

Environmental Studies Academy



Service Learning The Easy Way

Responsibility

Standards

Accountability

Reflection



An activity or project that covers civic responsibility, academic standards, accountability, and student reflection.


Evolution and Adaptation



Wetlands 2001

Originally only the seniors presented to an audience.

Projects had to incorporate scientific research.



think
rethink
respond
react
act
action

Program was energized with fresh ideas,
and rigor.

All students involved, but still along class
lines.

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Articulation

Projects now include sophomores, juniors and seniors

Each year as students stay in their project they take on more responsibility, and as seniors will take on leadership and training positions.

Maturing Projects

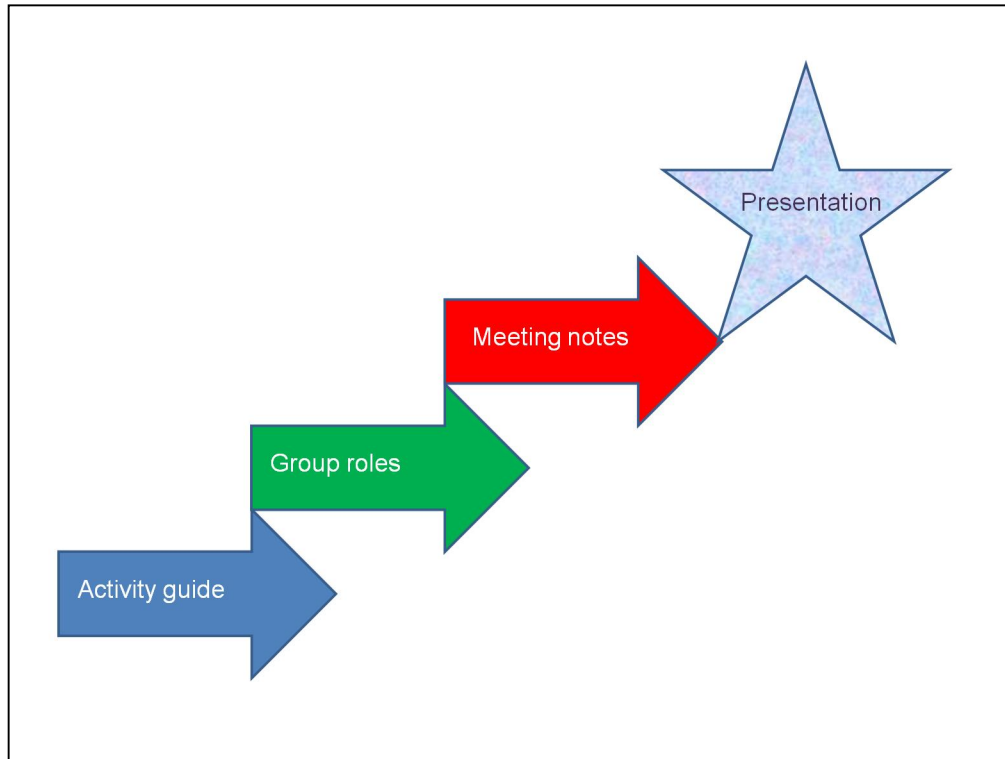


Students lead the projects and recruit new members at an all Academy meeting in September.

Projects tend to be led by juniors or seniors who have grown into the role.



Students are encouraged to create their own new projects.



Project binder is kept for each project

Description of project

Project criteria and requirements

Students find the standards addressed including SCANS

Planning guide including

- List of students and contacts for each project

- Group roles with explanations of roles

- Template for project meeting with civic groups

- Reflections template

- Project Activity guide



THE PROJECT YEAR

Students meet on their own, or with their mentor, as well as being given collaboration time in class.

A first semester presentation is done to the whole Academy reviewing their progress.



RECORD KEEPING

Students keep track of their meetings, who attended and minutes of their meetings.

MENTORS

One mentor can meet with and interact with a whole group of students over three years developing an even better relationship with these students.

