



OUTCOMES REPORT

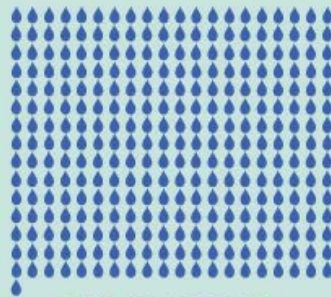
School Year 2016 - 2017

BRIGHT GREEN FUTURE GRANTS

2016 – 2017
School Year

2016 - 17
SCHOOL YEAR

GRANT
OUTCOMES



310,000

GALLONS OF WATER SAVED



31,653

MILES TRAVELED BY BIKE
INSTEAD OF CAR



20,000

BEES SAVED AND
RELOCATED

63

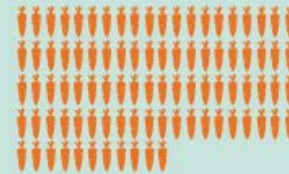
SCHOOLS APPLIED
FOR GRANTS

47

GRANTS AWARDED

14,150

STUDENTS PARTICIPATED



9,100

POUNDS OF VEGETABLES PRODUCED



41%

CAMPUS WASTE
DIVERTED FROM
LANDFILLS

22

NATIVE PLANT
SPECIES PLANTED



OFFICE OF
SUSTAINABILITY

CITY OF AUSTIN



GRANT FUNDING PROVIDED BY:

Austin Resource Recovery
Watershed Protection Department
Austin Transportation Department
Public Works Department
Office of Sustainability





projects that protect water quality



*“The best part was digging with the shovels
and planting all the pretty plants.”*

– Cheryl, a student at Sims Elementary School

Project Name: Rainwater Distribution Project

School: Sims Elementary School

Funded By: Watershed Protection Department

Project Description:

In a truly collaborative effort between Sims Elementary School and community partners, the installation of a rainwater distribution system solved a drainage problem that caused sidewalks to be closed to students and water to enter the school building during heavy rains.

Working with University of Texas design students, volunteers cleared an area in the main courtyard, built garden beds, and planted native plants. In addition to mitigating flooding in the area, students also use the area as an outdoor learning space to observe native flora and fauna.



One of several garden beds at Sims that help with rain water run-off.



"I hope the garden will be a safe place for bees, butterflies, and birds."

– Mike, a student at Brooke Elementary School

Project Name: Rain Garden at Brooke

School: Brooke Elementary School

Funded By: Watershed Protection Department

Project Description:

Bright Green Future Grant funding supported design and construction of a rain garden that reduces the need for irrigation from other sources and also provides fertilizer-free water for plants and wildlife on the Brooke campus.

Brooke's afterschool Green Clubs identified two underutilized areas on campus to capture rain water from roofs and install native plants.

It is hoped that the rain garden will attract birds and pollinators to the campus, which will help Brooke achieve Green Flag Campus status through the National Wildlife Federation.



Brooke Elementary students and volunteers plant flowers in their rain garden.



"It's cool that we can see fish and turtles swimming in the pond when we go outside."

