

## Tech Trek 2022 Camp Summary

**AAUW Laguna Beach Branch updates.** Our branch sponsored 10 campers for our 2022 Tech Trek Cohort from the Laguna Beach, Irvine, and Tustin Unified School Districts: Annalisa, Ariana, Fiona, Keira, Quincy, Sharon, Taylor, Vera, Yael, and Zoe. The campers were nominated by their teachers at Thurston, Venado, and Pioneer Middle Schools. Thank you to the teachers and nominating committees from each school, especially Pioneer as this marks our first year working together! Thank you to all of the branch members and sponsors for the scholarships to send the campers! Through everyone's support, we were able to accommodate the campers' preferences. Thank you notes from the campers are at the end of the newsletter!

Highlights include: • "I think this camp will help me be ready for college and choosing a job." • "Tech Trek has also encouraged me to work hard to become an environmentalist/biologist" • "Because of your generosity, I now know how best I could help the world."

**Members are invited!** Join us for the Tech Trek Showcase on Sunday, September 18 from 3-4 PM at the UC Irvine campus! Each camper prepared a poster to share the full Tech Trek 2022 experience at two Virtual Camps, Whittier College, and UC Santa Barbara! Masks are required. Please check the branch newsletter for the driving and parking instructions as the event is not open to the public.

**Abbreviated state updates** from Camp Director, Mary Isaac. "Thanks to the phenomenal support of the camp directors, committee members, branch coordinators, schools, and the AAUW California leadership team, we have been able to deliver another successful season of Tech Trek camps in California.

From the first in-person camp orientation on June 12th to the virtual camp Closing Campfire on July 29th, we successfully served **639 campers from 94 branches at eight camps** (six residential, two virtual) across California, staffed by a community of **230+ volunteers**, over half of whom were Tech Trek alumnae!"



*Campers, counselors, dorm moms, and directors of the Whittier College Camp.*



*One of the 2022 camper's posters. Attend the showcase on Sep. 18 to see all of them! Pictured: a poster titled "The Mad Hatter's Hat" with subheadings workshops, inspiration, main project, functions, and favorite part.*

**Whittier College Camp.** Whittier College kicked off the Tech Trek season in June. After move-in day, a typical camp day was structured around morning core classes, afternoon workshops, field trips, and evening projects. Core classes offered were Coding, Architecture, Anatomy, and Forensics. No matter which core class the campers took, they were exposed to a variety of STEM fields.

**Whittier Camp, continued.** During the afternoons, campers rotated between different workshops including pH indicators, polymers, chemistry of makeup, and paleontology. Since one of the missions of Tech Trek is to encourage the pursuit of higher education, the campers also took notes on a presentation about college readiness, including the A-G course requirements for CSU/UC schools, differences between types of colleges, and study tips to use during high school and later education.

The campers were busy after dinner as well! They worked on a project with their dorm group. Perhaps the most excitement was when the counselors prepared an elaborate puzzle while campers were on their field trip. Each dorm group had a set of boxes sealed with locks and clues scattered around their dorm common area. The campers had to work as a group to collect and decode all of the clues, finally opening their locked boxes.



*Campers experimenting during the chemistry workshop.*



*Campers looking through sand during the paleontology workshop.*



*Campers using tools to excavate demo fossils.*



*Whittier campers visited the Columbia Memorial Space Center and are shown designing paper airplanes.*

Field trips included going to the Columbia Memorial Space Center and cadaver lab at the Southern California University of Health Science. At the space center, campers used block code to direct Lego rovers to pick up "rocks" to deliver the rocks to their home bases, built parachutes, paper airplanes, and satellite models.

At the cadaver lab, campers split into groups for rotations. One rotation included an in-progress dissection of a cadaver that was donated to the lab. The second rotation taught the campers about male and female reproductive system and presented examples of a preserved uterus and fetuses for the campers to observe. The final station was centered around neurology, and the campers could hold a



spinal cord or dissected brains. Photography was not allowed inside the cadaver lab, but many of the girls enjoyed the experience.

One of the timeless highlights of Tech Trek is Professional Women’s Evening. At Whittier, there were six fantastic women who spoke about their careers and showed how they apply STEM in their lives every day. The speakers included a manager of technology at Disney, who is in charge of software engineering; an astronautics design engineer and previous Tech Trekker who designs hardware for rocket engines; the Orange County police coroner, who brought examples and fingerprinting kits for the campers to use; a physical therapist who works in skilled nursing and hand therapy; a transportation engineer who focuses on serving the community sustainably through her projects; and an emergency room doctor who brought in examples of medical equipment for the campers to try.

**Virtual Camps.** There were two virtual camps, with 2022 being the second year of virtual camps offered statewide! SparkFun kits were provided by Qualcomm. Kits were distributed to campers at the Laguna Branch camper orientation in June. The core class for the virtual camps centered around the “Wearable Tech” weeklong project where campers worked on programming, designing, and building their article of wearable tech all week. Similar to the residential camps, there were afternoon and evening workshops each day keeping the campers active.