The projects provide an opportunity for mentors to interact with students.



STUDY TRIPS

Study trips are often directly related with our projects and involve mentors and business partners.

Final Presentation



Students present their projects to parents, partners, alumni, administrators and mentors in May.

Acts as a great motivator and recruitment tool.

Review



Teachers meet after school to review and tweak the projects as needed for the next year.

The Projects

- Recycling
- Watt Cops
- Redwoods
- Activists
- Emergency
- Native Plants
- Creek Group
- Watershed
- Composting
- Water
- Garden

The Environmental Studies Academy Thanks You



Service Learning Project Samples

Service Learning Project Group Native Plants

The purpose of the Native Plants Project Group is to develop a native plant nursery that will supply the environmental restoration efforts of ESA projects. The group will identify the native species that they will want to propagate and with the help of a mentor, they will either gather seeds or buy seeds or seedlings and start their nursery. They will have the use of the plant trays for their efforts. The group will keep a plant press (to be made by the students) with examples that are identified. This will also help the Creek and Wetlands groups who are to identify invasive species and have samples. The two groups will help each other! The California Native Plant Society will be contacted for a speaker and possibly a membership.

Project Criteria

- *There will be a minimum of 4 and a maximum of 10 students in the project group. Each student will be required to fulfill a minimum of 30 hours outside of school time to satisfy the SL graduation requirement and the ESA requirement. If the thirty hours are not completed before the final presentation, the project is not complete.
- *The group will fill leadership roles within the membership. If the number of students does not match the jobs needed, then collaborate and develop a leadership team to fit your numbers. Each member needs to be fully aware of other roles, contacts, and obligations so that nothing falls behind timelines. A list of members, class schedules, phone contact, and email contact, will be provided to the faculty advisor within 1 week of the beginning of the ESA Service Learning Project Program.
- *This group will need to get a mentor. It will be best to have someone from the community connected with the nursery business and knowledgeable about the environmental restoration needs for the Pinole area.
- *This group will have professional project forms to complete and file. You will need to have a copy for the advisor's project file at school, one for each mentor, and one for your group. You will receive a group project folder. The group will be responsible for copies and organization of your records. The folder will include all required forms, progress reports, meeting notes, activities, hours outside of class, and reflections. Copies of email contacts are to be included as well as a telephone log chronicling all phone conversations regarding group activities, and expense receipts if applicable. Check with advisor

- ahead of time regarding expenditures to be sure that they will be reimbursed. All posted announcements and/or posters must have the approval of the group advisor.
- *The academic standards addressed by the project will be identified by the group and cover at least two discipline areas.
 - *The Native Plant Project group will develop an interactive web link to the ESA site and keep it up to date weekly.
 - *All group members will participate in the service activity within the community, outside the academy, at least once each semester. Remember to keep documented records for your report. The service may be a presentation to a group, classroom, or civic organization. The service may also include city council visits or outside school collections of donated items.
 - *The nursery may develop into a resource for other restoration groups in the area and will need a business plan for the enterprise as it develops.
 - *The civic engagement requirements of service learning can be addressed through going to the school principal, the school board, PTSA, or Pinole City Council and presenting a project plan and asking for their assistance. The plan will need to be developed quickly. The plan is to be typed and will need the advisor's approval.
 - *The Native Plant Group can participate in the activist element of environmentalism by including the PVHS community in promotional activities identifying indigenous plant species. Other activities developed by members will be approved by the advisor and recorded for the report.
 - *There will be a presentation each semester of the group's plan and implementation activities as well as a reflection of their work.

Native Plant Project Planning Guide

Welcome to the professional side of project based learning. Below you will find the planning guide for your group. Please complete the guide. If you have any suggestions, additions, or revisions, let your advisor know about them so that they can be included in the design changes for future groups.

