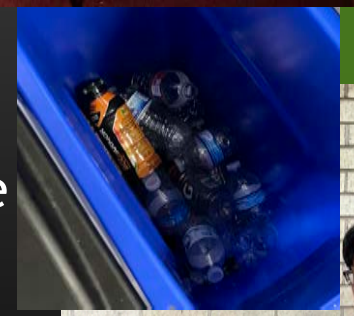
O'Connell College Preparatory School's OC Green Team
Putting the Green Back in Galveston Island!

Advisor: Nina Corley



The 2021-22 year kicks off the 8th year since origination of the OC Green Team! Our evolution over time have allowed this year's team to promote recycling and discovering methods to minimize waste flowing onto our beaches and our Gulf of Mexico. Our "Science Behind Recycling" program has encouraged recycling in our school while maneuvering around COVID-19 restrictions. Despite the obstacles it presented us, we've utilized our horticulture and earth science classes to educate our students about the dangers of climate change, waste runoff, and junk in our oceans. We've learned virtually within the community through recycling pick-up services, the Galveston's Farmer's Market, sharing gardening products with families in need, and beach cleanup events. Our recycling system has accumulated a hefty number of recyclable cans, plastic, and paper: a significant contribution to reducing waste and teaching our students to reduce, reuse, and recycle! The OC Green Team's foundation and participation in learning activities and virtual seminars to bolster our previous years' foundations will enable us to share our knowledge with those around us, within our school, in the community, and any visitors that display interest in saving the Earth.

SCHOOL RECYCLING GOALS AND INITIATIVES

The Ultimate Goal: Promote recycling culture within the entire school body; students, faculty, and custodians alike.

RECYCLE RALLY

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Approximately 150 full trash bags collected of pure recyclable material.

Provided 25+ recycling stations for plastic and cans throughout the school, along with 12 paper recycling stations.

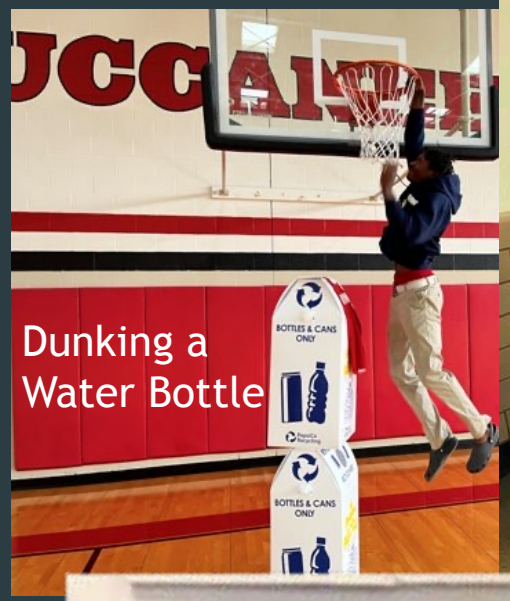
Ensured recycling bins were kept tidy every week and had designated officers and members pick up paper, plastic, and cans to bring to Galveston's Recycling Center.

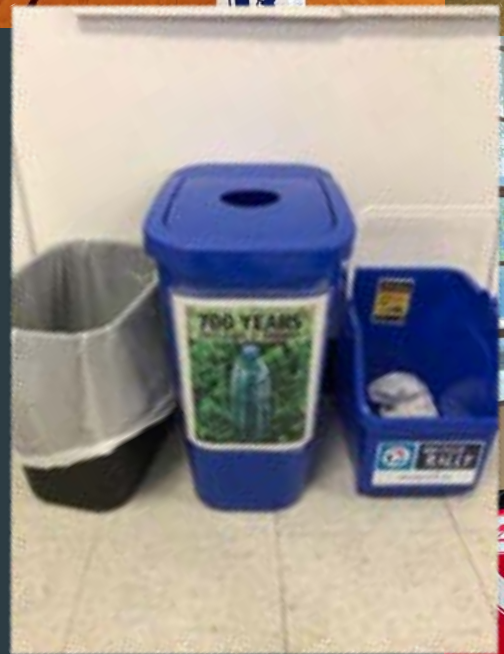
Utilized prior resources to encourage more recycling, especially in the outdoors for athletic teams practicing and playing in sports events

