ATTACHMENT E

ENVIRONMENTAL EDUCATION BEST PRACTICES AND PARTNERSHIPS

StopWaste | www.StopWaste.org

Contact: Roberta Miller, rmiller@stopwaste.org

StopWaste is a public agency governed jointly by three Boards: the Alameda County Waste Management Authority, the Alameda County Source Reduction and Recycling Board, and the Energy Council. They are responsible for reducing the waste stream in Alameda County by helping local governments, businesses, schools and residents reduce waste through:

- Source reduction and recycling
- Market development
- Technical assistance
- Public education

StopWaste has mature and robust programs that encompass in-classroom services, service learning and tour programs. In2002, the school tour program was re-branded as irecycle@school!, bringing technical assistance, educational resources, teacher training, and service-learning projects to the county's 350 public schools.

StopWaste and the Alameda County Office of Education are dedicated to helping students, teachers, and schools apply the 4Rs (Reduce, Reuse, Recycle, and Rot) to develop key academic skills and concepts while improving environmental sustainability. StopWaste offers a high level of programs and technical assistance to Alameda County school districts that are willing to declare their commitment to reducing the amount of readily recyclable and compostable materials in landfill trash to less than 10% by the year 2020. Of the 15 Unified School Districts in their service area, 8 Districts have made this commitment and are considered priority school districts.

TOUR PROGRAMS

Tours are offered to Alameda County public school 4th grade classes and are held at the Davis Street Recycling and Transfer Station and the Fremont Recycling and Transfer Station. The irecycle@school Education Center offer students an opportunity to learn first-hand what happens to their recyclables, garbage and compostables at a working material recovery facility and transfer station. This field trip provides real-life application of concepts taught in the classroom in the areas of physical science, life science and investigation/experimentation.

Tours and Field Trips:

- A two-hour program including a visit to the Education Center, Garbage Pit and Material Recovery Facility.
- Learning about the 4Rs (Reduce, Reuse, Recycle, Rot) and exploring how student's individual actions can help reduce waste.
- A hands-on activity in the Education Center aligned to the Next Generation Science Standards (NGSS) and "Common Core Standards." 4th graders also simulate the life-cycle of an aluminum can using puzzles and role play.
- Pre and post-field trip lessons aligned to NGSS and "Common Core Standards."
- Free bus pick up and drop off at school.

There is no charge for field trips to the irecycle@school Education Center (value of this service is $850.)

In exchange for this service, teachers must commit to the following:

- Prepare students for their field trip with the Pre-Trip Activities. Screening the Doing the 4Rs video is required.
- Complete the Teacher Evaluation
- Conduct the Student Reflection with your class
- Conduct the activities in your Teacher Post-Field Trip Packet

StopWaste Schools Transfer Station Tour Budget- 2014-2015

In 2013-2014, StopWaste provided 250 tours between both sites, serving 9,000 students, 250 teachers and 2,000 parents/chaperones.

HARD COSTS	STAFF COSTS	TOTAL COSTS	FTEs
$221,800	$449,483	$671,283	4.34

SCHOOL BASED PROGRAMS

I Recycle@School Assemblies- 2nd-5th grades

StopWaste offers an entertaining and educational 45 minute assembly program by Rock Steady Juggling on a first come-first serve basis. Public school students learn how to reduce their carbon footprint by food scrap recycling and reducing consumption along with the importance of the 4Rs. StopWaste also provides comprehensive follow-up classroom activities for 2nd-5th grade teachers. For more information: www.rocksteadyjuggling.com or call Doug Nolan at 650-266-8286.

Curriculum

Any Alameda County teacher or non-formal educator can receive the 4Rs Teaching Kit which includes the following:

- "Doing the 4Rs- A Classroom Activity Guide to Teach Reduce, Reuse, Recycle and Rot"- includes 24
- California standard based lessons and five thematic units developed for 4th and 5th grade teachers.
- "Doing the 4Rs- students show they practice the 4Rs at home, school and play video
- "Do the Rot Thing- The Simple Art of Home Composting" video
- Waste Reduction Videos
- Transfer Station Videos
- Material Processing Videos
- Forms and Surveys
- Set Up School Recycling- overview, waste audit, bin selection, bin labels, posters, graphics, "how-to tips", special events (i.e. locker clean-out).