Group members, mentor, and advisor contact information

Name	Phone	email
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1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

A separate, typed copy of this list goes to your advisor (ASAP)

Group roles

Moderator _____

Liaison _____

Historian _____

Records _____

Accountant _____

Reporter _____

Varied role _____

Varied role _____

Moderator – this member will set the meetings, facilitate the agenda, and implement the general running of the group. The moderator will also help mediate any problems that arise and seek outside help for any unresolved issues.

Liaison – This member will be the contact person for the group with mentor, advisor and ESA staff, administration, other project groups. The liaison will keep phone logs and email records up to date and give copies to records keeper. The liaison will also refer specific inquiries to the appropriate person in the group including advisor.

Historian – This member will keep photographic evidence of work and organize into the group folder. These pictures will be used for presentations and other promo work. Video is also available. The historian will also keep copies of any published reference to work, such as a news article, and incorporate in the historical piece for the folder. The reporter and historian will work together on publicity.

Records – The records keeper will print up an agenda for each meeting making at least 3 copies for the meeting and appropriate copies for advisor, mentor, and record book. Meeting attendance and notes can

Accountant or varied role description here– The accountant will keep all financial records for the group. There will be no combining of jobs for this member. All accounts payable and receivable will be recorded in the accounting book that you will be given. The book is to be kept in room 403 with the Advisor's file. The funds, cash or check, will be kept in the safe and deposited by advisor or ESA staff.

Procurement or varied role description here – This member will organize and implement all materials needed to complete an activity. All records and copies from transactions will be given to the records keeper. Remember to keep a copy for your personal record (good back up procedure). Any special items needed will be decided by group and if a cost is involved, the advisor must be consulted.

Reporter – The reporter will publish information about project work. Some publicity will be announcements but there can also be inserts into school newspaper or posters. The reporter will collaborate with the historian on the before, during, and after publicity. The reporter will develop the calendar with group collaboration and keep it up to date.

Special Note! Remember, if your group does not have the member numbers needed for the roles or has too many members, collaborate and divide up the jobs appropriately. Everyone is to have a job within the project.

PTSA/WCCUSD Meeting Records (or other groups you attend)

Date: _____

Attendee: _____

Meeting/location: _____

Notes: _____

Project Activity Guide

Activity date

Name of activity

Special roles of members

Notes (Advisor initial needed for every activity) check on permission slip requirements if off campus. Transportation requirements need to be approved.

contact request form date

Response with suggestions if applicable

Name, address, phone, email contact for location and information regarding activity. Copies of permission slips if needed should be included.

Initial material and costs of activity.

Approximate amount of money raised before expenses taken out.

Native Plant Project Reflections

As you work during the year, the reporter, recorder, or historian can keep a list of ideas, suggestions, observations, and reflections to be used to write the reflection aspect of your service learning project. There are some specific questions and an area for your other reflections.

What is your definition and understanding of "Service Learning Project?"

How did the project design help or hinder your group?

How was your collaboration experience?

How were your choices for activities? Did you get enough cooperation from the academy as a whole with participation in the activities?

Project Group Reflection

What problems did you encounter?

How was the service learning aspect of your project successful?
What service learning aspects were lacking or not realized?

Group and individual reflections.

Service Learning Project Group Wetlands 2010-2011

The purpose of the Wetlands project group is to work with the community to help restore the wetland area around Pinole and to engage in other marine activities promoting a healthy environment. The tunicate monitoring project in the Berkeley Marina with Smithsonian Institute has a mentor and will continue for a third year. A new oyster project is proposed and will need to get the mentor in place. Wetlands restoration will also be on the agenda for activities, including mapping and species identification.

Project Criteria

- *There will be a minimum of 4 and a maximum of 10 students in the project group. Each student will be required to fulfill a minimum of 30 hours outside of school time to satisfy the SL graduation requirement and the ESA requirement. If the thirty hours are not completed before the final presentation, the project is not complete.

