

E kaupē aku nō i ka hoe a kō mai

Put forward the paddle and draw it back.

Nicole A. Sapigao

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Nicole A. Sapigao, Indigenous Early Childhood Educators, is a kumu specializing in Early Childhood Education with a focus on Hawaiian Culture Based Education (HCBE). She teaches in a dual-language classroom setting, incorporating ‘Ōlelo Hawai‘i, Pelekānia, as well as Hawaiian practices and traditions into her curriculum. Correspondence regarding this STEM curriculum can be addressed to Nicole A. Sapigao, Institute for Native Pacific Education and Culture (INPEACE) - Keiki Steps, 87-790 Kulauku Street, Wai‘anae, HI 96792. Email contact: nicoleanns@inpeace.org

Context

Aloha kāua. I am Nicole Sapigao, a Kumu Alaka‘i at Keiki Steps, a Hawaiian Culture-Based Education (HCBE) Family-Child Interaction Learning (FCIL) program through the Institute for Native Pacific Education and Culture (INPEACE). We are a unique program here in Hawai‘i, truly one of a kind. We offer both dual-language (‘Ōlelo Hawai‘i/Pelekānia) and ‘Ōlelo Hawai‘i immersion classes, in-person and online. I currently serve as the Kumu Alaka‘i, or lead teacher, for one of our in-person, dual language classrooms.

I teach in the moku of ‘Ewa on Mondays and Tuesdays. This is my second year in this classroom. I have 14 haumāna who attend with their mākua and/or kūpuna. One ‘ohana has multiple siblings enrolled, while the rest are individual keiki with one caregiver. Our families are diverse, comprising Native Hawaiians, Filipinos, Samoans, Japanese, Koreans, and Caucasians. Most ‘ohana live in the ‘Ewa area, with two commuting from nearby towns. The median age of our keiki is 3 years old.

On Wednesdays and Thursdays, all Keiki Steps classes gather at the beach for our Ka‘ahele day, where learning takes place entirely outdoors. No classroom materials are brought, just what the ‘āina provides. It has been a powerful experience to witness haumāna who struggle indoors come alive outside, thriving in spaces where the ‘āina leads their learning and where they are free to move, explore, and grow without walls or limits.

I work with keiki ages 0–5. They call me ‘Anakē Nicole or Aunty Nicole, and I love it. In Hawai‘i, anyone older than you is “aunty” or “uncle.” Your parents’ friends? Aunties and uncles. The lady at the corner store? Aunty. The guy who helps you at the beach? Uncle. At Keiki Steps, we value the pilina and kuleana that come with being an ‘anakē. We believe mākua and kūpuna know what’s best for their keiki, and we are here to support them. That’s why we chose ‘anakē, rather than teacher, kumu, or Mrs., because it reflects our role in the ‘ohana.

I feel truly blessed to work not only with keiki but also with their mākua and kūpuna. As a multigenerational program, FCIL allows us to grow together. As a kumu, I am honored to teach keiki every aspect of our mo‘omeheu. But the most profound privilege is guiding mākua and beloved kūpuna, some of whom were once punished for speaking their ancestral ‘ōlelo, back to the ‘ōlelo that has always lived in their iwi.

I was raised in the moku of Wai‘anae, in the ahupua‘a of Nānākuli, the first Hawaiian homestead on O‘ahu. Today, I live in the moku of ‘Ewa, in the ‘ili ‘āina of Makakilo, which helps me connect even more deeply with the ‘ohana I serve. In Hawai‘i, we always connect by asking, “What’s your name? Where you from? What year you grad?” There are no typos there, it’s called Pidgin, and it’s how we talk. And it’s how we connect. So, when

‘ohana asks me, ““Anakē Nicole, where do you live?”” and I can say I live in the same area they do, that connection deepens instantly.

The entire west side of O‘ahu is where I come from. My roots are planted in Nānākuli, my classroom is in ‘Ewa, and our Ka‘ahele program thrives in Wai‘anae. Serving the leeward coast has always been my passion, and writing a curriculum like this, with Native Hawaiian keiki and ‘ohana at its heart, is both a privilege and a kuleana. It’s how I honor where I come from, uplift the next generation, and ensure that our mo‘omeheu, ‘ōlelo, and ‘ike are lived, not just learned.

