



“Every Classroom a Green Classroom”

Green Classroom Profile: *Mollie Behn*



Teacher Leadership Institute for Sustainability 2022-2023

TEACHER LEADER BIO: *Mollie Behn*

Mollie Behn (they, them) is a first year teacher at Boulder Creek Elementary school. Prior to becoming a classroom teacher, Mollie spent 7 years working for an environmental non-profit as the Education Manager teaching students across the County of Santa Cruz and partnering with over 80 teachers. Mollie also previously worked for the National Park Service in various capacities including as an Interpretive Park Ranger at Sequoia and Acadia National Parks and as Special Assistant to the National Park Service Deputy Director in Washington D.C.. They live in Santa Cruz and love training for triathlons and traveling during their free time.



BACKGROUND AND CONTEXT

Class(es)	# of student impacted by this project: 22 Grade level(s): 2 Content area(s) of focus for this project: Math, Science, Writing	
School Site	Boulder Creek Elementary	
School Demographics	Grades served: K-5 # students: 445 % English learners: 3% % qualifying for free and reduced price meals: 29%	
District	San Lorenzo Valley Unified School District	
District Demographics	Find ed-data here and fill in the following: Grades served: K-12 # students: 5,534 % English learners: 3% % qualifying for free and reduced price meals: 23%	
General Vision/Mission of School and/or district	The mission of the Boulder Creek Elementary School learning community is to cultivate the academic, social and creative excellence of our students.	

1) ORIGINAL GOALS AND INTENTIONS

What originally drew you to this program?

Having been a non-profit partner in the previous rounds of the Teacher Leadership Institute, I knew the incredible professional development value of these trainings so I was eager to build my skill sets as a new teacher to integrate multiple content areas with environmental literacy. I'm also co-lead of the schools' Green Team so there was natural alignment between my work on the green team.

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

Vision

- Students understand, appreciate and actively participate in reducing waste by recycling, composting and reusing/repurposing classroom and lunch materials.
- Students feel safe, are curious, observant and appreciative of nature by using the school grounds and surrounding environment as an extension of the classroom for learning, investigation, mindfulness and self-reflection.
- Students grow in their understanding of how their actions impact the environment and develop self-efficacy in taking action.
- Integration of CA EP&Cs into diverse content areas.
- Growth of BCE's Green Team to include student efforts.

The Teacher Leadership Institute for Sustainability has reinvigorated ideas I've had for several years of what I'd like to cultivate within my classroom and provided me with tangible ways to move towards that vision.

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?**

My growth has primarily been in the area of integrating different content areas and the varying degrees to which I can integrate environmental literacy and content areas in a way that is sustainable and manageable for a new teacher.

3) ACTION - COMMUNITY IMPACT PROJECT OVERVIEW

Summary of the project purpose and overall goals

Summary of Project Purpose and Goals for student learning:

- Explain what is composting and how it works as demonstrated by recorded observations, data/graphs, and nature drawings.
- Explain why compost is important for our community as demonstrated by an opinion writing piece with a stated opinion, reason and evidence.

- Advocate how the school can improve its composting efforts as demonstrated by a completed action project.

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

Students will examine how food breaks down into small pieces (soil) with the support of decomposers. Small groups will 1) observe changes in the food material over time 2) draw the changes 3) graph the changes they see from small compost containers. Students will read about composting, watch videos and then write an opinion piece on why compost is important for the environment and BCE. All this research will support students in identifying an action project that will support the school in continuing to educate students and staff at BCE in composting. Students will determine the nature of the action project. A key focus of the school district is environmental literacy so this project will directly support my students environmental literacy and hopefully those that they share their knowledge with.

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

We will learn about composting, what it is, how it is important, and what we can do to help composting grow at our school. I gave them a checklist of the different activities we will do to prepare for the action project.

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

This project directly supported me in teaching the following standards in a relatable way:

- Math Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.
- Writing: Write opinion pieces in which they introduce the topic or book they are writing about, state an opinion, supply reasons that support the opinion, use linking words (e.g., *because*, *and*, *also*) to connect opinion and reasons, and provide a concluding statement or section.
- NGSS: 2-PS1-1: Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.