- *The group will fill leadership roles within the membership. If the number of students does not match the jobs needed, then collaborate and develop a leadership team to fit your numbers. Each member needs to be fully aware of other roles, contacts, and obligations so that nothing falls behind timelines. A list of members, class schedules, phone contact, and email contact, will be provided to the faculty advisor within 1 week of the beginning of the ESA Service Learning Project Program.

- *This group has a mentor for the tunicate project, Linda McCann. Carson Cox is the oyster project mentor. EarthTeam also has a mentor for wetlands restoration education and training.

- *This group will have professional project forms to complete and file. You will need to have a copy for the advisor's project file at school, one for each mentor, and one for your group. You will receive a group project folder. The group will be responsible for copies and organization of your records. The folder will include all required forms, progress reports, meeting notes, activities, hours outside of class, and reflections. Copies of email contacts are to be included as well as a telephone log chronicling all phone conversations regarding group activities, and expense receipts if applicable. Check with advisor ahead of time regarding expenditures to be sure that they will be reimbursed. All posted announcements and/or posters must have the approval of the group advisor.

- *The academic standards addressed by the project will be identified by the group and cover at least two discipline areas.
- *The Wetlands Project group will develop an interactive web link to the ESA site and keep it up to date weekly.
- *All group members will participate in the service activity within the community, outside the academy, at least once each semester. Remember to keep documented records for your report. The service may be a presentation to a group, classroom, or civic organization.
- *The civic engagement requirements of service learning can be addressed through the Harbor Master at the Berkeley Marina or through your mentor.
- *The Wetlands group can participate in the activist element of environmentalism by including the PVHS community in promotional activities raising environmental issue awareness. Speakers for wetlands issues, posters advertising activities such as coastal clean up days, and will be included in the project. Other activities developed by members will be approved by the advisor and recorded for the report.
- *There will be a presentation each semester of the group's plan and implementation activities as well as a reflection of their work.

Service Learning Project Group Composting

The purpose of the Compost Project Group is to work and develop at least two composting activities on campus that will be a reflection of "green" gardening practices, as well as supporting the ecology of the area. This group will maintain the worm bins and compost piles throughout the school year and have a summer plan in place to cover the time when the school is closed. The worms may be used, donated, or sold at the end of the year.

Project Criteria

- *There will be a minimum of 5 and a maximum of 10 students in the project group. Each student will be required to fulfill a minimum of 30 hours outside of school time to satisfy the SL graduation requirement and the ESA requirement. If the thirty hours are not completed before the final presentation, the project is not complete.

- *The group will fill leadership roles within the membership. If the number of students does not match the jobs needed, then collaborate and develop a leadership team to fit your numbers. Each member needs to be fully aware of other roles, contacts, and obligations so that nothing falls behind timelines. A list of members, class schedules, phone contact, and email contact, will be provided to the faculty advisor within 1 week of the beginning of the ESA Service Learning Project Program.

- *This group has a mentor in 2010, Caroline Sandoval from Earth Team and Delaine Newman, and ESA parent.

- *This group will have professional project forms to complete and file. You will need to have a copy for the advisor's project file at school, one for each mentor, and one for your group. You will receive a group project folder. The group will be responsible for copies and organization of your records. The folder will include all required forms, progress reports, meeting notes, activities, hours outside of class, and reflections. Copies of email contacts are to be included as well as a telephone log chronicling all phone conversations regarding group activities, and expense receipts if applicable. Check with advisor ahead of time regarding expenditures to be sure that they will be reimbursed. All posted announcements and/or posters must have the approval of the group advisor.

- *The academic standards addressed by the project will be identified by the group and cover at least two discipline areas.

*The Composting Group will develop an interactive web link to the ESA site and keep it up to date weekly.

*All group members will participate in a service activity within the community, outside the academy, at least once each semester. Remember to keep documented records for your report. The service may also be a presentation to a group, classroom, or civic organization as well as helping another school or school group begin a garden program.