Rationale

E kaupē aku nō i ka hoe a kō mai

Put forward the paddle and draw it back.

(Go on with the task that is started and finish it.)

‘Ōlelo No‘eau #319

This ‘Ōlelo No‘eau reminds me of ho‘omau: resilience, perseverance, persistence. Sometimes we begin a huaka‘i, however nui or li‘ili‘i, and something gets in the way. We may get frustrated and want to give up. The odds may be stacked against us, and we may even have every reason to give up, but e kaupē aku nō i ka hoe a kō mai is a reminder that we must paddle forward. This is what I want to teach the keiki I work with: never to give up, even when the odds are stacked against them, as children from lower-income neighborhoods, as Native Hawaiians, and as those often overlooked by a system not built for them. Ho‘omau!

With that, the topic for my curriculum unit this year is ho‘okele: Hawaiian navigation. Pwo (Master) Navigator Nainoa Thompson said during their first voyage on the Hōkūle‘a to Tahiti in 1976, “We were facing cultural extinction. There was no navigator from our culture left” (Thompson, n.d.). It is hard to fathom how long the ‘ike of ho‘okele was lost. Thompson later earned the title of master navigator through his relationship with Papa Mau Piailug, a Satawalese navigator who passed down the sacred knowledge of wayfinding.

I learned about Papa Mau in Ho‘okele I & II at Honolulu Community College from my kumu, Ka‘iulani Murphy, who was my inspiration for creating this curriculum. Her passion for teaching ho‘okele, as a navigator on the Hōkūle‘a herself, ignited something in me: a deep desire to carry on this ‘ike and share it with the next generation of keiki in a way that is both accessible and rooted in aloha ‘āina. I feel it is my kuleana to share this ‘ike on behalf of the generations who never had the opportunity to learn.

Our program is grounded in the moku of ‘Ewa and Wai‘anae on the island of O‘ahu. As we learn about ho‘okele, we also learn from the ‘āina we are kupa to, their mo‘olelo, and their deep pilina to the kai and lani.

In ‘Ewa, we stand on ‘āina that was once filled with thriving loko i‘a and mahi‘ai. The name “‘Ewa” comes from a mo‘olelo about the akua Kāne and Kanaloa, who threw a pohaku to mark the boundaries of the ‘āina, but the stone went astray, so “‘ewa” means “crooked” or “strayed.” One of the most special places here is Pu‘uloa, known today as Pearl Harbor. But long before it became a military base, Pu‘uloa was home to over 30 loko i‘a, making it one of the most extensive and productive fishpond systems in Hawai‘i. These loko i‘a were carefully built and cared for by generations of kanaka Hawai‘i, providing mea‘ai and showing an understanding of the balance between kai and lani (Kamehameha Schools, n.d.).

Sadly, much of that mō‘aukala was erased when the U.S. military stole Pu‘uloa and filled in many of the fishponds to build the naval base. Even though we don’t see the loko i‘a today, their mo‘olelo, inoa, and ‘ike still live on. Learning about ho‘okele in ‘Ewa is also about remembering what was once here, honoring the ingenuity of our kūpuna, and keeping their ‘ike alive.

In Wai‘anae, we walk in a place shaped by the mauka and makai. The name “Wai‘anae” means “waters of the ‘anae”, pointing to the abundance of these fish that once swam in great numbers along the coast. There’s a mo‘olelo that tells of a school of ‘anae swimming from the waters of Pu‘uloa, traveling west around Ka‘ena Point, and gathering in the calm bays of Wai‘anae to spawn. This journey of the ‘anae connects the two moku through the kai, reminding us that the ocean was, and still is, a highway, a source of life, and a link between kaiāulu (Young, 2019).

Looking up at the peaks of the Wai‘anae range or out at the horizon, we can imagine how our kūpuna watched the makani, the hōkū, the ao, and the ‘ōhū to guide their huaka‘i by wa‘a. Today, the waters surrounding O‘ahu are bordered by the great channels: Kaiwi Channel to the east, separating O‘ahu from Moloka‘i; ‘Alenuihāhā Channel beyond that, linking Maui to Hawai‘i Island; Kai‘ehīlani (Ka‘ie‘ie Waho) Channel to the north, between O‘ahu and Kaua‘i; and Kealaikahiki Channel near Lāna‘i, leading voyagers toward Tahiti. These channels were pathways of connection for our ancestors, and they remain important wayfinding points for modern navigators.