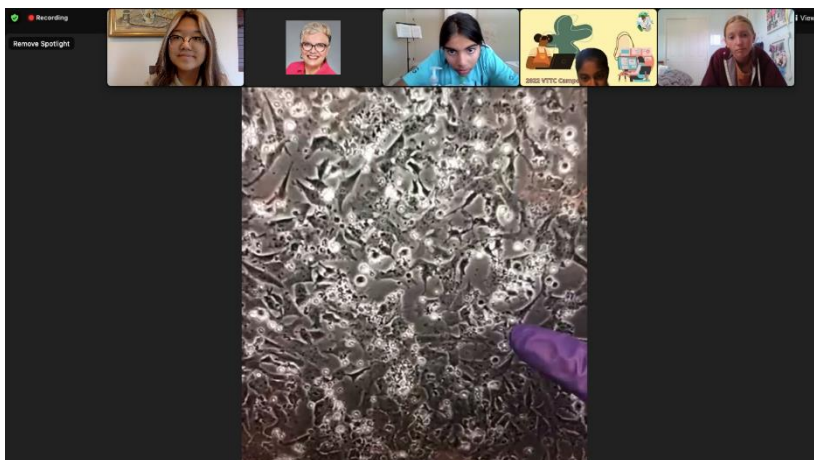


*Dr. McQuade showing her UCSF lab to campers on Zoom.*

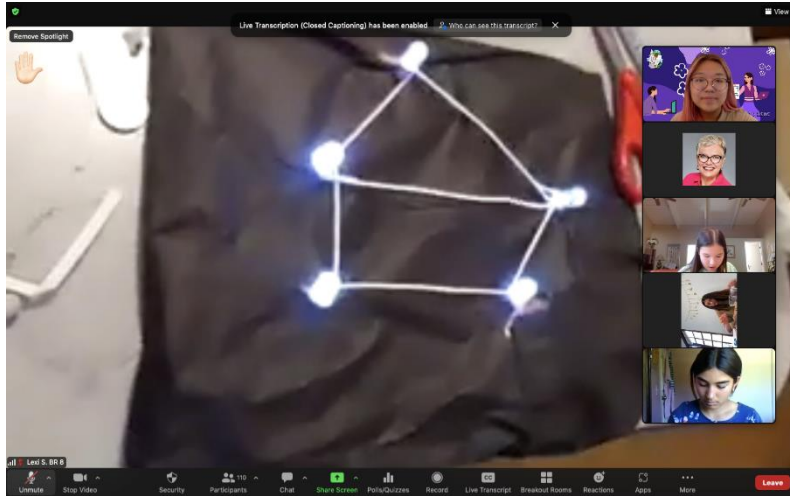
On the first day, campers dove into Purposeful Innovation and Sustainability, went over their SparkFun kits, and identified each material while following along in their Qualcomm notebooks. Dr. Amanda McQuade led the demo for Strawberry DNA. She also gave a tour of her lab at UCSF for Virtual Campers! She showed campers cultured cells called microglia in her workspace for her research on Alzheimer's Disease.

Afternoon workshops included: Magnifying the Miniscule (the foldoscopes kit) and Lights, Waves, Plasma, Oh My! (the spectroscope kit), Blowing in the Wind, and Twinkle, Twinkle Little Star. Activities were interactive.

In Blowing in the Wind, campers made their own wind turbines and learned about torque, surface area of blades, and more! In the



*Dr. McQuade showing campers cultured cells called microglia on Zoom.*



Virtual Campers showing off their Twinkle, Twinkle, Little Star project on Zoom.



Zoom session led by Doctors Kathleen Thorne, Shawn Tang, and Elizabeth Sterling, sharing photos of themselves as "scientists at work" and "scientists at play."

Campers showing off their final "Wearable Tech" projects. The hat pictured on the left is inspired by the Mad Hatter from Alice in Wonderland. The hat on the right is inspired by Baymax, the healthcare companion, from Disney's 2014 animated film, Big Hero 6. The theme of the Baymax-inspired hat is well-being.



Twinkle, Twinkle, Little Star workshop, the campers made constellations with an open circuit using copper tape, LEDs, their own creative designs, and a battery.

While the Virtual camp differs from the residential camps, campers were similarly exposed to deep discussions. For example, female scientists and engineers facilitated a very important and relevant discussion about extreme heat and its impact in the environment in addition to the importance of the future of food and food deserts! Remember to turn off the lights, stay cool in the summer, and take the time to think about more sustainable food choices. As mentioned, over half of the volunteers were Tech Trek alumnae, and many of the volunteers earned PhDs and actively practice STEM in their careers and daily life.