2014-2015 Budget for 4Rs Education Includes

65 elementary school assemblies, supports elementary school based community outreach events, supports development and printing of 4Rs curriculum and supports integration of Student Action Project and Service Learning Curriculum materials with external agencies

HARD COSTS	STAFF COSTS	TOTAL COSTS	FTEs
$73,000	$36,433	$109,433	0.14

NOTE: *This does NOT include ALL of StopWaste's school related program costs which are spread across multiple program budget categories. It is only intended to show costs for assemblies, printing and coordination.*

Student Action/Service Learning Projects

The StopWaste at School Program embraces service learning as a key instructional strategy to help students develop the knowledge, skills and dispositions necessary to identify, understand and solve environmental problems throughout their lives. It is intended to help foster civic responsibility and stewardship of the environment. The Service-Learning Waste Reduction Project (SLWRP) supports teams of teachers, staff and students at middle and high schools in setting and achieving sustain- ability goals at their schools and in their communities.

Service-Learning Waste Reduction Project (SLWRP)

Contact: Nate Ivy at nivy@acoe.org or visit http://schools.stopwaste.org

SLWRP works with students and teachers from middle and high schools interested in reducing waste on campus, at home and in the community. Funded primarily by StopWaste's irecycle@school program in partnership with Alameda County Office of Education, SLWRP provides standards aligned waste reduction curriculum, field trips, waste audit support, technical assistance, professional development, networking and stipends to school teachers and staff in Alameda County for Grades 6-12. Students engage in active learning experiences where they examine the role they play in generating waste, learn where their waste goes and discover how to respond through the 4Rs. Over 14,000 middle and high school students and teachers have participated in the service learning program in addition to three community outreach events.

SLWRP's educational goals include:

- Engaging multiple classes of students in campus wide service learning experiences that connect CA content standards with waste reduction
- Empowering students to take active leadership roles defining and promoting their school waste reduction and recycling programs
- Developing lifelong waste reduction habits for students and staff
- Developing a conservation ethic and an appreciation of natural resources

SLWRP's waste reduction goals include:

- Reducing the amount to waste going into Alameda County landfills
- Reducing litter and increasing campus beautification
- Increasing school-wide 4Rs interest and knowledge
- Developing collaborative teacher teams to institutionalize and sustain waste reduction efforts

SLWRP Services, Resources and Expectations:

- In-service training for service-learning
- Support through Site Coordinator and Site Team meetings
- Technical assistance from industry experts in waste reduction practices
- Field trips
- Guest speakers and in-class presentations
- Waste reduction curriculum, 4Rs videos and posters
- Stipends for site team members

SLWRP also adds support for other environmental pathways in the Green Star Schools framework which includes waste, transportation, energy, water, food and school yards.

NOTE: *The budget below strictly refers to StopWaste's administrative support of the Green Star Schools Pathway.*

2014-2015 Budget for Green Star Schools Activities

Promotes and recognizes the sustainability efforts of Bay Area elementary and secondary school students using the Green Star School web platform

HARD COSTS	STAFF COSTS	TOTAL COSTS	FTEs
$22,200	**$4,151**	**$26,351**	**0.01**

Region 4 STEM Service-Learning Network

Contact: Nate Ivy, nivy@acoe.org 510-670-4283, Fax: 510-670-3283

The STEM Service-Learning Regional Network, funded through the California Department of Education by Learn and Serve America, seeks to engage under-represented youth in Science, Technology, Engineering and Math through service learning projects in their communities.

The STEM Regional Network works with teams of teachers, industry representatives, higher education, students and community partners representing secondary schools to provide the resources, training, and technical assistance needed to develop high quality STEM service-learning programming.

