



## “Every Classroom a Green Classroom”

### Green Classroom Profile: *Watsonville High - Science - From Urban Heat Islands to Environmental Justice Action*

*Teacher Leadership Institute for Sustainability 2023-2024*

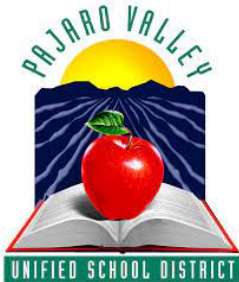
#### TEACHER LEADER BIO: *Satina Ciandro*

I have been teaching science at WHS for 24 years. Currently I teach Marine Biology and Environmental Resources II within the ESNR Academy. For 10 years I team-taught a course with the Monterey Bay Aquarium that had students doing scientific research and presenting to different audiences. I was a student at Moss Landing Marine Labs where my love for Invertebrates flourished. I have a teaching credential from SJSU, a BS in biological science from UCD and I double majored in Biology and Chemistry from Hartnell Community College. I have been fortunate to raise my children with my husband in the same home that my father grew up in. My love for the outdoors started when I was in Chico, while my father attended college, and grew when I spent my summers at the beach in Monterey after moving back. When I was in graduate school I would say that the worst day on the boat was better than the best day in the lab.



#### BACKGROUND AND CONTEXT

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| <b>Class(es)</b> | <p><b># of student impacted by this project:</b> 24</p> <p><b>Grade level(s):</b> 12th</p> <p><b>Content area(s) of focus for this project:</b> Climate Action, Climate Justice, Helping Community</p> <p><b>Student quotes:</b></p> <p>“I think the biggest thing I learned about myself while working on this entire project was how much this kind of topic really interests me. I had a lot of fun working on it and it honestly never felt like I was doing a school related project because this is such an interesting thing to me. I have just always been interested in environmental science and climate change and how I can make a change in my community. So it was such a great experience being able to do research, teach others and make a project out of this topic.”</p> <p>“To me the semester project has made me want to be more involved with the environment, specifically by taking action and raising awareness about our topic. I have always cared about the environment but I always thought I would never be able</p> |
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|                                                  |                                                                                                                                                                                                                                          |                                                                                     |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                                                  | to take action and actually do something. I'm really glad that I get to be involved with my community and take action. Our project will hopefully spread the word on how to be safe during extreme heat and even ways we can reduce it." |                                                                                     |
| School Site                                      | Watsonville High School                                                                                                                                                                                                                  |  |
| School Demographics                              | Grades served: 9-12th<br># students: 2,244<br>% English learners: 28.8%<br>% qualifying for free and reduced price meals: 91.6%                                                                                                          |                                                                                     |
| District                                         | Pajaro Valley Unified School District                                                                                                                                                                                                    |  |
| District Demographics                            | Grades served: K-12<br># students: 17,963<br>% English learners: 38.3%<br>% qualifying for free and reduced price meals: 74.3%                                                                                                           |                                                                                     |
| General Vision/Mission of School and/or district | The Watsonville High School community is committed to offering rigorous academic and vocational opportunities for multiple career and college pathways beyond graduation                                                                 |                                                                                     |

## 1) ORIGINAL GOALS AND INTENTIONS

What originally drew you to join the Teacher Leadership Institute for Sustainability?

I wanted an opportunity to connect with others that are working with environmental education in my area. In the past I worked with a team of educators that had students doing scientific research outdoors so I wanted to make my own connections. I also wanted to have my students work more outdoors. I wanted to provide the opportunity for my seniors to present their ideas and receive their State Seal of Civic Engagement.

Share your vision for your Green Classroom. How has this program affected this vision?

I feel that in a green classroom students not only "know" about being environmentally aware, but are also doing it in their everyday lives and teaching others. We learn the most when we teach others and I want my students to take what they learn about being green and teach their family, friends and others in the school community. Lastly, they should feel comfortable to go out into the broader community and participate in government and other activities to support their beliefs.