**UC Santa Barbara Camp.** Since UC San Diego did not participate as a Tech Trek campus this year, it was Laguna Beach's first time sending students to UCSB! The Southern California AAUW branches were heavily impacted due to UC San Diego's temporary closure, with Whittier as a smaller campus serving the entire SoCal region of branches. Some of our campers were willing to drive all the way to UCSB for Tech Trek! We hope the re-opening of UC San Diego in 2023 will allow us to offer more local spots.



*UCSB campers, counselors, and dorm moms posing in matching Tech Trek shirts.*

Camp at UCSB was similar to Whittier, with morning core classes, afternoon workshops, field trips, and evening projects. Core classes offered were Aerospace, Robotics, Forensics, and Marine Science. There were more marine-focused activities since UCSB is located right on the coast. Campers went on a field trip to the beach where they learned to surf and boarded a ferry for whale-watching. They toured the REEF (Research Experience and Education Facility) where they learned hands-on about marine life.



*Campers at the REEF aquarium.*



*Campers attempting to send their robot through the maze.*



*Campers after they programmed their robot, Misty.*

**Thank You!** The camper thank you notes were received as letters and typed up to share with the branch:

1. Ariana, Virtual Camp: “Dear AAUW Laguna Beach Branch, Thank you so much for this wonderful opportunity. I learned a lot about different STEAM careers, and more importantly about passionate, female steaminists who pursued their passions. This was an amazing insightful experience, the workshops and all participants (campers, coaches, and guest speakers) were really wonderful and passionate. Sincerely, Ariana”
2. Keira, Virtual Camp: “Dear AAUW Laguna Beach Branch, Thank you for helping me learn so many new things (servos, arduino, etc) and giving me an opportunity to stretch out into new horizons. It’s been an amazing time to meet #GirlBosses and a cook! Tech Trek holds a special place in my heart and hopefully I’ll be able to come back next year! -Keira”
3. Zoe, Whittier Camp: “Hello, my name is Zoe. Thank you Laguna Beach Branch for selecting me to allow me to attend the AAUW Tech Trek STEM camp at Whittier College. I was in seventh grade at Thurston Middle School in Laguna Beach. I was very excited to learn about the carbon cycle and the environment. Tech Trek has made me aware of how many components are in architecture. Tech Trek has inspired me to pursue science for the rest of my life. Tech Trek has also encouraged

me to work hard to become an environmentalist/biologist so I can make the world a better place. So thank you so much for the INCREDIBLE opportunity. Sincerely, Zoe”

4. Yael, Whittier Camp: “Dear Laguna Beach Branch, Thank you for this amazing experience at Tech Trek Whittier. I had so much fun engineering, dissecting, and communicating with people that pursue jobs that I am interested in. Being able to attend this camp expanded my knowledge on subjects that excited me the most. Once again thank you for giving me this unforgettable experience. -Yael”
5. Vera, Whittier Camp: “Dear AAUW Laguna Beach, Thank you for funding my Tech Trek 2022 experience. I really enjoyed learning about coding and being able to go to the Cadaver Labs. I also appreciate being able to feel what living in a college dorm is like. I think this camp will help me be ready for college and choosing a job. Thank you so much for deciding to sponsor me! Sincerely, Vera”
6. Annalisa, Whittier Camp: “Dear Laguna Beach AAUW, Thank you so much for sponsoring my trip to Tech Trek. I can’t thank you enough for giving me this opportunity. At camp, my core class was architecture. I learned how much I would want to be an architect or an engineer. Because of your generosity, I now know how best I could help the world. You have changed my life forever. Sincerely, Annalisa”
7. Quincy, UCSB Camp: “Laguna Beach branch of AAUW, Thank you for sponsoring me for Tech Trek. I liked the campus, classes, and variety of activities. They made this a unique experience that I’ll never forget. -Quincy”
8. Taylor, UCSB Camp: “Dear Laguna Beach AAUW Branch, Thank you so much for sponsoring me for Tech Trek. I would have never had this incredible opportunity if it wasn’t for all of your compassion and constant support. This experience has provided me with so many valuable lessons, friendships, and memories that I will never forget.  
One of my favorite things we did was going to the REEF and seeing all the fascinating animals. Another one of my favorite things we did was going on the boat trip. We saw so many dolphins and it was incredible! We have had so many activities at camp and we are always busy.  
A few of the things that we did in the REEF were: feed the animals, which includes Borriss the 90 year old lobster, make hypotheses about the animals, and I even got to hold some. I got to hold a sea star, a crab, and really shiny snail, a sea cucumber, and even a red urchin!  
Once again I would like to thank you from the bottom of my heart for sending me to Tech Trek and allowing me to make so many amazing memories. Sincerely, Taylor”

We express our gratitude to the AAUW Laguna Beach Tech Trek donors and STEM enthusiasts, the Camp Directors Mary Isaac, Judy Pfeil, Jonae Fedors, Susan Pease, and Pat Grijalva. Thank you to everyone who makes Tech Trek possible!

Best,  
Esther Hessong  
AAUW Laguna Beach Tech Trek Coordinator