



Sustainable Gardening



Team Verdant. SMUD YES 2024 |



Meet Our Team



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Team Leader



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Public Relations



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Creative Director



Background

Food Waste

- **30%** of produced food is wasted
 - **133 billion lbs = \$161 billion** (*USDA, 2010*)
 - Overbuying, storage and handling cause spoilage
- **48%** of organic waste ends up in landfills in CA (*CalRecycle*)
 - Produces methane, adding to carbon emissions

Transportation of foods accounts for

- **19%** of food-related greenhouse gas emissions (*ScienceDaily, 2024*)
- **~50%** of road vehicle emissions (*University of Sydney, 2022*)
- Long distance food is less fresh
- ❖ **Local Garden grown produce cuts down on the spoilage rate & carbon emission**





Our existing club

- 2 years ago, we founded the first COHS gardening club
- Planted 10+ varieties of edible greens
- Harvested 50+ lbs of food

However,

- Realized there was lots of organic waste
 - Needed to purchase soil/fertilizer
 - Needed to purchase and transport sprouts from nursery
 - All this leads to extra carbon emissions
- ❖ **Therefore, we designed our sustainable gardening plan inspired by the SMUD 2030 Zero-Carbon goal**





Overall Concept:

- **Grow** fresh herbs/vegetables
- **Provide** food for underserved communities/food banks
- **Offer** shelter for native animals
- **Improve** our garden to be more sustainable
- **Encourage** students to grow sustainably and help with our cause



- **Compost** organic waste
- **Reduce** carbon emissions
- **Alleviate** climate change
- **Advocate** education of composting
- Bring **awareness of climate change and sustainability** to students on campus