*The civic engagement requirements of service learning can be addressed through going to the school principal, PTSA, an outside organization or business, and presenting a project plan and asking for their assistance. The plan will need to be developed quickly. The plan is to be typed and will need the advisor's approval.

*The Composting Group can participate in the activist element of environmentalism by developing an outreach program for PVHS and for elementary schools or other organizations to learn more about composting.

*There will be a presentation each semester of the group's plan and implementation activities as well as a reflection of their work.

Service Learning Project Group Recycling 2010 - 2011

The purpose of the Recycling Project Group is to work with Pinole Valley High School and ESA to continue with the recycling program and expand the project efforts. Eye glasses, batteries, and cell phones have been part of the expansion and this year the group will find other ways to increase and improve their services. Ink will be added this year. The recycling members will monitor the small bins in ESA classes and sort the recyclables from the trash to make sure our bins are correctly used. The group will also develop a behavior and procedure for the regular school recycling. They will need a calendar that tells when to recycle and include the day of placement on front property and the day of pick up. There will be a trash audit class offered through Earth Team that will use our students as participants. The group will volunteer for the Earth Day celebration as well as any other special days during the year. They will also participate in the annual contest through the Waste Management of Richmond. A video presentation will be developed to use in an outreach program at PVHS.

Project Criteria

*There will be a minimum of 6 and a maximum of 15 students in the project group. Each student will be required to fulfill a minimum of 30 hours outside of school time to satisfy the SL graduation requirement and the ESA requirement. If the thirty hours are not completed before the final presentation, the project is not complete.

*The group will fill leadership roles within the membership. If the number of students does not match the jobs needed, then collaborate and develop a leadership team to fit your numbers. Each member needs to be fully aware of other roles, contacts, and obligations so that nothing falls behind timelines. A list of members, class schedules, phone contact, and email contact, will be provided to the faculty advisor within 1 week of the beginning of the ESA Service Learning Project Program.

*This group will need to get a mentor. The mentor must come from outside the ESA community and have a connection with the recycling industry in the area.

*This group will have professional project forms to complete and file. You will need to have a copy for the advisor's project file at school, one for each mentor, and one for your group. You will receive a group project folder. The group will be responsible for copies and organization of your records. The folder will include all required forms,

progress reports, meeting notes, activities, hours outside of class, and reflections. Copies of email contacts are to be included as well as a telephone log chronicling all phone conversations regarding group activities, and expense receipts if applicable. Check with advisor ahead of time regarding expenditures to be sure that they will be reimbursed. All posted announcements and/or posters must have the approval of the group advisor.

- *The academic standards addressed by the project will be identified by the group and cover at least two discipline areas.

- *The Recycling Group will develop an interactive web link to the ESA site and keep it up to date weekly.

- *All group members will participate in a service activity within the community, outside the academy, at least once each semester.

Remember to keep documented records for your report. The service may also be a presentation to a group, classroom, or civic organization as well as helping another school or school group begin a recycling program. Bringing a speaker to the academy will also be an excellent community activity.

- *The civic engagement requirements of service learning can be addressed through going to the school principal, PTSA, an outside organization or business, and presenting a project plan and asking for their assistance. The plan will need to be developed quickly. The plan is to be typed and will need the advisor's approval.

- *The Recycling Group can participate in the activist element of environmentalism by including the PVHS community in promotional activities encouraging community efforts to keep the campus clean. Posters advertising activities should be coordinated with other groups that have similar goals so that the school is not littered with advertising.

- *There will be a presentation each semester of the group's plan and implementation activities as well as a reflection of their work.

California Academic Standards for Recycling Project

Ecology

6. Stability in an ecosystem is a balance between competing effects. As a basis for understanding this concept:
 - a. Students know bio diversity is the sum total of different kinds of organisms and is affected by alternations of habitats.
 - b. Students know how to analyze changes in an ecosystem resulting from changes in climate, human activity, introduction of nonnative species, or changes in population size.
 - c. Students know how fluctuations in population size in an ecosystem are determined by the relative rates of birth, immigration, emigration, and death.
 - d. Students know how water, carbon, and nitrogen cycle between abiotic resources and organic matter in the ecosystem and how oxygen cycles through photosynthesis and respiration.

