PROJECT DESCRIPTION:

Seeing my students prancing around the Rain Garden and planting their native plant kin, I knew that I was in right relationship with the land. After a long unit about climate change and ecological destruction, I could feel my students' exhaustion and hopelessness take hold in our class. When they learned that they had the power to restore our native ecosystems by planting seeds of hope and futurity, however, I could feel my students learning into their resilience and solidarity with one another. It was then I learned, or perhaps remembered, that climate change education must be rooted in tangible tools and pathways to make change. Without hands-on opportunities to be the change they want to see in the world, students can become lost on the crises of climate change and injustice. The Garden Program at Epiphany School sets out to tear down this tired cliche in education and to empower students to gain the skills necessary to foster food sovereignty and climate resilience. Through this fellowship, I seek to enhance the groundwork that the Garden Program has already laid by integrating permaculture practices into climate change curriculum.

As a Pat Cooke Fellow, I will expand upon my experiential knowledge of sustainable agriculture and education by taking a Permaculture Design Course and observing the practices of a small ecological school in Quito. The Permacutlure Design Course will be hosted by Yakunina Farm, a permaculture space located in northwest Pichincha province in Ecuador. Yakunina is a member of the Network of Seed Guardians (*La Red de Guadianes de Semillas)* and provides training opportunities for people to learn practices such as food forests, soil regeneration, irrigation, seed saving, and natural construction. When I complete the course, I will travel to *Escuela Yachay Wasi* in Quito, a small, Indigenous-led school focused on environmental and social justice. Here, I hope to take note of how to ground climate change education in indigenous land care.

I am called to return to the highlands of Ecuador, my homelands, to learn how to practice agriculture in the ways of my ancestors. As a garden educator, I feel it is crucial to awaken the ancestral memory that my students hold in relation to working with the land, and I know this is only possible when I, too, have learned to awaken this memory.

MEASURABLE GOALS

Goal 1: By January of 2026, I wil gain formalized knowledge of permaculture approaches to growing food and stewarding the land by taking a Permaculture Design Course.

- Taking a Permaculture Design Course will allow me to enhance my understanding of regenerative and permaculture practices in agriculture. While I have had the opportunity to travel to and work on organic and sustainable farms in the past, an official class rooted in permaculture will allow me the opportunity to formalize my learning and expand upon the knowledge I have gained through practical experience.

Goal 2: By June of 2026, I will enhance the sustainability philosophy of the Garden Program at Epiphany School by integrating and expanding upon permaculture practices such as compost, food forest, natural construction, and regenerative soil health.

- As it stands, the Garden Program at Epiphany School prioritizes using sustainable practices to grow food, such as growing pollinator flowers, using organic fertilizers and biological pest management, generating compost, and saving seeds. However, there are many areas for improvement within the program that can move Epiphany closer to stewarding the land in a regenerative way. I seek to improve and expand upon our compost system to include food waste, diversify our food production to include fruit trees, maximize our garden yield by interplanting crops to mimic forest ecosystems, optimize our irrigation system to conserve water, and improve our soil health by incorporating soil regeneration strategies. As we look forward to beautifying our garden with sitting and play structures, I hope to keep this effort carbon neutral by using locally sourced earthen materials. The permaculture design course will allow me to gather the skills necessary to enhance the sustainability of the Garden Program at Epiphany School.

Goal 3: By Feburary of 2026, I will develop a hands-on, interdisciplinary climate justice curriculum at Epiphany School that encourages students to build climate knowledge and resilience through applied permaculture skills.

- As an educator driven by the mission to raise critical consciousness of social, environmental, food, and climate injustice among my students, I notice that this teaching approach can lead to residual burnout among young people. Often, this burnout comes from young people internalizing the weight and hopelessness of addressing the climate crisis in the face of precarity. Climate change education that truly empowers young people toward action and solidarity requires arming young people with practical, material skills that they can use to build a more just world. A piece of this toolkit includes developing land-based skills like growing high-yield organic food, building compost, constructing sustainable structures, and regenerating the soil health of the land. Upon completing the Permaculture Design Course, I will be able to develop a hands-on, interdisciplinary climate justice curriculum that builds students' resilience through land and garden-based skill-building.

TEACHING OUTCOMES

Upon completing the Permaculture Design Course and returning from Ecuador, I will create, plan, and facilitate climate change curriculum at Epiphany School rooted in permaculture practices. The objectives of the curriculum include:

1) Students will analyze how climate injustice is impacting marginalized communities in Boston and around the world.
2) Students will identify solutions that frontline communities implement to adapt to and mitigate climate change.
3) Students will design and implement a permaculture project in the Epiphany Garden as a solution to the climate crisis.

This hands-on, project-based unit will be a collaboration between the garden department and lead teachers across subject areas, including math, science, English, and history. Each project will match existing curcciulm of core classes in developmentally appropriate ways. Fifth grade students will design and implement an improved compost system as part of their unit on decomposers. Sixth graders will design and implement an irrigation and water diversion project as part of their unit on irrigation and agricutlure in ancient history. Seventh graders will design and plant a food forest in the garden during their short stories unit. Finally, eighth graders will design and install a sitting structure in the garden as part of their volume unit in math. By the end of the school year, each student will have contributed to implementing a climate resilient practice in the garden program at Epiphany School rooted in permaculture and regenerative agriculture.

Given my connection to the school garden community in Boston, I plan to facilitate a hands-on worshop for school garden educators across greater Boston so that they can implement peraculture practices at their school sites. I will also present my findings to the Epiphany School staff to create cohesiveness in climate change curriculum development.