



O'CONNELL COLLEGE PREPARATORY SCHOOL OC GREEN TEAM: PUTTING THE *GREEN* BACK ON GALVESTON ISLAND

ADVISOR: Nina Corley

This school year has marked the 7th 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 have allowed for this year's project team to shift our focus on the promotion of a recycling culture in our school and community, bring to light the problems of nurdles on our beaches, while simultaneously finding ways to safely recycle observing Covid-19 protocols throughout our programs. We have expanded our "Science Behind Recycling" program to include the incorporation of information about the existence and 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, where to safely to recycle, all the while incorporating education about the dangers of plastics in our ocean and the affect of climate change on our island, sharing ways our community can make a difference her and around the 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 collection to community events such as mass vaccination sites and 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 during the pandemic. Each of the activities were proceeded by The Green Team participating in learning activities 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.

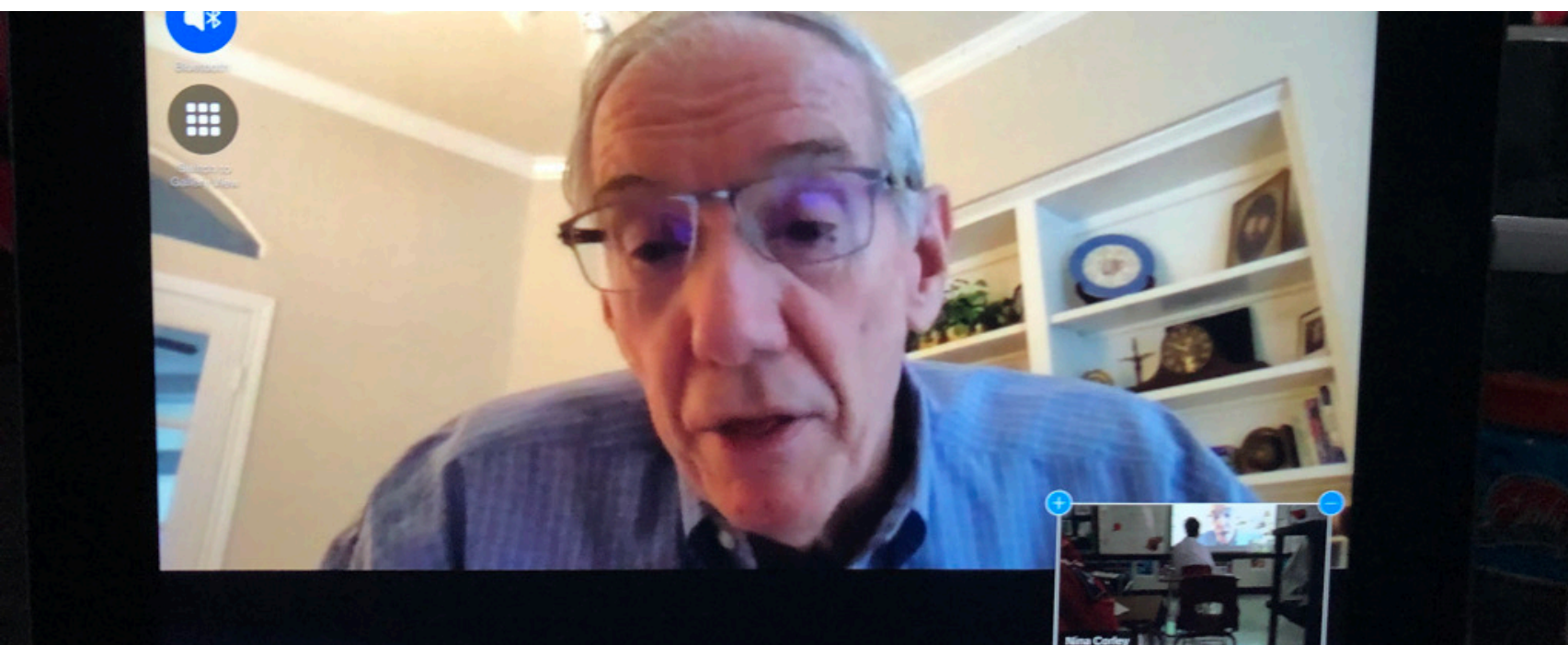
RECYCLING GOALS

- Goal: to promote a recycling culture throughout the entire school, providing more recycling bins , adding bins for materials not recycle before and 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 TASK

