



# SCHOOL RESOURCE JOURNAL

A JOURNAL ON RESOURCE CONSERVATION TOPICS FOR SAN MATEO COUNTY EDUCATORS

ISSUE NO. 20, 2019-2020



## Dear Teachers and Administrators,

We admire all the hard work you do to inspire students to lead our communities towards a sustainable future! The students in San Mateo County are leading environmental change because of you, our amazing educators. Thanks to your new and continued partnerships with us, in the last year alone we reached over 10,500 students and educators across San Mateo County.

The County of San Mateo Office of Sustainability (OOS) Schools Program offers a variety of free services, resources, and assistance to educators who are “greening” their schools, classrooms, and curricula. Some of the activities that students love include hands-on worm and backyard composting lessons, transforming old t-shirts into tote bags, and playing the 4R’s Unit Board games. Administrators and teachers appreciate our assistance in helping them set up recycling and composting programs at their schools. Additionally, we help them create waste reduction action plans that can lead to Green Star School ([www.greenstarschools.org](http://www.greenstarschools.org)) certification. Our goal is for students to take action right now and into our future; it can be as simple as sorting their waste correctly or petitioning school board members to create new climate conscious policies. Our passionate team is excited to support your classroom, school, and school district in ways that help us build a more sustainable community for all.

In addition to the resources and activities that we provide, the Schools Program publishes an up-to-date collection of local environmental education providers through this annual journal. These providers also offer teacher and youth training workshops, field trips, classroom lessons and projects, and school assemblies.

To find links to environmental education literature, curricula, and grant opportunities for your classroom, school, and community, check our webpage at [www.smcsustainability.org/schools](http://www.smcsustainability.org/schools).

If you have any questions or suggestions for the Schools Program, please don’t hesitate to reach out to us. We are looking forward to working with you throughout this school year.

Sincerely,  
**The OOS Schools Team**



*Students Doing the 4R’s Dance During an Assembly*



**GREENING SCHOOLS .....02**



**RECYCLING .....03**



**DISTRICT/SCHOOL SPOTLIGHT ..... 04**



**YOUTH SPOTLIGHT .....05**



**TEACHER EDUCATION ... 06-09**



**CURRICULA & RESOURCES..... 06-11**



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## THE OFFICE OF SUSTAINABILITY IS HERE TO HELP

The County of San Mateo Office of Sustainability Schools Program can provide free waste reduction resources, assistance, presentations and trainings.

**Check Out Our Website:**  
[www.smcsustainability.org/schools](http://www.smcsustainability.org/schools)

**Contact Us At:**  
(888) 442-2666  
[sustainability@smcgov.org](mailto:sustainability@smcgov.org)

**Stay in Touch With Us!**  
Follow the Office of Sustainability on Instagram and Twitter.



@SustainSMC



## OPPORTUNITY AWAITS Green Star School: Certify Your Classroom



Through the Green Star School (GSS) Certification Program, teachers are provided the tools, resources, and technical aid to inspire students to take action to conserve resources. Students examine, assess and explore how their classroom or school can model sustainable practices such as minimizing the school's waste stream. This inquiry-based program is centered on a model of student driven action and correlates with both NGSS and Common Core standards. First, students will be given access to resources and information based on what they identify as problems in the initial assessment. Next, students will be asked to look deeper and work together to problem solve and recommend changes that are needed to implement best practices. This certification makes it easy for teachers to integrate environmental project-based learning (PBL) lessons into their curriculum with a multi-disciplinary approach. Each step taken counts as an action toward a GSS certificate. The GSS interactive website provides tools for teachers and students to calculate the carbon dioxide (CO<sub>2</sub>) emissions reduction that results from implementing classroom and school-wide conservation projects. Starting this year, GSS is also providing opportunities for entire schools to earn a GSS certificate in the waste pathway by working with teachers and administrators to develop and implement an action plan. For more information about this exciting certification program, please email us at [sustainability@smcgv.org](mailto:sustainability@smcgv.org) or go to [www.greenstarschools.org](http://www.greenstarschools.org).



*Example Certificate*

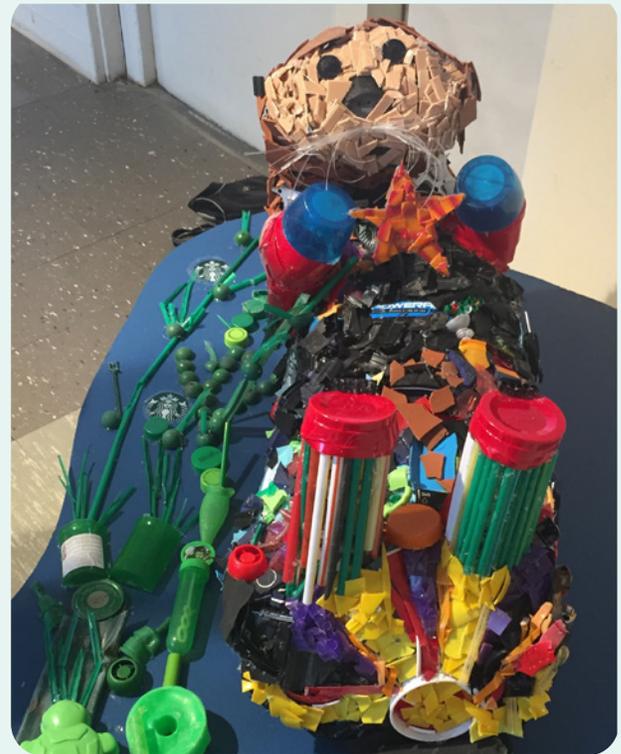


## GIVE UP OR INNOVATE?

In 2018, China passed the National Sword Act due to contamination issues in the materials being sent there for recycling. China has historically been the largest purchaser of U.S. recyclables. The passage of the act has resulted in a drastic reduction of the amount of U.S. recyclables China buys and processes. This move has sent many states, municipalities, and materials recovery processors into a bit of a tailspin as they attempt to keep moving commercial and curbside recycling through complex markets of materials recovery buyers, sellers and manufacturers. Considering that curbside recycling is comprised of mostly paper, cardboard, and single-use plastics, National Sword should also cause us as consumers to reconsider our consumer choices and habits towards reduce and reuse.

