

Youth Climate Ambassador Program

Program Report 2022 (Cohort 3)

Environmental Literacy and Sustainability Initiative (ELSI)

PROGRAM OVERVIEW

Youth Climate Ambassadors (YCA) is a knowledge to action Leadership Program that provides 9-12th grade students in San Mateo County with the opportunity to dive into social and environmental issues contributing to the global climate crisis. The program is run in partnership with the San Mateo County Office of Sustainability (SMCOOS), Citizens Environmental Council of Burlingame (CEC), Acterra, and the Environmental Literacy and Sustainability Initiative at the San Mateo County Office of Education (SMCOE) - see [Appendix A](#) for a description of each partner organization. The program is sponsored by Peninsula Clean Energy (PCE) .

During this eight month program (six months for Cohort Three), youth leaders strengthen their knowledge on climate change and environmental issues, and build leadership skills by planning and implementing a community impact project that addresses a local environmental issue and seeks to mitigate climate change. Throughout the program, students gain experience in a variety of skills including observations, data collection, interviews, survey design, problem-solving, and more, based on student interest and the project.

PROGRAM REQUIREMENTS

The Cohort Three program followed a six-month schedule, with a kick off retreat in January and a graduation event at the end of the school year (end of May). Students have a number of synchronous in-person/virtual touchpoints, a project, as well as asynchronous tasks to complete throughout the program.

Program Element	Requirement Details
Application Oct - Dec	Students apply to the program in the fall, and applications include a range of questions, including basic demographics and context, as well as the opportunity for students to share their passion, and interest in taking part in the program.
Retreats: Two full day retreats (9-3:30 - virtual)	<ul style="list-style-type: none"> • Kick-Off Retreat in January where students were introduced to the research topics and systems analysis. • Mid-Point Retreat in March where students had the chance to present and reflect on the knowledge gained, and begin planning their Community Impact Projects.
Evening Workshops: 7:00 - 9:00pm	Throughout the program, students attend 10 workshops (~2 per month). The first half of the workshops (Part 1) were spent building knowledge and developing students' passions and interests. Then, after the March retreat,

	students moved into (Part 2), an action phase with workshops focused around skill building and community impact projects.
Asynchronous Tasks	Between workshops and retreats, students complete asynchronous tasks that support knowledge building and skill development.
Community Impact Project	During the second half of the program, students work individually or in teams to complete a community impact project that brings forward a solution that mitigates climate change. The intended outcomes of the project is for students to gain experience in project development, implementation, and evaluation.
Coaching Sessions	Throughout the program, students participate in monthly coaching calls with adult mentors who provide guidance on different phases of the project, and also provide support for students individually on their personal leadership plan.
Final Deliverables & Graduation	<p>At the end of the program, students complete a written case study and oral presentation that captures their overall experience in the program, including: reflection on knowledge building, reflections on skill development, challenges and successes with their community impact project, and overall enduring understanding about what it means to be a climate ambassador.</p> <p>To view individual student case studies, click the link here and navigate to a specific topic (biodiversity, energy & transportation, food, water or waste). Select the individual's case study you would like to review further. A video of the student's oral presentation is included within the written case study document.</p>
Program Evaluation and Feedback	<p>In order to track program outcomes, YCA staff implements a number of feedback cycles into the program:</p> <ul style="list-style-type: none"> • Pre-program and post-program survey gathering metrics on knowledge, skills, and mindset towards climate leadership • Exit tickets for workshops and retreats to check effectiveness of content and facilitation • Demographic surveys focused on equity metrics

2022 SUMMARY

This was the third year of the Youth Climate Ambassador Program. Still in the midst of a global pandemic, the majority of the program was completed virtually; however, there was one in-person retreat session in March at Coyote Point County Park.

Over the course of Part 1 of the program, students completed retreat and online workshops focused on understanding the basics of ecological overshoot and climate change, and successfully completed a student centered group research project focused on the systems analysis of an environmental topic - Water, Waste, Biodiversity, Energy, Food, or Transportation. The project outline and templates can be found here: [YCA Environmental System Analysis and Solutions Research Project](#).

