



NEWSLETTER

KAUAI COMMUNITY SCIENCE CENTER

JULY 2020



CLIMATE CONNECT LOGO CONTEST WINNER!

BRYNN LEE HIRATA

WHAT'S NEWS AT KAUAI COMMUNITY SCIENCE CENTER

We hope that you and yours have all been well during these times of the COVID-19 Pandemic. [Kauai Community Science Center](#) has been busy in the last three months working on ways to bring science and community together in these challenging times. We are happy to share the NEW CLIMATE CONNECT logo! Brynn Lee Hirata, a rising 7th Grader at Waimea Canyon Middle School created the winning design. It is stunning and incredibly meaningful. We had beautiful entries, but we could only choose one. Learn more about our new logo in "Connect with Climate" on page 4.

We were also busy with grant writing the last few months. We are very excited to share that we now have two new funding partners, The County of Kauai Kupaa CARES Act grant program and Kamehameha Schools Community Investments. You can learn more about both NEW programs in "KCSC mobile WiFi and STEAM Resourcer" on page 6 and "More Sharing Science" on page 10. .

We enjoyed continued support from our colleagues at The Science Center in Ithaca NY, Waimea Canyon Middle School and Kauai Makerspace. We also built new collaborations with BNY Mellon Fab Lab at Carnegie Science Center in Pittsburgh, PA, STE(A)M Truck powered by Community Guilds in Atlanta, GA and West Networks in Ganville, FL. Locally we also connected with folks at Chaminade University, The Hawaii Public Library System, Kauai Planning & Action Alliance, Waimea High School and the PTSA's at both WCMS and WHS to name a few.

We are also working on ways to finish up some of the exhibits from the Students Sharing Science pilot project, so stay tuned, we hope to be able to showcase some exhibits by the end of 2020.

We couldn't have accomplished all of this without a lot of support and excellent help along the way. We are very happy to share that Marisa Chelius has also joined KCSC and we are thrilled to have her on our team. Learn more about Marisa on the facing page.

Please help us by sharing our KCSC Intern Project. You can find more information in the NEWSletter as well as on our [KCSC Website](#).

MAHALO TO EVERYONE INVOLVED!

FOLLOW US & LEARN MORE



KCSC WELCOMES, MARISA CHELIUS

NEW KCSC PROGRAM DIRECTOR



Marisa Chelius, Ph.D.

We are thrilled to welcome Marisa Chelius, to KCSC. Marisa is KCSC Program Director and she will help us to develop and execute the curriculum associated with the KCSC HOTshot as well as supporting all of our activities at KCSC. Her extensive research career coupled with her teaching experience and love of science make her an incredible asset for KCSC. We are so happy to have her to help us grow KCSC and bring science and community together in meaningful ways on Kauai.

Marisa received her Ph.D. in Agronomy from the University of Wisconsin-Madison. As a research scientist, she has studied microorganisms in a variety of environments such as caves, oceans and swamps, in animals including humpback whales, springtails, and pigs, and in numerous plants.

For over thirty years, Marisa has worked with students from middle school through college as both a teacher and mentor. This work is among her most valued. Marisa is a eleven-year resident of Kauai.

SPECIAL RECOGNITION

MAHALO & CONGRATULATIONS TO OUR OTHER CLIMATE CONNECT STUDENT LOGO CONTEST WINNERS!



Jashly Guillermo - First Runner-up, Sophomore at Waimea High School.



Miley Cox - Second Runner-up, Eighth Grader at Waimea Canyon Middle School.



CONNECT WITH CLIMATE

THE CLIMATE CONNECT LOGO WILL HELP TO PROMOTE AWARENESS TO CLIMATE CHANGE



Brynn Lee Hirata, 7th Grader at WCMS and CLIMATE CONNECT Logo Contest Winner.

One of Kauai Community Science Centers goals is that all of the content for KCSC will be student generated, based on the interests of the students. No matter what the student's interest, there is science in it. KCSC wants to facilitate students learning more about their own interests and science at the same time.

However, KCSC also wants to promote awareness to Climate Change and encourage the students to think about how their interests, everything they do every day and the choices that they make can make a difference. Our [CLIMATE CONNECT](#) initiative promotes awareness of Climate Change and each exhibit at KCSC will have a **CLIMATE CONNECT** that connects how the exhibit is related to Climate Change.

