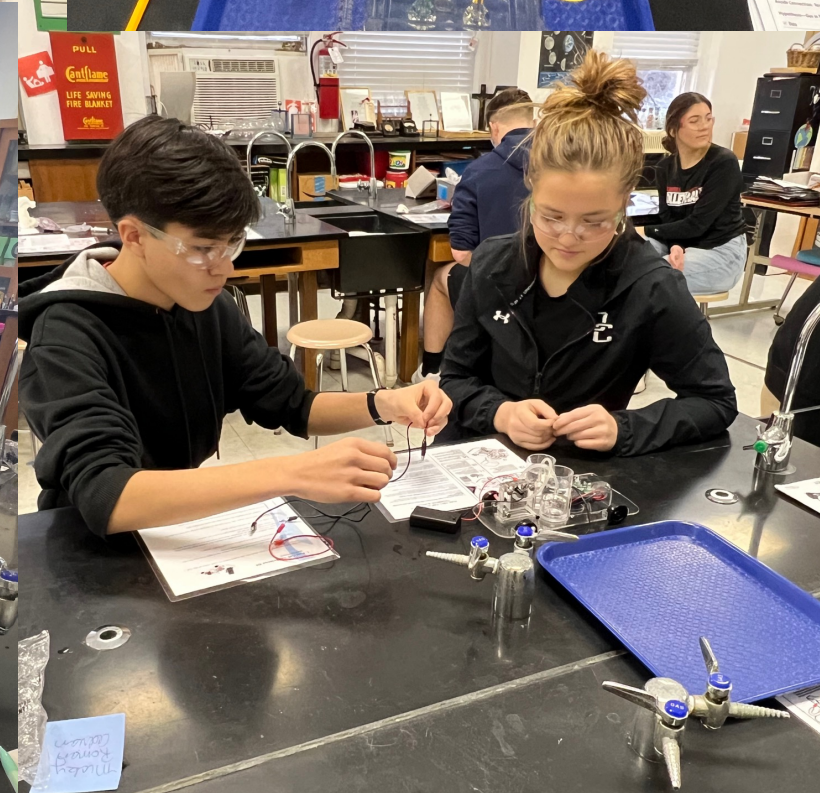
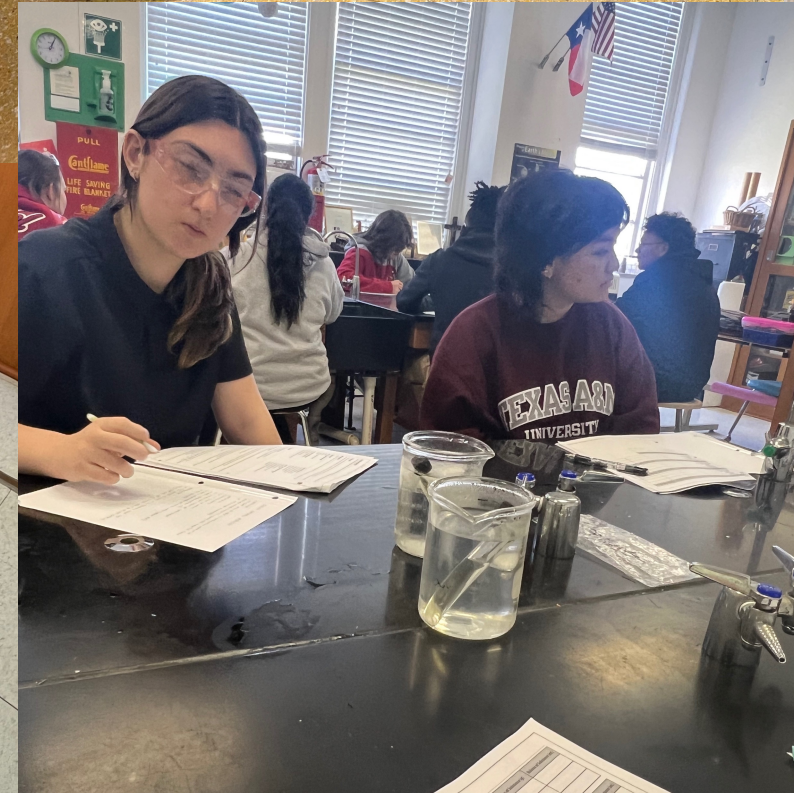
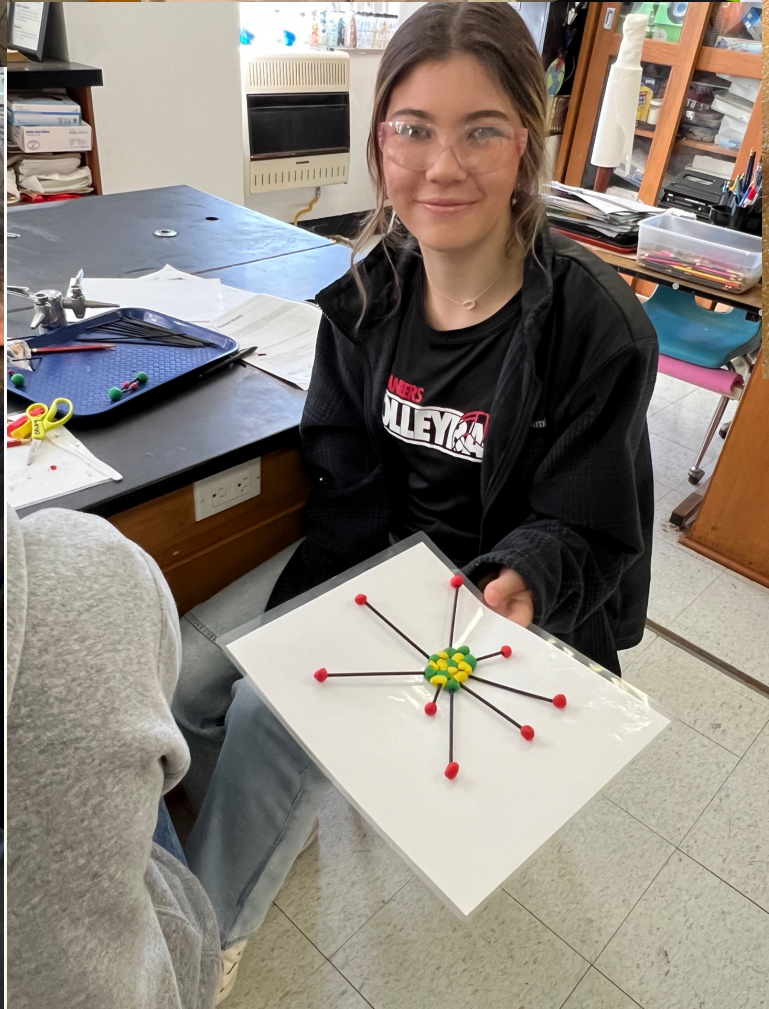
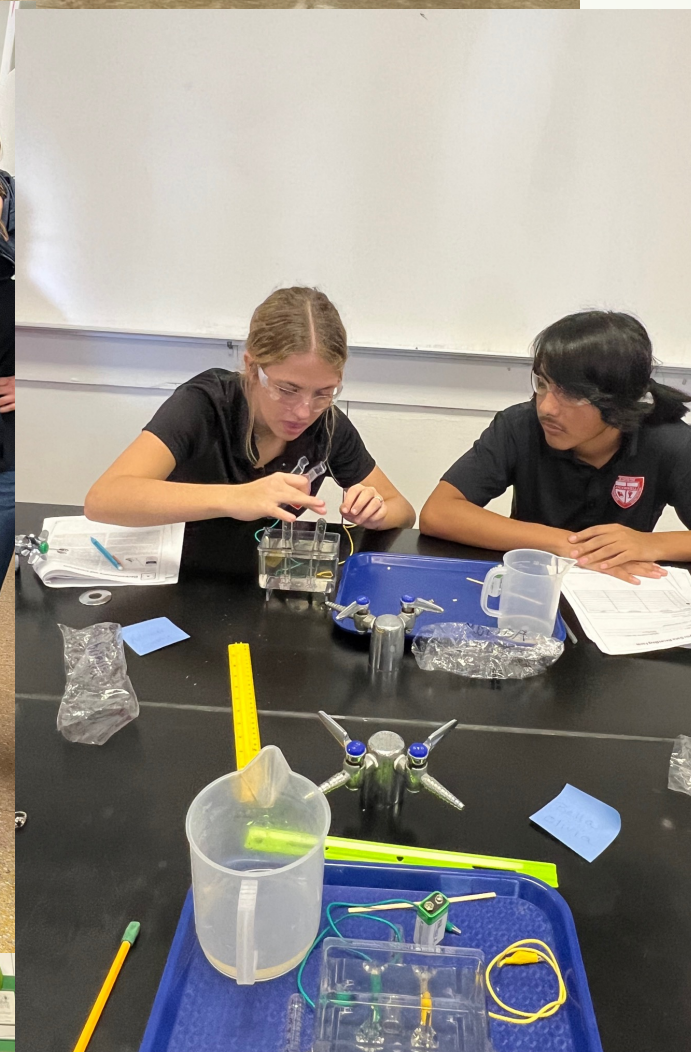
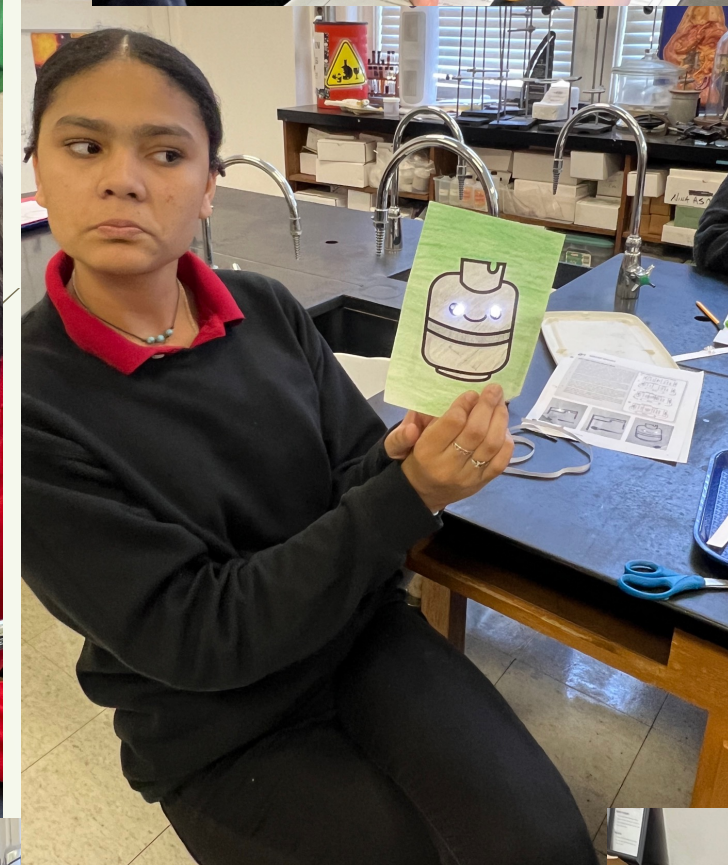
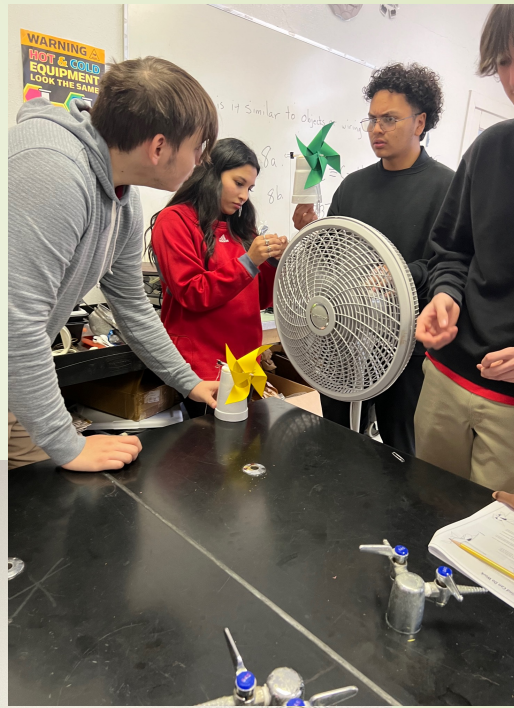
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- ❖ NEED's : Science of Energy, Fossil Fuels to Products, Exploring Oil and Gas, Secondary Energy Information Book, Exploring Climate Science, Energy Enigma, Exploring Nuclear Energy, Exploring Photovoltaics, H2 Educate, Transportation Fuels Information Book, Transportation Fuels Enigma, Transportation Trio, Energy Works, Thermodynamics, Exploring offshore Wind Energy
- ❖ Energy Websites Linked to [www.need.org](http://www.need.org) [www.switchenergy.org](http://www.switchenergy.org)
- ❖ Pamphlets and posters from Pepsico Recycle Rally, <https://pepsicorecycling.com>
- ❖ Information from the American Chemical society. [www.Acs.org](http://www.Acs.org) and Virtual speakers through their High School Chemistry Club
- ❖ PE3 book from Offshore Energy Center as well as the knowledge box and playing with petroleum box
- ❖ Energy4Me curriculum from the Society of Petroleum Engineers
