Protecting our ocean one school at a time

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The Ocean Guardian School Program is managed by NOAA’s Office of National Marine Sanctuaries with funding coordinated by the National Marine Sanctuary Foundation
PRESENTATION OVERVIEW

• What is an Ocean Guardian School?

• More Ocean Guardian School stories

• How to Participate in the Ocean Guardian School program
What do the following have in common?
National Marine Sanctuaries serves to preserve and protect biodiversity, beauty, historical connections and economic productivity of underwater parks.
EDUCATION

ocean-literate public making informed environmental decisions
AN OCEAN GUARDIAN SCHOOL PROJECT…

Engages K-12 students (public, private, charter) in the protection and conservation of local watersheds, the ocean and special ocean areas like national marine sanctuaries.

Students carry out HANDS-ON stewardship projects on school campus and/or in the local community that address an issue affecting the health of local watersheds and/or the ocean.
Hands-on stewardship project connects to one of the 5 PROJECT PATHWAYS

RESTORATION
watershed/wetland restoration, fish habitat creation, shoreline/bank stabilization

SCHOOLYARD HABITAT/GARDEN
creating or improving school gardens/schoolyard habitats with an emphasis on native plants, low water use, rain catchment systems, etc. while clearly connecting these activities to the health and preservation of the local watershed and/or the ocean.

MARINE DEBRIS
reducing single-use plastics in school/community, promoting reusable items in local community/stores

6Rs: Rethink/Refuse/Reduce/Reuse/Rot/Recycle
school-wide recycling/composting programs, redesign and implementation of school-based wastewater system, school-wide green purchasing program, zero waste lunch programs

ENERGY & OCEAN HEALTH
Reducing fossil fuel-based energy use/carbon footprint (i.e., "power down" campaign, "no idling" campaign, bike to school days, light bulb/computer energy saving plans, etc.), implementing renewable energy alternatives (i.e., wind/solar projects), water savings projects, tree planting projects.
SCHOOL PRESENTATIONS

Project Introduction Presentation

Project Wrap-up

"What a Wonderful Creek"
Original Lyrics by 3rd Grade Class,
Willow Creek Academy
2013

I see bracken ferns, sword ferns too
Wild strawberries for me and you
And I think to myself, what a wonderful creek

Willows and horsetails blow in the wind
I hear the song of the red breasted robin
And I think to myself, what a wonderful creek

This is the landscape where the deer like to play
And salmon and bears, before they were chased away
The Miwoks used poison oak to make tattoos
And bay leaves to hunt, even on their shoes

I see salamanders and raccoons
Newts, mayflies and woodpeckers, too
And I think to myself, what a wonderful creek

Let’s clean up the trash, make sure we do our part
There’s so much history here, there’s so much heart
We want the fish to come back, the birds to sing
The humans to love without hurting anything

I hear water run, I watch it flow
I’ve learned much more than I thought I’d know
And I think to myself, what a wonderful creek

Presentation
Keep your butts out of the bay

Protect the San Francisco Bay Watershed!

A message from
Wood Middle School Environmental Science Students in Alameda, California

THE DRAIN IS JUST FOR RAIN

Sincerely
Mistle White 5th graders

Ocean Guardian School
Grant award will fund...

- Grants are awarded for up to $4,000 per school depending on the level of the project and funding year.
- Schools may re-apply for funding for a single project for up to 5 successive years. Funding steps down in years 4 and 5 to encourage project sustainability.
- Schools may submit applications for projects that DO NOT require funding.

Ocean Guardian Schools 2010-2019

<table>
<thead>
<tr>
<th>Awarded Grants</th>
<th>$1,074,367</th>
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<tbody>
<tr>
<td>Number of Participating Schools</td>
<td></td>
</tr>
<tr>
<td>*Schools that received more than one grant are only counted one time</td>
<td>134</td>
</tr>
<tr>
<td>Number of Participating Students</td>
<td></td>
</tr>
<tr>
<td>*Number reported from participating schools, not school districts</td>
<td>61,936</td>
</tr>
<tr>
<td>Number of Participating School Districts</td>
<td>2</td>
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<tr>
<td>Number of recycle bins installed</td>
<td>1070</td>
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<tr>
<td>Number of compost bins installed</td>
<td>530</td>
</tr>
<tr>
<td>Kilograms of compost made from school food/garden waste</td>
<td>927.14</td>
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<tr>
<td>Kilograms of recycled e-waste</td>
<td>2,322.85</td>
</tr>
<tr>
<td>Kilograms of reused oyster and clam shells</td>
<td>2,721.55</td>
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<tr>
<td>Kilograms of trash/debris removed from campus and/or from out in the community</td>
<td>149,661.14</td>
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<tr>
<td>Number of reusable bags (grocery bags, snack bags, etc.) distributed</td>
<td>12,026</td>
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<tr>
<td>Number of reusable bottles distributed</td>
<td>23,801</td>
</tr>
<tr>
<td>Number of single use plastic bottles NOT used due to use of reusable bottles at filtration station</td>
<td>726,544</td>
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<tr>
<td>Number of rain barrels installed</td>
<td>107</td>
</tr>
<tr>
<td>Liters of water reclaimed from use of water catchment system</td>
<td>86,138.13</td>
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<tr>
<td>Number of native trees planted</td>
<td>5142</td>
</tr>
<tr>
<td>Number of native perennials/grasses/annuals planted</td>
<td>41,302</td>
</tr>
<tr>
<td>Square meters of native plants planted</td>
<td>55,818.89</td>
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<tr>
<td>Square meters of non-native invasive plants removed</td>
<td>51,665.81</td>
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<tr>
<td>Square meters of turf removed</td>
<td>3,978.42</td>
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<tr>
<td>Linear meters of bank stabilization</td>
<td>1,238.94</td>
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<tr>
<td>Number of wildlife habitat structures installed</td>
<td>198</td>
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<tr>
<td>Number of LED or energy saving bulbs installed</td>
<td>46</td>
</tr>
<tr>
<td>Number of bike-to-school days</td>
<td>173</td>
</tr>
<tr>
<td>Number of stenciled storm drains</td>
<td>63</td>
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</tbody>
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http://sanctuaries.noaa.gov/education/ocean_guardian
NOAA Ocean Guardian School Recognition

