

Hōkūlani Insider

Quarterly eNewsletter for Project Hōkūlani

E KOMO MAI!

Dr. Hye-Jin Park Welcome Message



Welcome to the Spring 2023 newsletter, we are excited to share new additions to the Hōkūlani 'Ohana and other creative ways to share STEM and science education throughout the State of Hawai'i. Project highlights include:

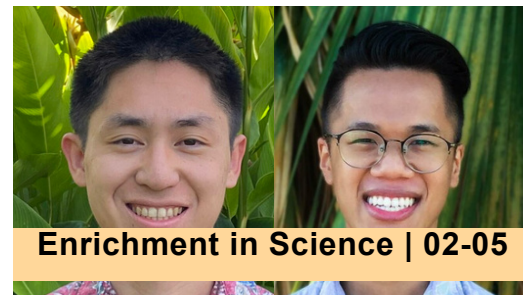
- ▶ **Academic Enrichment in Science**
Science Lessons;
Supporting High School Students Presentation;
Hōkūlani Tech Tips;
- ▶ **College Transition Support**
Top STEM Jobs
- ▶ **Mentoring**
Spring and Fall Science Lesson Recaps
- ▶ **'Ohana Gatherings**
April and May Events
'Ohana Gathering Sessions Presentation
- ▶ **STEM Internships**
Internship Track Release

Project Hōkūlani

University of Hawai'i at Mānoa, College of Education,
Center on Disability Studies
1410 Lower Campus Rd., #171F, Honolulu, HI 96822
www.projecthokulani.com | projecth@hawaii.edu



IN THIS ISSUE



April 2023 Student Sessions

Students were introduced to computer science. Students signed-up for the Computer Science: Algorithms class learned about algorithmic thinking and created art with complex patterns. And students that signed-up for the Computer Science: Simulations class learned about computer programming patterns. Ultimately, students used computer programming patterns they will develop and analyze a computer model.





How to Support High School Students to Pursue a Career in STEM

March 6, 2023 - Pacific Rim International Conference on Disability and Diversity Workshop Presentation Highlights

89.3%

of students overall, enjoyed the program

My cultural values and ways were appreciated in the program. 85.1%

I felt safe and supported in the program. 93.6%

I met my goals that I set at the beginning of the program. 87.3%

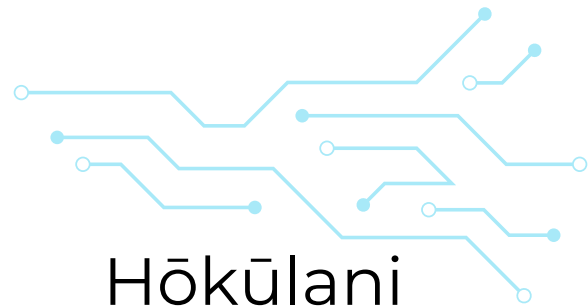
Did your participation in the program change your academic or career goal?

"I think it gave me more breadth of knowledge across various fields of science, potentially opening new pathways and passions."

"It helped me really want to pursue my degree and career path."

"It had opened new career opportunities for me"





Hōkūlani

TECH TIPS



As a part of Project Hōkūlani, Richard and Davin produce periodic technology tip videos that focus on and explore trending and important technology topics. These videos are designed to introduce and expand on technology concepts with the goal of sparking an interest in students and getting them to think about how much technology shapes our world. Previous topics include:

Chrome Extensions

Introducing and showing students how to utilize Google Extensions for productivity and providing a few examples of useful extensions that can be used in an academic setting.

[WATCH VIDEO](#)



Computer Science

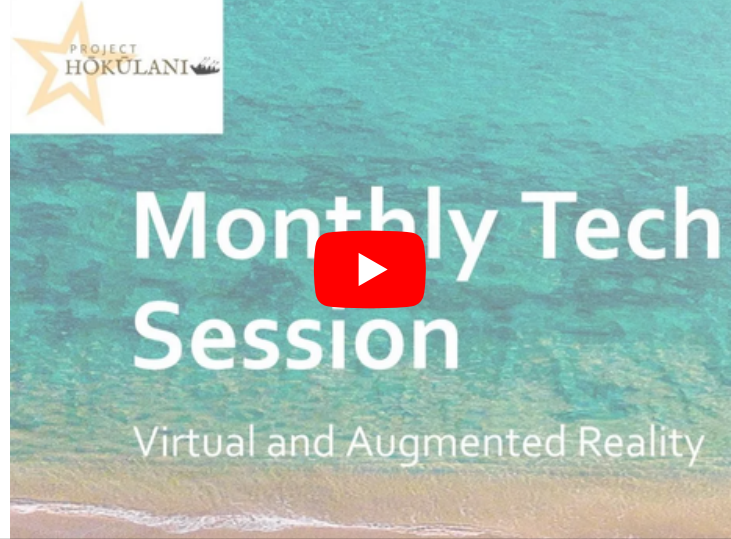
Exploring the vast topic of Computer Science and sharing potential careers that students can consider. Also shared was what an experience as a first time college student majoring in Computer Science at the University of Hawai'i at Mānoa is like and what students can expect in college.

