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The Ancestral Science Podcast explores scientific topics through conversations between Knowledge Keepers and Scientists, while *experiencing* the origins and depth of science on and with “the Land”. Join us as science COMES ALIVE when knowledges are shared alongside ancestor plants, rocks, animals, and rivers, creating connections between personal, Indigenous, and global science. The Ancestral Science podcast is a place for *everyone* to see themselves in science, to be inspired by the SCIENCE that is all around them and expand the definitions of both *ancestor* and *science*.

SEASON 3: Episode 21 with **LilyMarleen Uta’i** “Kalo Ancestors & the Pulse of the Land”

We were grateful to speak with the absolutely lovely and talented **LilyMarleen Uta’i**, who is first generation Samoan, grew up in Hawai’i, currently living in He’eia Valley. We chatted about relational body measurement, aggressive & invasive species, waking up the kalo patches, our favourite smells, ancestral knowledges of Kalo, the significance of “just one breathe- one moment” that can set you on your path, and Wahi Pana... the pulse that connects us all.

Donation from the episode went to [Papahana Kuaola](http://www.papahana.kuaola.org), an ‘āina-based education organization connecting past with sustainable future.

Remember, you can support the pod and rock some unique Indigenous Science merch at www.relationalsciencecircle.com/shop, all proceeds go towards Knowledge Keeper honoraria, following protocols, and keeping the pod going. Please like, share, follow, and rate the pod, it goes a long way to share this knowledge.

Thanks to Emil Starlight ([@mikadikadzi_redfoot](https://www.instagram.com/mikadikadzi_redfoot)), the pod’s multimedia podcast producer and [Walter White Bear](#), Sharon Ann Foster, and Emil Starlight for composing and performing our opening tune.

Questions for the Pod? Email us at relational.science@gmail.com

SHOWNOTES:

-where we met: [Ethnomathematics program](#), in 2017 at the University of Hawai’i Manoa
-Shout out to the infamous [Dr. Linda Furuto](#) for creating the ethnomathematics program of which validated the cultural and relational aspects of mathematics for so many of us.

-“**Ethnomathematics Solves Real World Problems**” (Ancestral Science Podcast, with Dr. Linda Furuto) [Spotify Link](#), [Apple Pod link](#).

-Like many, Lily and Kori knew there was a pathway towards this work we didn't fully comprehend until gathering in this cohort, sharing other's relationships with mathematics, land, and culture.

-Lily's presentation about relational measurement using arm-span, hands, feet, etc, made a significant impact on Kori. This has been reinforced over the years by many Elders to reconnect self and the surroundings. "We are our own standard measurement!"

-think about land "measurement," how can that be done without politics but through stories, natural geography, relationality?

Links: ["E lele le Toloa, Ae Ma'au i le Vai: Returning Home Through Hawai'i, Samoa, and Ethnomathematics"](#) (article, LilyMarleen Uta'i, 2025)

["LilyMarleen Uta'i and Students explore Ethnomathematics in their Classroom"](#) (video, article, 2020)

["I hated Math"](#) (article, LilyMarleen Uta'i, 2020)

["Traditional Hawaiian measurements: Nā Anakahi Hawai'i"](#) (Chelsea Womack)

["Hawaiian measurement- worksheet"](#) (Chelsea Womack)

["Hawaiian measurement- rubric"](#) (Chelsea Womack)

Remember to connect these teachings to the land they originate. Indigenous Science differs based on Land and People. If you DO NOT live in Hawai'i, how can these teachings inspire your students to use their body to measure?*

-'Āina-Based Education

-bringing land to the classroom

-what was this land like before contact? What is missing now? How do we re-connect?

-learn from land, mountains, sky, ocean...

-invasive plants brought to Hawai'i by settlers, inattentive migrations, or prioritizing commodification and European mono-agriculture over land relationality.

-aggressive species often introduced to land by released pets (fish)

-waking up the kalo/taro patches

-**Kalo:** Hawaiian word, **Taro:** colonial/western/translated word

-what does 'Āina need? How do we listen? How do we give back?

-Va'a: Samoan for "this time/universes/realms," another space/time

-Lily wanting to learn more about "A.I.-pono"

-how can AI "do the right thing?"

-how can AI help and support ancestral knowledges?

-Karen Colbert-

["Reclaiming Education, Leadership, and the Future in an AI-Driven World"](#)

["The Algorithm Wasn't Built for us"](#) and available on [Amazon](#)

-Ancestral Intelligence- ["Indigenous AI"](#)

-[Abundant Intelligences](#)

-["AI Reflections: Resources from Indigenous Scholars, Artists & Activists"](#) by Emily Bridge & Carissa Block (2025)

-["Ensuring Indigenous Peoples' Rights in the Age of AI"](#) UN, Department of Economic and Social Affairs (2025)

-Papahana Kualoa & the Kalo Krew

- Kalo is the Elder brother of Hawai'i. This plant feeds and sustains all.
- it is a root vegetable but can eat all the plant. 30 varieties of Kalo/Taro.
- Kalo Krew are the stewards and caretakers of the Kalo, they are the heart of the community.

-Lelekamanu Oahu: Our Lelekamanu Program operates in partnership with schools, with participation being by invitation only. Lelekamanu serves as our outreach and service project division on O'ahu, offering exclusive educational opportunities. These include field trips to terrestrial conservation areas and active restoration sites, partnering with other community organizations on mālama 'āina-based initiatives, and participating in native vegetation restoration projects in Waipao.

-Donate to Papahana Kualoa @papahanakuaola [here](#)

-Future of Ancestral 'Āina Knowledges:

- for spaces to connect- to self, to find your purpose
 - just taking ONE BREATH to change it all
 - one breath to find the path you were supposed to be on
 - it's always been there, that knowledge has always been there, you just have to notice, pay attention, learn from the knowledges from all around.

Wahi Pana – special and sacred place/pulse of a place

- for places to visit, to breathe, to touch, to learn

ADDITIONAL LINKS:

-Ethnomathematics Curriculum Library (please remember, these resources/learning helpers, are connected with the teachings and knowledges from the Lands of Hawai'i. Please reference that and keep that in mind when using).

-Dr. Linda Furuto. “[Long Story Short with Leslie Wilcox](#)” (YouTube video. 2016)

“[Ethnomathematics Turns the planet into a classroom](#)” (article, 2024)

“[Pacific ethnomathematics: Pedagogy and Practices in mathematics education](#)” (article, 2014)

“[Knowledge and Action for Change through culture, community, and curriculum](#)” (article, 2018)

- Kauai Adventure- “[tubing down the irrigation canal](#)” ...haha, as chatted about with Lily!

Want more Indigenous Science Resources? Check out [Relational Science Circle](#).

Want to learn more about Indigenous Science, Indigenous Science/Mathematics Teacher PD sessions, or have an idea for a guest or topic for the Ancestral Science Podcast, email relational.science@gmail.com

Gratitude to the OG support from Juan-Carlos Chavez, ongoing teachings gifted from Elders and Knowledge Keepers, Ancestors of past and future, and all the science and knowings of Stones and Stars.