7



- 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
- Virtual Field trips to The Ocean Star Drilling Rig Museum . Oilfield Energy Center Job Fair and about how the petroleum for plastics is obtained, and Careers in the energy industry as well as education required for each of those jobs. 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.
- 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 Virtual 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



VIRTUAL FIELD TRIPS FOR LEARNING

❖ NASA Engineer Zoom Meeting

❖ Ocean Star Drilling Rig Museum Job Fair Zoom Meeting



Oilfield Energy Center Virtual Career Fair
December 10, 2020

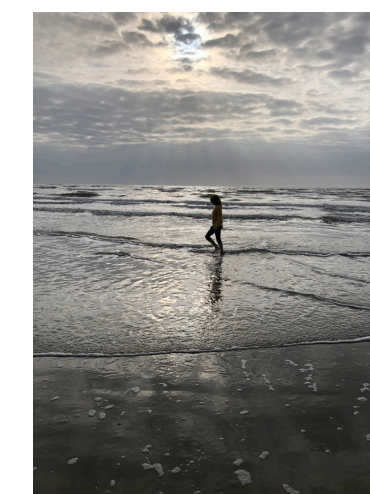
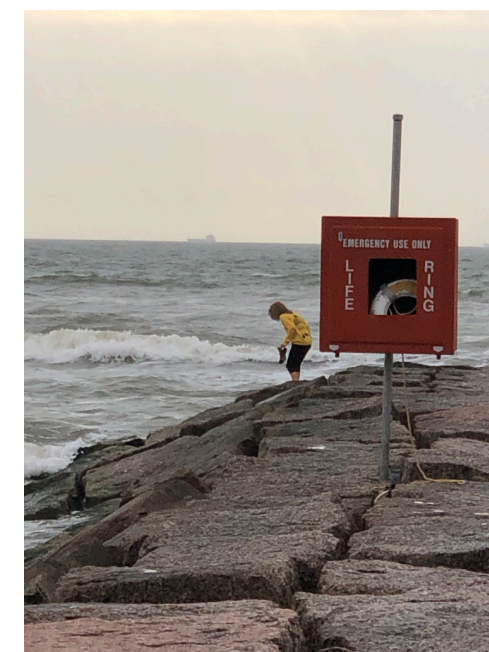
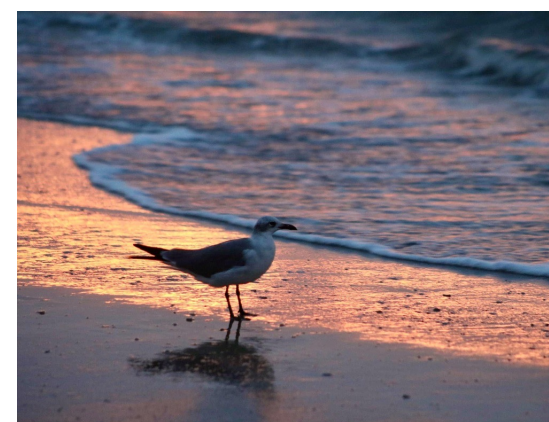
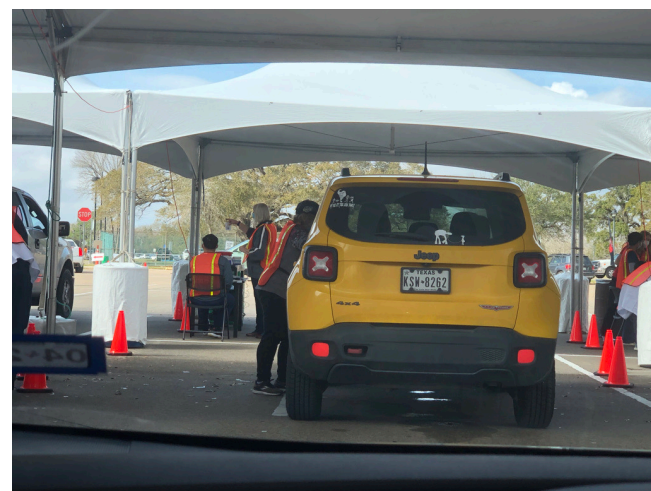