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.*

General story of implementation:

We had been investigating mealworms as part of our FOSS science lessons and the students began to wonder if mealworms were true worms. That gave a nice bridge to introduce the redworms which would be part of the compost bins. Students compared and contrasted mealworm larvae and redworms to answer the question “are mealworms true worms?” I then made the connection to redworms living in the dirt and the role they could play in the environment. We constructed compost bins, drew pictures of what was in the compost bins and what they noticed/wondered. Students also attached a ruler on the outside of the compost bins to track the decomposition of the organic material and began graphing the height of the organic material. They repeated this process each time they observed the changes in the compost bins. We read books on compost and watched videos and as a class came up with a list of important information about compost. We watched videos about how students can make a difference at any age and that their voice matters to encourage them sharing

their knowledge with others. We applied the knowledge from our opinion writing unit to prepare opinion pieces in the form of Public Service Announcement posters in which students stated 1) their opinion on compost 2) a reason for their opinion 3) evidence to support their reason and 4) an action they suggest the public takes. In connection with our data and graph math unit, students will observe our trash, recycling and compost bins located around the school and record whether they observe food in either the trash, recycling, or compost bins. They'll then graph the results. As a final culmination, the students will plan a way to share their findings and knowledge with the school.

Challenges and obstacles and how you overcame them:

The big wind and rain storms were a challenge in preparing the compost bins properly as we were not able to go outside during the time we were constructing our compost bins.

Successes and what contributed to success:

Students were really excited to learn more about compost and invested in learning why compost is helpful to the planet.

Next Steps for this project:

It is my goal that we'll use all this information to plan a class action project in which we educate the school about how we can better compost at school. This will be completed in the next two weeks.

<i>*Optional: Insert picture here*</i>	<i>*Optional: Insert picture here*</i>
<i>Coming soon</i>	<i>Coming soon</i>
<i>*Optional: Insert picture here*</i>	<i>*Optional: Insert picture here*</i>
<i>Coming soon</i>	<i>Coming soon</i>

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:

- This project is not fully completed so I can not offer an overall assessment at this time, but at this time I can tell that they are excited about sharing their knowledge and beginning to recognize that their actions matter and that their voices matter.
- They can also state different reasons composting is important to nature and make cross-cutting connections to other ecological concepts throughout our conversation.

Ecological Benefit:

- Tentative: Reduce waste. Our class could do a pre and post assessment after our action project to assess the ecological benefit

Culture & Community Benefit:

- Tentative: Increase awareness of what the school can do to improve its composting efforts

Educational Benefit:

- Increase student self-efficacy in making a difference
- Make the data and graph math unit and opinion writing unit more relatable and relevant to students.
- At an initial glance, I'm observing that students have a better grasp of the components of an opinion writing piece (opinion, reason, evidence) as a result of this project because the writing is not abstract but rather something we've been working on across math, science and writing and relates to something they care about.

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:

What we teach needs to be relevant and relatable to the students in a way that either they've had a personal experience, observed a phenomenon, or completed an investigation. How we teach it is equally important as I think a key component of teaching for a sustainable future is ensuring student self efficacy and helping them recognize that their actions and their voice matter. I found it easier and more fun to teach math and writing when it was connected to science. It was also truly amazing to see the kids light up with pride at the work that they have done. Yet, I think there is still more I want to do....especially helping my students recognize that their voice matters. It was sad when I first introduced the idea that "kids can make a difference and your voices matter" that several kids did not believe it or were confused by the concept. They are so used to being taught rather than being the teacher. I think it is important for them to know, believe and embody that everyone can learn from them so this will be a focus for the remainder of the school year weaved throughout different activities.

Commitments:

Next year, I'd like to try to expand this conceptual work to another set of science, math and writing standards and continue to build upon the work completed this year. I'd also like to see how I could integrate a field trip into this work.