Examples of past projects:

- Students at Livermore High won a grant to build a portable recycling station in the gym. They worked with the Green Engineering Academy to develop the design and specifications for the bin through a reverse engineering and modification process of existing systems. When the design was completed, the plans were given to the ROP (Regional Occupational Program) where another set of students built the stations.
- At Wood Middle School, students regularly participate in beach clean-up activities where the items they collect are categorized and studied. Based on the data, they initiate different projects to reduce the impact of marine debris on wildlife. After discovering that most of the litter at the beach was plastic food packaging and noticing that healthier foods had less packaging, students organized a healthy eating campaign on campus. Science scores at this school have risen dramatically since teachers began engaging students in environmental stewardship and study on campus, in the community and at the beach.

4Rs Student Action Project- Grades K-6

Contact: Angelina Vergara, at schools@stopwaste.org or 510-891-6520

This is a free in-class program for 5th grade Alameda County public classrooms that engages students in addressing real environmental issues at their school and in their community by putting the 4Rs (Reduce, Reuse, Recycle and Rot/Compost) into practice. Over the course of three, two-hour visits, students examine and analyze their waste, design and implement a 4R's action project (i.e. waste-free lunch, campus campaign to sort/recycle food scraps, paper reduction campaign) and communicate their results to their community by developing brochures, posters and door hangers.

Teachers select an action project from one of three thematic focus areas:

- The 4Rs & My Wasteshed
- The 4Rs & My Foodshed
- The 4Rs & My Watershed

Staffing for Student Action Projects

In a typical school year, there are 5 interns/classroom sustainability associates spread over 70 classrooms throughout the County. Candidates for these positions are recruited from Craigslist, the StopWaste website and e-mail networks (i.e. CREEC). The minimum qualifications are a Bachelor's degree, teaching experience and a desire to work in the industry. **The approximate budget based on $25/hr. for 25 hrs. /week for 40 weeks is $25,000 per intern/ associate for a total of $125,000 annually for five positions.**

Training includes a two week orientation, on-the-job coaching and a professional development plan throughout the ten month service period.

The performance metrics used to measure effectiveness of this program are:

- Waste diversion metrics of student action projects
- Audience reach
- Teacher and participant evaluation
- Student pre-post surveys of knowledge, skills and dispositions

Student Action Projects Examples

- Students author recycling and waste reduction themed books to read to younger buddies
- Students write and present classroom presentations to encourage school-wide recycling
- Students organize school-wide "green teams" or recycling sorting monitors
- Students create and share educational posters highlighting their waste audit findings with a call to action
- Students write opinion papers to influence their community to pledge to sort correctly
- Students create an assembly and promote a school-wide "Ready, Set, Recycle Challenge" monitoring the reduction of landfill waste by improving how students sort materials.

Teachers are provided with classroom support, project materials and pre- and post-learning videos and activities that connect to California State Science, Math and Language Arts Standards. Students learn and use vocabulary, science concepts, math, graphing and language arts skills to analyze and present results. By applying these concepts, students review and retain information that better prepares them for state testing.

The 4R's & My Watershed
5th and 6th Grade Sheet Mulching - Action Project

Students can make a real difference protecting our creeks, the bay and watersheds by promoting less toxic pesticides and building gardens and landscapes by using healthy practices like composting and sheet mulching.

Sheet mulching is a layered mulch system that can be used to suppress weeds, build healthy soil and replace lawns. Through scientific investigations, students apply their science knowledge, to create a healthy landscape model for their school through sheet mulching.

In this project, students also take action by:

- Sheet mulching a designated area at their school
- Conducting research and collecting data
- Applying what they have learned by doing educational outreach at home, at school, and their community to protect the Earth's resources and environment

Examples of Food Scrap recycling student action projects:

- Students write and present classroom presentations to encourage school-wide recycling
- Students author food scrap recycling themed books to read to young buddies
- Students organize "green teams" to sort food and other compostables at lunch
- Students create an assembly and promote a school-wide "Ready, Set, Recycle Challenge" monitoring the reduction of landfill waste by improving how students sort materials
- Students create and share educational posters highlighting their waste audit findings with a call to action

ART is EDUCATION

Students across Alameda County are using visual, performing and culinary arts to help raise awareness, inspire environmental action, and transform trash to treasure. Examples of these creative projects are:

Students in Advanced Drama at Irvington High School in Fremont and Skyline High School in Oakland worked with the Circus Center to create waste reduction assembly performances for elementary and middle school students

Alameda High's Songwriter's Club chose the theme word "Garbage" as the inspiration for writing Earth Day songs. Other students sold hand-made cargo bags with hand painted designs to help reduce reliance on plastic bags.