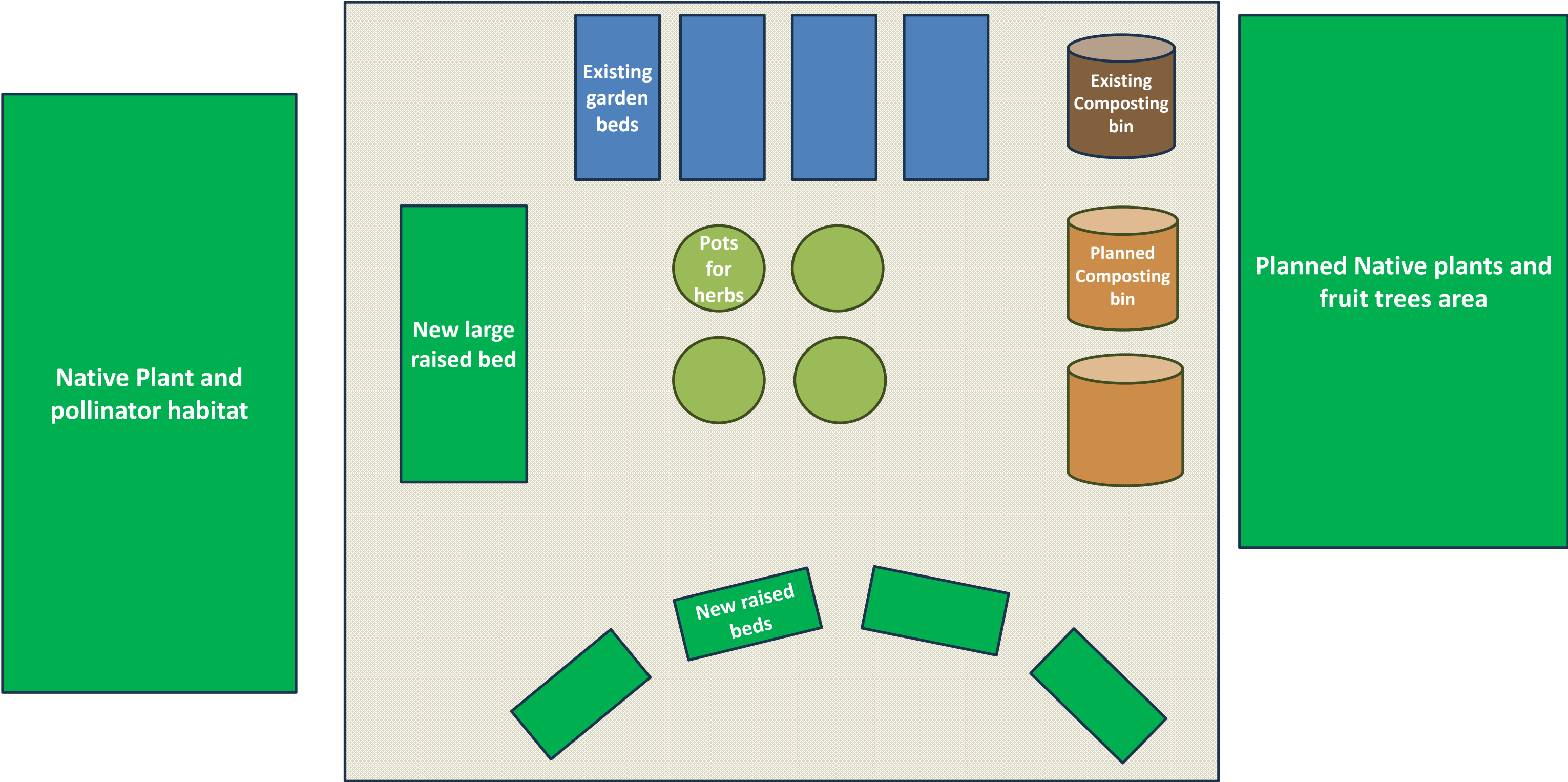
Viability

- Existing club affiliated with COHS Culinary Arts
- Access to organic waste from kitchen and garden
- Already have some equipment-composting bins
- Supports from local businesses



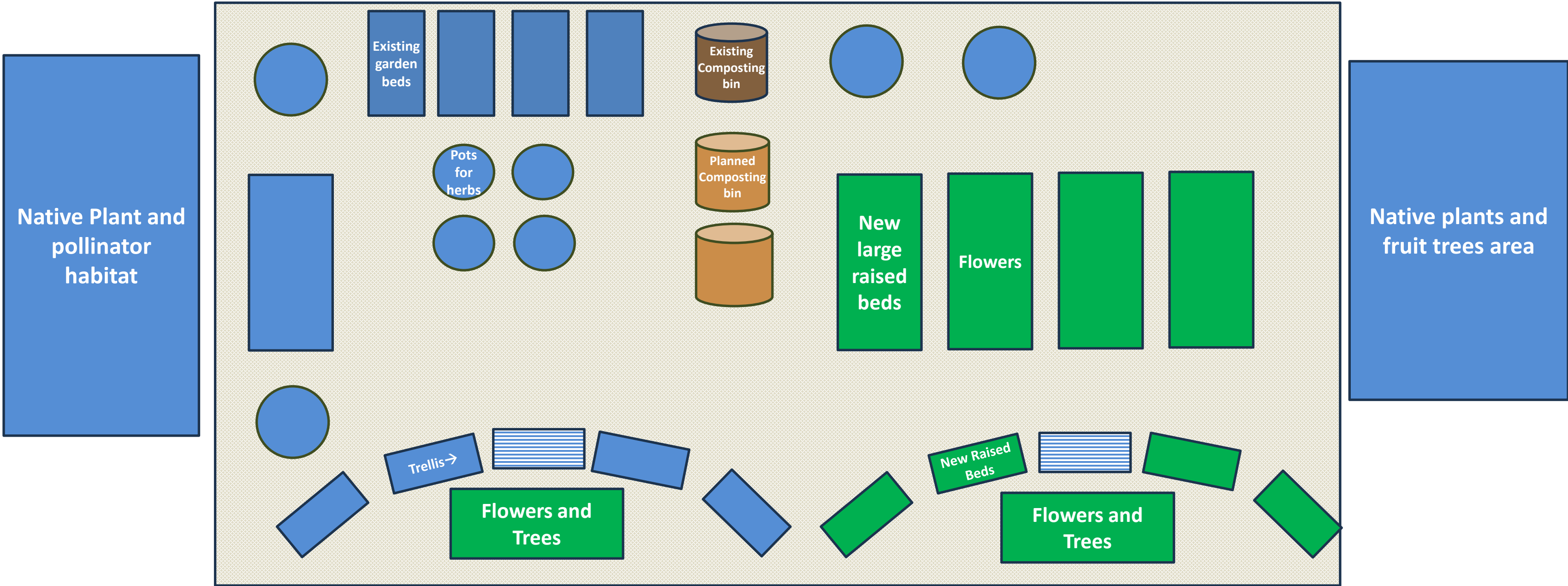


The Sustainable Garden Blueprint, 2024





The Sustainable Garden Blueprint, 2025





Collaborating with the Community



- We connected with local box stores and nurseries
- In this past year, collaborated with Green Acres, Big Oak Nursery, Home Depot, and Baker Creek Seeds
- Received plants, supplies, and donations to purchase hardware
- Plan to give back to the community and school with fresh vegetables