[WATCH VIDEO](#)

Virtual and Augmented Reality

Introducing and showcasing the topics of Virtual and Augmented Reality and how these technologies are continually growing. A brief history of VR was introduced, real-world examples were shared, and forward-looking predictions were discussed.

[WATCH VIDEO](#)



Cybersecurity

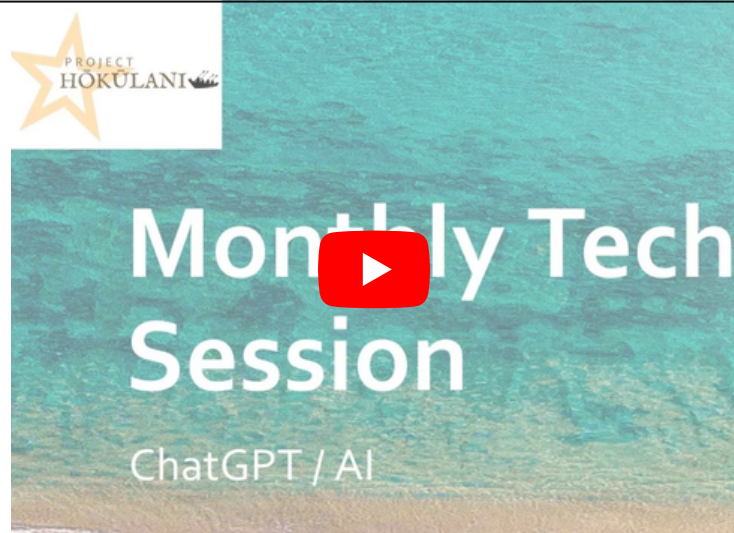
In a world where cyberattacks are breaking records year after year, the topic of Cybersecurity was introduced to students with the goal of protecting their identities while online. Concepts such as PII, phishing, and social engineering were shared, as well as resources that students can use to keep themselves safe and secure online.

[WATCH VIDEO](#)

ChatGPT / AI

ChatGPT is a trending topic, and we will introduce the concepts of ChatGPT and other AI technologies and how they have the potential to change our world. We will explore how it is currently being used and share some of the ramifications of utilizing this technology.

[WATCH VIDEO](#)



Assistive Technologies (Upcoming)

There are many assistive technologies that are utilized to increase, maintain, or improve the functional capabilities of persons with disabilities. We will be introducing some of the tools used in the assistive technologies field and how these tools are utilized to provide equal access to all.

▶▶▶ Top 21 STEM Jobs that are in Demand



“

*What kind of job
does Project
Hōkūlani get you,
you wonder?*

”

As you increase traits like being able to analyze, pay attention to detail, problem-solve, think critically, communicate well, lead well, be creative and be organized, you put yourself on the right track to getting a STEM degree! This means you are headed straight for jobs that are in demand!

Read the latest about the top jobs this opens up to you: 21 STEM Jobs That Are In Demand | Indeed.com (<https://go.hawaii.edu/XDZ>).

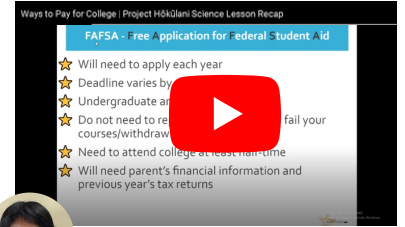
Just right for you? Try see!

- | | |
|---------------------------|----------------------------|
| 1. Technical writer | 11. Mechanical engineer |
| 2. Accountant | 12. Statistician |
| 3. Computer programmer | 13. Psychologist |
| 4. Chemist | 14. Database engineer |
| 5. Financial analyst | 15. Database administrator |
| 6. Web developer | 16. Mathematician |
| 7. Biologist | 17. Economist |
| 8. Environmental engineer | 18. Physician assistant |
| 9. Systems analyst | 19. Actuary |
| 10. Civil engineer | 20. Data scientist |
| | 21. Dentist |



Science Media Library Updated

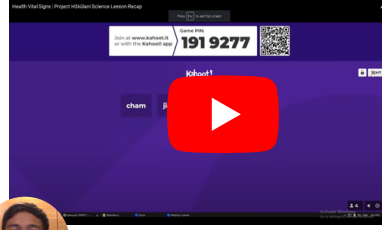
The 21 Fall 2022 and Spring 2023 peer mentors' science lesson recap videos are available for viewing!! Each week peer mentors create short science-based videos that recap session lessons.



Chaemin Lee | Nov 15
Ways to Pay for College



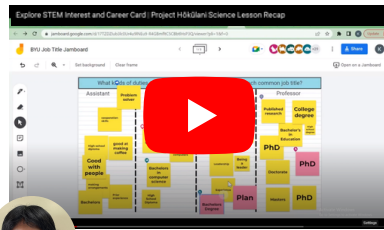
Elle Yi | Nov 15
Ways to Pay for College



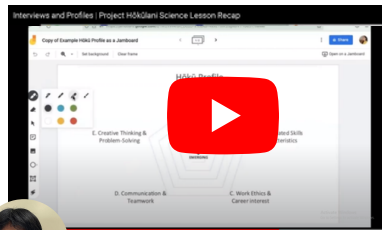
Kahoku Chang | Nov 17
Health Vital Signs