## 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?**

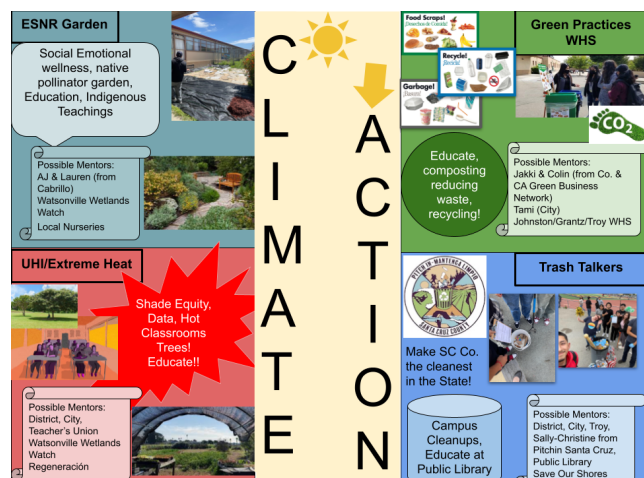
I have known about the EEI Curriculum and EP&Cs for most of my years of teaching, yet in some ways last year was the first year really trying to align my curriculum for my Environmental Resource Course with them in a conscious way. I have also had my students do project based learning in the past, but for the past two years were an opportunity to really begin to connect the two ideas. The knowledge and skills that I have developed the most is that of connecting with the community. I have had many partners come and connect with the students with their projects including Watsonville Wetlands Watch, the City of Watsonville, Green Business Network, and Trashtalkers (Pitchin Santa Cruz). I am trying to make as many connections between these groups and our Academy and TLIS gives me so many opportunities. This program connected (and reconnected) me with many Environmental groups and their support of the students has been extraordinary. I also was able to present to adult learners and grow as an educator.

📅 2024 CREEC Session: Hope & Empowerment through Environmental Justice and Action

## 3) ACTION - COMMUNITY IMPACT PROJECT OVERVIEW

### Summary of Project Purpose and Goals for student learning:

After learning about UHI/Extreme heat with a social justice lens, students would work on their own project proposal for a climate action that they wished to work on. They were given four categories to choose from: ESNR Garden, UHI/Ext Heat, Green Practices and Trashtalkers. Students would then present at the STEAM Expo to get feedback about their ideas. Currently, students are working with different community groups to fulfill their proposals. I also wanted my students to earn the State Seal of Civic Engagement by also attending several civic meetings along with their projects.



**How does this project connect to your Green Classroom vision and the broader mission and vision of the school/district?**

Students are doing authentic problem based learning about a climate topic that they choose that is aligned not only with the NGSS but the CTE standards as well. They are using their communication and time management skills and also helping the community.

**What specific learning intention(s) did you share with your students?**

Students are applying what they learned about Climate Justice from the UHI Unit (or extending upon) and working towards their own project. They have learned about Global Change and are relating how their action will help with the drawdown of carbon. We have also been using All of the Feelings Under the Sun by Leslie Davenport as a text to deal with the social-emotional impact of the climate crisis. Students have been journaling and I have added lessons to complement or enrich each chapter. Furthermore many students have also completed the requirements to receive their State Seal of Civic Engagement on their diploma.

**How did this project serve your pre-existing instructional goals?**

See above and this aligns with the NGSS, as well as, the CTE standards for my [sector](#). My Academy has been trying to establish the garden space for almost 5 years and it seems that we have found community partners within the Cabrillo College and CSUMB Environmental Science Departments to finally allow us to reach that goal.

#### 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:**

For the second semester students chose from one of four categories to create a project that would address a local climate action. Some worked in teams and created a [trifold board project proposal](#) that they would present at the STEAM Expo at the Santa Cruz County Fairgrounds. Students were also required to participate in a restoration event with Watsonville Wetlands Watch. In the last quarter they are working to implement/complete their proposals. Many students are continuing to work with community partners in order to complete their projects. From November to March fourteen students also completed the requirements for the State Seal of Civic Engagement.

**Challenges and obstacles and how you overcame them:**

There were a few challenges. It was difficult to assure the students that they could present at the STEAM Expo. Once there, they grew confident in their skills and later told me they were glad that they went and that I should continue with this project with next year's students. Having high school seniors give up two Saturdays was also difficult. Making the assignment as their final helped motivate many. Sometimes schedule conflicts came up and having alternative ways for them to make up for the missing day was helpful. I do have a handful of students that chose not to present at all and I am encouraging them to do some sort of alternative assignment as their final.

**Successes and what contributed to success:**

- Twenty Students presented at the STEAM Expo and one received Honorable Mention in the SCC Science Fair
- Fourteen of my ERII students will receive the State Seal of Civic Engagement
- Watsonville High will participate in the First Annual Santa Cruz County Cleanup Day on May 11th with the Trashtalkers <https://pitchinsantacruz.org/>
- Begun Process to get Watsonville High School Green Certified

### Next Steps for this project:

Students are working to complete their projects before graduation. I have made connections with other community leaders that want to support having more students meet the requirements of the State Seal of Civic Engagement next school year. Continue to work with our partners at Cabrillo College/CSUMB on getting the ESNR Garden up and running. Continue to work with the Green Business Network to get school Green Certified.



