

# Raising Solutionaries

Plan→Connect→Innovate→Learn

*Guadalupe Elementary School  
Spring 2023*

**TAKE ACTION AS A COMMUNITY !**

# Garden OLA

- Increases Project-Based Learning
- Gardening connects to all subjects
- Increase access to emotional regulation spaces
- Equal access is the goal
- Provides a STEAM model of learning with civic and sustainability education at the core





# The Forest

**IDEA:** Provide a shaded area for collaboration on campus that connects to place-based learning and this will give teachers a meeting space.

**LOGISTICS:** We are working with a community partner to get healthy logs for this space and have received approval to put them under the trees. The district will help me move them to the locations.



# Playground OLA

GOAL: Create a playground and outdoor learning area that creates a safe space for exploration with nature and natural elements at the core of the design.



## Logistics:

Eagle Scout will add the following in SPRING 2023:

(2) 8 foot benches made with high quality wood and will be cemented into the ground with posts

Balance beam

Bridge over the rock bed

Neighborhood Library

## OLA Team:

Finish the mounds with no water plants and walking paths

Adhere the rocks together to create the “cemented” approach

Create the biomes on the hill

Add an oak tree

Finish and cleanup the space with current elements

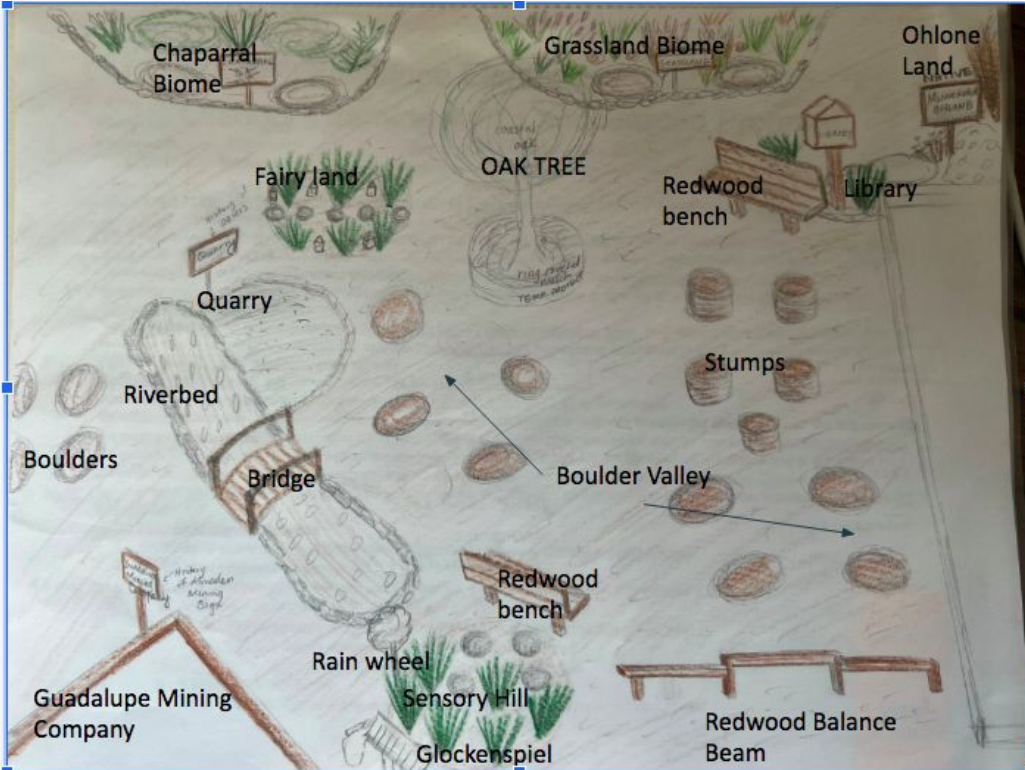
Figure out the mining area

Add signage for the cobblestones and mining connection





# Big Idea for the Playground Area



1. Biomes will be highlighted around campus with signs. The signs will include maps, animal habitat information, native plant explanations, and all academic links teachers want to see.
2. The little library will be filled with donated books.
3. All elements will be as natural as possible.
4. The plants will require little to no water but drip irrigation will be run.
5. We hope to give the children a haven for integrating nature into their daily “diet”.
6. Include an area that recognizes the native Muwekma Ohlone plants to help acknowledge the indigenous lands.
7. Trees will be planted around the area as we finish the elements. This is strategic. The first tree you will see is an oak tree in the middle of the area.
8. The dry creek was created with cobblestones that were mined from the American River and were pulled from the streets of San Francisco after the 1906 Earthquake. We have the historical information for teachers. We will move the school mining company to an area that is not in the fire lane and provide tools for the “quarry”.
9. There will be natural paths that will integrate sensory breaks. There will be a glockenspiel and rain wheel concreted into the ground.