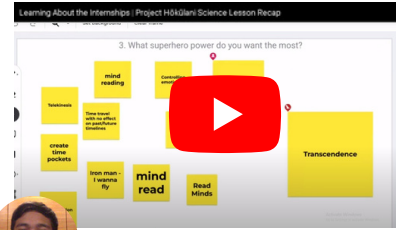
Kahoku Chang | Nov 17
Vital Signs and Medicinal Hawaiian Plants



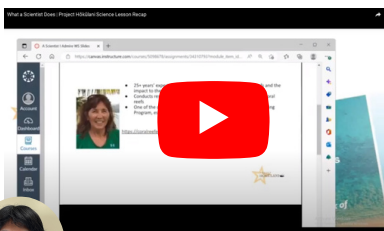
Chaemin Lee | Dec 3
Explore STEM Interest and Career Card



Chaemin Lee | Dec 10
Interviews and Profiles



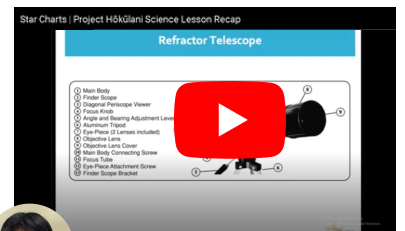
Kahoku Chang | Dec 10
Learning About the Internships



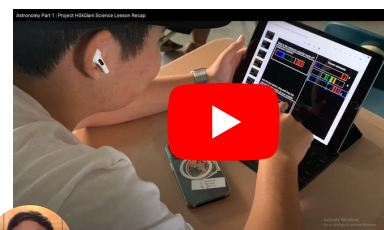
Chaemin Lee | Jan 10
What a Scientist Does



Elle Yi | Jan 10
What a Scientist Does



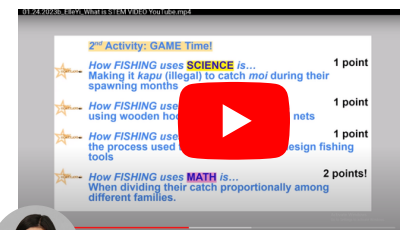
Chaemin Lee | Jan 12
Star Charts



Kahoku Chang | Jan 14
Astronomy Part 1



Chaemin Lee | Jan 24
What is STEM?

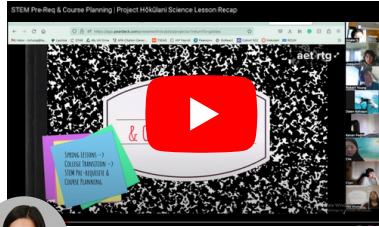


Elle Yi | Jan 24
What is STEM?





Kahoku Chang | Jan 28
Astronomy Part 2



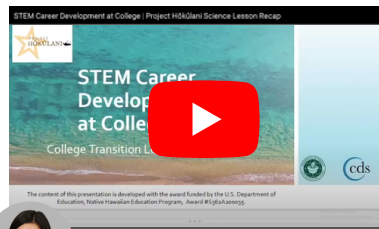
Elle Yi | Feb 7
STEM Pre-Req & Course Planning



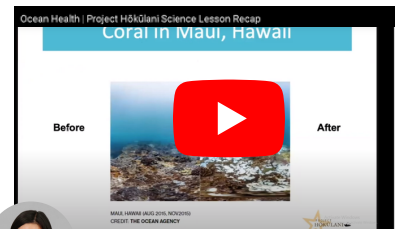
Kahoku Chang | Feb 11
Agricultural Soil Science and STEM in Sports



Kahoku Chang | Feb 25
Engineering/Urban Planning Soil Science



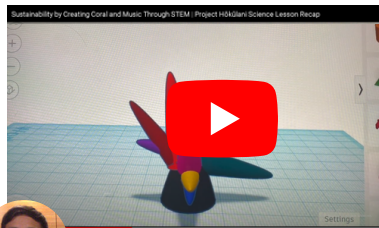
Elle Yi | Mar 07
STEM Career Development at College