You are invited to participate in the Oilfield Energy Center Career Fair which will be held between the hours of 9:00 am to 12:30 pm on December 10, 2020. We will be using the Microsoft TEAMS program. Prior to the event, we are asking teachers to register their students for all or part of the fair. Please note that we can only accommodate 300 students each hour. We are also requesting that students view the list of participants and forward questions to their teachers they would like answered during the fair via email. These questions will be sent to the presenter prior to the fair.

2020 Career Fair			
Time	Presenter	Company	Title
9:00	Galen Cobb	Halliburton	Vice President Industry Affairs
9:15	Bente Plaszko	NOV - National Oilwell Varco	Manager, Global Project Proposals and Inside Sales
9:15	Svein Ove Aanesland	NOV - National Oilwell Varco	Sr. Sales Manager
9:30	Libby Cheney	Cheney Energy	Principal Cheney Energy
9:45	Robert Effler	Noble Corporation	Senior VP Marketing and Contracts
10:00	Nick Tran	Schlumberger	Manager of Community and Veteran Affairs
10:15	Jeff Beach	Universal Wireline	President of Universal Wireline
10:30	Joy Hall	ConocoPhillips	Director of Marine Training
10:45	Kevin Broom	PESA-Petroleum Equipment & Services Association	General Manager Surface Engineering Deepwater
11:00	Lori Fremin	Shell	Recruiter
11:00	Mary Briley	Shell	External Affairs Coordinator
11:15	Natalie Clarke	Cabot Oil and Gas	Senior VP Business Development
11:30	Alan Quintero	Valaris	Director of Completions, Interventions, & Integrity
11:45	April Partridge	Bp	Executive Director
12:00	W. Eric Newby	NAPTA National Association of Process Technology Alliance	Advanced Completions Engineer- Bakken
12:15	Julie Foster	Marathon Oil Company	

COMMUNITY RECYCLING GOALS

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



ACTIVITIES AND TASKS

Obtained permission for students from the Principal and parents to participate in activity off school grounds and virtually

Obtained permission for students to set up a booth at Galveston's Own Farmer's Market bi-monthly to share information about recycling and the science behind recycling to promote recycling in the community. This has been limited to a great extent by Covid-19 but has picked up again as it has opened back up as restrictions have been lifted. Some has been done virtually