– Trish, a student at Whole Life Learning Center

Project Name: Pond Restoration Project

School: Whole Life Learning Center

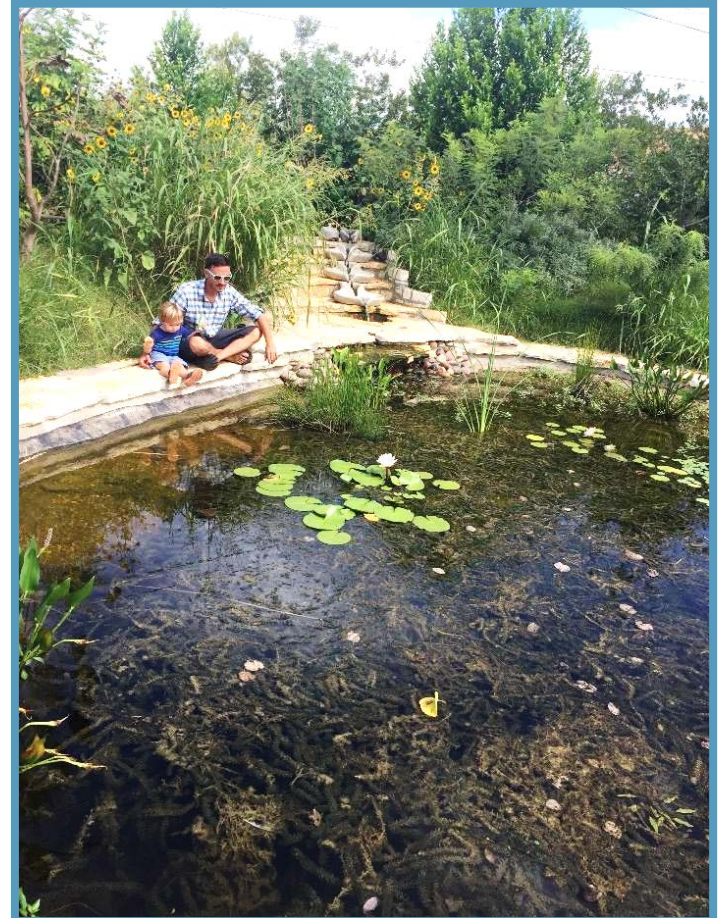
Funded By: Watershed Protection Department

Project Description:

Maintaining the beautiful garden at Whole Life Learning Center has always been a challenge. With funding from a Bright Green Future Grant, the school was able to restore the campus pond, which now supplies the garden with nutrient dense water for watering.

Volunteers, including a mason whose child attends Whole Life Learning Center, installed the limestone surrounding the pond and a solar pump to keep the water clear. The school also hosted a volunteer day where students and their families helped plant new herbs and flowers in the garden. Students and volunteers will help with seasonal care of the garden.

In addition to providing a stunning outdoor learning area for students, Whole Life Learning Center no longer uses city water to care for their grounds.



Whole Life's newly renovated pond is a great place to observe wildlife.



“We hope growing and consuming fresh vegetables will encourage families to establish home gardens.”

– Beth Thornton, a teacher at Oak Hill Elementary School

Project Name: Water Wise Garden at Oak Hill

School: Oak Hill Elementary School

Funded By: Watershed Protection Department

Project Description:

Oak Hill Elementary used their Bright Green Future Grant to install two small rain cisterns on remote areas of the school campus. The school already had one large rain barrel, but needed more water for the garden to be able to rely exclusively on rain collection as its watering source.

The water collected in the cisterns is used to fill ollas that are used to water the community food gardens on site. University of Texas students helped design and install the rain barrels, while the school gardening club installed the ollas.

With over 58 community garden beds, Oak Hill hopes to provide fresh vegetables and herbs to the campus for the upcoming school year.



Parents and students helped construct garden beds that are watered from rain cisterns.



"It's pretty cool that I can tell people I helped design something that will be a part of the school for a long time."

– Yvette, a student at Laurel Mountain Elementary School

Project Name: Natural Play Rain Garden

School: Laurel Mountain Elementary School

Funded By: Watershed Protection Department

Project Description:

A Bright Green Future Grant supported Laurel Mountain's project, where 24 fourth and fifth graders helped design and construct a rain garden and natural play area. This project helped students learn about stormwater run-off, water quality, and riparian zones.

The students participated in an enrichment cluster that met every Friday and was led by parents who are professional landscape architects. Students also met with the City of Austin's Watershed Protection Department to conduct a soil analysis of the property. Students presented their ideas for the garden to the Campus Innovation Action Team and community members.

In addition to conserving water and helping beautify the campus, the project helps meet State-defined learning objectives by providing experiences based on student interests in Biology, Botany, Hydrology, and Sustainability.



Laurel Mountain students learn about stormwater run-off while planting native plants.



*"I had no idea rain can do so many good things
and some bad things too."*

– Bailey, a student at Metz Elementary School

Project Name: The Rainscape at Metz

School: Metz Elementary School

Funded By: Watershed Protection Department

Project Description:

Collaborating with the Watershed Protection Department, University of Texas Civil Engineering students, and community stakeholders, Metz students used their Bright Green Future Grant to design three landscapes for the campus.

University of Texas students identified three critical areas on the Metz campus that were susceptible to flooding and erosion as well as a plan to combat the issue. Students and volunteers installed the rain gardens, plants, berms, and swales to protect water quality on the campus.