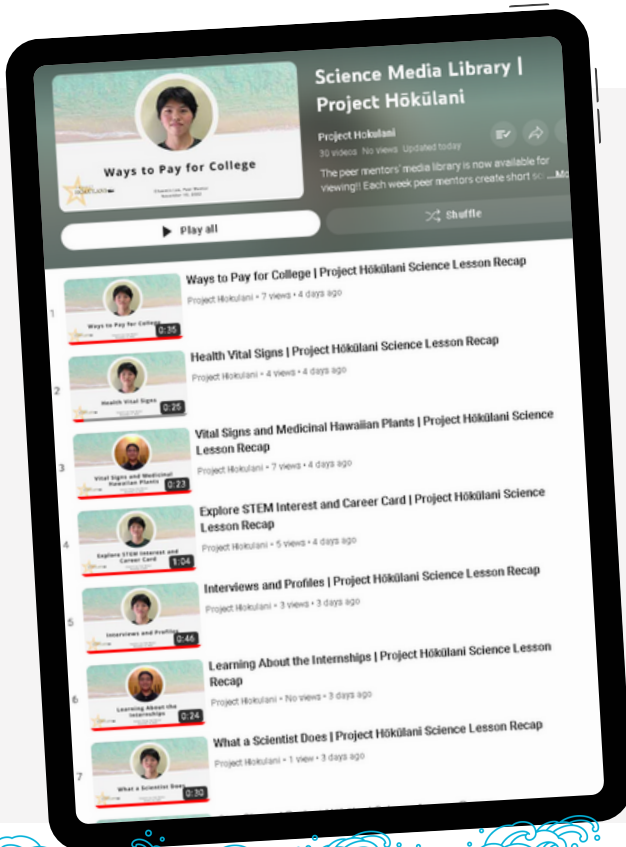
Elle Yi | Mar 07
Ocean Health



Kahoku Chang | Mar 11
Sustainability with Water Supply and Coral



Kahoku Chang | Apr 1
Sustainability by Creating Coral and STEM in Music



Subscribe and Save Playlist

Get the latest peer mentor science lesson recap videos by:

- 1) Save our playlist to your library at <https://go.hawaii.edu/SmX> and click on the "Save Playlist."
- 2) Subscribe to our YouTube Channel at <https://go.hawaii.edu/XmK>.

▶▶▶ 'Ohana Gathering Update: April and May 2023

We had guest speakers in April and May.

In April, Kinohi Gomes, director of Na Pua No'eau UH Mānoa, talked about Native Hawaiian student support at UHM and other UH system schools.

In May, we had three guest speakers:

- Kay Jernigan, Career Counselor at University of Hawai'i at Mānoa, who talked about work, research, and internships on campus.
- Elisabeth Dubuit, Assistant Professor of Engineering Technology at UHMC, who talked about S-STEM scholarships and STEM programs.
- Angela Sy, Associate Professor at the University of Hawai'i at Mānoa's John A Burns School of Medicine, who talked about their Minority Health Research Training Program.



Project Hōkūlani 'Ohana Gathering Sessions

March 7, 2023 - Pacific Rim International Conference on Disability and Diversity Poster Presentation Highlights

Change After the 'Ohana Gathering Workshops

Significant increase in their confidence about knowledge and skills in science.

Significant increase in:

- knowledge of untapped talents and needs of Native Hawaiian students with and without disabilities in STEM;
- culturally responsive approach to teaching STEM applying UDL;
- early college and dual enrollment programs;
- STEM internship opportunities; and
- culturally responsive STEM hands on activities.

Significant increase in attitudes toward science.

Significant increase in frequency in:

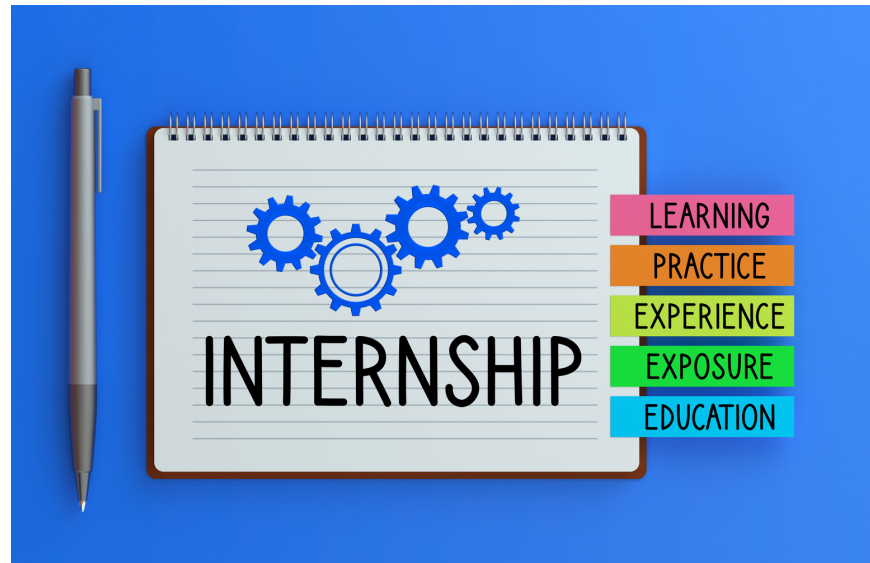
- talking about how Native Hawaiians use science knowledge and skills;
- Native Hawaiian people in STEM;
- internship opportunities in STEM;
- college programs in STEM; and
- job prospects in STEM.

100%- became more supportive for their children to participate in a STEM honors program, AP class, and competitions; and enter into postsecondary STEM fields.



Spring 2023 Internship Site Visits

During spring, students got to visit their future internship site. They spent at least 8 hours in training. The internship site visit is a way for students to get familiar with the location and the people they will be working with in the summer.



O'ahu students and mentors debris removal at North Shore Community Land Trust.

North Shore Community Land Trust

The interns met with their mentors Kumu Kawela and Kumu Kaleohano and had a tour of the Wai'ale'e site and learned about its historical and ecological significance. The interns then worked with community volunteers for a few hours to help restore the dry areas of the site. This included removing litter and construction debris, cutting tree branches and digging roots, cutting and raking weeds, forming a composting pile, carrying and moving large stones, and grading the soil. After the volunteers have left, our interns continued their restoration efforts in the wet areas. There, the interns entered the pond and removed large islands of invasive floating plants. The interns then designed and built a scaffold for a floating garden using tree trunks and coconut fiber lashing. The interns ended their work day by exploring a lo'i kalo (taro terrace) where they learned about various growth stages and varieties of kalo. They were even able to harvest and plant some kalo.