In Part 2 of the program, students were coached through implementing Community Impact Projects that were loosely based on the solutionary design challenge ideas they completed in Project 1. During this phase of the program it is critical that students are working on a project that they feel very passionate about as well as workin on a team that are in the same school district or community; therefore, students

were able to choose new topics and new groups for Project 2. To complete Project 2, students were guided through a design process that helped them complete the [YCA CIP Project Plan Templates](#), and received mentoring from YCA coaching staff.

The final requirement of the program is an individual case study reflection that captures the students journey in the program for knowledge and skill building, as well as captures a summary of their Community Impact Project. Students also created a slide deck version of their case study and completed an oral “Capstone” presentation at the May graduation event.

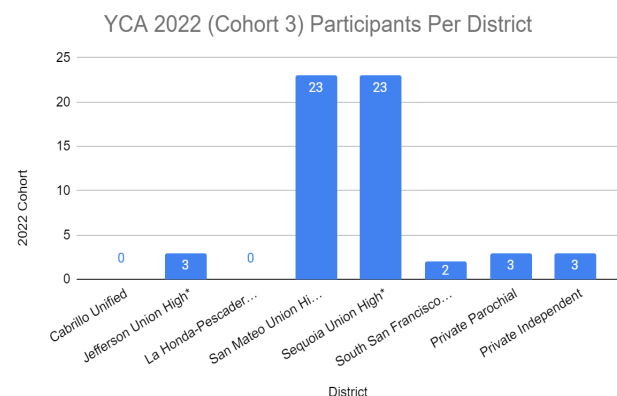
OUTCOMES AND IMPACT FOR 2022

A) Overall Number of Students in the Program

The YCA program started with 63 students, but due to a variety of reasons (moving, being overwhelmed from too many activities, COVID-19 related responsibilities at home, etc.), 6 students did not complete the program, with 57 students graduating from the program. This level of attrition from a co-curricular activity is standard in high school activities during normal times; however, the rate was much higher during COVID-19.

B) Geographical Distribution

Cohort 3 for YCA represented four out of the six high school public districts (13 out of the 24 public high schools), and a handful of private schools - See exact statistics below. This particular cohort had an over-representation from Carlmont High School (Sequoia Union High School District), and has inspired YCA staff to focus on geographic distribution as a key part of the equity framework for recruitment for Cohort 4 (2022-23).