Giving back to the Community

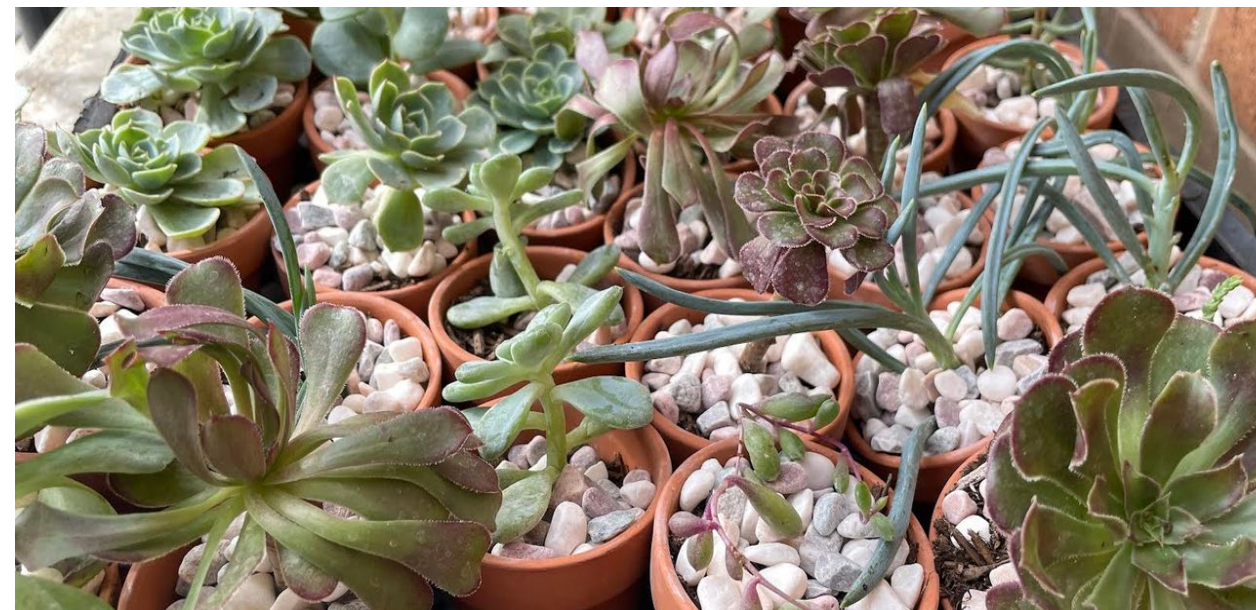
- Started a seed bank for Elk Grove, recycled seeds from culinary and out of season seeds from seed companies
- Attended Lunar Flower Festival @ Dist. 56 and shared seeds with community
- Seeds are sustainable, helps underserved communities grow food





Execution: Foundations

- Growing gardening club for the 2nd year - 91 signups!
- Raised \$300+ raised this year by selling plants
- Built new raised beds and drip irrigation system
- \$2000 Culinary Arts grant for expanding the garden
- Set up by our club members!





