



**Educators Consortium
for Service Learning**

Service Learning Lesson Plan: Green Ambassadors: Environmental Justice in South LA and Beyond

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The Story

Green Ambassadors 1 is a service learning, project-based, college-prep course required for all 10th graders at Environmental Charter High School (ECHS). Students become agents of change by engaging in local environmental issues and solutions. Students learn community organizing skills, how to empower their own communities (school, parents, neighbors, friends, peers) to understand environmental issues and implement solutions through events and presentations. The Green Ambassadors 2 Internship is a dedicated group of twenty 10th and 11th graders who are committed to learning more deeply about environmental topics and developing their own service learning plans. Students work in teams to explore sustainable community solutions such as composting, rainwater harvesting, healthy food, energy efficiency, and native plant gardening, among many other ideas. High school interns train with community organizations and professionals to lead workshops, build hands-on environmental learning spaces on campus, mentor middle school students, and produce educational media.

Some 2014-15 Service Learning Experiences: Tabling and presenting at community events with information about energy efficiency and home upgrades – Hosting a poetry slam about social and environmental justice, with informative exhibits and student art about how to reduce your carbon footprint — Inviting local elementary schools to participate in an Earth Carnival at our high school campus of booths and games created by students – Building Do-It-Yourself/Do-It-Together (DIY/DIT) rain barrels and teaching people how to make them – Teaching fruit tree planting and care classes in English and Spanish at a TreePeople fruit tree giveaway.

Two Featured Examples following the Five Stages of Service Learning

ECMS Rain Garden: High school interns mentored middle school students in creating art and a rain garden inspired by a local wetland.

Sustainability Audit: Interns visited a local company to perform a custom sustainability audit and created a report based on their findings with recommendations for the company directors.

Grade Level of Students Involved: 9-12 (High School)

Duration – For how many days/ weeks/months did this service learning experience last?
All year. Each project ranges from a day to several weeks.

Service Learning Themes

- **Environment**
- **Gardening**
- **Healthy Choices**
- **Hunger, Homelessness, and Poverty**
- **Safe and Strong Communities**
- **Social Change**

Community Need

The Green Ambassadors (GA) program addresses two key community issues:

1. A legacy of environmental degradation
2. The lack of constructive activities for youth in the community.

The GA curriculum addresses the environmental issues of greatest significance to communities in Southern California – water conservation, water quality, air quality, open space conservation, and urban community health – as well as preparing students to be community advocates

Over 90% of the students served by Environmental Charter Schools (ECS) reside in the densely populated underserved communities in the Southwest Los Angeles area, including, but not limited to, South Los Angeles, Gardena, Hawthorne, Inglewood and Lawndale. The communities of Lawndale, Hawthorne, and Gardena have seen a 20% increase in their populations in the last 15 years, the greatest growth rate in the South Bay portion of Los Angeles County. While home values and the cost of living have increased in this region, these communities are still undereducated and face a crime rate that is twice the national average. The region's large population, geography, climate, and industrial activities (commercial and personal transportation, oil refineries) all place a tremendous burden on the area's environmental health and natural resources. For less advantaged communities, such as many in south Los Angeles, poor environmental quality, low income, and lack of information on the environment are strongly connected. For example, in a recent study on the disparity of environmental quality in Los Angeles, researchers found non-Whites 80% more likely than Whites to live in neighborhoods with toxic waste disposal sites. This region is home to a number of U.S. Environmental Protection Agency Superfund cleanup sites. Targeting this region creates meaningful and long lasting change that directly affects students' lives and the lives of their families, neighbors, businesses and future generations.

Community Partners

From Lot to Spot, TreePeople, South Coast Air Quality Mgmt District, Hyperion Water Treatment Plant & Environmental Learning Center, Gardena Willows, Environmental Charter Middle School, South Bay Cities Council of Governments, Energy Upgrade CA, Communities for a Better Environment, LA Food Policy Council, Daily Organics, Algalita Marine Research and Education, National Forest Foundation – partner with us next!

Academic Connections

Key Content Areas:

1. Science and Technology: Concepts & principles that underlie sustainable practices and technologies in the zones of, i.e: transportation, water management, agriculture, recycling, energy production, energy efficiency.
2. Language Arts and Communications: The production of coherent, comprehensive and effective communications in the forms of writing, speaking, slide-based presentations, photography, and video.
3. Social Science: An understanding of types of community organizations (local government, business, non-profit, educational) and their roles, as well as the relationships of local, state, and federal level agencies and organizations, as applied to the production of events that successfully disseminate sustainability solutions.

Skills being introduced or developed:

- Outreach and marketing skills to mobilize for change
- Present effectively to middle school students and adults
- Professional skills such as letter writing, networking, resume,
- Create short how-to videos
- Write descriptive social media captions and blog posts
- Understand larger context of environmental justice

Academic Standards

Note: GA curriculum is currently undergoing revision to address Common Core Standards.