As we teach navigation here in ‘Ewa and Wai‘anae, we help our keiki and ‘ohana see that they, too, are navigators, finding their way by connecting with the ‘āina, the kai, the lani, and the mo‘olelo of these wahi pana. Together, we honor the ‘ike passed down and carry it forward for the next generation.

For me, this journey of ho‘okele is also deeply personal, because Nānākuli is my home. The name “Nānākuli” means “to look deaf” connected to a mo‘olelo of the people here being cautious about sharing resources with strangers. Growing up in Nānākuli, I’ve learned that while outsiders may have misunderstood or judged this place, our kaiāulu is ikaika, ha‘aheo, and full of aloha. Standing on the sands of Nānākuli Beach, watching the sunset over the ocean, I feel the same makani and see the same hōkū that guided our kūpuna. This is where my own ‘ike begins, where my pilina to the kai and ‘āina was first shaped, and where I hope to inspire our keiki to see themselves as part of this long line of ho‘okele.

In wā kahiko, it was decided in childhood whether or not a keiki would become a ho‘okele. “Knowledge of the stars, swells, and winds was imparted to hopeful youths who were selected at an early age, all of whom demonstrated characteristics or tendencies a master navigator identified as necessary for his trade” (Kahele, 2017).

My intention with this curriculum is to teach keiki not only about ho‘okele, but also:

Mo‘olelo

Hua‘ōlelo

Wa‘a building

Using different aho and tying techniques

Kilo

Pō mahina

Kūkuluokalani

Nā Kai ‘Ewalu

Noio

And most importantly, trusting your na‘au through a story about Nainoa Thompson on one of his voyages on the Hōkūle‘a.

In doing so, we help keiki see that ho‘okele isn’t just about navigating the ocean; it’s about navigating their own identity, resilience, and belonging.

Instructional Guide

This curriculum unit, rooted in Indigenous Hawaiian knowledge systems, introduces keiki to the foundational principles of ho‘okele through a STEM-integrated, culturally sustaining approach.

Grounded in the ‘Ike Kūpuna and revitalized by contemporary voyagers, this unit centers on the brilliance of Hawaiian science in the context of celestial navigation, environmental observation, and wayfinding.

The purpose of this unit is to foster a deep appreciation and practical understanding of the technologies, patterns, and cultural values embedded in ho‘okele. Through STEM, hands-on, inquiry-based learning, keiki will build cognitive, motor, and social-emotional skills while being grounded in ‘Ike Hawai‘i, ‘Ōlelo Hawai‘i, and culturally responsive practices.

i. Essential Background Ideas and Concepts

Key concepts in this unit include:

Kumulipo/Hawaiian Cosmogony: Introducing the Kumulipo to keiki, explicitly focusing on Ka Wā Umikūmāmahā, lines 1904-1911 (Beckwith, 1951). “A people’s origin story maps and integrates the key relationships with all aspects of the landscape. Hence, the origin stories of a people are presented via symbolic language, story, art, song, and ritual” (Cajete, 2020).

Celestial Navigation: Understanding the use of hōkū, pō mahina, and the Kūkuluokalani star compass for ho‘okele.

Kilo/Environmental Observation: Deep attentiveness to makani patterns, ao, currents, and manu behavior (e.g., noio).

Traditional Knowledge Systems: Integrating mo‘olelo/oral histories, hua‘ōlelo, and ‘Ike Kūpuna with modern STEM frameworks.

Wa‘a Technology: Exploring engineering principles through wa‘a building, aho, and construction techniques.

Na‘au-based Learning: Emphasizing internal knowing and intuition, inspired by Nainoa Thompson’s reflection on trusting his na‘au on his Hōkūle‘a voyage (Thompson, n.d.).

These foundational ideas reinforce Hawaiian worldview principles such as pilina, mālama, and a collective kuleana.

ii. Summary of Teaching Strategies, Lesson Sequence, and Assessment Plan

Teaching Strategies:

Culturally responsive mo‘olelo/storytelling as an anchor for content learning.

Hands-on exploration with natural materials for building wa‘a models and practicing aho techniques.