Project in Action

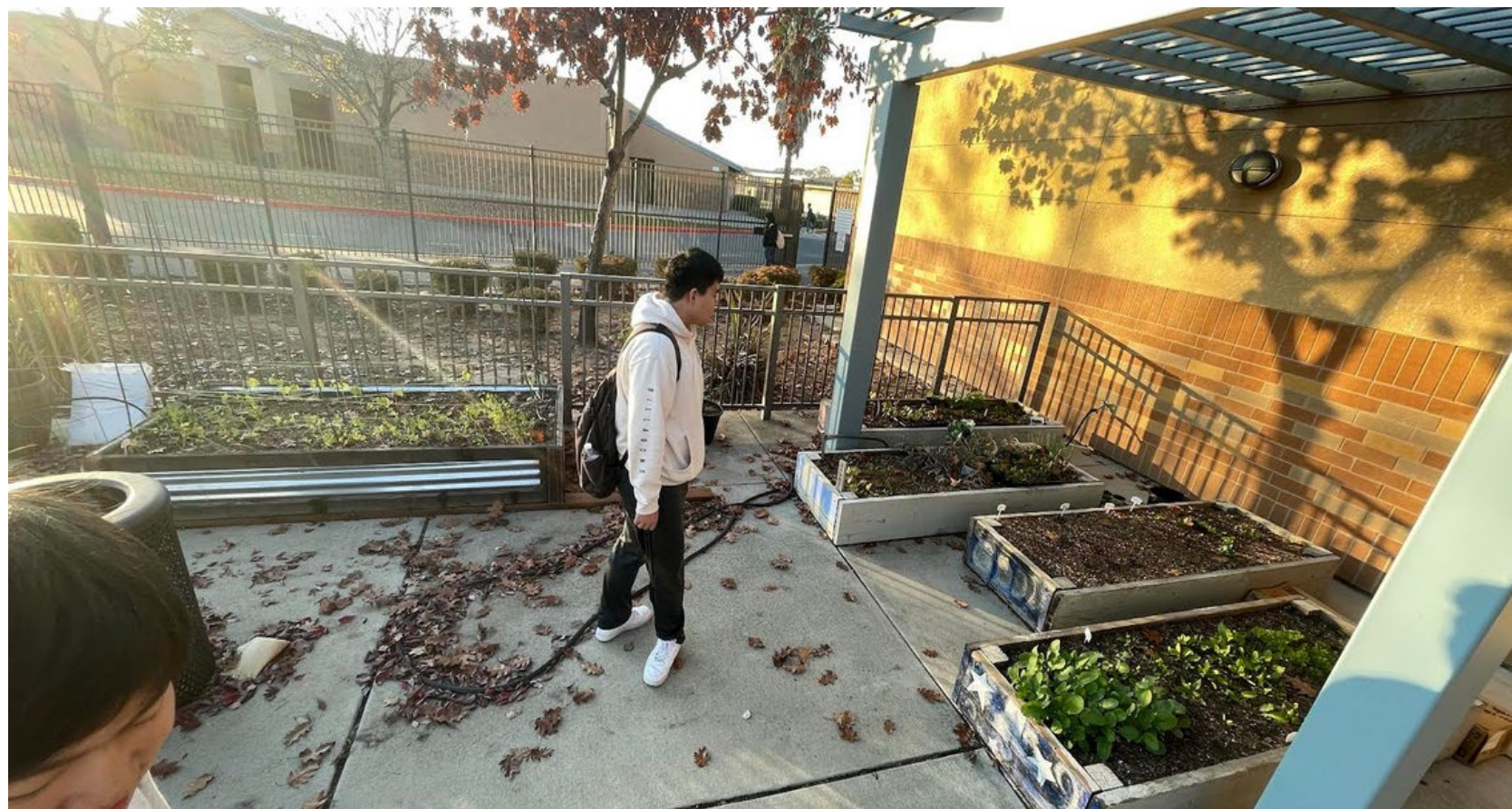
- Club members planted a wide variety (20+) of seeds saved by Culinary department
- Increased involvement by hosting educational meetings
- Allowed hands-on learning by letting club members interact with garden by growing their own seeds
- Taught the benefits of growing from seeds, sustainability and climate change
- Collected and composted organic waste from garden and Culinary Arts