For the moment, recycling has taken a hit but that doesn't mean we should stop teaching or encouraging students to sort their waste. Let's take the time to turn this challenge into an opportunity to apply design thinking principles to 4R's classroom units. Can you design a product that is re-used in multiple, useful or creative ways? Can you think of a waste material that can be re-used repeatedly or be fully compostable at the end of its life? Can you design waste-free packaging that protects what's inside as well as stands up to the demands of product transport? What makes waste sorting easier for as many people as possible? Can you design an optimal waste sorting system?

Teachers of younger students can take advantage of our Creative Re-Use Crafts and curriculum that we bring directly to classrooms. So don't wait; INNOVATE!



*Sea Otter Made from Plastic Litter*



## Recycling at School

### Free Technical Assistance

Schools Program staff can provide your school or staff free technical assistance to implement or expand your school recycling and/or composting program. Contact us at [sustainability@smcgov.org](mailto:sustainability@smcgov.org) to get started.

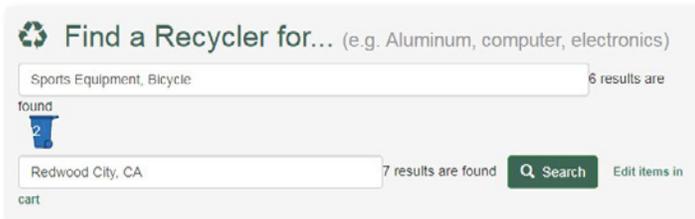
### Batteries and Fluorescent Lights



It is illegal to dispose of these items in your trash. For information on how to properly get rid of these items, call (650) 599-1406 or [www.flowstobay.org/toxic](http://www.flowstobay.org/toxic).

### Computers and Electronics

Goodwill and Savers donation sites in San Mateo County accept working computer equipment for reuse. To find locations to recycle electronics and other donations sites throughout San Mateo County use the recycling search engine at [www.recyclestuff.org](http://www.recyclestuff.org) or call us at (888) 442-2666.



Find this search tool at [www.recyclestuff.org](http://www.recyclestuff.org)

### Lost and Found Items

At the end of the semester most schools accumulate a large amount of lost and found items such as clothing, lunch bags, toys, and books that are never claimed. These items can be donated to benefit a local charity. To find a list of charities in San Mateo County, use the recycling search engine at [www.recyclestuff.org](http://www.recyclestuff.org). If you have trouble finding a charity near you, you can also call us at (888) 442-2666.

### Desks and Chairs



Is your school or district accumulating broken desks and chairs? If so, don't throw them away! Sims Metal in Redwood City will take them and recycle the reusable metals from them. Call Sims Metal at (650) 369-4161.

### Books



Visit [www.recyclestuff.org](http://www.recyclestuff.org) and use the recycling search engine to find locations in San Mateo County where you can donate books in good condition. Damaged or outdated softcover books can be recycled at your school site in your mixed paper recycling bins.



3-bin Sorting Station at Jefferson High School

## Reuse Centers

There are several organizations in the area that collect a wide variety of manufacturing byproducts, overruns and other scrap materials, and then redistribute them to schools and community groups for reuse. Many of these materials are great for science and art projects! Visit the following local reuse centers:

- Resource Area for Teaching (RAFT), Redwood City; (650) 802-5505, [www.raft.net](http://www.raft.net).
- Scroungers Center for Reusable Art Parts (SCRAP), San Francisco; (415) 647-1746, [www.scrap-sf.org](http://www.scrap-sf.org).

## Surplus Property Sales

The public can purchase leftover office furniture, computers, and office equipment from the County of San Mateo. Teachers can receive these items free of charge. Visit [www.smcsustainability.org/surplus](http://www.smcsustainability.org/surplus) to view the items available for purchase in-person and through the online auction.



Thomas Edison Elementary School Students Learning About Recycling From Their Local Hauler, Republic Services, Earth Day



## San Bruno School District Composting – Reaching Toward Zero Waste

Congratulations to the San Bruno Park School District (SBPSD) for collecting organics to be composted by Recology (their local hauler) in four out of their six school campuses. Additionally, by this winter SBPSD is planning to have all six of their schools actively diverting organic waste from being landfilled.

### How Was This Accomplished?

In 2018, administrators and teachers at Rollingwood, John Muir and Portola Elementary wanted to make a difference to “green” their schools as Bell Aire Elementary had been doing for the past five years. Under the guidance of Recology San Bruno and with Office of Sustainability Schools Program support, school staff taught their students to sort and divert organic waste on their campuses. As a result, these schools became the model for the other schools in the district.

Most recently, after the district and school board learned of the new CA state commercial composting law, AB 1826, they remembered that reducing waste and conserving resources were already part of school board policy. They were happy to renew their effort to give more focused support and resources toward bringing all schools in the district on board towards zero waste! Therefore, Recology



*Sorting Station at Portola Elementary School*

and the Office of Sustainability Schools Program schools will also continue to provide their district with signage, in-depth waste assessments, and educational resources such as 4R’s assembly presentations and classroom lessons to get staff and students on-board with collecting organics / composting on all their campuses.

If you have any questions about how to get help for school districts to better reduce waste, improve or implement organics collection on their school campuses, and/or find out which hauler your district’s contracts with, please contact us at [sustainability@smcgov.org](mailto:sustainability@smcgov.org).

## EPIC Day at Mills High School

At Mills High School, EPIC is the acronym for the following student learning outcomes: effective communicators, positive contributors to the community, individuals that are healthy, self-reliant and responsible, and critical problem solvers and creative thinkers. To inspire students to work toward achieving these objectives, Mills staff created the EPIC Day. EPIC Day is a community based event where staff, parents, and students connect with one another around the joy of learning for the sake of learning. The day also provides students the

opportunity to connect and engage with each other to build their collective efficacy around sustainability and climate justice.

At this year’s EPIC Day, students attended an assembly with young speakers, community activists, and AP Environmental Science students who spoke about a variety of topics including: the importance of community, environmental issues, climate change, sustainability, and solutions everyone can implement in their daily lives. While half the school was at the assembly, the other half attended breakout sessions led by community members, County of San Mateo OOS staff, Mills High School staff, and student leaders. Here they took a deeper dive into topics like sustainability, cultural awareness, health and wellness, art, music, language, and more. The EPIC Day concluded with the Club Fair where students could learn about and join the different communities and clubs on campus.

Overall, EPIC day helped nurture different levels of student empowerment, fostered stronger community connections and a sense of belonging, and informed students about environmental issues happening across the world and within their own community.