[LEARN MORE](#)

O'AHU ISLAND SITE VISITS





Chaminade Natural Science Department Lab

Students got to meet Kumu Kahoa and briefly go over the area we would be visiting and spending the majority of our days at. They also learned a little about the different limu and the importance or dangers of them.

"We had a brief visit to our site and got to walk to get a better feel of what we were going to be doing there and what we would be looking for. It's a very hands-on internship so everything was pretty brief and Kumu informed them that he would be going more into depth when summer came around. He also sent them some readings to prepare them for the lab portion of the internship."

[LEARN MORE](#)

O'ahu Island students on site with mentors at Hui o Ho'ohonua.

Mālama Pu'uloa Program, Hui o Ho'ohonua

Students walked through Kapapahu Park and learned a brief cultural and political history of different sections throughout the area. They removed invasive plants and planted native plants near one of the fishponds in the area. They learned how to identify some species of native plants and brainstormed project ideas as they walked and worked throughout the park.

[LEARN MORE](#)

O'AHU ISLAND SITE VISITS





Laboratory of Applications in Informatics and Analytics

Students were first introduced to the concept of AI. Professor Mahdi began by explaining how AI is able to recognize/identify objects in photos. Students can program AI to identify objects in photos in different ways, for example, by programming the AI to recognize certain shapes, sizes, colors, order of these things from top to bottom or side to side of a photo. Students practiced using an already programmed AI to see how accurate it was at identifying if a photo students found off the internet was a cat or a dog. Students were also introduced to a different type of AI program called ChatGPT and how AI is able to provide the information it does.

[LEARN MORE](#)

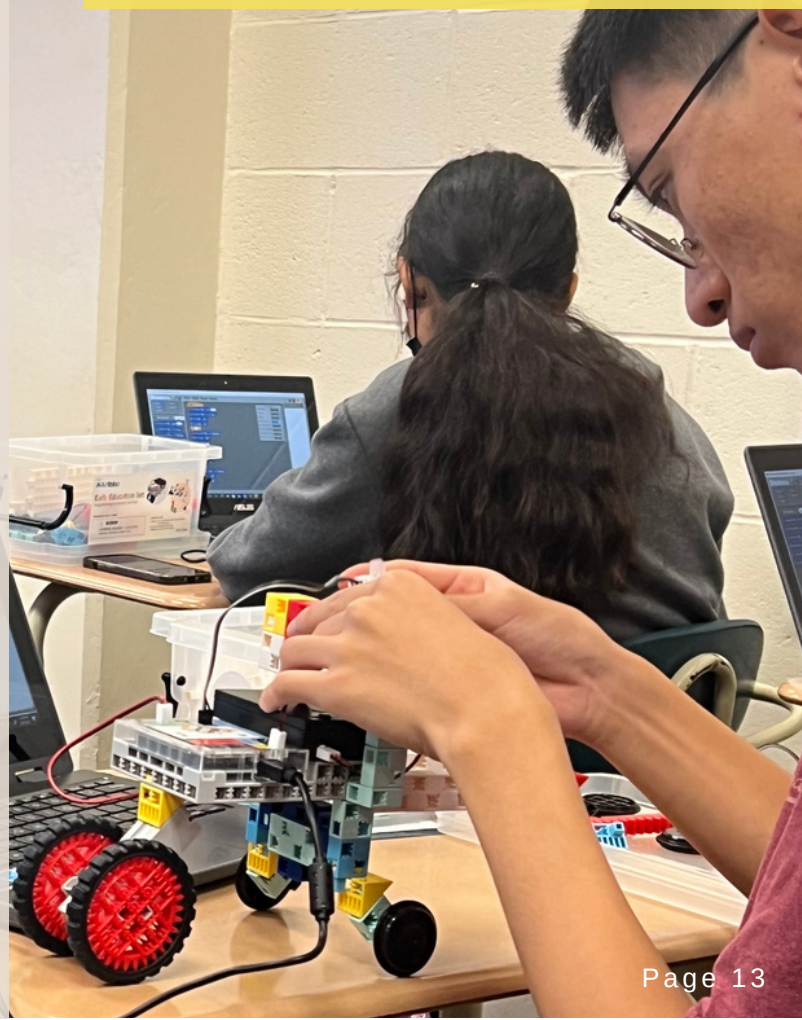
O'ahu students and mentors in the classroom at UH Mānoa.

Oceanit

Students got to meet Ian Kitajima from Oceanit and did brief introductions of their interests and prior experiences with programming. The students then spent their time learning to program basic projects related to community and personal development. The students worked on familiarizing themselves with basic coding commands. Which eventually led up to the students creating their own cars that could move along a specific distance and eventually turn. The knowledge gained during this visit will be applied in their summer project.