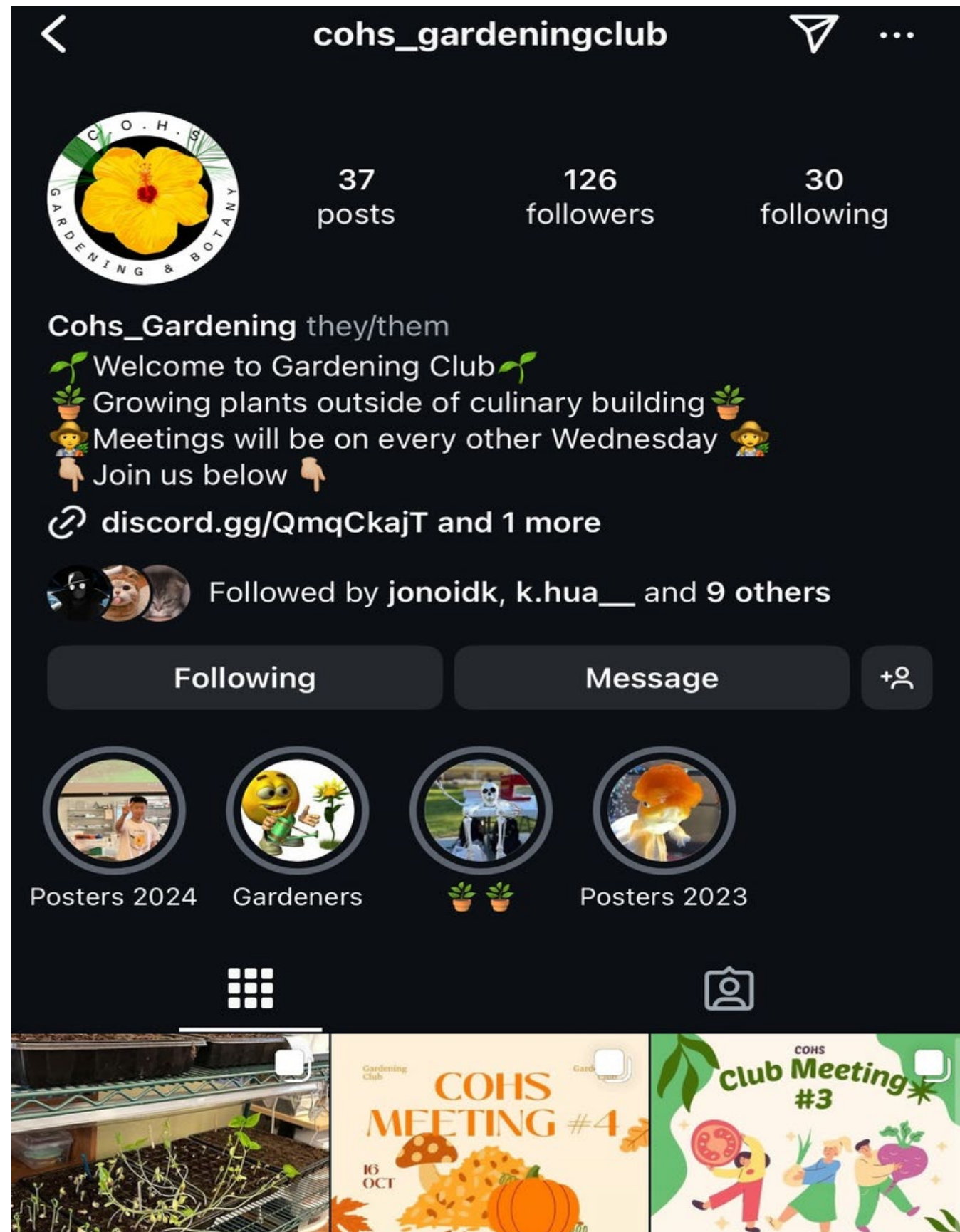


Project Progress

- Vegetable sprouts growing
- Fresh herbs ready to harvest
- Waste including dried plants and fruit peels
- Compost in progress