If you like to learn more about EPIC Day and how to implement an event like this at your school email us at [sustainability@smcgov.org](mailto:sustainability@smcgov.org).

*Students learning about Climate Change and Sea Level Rise during the EPIC Day at Mills*





## Green Team Leader, Lilian Chang, Takes on Waste Contamination

At the beginning of the 2018-19 school year, Mills High School student Lilian Chang and her fellow green team members took a walk around campus to evaluate the effectiveness of the school's new waste sorting bins. What they discovered was a not-so-secret waste problem. Garbage was contaminating the recycling and compost bins, and recyclables were being thrown into the compost and landfill bins. Building on these initial observations, Lilian and the team conducted waste audits of all the bins on campus. The results showed that the contents of all the bins looked the same regardless of signage for recycling, composting, or landfill. With these findings, the Mills Green Team set out to create change by developing an educational campaign to teach fellow students and faculty about the importance of recycling and composting and how to properly sort waste on campus. After the educational campaign and toward the end of the school year, the team did their final waste audits. The results showed improvement in materials being properly placed in recycling, composting, and landfill bins on campus. Way to Go Mills!

Based on what Lilian learned by leading the waste reduction education campaign at Mills and the desire to generate more change in her community, she participated in the Schools for a Sustainable Future Summit held by the San Mateo County Office of Education last spring. During this conference Lilian spoke



*Lilian Chang Teaching Her Peers about the importance of Diverting Waste*

### San Mateo County Youth Climate Ambassadors - Leadership Program

The new Youth Climate Ambassadors - Leadership Program provides 9-11th grade students with a year-long opportunity to dive into social and environmental issues contributing to the global climate crisis and become empowered leaders to take action on climate change in their schools and greater community. During this program, students will develop and implement a community impact project that is designed around local climate change efforts where students will exercise a variety of skills including observations, interviews, survey design and implementation, data collection, and more, based on student interest. This leadership program is made possible through a team of organizations including Citizens Environmental Council of Burlingame, Peninsula Clean Energy, San Mateo County Office of Education, County of San Mateo Office of Sustainability, and Youth Leadership Institute and will run from January 2020 – December 2020. For more information and applications visit: <http://bit.ly/33gUez1>.

about the challenges of waste sorting on a high school campus and educated them on campus-wide waste reduction plans with her peers. Additionally, this fall, Lilian was a keynote speaker at Mills' first EPIC Day (a school-wide event on climate change and social justice). She taught her fellow students about how Mills can reduce the waste stream that ends up in the landfill, the importance of composting organics to reduce methane gas emissions and recycling to conserve raw materials.

Thank you Lilian Chang for leading the way!

## Girl Scouts Green Team Composting Greens!



*Girl Scout Troop Members Collect Vegetable Leftovers From the Salad Bar for Their School Garden Composting System*

The 5th grade Girl Scout Troop 61563 is helping to close the loop at Ocean Shore School in Pacifica. Their school is composting cafeteria salad bar leftovers (greens) in their school garden 3-bin composting system.

### How Did the Troop Do This?

First, they spoke with the school nutrition director and principal to get support for this new project. Once they got approval, they trained their fellow fourth and fifth graders on how

to move the salad bar leftovers to the 3-bin composting system in the school garden and how to use it. In addition to leading this on-site waste reduction project, the troop conducted a schoolwide outreach campaign. They visited each classroom and taught students about the importance of composting and diverting organics from the waste stream.

As a result of Troop 61563's efforts, over the course of the spring semester, the school diverted 300 pounds of greens and vegetable leftovers into their school garden composting system; this is the equivalent of keeping 3000 pounds of carbon emissions out of the atmosphere! That's some Green Girl Power!

If you are interested in building a 3-bin composting system and/or creating a similar composting program at your school, please contact us at [sustainability@smcgov.org](mailto:sustainability@smcgov.org).



# CURRICULA AND RESOURCES



## TEACHER EDUCATION

### SMCOE STEAM Center

The San Mateo County Office of Education (SMCOE) STEAM team envisions a world filled with empathic learners who are passionate problem-solvers, real-world risk-takers, and curious creatives. All children deserve access to learning that nurtures their innate curiosity! That is why the STEAM team collaborates with educators to design and facilitate learner-centered experiences that are also STEAMCENTRIC!

The STEAM team builds educator capacity through diverse professional learning opportunities, by connecting schools, networks, community, industry, and government, and by catalyzing and propagating emerging models for learning. Visit the Center to attend active workshops on topics such as argumentation & the Next Generation Science Standards, number talks and conceptual understanding, Project Based Learning (PBL), making robotics, and computer science. To learn more about the STEAM Center or to check out their on-line resource center, go to:

[www.smcoe.org/for-schools/district-instructional-services/steam-center-services.html](http://www.smcoe.org/for-schools/district-instructional-services/steam-center-services.html)



### Food Share Table Program

The Food Share Table Program aims to help feed students and reduce the amount of food that ends up in landfills. Share Tables provide a way for schools to follow state mandate SB 1383 which promote the recovery of 20% of edible food toward a total diversion of 75% of organic waste from landfills. Environmental Health Services, in partnership with the Office of Sustainability and RethinkWaste, offers assistance and a toolkit

to help implement safe and efficient Food Share tables at schools. Visit [smchealth.org/sharetable](http://smchealth.org/sharetable) or call Environmental Health Services at (650) 372-6252 to establish a Share Table at your school!



Danielle and Nicole Setting Up a Share Table at Sunshine Garden Elementary

## LOCAL PROGRAMS AND RESOURCES

### OFFICE OF SUSTAINABILITY FREE PROGRAMS

#### Interactive and Field-Based Program on Climate Change and Sea Level Rise

The Youth Exploring Sea Level Rise Science (YESS) program empowers youth with the knowledge and skills to act on climate change and participate in climate solutions within their school and community. The YESS program provides high school students with the opportunity to participate in hands-on learning activities and gets students out in the field to connect with places that will be impacted by climate change. Additionally, students collect their own data, create communications products, and get to be part of climate change solutions. The YESS program provides youth with the knowledge and resources to act on climate change and gives them a platform to spark a broader conversation about risk and resiliency. The program is divided into three primary components:

- 1. Classroom Learning:** Through a flexible curriculum that includes hands-on experiments, games, and interactive activities, students learn about the causes and potential impacts of climate change and sea level rise.
- 2. Field Trips:** Students analyze local sea level rise data, explore flood risk and potential solutions for their communities.
- 3. Final Projects:** Students reflect on what they've learned and what sea level rise will mean for their communities, and construct final projects based on their own interests. Previous student projects included presentations to local sea level rise stakeholders, multi-media communication projects, and more.