Interpretive signs were also installed to help students understand rain water runoff, resource management, and landscape design as vital to environmental stewardship.



Rainwater collected in this cistern at Metz will provide water for campus landscaping.

A group of approximately ten children are sitting on a set of wide, grey stone steps outdoors. Most of the children are wearing colorful bicycle helmets in shades of orange, green, and blue. They are dressed in casual clothing like t-shirts and jeans. One child on the far left is wearing a black t-shirt and patterned leggings, while another in the center is wearing a pink polo shirt. The steps are situated on a grassy area. In the background, there is a chain-link fence and a single-story building. To the right, several bicycles are parked on the grass. The sky is clear and blue. The text "cycling programs" is overlaid in white, sans-serif font across the middle of the image.

cycling programs



“Thank you for the cycling initiatives you have brought to our schools. I am confident they are better off because of this program and that you are helping kids grow to be safety conscious riders.”

– Megan Tunningley, Principal at Perez Elementary School

Project Name: Cycle Academies

Funded By: Austin Transportation Department

Project Description:

Cycle Academy is a structured educational program geared toward youth cyclists that concentrates on teaching bicycle riding, safety, and maintenance skills. The program focuses on learning by doing, self-sufficiency, developing a healthy lifestyle, and community service. The curriculum is split into discrete education modules that track individual student achievement and measure progress in becoming subject matter experts. The goal is to develop youth cyclists to become teachers within their peer groups and families.

Students develop a well-rounded lifestyle and become recreational cyclists through a culture of ridership at schools. The aim is to create cyclists who not only use their bicycle for fun and recreation, but as a viable transportation option as well. Students acquire safety skills and learn to teach others to be safe as well. Encouraging bicycle transportation reduces the carbon emissions produced by motor vehicles, improves air quality, and reduces resource utilization.

This year, cycle academies at Blackshear, Cunningham, Hart, Houston, Langford, Pecan Springs, Perez, Reilly and St. Elmo elementary schools were funded by Bright Green Future Grants.



Students from Pecan Springs demonstrate proper cycling hand signals.



"This was so much fun. I hope you come back."

– Maite, a student at Blackshear Elementary School Cycle Academy



"I learned how to use my brakes so I won't flip my bike."

– Juan, a student at Cunningham Elementary School Cycle Academy



"I wish this would never end."

– Abigail, a student at Hart Elementary School
Cycle Academy



"Whoa!"

– Dustin, a student at Houston Elementary School Cycle Academy



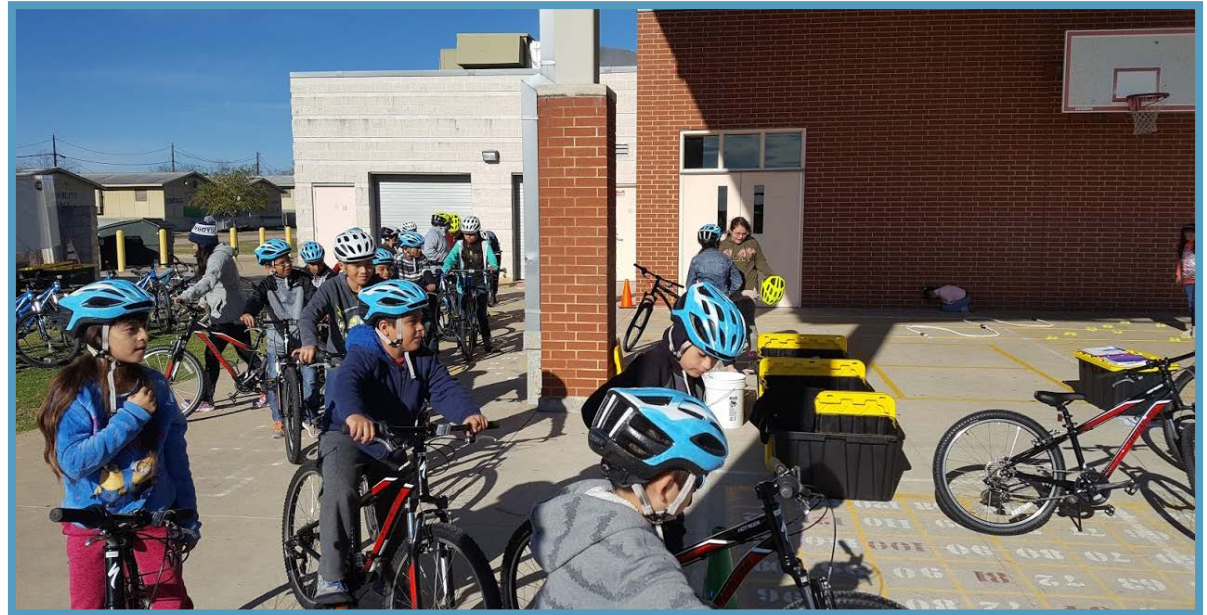
"Always wear your helmet and bring a water bottle."