# Our Community and Beyond with Biomes (Included in the Playground OLA)

GOAL: Recognize the biomes that create the chaparral and grasslands of California with signage and plants. We will encourage the students to be the caregivers of the area. The areas would include signage with maps that provide detailed information about California Biomes. This will increase place-based education for the students.



Goal:

Create a three distinct NO water or low water spaces on the hillside that will include a “grassland”, “chaparral”, and “Muwekma Ohlone Native Plants” that will link to the units of study for the students.

Parents will fund the signage that will include all information about each of the areas to further the learning.

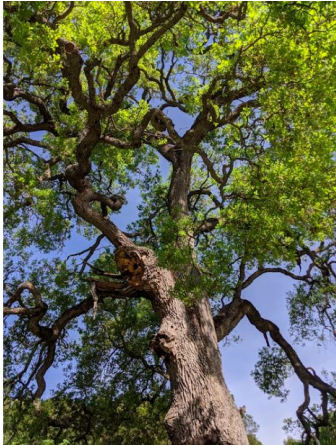
Irrigation will be low drip water system.



# ADD OAK TREE TO PLAYGROUND OLA

Increasing shade coverage naturally

Link to *BeautifySJ* grant for additional trees on campus



**Oak trees** native and are unique because of their fruit, the acorn, which is key in identifying oak species. They are known for being multi-trunked and growing wide canopies with sprawling, scraggly branches.

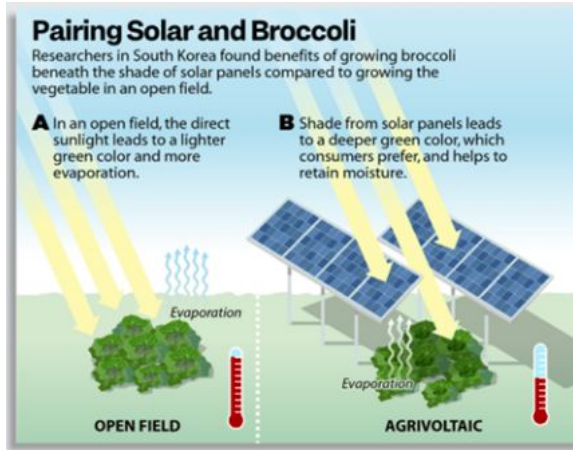
**Proposal:** Hire Moon Valley Nursery to plant the tree in the border between where the rocks start and the hillside ends. We will add more trees around campus as they get approved or we will have to come up with a plan that works logistically for all parties. We are starting with the one spot that will be hard to reach after we complete the OLA space.

[Significance of “WHY” we should plant a native oak tree in the Playground OLA](#)

# Agrivoltaic Growing Area (Agri = farming and Voltaic= renewable energy)

## IDEA

Plant native pollinator garden under the solar panels with the same principles as a rain garden and get PGE to [install a solar panel readable monitor](#).



## Benefits

### Why AGRI VOLTAICS?

### Reduce costs for the school district

## WHY

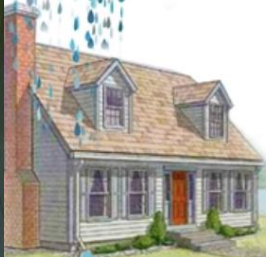
1. Reduce water loss due to the retention of moisture from the decrease in evaporation and it also provides a canopy to the plants during heat waves ( specifically pollinators).
2. “Harvest” the sun twice, essentially
3. Rain water collects under the panels
4. Reduces water stress on the plants due to increasing temperatures and drought
5. Benefits local animals and pollinators
6. If used for crops, you would get equal harvest for ½ the water used.
7. Panels can overheat during warmer days (i.e. sunny and warmer than 75 degrees) and it actually cools the panels and creates better performance because the crops and transpirational water loss cools the panels.
8. Students learn how to create solutions for a resilient future through learning the best practices for water reduction and food security issues. This practice is being studied by universities and the UN as a model for sustainability.
9. Increase natural data analysis opportunities for students(i.e. Sci-starter, Urban bee tracking through UC Berkeley, relationship between energy and water conservation, pollinators, tracking butterflies).