Tennyson High School's X-Academy hosted an Earth Day event that featured a contest for painting recycling bins, a "trashion show" and the silk-screening out of style t-shirts to give them new life.

Bay Friendly Gardens

This project builds awareness and promotes the use of recycled mulch and compost in schoolyards in addition to creating and maintaining school gardens and hands on learning opportunities. This program is part of a regional Bay Friendly program that provides public education and technical support to the cities of Alameda County. Students are engaged in garden design, installation and on-going maintenance of the school garden. Gardens include an outdoor classroom and features are connected to state academic content standards and classroom curriculum. Teachers are provided with professional development and resources on how to use the garden as an outdoor classroom. Classroom teachers include lessons or activities in the garden as part of their yearly curriculum plan.

2014-2015 Budget for Bay Friendly Schoolyards

HARD COSTS	STAFF COSTS	TOTAL COSTS	FTEs	FUNDING
$60,350	**$15,564**	**$75,915**	**0.07**	**Prop 84 Urban Greening (this is 1st yr.)**
$0	**$15,968**	**$15,968**	**0.07**	**Matching Portion**

BLOGS, Q&A and Special Events

- SOAP BOX- blog where staff and students can write about their experiences.
- Dig It! - dedicated to expanding understanding of the role composting plays in waste reduction.
- Teachers and students implementing bay-friendly gardens and composting programs can post questions.

Non-Profit Partners

Earth Team

StopWaste at School has partnered with Earth Team to help schools conduct waste audits. In the waste audit process, students learn what ends up in the garbage and develop service-learning projects to reduce waste and increase recycling. Earth Team offers a number of innovative environmental service-learning opportunities for schools including restoration projects, air quality monitoring, climate action campaigns, and student produced environmental news and media - including a cable access television program.

East Bay Depot

Founded by teachers, the mission of the East Bay Depot is to divert waste materials from landfills by collecting and redistributing discarded goods as low-cost supplies for art, education, and social services in their Depot Store. The educational mission is to increase the awareness of school children and the general public regarding the green benefits of reusing materials.

NAME: Green Schools Alliance (GSA), www.greenschoolsalliance.org

MISSION STATEMENT: To connect and empower schools worldwide to lead the transformation to global sustainability

PARTICIPATING NO. CA. SCHOOLS: 28 schools in Bay Area cities/counties. The GSA Coordinator is Libby Jones who is also the Sustainability Coordinator for Sacred Heart in Atherton.

Uniquely created by schools for schools, the GSA is a global Peer-to-Peer Network of pre K to grade 12 schools represented by sustainability coordinators, faculty, staff and students working together to solve climate and conservation challenges. Since 2007, the Alliance has grown to include more than 4,000 schools in 43+ U.S. states and 40+ countries - by word of mouth. Alliance schools collaborate locally and virtually to share and implement sustainable best practices, and promote connections between schools, communities, and the environments that sustain them. GSA does this by: creating forums; exchanging resources; offering original programs and experiential STEAM learning opportunities developed by Member Schools that integrate education and action; and by connecting youth to nature.