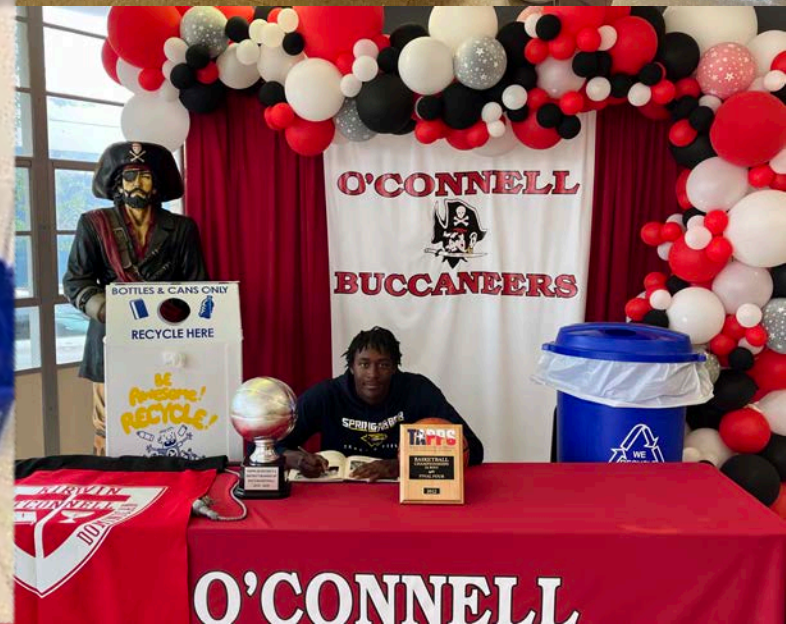
Kept Recycling an efficient and safe method while observing COVID-19 safety protocols.

DOMINATING AT RECYCLING: ON AND OFF THE COURT

- 20 Students signed up to become an OC Green Team Member, each receiving a shirt and tote.
- Every student, whether a part of the team or not, learned some part of the science behind recycling, whether it be through energy conservation, climate change, our beach, pollution, etc., to build diverse backgrounds for differing perspectives. This is accomplished by the curriculum in earth/space science, horticulture, chemistry, and biology courses.
- Team members chose jobs (bin cleaners, bin checkers, bag replacers, paper crew, transport crew to recycling facilities) carried out positions while addressing COVID-19 protocols.
- Pepsi-Co Recycle Rally sponsored our group and we ordered more recycling bins to place throughout the school, including new locations such as the gym, lobby, and team locker rooms.
- Distributed recycling bins around gathering hotspots (i. e. cafeteria, classrooms, hallways, garden, lobby, outdoor eating and rendezvous areas)
- Displayed signs on recycling bins for easy recycling and created displays to promote recycling
- Sponsored a posterboard at open house to answer any questions about our Green Team's program, the science and experimentation behind it, and how it benefits our school, the community, and the health of our local ecosystem, the beach.
- Decorated Primary Display Case with Recycling Advertisement







BOTTLE, PAPER, AND CAN COLLECTION

Galveston's Own
FARMERS MARKET

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RECYCLING WITHIN THE COMMUNITY

Our secondary purpose involved spreading our scientific insight behind recycling, performing beach clean ups, and participating at various community events.

Decorated Primary Display Case with Recycling Advertisement for Visitors during 8th Grade Visits.

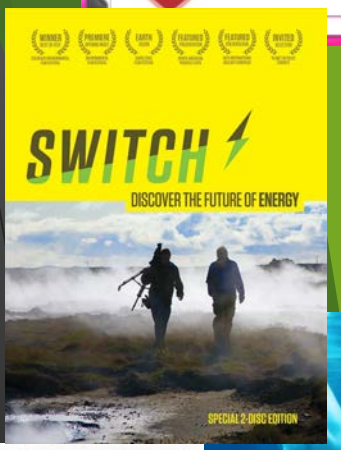
- Undertook the Great Nurdle Hunt (Plastic Water Pollution), collected them off the beach, and did several investigative experiments.
- Re-established connection with the Galveston Farmer's Market: COVID restrictions still in effect.