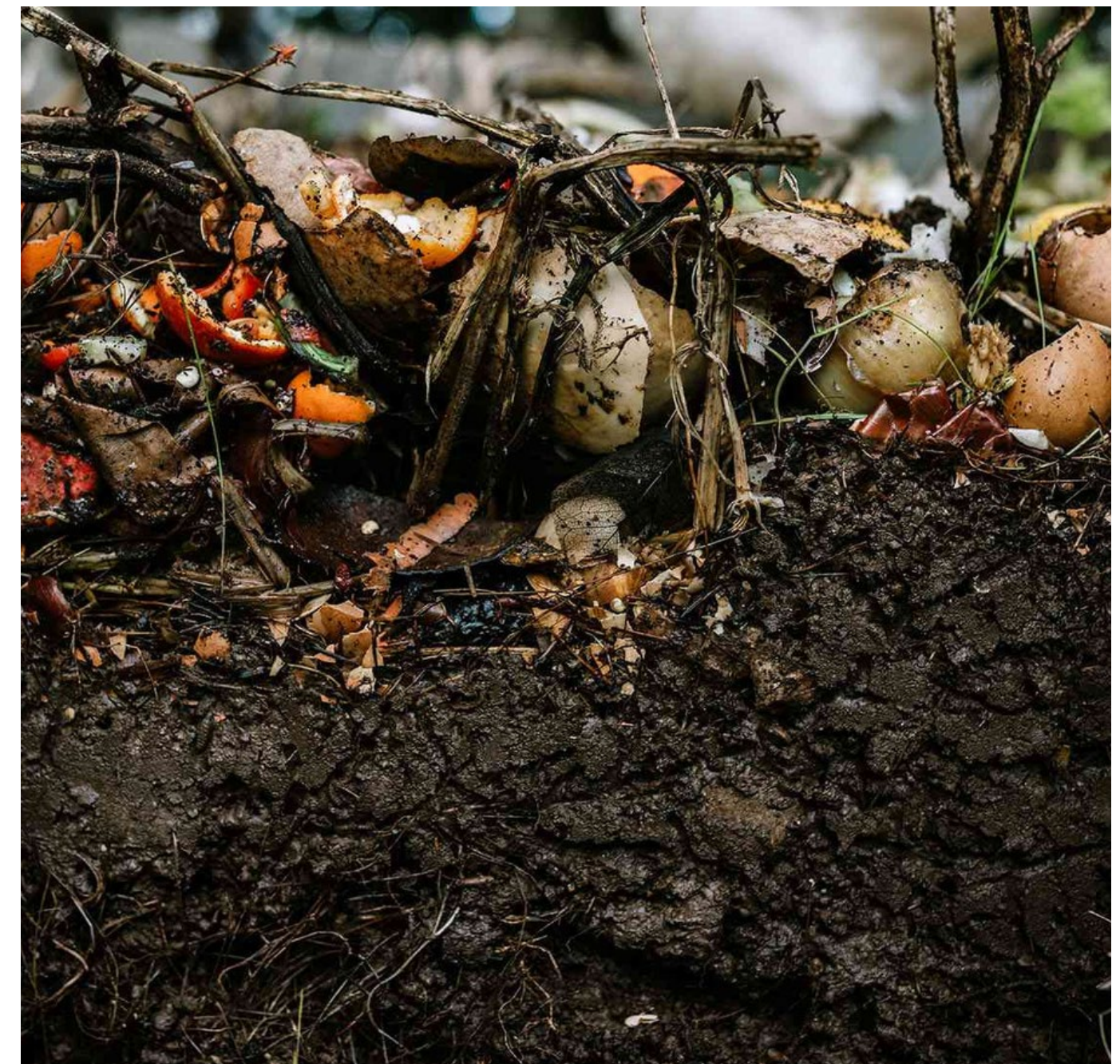
Impacts so far

- Making our school a greener place
- Fresher herbs and vegetables for Culinary, reducing transportation emissions of food
- Visible increase in wildlife populations (ladybugs, lizards, hummingbirds)
- 91+ club members help with our cause
- 126 followers on Instagram
- Connected with many other gardening clubs with Instagram
- Many appearances on COHS student news
- 400+ service hours in total
- Developing responsibility for the environment and the school
- Promote buying local = less transport emissions