TARGET AUDIENCE	IN-CLASSROOM CURRICULUM	SERVICE LEARNING	COMPETITION/ CONTESTS	STAFFING PAID/VOLUNTEER	FUNDING STRUCTURE/ SPONSORS	MEASURING RESULTS
All K-12 schools	Green Cup Recycle Challenge	During the 4 week challenge, schools unite to *"Recycle Right, Reduce Waste, and Rethink Consumption"*. Purpose is to measure and reduce energy use; improve recycling & waste reduction programs; and promote water conservation.	Schools compete for Bin Points by "recycling right" - improving recycling compliance rates and decreasing contamination. Bonus Points can be earned for additional waste reduction efforts such as composting or paperless communications.	Sustainability coordinators, faculty, staff and students	School membership to the GSA is FREE. Corporate Partners support the mission of the GSA and Member Schools. **Government:** US EPA, National Conservation Training Center, Dept. of the Interior, US Fish and Wildlife **Corporate:** Toyota USA Foundation, Green Depot, Waste Management, and many other large businesses **NGO's:** NRDC, US Green Building Council's Center for Green Schools, Clinton Climate Initiative, 1% for the Planet, 350.org, Captain Planet Foundation, CELF Environmental Literacy, Unicef and many more.	Weekly bin surveys provide instant feedback on recycling efforts. Data collection worksheets based on audits of trash and recycling bins Four bin surveys must be completed during the Challenge
	SMART Schools® Toolkit (Sustainability Metrics And Resource Tools) The Toolkit is organized according to the 3 Action Tracks of the GSA Sustainability Commitment, the criteria for membership to the GSA: **TRACK I:** Reduce Our Ecological & Climate Impact **TRACK II:** Educate & Empower Our Community **TRACK III:** Connect To Nature & Place	Activities depend on track but can be geared to establishing school based waste reduction, diversion, recycling, composting, and green procurement programs		Sustainability coordinators, faculty, staff and students	See above	

NAME: Trash4Teaching, www.trashforteaching.org

MISSION STATEMENT: Help us inspire a generation of deserving young minds, protect the environment, and prepare students for 21st century job opportunities by MINIMIZING WASTE and MAXIMIZING EDUCATION.

We partner with educators, communities and businesses to promote innovative learning, advance environmental awareness and reduce the volume of material destined for landfills by rescuing manufacturing overruns, discards and castoffs, and re-imagining these items.

TARGET AUDIENCE	IN-CLASSROOM CURRICULUM	SERVICE LEARNING	COMPETITION/CONTESTS	STAFFING PAID/VOLUNTEER	FUNDING STRUCTURE/ SPONSORS	MEASURING RESULTS
5th-8th grade but can be adapted for public events where a range of ages are involved		T4T has facilitated classroom and community scale Ultimate Recycling Invention sessions all over Los Angeles as… - School Assemblies - Science Fairs - Math & Science Nights - Earth Days - Art Walks - TED Talks - Teacher In-Service Days - Business Meetings	**"Ultimate Recycling Machine"**- a design-build challenge using re-purposed materials to transport cans and bottles into blue bins using zip lines, catapults, sling shots and towers of tubes. Points are awarded for correct placement of HHW and recyclables, explanations given for incorrect placement and everyone benefits from knowing "what goes where".	45 minutes-1½ hrs. per session with a 1:10 facilitator: inventor ratio. T4T facilitator, teacher, parent volunteer etc.	Event management: staffing plus extra cost for "leave-behind" materials and projects.	All teachers receive a pre and post survey questionnaire that captures both qualitative and quantitative data on each project.
1st-12th grade	**"What Goes Where"**- recycling education re-imagined through relay races. Can be done as a school assembly and/or community event					

NAME: Trash4Teaching, www.trashforteaching.org

MISSION STATEMENT: Help us inspire a generation of deserving young minds, protect the environment, and prepare students for 21st century job opportunities by MINIMIZING WASTE and MAXIMIZING EDUCATION.

We partner with educators, communities and businesses to promote innovative learning, advance environmental awareness and reduce the volume of material destined for landfills by rescuing manufacturing overruns, discards and castoffs, and re-imagining these items.