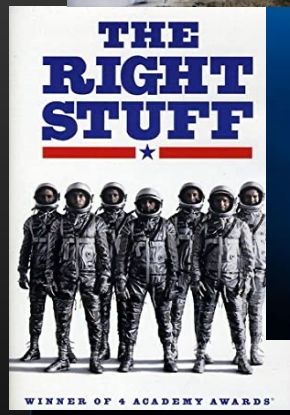
COMMUNITY OUTREACH

- Obtained permission from administrators and parents to participate in off-campus duties and virtual events, such as beach clean-ups, climate change simulators, etc.,
- Obtained continued sponsorship to set up a booth at Galveston's Farmer's Market bi-monthly to spread awareness and share helpful tips about recycling. COVID-19 continues to restrict our appearances, but we've created posters and external resources that are readily available.
- Team members collected and volunteered outside of school at beach cleanup events.
- Participated in the Nurdle Patrol, counting the number of nurdles in surveys on the beach
- Shared solar and science of energy activities with 8th grade students from nearby schools.

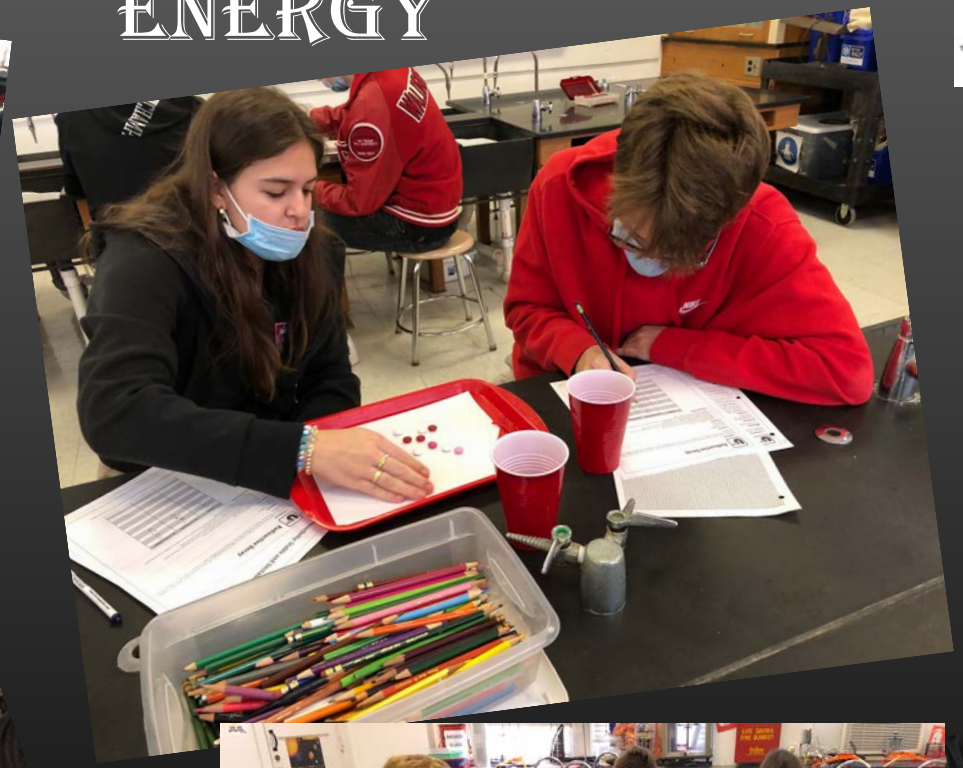
LEARN ABOUT ENERGY SOURCES THAT FUEL SPACE TRAVEL, THE GREEN WAY

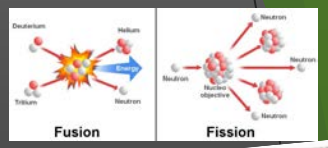
- Completed Exploring Solar Energy & Climate Sampler in Earth & Space Science
- The H^2 Educate & Science of Energy Curriculum in Chemistry Labs
- Exploring Nuclear Energy, Energy Works, & Thermodynamics in Physics
- Exploring Photovoltaics in Physics & Health
- Energy debate and Energy Careers excursion
- Listened to energy industry leaders and former NASA employees
- Participated with online Career talks with Industry Professionals through the OEC
- Researched alternatives to fuel rockets
- Investigated climate change as it relates to energy in aeronautics.
- Built air-propelled rockets
- Investigated airplanes and how they fly in our Federal Aviation (FAA_ Class)
- Watched movies such as Apollo 13, The Dish, and The Right Stuff to expound our knowledge on the space program in an engaging way, and The Plastic Ocean looking at waste in the ocean and Switch to look at energy sources.
- Wrote thank you notes to virtual guest speakers and to places we went for field trips.