- ❖ Agriculture Extension Agency
- ❖ NASA
- ❖ Texas A&M
- ❖ Junior Master Gardener
- ❖ NurdlePatrol.org
- ❖ Kitchen Chick
- ❖ HEB recycling in community





# Learning Activities



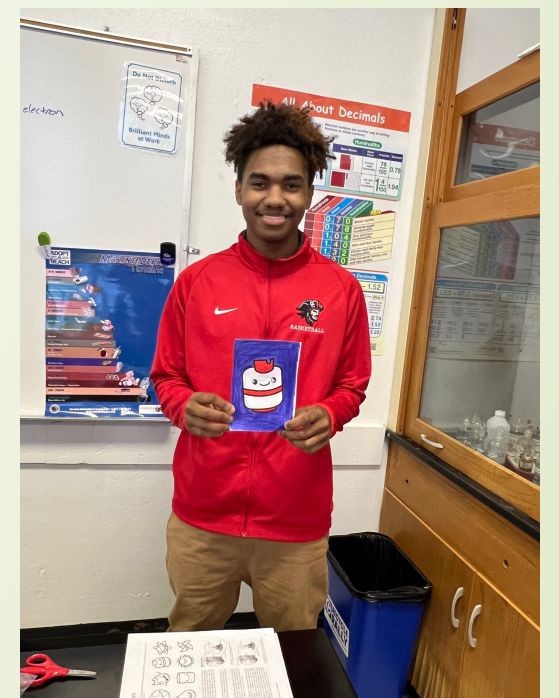


# Student Leadership



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- ❖ 1 student was put in charge as liaison with the principal and faculty to contact if there were any questions about recycling or pick up or need to be picked up early (problems with food etc., being put in the bins drawing bees etc.) Keeping up to date with the current Covid-19 protocols within our school
- ❖ 4 students were assigned to making sure the bins were set up around the school in the high traffic areas and monitored daily
- ❖ 2 students were assigned to collect the plastic bottles and cans at least 2 times a week or whenever they the bins started to fill
- ❖ 2 students was assigned to collect the recycled paper and deliver it to the recycling facility and the newspapers to the Galveston County Humane Society to be used for the animals
- ❖ 2 students were assigned to gather the plastic bottles and take to the plastic recycling and to collect the aluminum cans and take them to the can recycling facility.