National Science Standards:

12CLS4.2 Living organisms have the capacity to produce populations of infinite size, but environments and resources are finite. This fundamental tension has profound effects on the interactions between organisms.

12FSPSP4.1 Natural ecosystems provide an array of basic processes that affect humans. Those processes include maintenance of the quality of the atmosphere, generation of soils, control of the

hydrologic cycle, disposal of wastes, and recycling of nutrients. Humans are changing many of these basic processes, and the changes may be detrimental to humans. [See Content Standard C (grades 9-12)

12FSPSP4.3 Many factors influence environmental quality. Factors that students might investigate include population growth, resource use, population distribution, overconsumption, the capacity of technology to solve problems, poverty, the role of economic, political, and religious views, and different ways humans view the earth.

Books, Media, Websites, and other Resources Used: Community Partnerships, guest speakers & field trips are our primary source of information for students. Other resources include:

Water – Mega drought video (3:16) <http://www.nbcnews.com/video/nightly-news/54228481#54228481>, Campus Water Audit:

<http://dpw.lacounty.gov/prg/generationearth/pdf/waterAudit.pdf>, 8 Second Snapshot of drought over years: <http://www.latimes.com/la-me-g-california-drought-map-gif-htmlstory.html>

Food – A Tale of Two Women - Food Deserts: <http://youtu.be/4ke8bglaZWA>, Ron Finley, plant some shit (11 min): http://www.ted.com/talks/ron_finley_a_querilla_gardener_in_south_central_la,

Vandana Shiva, GMO seeds (10 min): <http://youtu.be/fG17oEsQiEw>, Farmworker Rights - Coalition of Immokalee Workers: <http://ciw-online.org>

Energy – Energy Basics <http://www.energyupgradeca.org/en/learn/energy-basics>, Lights at Night (3 min) <http://youtu.be/ulzqkEkhw5l>, Green Ambassadors student Prezi https://prezi.com/_9ips2oxwbim/ecs-energy-upgrade-ca-ambassadors

Waste – William McDonough, Cradle to Cradle technology (20 min) http://www.ted.com/talks/william_mcdonough_on_cradle_to_cradle_design

For more resources feel free to email me or visit <http://bit.ly/enviroresources>

Global Connections Made: China Drought Bucket Challenge

http://shanghaiist.com/2014/08/24/residents_in_drought-striken_henan.php

Five Stages of Service Learning (Procedure)

(Investigation, Preparation and Planning, Action, Reflection, and Demonstration)

Investigation:

At the beginning of the year, I provide a syllabus with course goals and the key topics for the year: Water, Food, Energy, Waste. Within those, I provide sub-topics (i.e. under Water are: Drought, Rainwater catchment, Urban runoff, Ocean pollution, Native plants, Wetlands). As a class, we brainstorm other issues that students are interested in pursuing within each key topic and we add those to the syllabus. At the beginning of each unit, students use the Question Formulation Technique (<http://bit.ly/QFTguidelines>) to generate questions on a “Q Focus.” This can be a short video, word, statement, picture – it just cannot be a question. Students develop guiding questions in groups, then we type them into a shared Google Doc. These are the questions that guide our unit. Typically, I have pre-planned field trips, guest speakers, videos, and readings. In the past, I relied on students to find these resources, but I found that students appreciated getting basic info as jumping off points. During and at the end of each unit we revisit the Guiding Questions Google Doc for that unit and see if we have addressed our questions. Also, as opportunities arise, we may change the course of our investigation.

ECMS Rain Garden: High school students first took a tour of the Gardena Willows, a local wetland near our Environmental Charter Middle School—Gardena campus. The tour was led by the director of the board who is also an environmental science professor at a local university. They asked lots of questions, knowing that they needed to learn as much as they could so they could teach it to the middle school students.

Sustainability Audit: Green Ambassadors students were invited by a local company to perform a sustainability audit. Students had built a good reputation in the community. And the company wanted to work on reducing their carbon footprint and collaborate with students.

Preparation and Planning:

ECMS Rain Garden: They took what they learned at the Gardena Willows and developed a PowerPoint presentation. In creating the presentation, they had to reflect on what they learned and how to translate it so it would be accessible to middle schoolers.

Sustainability Audit: Students developed a custom sustainability audit based on their knowledge of environmental issues and examples they found online. They picked and chose the best and most relevant pieces, and added their own creative flair. They reflected broadly on what the overall goals of a sustainability audit was, related to both environmental and community sustainability.