The YESS curriculum, aligned with Next Generation Science Standards (NGSS) and Common Core Standards, is now available to high school teachers throughout San Mateo County for the 2019-2020 school year. If you would like more information, or to partake in the YESS program, please contact Zoe Van Duivenbode at [zvanduivenbode@smcgov.org](mailto:zvanduivenbode@smcgov.org).



Don't forget to visit the Office of Sustainability Schools Program Website and download our Resource Lists at [www.smcsustainability.org/schools](http://www.smcsustainability.org/schools) or call us at (650) 599-1424 to find additional information on developing classroom activities and curricula.



## Composting Lessons and Demonstrations (all grades, TK-12th)

Composting is a great way for students to experience hands-on learning in nature while simultaneously recycling organic waste. The Office of Sustainability offers free classroom demonstrations correlated to the Next Generation Science Standards on outdoor composting and vermicomposting (worm composting). To schedule a demonstration contact us at (888) 442-2666 or email [sustainability@smcgov.org](mailto:sustainability@smcgov.org).



## 4R's Unit Games (grades, 3rd-12th)

Teach your students about the Natural Resources, Resource Recovery, the Waste Management System and more by using our interactive board games. The Schools Program has a limited number of classroom sets of the 4R's Unit Games available to schools for free. Our staff also help teachers facilitate the games the first time they are played in the classroom. Game sets will be provided to teachers and schools on a first come-first serve basis. Don't wait! Email [sustainability@smcgov.org](mailto:sustainability@smcgov.org) to request your 4R's Unit Games.

## 4R's Presentations (all grades, TK-12th)

Schools Program staff is available to give free presentations to classes, small groups, school assemblies or events to support your school's recycling, composting, waste reduction and green building efforts. Contact us at (888) 442-2666 or email [sustainability@smcgov.org](mailto:sustainability@smcgov.org) for more information.

## Community and School Garden Partnership

The Office of Sustainability (OOS) is currently looking to partner with local schools and community organizations to build and maintain vibrant community gardens in San Mateo County. Through this program, community members will practice sustainable composting techniques and apply their hands-on experience at home to reduce the amount of organic waste being sent to landfills. Participants will also learn to use compost as a soil amendment to grow nutritious and fresh produce! The OOS will provide funding and resources to help start gardens and maintain current gardens. The recipient's role is to use the funding to build the garden, coordinate with the gardeners to upkeep the garden, and promote composting and sustainable gardening in the community. Please contact [sustainability@smcgov.org](mailto:sustainability@smcgov.org) if your organization or school is interested in starting or maintaining a community garden! Visit [www.smcsustainability.org/communitygarden](http://www.smcsustainability.org/communitygarden) to learn more.

Some of our community gardens can be found at the following schools:

- [Pescadero Elementary School](#)
- [La Honda Elementary School](#)
- [Los Robles Ronald McNair Academy in East Palo Alto](#)
- [Woodrow Wilson Elementary School in Daly City](#)
- [The San Carlos Charter Learning Center](#)
- [Monte Verde Elementary School in South San Francisco](#)



## TEACHER EDUCATION

## The County of San Mateo's Sustainability Academy

Over the years, many teachers have taken part in the free courses and workshops of the Sustainability Academy. The Sustainability Academy's design and purpose is to raise awareness about environmental issues and to empower San Mateo County community members of all ages with the knowledge and skills to practice sustainability in their everyday lives. Academy workshops are usually one-time for about half a day, while courses can run between 12 days and 9 weeks and often include a volunteer component. Courses and workshop topics include composting, resource conservation, going solar, fixing electronics and house deconstruction. To view a list of all the courses and workshops with descriptions, visit:

[www.smcsustainability.org/academy](http://www.smcsustainability.org/academy).

## Bay Area Earth Science Institute (BAESI)

BAESI offers hands-on teacher training workshops and field trips. When attending these workshops, 4th-12th grade teachers are provided with instructional materials for classroom lessons. Teachers also have the opportunity to earn continuing education units (CEU's) through San Jose State University. For more information, visit [www.baesi.org](http://www.baesi.org).



*Woodrow Wilson Elementary School  
Community Garden in Daly City*



# CURRICULA AND RESOURCES



## TEACHER EDUCATION

### Hands-on Education at RAFT

RAFT serves educators of all types—classroom teachers, early educators, after school program providers, youth and community club leaders, and home educators. RAFT works with educators to integrate hands-on, student-led activities in the learning environment. Visit RAFT at [www.raft.net/resources/#workshops](http://www.raft.net/resources/#workshops).

### Education and Training at the Energy Coalition

The Energy Coalition’s PEAK program gives educators opportunities for high-quality STEM professional development to further hands-on science of energy education in their classrooms and afterschool sites. The PEAK program provides schools with avenues to save energy and water on campus through student-led actions. They help advance critical thinking, problem solving, and team building skills to inspire students to engineer innovative solutions for a brighter future for all.

During the professional development training, educators receive lessons aligned with NGSS and Common Core Standards, a toolkit of materials, ongoing support from staff, and access to green career connections through My Energy Future, at no cost. Admission to online and in-person training workshops is offered on a rolling basis. For more details about their offerings visit [www.peakstudents.org/teachers-corner/](http://www.peakstudents.org/teachers-corner/).

### Making a Solar Oven

Explore the world of solar energy and how you can harness it to make heat and electricity. The Office of Sustainability has a solar oven available for teachers to borrow. The oven is accompanied by instructions for a hands-on activity where students create their own solar ovens out of pizza boxes and use them to make nachos. This activity is available for download on our website, [www.smcsustainability.org/schools](http://www.smcsustainability.org/schools).



# LOCAL PROGRAMS AND RESOURCES

## ENERGY AND WATER

### Energy and Water Upgrade Toolkit at Your Local Library

The Office of Sustainability’s Check It Out! Home Energy and Water Saving Toolkit is available for checkout at all San Mateo County Libraries. Designed to help residents and students evaluate the energy and water usage of their homes, this kit can be easily adapted for classroom lessons. With the kit’s free LED lightbulb, heat leakage thermometer, faucet aerators, simple instructions, and other resources, students can learn how to enhance their classroom’s and even home’s water and energy efficiency. To learn more about these kits email us at [sustainability@smcgov.org](mailto:sustainability@smcgov.org).