KAUAI AS THE SHAPE OF THE WORLD - Represents commitment from the

KAUAI IS SURROUNDED BY PRECIOUS RESOURCES

TEACHERS & STUDENTS: *They work with KCSC as climate scientists to connect how everyday activities have an*

TREES: *Important resources for providing oxygen and makes our air quality better*

THE SUN: *The most important resource for generating weather patterns, creating energy for plants, food and*

AN ENERGY EFFICIENT HOME: *These homes can provide an opportunity to save money and reduce emissions of*

FISH: *A natural resources for food and is a vital part of the ocean's ecosystem.*

THE OCEAN: *As an Island, we are surrounded by the ocean. It basically effectsour way of life. It's a source of food,*

KALO (TARO): *I included Kalo or Taro to represent Hawaiian Culture because it is an important staple food for the*

A SOLAR PANEL: *On Kauai we see the sun almost everyday of the year. Solar power is a great way to create energy*

THE HOKULE'A: *The Hokule'a completed a worldwide voyage a year ago called Malama Honua, which means venture beyond the horizonto connect with others on how to best preserve environmental resources for the future*

WIND: *Another important resource and alternative for producing energy.*

AN ENERGY EFFICIENT CAR: *This mode of transportation doesn't let out as much emissions as a regular car.*

RECYCLE BIN: *Reduces the amounts of trash that end up in the landfill. Also reduces the amount of marine debris*

BICYCLE: *Another mode of green transportation*

MOUNT WAIALE'ALE: *We are fortunate to have the wettest spot on Earth on our island. Mount Waiale'ale produces*

FUN FACT: *Notice the pineapple on the computers that replaces an apple to represent a fruit from Hawaii.*

MAKE A DIFFERENCE

Brynn Lee's amazing logo speaks volumes about Climate Change. All of the information in this logo will help everyone understand many of the important elements associated with Climate Change and taking care of our planet.

Brynn Lee's logo is not only beautiful, but it will help us all to **CONNECT TO MAKE A DIFFERENCE** every day and for years to come. Keep thinking about how you can make a difference.



people of Kauai to care for our planet.

impact the Earth's climate.

*all living things. Without the sun, Earth would be just a lifeless rock.
greenhouse gases.*

*entertainment, it influences weather patterns, and can be a source of energy.
Hawaiian people. Today all cultures enjoy taro in many different ways.
with emitting carbon dioxide into the atmosphere.*

"to care for our Earth": the purpose of the voyage was to practice the tradition to

an abundant amount of fresh water for the residents of Kauai.

KCSC'S MOBILE WIFI & STEAM

KCSC awarded a CARES Act grant from Kupaa Kauai

KCSC HOTspot

[KCSC HOTspot](#) is a mobile WIFI hotspot equipped with STEAM learning resources, that improves student access to WIFI, fun STEAM activities and exposure to career pathways. KCSC has built collaborations with other successful mobile STEAM programs, [BNY Mellon Fab Lab](#) at Carnegie Science Center in Pittsburgh, PA, [STE\(A\)M Truck](#) powered by Community Guilds in Atlanta, GA and ["I Am a Scientist"](#) STEM program from Chaminade University in Honolulu to develop KCSC HOTspot. KCSC will also partner with local organizations to disseminate information and resources to students, teachers and parents as it moves through neighborhoods in West Kauai.



KCSC'S NEW 2019 Ford Transit van that will be transformed in to the KCSC HOTspot.

To compliment KCSC HOTspot, KCSC will also develop Neighborhood Hubs, NH, similar to a "bus stop" where KCSC HOTspot can stop to share resources and provide services on a regular schedule. KCSC HOTspot will connect people to critical resources, internet access, and support student learning and interest in STEAM fields and career pathways that build resilient communities.

SOME OF OUR KCSC HOTspot COLLABORATORS

RESOURCE

WIFI + STEAM = HOTspot

S **T** **E** **A** **M**
C **E** **N** **R** **A**
I **C** **G** **T** **T**
E **H** **I** **&** **H**
N **N** **N** **C**
C **O** **E** **U**
E **L** **E** **L**
O **R** **T**
G **I** **U**
Y **N** **R**
G **E**

STEM has become a hot commodity and popular acronym that represents a focus on science, technology, engineering and math learning and career choices.

STEAM incorporates an "A" for Art & Culture. STEAM is also hot, which emphasizes the "HOT" component in our KCSC HOTspot.

Virtually any career that students will have in the future will be related in some way to at least one or potentially even all of these STEAM topic areas.

By providing hands-on STEAM programming for students KCSC will support student exploration of a wide range of career options and also grow science literacy at the same time.

When students share what they learn through creating content and/or leading STEAM activities at KCSC, their friends, family and the whole community will also learn from them. Ultimately Kauai will have a community that is better prepared to face the challenges of climate change, diversifying the economy and building a more sustainable and resilient Kauai.