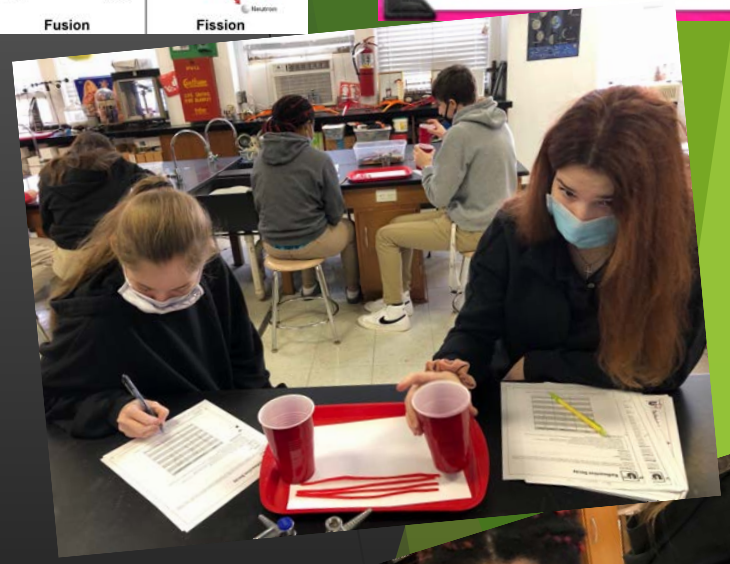


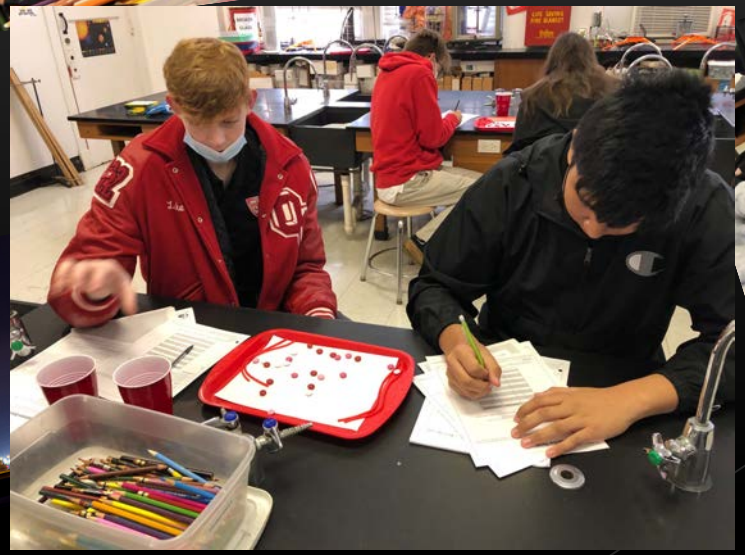


INVESTIGATING NUCLEAR ENERGY& SCIENCE OF ENERGY

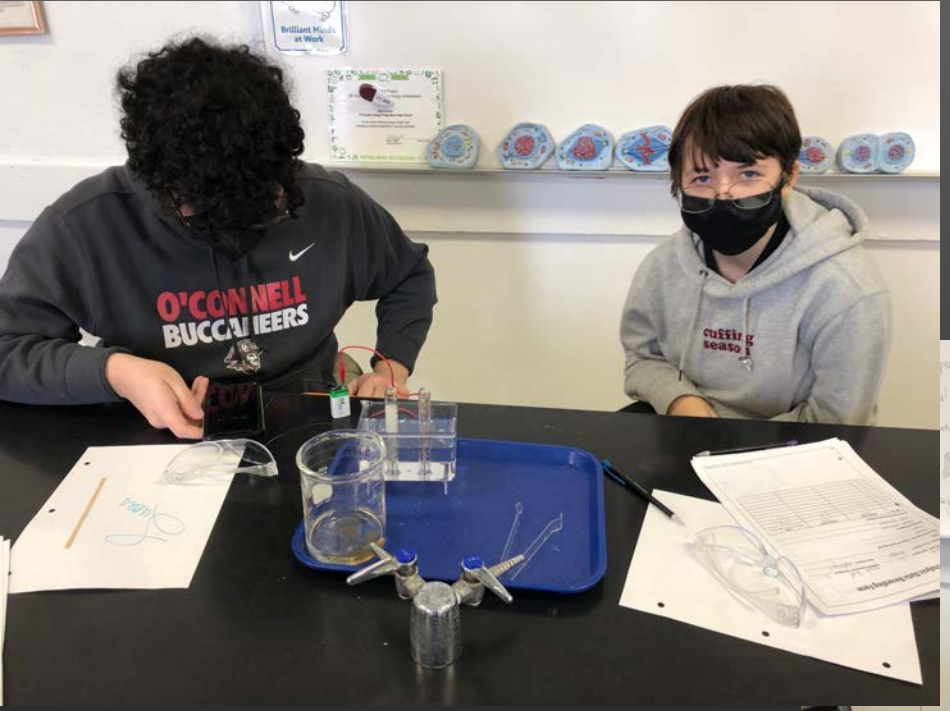