*Inside Look at Tools and Resources Found in the Energy and Water Toolkit*

### Prop 39 Success: Saving Energy in Your School

The San Mateo County Energy Watch, a program of the Office of Sustainability and City/County Association of Governments of San Mateo County (C/CAG), supported 20 school districts in the county with implementing energy efficiency upgrades through California Proposition 39 (Prop 39), a ballot initiative passed in November 2012. Their team supported schools by providing energy audits and assistance with writing and submitting Energy Expenditure Plans (EEPs) needed to access these funds. As a result, 20 out of the 22 K-12 school districts in San Mateo County submitted EEPs and were approved for Prop 39 funding! To see case studies or learn what opportunities are available for your facilities, please visit: [smcenergywatch.org/schools/](http://smcenergywatch.org/schools/).

### Flows to Bay

The “Teachers” section of the San Mateo Countywide Water Pollution Prevention Program (SMCWPPP) website provides teachers with resources to educate students about water and how we can prevent pollution of our local waterways. For more information, visit [www.flowstobay.org/schools](http://www.flowstobay.org/schools).





## COMMUNITY SERVICE

### Fun Ways for Students to Fulfill Their Community Service Hours

If your class or school requires community service hours or you have students who want to help their community, have them check out the County of San Mateo's Sustainability Academy. Students age 14 and older can participate in Academy courses at no-cost. In exchange for enrollment, students will be required to volunteer their time back to their community. We encourage students to volunteer in an activity that is fulfilling and fun for them and will help connect them to opportunities and resources that meet their needs. Also, attend the Academy's Sustainability Socials to meet like-minded people and contribute to your community! For more information visit [www.smcsustainability.org/volunteer](http://www.smcsustainability.org/volunteer) or reach out to Avana Andrade at [aandrade@smcgov.org](mailto:aandrade@smcgov.org).



## TRANSPORTATION



### Safe Routes to School

The San Mateo County Office of Education Safe Routes to School (SRTS) program supports school-wide projects and activities to encourage, enable and educate students to walk and bike to school safely.

The overall goal of the program is to reduce traffic congestion and emissions caused by school-related travel and, at the same time, improve students' health and well-being. To learn more about San Mateo County SRTS resources for implementing school-wide projects and activities and for upcoming events visit [tinyurl.com/SanMateoCountySRTS/](http://tinyurl.com/SanMateoCountySRTS/).



## TEACHER EDUCATION

### San Mateo Environmental Learning Collaborative (SMELC) Teacher Fellowship Program

The Office of Sustainability is thankful to participate in and support several San Mateo Environmental Learning Collaborative (SMELC) teacher fellowship programs sponsored by the San Mateo County Office of Education (SMCOE). SMELC fellowships include the Science and Environment, Zero Waste, and Clean Water Pathways programs. The overall objective for these programs is to provide teachers with professional development that supports them in deepening their knowledge and understanding of environmental issues leading to the development of their own project-based learning (PBL) units. These units help students dive deep into local and global environmental problems and culminate in advocacy-based solutions generated and implemented by the students under the guidance of fellowship teachers. The SMELC fellowship programs also give teachers the opportunity to interact and connect with representatives from various local environmental education organizations who can provide resources to support their lessons. To learn more, visit [tinyurl.com/SMELC-Fellowships](http://tinyurl.com/SMELC-Fellowships).

### San Mateo Environmental Learning Collaborative (SMELC) Administrator Fellowship Program

The San Mateo Environmental Learning Collaborative (SMELC) offers a year-long paid administrator fellowship program to support administrators to drive environmental transformation across their school community. Fellows attend monthly workshops to develop and implement an action plan that greens one aspect of their school/district's facilities. They are also encouraged to integrate these efforts into the curriculum thereby moving schools to be genuine laboratories for learning. The cohort starts soon. For more information, visit [tinyurl.com/SMELC-Fellowships](http://tinyurl.com/SMELC-Fellowships).



*Teachers Playing the 4R's Game at SMELC Workshop*



## LOCAL PROGRAMS AND RESOURCES

### Classroom Visits and Field Trips

There are many environmental education organizations within or near San Mateo County that offer field trips or bring their interactive programs directly to schools.

#### San Mateo County Parks

Discover the different habitats in our parks and learn about all the species that exist there. To learn more about our County Parks and how to sign up for the student programs and the docent led tours of some parks, visit [parks.smcgov.org/student-programs](http://parks.smcgov.org/student-programs).

#### Marine Science Institute in Redwood City

Encounter the creatures that live in San Francisco Bay and practice using the equipment and tools researchers use to study them: [www.sfbaymsi.org](http://www.sfbaymsi.org).

#### WILDMIND in Half Moon Bay

Non-releasable and injured wildlife become the ambassadors that teach students about the importance of protecting and conserving our natural environment: [www.wildmindscience.org](http://www.wildmindscience.org).

#### Elkus Ranch in Half Moon Bay

Meet the goats, chickens, horses, and sheep that live on this working farm and learn about environmental stewardship: [elkusranch.ucanr.edu](http://elkusranch.ucanr.edu).

#### CuriOdyssey at Coyote Point

Experiment with physics and observe California native reptiles, amphibians, birds, and mammals in their habitats: [curiodyssey.org](http://curiodyssey.org).

#### Pie Ranch in Pescadero

Experience sustainable farming practices by making pie from scratch, starting with the very source of the ingredients such as milking goats and cows for butter: [www.pieranch.org](http://www.pieranch.org).

#### The San Mateo County School Farm Operated by the HEAL Project (Half Moon Bay)

Field trips to this farm offer San Mateo County students an opportunity to connect with the environment and the food they eat: [www.thehealproject.org/farm](http://www.thehealproject.org/farm).

#### Hidden Villa in Los Altos Hills

Practice sustainable agriculture and animal husbandry and take hikes to explore the wilderness that surrounds this farm: [www.hiddenvilla.org](http://www.hiddenvilla.org).

#### Environmental Volunteers in Palo Alto

Visit the EcoCenter, explore the marsh of San Francisco Bay, and learn about the Bay's natural systems: [www.evols.org](http://www.evols.org).