Action:

ECMS Rain Garden: High School interns visited the ECMS-Gardena students and presented to them about the flora and fauna of the wetlands, in conjunction with a local arts organization, LA Commons. Then high school students chaperoned the middle school students on a walking field trip to the Gardena Willows and gave them a tour. LA Commons worked with middle school students in a series of follow up workshops to create art based on what they saw.

Sustainability Audit: Students printed their audits, toured the offices and production facilities, spoke with employees, spoke with the company directors and co-founder and asked lots of questions (part of the investigation and preparation cycle). Then they took the information they learned on the audit and created a report with specific recommendations for reducing their carbon footprint, from installing low-flush toilets to getting rebates to improve insulation and install double pane windows to communicating their sustainability plan on social media. They were dressed and behaved as professional auditors.

Reflection:

Students start the year with a Learning Goals worksheet: Why are they participating in Green Ambassadors? What are their learning goals? Mid-year they also fill out an evaluation with a series of statements to gauge their learning and interests, what is working, what can be improved, what are the instructor's strengths, how can the instructor improve (try having your students write YOU an evaluation – it's fun!). In the spring, they typically use authentic Demonstration opportunities to reflect. For example, one presentation asks them to share with students at other schools in 5 minutes with 5 slides how they make change. This presentation requires that they pare down their various service activities to the most meaningful ones and identify their community impact and the learning that came from leading that process. They will also be writing blog posts describing one particular project from the year, the community need addressed, their role, impact, and what they learned about the issue and themselves. These blog posts will be shared on their personal website portfolios, as well as a communal Green Ambassadors blog.

Demonstration:

ECMS Rain Garden: This service learning experience culminated in a community workday where the art was displayed with community members' participation. High school interns, parents, ECMS students, teachers and community volunteers created a rain garden with From Lot to Spot using native plants to capture rainwater from the roof of the classroom building & prevent many gallons of urban runoff from reaching the ocean.

Sustainability Audit: Students are returning to the company on May 18 to present their report to the co-founders and directors to cover WHY sustainability is important, what the company is doing WELL, what they can IMPROVE on, all with specific recommendations and resources.

Assessment and Evaluation

Typically students are assessed by community members, which is the nature of presenting in authentic situations. In one example, students were hired by a statewide grant to share information on energy efficiency. The grantor sent a "secret shopper" to one of the tabling events staffed by students, so students were surprise evaluated by the organization administrating the grant itself (they did well ☺). After every event and completion of the learning and service combo, students self-assess their own performance. This group discussion activity doubles as reflection, as well as assessment and evaluation. Because the stakes are high, students take their self-assessments seriously. As their

supervisor, I also give my own feedback, and also ask other educators who were involved to provide their feedback so I can share with students. These authentic assessments mirror what would typically happen as student actions move beyond grades and service hours.

Technology Integration

Students manage the Green Ambassadors Instagram and Twitter accounts and choose who will document on each platform. They create compelling captions and use hashtags to get more visibility. For both accounts, there is a shared password that all interns have access to, so they are also trusted to use the accounts appropriately. The purpose of the accounts (documentation, grant reporting, outreach) are clearly described at the beginning of the internship and they share a stake in the accounts being successful. Students use their phones to take photos and post.

In some cases, the Instagram account is used to post agendas and for students to submit assignments. Example – campus water audit assignment:

<https://instagram.com/explore/tags/echswater>

Director’s Act, the afterschool film club, created a short documentary about two Green Ambassadors students, Vanesa and Justin, who worked with Daily Organics to bring healthy food to South Los Angeles: <https://youtu.be/KMarQw0UXSc>

Throughout, we use Google Slides, Google Docs, and Prezi to collaborate on presentations.

Social Media

Website: www.ecsonline.org | www.greenambassadors.org

Instagram: www.instagram.com/ecsgreenambassadors | www.instagram.com/enviroschools

Twitter: www.twitter.com/envirocharter | www.twitter.com/gambassa

Facebook: Environmental Charter Schools | Green Ambassadors

Examples of Youth Voice & Choice

Students are always encouraged to do quality work that they are proud of. The syllabus says under Responsibilities: “Produce quality work that you are proud of. Ask yourself: What would make me feel successful this year? Do that.” This inherently requires youth choice. Increasingly, I have assigned them to take the lead on different activities and service learning experiences, and they are responsible for gathering their team and implementing it.

Lessons Learned and Next Steps

What did you discover about service learning through this experience? What would you do differently? Most memorable highlights? Any advice for teachers who want to integrate service learning into their classrooms?

I have learned so much! My students are amazing and I encourage you to come meet them! Advice: raise your students up wherever you go, and encourage them always. Guiding principles: *The Quality School* by William Glasser, *Teacher Effectiveness Training* by Thomas Gordon, *An Ethic of Excellence* by Ron Berger. Check out my blog for other ideas and please get in touch – I’d love to collaborate! www.lyonideas.com/blog