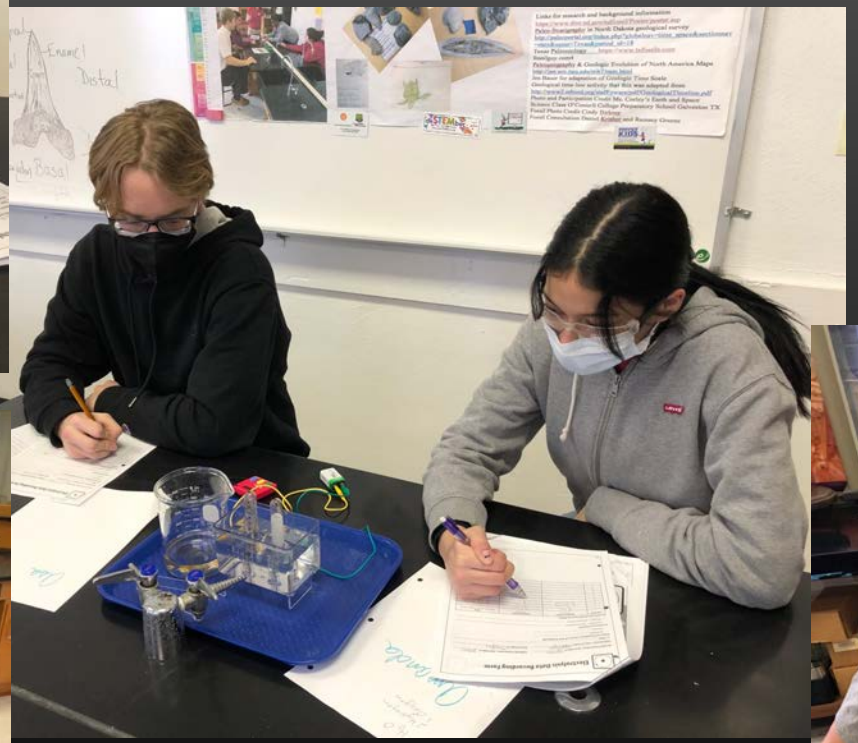


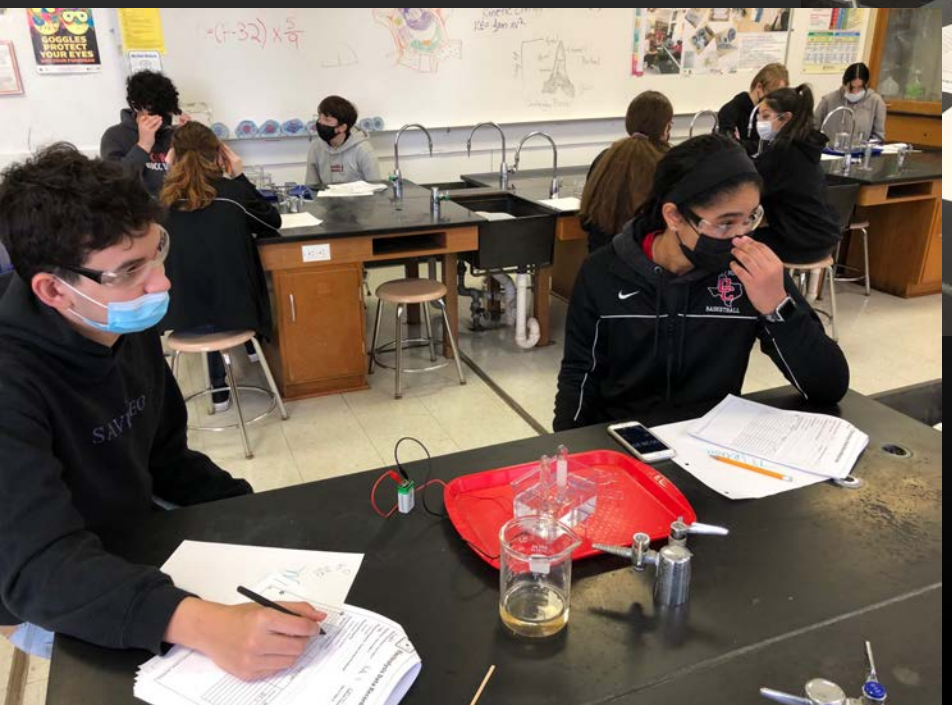


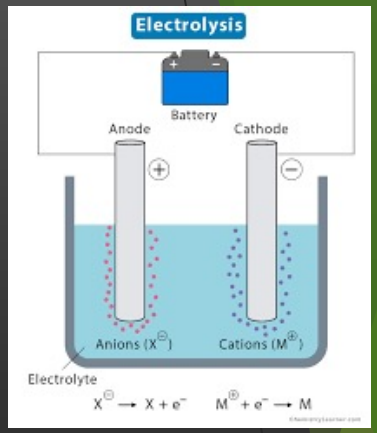


HYDROGEN LABS: H2









EXPLORING SOLAR ENERGY