Career Planning and Management

- 3.0 Students understand how to make effective decisions, use career information, and manage personal career plans:
 - 3.1 Know the personal qualification, interests, aptitudes, knowledge and skills necessary to succeed in careers.
 - 3.2 Know opportunities and requirements for education, training, and licensing
 - 3.3 Develop a career plan
 - 3.4 Understand role of professional organizations in a productive society

Technology

- 4.0 Students know how to use contemporary and emerging technological resources in diverse and changing personal, community, and workplace environments:
 - 4.2 Understand the use of tech resources to gain access to manipulate, and produce information, products, and services.
 - 4.3 Use appropriate tech in chosen career path.

Environmental and Natural Science

E9.0 Students understand the effective use of environmental and Natural science equipment:

- 9.1 Use appropriate methods and techniques for employing environmental and natural science equipment.
- 9.2 Apply processes accurately and safely.

English Reading

- 2.1 Analyze structure and format of functional workplace documents.
- 2.2 Prepare a bibliography of reference materials for a report using a variety of sources.

Writing

- 2.5 Business letters: Clear and purposeful information and address intended audience appropriately. Use appropriately vocabulary. Highlight central ideas or images. Follow conventional style with formats, fonts, and spacing.
- 2.6 Write technical documents: Report information and ideas logically.
- 2.7

Speaking Applications

- 2.3 Deliver expository presentations. Convey information and ideas from primary and secondary sources accurately and coherently. Include visual aids and employ technology to organize and display topics. Use technical terms and notations accurately.
- 2.6 Deliver descriptive presentations. Establish speakers connection to the topic. Use effective descriptions (imagery). Use multi media for presentations.

Example of a year end reflection

Wetlands/Oyster Group 2008 – 2009

So far this year we have only been in school for 4 months and have accomplished a lot as individuals as well as a group. I have seen a great amount of improvement from those who were involved last year. This year Wetlands has come very far in a short amount of time.

So far we have accomplished two deployments in Berkeley Marina. At our most recent deployment we had so special guest involved with us as well. We had members from Earth Team there to record and observe as our group continued to do research. While our group was hard at work Chris Tarp from Contra Costa College was there to help our member identify the many species found on our bricks. While at Berkeley Marina we have every body interacting in some way to help make the day fast and easy. We have members who pull up and deploy the bricks. We also have people who write down observations and take samples as well as someone who takes the pictures. After a deployment we always send the information that we have gathered from the day to Chela who then uses our observations in her research. Both deployments have been very successful this year and I'm sure they will be just as successful in the future.

Along with taking regular trips to Berkeley, we have also been doing a fair amount of work at Pinole Shores. This year we have decided to split up into three groups. Each group has a subject. Group 1 has species, group 2 has plants, and group 3 has birds. Each group goes out on a day that is best for the members to get together. When they arrive they begin taking pictures walking around and observing the day. If possible they collect samples and write them down. Each group has been successful in identifying at least 5 objects.

We have goals that we would like to reach by the end of the year as well. One is being able to have Wetlands mapped out and drawn out by the final presentation. We would like to be able to have all of our species, birds, and plants identified as well so we can present it to the rest of the academy and tell them about our findings since it is just as much home to them as it is to us. It will take a lot of work and collaboration as a group but I'm positive that if any group was put to the test our group would be able to finish it. We also hope to start an Oyster bed in the water as well. We want to be able to provide a stable and healthy habitat for the oysters in our bay so we have something else to work with and do research on. As for Berkeley Marina we will continue to deploy the bricks and continues to take many samples and pictures as well as keeping in contact with Chela as well as Chris Tarp and Earth Team.

So far I feel as if our group has been very successful and we'll just have to wait and see what more our group can accomplish.