– Jordan, a student at Pecan Springs Elementary School Cycle Academy



"It's fun when we ride wearing our school shirts!"

– Cindy, a student at Langford Elementary School Cycle Academy



"I even learned how to do my carbon footprint."

– Lisa, a student at Perez Elementary School Cycle Academy

"We learned a lot of stuff to be safe."

– David, a student at Reilly Elementary School Cycle Academy



OFFICE OF
SUSTAINABILITY

CITY OF AUSTIN



“Instead of throwing my bike away, I put on a new seat and painted it and now it’s just like a new bike! ”

– Matt, a student at Integrity Academy

Project Name: IA Bike Program

School: Integrity Academy

Funded By: Public Works Department

Project Description:

With the primary goal of teaching students the value of repairing instead of replacing their bikes, Integrity Academy used their Bright Green Future Grant to develop a bicycle repair program.

Because so many re-usable items – including bikes – end up in landfills, Integrity Academy identified volunteers to host workshops to teach kids minor bicycle repair and maintenance. Students were taught how to repair chains, inner tubes, cleaning, and rust damage to make bikes more appealing and encourage more riders.

A secondary goal for the program was based on the idea of getting kids outside to bike more often. Being outdoors increases the likelihood that riders will become more attuned to nature and work harder to preserve those spaces.



Integrity Academy students show off their refurbished bikes on a neighborhood ride.



“We hope that through the resources and training we provide for families, parents will have more confidence in helping their children stay interested in cycling.”

– Lisl Friday, Director at Athena Montessori School

Project Name: Carbon Footprint Project

School: Athena Montessori School

Funded By: Public Works Department

Project Description:

It was an easy choice for the Athena Montessori School to use their Bright Green Future Grant on a bicycle project, because the entire staff are all cycling enthusiasts.

The school purchased bicycles and helmets for every student and enlisted help from WOOM Bikes to develop a safety curriculum. Students and parents also learned about the negative affect automobile transportation has on the environment and were taught how to compute their carbon footprints.

By bringing awareness to ways of reducing their carbon footprints through alternative transportation choices, the school hopes to encourage more children and parents to ride bikes, as well as consider other forms of public transportation.



WOOM Bikes use non-toxic materials and ergonomic designs to make environmentally-friendly bikes for kids.



projects that minimize waste



“We never recycled at our house, but I taught my parents how easy it is and that it helps the planet.”

– McKenzy, a student at Foundation Communities

Project Name: Green and Healthy Classroom

School: Foundation Communities

Funded By: Austin Resource Recovery

The Green and Healthy Classroom is Foundation Communities’ most successful green living engagement strategy, and their Bright Green Future Grant will allow the program to grow.

To effectively engage staff and residents in green operations at multi-family residences, Foundation Communities replicated a successful learning center remodel that was piloted in 2014. A large component of this remodel involved installing recycling centers and other visually green elements into the learning center that helps change perceptions and community understanding of waste diversion and resource conservation.

The Green and Healthy Classroom afterschool curriculum at the learning center has empowered over 500 students with environmental literacy tools that promote greener and healthier habits and lifestyles.



Foundation Communities students pledge to recycle more.



"We planted something I never heard of, but my mom used it to cook."

– Jessie, a student at Dobie Pre-K

Project Name: Outdoor Learning Center

School: Dobie Pre-K

Funded By: Austin Resource Recovery

Project Description:

Understanding that students, particularly young preschoolers, are more engaged and learn more in an outdoor setting, Dobie Pre-K used their Bright Green Future Grant to construct an outdoor learning center and community garden.