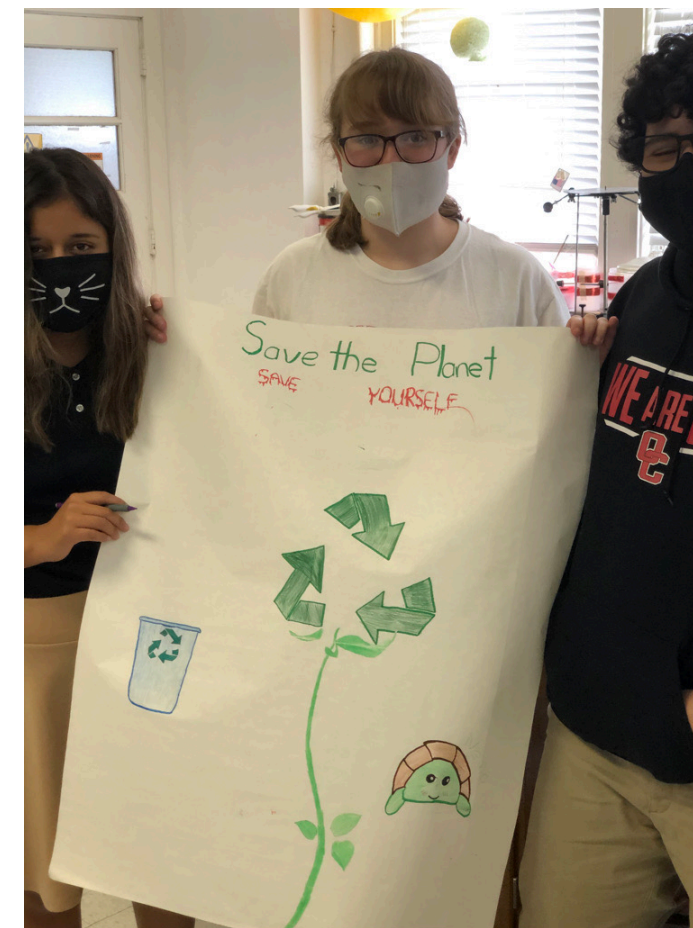
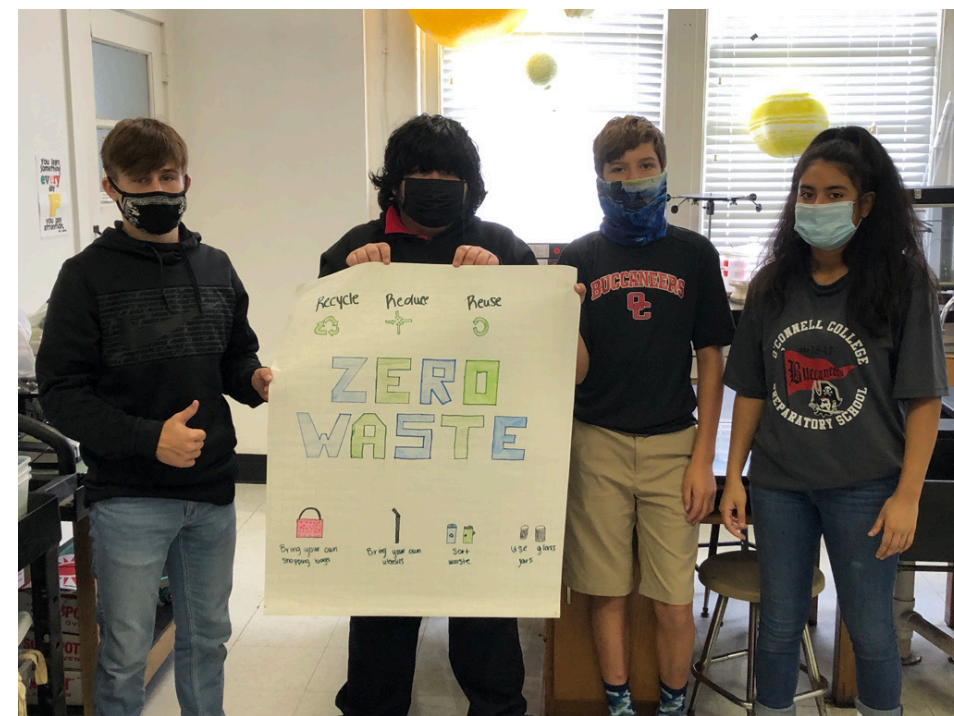
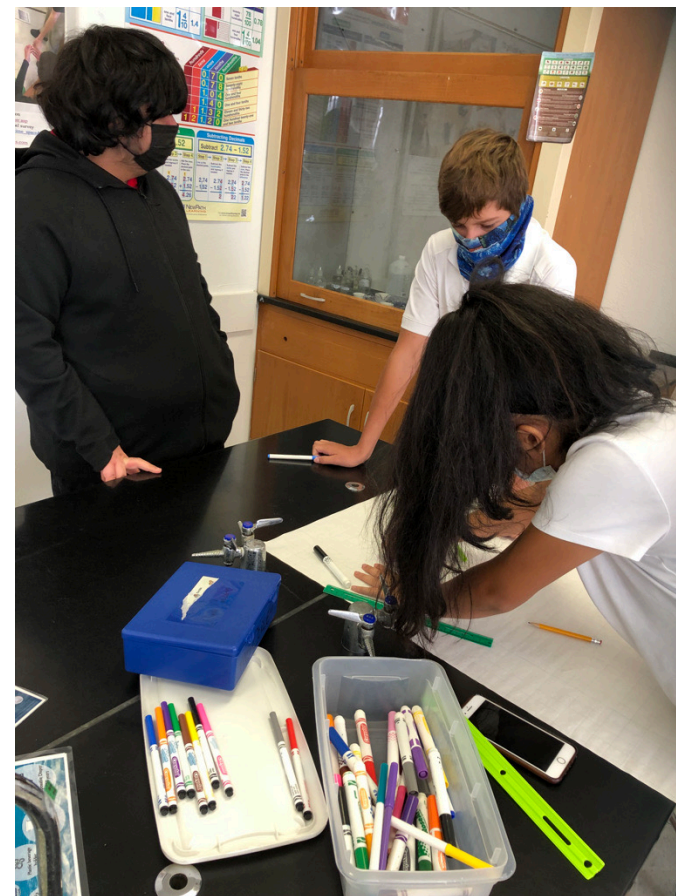
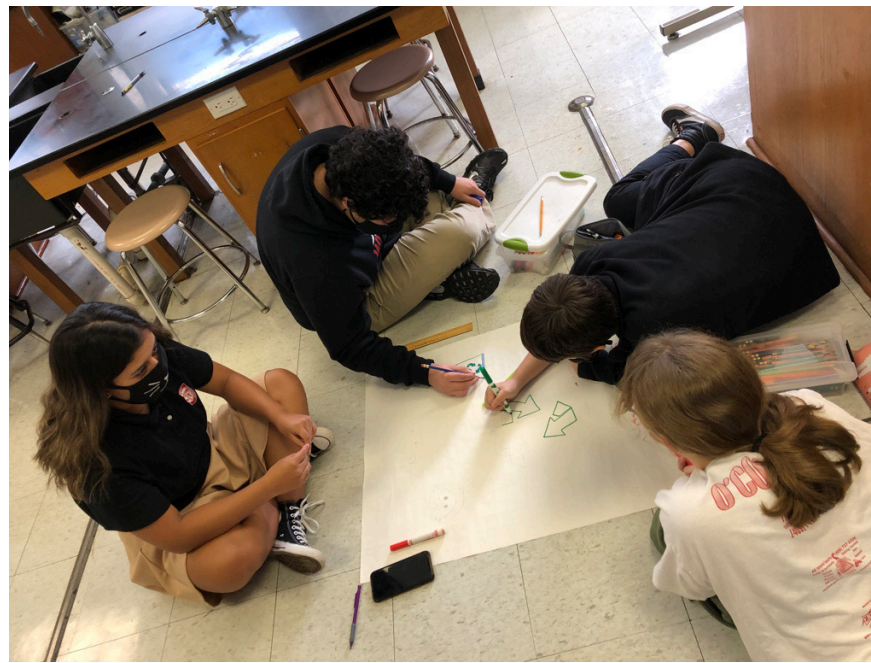
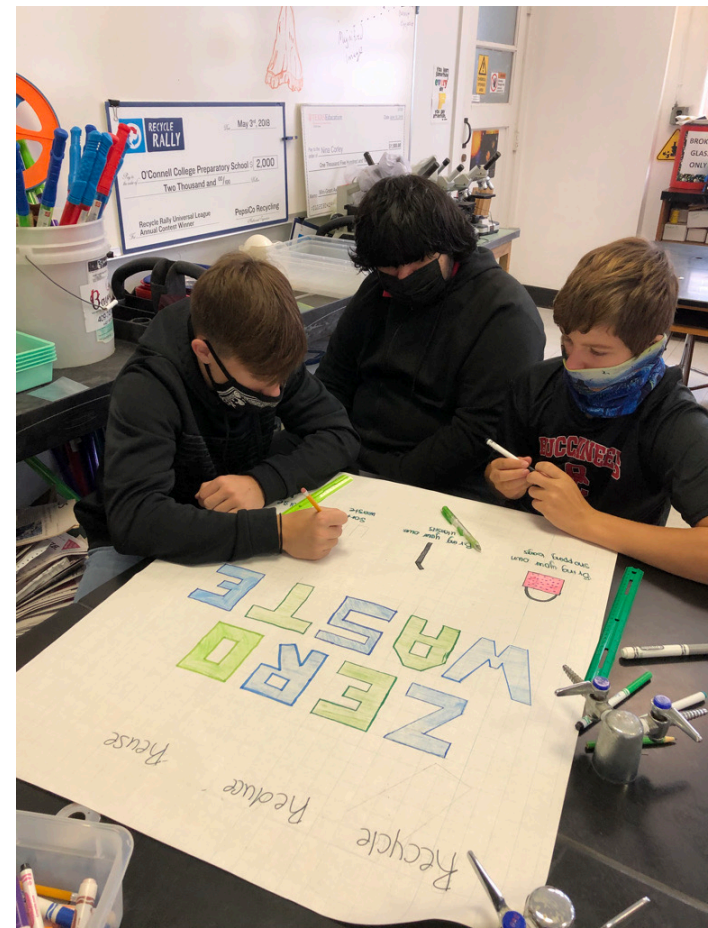
Team Members collected community recycling at the Farmer's Market bi-weekly and carried it to the recycling facilities so that the people they were able to convince to recycle would have a way to do so, students developed new methods of collection and transporting to reduce the chances of Covid -19 exposure.