#### Shoreway Environmental Center in San Carlos

RethinkWaste (South Bay Bayside Waste Management Authority-SBWMA) offers free field trips for classes 3rd grade and up. Free bus transportation is available for 3rd to 5th grade classes in the RethinkWaste service area (Atherton, Belmont, Burlingame, East Palo Alto, Foster City, Hillsborough, Menlo Park, Redwood City, San Carlos, San Mateo, Unincorporated San Mateo County, and West Bay Sanitary District). RethinkWaste also offers in-school technical assistance that includes no-cost 3-stream bins, staff training, and student education; this service is available to select elementary schools in the service area. Schools and community groups in the RethinkWaste service area can participate in contests, community events, and they can receive up to five 50-lb bags or 20-cubic yards of compost for a garden project. To learn more, visit their website at [www.rethinkwaste.org](http://www.rethinkwaste.org) and to schedule a tour, email [tours@rethinkwaste.org](mailto:tours@rethinkwaste.org).



*Field Trip Shoreway Environmental Center: Students Learning About Compost*

## HEALTH AND WELLBEING



#### Get Healthy San Mateo County (SMC) - Healthy Schools Program

Get Healthy San Mateo County uses policy change to prevent diseases and ensure that everyone has equitable opportunities to live a long and healthy life. Get Healthy SMC has partnered with Community Alliance with Family Farmers (CAFF) and other local partners to increase the amount of local produce in school meals and other farm to school strategies. To learn about this program and to discover other resources that the San Mateo County Health has for teachers, administrators, parents, and guardians, visit [www.gethealthysmc.org/healthy-schools](http://www.gethealthysmc.org/healthy-schools). Informational resources on this website include links to school wellness policies, educational attainment, parent advocacy, nutrition, and afterschool and child care programs. You will also be able to see updates about the San Mateo County School Wellness Alliance and learn how you can join this inspirational group.

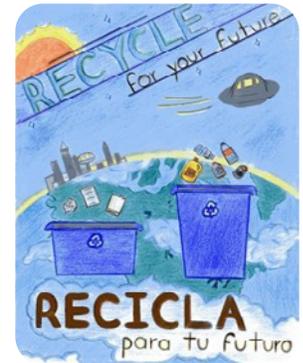


## LOCAL CONTESTS

### COUNTYWIDE

#### Art Takes a Bus Ride in San Mateo County

SamTrans is more than just a bus. It is an important service that empowers people in San Mateo County by providing a way to get where they need to go. But perhaps there's more that can be said about the "power of SamTrans?" Therefore, SamTrans is inviting first through twelfth grade student artists from San Mateo County to show them this "power" through their visual artwork such as drawings and paintings. Entries are typically submitted in early April 2020. For more details about this contest, visit [tinyurl.com/y6b5p2dj](http://tinyurl.com/y6b5p2dj).



### DALY CITY

#### America Recycles Day Bookmark Contest

America Recycles Day is a nationally recognized day to promote and celebrate recycling in the US each year on November 15th. Republic Services, in partnership with the City of Daly City, organized a bookmark contest to acknowledge this day. The contest winners are recognized at the Daly City Council meeting, and their artwork will also be displayed and used in various Republic Services and Daly City social media and outreach materials. The bookmark contest is open to all kindergarten through 5th graders in Daly City. All entries must be submitted by January 15th, 2020. To learn more contact Monica Devincenzi at [MDevincenzi@republicservices.com](mailto:MDevincenzi@republicservices.com).

*"We may all have come  
on different ships, but we're  
on the same boat now."*

— MLK Jr.

### RethinkWaste Service Area

#### Trash to Art Contest for Schools

The annual RethinkWaste Trash to Art Contest is a fun way for individual students and classes to participate in creative reuse! Ninety percent of submitted art pieces must be made from recyclable or trash material collected from school or home. The contest is open to all 3rd-5th grade classes in the RethinkWaste service area (Atherton, Belmont, Burlingame, East Palo Alto, Foster City, Hillsborough, Menlo Park, Redwood City, San Carlos, San Mateo, parts of unincorporated San Mateo County, and the West Bay Sanitary District). A contest submission form must accompany Trash to Art submissions, usually due in April. Winners can choose from a new selection of prizes and will be recognized at RethinkWaste's Earth Day event and their respective City Council meetings. For more information, please visit [rethinkwaste.org/schools/school-contests/](http://rethinkwaste.org/schools/school-contests/).

### 4R'S (REDUCE, REUSE, RECYCLE, ROT-COMPOST) GRANTS

Are you looking for funds to cover the cost of field trips, workshops, or classroom materials to provide your students with environmental project based learning (PBL) experiences? If so, the Office of Sustainability (OOS) may be able to help. OOS is offering our 4R's Grants to public agencies, nonprofit organizations, educational institutions and other qualified parties. These grants support small projects that will increase awareness and action about the 4R's (reduce, reuse, recycle, rot-compost). Our past grants have funded school recycling and compost bins, environmental field trips, recycling campaigns, and school garden structures such as a greenhouse and planter boxes made from salvaged lumber. Call for applications for the upcoming new grant cycle will open in January 2020 (exact date TBD). For more information contact us at [sustainability@smcgov.org](mailto:sustainability@smcgov.org) or visit [smcsustainability.org/4RsGrant](http://smcsustainability.org/4RsGrant).



# SIGNAGE

## Take Advantage of Our Free Signage

One way we can get students and school staff to reduce waste is by communicating with them on ways to take action and reminding them specifically what goes into the recycling, organics, and garbage bins on campus. We can do this through signage. For example, a green team or even leadership class can

take ownership of their program and create their own posters and signs and/or they can use some of our signage. Check out some of the following posters, signs, and stickers that we offer. If you would like some of this signage for your classroom or school please email us at [sustainability@smcgov.org](mailto:sustainability@smcgov.org).

### BE A LUNCH TIME HERO! PACK A WASTE-FREE LUNCH

LET'S GET PACKIN'!

**BY PACKING A WASTE-FREE LUNCH YOU CAN:**

- Save up to \$300 a year.
- Save natural resources by reducing your packaging.
- Prepare a more nutritious lunch.

**3 SIMPLE STEPS TO A WASTE-FREE LUNCH:**

- 1 Use a lunch box or reusable sack.
- 2 Include a cloth napkin and reusable silverware.
- 3 Make use of reusable food and drink containers.