Utilizing repurposed materials that would have ended up in the landfill, volunteers and parents designed and constructed a covered area where students helped plant seedlings in a living wall and water trough planters.

This area provides a hands-on opportunity to students as they are introduced to STEM subjects at an early age.



Dobie Pre-K students celebrate "Planting Day!"



“Daily routines have a huge impact on awareness and education of elementary students.”

– Amanda Braziel, Librarian at Maplewood Elementary School

Project Name: Compostable Campus

School: Maplewood Elementary School

Funded By: Austin Resource Recovery

Project Description:

Following a recommendation made by Maplewood’s Green Team that the cafeteria would be the best place to start in eliminating waste, the school used their Bright Green Future Grant to begin to establish a compostable campus.

On a weekly basis, Maplewood was using over 1,750 Styrofoam plates. While the school does not have the funds to eliminate the practice completely, compostable plates are now provided one day each week. The grant also allowed the school to purchase compostable bags for the janitorial staff’s use.

And knowing it will take everyone to effect major change, the Green Team scheduled time in each classroom to educate students about the benefits of composting.



Maplewood students take the first steps to eliminating Styrofoam in the cafeteria..



“With only three full service grocery stores in our district, community gardens only make sense!”

– Geoffrey Carlisle, a teacher at KIPP Academy

Project Name: Aquaponics Greenhouse

School: KIPP Academy

Funded By: Austin Resource Recovery

Project Description:

Located in Northeast Austin, in an area recognized as a food desert, KIPP Academy used their Bright Green Future Grant to construct an Aquaponics Greenhouse that grows fresh, healthy food for the community.

Aquaponics is a closed-loop system of growing fish and plants together in symbiosis; fish waste is used to fertilize plants, and the plants clean the water for the fish. This system of food cultivation provides a meaningful, less wasteful alternative to current agricultural practices.

High school students mentored 8th grade science students about their work in the greenhouse. Parent volunteers worked with Urban Roots, an urban farming organization, to build the greenhouse.



The aquaponics garden at KIPP grows healthy food for students and the community.



"You have to throw your stuff away, so why not recycle or compost it?"

– Jessica, a student at Mendez Middle School

Project Name: Compost Happens

School: Mendez Middle School

Funded By: Austin Resource Recovery

Project Description:

The lunchroom at Mendez wasn't sorting materials and treated everything as waste – it all went into the landfill. A Bright Green Future Grant provided the necessary resources to implement recycling and composting in the cafeteria.

Food service employees now save food scraps and students add these to the school's compost area. The compost created is used in the school's garden. Recycling containers have been installed in the cafeteria and gymnasium, and Austin Resource Recovery offered training for Mendez janitorial staff.

Next year, the students hope to expand the program to the teachers' areas. The goal is to reach 50% diversion in the first year!



Mendez students show off some of their composting tools.



"This is a great project. We are learning to grow healthy food and create a successful business model at the same time."

– Tomas, a student at Mendez Middle School

Project Name: Community Garden at Mendez

School: Mendez Middle School

Funded By: Austin Resource Recovery

Project Description:

The Dove Springs area of Austin is a food desert, with very few options for the community to purchase and eat fresh, whole foods. The Community Garden at Mendez Middle School provides a food forest for surrounding residents to eat food grown by students in the academy using compost created from lunchroom food scraps. Residents can also rent a plot that is managed by students in the Business Careers course. The garden will supply a future farm stand at the school.

In researching the benefits of community gardens in Austin, students found that a community garden increases the value of nearby property values by as much as \$37,000 and lowers crime. Since Dove Springs is marked by both low property values and a high crime rate, this project is helping to improve the environment in more ways than one!



The community garden at Mendez is bringing the neighborhood together.



"Bees aren't scary at all, you just have to respect them."

– John, a student at Wholesome Generation

Project Name: Honey Bee Apiary

School: Wholesome Generation

Funded By: Austin Resource Recovery

Project Description:

Partnering with the American Honey Bee Protection Agency, Wholesome Generation installed an apiary on their campus. Students are learning about the importance of the Honey Bee through hands-on beekeeping.

The American Honey Bee Protection Agency designed and constructed the apiary, and also leads classes with students to teach them about the critical role bees play in the food chain. With a deeper understanding of pollinator function, students can better advocate for protection of the environment.