Team members volunteered and collected recycling at Various Community Events that were still held, including mass vaccination sites and beach cleanup events.

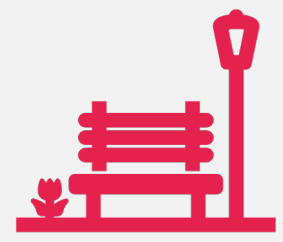
Researching information on Nurdles and doing Nurdle Collection on the beaches and adding more information about nurdles to the science behind recycling presentations.



❖ Designs for recycling posters, displays and display cases promote recycling and energy education.



GARDEN GOALS



Reopen our outdoor Garden Classroom as we were able to come back to face to learning.



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 with the community through social media and planning to go back to in person sharing once social distancing is relaxed. Researching the effects of a hard freeze on the island and replanting after the hard freeze.



ACTIVITIES AND TASK

11

Research urban gardening techniques to see investigate will work best on the island

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

Master Gardeners and local farmers visiting virtually via zoom 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 to be held once social distancing is relaxed.

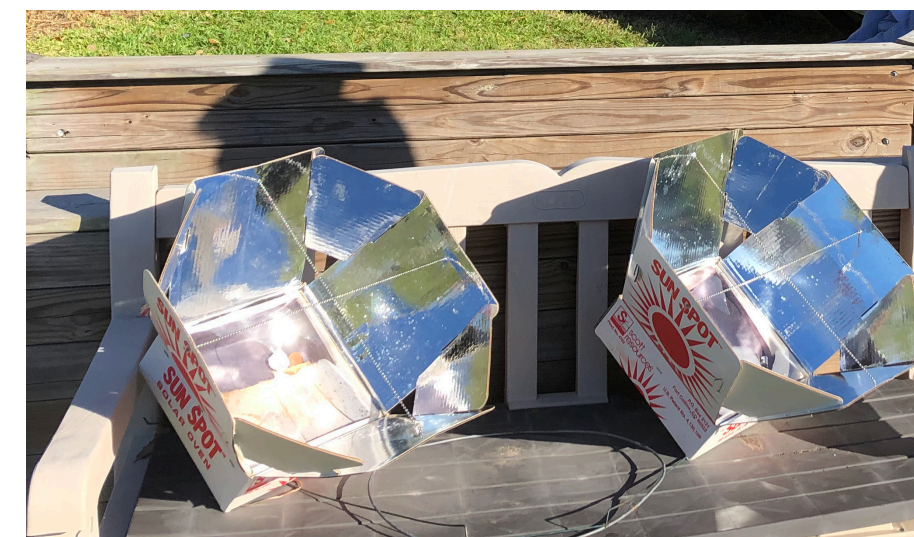
Using Solar Ovens to prepare produce grown in the garden

Sent home produce with students in need of food during the pandemic .