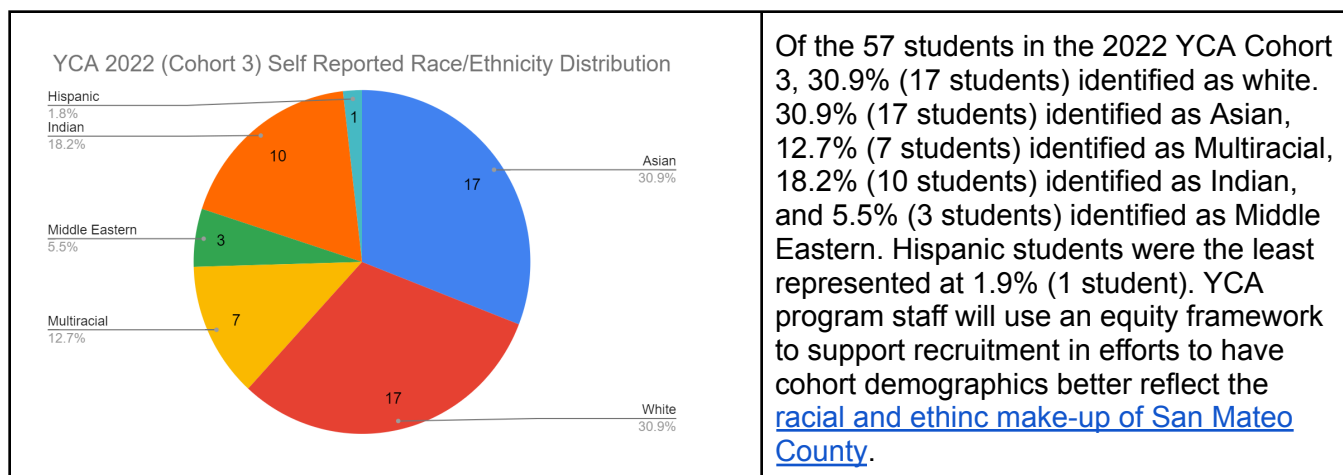


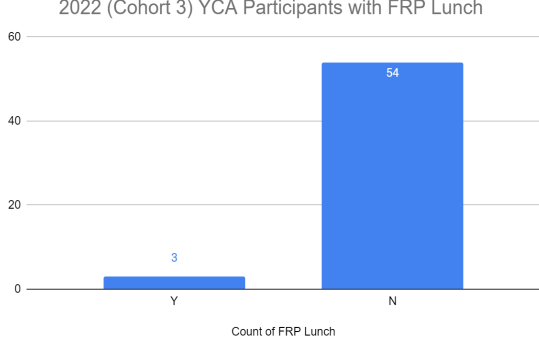
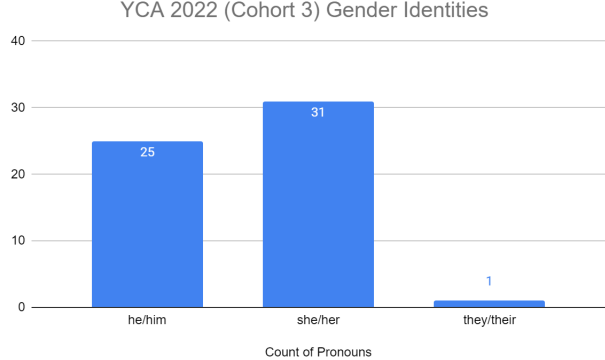
Public Districts and Schools	# of Students
Sequoia Union High School District (3 of 10 High Schools): 24 Students	
Carlmont High School	18
Menlo-Atherton High School	1
Woodside High School	5
San Mateo Union High School District (6 of 8 High Schools): 22 Students	
Burlingame High School	7
Capuchino High School	1

Mills High School	3
Aragon High School	3
Hillsdale High School	7
San Mateo High School	1
Jefferson Union High School District (1 of 6 High Schools): 3 Students	
Oceana High School	3
South San Francisco Unified School District (2 of 6 High Schools): 2 students	
El Camino High School	1
South San Francisco High School	1
Private School Name (2 of 23 private high schools): 6 Students	
The Nueva School	3
Junipero Serra	3
Charter School Name (1 of 5 High Schools): 1 Student	
Design Tech High School	1
Grand Total	57

C) Other Student Demographics

Other key demographics tracked for YCA Cohort 3 include: income, race and ethnicity, and gender. Each of these are explained in the table below, as well as an analysis of what adjustments can be made to strengthen diversity, equity, and inclusion outcomes.



<p>2022 (Cohort 3) YCA Participants with FRP Lunch</p>  <table border="1"> <thead> <tr> <th>Count of FRP Lunch</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Y</td> <td>3</td> </tr> <tr> <td>N</td> <td>54</td> </tr> </tbody> </table>	Count of FRP Lunch	Count	Y	3	N	54	<p>Of the 57 students in the 2022 Cohort 3, just three qualified for Free and Reduced Price Lunch.¹ In San Mateo County, 31.3% of students ages 5-17 were eligible to receive free or reduced price school meals in the 2020-21 school year (most recent data available). Further adjustments are being made to the structure and recruitment strategies for Cohort 4 in order to try and better represent the demographics of San Mateo County students.</p>		
Count of FRP Lunch	Count								
Y	3								
N	54								
<p>YCA 2022 (Cohort 3) Gender Identities</p>  <table border="1"> <thead> <tr> <th>Count of Pronouns</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>he/him</td> <td>25</td> </tr> <tr> <td>she/her</td> <td>31</td> </tr> <tr> <td>they/their</td> <td>1</td> </tr> </tbody> </table>	Count of Pronouns	Count	he/him	25	she/her	31	they/their	1	<p>The pronouns used by the 2022 YCA Cohort 3 were she/her, he/him and they/them. 54.4% (31 students) in the cohort used she/her pronouns, 43.9% (25 students) used he/him pronouns, and 1.8% (1 student) in the cohort used they/them pronouns.</p>
Count of Pronouns	Count								
he/him	25								
she/her	31								
they/their	1								