These coordinated lesson plans and projects for kindergarten through 6th-grade classes will culminate in an awareness-raising project to be presented to the community.



Beekeepers use smoke to calm the bees.



"We got to draw where the vegetables should grow."

— Sophia, a student at Lucy Read Pre-K

Project Name: PEAS Community Garden Classes

School: Lucy Read Pre-K

Funded By: Austin Resource Recovery

Project Description:

A foundational belief for Lucy Read students is that "Children learn best through hands-on experiences that involve observation, exploring, and creating, both individually and with others." What better way to do that than to take them outside to learn about the environment by growing their own food?

With funding from a Bright Green Future Grant, Partners for Education in Agriculture & Sustainability (PEAS) provided a trained gardener one day a week to work with students at Lucy Read Pre-K.

PEAS also led professional development training for staff to inspire teachers to use gardening in innovative ways.



Lucy Read Pre-K students put ideas for their garden down on paper.



"I like to come sit by the pond and read when my sister is playing on the play scape."

– Caroline, a student at Boone Elementary School

Project Name: Peace Pond Outdoor Learning Center

School: Boone Elementary School

Funded By: Austin Resource Recovery

Project Description:

Through the Bright Green Future Grants program, Boone was able to add a small pond to their natural playground, providing a more complete ecosystem that attracts wildlife for students to observe and study.

The school's natural playground currently serves around 100 students and is also a place where people from the community visit on weekends.

Volunteers from local scout troops helped make the project a reality.



During science class, students record their wildlife observations.



“Students own this project. They plant and maintain the trees and are involved in the sales process.”

– Mike Berryman, a PTA member at Bailey Middle School

Project Name: The Bailey Tree Farm

School: Bailey Middle School

Funded By: Austin Resource Recovery

Project Description:

Bailey Middle School used their Bright Green Future Grant to start a farm that grows trees with less water. The trees are grown in Airpots, which create a more resilient root system through natural pruning. As a result, the trees absorb water more easily, requiring minimal water to grow.

The trees will be sold at an Arbor Day event to raise awareness about the importance of trees, as well as offer tips for tree care. Proceeds from the tree sales will help teachers fund green projects – and purchase more trees!

Trees that use less water, provide shade, and pay for themselves is the very definition of a sustainability project!



The Tree Farm at Bailey Middle School grows more than trees.



"It was so frustrating to come the garden and our tools were either rusted or gone."

– Derek, a student at Covington Middle School

Project Name: Repurposed Shed

School: Covington Middle School

Funded By: Austin Resource Recovery

Project Description:

Covington Middle School is a previous Bright Green Future Grant recipient, and they are using this year's funds to improve on a past project.

Tools were purchased for students to maintain the garden that they planted last year, but with no place to store them, much of the gardening equipment was either broken or stolen. So students constructed a tool shed using repurposed materials that would have ended up in the landfill. The new shed is used to store their tools and as a seasonal greenhouse.

Now Covington students can continue their gardening efforts and keep their plants safe and warm during the winter.



With this shed built out of repurposed materials, Covington students now have a secure place to store their gardening equipment..



"If everyone just does their part, we can solve this problem."