WILD ABOUT SOURDOUGH

KCSC PROMOTES THE WILD SOURDOUGH PROJECT FROM NORTH CAROLINA STATE UNIVERSITY

Kauai Community Science Center is exploring new ways to work towards their goal of Bringing Science & Community Together during these times of social distancing and COVID-19. Promoting Citizen Science is something we are giving a try.

Citizen Science is when citizens, like us, run experiments, collect data and/or analyze data for scientists. The work of citizen scientists directly contributes to the work of real scientists, helps them to learn more and make new discoveries. There are only a limited number of scientists working on their research, but if we help them, they can collect more information/data from all over the world and dramatically increase the scope of their project. You can make a big difference by being a Citizen Scientist!

There are many Citizen Science projects and we would like to promote these projects and support all of you citizen scientists out there. You don't have to have any prior experience or expertise. This is open to anyone interested in giving it a try.



We selected the [Wild Sourdough Project](#) as the first Citizen Science project to promote. We were able to do a test run with some AMAZING Science Teachers and Students at Waimea Canyon Middle School, so we know that it is fun and that you can also bake some delicious sourdough bread if you get through all 15 days of the project.

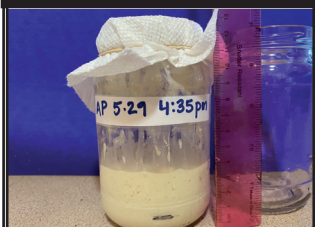
Food and science are a great combination so we hope that you will give it a try. All of the information is on our [KCSC website](#) and you can contact us if you have any questions or suggestions at info@kauaicsc.org.



CITIZEN SCIENCE

MICROBES MAKE FOR DELICIOUS SCIENCE

FLOUR + WATER + MICROBES IN THE AIR + TIME = SOURDOUGH STARTER



15-day old culture that was fed daily with fresh flour and water.



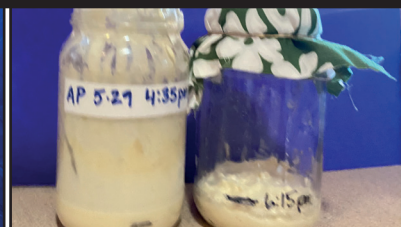
Adding starter to a clean jar for the final evaluation.



Adding some flour



Adding some water

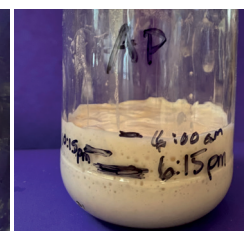


Final culture on the right, ready for the final growing period

After 15 days of feeding the culture flour and water daily, it rises consistently each day, showing you have healthy microbes growing in your culture. For WILD SOURDOUGH, after 15 days you go through one more feeding, adding flour and water to a set amount of starter. Then watch how it grows. Once it stops growing, you take the final height measurement and record the time it took to reach that maximum height.. Then you take a picture of the view of the top and view from the side. You then submit that information online and you have become a citizen scientist. It is easy, fun and then you can put your microbes to work.



Top view of culture.



Side view of culture.

SOURDOUGH STARTER + FLOUR + WATER + SALT = SOURDOUGH BREAD



You can use the sourdough starter for many recipes, but our favorite is sourdough bread. We followed the recipe provided by the WILD SOURDOUGH scientist and it was DELICIOUS! Just flour, water, sourdough starter and salt are the ingredients. Your sourdough starter serves as the "yeast". After some mixing, and periods of rising, you bake and then you get your reward for your work and commitment as a citizen scientist. The resulting bread is totally unique to your home and your very own microbes that you hadn't even met before. If you send in the data you can also put Kauai or wherever you live on the map.



MORE SHARING SCIENCE

KCSC INTERNSHIP PROGRAM & SCIENCE TEACHER COLLABORATIVE ADDED TO KCSC SHARING SCIENCE PROGRAMS

Students Sharing Science was the first project that KCSC ran in collaboration with Waimea Canyon Middle School and The Sciencenter in Ithaca, NY during the 2019-2020 school year. This year, thanks to support from Kamehameha Schools Community Investment funding we are expanding our Sharing Science programs to include a student internship program and also the development of a Science Teachers Collaborative, Teachers Sharing Science.

KCSC 2020-2021 Student Internship Program

We are looking forward to working with students to connect their interests with our needs to develop an enriching and fun internship program during the 2020-2021 school year. As a new organization there are many things that we need to develop and grow like our website, social media and YouTube channel for example. We also will need students interested in working with the KCSC HOTspot. There is more about it on the facing page and KCSC Interns will gain leadership skills, communication skills, and have an internship experience to put on their resume for their future career or academic pursuits.