TARGET AUDIENCE	IN-CLASSROOM CURRICULUM	SERVICE LEARNING	COMPETITION/ CONTESTS	STAFFING PAID/VOLUNTEER	FUNDING STRUCTURE/ SPONSORS	MEASURING RESULTS
All grades	Hands-on recycling training during PE classes Brought reduce, reuse, recycle initiatives into area schools Co-hosted recycling awareness events throughout the community			PE teachers, volunteers, students	LA Unified School District and Republic Services Supplied materials for science symposiums in classrooms and after-school programs	Supplied 2,000 lbs. of materials for the final challenge of the International Science and Engineering Fair with 150 students competing from all over the world.
8th grade science High School Physics	Initiated at the district level, pilot projects are underway in 25 LAUSD schools (Los Angeles)	**S.T.E.M.** Science+Technology+ Engineering+Math+ Language Arts. Currently a multi-year, multi-institution pilot program for "interconnected learning". Includes classroom learning with "hands-on" discovery and engineering from designing a tin can telephone to imagining a concept car for Ford		T4T, teachers	In-kind funding, grants and donors including foundations, universities, school districts, Intel, NASA, JPL, Southern California Edison, Raytheon and Ford	Over 1,500 science kits were designed and distributed across LA through INTEL's kick-start grant and employee volunteers

NAME: Power2Sustain (formerly BagSpeak), www.power2sustain.org

MISSION STATEMENT: The Power2Sustain project is designed to give K-12th grade students an in-depth foundation and skills in systems thinking within the areas of environmental stewardship, sustainability and personal responsibility toward our natural world. All lessons are grade leveled and linked to Common Core Standards. There is a pre and post measure of student understanding as well as both school and home follow-up activities.

PARTICIPATING CA SCHOOLS: 19 schools in Santa Clara County, 12 schools in Santa Cruz, 7 schools in Mountain View/ Los Altos, 3 schools in Petaluma, 4 schools in Gonzalez/Greenfield and 5 schools in King City/Soledad. As of Fall, 2013, there were 10,756 K-12 students in 122 schools with 218 teachers and 19,000 parents and families engaged with the program across the US.

TARGET AUDIENCE	IN-CLASSROOM CURRICULUM	SERVICE LEARNING	COMPETITION/ CONTESTS	STAFFING PAID/VOLUNTEER	FUNDING STRUCTURE/ SPONSORS	MEASURING RESULTS
K-12th grade public, charter and independent schools both in the US and internationally ***"Grocery Bags Tout Message- Non-profit teaches environmental lessons"***, San Francisco Chronicle-Peninsula Edition, 6-23-13 attached	Teachers/schools register and then receive the lessons and activities by e-mail. Upon completion of a unit, teachers receive a class set of reusable bags and fabric paint. Students then illustrate one side of the bag with a concept or lesson that they learned. Bags are sold at local grocery stores w/ proceeds going back to the school.	**INITIATIVES**: Zero-Waste Lunch Implementation The 4 R's (Reducing, Reusing, Recycling and Rotting) Green Team Implementation Energy Reduction Campaign Quarterly school and home waste audit Partnered w/ Capitola and Santa Cruz to educate residents on plastic bag ban and new law.	Supporters can buy Bagito, a full sized reusable bag made from recycled PET at Safeway and Whole Foods. 100% of net proceeds from each sale go to the Project. Classrooms competed against each other to "win" the field trip by earning tickets for taking shorter showers, biking/ walking to school and other environmental practices. The class that turned in the most tickets won the field trip	**Power2Sustain** will provide consultation and help a community navigate the schools and educational systems	**FREE to teachers, principals, parents and schools.** Funded through grants from Safeway, County of Santa Clara and Green Waste, Inc. Funded by the Salinas Valley Solid Waste Authority through a grant from CalRecycle	2013 Mountain View, Los Altos and Palo Alto: 1400 students, 38 teachers and 12 schools. Tour given at "The Village at San Antonio Center", a retail shopping center in Mountain View that uses bio swales, solar panels and other rain water conservation measures. 2013 Salinas Valley, Monterey County: 1000 students, 42 teachers, 8 schools