Americans produce up to 1/2 pound of lunch waste each day, enough to fill four garbage cans a year. Help reduce waste by packing your lunch. **THE POWER IS IN YOUR HANDS!**

OFFICE OF SUSTAINABILITY  
COUNTY OF SAN MATEO

888-442-2666  
[www.smc sustainability.org](http://www.smc sustainability.org)

Find more tips on packing waste-free lunches at:  
[www.smc sustainability.org/waste-reduction](http://www.smc sustainability.org/waste-reduction)

### ¡SEA UN HÉROE DE LA HORA DE ALMUERZO! EMPAQUE UN ALMUERZO SIN DESECHOS

¡EMPAQUEMOS!

**AL EMPACAR UN ALMUERZO SIN DESECHOS USTED PUEDE:**

- Ahorrar hasta \$300 al año.
- Ahorrar recursos naturales al reducir los materiales de embalaje.
- Preparar un almuerzo más nutritivo.

Los estadounidenses producen hasta 1/2 libra de desperdicios de almuerzos cada día, suficiente para llenar cuatro botes de basura al año. Ayude a reducir los desechos al empaquetar su almuerzo. **¡EL PODER ESTÁ EN SUS MANOS!**

**3 PASOS SIMPLES PARA UN ALMUERZO SIN DESECHOS:**

- 1 Use una lonchera o bolsa reutilizable.
- 2 Incluya una servilleta de tela y cubiertos reutilizables.
- 3 Use recipientes de comida y bebida reutilizables.

Para obtener más consejos sobre cómo empaquetar almuerzos sin desechos vaya a:  
[www.smc sustainability.org/waste-reduction](http://www.smc sustainability.org/waste-reduction)

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888-442-2666  
[www.smc sustainability.org](http://www.smc sustainability.org)

11" by 14" No Waste Lunch Poster (Available in English and Spanish)

### MAKE YOUR OWN COMPOST!

**BENEFITS OF COMPOSTING**

- A fun individual, family, or community activity.
- Reduce waste (34% of the waste stream is yard and food waste) and methane gas, a powerful greenhouse gas that contributes to climate change.
- Improve soil and garden health.

**1 CHOOSE A METHOD AND A LOCATION**

Choose a location in the sun or shade!

**2 BUILD A PILE**

Build a pile of 60% "browns" to 40% "greens" in alternating layers. Chop larger materials into smaller pieces.

**BROWNS (CARBON)**  
Dried plant material  
Paper towels, napkins, and plates  
Newspaper  
Wood ash  
Untreated sawdust

**WATER**  
Add water as you build the pile. Keep as moist as a wrung-out sponge.

**GREENS (NITROGEN)**  
Grass clippings  
Coffee grounds  
Vegetables  
Herbaceous mulch  
Fruit  
Greens

**3 PILE MAINTENANCE**

- The pile needs oxygen. Turn the material from the outer edges to the center where it will be the hottest.
- Add water as needed so it is as wet as a wrung-out sponge.
- Use a compost thermometer to check the temperature of the pile. When the center of the pile reaches 100° F, turn it. If you don't have a thermometer, turn the pile 2-4 days after you build it and occasionally thereafter.

**4 COMPOST CRITTERS**

Common critters that break down organic material:

- Millipede
- Centipede
- Ant
- Flea
- Mole
- Earthworm
- Fairy fly
- Slig
- Beetle
- Spider

**5 TROUBLESHOOTING**

**Bad odor**  
Reason: Too much moisture  
Solution: Turn the pile and add dry porous material.

**Pile Will Not Heat Up**  
Reason: Pile is too dry and/or lacks "greens"  
Solution: Add water and/or "greens" and turn the pile.

**USE IT AS**

- Soil conditioner
- Top dressing
- Mulch
- Potting mix

**DO NOT USE**

- Diseased plants
- Woods with seeds
- Dog and cat feces
- Meat, fish, poultry
- Dairy
- Treated wood
- Fats, oils, grease

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[www.smc sustainability.org](http://www.smc sustainability.org)

### MAKE COMPOST USING WORMS!

**BENEFITS OF WORM COMPOSTING**

- An ideal method for people who have limited outdoor or patio space, especially those who live in apartments or condos.
- A fun individual, family, or community activity.
- Reduces waste (34% of the waste stream is yard and food waste) and methane gas, a powerful greenhouse gas that contributes to climate change.
- Improve soil and garden health.

**1 CHOOSE A BIN**

Purchase or build a bin. Key bin characteristics:

- 8-12 inches deep
- A lid to keep out flies and rodents and keep bin dark
- Drainage holes on bottom (1/4 inches or smaller)
- Tray/another bin layer to capture drainage

**2 CHOOSE A LOCATION**

Protect from direct rain, sun and excessive cold. Bin can be elevated (obscure or in shaded outdoor area (e.g., shed, garage, balcony)).

**3 BUILD YOUR WORM HOME**

**WORMS**  
Start with one pound of red wigglers (purchased or taken from another bin).

**FOOD**

- Most fruits and vegetables
- Cereals and grains (e.g., oatmeal, pasta)
- Coffee filter paper, tea bags
- Bread, biscuits, toast, crackers
- Eggshells, nut shells
- Crushed paper shells
- Worms have no teeth, so they don't eat paper (or food).

**DO NOT USE**

- Meat, poultry, fat
- Dairy food (e.g., grease, chips, candy etc.)
- Citrus (e.g., orange, lemon, lime)

**4 FEEDING TIPS**

- Cut food into small pieces. Place food under bedding (but not buried in castings) in different parts of the bin each time.
- Feed worms every day or twice or once a week. There is no strict schedule. Feed worms just ahead of their rate of consumption.

**5 OTHER CRITTERS**

**Good:** Springtails, roly polys, earwigs, pot worms, millipedes, mites (except earthworm mites)

**Bad:** Centipedes, fruit flies, earthworm mites, ants

"Good" critters do not hurt worms. There are different ways to handle "bad" critters, depending on what they are.

**6 TROUBLESHOOTING**

**Fruit flies**  
Reason: Exposed food  
Solution: Bury food in bedding. Add more bedding to cover food.

**Worms are dying or trying to escape**  
Reason: Environment is too wet, too dry, or bedding is used up  
Solution: Add more bedding, moisten bedding, or harvest castings.

