“Every Classroom a Green Classroom”
Green Classroom Profile: *Bay View Elementary - TK-5th Grade -*
Teacher Leadership Institute for Sustainability 2023-2024

TEACHER LEADER BIO: April Porterfield

As a teacher librarian at Bay View Elementary, I am a passionate advocate for literacy and education. I believe that libraries are a hub of learning and discovery, where students can explore diverse ideas, cultivate critical thinking skills, and foster a lifelong love of reading for preschool through fifth graders. I collaborate with classroom teachers to integrate information literacy skills with content across various subject areas. Through this lens, I am able to incorporate environmental literacy and prepare students to become informed and responsible citizens who help contribute to a sustainable future by integrating sustainability concepts into the existing California Common Core Standards.	

BACKGROUND AND CONTEXT

Class(es)	# of student impacted by this project: 120 Grade level(s): 4th and 5th plus presentations to other grades Content area(s) of focus for this project: Waste reduction Student quote:	
School Site	Bay View Elementary	
School Demographics	School: TK-5 Total School Enrollment: 336 % English learners: 24% % qualifying for free and reduced price meals: 45%	
District	Santa Cruz City: Elementary	
District Demographics	District: TK-12 Total District Enrollment: 4660 % English learners: 20% % qualifying for free and reduced price meals: 35%	
General Vision/Mission of School and/or district	To provide equitable access to academic achievement and the development of confidence, self-advocacy and independence so that each student, regardless of their diverse strengths and abilities, can access their post-secondary goals.	

1) ORIGINAL GOALS AND INTENTIONS

What originally drew you to this program? *(50-100 words)?*
I was drawn to the Teacher Leadership Institute for Sustainability program because it seemed like a natural fit for my students and school. I am passionate about environmental conservation, and the Green Classroom Program is integrated with our curriculum and learning goals. It was the perfect opportunity to learn more, connect with resources, and help educate and inspire others. Our school was the first in our district to become net zero with energy and sustainability, so I was excited to help support our new initiatives.

Share your vision for your Green Classroom. How has this program affected this vision? *(50-100 words)?*
I envision the library as a central hub for environmental education, where students can learn about sustainability, conservation, and environmental stewardship through engaging and interactive research and literature. Half of the fourth and fifth graders come into the library each week for a lesson, while the other half meet in the Life Lab Garden to learn about composting, vermiculture, and gardening. This program has helped the students feel empowered to bring change to Bay View, teaching them about reducing food waste, recycling, and composting. Through their outdoor surveys, research, and presentations, they will continue to be stewards of our green school and planet. Program overview slide

2) KNOWLEDGE AND SKILL BUILDING

A critical part of this program is building knowledge and skills related to Sustainable Schools. Examples include: Environmental Literacy & Sustainability Frameworks; Environmental Identity; Building student engagement through Campus, Curriculum, Community and Culture efforts; Continuum of Environmental Literacy Integration. **Where are you experiencing the most growth in your knowledge and skills related to being a teacher leader for sustainability** *(100 - 150- words)?*
I've experienced the most growth in my knowledge and skills related to being a teacher leader for sustainability in the movement from ***focus*** to ***integrate*** along the Environmental Literacy Integration Continuum. In the library, we research environmental problems, learn about solutions, and continue inquiry to integrate these solutions. I've learned that for a project to be transformative, it will need school-wide support by all. At Bay View, we are moving in that direction, learning about sustainability in our school community, and beyond in our community. Overall, I've grown in my ability to foster a culture of sustainability that inspires students to become informed, responsible, and active stewards of the environment.

3) ACTION - COMMUNITY IMPACT PROJECT OVERVIEW

Project Purpose:
The purpose of the sustainability project was to promote environmental awareness, foster a culture of sustainability, and reduce our school's ecological footprint.

Goals for student learning:
Environmental literacy: Increase students' understanding of environmental issues, including waste management and conservation through research and hands-on learning experiences outdoors in the Life Lab garden, lunch areas, and indoors in the library.
Critical thinking skills: Develop students' critical thinking skills by engaging them in an inquiry-based investigation related to our sustainability needs.
Civic engagement: Empower students to become active participants in creating positive environmental change within their school and community.

How does this project connect to your Green Classroom vision and the broader mission and vision of the school/district?
The library Green Classroom vision is aligned with Bay View's green initiatives and Santa Cruz City Schools' goals for sustainability.

What specific learning intention(s) did you share with your students?
I shared the importance of understanding environmental issues such as waste management and conservation through online and print resources

How did this project serve your pre-existing instructional goals?
This project helped us integrate environmental literacy into various subject areas and promoted interdisciplinary connections. It provided opportunities for students to analyze real-world environmental challenges and develop solutions based on their analysis. Finally, it provided active participation and leadership when planning and implementing their project, fostering a sense of responsibility to sustainability.

4) ACTION - IMPLEMENTATION STORY

Describe how implementation of your community impact project went. *If your project has not finished yet, describe how the start has gone, and how you anticipate it completing (300 - 500 words).*

General story of implementation:
We began our project with an outdoor survey of our waste systems, new vermiculture bins, and lunch area. Fourth grade students also interviewed the custodian and Life Lab teacher to analyze the needs of our school. They determined that the biggest need during lunchtime was for them to educate other grades how to sort the lunch waste properly. The project they wanted to focus on was researching and presenting information to the other Bay View students.

Challenges and obstacles and how you overcame them:
Scheduling became our biggest obstacle as several holidays and field trips limited our Friday lesson times. The students worked overtime on their presentations, sometimes during free-time and for optional homework. The presentations will be ready for the other students in late April. We weren't able to do a trash audit as planned, but hope that that will be something that will be implemented with the city soon. There is still waste that happens due to food services containers, and students want to advocate for change at the district level for future projects.