– Meghan, a student at Griffin High School

Project Name: Zero Waste

School: Griffin High School

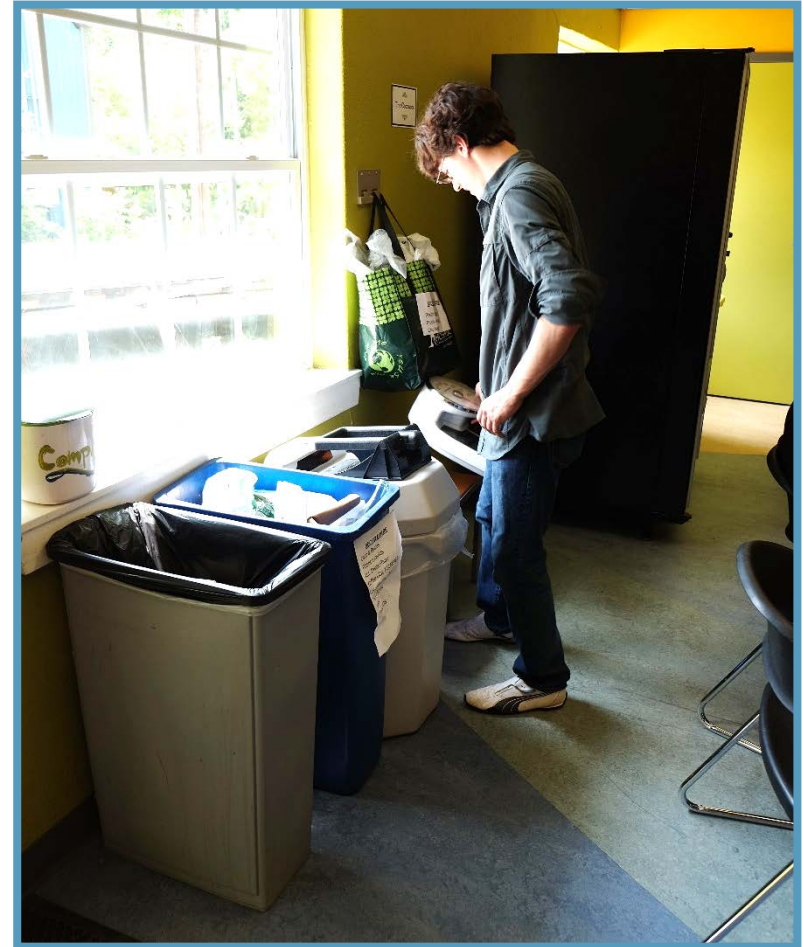
Funded By: Austin Resource Recovery

Project Description:

Lucas Brown, a senior at Griffin, decided to make zero waste his senior project. Funding from the Bright Green Future Grant program provided the necessary resources to make his project a reality.

Griffin High School embraced his plan to minimize waste and reworked their waste management systems to make recycling and composting easier and more effective. Students went on site visits to learn more about recycling, composting, and zero-waste efforts in the community. Students also designed a school-wide communication plan to educate everyone about what goes where using posters and social media.

The school's National Honor Society Chapter has taken on the zero waste effort as a service project.



Lucas Brown in the recycling center at Griffin High School.



"I think it's a great idea. You can't expect folks to do something if they don't have the training or resources."

– Dominic, a student at NYOS

Project Name: Festival Recycling Project

School: NYOS High School

Funded By: Austin Resource Recovery

Project Description:

NYOS High School decided to start small on their path to zero waste. They used their Bright Green Future Grant to purchase bins to make their Spring Festival zero waste.

But their work won't end there. Future plans call for training students and teachers about appropriate waste stream recycling for the large annual fundraising event at the school. NYOS also plans to apply that experience to expand to year-round recycling, explore compost collection strategies, and contract collection services with vendors.



NYOS students and faculty enjoy their annual school fundraising festival.



eco-audit projects



The Office of Sustainability partnered with EcoRise Youth Innovations to provide funding for EcoAudit projects.

17 projects

1,273 students directly engaged

Project themes:

Water Conservation

Waste Reduction

Energy Conservation

Food Production

Public Space Improvements

Alternative Transportation

Air Quality

Over the next year, student projects will save an estimated

509,128 gallons of water,
29,826 KWH of energy, and divert **over 1.5 million pounds of waste** from landfills.





EcoAudit Projects:



Akins High School: Bottles You Can Refill, Not Landfill!

Austin Achieve: Revamping Campus-Wide Recycling & Compost

Austin Discovery School: Soil & Water Are Life Rainwater Garden

Brooke Elementary School: Beehive Education

Cedar Park High School: Microbial Fuel Cell with Clean Water Generation

Cedar Park High School: Portable Plant Wall

Cedar Park High School: Vertical Aquaponic Gardening

Hill Elementary School: Compost Tumblers

Hill Elementary School: Lunchroom Recycling Rollers

Hill Elementary School: Playground Bins

Integrity Academy: Energy Audit

Integrity Academy: Drinking Water

Integrity Academy: Waste Improvement

Inside Outside School: Outdoor Classroom

Joe Lee Johnson Elementary School: Water Bottle Campaign

Mendez Middle School: Chickens are Friends and Food!

Lamar Middle School: Compost Initiative



OFFICE OF
SUSTAINABILITY

CITY OF AUSTIN