[LEARN MORE](#)

O'AHU ISLAND SITE VISITS





Polynesian Cultural Center & BYU - Hawai'i

Haumāna entered the Hawai'i village at the Polynesian Cultural Center with an oli they were taught to greet the Wa'a Iosepa. They walked around and sat near Wa'a Iosepa and heard the mo'ōlelo of its birth. Our first visit to the site our haumāna were taken on a field trip to the annual Wa'a festival where they were able to meet sailors from around the island and learn the names of the wa'a that sail our waters. Our next visit the haumāna had the opportunity to clean the wa'a and afterward spend time walking around "Hawai'i" and the surrounding villages learning about their culture and traditions. Uncle Kaipo informed us that more work on and with the wa'a would be done during the summer session.

[LEARN MORE](#)

Hawai'i Island students and mentors removing debris at Hui Ho'oleimaluō.

Hui Ho'oleimaluō

Students began each day with traditional protocols (oli, introduction, kilo, and briefing). On day one, the students were introduced to the basics of ho'e wa'a and the importance of teamwork in the wa'a. They were taught and engaged in recording data from water samples collected from different areas in Hilo Bay using various equipment and a mobile lab to test the water quality in these areas. On day two, the students spent the day at the MDC (Mokupāpapa Discovery Center). They participated in marine science lab activities and engaged in the presentation and activities given by the group from "The Mega Lab."

[LEARN MORE](#)

HAWAI'I ISLAND SITE VISITS





Mauna Kea Forest Restoration Project

Our interns along with various volunteers from other groups met us at the Pu'uuhonua o Pu'uuhuluhulu parking lot. There, traditional protocol, introductions, and briefing were conducted before heading to the work site which is located below the visitors center on Mauna Kea. At the work site, the interns learned about the non-native invasive species and other variables that are contributing to the decline of the native Hawai'i bird species, specifically the "Palila." They also learned that in order to preserve this native bird, we must help preserve and restore its food source and habitat to sustain and promote its increase in population. Then the group planted over 700 native Hawaiian "Māmane" trees which are the main food source and natural habitat for the native "Palila." In return, the "Palila" will help pollinate and help restore the native "Māmane" forest.

[LEARN MORE](#)

Hawai'i Island students and mentors at Hilo Bay with canoe paddles.

Nā Wa'a Mauō - Honuaiākea Voyaging

Students began each day with traditional protocols (oli, introduction, kilo, and briefing). On day one, the students were introduced to the basics of ho'e wa'a and the importance of teamwork in the wa'a. They were taught and engaged in recording data from water samples collected from different areas in Hilo Bay using various equipment and a mobile lab to test the water quality in these areas.

[LEARN MORE](#)





Natural Energy Lab Hawai'i

Haumāna was given a brief history of the establishment of NELHA by Chief of Operations Keith. Haumāna were given a tour throughout the property to better understand the environments that they will be working in during this summer's internship and get a feel of where they would feel most comfortable. Haumāna learned about engineering and how the pumps work along with the multiple projects that the pumps feed the deep sea water such as West Hawai'i Explorations, Cyanotech, Oyster Farm, Octopi Farm, and many more. They learned about pressure needed per foot of elevation, the system that monitors all pumps, importance of back up electric for the operation, water testing devices, importance of organization, systems that communicate with each other to keep things organized and synchronous, and the devices that they will be installing to gather data that they will later analyze.

[LEARN MORE](#)

Hawai'i Island students and mentors at Terraformation lab.