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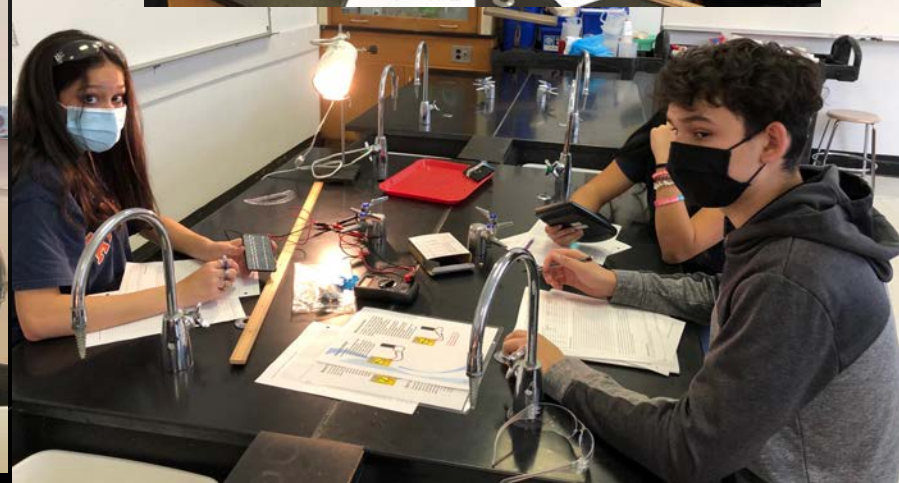


Garden Goals and Initiatives

Obtained permission from Principal and school board to conduct the activity.