**USE IT AS**

- Planting mix, but not as the only planting medium
- Soil conditioner
- On lawns, to boost of vegetable plants, or into soil around trees/shrubs

**FEEDING TIPS**

Finish by adding a blanket (e.g., more bedding, a piece of cardboard). It discourages fruit flies.

Blanket: Finish by adding a blanket (e.g., more bedding, a piece of cardboard). It discourages fruit flies.

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888-442-2666  
[www.smc sustainability.org](http://www.smc sustainability.org)

24" by 34" Outdoor School Garden Composting and Worm Composting Instruction Signs (Available in English and Spanish)



## Compost

Food and Food-soiled Paper

No plastic, glass or metal  
No styrofoam cups or containers  
No liquids

*Nada de plástico, vidrio o metal  
Ni vasos ni cajas de espuma de poliestireno  
Ningún líquido*

**OFFICE OF SUSTAINABILITY**  
COUNTY OF SAN MATEO

For more information on reducing waste visit us at [www.smcustainability.org](http://www.smcustainability.org) or call 888-442-2666.

September 2019

## Recycling

Mixed Paper, Bottles, Cans and Food Containers

No polystyrene cups or containers  
No food or food-soiled paper  
No paper cups  
No plastic packaging

Ni vasos ni cajas de espuma de poliestireno  
Nada de comida ni papel sucio de comida  
No vasos de papel  
Este embalaje no contiene material plástico

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For more information on reducing waste visit us at [www.smcustainability.org](http://www.smcustainability.org) or call 888-442-2666.

October 2019

## Bottles & Cans

No black plastic  
No clear, hinged plastic containers  
No polystyrene  
No paper/plastic cups

Nada de plástico negro  
No recipientes plásticos con bisagras que sean transparentes  
Ningún tipo de espuma poliestireno  
No vasos de papel ni de plástico

**OFFICE OF SUSTAINABILITY**  
COUNTY OF SAN MATEO

For more information on reducing waste visit us at [www.smcustainability.org](http://www.smcustainability.org) or call 888-442-2666.

October 2019

## Mixed Paper

No plastic, glass or metal  
No Styrofoam cups or containers  
No food or food-soiled paper  
No paper/plastic cups

*Nada de plástico, vidrio o metal  
Ni vasos ni cajas de espuma de poliestireno  
Nada de comida ni papel sucio de comida  
No vasos de papel ni de plástico*

**OFFICE OF SUSTAINABILITY**  
COUNTY OF SAN MATEO

For more information on reducing waste visit us at [sustainability.smcgov.org](http://sustainability.smcgov.org) or call 1-888-442-2666.

November 2018 Partially funded by CalRecycle

11"by 8.5" Stickers for Labeling Classroom Bins



# FREE FIELD TRIP

## FREE Office of Sustainability 4R's Field Trips to a Transfer Station and Recycling Center

WE MUST RECEIVE YOUR APPLICATION BY  
5:00 P.M., JANUARY 31, 2020

TO BE ENTERED INTO A RANDOM DRAWING FOR THE FREE FIELD TRIP.

Our Schools Program will once again be offering approximately 20 to 30 free field trips (including bus transportation) for classes of 20 to 35 students in 3rd to 12th grade. Participating students will tour a working transfer station and recycling center (materials recovery facility) and/or a working open sanitary landfill. On these tours, the students will observe important processes at these facilities. For example, they may see how garbage and recyclables are sorted and processed before being shipped out to a landfill or recycling facility, or how garbage is being compacted at the open sanitary landfill to maximize space. If time permits, students will also explore a local closed landfill or visit a coastal habitat to learn about the long-term environmental impacts of solid waste.

These field trips align with the Next Generation Science Standards and are a great opportunity for students to gain firsthand knowledge about resource conservation. Classes are selected for these field trips by a random drawing from a pool of submitted applications. If your class is selected for a field trip, we will assist you in developing pre- and post-tour activities to incorporate into your existing course units. You will also be required to attend a mandatory informal orientation workshop in February (exact date TBD) to discuss field trip goals and expectations. Field trips will be scheduled during the months of March, April, and May.



*Students Learning about the Anaerobic Digester at Blue Line Transfer Station*

COMPLETE THE  
ONLINE APPLICATION  
FORM BY



TO APPLY FOR A FREE FIELD TRIP,  
PLEASE FILL OUT THE ONLINE  
APPLICATION FORM:  
[TINYURL.COM/FREE4RSFIELDTRIP](http://TINYURL.COM/FREE4RSFIELDTRIP)



## MEET OUR OFFICE OF SUSTAINABILITY EDUCATORS!

We are all about boots on the ground and helping students and teachers take action to make a difference!



*Educators: Gerald Schwartz, Nicole Larson, Zoe Van Duivenbode and Esme Cabrera*

We are very excited about supporting our County's diverse students and communities to be a part of the collective efforts that ensure a healthy and prosperous environment and future for all. We love empowering the youth because we believe every student has the potential to make a difference in this world. When it comes to embracing our duty as a responsible citizen of the earth, no act is too small because the small actions of many can make all the difference in the world. Our work will continue to build a community that embraces our youth's voices and vision for a stronger, healthier, and more sustainable present and future.



OFFICE OF  
SUSTAINABILITY  
COUNTY OF SAN MATEO



## THANK YOU TO ALL OUR EDUCATORS!

You are making a difference in your students' lives. May these quotes from young people who experienced interactive environmental education lessons and field trips in San Mateo County inspire you to continue planting the seeds of action!



***“Thank you for teaching me about nature. I told my parents to buy less garbage. My big brother and I were making lots of crafts!”***

— Third grader at Taft Elementary, Redwood City

***“Thank you for teaching us how to take care of our environment. Now at my house I’m going to tell my family to start composting. I will try really hard to take care of our world. You inspired me to start Recycling, Reusing, Reducing and Rot - Compost!!!!”***



— Third grader at Martin Elementary School, San Bruno



***“With my school knowledge and the waste saving information that you gave us, I feel that I can make a change towards producing less waste.”***

— Student at Woodside High School, Redwood City

School Resource Journal is published by the County of San Mateo Office of Sustainability Schools Program.

For more information, please visit [www.smcsustainability.org/schools](http://www.smcsustainability.org/schools).

Contact us at (650) 599-1424, or [sustainability@smcgov.org](mailto:sustainability@smcgov.org).