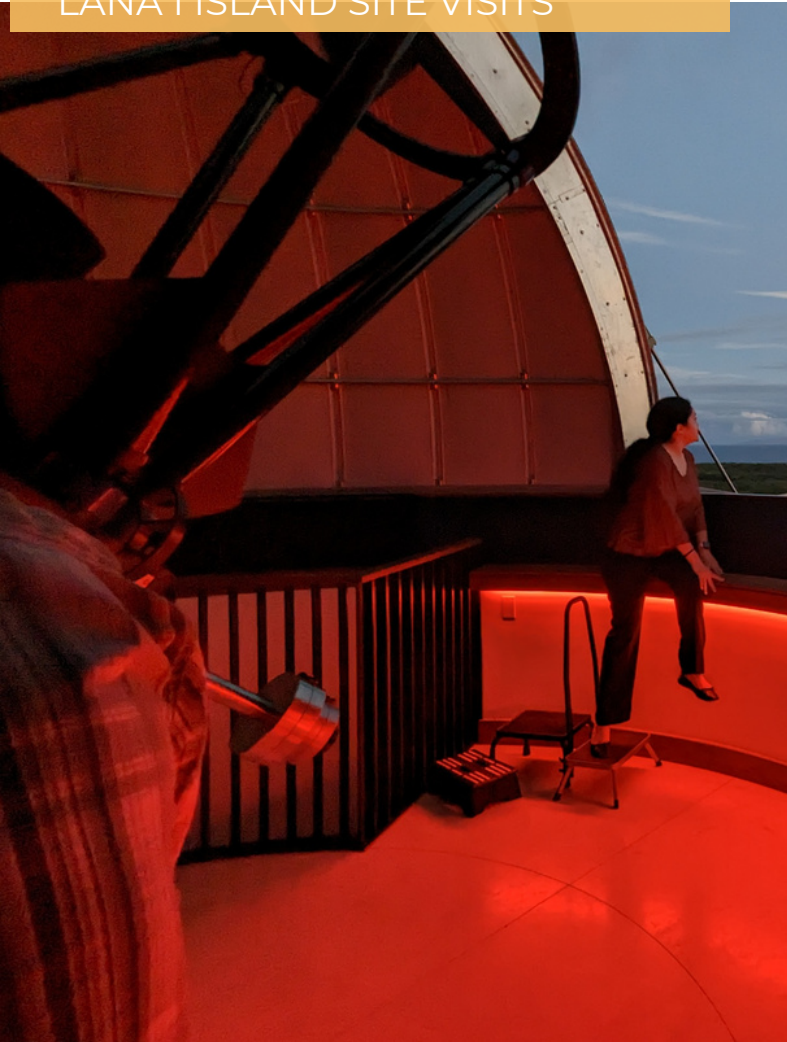
Terraformation

Haumāna visited two of many different sites that are being cared for by Terraformation. Keli'i, community coordinator, introduced haumāna to the 'āina in Kaupalaoa ahupua'a through a walking tour and gave a brief history of Terraformation's start up as well as their mission and vision statement for their worldwide presence. Haumāna were taught an Oli that they were able to makawalu and connect to many different perspectives. Keli'i took students on a tour to their desalination process, pumps, and 'āina. On another site haumāna learned how Terraformation is connected to many other organizations such as Arizona University. Haumāna were given a tour of the facility, which included their seed banks and were shown how they gather, prepare, propagate, and organize the seeds. Haumāna were introduced to the way that they could contribute to Terraformation with talents that they already possess.

[LEARN MORE](#)

HAWAI'I ISLAND SITE VISITS





Four Seasons Lāna‘i Observatory

Students learned and shared the safety briefing with resort guests – good practice of their public speaking skills. They learned about the mechanics of the telescope and how to operate it using a computer, as well as how to change the eye pieces. They began to study the starline, star compass and the wayfinding history of Hawaiian navigators, plus they began to research the celestial bodies that will be the focus of their own projects.

[LEARN MORE](#)

Lāna‘i student using tools at Lana‘i Limu Restoration Project.

Lana'i Limu Restoration Project

Students helped collect seawater at Kaumalapau Harbor and set up tanks at the town site to propagate limu. He collected limu at the beach site in Keomoku, and learned about not gathering the holdfast so the limu can continue to grow. He tested and compared pH and salinity metrics and found no difference in the ocean water at both sites; he will use this data to monitor and adjust the tanks.

[LEARN MORE](#)





Venture Physiotherapy

Students reviewed HIPAA and patient participation trainings, then observed patients receiving treatment for various conditions.

"He is especially interested in sports injuries and asked questions and took notes on this topic, learning about the process to fully heal. He also learned about preventative measures to avoid injuries and the need for physical therapy."

[LEARN MORE](#)

Kaua'i mountain range view.

Iwikua

Students got a brief introduction into aquaponics and how it works. Then students got to interact with the fish used in the aquaponic system. They also gained some insight in crop rotation and its importance to crop production. Lastly, students learned about the harvesting process of the products grown at the site.

[LEARN MORE](#)

KAUA'I ISLAND SITE VISITS



Alapa'i Kaulia

Hawai'i Island Academic & Cultural Mentor

Born and raised on the beautiful island of Hawai'i on the slopes of Hualalai in Kahalu'u, Kona 'Ākau, Alapa'i is proficient in the Hawaiian Language and is currently a provisional licensed Hawaiian Immersion science teacher for grades 8-11 at Ke Kula 'o 'Ehunuikaimalino. He enjoys helping students make connections to new concepts and incorporating Hawaiian culture into our modern lives. Alapa'i believes that building relationships are key to educating our future generations.



Dr. David K. Sing

Communities of Practice (COP) Member

Professor Emeritus, UH Hilo; Managing Partner, Educational Prism, LLC. Designed an education model and directed programs at K-12 (Na Pua No'eau) and in higher education (Ke Ola Mau Health Pathways, Hawaiian Leadership Development Program) that raise achievement and aspirations through a pedagogy that integrates native perspective, history, language, culture and values. Mobilized native Hawaiian education caucus groups creating a voice for native Hawaiian education to be heard through grass roots venues (Native Hawaiian Education Association and Hawaiian Leadership Conference).



Kanani Wall

Hawai'i Island Site Coordinator

Kanani calls Kona, Hawai'i Island home, a deeply rooted place where she was born and raised, picks coffee, fishes, ranches and tends to the land. She has 20 years in education in private schools, public schools, and other community settings as a teacher and counselor. Serving her community is a privilege and she finds great joy in collaborating with students and families in exploring options, igniting potential, and reaching goals.



Ikaika Reyes

Hawai'i Island Academic & Cultural Mentors

Ikaika received a bachelor's and master's degree at University of Hawai'i Hilo, and recently started a PhD in Geography at Arizona State University. He has extensive experience volunteering and working with students from Ka 'Umeke Kā'eo Hawaiian immersion charter school in Keaukaha, Hilo. Over the past four years he have been able to assist middle and high school students with their environmental science projects at the loko i'a and help them develop presentations given in 'ōlelo Hawai'i. In his free time he enjoys surfing, cooking or spending time with 'ohana and friends.