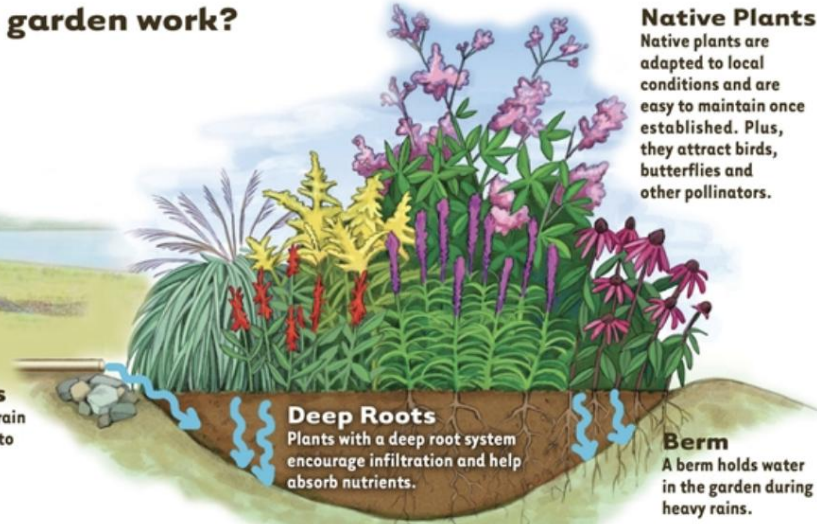
**PLANT WITH A PURPOSE**

## How does a rain garden work?



### Gutters & Down Spouts

Assist with directing rain water from your roof to your rain garden.



### Deep Roots

Plants with a deep root system encourage infiltration and help absorb nutrients.

### Berm

A berm holds water in the garden during heavy rains.

## Monarch Waystation Program



Create, Conserve, & Protect  
Monarch Habitats  
monarchwatch.org



Wildlife habitat gardens are a haven for local birds, butterflies, and other wildlife. Tell us how your yard or garden provides habitat and the National Wildlife Federation will recognize it as a Certified Wildlife Habitat®.







Agrivoltaic area

The Forest

Garden OLA

Propagating succulents

No water plants

BIOMES

Playground OLA

FIRE LANE

FIRE LANE

Google



# Why?

## Environmental Literacy Hub County Office of Education iSTEAM Hub

The transition has happened at the County Level.

### Environmental Literacy

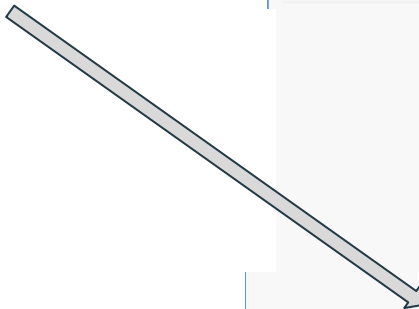
The **Environmental Literacy** and Facilities teams at the SCCOE will support Santa Clara County schools in local prioritization of environmental literacy and integrating environmental sustainability and climate-resilient practices across a school's campus, curriculum, community, and culture.

### Mathematics

The **Mathematics** Coordinators provide professional learning opportunities in mathematics curriculum, instruction, assessment and teacher leadership. Equity and social justice are issues that are woven into all aspects of mathematics service and support.

### Science

The **Science** Coordinators provide professional learning opportunities in science curriculum, instruction, assessment and teacher leadership. Connections to Environmental Literacy and phenomena-based education are woven into all aspects of science service and support.



Santa Clara County Office of Education

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Integrated Steam (iSTEAM)

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Educational Technology

Environmental Literacy

Mathematics ▾

Science ▾

Professional Learning & Instructional Support Division

### Integrated STEAM (iSTEAM)

Integrated STEAM (iSTEAM) provides high-quality professional learning opportunities and instructional support to improve teaching and learning in the following content areas: Artspiration, CTE, Computer Science, Environmental Literacy, Mathematics, and Science.

In 2019, SCCOE developed an Environmental Literacy Landscape Analysis of the efforts in Environmental Literacy across the county. To view the report click on the PDF below.

[Santa Clara County Office of Education Environmental Literacy Survey Report.pdf](#)

### Artspiration

Artspiration is a Santa Clara County Initiative supporting professional learning opportunities, advocacy, and student engagement in the visual and performing arts.

### Career Technical Education

The mission of Career Technical Education (CTE) is to provide industry-linked programs and services that enable all individuals to reach their career goals in order to receive economic self-sufficiency, compete in the global marketplace, and contribute to Santa Clara County's economy.

### Computer Science

Computer Science at Santa Clara County is an Initiative that supports professional learning, advocacy, and student engagement in the California Computer Science Standards which include computational thinking, core concepts, and core practices.

### Educational Technology

Specializing in integrating learning with technology, the Educational Technology team provides professional learning for teachers, administrators, and support staff.