Making sun hats from newspapers and sharing hat making techniques while studying sun safety



GARDEN ACTIVITIES⁰



LEARNING ACTIVITIES



ENERGY CONTENT

- ❖ 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, Energy Games and Icebreakers, Thermodynamics

- ❖ Energy Websites Linked to www.need.org switchenergy.org

- ❖ Pamphlets and posters from Pepsico Recycle Rally, <https://pepsicorecycling.com>

- ❖ Information from the American Chemical society. 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

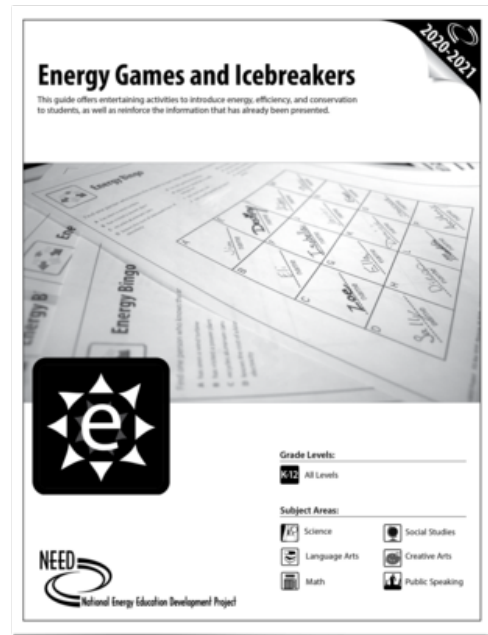
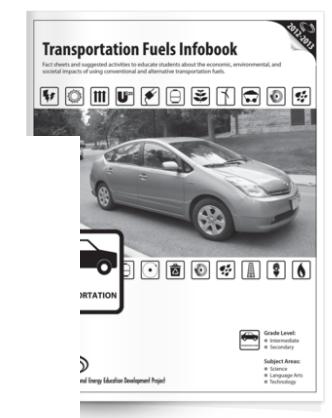
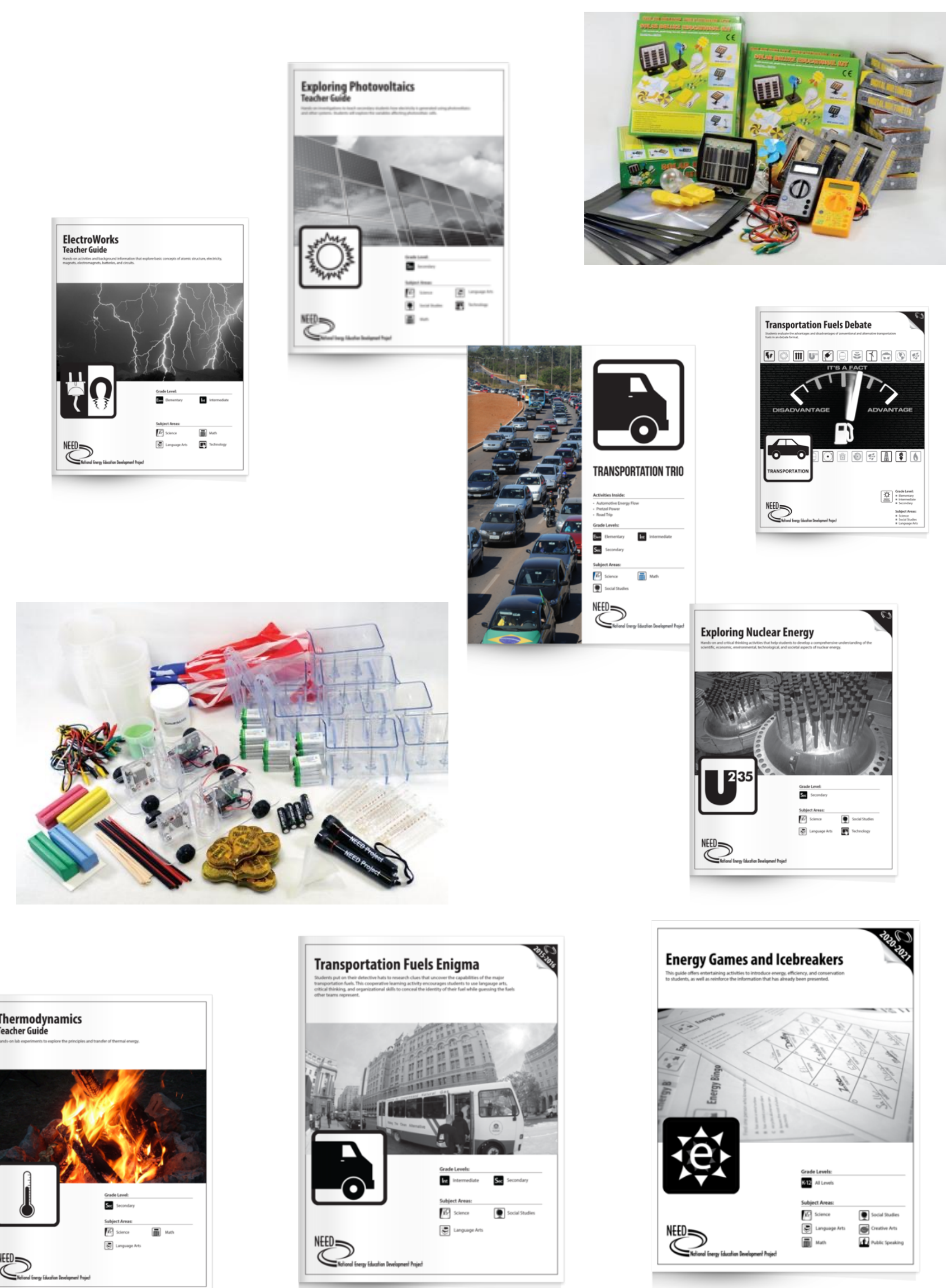
- ❖ NASA