Spanish Teacher improved our garden and brought in new plants.

Worked with Spanish teacher to learn the language to translate presentations for native Spanish speakers.

Planted seeds and seedlings in class while caring for the garden.

Grow our outdoor Garden Classroom as restrictions from COVID-19 are being lifted. Our goal is to grow many produce types and food to eat in the classroom.

Investigating a suburban/urban gardening technique that can replicate small gardens of those in apartments, small houses, and compact settings.

Maintain social distancing until the pandemic finally dies down

Sharing results of vegetables and fruits, consuming them, harvesting seeds, and giving some food to families in needs.

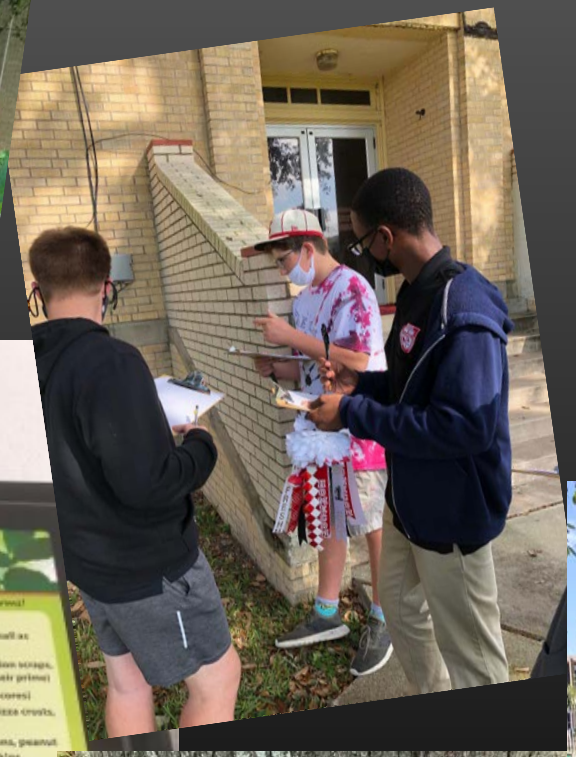
Researching effects of a hurricane and flooding events (Hurricane Nicholas) and taking data to implement more protective measures of micro-scale agriculture.

Donated excess food to local food banks in need.

Through donations from a local hardware store, adding more raised beds in the Spring.

Invested in an auto-composting worm factory

OC GREEN TEAM GARDEN AND LAB



FIELD TRIPS TO BRYAN MUSEUM AND ROSENBERG LIBRARY
SHARING OUR RECYCLING IDEAS WITH THE COMMUNITY

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STUDENT LEADERSHIP

- 1 person oversaw communications with the principal and faculty, managed the team, monitor overall recycling progress, observe any trash put in recycling bins or recyclable material put in the trash, and follow COVID-19 Protocols
- 12 people aided in maintenance of recycling bins and monitored them weekly
- 3 students were assigned to collect plastic bottles/cans once bins started to fill.
- 3 students were assigned to collect paper in small containers.
- 2 students were charged with ensuring safe delivery to the recycling facility.
- 6 Students coordinated printing and creating recycling/energy promoting information.
- 4 students worked shifts at the Green Team booth during open house.
- 8 students worked to maintain our garden during regular school days.
- 2 students volunteered to maintain the garden during holidays.
- 3 students took care of the lobby and main entrance display cases.
- 5 Student Coordinators (Officers): Kyle Tan, Javier Rodriguez, Bailey Bacon, Elijah Collier, Taylor Albert

Hours Spent Working on Projects and Education

Special Events: Open Houses, 8th Grade Visits, Decorations and Display Case Preparations, Nurdle Collection and Experimentation, Beach Cleanups: 200 hours

Garden Experiments and Caretaking: 300 hours

Recycling: 500 hours

Alternative Energy Laboratories: 100 hours

Connecting with the Farmer's Market: 50 hours

Energy-based Laboratories, Space Program Movies, and Teaching Energy Based Curriculum: 400 hours

Total hours: Approx. 1,550 hours