California
Florida Keys
Texas
Washington and Oregon
Maryland
Alaska
North Carolina
Ocean Guardian School Evaluation Studies

2015-2016

Ocean Guardian School Parents

View Changes in Their Child's Behavior
- 66% of students are now talking to others about the environment, including...

See Benefits to Their Child
- Commitment to the Environment
- Increased Sense of Community
- Volunteering
- Experience Working with a Team

Think Programs are Worth*
- $59 Habitat Creation**
- $48 Watershed Restoration**
- $34 Energy Saving**
- $25 Marine Debris Reduction**
- $21 Recycling**

This infographic was based on data collected from a first of its kind formal education study of an ocean conservation program.

*All values are per student annually **Non-renewable for the Ocean Guardian School pathway

http://sanctuaries.noaa.gov/education/ocean_guardian

2018

Economic Benefits of the NOAA Ocean Guardian School Program

2018 - 2019

Evaluating the Program Sustainability of Ocean Guardian Schools

Evaluation Report
Prepared by: John Y. Baek, PhD
March 2019
Calabasas Elementary School
Watsonville, CA

Project Pathway: 6Rs
2016-present
"We live on this earth, and who would want to live in a place that's full of garbage?"
- Calabasas Green Team member
After-school team changing school’s environmental culture

(Calabasas Elementary School students of the Green Team round up trash around their campus. Photo by Tarmo Hannula/Register-Pajaronian)
The Moral(s) of the Story...

It doesn’t have to cost a lot of money.

It might not work the way you thought or happen on time.

It doesn’t have to be perfect.

Everyone wants to help you.

The kids have weirder but better ideas than you do.
Scotts Valley High School, Scotts Valley, CA

Project Pathway: Schoolyard Habitat/Garden
2018 - present
Trash Counts (Part 8)

If you wish to be part of the solution to marine debris and are ready to do more than talk trash, watch our new TRASH COUNTS video featuring a citizen science project that is making a difference, one data entry at a time.

These students from Scotts Valley High School near Santa Cruz California
“What starts on land ends up in the sea!”
Scotts Valley Unified takes us to school on sustainability | Rachel Kippen, Our Ocean Backyard
**Problem:** Our community of Scotts Valley needs a cost-efficient means of killing weeds that does not pollute our land or oceans.

**Observation:** Creating an Organic Weed Killer that can be sprayed onto plants in a time-efficient manner and kill them within 5 days.

Note: Killed is defined as no more green color on leaves.

**Hypothesis:** Predict which formulation will be the most cost-effective.

**Materials:**
1. Coyote Brush Native Plants around campus (or Stinkwort)
2. Masking Tape
3. Dove Soap
4. 100ml and 500ml beakers or graduated cylinders
5. Spray Bottles
6. Distilled Water
7. Distilled Vinegar
8. Salt
9. Lemon Juice
10. Wild Card – You choose if you dare!

**Study Objective:** Using two separate sample formulas of your team’s choice, determine and list your six formulations in order from the least cost effective to the most cost effective.

**Procedure:** Describe your procedure and study design IN DETAIL here. You will develop and study two different formulations each week for three weeks. Insert you first two formulations here.

**Cost Information:** Change all cost information to the common unit of milliliter (ml). Simply use 5 ml of soap per spray bottle.
Scotts Valley High School

GREEN TEAM

ORGANIC WEED KILLER

Ingredients: 5 ml Dawn Dish Soap, 450 ml Distilled White Vinegar, 45
Gault Elementary School  
Santa Cruz, CA  
Project Pathway:  
Restoration  
2014-2019  

Community Partner:  
Groundswell Coastal Ecology
9,000 nurdles collected.
Schools from anywhere in the U.S. may apply to participate in the Ocean Guardian School program without funding.
APPLICATION TIMELINE

April 1, 2020

June 1, 2020 – Deadline for grant applications and applications for participation without funding
All applications must be postmarked by 5 pm.

Early July 2020 – Funding and non-funding participation decisions announced
Thank you!

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