- ❖ Texas A&M

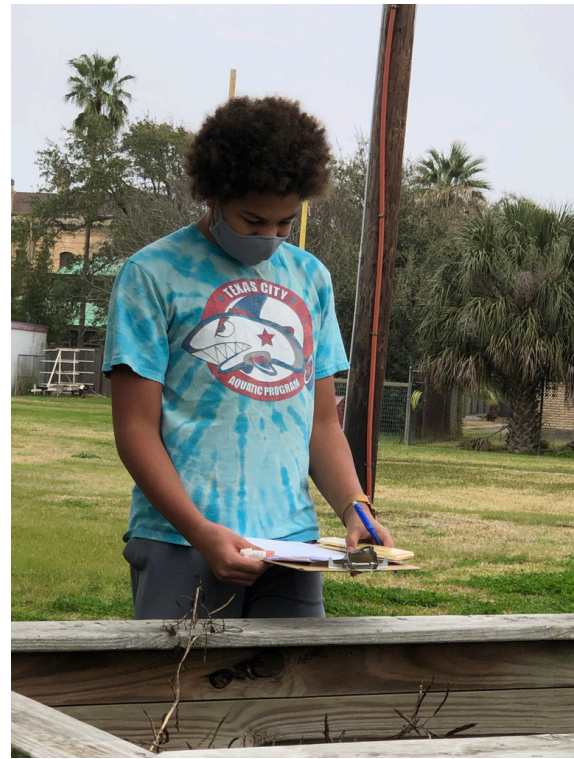
- ❖ Junior Master Gardener

- ❖ NurdlePatrol.org

- ❖ Kitchen Chick



STUDENT LEADERSHIP³



- ❖ 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 tin charge of the display case area and it's displays
- ❖ 5 students volunteered and worked shifts at the tables during the virtual open house
- ❖ 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 new cooking classes
- ❖ 4 students were in charge of the garden during holiday and off times as allowed by covid-19 protocols



EVALUATION



- ❖ We evaluated our outcome by keeping track of the amount of recycling and also doing spot checks of classrooms and various cans around campus to see how many possibly recyclable items were being put into the regular trash

- ❖ 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 virtual presentations to evaluate the information learned and also to determine any changes that should be made to future presentations.



HOURS SPENT WORKING ON PROJECTS



Approximately 1400 hours collectively (Covid-19 cut into our time)
Recycling at School , Galveston's Own Farmer's Market, Nurdle patrol gathering,
Community Events Research and working in the Garden and preparation of food and
developing cooking classes



Student Coordinators

8 Student Coordinators this year , 2 from each class.