## 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:**

I am so proud of what the students have accomplished this year! It took me many years to guide a class of students to present in a public forum. Having most of my class present at the STEAM Expo and attend a restoration for their final was extraordinary. The trifolds themselves had varied success, however, the students did a great job of presenting their ideas and getting feedback to improve their project proposals. Each team has had varied success in implementation and to keep them on track we are using the Kanban Board Technique.

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

**Ecological Benefit:**

Students are working to improve the composting on campus, recording and reducing the amount of water and energy waste, planting more plants, and educating others about extreme heat.

**Community & Culture Benefit:**

Establishing this project for our senior class will greatly enhance our culture for our academy. Knowing that the 12th graders will continue with this each year and hopefully even more will receive the State Seal of Civic Engagement. Their projects are also improving our school community, as well as, making connections within the outside community. Students don't always see themselves as part of the community they live in. This project gave them a chance to actively participate, interact with and give back to their community. We had many guest speakers in class to support and inspire them. The connections they made may help them in the future.

**Educational Benefit:**

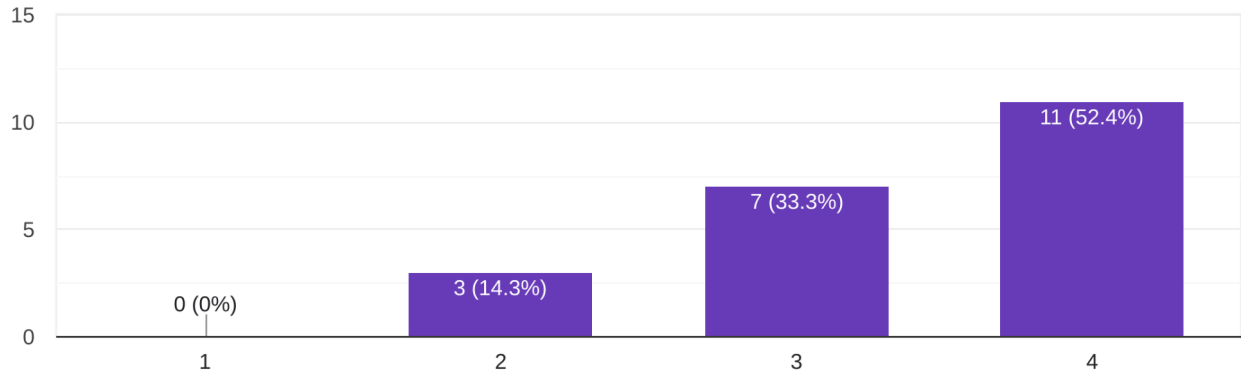
Students improved their communication skills by presenting, writing emails, talking with Guest speakers and working as a team on a long term project. They have learned about Global Change and how it applies to their lives including the Carbon Cycle, Carbon Pools and Fluxes, Carbon Footprint, Climate Ready Simulations, interconnectedness of systems (ecological, everyday life, earthwise traditions), bees, drawdown solutions, and people and places in the community that are also solutionary. Overall I feel that both myself and the students have been empowered to make a difference.

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

## Pre-Survey

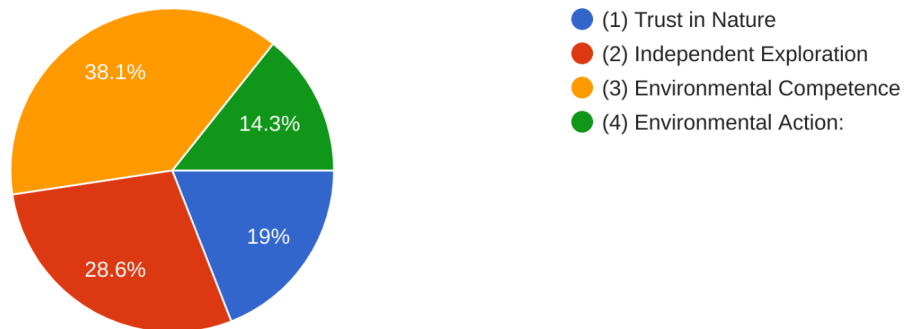
Learning about nature is important to me.