Collaborative kilo journaling to document moon phases and environmental kilo/observations.

Kinesthetic learning through re-enacting star navigation and mapping out the Kūkuluokalani.

Lesson Sequence:

He aha ka STEM? – What is STEM? Introduce STEM and connect it to Hawaiian culture.

Kumulipo – Introduce the creation story.

Intro to Ho‘okele through mo‘olelo – Students hear and retell stories of early navigators.

Hua‘olelo Focus – Learn key hua‘olelo through a variety of ha‘awina.

Kilo & Pō Mahina – Begin observation journals, track hōkū and pō mahina.

Wa‘a Design & Aho Techniques – Use problem-solving to construct mini wa‘a and practice different aho techniques.

Kūkuluokalani & Noio – Practice spatial reasoning and direction finding.

Na‘au – Reflect on intuition and ancestral connection through mo‘olelo.

Hō‘ike – ‘Ohana showcase with ho‘okele focus.

Assessment Plan:

- Observation checklists for ‘olelo and skill development
- Haumāna portfolios (drawings, journals, models)
- ‘Ohana reflections and participation in hō‘ike
- Anecdotal records capturing haumāna insights and growth

iii. Culturally Responsive and Sustaining Practices

This curriculum embeds culturally sustaining practices by supporting learning that is visual, hands-on, rooted in real-life experiences, and guided by direct engagement with the world around us. These approaches align with the natural ways many Indigenous learners come to know and understand (Brayboy & Castagno, 2008). These methods are deeply connected to the values upheld in Nā Honua Mauli Ola, which guide us to nurture the whole child spiritually, intellectually, emotionally, physically, and socially (Native Hawaiian Education Council, 2002).

Through this integrated and grounded approach, keiki are not only building STEM knowledge but also growing as responsible, capable, and caring members of their ‘ohana, kaiāulu, and lāhui.

Ka Ha‘awina (Activity): He aha Ka STEM?

Ka Wehena (Description): In this ha‘awina, keiki will be introduced to the idea of STEM (Science, Technology, Engineering, and Math) in a way that connects to their everyday lives and Hawaiian cultural practices. Using hands-on activities with natural materials, keiki will see how their kūpuna were scientists, builders, and problem-solvers.

Ke Kālaimana‘o (Objective): Haumāna will begin to recognize how science, technology, engineering, and math (STEM) are part of everyday life and Hawaiian culture by exploring natural materials, tools, and processes used by their kūpuna.

Nā Kālai‘ike (Standards):

Nā Honua Mauli Ola (NHMO):

- ‘Ike Na‘auao
- ‘Ike Mauli Lāhui
- ‘Ike Kuana‘ike

Hawai‘i Early Learning and Development Standards (HELDS):

- Science – Science and Engineering Practices: GK.KE.n, GK.KE.p
- Language – Vocabulary Acquisition and Use: LA.KE.ff

Culturally Responsive Principles:

- Indigenous knowledge systems and language: 4, 13, 21, 22
- Critical understandings: 9
- Relationality: 16, 17

Nā Lako (Materials):

- Natural materials (stones, leaves, sticks)
- Magnifying glasses
- Measuring cups
- Bowls of water
- Scale/balance
- Pictures of traditional tools.

Nā Ki‘ināa‘o (Teaching steps):

1. Begin with a small group and ask, "He aha ka STEM?" Introduce each part (Science, Technology, Engineering, Math) with a simple definition and a Hawaiian example.
2. Use ki‘i or real items to show how kūpuna used STEM (e.g., measuring aho, building wa‘a).
3. Do a simple experiment or problem-solving activity with keiki (e.g., build a mini bridge using lā‘au).
4. Talk-story about how STEM is used at home or outside (e.g., ku‘i kalo is math, lawai‘a is science).
5. Use new hua‘ōlelo like 'kilo', 'wa‘a', 'aho', and repeat throughout the ha‘awina.
6. Invite keiki to explore and try building with natural materials.

Pehea e palapala ai i ia hopena (How to Document This Evidence – System of collection):
Haumāna portfolios (drawings, journals, models)

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- Science – Science and Engineering Practices: GK.KE.n, GK.KE.p
- Language – Vocabulary Acquisition and Use: LA.KE.ff

Culturally Responsive Principles:

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6. Invite keiki to explore and try building with natural materials.