D) Major Program Deliverables: Project 1, Project 2, and Case Studies

Knowledge Phase: Project 1 Environmental Systems Analysis and Solutions Research

During the knowledge phase (Part I) of the program, 57 students worked in groups to complete an [Environmental System Analysis and Solutions Research Project](#). See example projects in the table below, or to see all projects, use [this google folder](#).

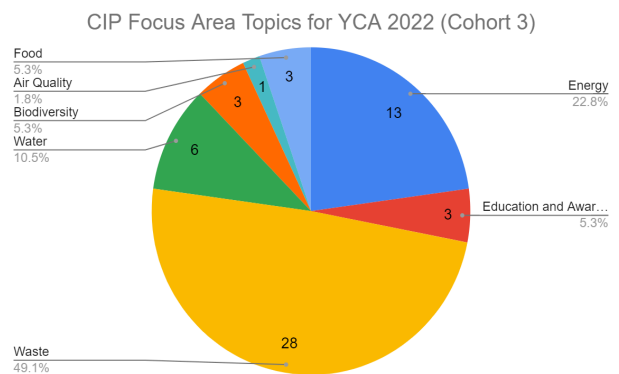
Focus Areas	# of Students/Groups	Projects
Water	10 Students in 4 groups	<ul style="list-style-type: none"> Group 9 research project Group 10 research project Group 11 research project Group 12 research project
Waste	13 Students in 5 groups	<ul style="list-style-type: none"> Group 18 research project Group 19 research project Group 20 research project Group 21 research project Group 22 research project

¹ In California, students are eligible for free or reduced price school meals if their family income falls within [the eligibility guidelines](#) (e.g. an annual salary of \$48,470 for a family of four in 2021-22 school year), they participate in the CalFresh or CalWORKS programs, they are eligible for the Migrant Education Program, they are homeless, or are foster youth.

Land-Based Ecosystems	5 Students in 2 groups	<ul style="list-style-type: none"> Group 1 research project Group 2 research project
Energy	15 Students in 5 groups	<ul style="list-style-type: none"> Group 5 research project Group 6 research project Group 7 research project Group 8 research project Group 23 research project
Food	9 Students in 3 groups	<ul style="list-style-type: none"> Group 14 research project Group 15 research project Group 16 research project
Transportation	5 Students in 2 groups	<ul style="list-style-type: none"> Group 3 research project Group 4 research project
Total	57 Students in 21 groups (with each group completing one project)	

Action Phase: Project 2 - Community Impact Project

In the action phase, 57 students worked individually or in groups to plan and implement a number of community impact projects that varied in focus and reach. A number of student projects for Cohort 3 focused on waste, which makes sense as [compliance for zero waste became mandatory in January 2022](#), and the vast majority of San Mateo County were not in compliance with zero waste mandates. Other common focus areas include energy and water. To see data table for details on the focus area and number of students from the graph to the right see table below.








Focus Areas	# of Students	# of Projects
Water	6	2
Waste	28	9
Energy	13	4
Food	3	1
Biodiversity	3	1
Air Quality	1	1
Education and Awareness	3	1
Total	57	19

Program Reflection: Case Study and Capstone Presentation

All students are required to complete a YCA Case Study Reflection at the completion of the program, as well as a Capstone oral presentation. These case studies can be found on the [San Mateo County Office of Sustainability Program Page under the Community Impact Projects](#).