21 responses



At which step do you identify yourself in terms of Environmental Identity?

21 responses

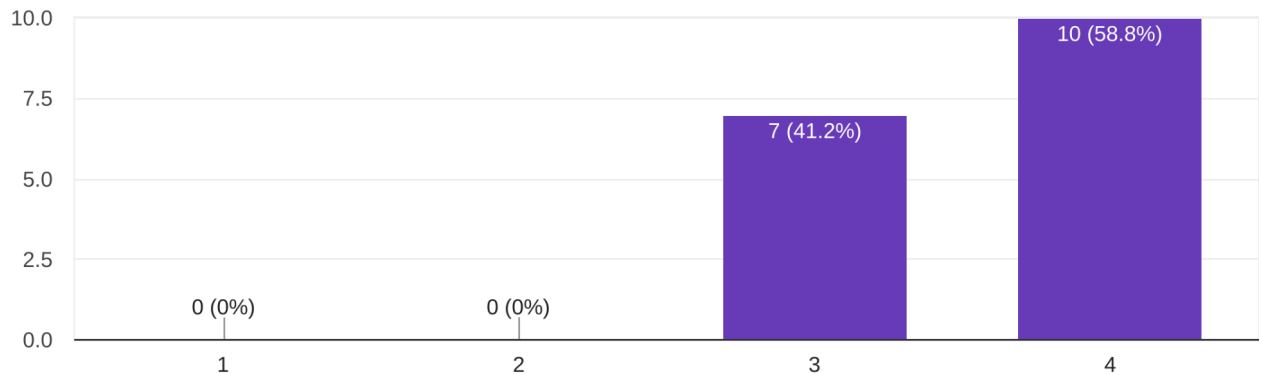


## Post Survey:

As we have worked on this semester's project I feel my environmental identity has changed from environmental competence to environmental action. I have deepened my knowledge, understanding and empathy for the environment, leading me to act on it by educating others. I have also dedicated my own time to take action on helping the environment by participating in tree planting and wetlands restoration.

Learning about nature is important to me.

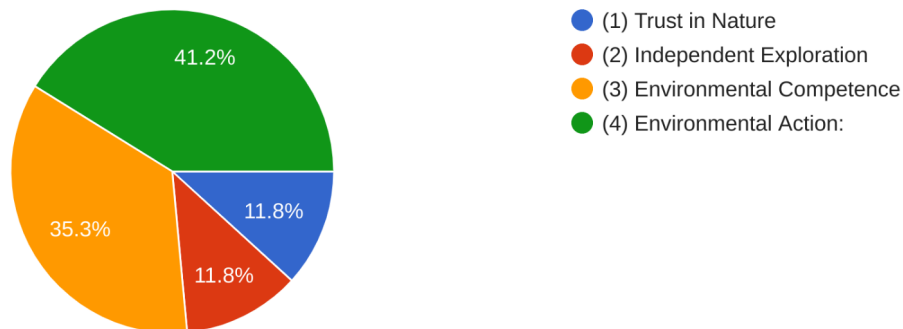
17 responses



As you can see that step 4 (environmental action increase) from 14.3% of students surveyed to 41.2% and learning about nature is important to me ranked more 3s (33.3% to 41.2%) and 4s (52.4% to 58.8%) and no 1s or 2s in the post survey.

At which step do you identify yourself in terms of Environmental Identity?

17 responses



## 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:

I am filled with so much hope after working with my students on their Climate Action Projects. They see their own environmental identity as ones that are taking Environmental Action from 14.4% to 41.3%. Students felt empowered. Also 14 students will receive the State Seal of Civic Engagement

on their diploma. It can be overwhelming the amount of change that is needed to combat Global Change. I look at my school and see all the things that need fixing or improvements. I saw this year that my students are capable of making those changes.

On a professional level I also grew by presenting to adult learners at the Central CREEC January Meeting and at the Virtual CELP (CREEC) conference. My students were featured on an Education Blog from TUVA labs.([This Teacher Wishes Her Content Wasn't Relevant](#) )

**Commitments:**

Next year I would like to have even more students complete their State Seal and want to also have them present at the STEAM Expo. I would also like to support more students to compete in the science fair portion. I will be working with others to get students to the civic meetings needed to get their seal as well. We have much to do with the garden and the partnership with Cabrillo/CSUMB hopefully will support that. I want to continue to work on my district's Green Team.