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### Resources

- CA Common Core Standards
- CA NGSS Standards
- CAASPP Portal
- Dashboard Portal
- Professional Ed. Standards

### Partnerships

- Direct Support Professional Training (DSPT)

# Collaboration at the Community Level and Beyond

## PROGRESS FOR POLLINATORS



As a Certified Wildlife Habitat and Certified Monarch Waystation, Happy Hollow supports pollinators in many ways. There are pollinator habitats throughout the park and zoo, and Happy Hollow hosts beekeeping workshops. Our Backyard Habitat shows people how they can encourage wildlife right in their backyard!

But we don't stop there. Happy Hollow Foundation's Progress for Pollinators grant program inspires the community to care about pollinators, too! Twice a year, in spring and fall, the foundation awards \$2,500 grants to people and organizations who want to beautify public spaces with pollinator-friendly gardens and habitats.



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## ENVIRONMENTAL LITERACY



Community of Practice  
for Schoolyard Forests



GROWING GARDENS

Schools and communities across the United States have expressed an increased interest in outdoor learning, garden-based learning, and nature-based learning as a growing body of research for the past several decades shows their positive outcomes for children and youth.



Event Calendar

Check out our event calendar for upcoming workshops.



Curriculum & Instruction  
Resources



Report

SCCOE Growing Gardens Survey Analysis and Report.



Community of Practice

Learn more about our network and gardens throughout the Bay Area.



Implementation and  
Funding Resources



Partnerships

Explore regional and national partnerships to support your garden.



THE OUTDOOR  
LEARNING STORE



# Approach

GOALS CONNECTED TO OUTDOOR LEARNING AREAS AND ENVIRONMENTAL LITERACY:

1) reducing environmental impacts, such as waste, water, energy, greenhouse gases, and transportation in the areas of facilities, grounds, and operations; 2) improving health and wellness through coordinated school health, with consideration to air quality, contaminant control, acoustics, daylighting, thermal comfort, school nutrition, and outdoors physical activity; and 3) offering effective environmental and sustainability education that emphasizes hands-on, real-world learning, civic engagement, STEM connections, and green career preparation.

## Our Parent Community GOAL:

Parents can help support these efforts by helping us create spaces that provide natural curriculum connections. We count on the support of all to help make this equitable for the students. We are working very hard to be accessible and support any and all teachers that want to extend the learning to make these exciting hands-on opportunities happen for the students. Our teachers are SO talented and they make Guadalupe such a fun place to be!

We hope the students become environmental stewards and advocate for best practices throughout their entire education journey! Change happens when they are inspired and given a voice!

# Budget Used: \$7,000

Finished the Garden OLA by adding 6 additional beds (all materials, rentals, soils, and hardware with new irrigation lines run ) with educational signage from Life Lab UC Santa Cruz = Just under \$5,000

Full school garden rotations made available to all teachers and additional teacher connections= just over \$600

Composting infrastructure and worms to start the program at Guadalupe= \$775

Hydroponics for alternate = \$300

Currently, at \$6,681 spent and using the remaining budget to finish the Playground OLA.

**\*\*Approval received last week to finish the remaining areas of campus to link them to Environmental Literacy best practices.**

**Please keep in mind I frequently research grants, acquire materials through donations, do all labor for free with my family or community members, and fund the projects until paid back. I actively seek for ways to integrate every element into the learning that is already happening on campus. I strongly believe that the momentum we are creating will impact what happens for the long term educational model our children will experience.**

# Budget Request:

## **Proposal ONE: PLAYGROUND OLA \$5,000 (max budget)**

Add balance beam, two redwood benches, neighborhood library, oak tree, bridge, glockenspiel, sensory paving stones, contain the mining and quarry areas, and add mulch to the areas

Complete the hillside with three distinct areas “chaparral”, “grasslands”, and “Ohlone Native Plants” with educational signage and new irrigation lines

Requires preparing the land with additional healthy soil and reinforcing the hillside with the mounds.

Supplement cost: Beautify SJ grant for trees and fill out grant again for Happy Hollow for the native plants, link up with nurseries for donations

## **Proposal TWO: Agrivoltaic Native Plant Garden \$5,000 (max budget)**

Create native pollinator garden using an alternative approach to water and energy conservation that will help students study plants, butterflies, bees, and local habitats in our own school yard. We will work on certification from multiple bigger conservation efforts.

Students will be able to work as bio-investigators (control invasive plants and animals) and be energy monitors by using data analysis when monitoring the different approaches to harvesting energy and reducing water usage in real time.

Supplement cost: Ashley will fill out the Valley Water mini-grant to pay for this project, if needed.



THANK YOU!!