Special Announcements: Meet our COP Members

Our Communities of Practice (COP) members are practitioners throughout Hawai'i who also work, 'to support Native Hawaiian high school students into science, technology, engineering and math (STEM) fields.' As a community approach, the COP members advise and collaborate with staff, recruit and share project resources, review applications, evaluate hō'ike projects and ultimately contribute to resources for our education system. We are pleased to introduce:



Kelli Ching

Native Hawaiian Science and Engineering
Mentorship Program,
University of Hawai'i at Mānoa



Elizabeth Conroy-Humphrey

Secondary Counselor
Lāna'i High & Elementary School



Jared Galea'i

Center on Disability Studies,
University of Hawai'i at Mānoa



Dr. David Kekaulike Sing

University of Hawai'i
at Hilo and Educational Prism, LLC



John Villiarimo

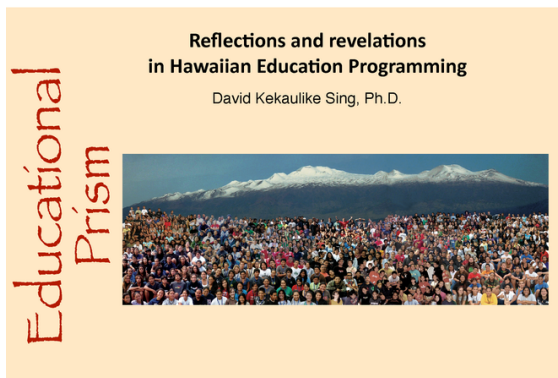
University of Hawai'i Maui College
Moloka'i Extension Center



Dr. Kamuela Yong

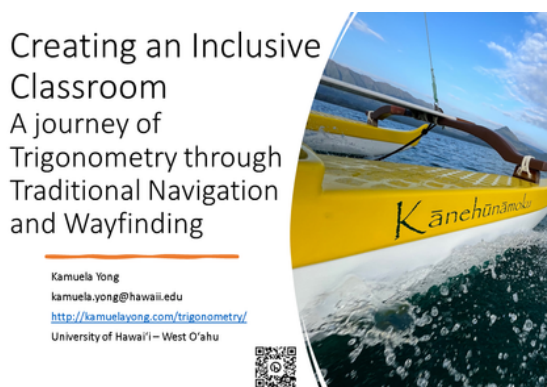
Department of Math and Natural Sciences,
University of Hawai'i at West O'ahu

Special Announcements: Community Presentations



Dr. David K. Sing
 Communities of Practice (COP) Member
 Presentation

Reflections and Revelations
 in Hawaiian Education
 Programming



Dr. Kamuela Yong
 Communities of Practice (COP) Member
 Scholarly Presentation

Creating an Inclusive
 Classroom A Journey of
 Trigonometry through
 Traditional Navigation and
 Wayfinding

Congratulations Dr. Kendra Nip

Project Hōkūlani Data Coordinator
 Dissertation Defense - March 24, 2023

Performance on the Boston Naming
 Test of College-aged Hawai'i and North
 American Residents: A Multi-Method
 Differential Item Functioning Analysis

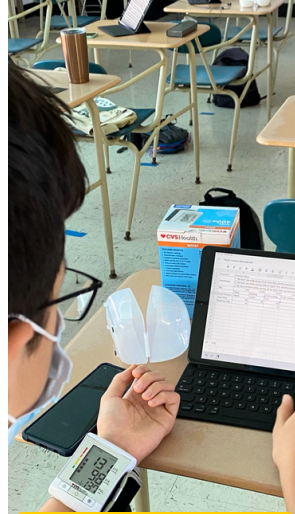




Science Exploration within Native Hawaiian Culture



Hands-on Science Activities



College Preparation and Early College/ Dual Credit Opportunity



Paid Summer 2024 Internship and Mentoring



'Ohana Hands-on Culture Activities At-home Resources

2023-2024 PROJECT HŌKŪLANI STUDENT RECRUITMENT

HŌKŪLANI SCHOLARS PROGRAM



Application QR Code



June 30th Deadline (extended)

SUBMIT application www.projecthokulani.com

- May-June Application Review
- June 2023 Interviews
- July 2023 Acceptance Announcements



Sept 2023 - July 2024

ATTEND online and on campus student sessions and 'ohana sessions.



Summer 2024

WORK as a paid intern on Hawai'i island, Kaua'i, Lana'i, Molokai'i or O'ahu



July 2024

End-of-Year Hō'ike

Eligibility and Requirements



- Enrolled as a Fall 2024 high school student.
- Attend two classes/month.
- Complete the year-long program.
- Work 40-hour paid summer internship position.

Native Hawaiian students are given priority, but all are welcome. Limited space is available. Upcoming application informational session schedules and recordings are available on our website.



www.projecthokulani.com
projecth@hawaii.edu



U.S. Dept of Education Native Hawaiian Education Program Grant (Award #S362A200035 and Award #S362A210073)
Project Hōkūlani, Center on Disability Studies, University of Hawaii'i at Mānoa