Pehea e palapala ai i ia hopena (How to Document This Evidence – System of collection):

Haumāna portfolios (drawings, journals, models)

Ka Wehena (Description): In this ha‘awina, keiki will hear the mo‘olelo of *La ‘amaikahiki*, a voyager who sailed from Kahiki to Hawai‘i on a wa‘a, bringing the pahu and ‘ike from a faraway ‘āina.

Ke Kālaimana‘o (Objective): Haumāna will demonstrate an understanding of ho‘okele by retelling mo‘olelo of early navigators using visual storytelling (drawing, puppets, reenactment).

Nā Kālai‘ike (Standards):

Nā Honua Mauli Ola (NHMO):

- ‘Ike Kuana‘ike
- ‘Ike Pilina
- ‘Ike Mauli Lāhui

Hawai‘i Early Learning and Development Standards (HELDS):

- Reading Literature – Key Ideas and Details: LA.KE.g
- Emotional Development – Emotional Expression: SE.KE.j
- Learning Approaches – Reflection and Interpretation: AL/LA.48-KE.e

Culturally Responsive Principles:

- Indigenous knowledge systems: 4, 13, 21
- Critical understandings: 9

Nā Lako (Materials):

- La‘amaikahiki puke
- Drawing supplies (crayons, markers, paper)
- Kala‘au sticks (can use wooden dowels, as well)

Nā Ki‘ināa‘o (Teaching steps):

1. Gather keiki and introduce the name La‘amaikahiki. Tell them: “Today we will hear the story of a brave voyager who came from far away!”
2. Read or tell the story of La‘amaikahiki. Pause to explain important words (like wa‘a, pahu, hōkū and ‘Ōpuku and Hāwea which are the drums that La‘amaikahi brought to Hawai‘i).
3. Invite keiki to paddle their arms like they are on a wa‘a, pretend to feel the makani, and move with the nalu.
4. In the pāheona center, keiki can draw the huaka‘i of La‘amaikahiki to Hawai‘i.

5. In closing/reflecting at the end of the day, introduce kala‘au sticks and have keiki drum on the ground as if they were drumming on ‘Ōpuku and Hāwea.

Pehea e palapala ai i ia hopena (How to Document This Evidence – System of collection):
Observation checklists for ‘ōlelo and skill development

Ka Ha‘awina (Activity): Hua‘ōlelo Focus

Ka Wehena (Description): In this ha‘awina, keiki will learn and practice important hua‘ōlelo related to ho‘okele and the natural world. Using games, songs, and hands-on activities, they will hear and use words like wa‘a (*canoe*), noio (*black noddy bird*), hōkū (*star*), pahu (*drum*), and aho (*rope*).

Ke Kālaimana‘o (Objective): Haumāna will learn and use key hua‘ōlelo ho‘okele through various ha‘awina.

Nā Kālai‘ike (Standards):

Nā Honua Mauli Ola (NHMO):

- ‘Ike ‘Ōlelo
- ‘Ike Mauli Lāhui
- ‘Ike Pilina

Hawai‘i Early Learning and Development Standards (HELDS):

- Language – Vocabulary Acquisition and Use: LA.KE.ff
- Reading Literature – Key Ideas and Details: LA.KE.g

Culturally Responsive Principles:

- Indigenous Knowledge Systems: 4, 13, 21, 22
- Relationality: 16, 17

Nā Lako (Materials):

- Picture cards with hua‘ōlelo related to ho‘okele (e.g., wa‘a, hōkū, noio, kai, aho mahina, hoe)
- Three copies of each picture
- Space for forming a large circle
- Timer

Nā Ki‘ināa‘o (Teaching steps):

1. the hua‘ōlelo. (ie. “He aha kēia? He ____ kēnā.”)
2. Ask keiki to share their favorite hua‘ōlelo or ki‘i Prepare and print three copies of each hua‘ōlelo picture card.
3. Give each keiki and kumu one card and ask them to look closely at their ki‘i and repeat the hua‘ōlelo. Practice saying the hua‘ōlelo together.
4. All keiki and kumu stand in a large circle, each holding their card. One person starts in the middle (kumu can demonstrate first).
5. The person in the center calls out one hua‘ōlelo that is on someone else’s card.
6. Everyone holding that card (wa‘a, for example) must quickly leave their spot and run to a new spot in the circle, **not the one they just came from**.
7. The person in the middle also tries to run and find an open spot.
8. Whoever is left without a spot is now in the middle and calls out the next hua‘ōlelo.
9. Continue for a few minutes or until attention begins to wane. Use a timer if needed.
10. Sit together as a group and hold up the cards again. Ask keiki to say the hua‘ōlelo they have and identify someone else with the same one.
11. Use repetition to review the meanings and sounds of.