NAME: Healthy Day Partners and the Encinitas Union School District

The EUSD was one of only nine districts in the country to be named a US Department of Education Green Ribbon School for their Ocean Knoll Educational Farm and their SCRAP Cart (Separate, Compost, Reduce and Protect) lunch time system that includes full stream recycling and food scrap composting. With the support of the Superintendent and the School Board and with seed money from Jimbo's, Healthy Day Partners, a local non-profit turned a neglected one acre parcel of District owned land into a successful farm with 52 raised vegetable beds. Over 100 fruit trees were planted to supplement the vegetables which the kids grow. All food is then used in the school's salad bars and also supplies the nearby food pantry at St. Andrew's Episcopal Church. The District is also planning the EUSD Farm Lab, a 10 acre educational farm. I provided a PowerPoint presentation of the Shoreway Environmental Education Center to Healthy Day Partners who showed it to the District Superintendent who was very enthusiastic about the program.

Healthy Day Partners was the recipient of the CRRA School awards for their school composting program which reduced lunch waste by 80%.

TARGET AUDIENCE	IN-CLASSROOM CURRICULUM	SERVICE LEARNING	STAFFING PAID/VOLUNTEER	FUNDING STRUCTURE/ SPONSORS	MEASURING RESULTS
Elementary schools.		Ocean Knoll Educational Farm	Students, teachers, Healthy Day Partners	District funded with seed money from local organic grocery, foundations and community	Grows fresh food for all 9 elementary schools in the EUSD
All Students	Hands-on science workshops for all grade levels	SCRAP Cart (Separate, Compost, Reduce and Protect), an award winning mobile cart that simplifies and standardizes lunch time recycling and food scrap composting. Students sort their lunch	Students, cafeteria/ custodial staff and Healthy Day Partners	District funded Healthy Day Partners to create and manage food scrap lunch time program	Lunch waste reduced by 80% On-site production of organic fertilizer used for garden beds and landscaping Implementation of a major green school practice
Students, parents, community members	EUSD Farm Lab- two portable class-rooms dedicated to agriculture, science, nutrition & environmental education	Dedicated student growing and composting area, 7 acres of farming space for growing organic produce			

NAME: Grades of Green, www.gradesofgreen.org

MISSION STATEMENT: To inspire and empower kids and the broader school community to care for the environment.

PARTICIPATING CA SCHOOLS: Since 2009, 191 schools throughout Southern CA, Fresno, San Jose, Danville, San Francisco, Newark, Tracy, Los Gatos, and Visalia

TARGET AUDIENCE	IN-CLASSROOM CURRICULUM	SERVICE LEARNING	COMPETITION/ CONTESTS	STAFFING PAID/VOLUNTEER	FUNDING STRUCTURE/ SPONSORS	MEASURING RESULTS
Pre-school to high school All programs are in alignment with the City Council and School Boards.	Covers all aspects of stewardship including trash, electricity, water, chemical and emissions reduction. Each theme is connected to a flagship activity.	PROGRAMS: **TRASH REDUX** (Trash Reduction) **R3 PROJECT** (Reduce, reuse and recycle) **OPERATION GReeNATION** (Global impacts) **THE GREEN SHAKE** (Environmental Education) **WALK THE WALK** (Emission Reduction) Each activity has its' own instructions, videos, photos, artwork, related downloads and FAQ.	**"Trash Free Lunch Challenge"**- schools compete to divert waste by encouraging students to pack trash-free and to sort their trash, recyclables, and compost, during lunch time. Winning schools receive cash prizes, school assembly and kick-off, eco-prizes, lunch and tour at the Sanitation District	Program can be taught by teachers, or Grades of Green volunteer docents. The "Program Team" will go into schools that don't have the finances or volunteer support to implement measures on their own.	**NO COST TO SCHOOLS** Multiple funders, including local governments/JPA, Waste haulers (Republic and WM) corporate donors, foundations and local businesses in the service area. Offers schools the opportunity to save money by reducing electricity, water, paper, trash and chemicals	171,895 students in 262 schools across 38 states with over 73% of participants from CA Outstanding metrics to measure performance and effectiveness. Every activity clearly quantifies the time commitment(hours), # of volunteers, expected cost, steps to implement, benefits to students and the environment, and actual cost savings.
Students in grades 2-12. Must submit application and be selected. Project can be done independently or as a group.		**Youth Corps Student Leadership Program:** Selected students implement a year-long Green Project in their school community with guidance and leadership training from staff and supportive peer network. Students write their own Newsletter and Blog posted on website. The results of all projects along with Corps member bio goes into Annual Report.				Must participate in an Orientation Day, 3 quarterly meetings and a Final Presentation Day either in-person, by Skype, conference line or via Google Hangouts. Corps members will also participate in outreach including speaking engagements, presentations, and community events. Metrics for each project- # of green teams created, lbs. of trash diverted from landfill, other quantifiable measurements