- ❖ 3 students were assigned to coordinating the printing , laminating, creating, and drawing signs to put around the school and recycle bins, to promote recycling and energy information on our campus
- ❖ 4 students put in charge of the display case area and it's displays
- ❖ 5 students volunteered and worked shifts at the tables during the open house and to monitor the recycling bins at open house and at Ball games in the gym
- ❖ 2 students were put in charge of communication with the Galveston's Own Farmer's Market to coordinate the booths and days we would give demonstrations in person and virtually
- ❖ 6 students were put in charge of recycling collect at the Farmer's Market and taking it to the appropriate recycling facilities making sure to stay abreast of and observing local covid-19 restrictions and precautions
- ❖ 2 students were in charge of coordinating each of the events in the community
- ❖ 4 students in charge of the Nurdle patrol information sharing and gathering
- ❖ 2 students were put in charge of designing implementation of the cooking classes
- ❖ 4 students were in charge of the garden during holiday and off times
- ❖ 2 students were in charge of the new grocery bag recycling bin and gathering and delivering the bags





# Evaluation

- ❖ We evaluated our outcome by keeping track of the amount of recycling and also doing spot checks of classroom and various cans around campus to see how many possibly recyclable items were being put into the regular trash vs how much was being recycled
- ❖ Students made a questionnaire that was sent to students and faculty and staff which showed the majority of the people on campus were invested in recycling on our campus
- ❖ Students created a questionnaire on the Farmer's Market Facebook page to receive feedback from the community on the opportunity to have their recycling collected at the Farmer's Market and the reaction to the science behind recycling presentations at the booth at the Farmer's Market
- ❖ Students made questionnaires that were filled out at the end of in person and virtual presentations to evaluate the information learned and to determine any changes that should be made to future presentations.
- ❖ Questionnaires about Career choices after career research and presentation