Standout Presentations from the 2022 Capstone include the following:

Type of Project:	Name of Student, grade and school	Community Impact Project (CIP) Description
<p><i>CIP Topic: Education Awareness</i></p>	<p>Charlotte Rosario 9th Grade The Nueva School Case Study Link</p> <p>View Capstone Presentation here</p>	<p>For this project, Charlotte and her partner teamed up with San Mateo Climate Action Team to support the education and awareness campaign to bring residents of San Mateo County up to speed on carbon footprint reduction measures by supporting virtual and in person presentations, creating outreach materials and working with adults in the climate action space in the city of San Mateo. These students also led this discussion by example with sharing their unique experience updating a car to run more efficiently and sustainably.</p>
<p><i>CIP Topic: Transportation and Energy</i></p> 	<p>Haley Brown 10th Grade Carlmont High School Case Study Link</p> <p>View Haley's Capstone Presentation here.</p>	<p>For this project, Haley and her group worked together with fellow YCA students attending Carlmont High School to discuss energy efficiency at a public school board meeting. They also established an online petition that was shared with the school community and teamed up to table at an Earth Week event at Carlmont High School, planned in part by YCA Alumni and the Carlmont Green Team.</p>
<p><i>CIP Topic: Water Conservation</i></p> 	<p>Parsa Zaheri 11th grade Menlo-Atherton High School Case Study Link</p> <p>View Capstone Presentation here.</p>	<p>For this project, Parsa and his group generated awareness throughout San Mateo County residents in installing or updating greywater systems at home, starting the conversation at local farmers markets throughout Earth Month. They also used this opportunity to reach out to local businesses like Stanford Shopping Center and Hillsdale Mall to encourage greywater system implementation at these community gathering spots.</p>
<p><i>CIP Topic: Waste</i></p> 	<p>Misha Patel 10th grade Woodside High School Case Study Link</p> <p>View Capstone Presentation here.</p>	<p>For this project, Misha and her partner teamed up to address the end of the school year waste that they noticed in their fellow students. They planned and implemented an educational awareness campaign and school supply swap center at their high school to capture school supplies that are still useful but might have ended up in the landfill as the school year comes to a close and students no longer need previously purchased school supplies.</p>
<p><i>CIP Topic: Food</i></p>	<p>Zeenia Najmi 12th grade South San Francisco High</p>	<p>For this project, Zeenia and her partner identified an issue with culinary classes at South San Francisco High School disposing of food waste into landfill bins because</p>

	<p>School Case Study Link</p> <p>View Capstone Presentation here.</p>	<p>there was not a compost bin available on site. Students worked with school administration and teachers of the culinary program to install a vermicomposting (composting with worms) bin in close proximity to the culinary classes. Students also hosted an educational composting workshop for students to learn more and understand how to use this bin effectively when at school.</p>
<p><i>CIP Topic: Biodiversity</i></p> 	<p>Emma Gubbels 10th grade Burlingame High School Case Study Link</p> <p>View Capstone Presentation here.</p>	<p>For this project, Emma and her group took on the challenge to revitalize the grass area that is located on their school campus. With site administration approval, these students removed weeds, added nutrients to the, installed new irrigation and selected a unique showcase of native plants to feature in this heavily trafficked space on campus.</p>

E) Survey Data and Testimonials:

Students received pre- and post-program surveys to gauge their understanding of climate change and confidence to take action.

Skill	Before YCA	After YCA
Knowledge on Climate Change	<p>32% of students were not familiar with local climate change programs, policies, and initiatives.</p>	<ul style="list-style-type: none"> • 91% of students felt very knowledgeable about human causes of climate change • 89% of students felt very knowledgeable about climate change impacts (global and local)
Empowered to Action	<ul style="list-style-type: none"> • 47% of students felt ready to take action but not sure how • 24% of students felt empowered to make a difference • 27% of students expressed climate anxiety 	<p>89% of students felt empowered to make a difference after completing the YCA program</p>
Environmental and Climate Leadership	<p>On average students reported a comfort level of 6 (out of 10) when measuring how comfortable they are discussing climate change with adults.</p> <p>On average students reported a comfort level of 7 (out of 10) when measuring how comfortable they are discussing climate change with their friends or peers.</p>	<ul style="list-style-type: none"> • 90% of student shared they discuss global warming (global temperature increase that is changing our climate) with friends and family after completing the YCA program • On a scale of 1-10 rating student comfortability with talking to peers about climate change, students averaged at 9 • On a scale of 1-10 rating student comfortability with talking to adults about climate change, students averaged at 8