NAME: Education Outside, https://www.educationoutside.org

San Francisco Unified School District (SFUSD) partners with Education Outside to provide assistance and training for garden design, implementation, and curricular connections. Green School Corps members are assigned to an elementary school for a two-year full-time term of service. Other services include a web-based resource guide, a monthly resource bulletin, and a community list serve devoted to school garden projects are also available to schools.

EXPANSION PLANS: Planning expansion to San Bruno, Burlingame, San Mateo, Redwood City, Foster City, and Pacifica

TARGET AUDIENCE	IN-CLASSROOM CURRICULUM	SERVICE LEARNING	STAFFING PAID/VOLUNTEER	FUNDING STRUCTURE/SPONSORS	MEASURING RESULTS
Elementary schools	Standards based lessons taught in outdoor classroom by Green School Corps member.	Corps members lead sustainability efforts in energy efficiency, water conservation, alternative transportation and waste reduction at their school sites. Also provide assistance for garden design and implementation	Under contract with San Francisco Unified School District	Sites with green schoolyards must assign a Green Schoolyard Liaison and provide a yearly Maintenance Agreement and Green Schoolyard Map to Education Outside in order to be eligible for any of the above services.	The Green Schoolyard Guidelines guide school sites through the design, construction, and maintenance of their green schoolyard.

NAME: Edible School Network- Berkeley

Martin Luther King, Jr. Middle School (ESY Berkeley) is the Edible Schoolyard Project's demonstration site and learning lab for nearly 20 years.

TARGET AUDIENCE	IN-CLASSROOM CURRICULUM	SERVICE LEARNING	STAFFING PAID/VOLUNTEER	FUNDING STRUCTURE/SPONSORS
6th-8th grades	After-school classes	Students participate in all aspects of growing, harvesting, and preparing nutritious, seasonal produce during the academic day. Students' hands-on experience in the kitchen and garden promotes the environmental and social well-being of the school community.		Fully funded by the Edible Schoolyard Project

SCHOOL GARDENS

The 2014 California School Garden Survey found that teachers most often teach students in the garden. 65% of respondents reported that the school garden is used for core academic content instruction. Within the areas of core academic content instruction, 75% of respondents reported using the garden to teach Math and English/Language Arts, while 54% reported using the garden to teach History/Social Sciences. Most significantly, 99.7% of respondents indicated that they use the garden to teach science. The survey also found that a number of non-core subjects are also taught using the garden. The top three non-core subjects most commonly taught using the garden were nutrition/health, environmental studies and art. - See more at: http://www.lifelab.org/2013/12/schoolgardensurvey2014/#sthash.sklt1mfw.dpuf.

School gardens have the ability to transform minds and lives, but they can present substantial challenges. Amidst significant public school funding cuts, school gardens are not high on the priority list for most schools. Some schools do not have the physical space for an outdoor garden. According to the CA School Garden Survey, funding, supplies, and staffing are the top three challenges for the state's school gardens. Even a well-intentioned garden project may be short lived, lack administrative and financial support, and suffer from shifting and inconsistent leadership. The CA School Garden Survey also states that teachers are the ones most often responsible for school gardens. Yet these teachers or other school garden leaders may find themselves lacking adequate collaboration with school administration, time to plan garden lessons, implement a growing plan, and maintain the garden over time.

There are many resources and programs for schools gardens which can be found in Attachment A