Successes and what contributed to success:
We will be able to build on the work that the fourth graders created this year, and there are some great successes! So much food waste has been eliminated with our "Share bin." Also, "take only what you will eat" has helped eliminate waste. Our other streams of food waste keep food out of the landfill: "pig food," "compost," "liquids," and "recycling." It is extremely exciting to see students using more reusable water bottles, containers, napkins, and silverware. Our new "Green Team" of students are helping students sort their food waste correctly.

Bay View's sustainability in the news:
https://www.ksbw.com/article/bay-view-elementary-school-first-in-santa-cruz-to-become-entirely-net-zero/46151381#

Bay View's sustainability with vermiculture, food systems, and composting
https://youtu.be/hFcyxMV4F44

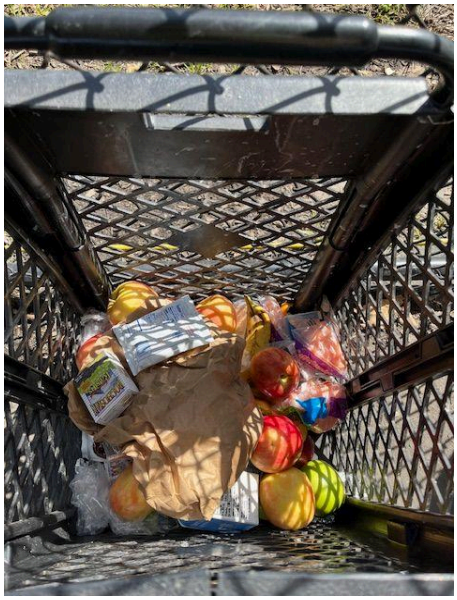
Next Steps for this project:

We will expand our “Green Team" to the 4th and 5th grade lunches next year, and students will continue their work learning about environmental issues in our community. The fourth grade students will present their work to all classrooms at the end of April. As fifth graders in August they will be able to continue their stewardship and leadership by helping with their buddy classes to teach them how to sort their waste, bring waste free/less lunches, and help keep Bay View be a Green School. We also want to implement a Food Waste Audit in August to track the quantity of food waste diverted from the landfill with the vermiculture, compost and share bins, and recycling.

Composting

Food scraps for livestock

Vermiculture



Share Bin

5) ACTION - METRICS AND OUTCOMES

- **Overall Assessment:** How would you characterize the success of your project?
- **Ecological Benefit:** If possible, how were you able to measure the ecological benefit (reduced GHG emissions, reduced waste, increased biodiversity, etc.) and what were the outcomes?
- **Community & Culture Benefit:** If possible, how were you able to measure impacts on classroom culture and community (for example, students' sense of connection to nature, stewardship) and what were the outcomes?
- **Student and Staff Learning:** *Reflect on evidence of student learning from this project, and how this project shifted your classroom to further integrate environmental literacy.*

Overall assessment:

For the three sections below, include how you tried to measure impacts and what evidence of outcomes you found.

Ecological Benefit:
Bay View's 10 new ***vermiculture bins*** are generating hundreds of pounds of worm castings for the garden using the food scraps from the student lunches. Vermicomposting diverts organic waste from landfills, reducing the amount of waste that decomposes anaerobically and generates methane, a potent greenhouse gas. By converting organic waste into nutrient-rich compost, vermiculture helps to close the nutrient loop and minimize the environmental impact of waste disposal. Additionally, the new ***share bin*** has helped deliver nutritious food to people in need while saving it from being wasted.

Community & Culture Benefit:
Sharing food in the food bin was a benefit for the schoolwide community. Many of our students are food insecure. Seeing nutritious uneaten food wasted when thrown in the garbage when so many of our community are hungry felt wrong on many levels. Now students can take what they would like without shame. By adding to the share bin, students know that they are being less wasteful and that it will likely go to someone in our school community. This helped build a stronger and more connected community.

Educational Benefit:
The sustainability project at Bay View Elementary provides students with a rich educational experience that fosters critical thinking, environmental literacy, civic engagement, and leadership development, preparing them to become responsible and environmentally conscious Bay View citizens.

Impact on Students' Sense of Connection to the Environment (results of Children's Environmental Attitude Survey and any other evidence of impact):

The results of the Environmental Attitude Survey showed that 79% of the fourth graders surveyed enjoyed spending time outdoors. I like nature: 79% and nature makes me happy

78%. Learning about nature is important to me: 73%. I like learning things outside of school: 73%. When asked, most students say they prefer being outside, like gardening in the life lab garden, and helping keep our school green. They participate in beach cleanups with their class, learn about environmental stewardship from the O'neill Sea Odyssey and the coastal watershed program, and participate in the garden with weekly lessons.

6) REFLECTION AND COMMITMENTS

What is your enduring understanding about teaching for a sustainable future? And what are your commitments for next year and beyond for this important work?

Reflection: Teaching for a sustainable future is about fostering a deep connection to the environment, instilling a sense of responsibility for its care, and empowering students to become agents of positive change. It involves inspiring a mindset of stewardship, critical thinking, and action that extends beyond the classroom and into students' lives and communities.

Commitments: Bay View has come so far with its environmental initiatives. Becoming Green School Certified would be an attainable goal for next year. We are going to continue and improve the student Green Team, continue waste reduction practices, complete a food waste audit, and work to reduce waste at the district food service level. Students can see how they can make a difference. I'm excited to keep learning and growing in this important work.