F) Testimonial Quotes from Post-Program Survey (issued to participants in May 2022):

- “The most valuable skill I have gained is the ability to comfortably organize events. I now feel that I have a better idea on how to start the process and how to go through with it.”
- “The most valuable skill that I have learned is how to have rich and thoughtful conversations with others about climate change. Now, I am better at connecting with people from various backgrounds and belief systems under one shared issue. This also is related to my improved ability to motivate my peers and inspire them to get involved.”
- “I really liked the self reflection after we learned things. It was nice to get educated and then synthesize or process the materials individually.”
- “I ranked the CIP (Community Impact Project) first because it was the most significant part of YCA and really helped me learn what it was like to implement a solution.”
- “[Since completing this program], I have definitely developed a solutionary mindset and have become a lot more active and ready to take action in my community. I no longer feel helpless about climate change, rather I feel ready to make a difference.”

BUDGET AND EXPENSES

Item	Description	PCE	SMCOOS	SMCOE	Acterra	CEC
Program Administration	Logistics: marketing and outreach, registration, purchasing, etc.	-	80% FTE	80% FTE	15% FTE	In-Kind Volunteer
Food and Beverage	When in person we provided food and beverage	-	\$1,500	-	-	-
YCA Program Materials	Support and branding materials	-	\$1,500	-	-	-
Program Planning and Facilitation	Curriculum Development, Workshops, Retreats, and Coaching	-	80% FTE	80% FTE	15% FTE	In-Kind Volunteer
Case Study Stipends	\$500 per student participant	\$28,000**	-	-	-	-
Community Impact Project Funding	Funds for students to implement their community impact project	-	\$12,000	-	-	-
YCA Staff Contract*	Funds for expanding partnership to		\$20,100			

	support staffing and purchasing for YCA					
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*Marika Ramdsen (One Planet Schools) contractual agreement with SMCOOS to support YCA

**Additional funding was provided to students who qualify for free and reduced lunches

Appendix A - YCA Partner Organizations

Organization	Roles and Responsibilities	Staff
San Mateo County Office of Education (SMCOE)	SMCOE serves as one of the main program coordinators taking the lead on program and curriculum development, retreat and workshop facilitation, mentoring students, and supporting CIP implementation.	<ul style="list-style-type: none"> Andra - 20% FTE Meg - 30% FTE Julia - 30% FTE
San Mateo County Office of Sustainability (SMCOOS)	SMCOOS serves as one of the main program coordinators taking the lead on student registration, weekly communication, staff meeting agendas, website editing, and managing additional program staff and mini-grant budgets. Also support program and curriculum development, retreat and workshop facilitation, mentoring students, and supporting CIP implementation.	<ul style="list-style-type: none"> Kamille - 80% FTE
Burlingame Citizens Environmental Council (CEC)	Piloted the original YCA Program - now serve as program support for retreat and workshop facilitation, and mentoring students. Additional duties include processing student stipends.	<ul style="list-style-type: none"> Volunteer, Mike McCord: ~8 hours/month Volunteer, Desiree Thayer: ~6 hours/month
One Planet Schools	YCA Program Consultant supports curriculum development, retreat and workshop facilitation, mentoring students. Additional duties include supporting CIP budgets and purchasing. *This contact has come to a close as Marika rotated into a new employment situation in March 2022.	Marika Ramsden: \$80,200 contract for two-year staff commitment, hours and funding for CIPs invoiced to SMC OOS monthly
Acterra	Acterra serves as a funded staff person and support for the YCA program. Acterra serves as program support for retreat and workshop facilitation, and mentoring students. Additional duties include managing working relationships with Burlingame CEC and PCE.	<ul style="list-style-type: none"> Lily - 15% FTE