Teachers Sharing Science

KCSC will bring science teachers together, to build relationships among the teachers and with KCSC. This will enable KCSC to better understand teacher's needs and develop ways that KCSC can provide support, resources, and opportunities for professional development. Teachers Sharing Science will also build a connected community of science teachers that have the tools as well as a means to ensure successful transitions as students move from preschool all the way through high school in the West Kauai Complex. We appreciate that this school year will be a new experience, and we are looking forward to finding ways to support STEAM teachers on Kauai.

KAUAI COMMUNITY SCIENCE CENTER



2020-2021 STUDENT INTERNSHIP

OBJECTIVE

We are looking for students, ages 15-25, who are interested in being part of our new organization. During the 2020 - 2021 school year we will be deploying our new program; [KCSC HOTspot](#) and growing our [Sharing Science](#) and [CLIMATE CONNECT](#) Programs. There is a lot going on at KCSC, the opportunities are very diverse, and we would like to work with you to create an internship that matches your interests and skills. We will be working virtually and within Social Distancing Guidelines as conditions permit. These are not paid internships, but we may be able to provide opportunities for paid activities with some of our collaborators during the course of the school year.

OPPORTUNITIES

Help us bring KCSC HOTspot, a mobile WIFI hotspot & STEAM* learning resource to West Kauai.

- Be part of selecting and leading maker & STEAM* activities at the KCSC HOTspot.
- Help us build the Neighborhood Hubs** in towns from Kekaha to Ele'ele, where we will be operating.
- Help support students, teachers and parents in West Kauai with distance learning and provide fun STEAM activities.
- Add new skills or build on what you already know related to CAD software, laser cutting, 3D printing, coding, climate science, drones, the natural world around us and all kinds of maker tools and activities.
- Practice your communication and teaching skills with other students.
- Receive training from Carnegie Science Center FAB Lab professionals and share your skills.

Help us build Kauai Community Science Center

- Support KCSC social media, website development, communications, graphic design and promotions.
- Learn or improve your skills with Adobe Creative Cloud software suite, PREZI and Mentimeter.
- Grow the KCSC YouTube channel.
- Design and build hands-on science center activities and exhibits.
- Explore other tools and software to help the organization grow.
- Grow your virtual/remote meeting skills and help KCSC do the same.
- Learn about nonprofit grant writing, fundraising, membership, board activities and organizational development.

OUTCOMES

- You can make a difference right in your community.
- It will be a great addition to your resume and college applications.
- Improve your communications skills by interacting with a wide array of people in a wide array of activities.
- Learn about other Makerspaces and Science Centers around the country.
- Build your network by meeting professionals from the mainland, in Hawaii and on Kauai.
- Get exposed to a wide array of jobs that you may someday choose to pursue.
- See what it is like to start and grow your own business and you can learn about everything that is involved.

There is more information on our [KCSC Website](#)

[Questions? Suggestions? email us at info@kauaicsc.org](mailto:info@kauaicsc.org)

* STEAM: Science, Technology, Engineering, Arts & culture and Math

** Neighborhood Hubs: Central locations in West Kauai Neighborhoods where the KCSC HOTspot will park and provide WIFI & activities.

WHAT'S NEWS



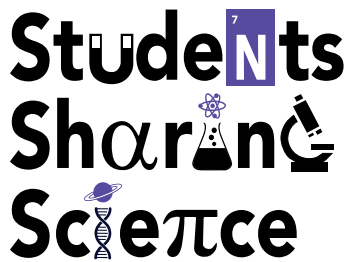
KCSC STUDENT INTERNSHIP

We are now accepting applications for our 2020-2021 Student Internship Program. There is more information on page 11, the [KCSC website](#) or email us at info@kauaicsc.org.



Student Internship

STUDENTS AGES 15-25 ARE WELCOME TO APPLY.



STUDENTS SHARING SCIENCE

We hope to figure out ways that we can complete at least some of the student exhibits from Mrs. Rowe's Integrated Science class and get them on display by the end of the year. We will keep you posted. If you have any interest in supporting the project let us know.

TEACHERS SHARING SCIENCE

We look forward to getting to know more of the Science Teachers from PK-20 in West Kauai during this school year. We hope that building a Science Teachers Collaborative will help KCSC learn how we can best support and work with science teachers on Kauai.

KCSC HOTSPOT



[KCSC HOTspot](#) is a mobile WIFI hotspot equipped with STEAM learning resources, that improves student access to WIFI, fun STEAM activities and exposure to career pathways. We look forward to seeing you out and about in West Kauai in the coming months.

FOLLOW US ON [FACEBOOK](#) & [INSTAGRAM](#) @KAUAICSC TO SEE ALL OF OUR NEWS AS IT HAPPENS.