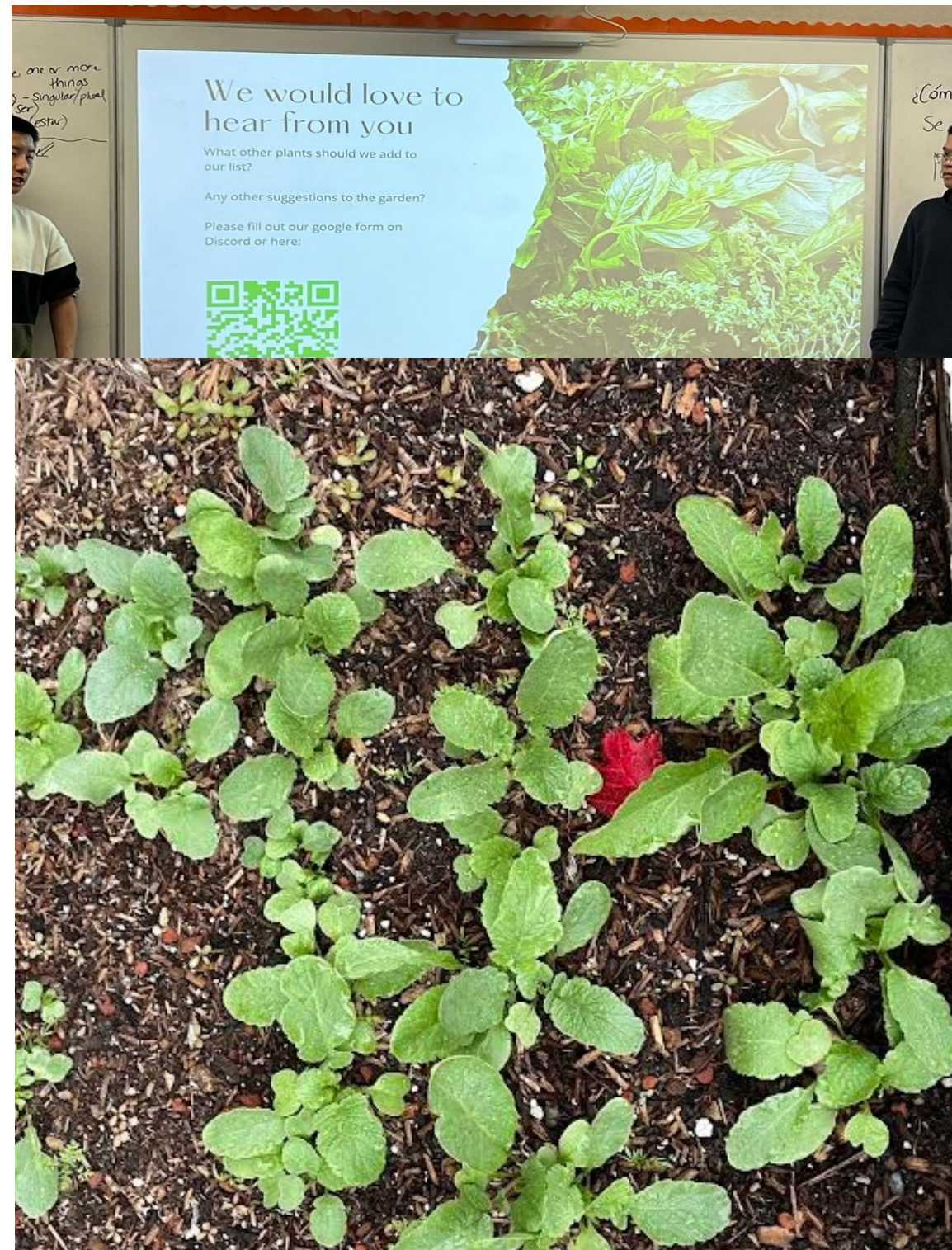


Reflection

- In the beginning of the SMUD YES program in our video, we planned to make compost from students' **lunches**, as we saw a lot of food waste
- This proved to be a challenge, as we learned that meat and processed foods in **lunches inhibit composting**
- So, we **changed** our source of organic waste to raw food scraps from Culinary Arts and **green waste** from the garden
- We also thought "What if composting was combined with gardening to establish an **eco-friendly cycle**?"
- Our result was to not only compost food waste, but also to grow a **sustainable food garden** for the benefit of our environment and **underserved communities**



Reflection



What worked well?

- By **forming a club** and allowing all students to join, we educated the community and also got much more work done.
- By **considering all aspects** of our garden, we were able to create a sustainable zero-waste garden

What was a challenge?

- We started to compost too late, which resulted in our compost not finishing in time for presenting

If we were to restart

- Start to compost earlier so that we would have more progress
- Attend more school events so we have more outreach
- Recruit more Team Verdant members



Future Aspirations

- Generating 100+ lbs of compost for our garden
- Saving \$\$\$ for soil/fertilizer purchase
- Aiming for 100+ lbs of food this year, donating to Culinary Arts and EG food bank
- Reducing carbon emissions on transportation for soil and food
- Finishing our drip irrigation system to save water and keep the garden sustainable year-round
- Training underclassmen for leadership to ensure the garden's sustainability and longevity after our graduation
- Establishing a seed bank to educate and promote sustainable gardening in our city

Team Verdant → Gardening Club → COHS → Elk Grove



Acknowledgements

- The SMUD YES program for supporting our projects and organizing events
- Green Acres, Big Oak, and Home depot for their support
- COHS Gardening Club teachers Mrs. Cristin Smith and Mrs. Karen Winslow
- COHS ASB for coordinating school events
- COHS Gardening Club members for their support and hard work along the way





References



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Thank you



Keep the city of trees forever green!