Pehea e palapala ai i ia hopena (How to Document This Evidence – System of collection)
Observation checklists for ‘ōlelo and skill development

Ka Ha‘awina (Activity): Kilo & Pō Mahina

Ka Wehena (Description): In this ha‘awina, keiki will begin to kilo the mahina and learn to identify its different phases using the Mele Helu Pō, a traditional moon phase chant. Keiki will practice daily observation and expression through drawing, discussion, and journaling. To extend learning, keiki will take home a simple observation journal to record the moon with their ‘ohana for one week.

Ke Kālaimana‘o (Objective): Haumāna will engage in observation of the natural environment and record findings about the pō mahina and hōkū using journals, drawings, and group discussions.

Nā Kālai‘ike (Standards):

Nā Honua Mauli Ola (NHMO):

- ‘Ike Na‘auao
- ‘Ike Pilina
- ‘Ike Mauli Lāhui

Hawai‘i Early Learning and Development Standards (HELDS):

- Language – Vocabulary Acquisition and Use: LA.KE.ff
- Reading Literature – Key Ideas and Details: LA.KE.g
- Science – Science and Engineering Practices: GK.KE.n, GK.KE.p
- Learning Approaches – Reflection and Interpretation : AL/LA.48-KE.e

Culturally Responsive Principles:

- Indigenous knowledge systems and language: 4, 13
- Relationality: 16, 17

Nā Lako (Materials):

- Mele Helu Pō lyrics (with visuals)
- Poster or chart of pō mahina with illustrations
- Personal observation journals (with space to draw the mahina)
- Crayons, pencils

Nā Ki‘ināa‘o (Teaching steps):

1. Show keiki a visual calendar of the moon phases. Talk about how our kūpuna would kilo to know when to plant, fish, or rest.
2. Teach and practice Mele Helu Pō with hand motions to represent each phase. Repeat daily during linapoepoe mua.
3. If visible, look for the moon together outside. If not, use photos of the current phase. Keiki draw what they see or the phase of the day in their journal.
4. Give keiki a small journal and ask them to kilo the mahina each night for one week with their ‘ohana. They will draw what they see and talk about the shape or color.
5. After the week, keiki bring back their journals. Share what they were able to kilo together in a circle.

Pehea e palapala ai i ia hopena (How to Document This Evidence – System of collection):

- Haumāna portfolios (drawings, journals, models)
- Anecdotal records capturing haumāna insights and growth

Ka Ha‘awina (Activity): Wa‘a Design & Aho Techniques

Ka Wehena (Description): Keiki will use problem-solving and creativity to design and build small wa‘a models using natural materials. They will practice weaving and tying aho techniques inspired by traditional Hawaiian methods.

Ke Kālaimana‘o (Objective): Haumāna will use fine motor skills and problem-solving to design a mini wa‘a and experiment with different aho techniques using natural materials.

Nā Kālai‘ike (Standards):

Nā Honua Mauli Ola (NHMO):

- ‘Ike ‘Ōlelo
- ‘Ike Mauli Lāhui
- ‘Ike Pilina

Hawai‘i Early Learning and Development Standards (HELDS):

- Language – Vocabulary Acquisition and Use: LA.KE.ff
- Reading Literature – Key Ideas and Details: LA.KE.g
- Science – Scientific and Engineering Practices: GK.KE.n
- Mathematics and Numeracy – Geometry: GK.KE.m

Culturally Responsive Principles:

- Indigenous knowledge systems and language: 4, 13
- Relationality: 16, 17

Nā Lako (Materials):

- Natural sticks
- Leaves
- Bark strips
- Soft vines or string for aho
- Scissors (child-safe)
- Glue
- Pictures or models of wa‘a.

Nā Ki‘ināa‘o (Teaching steps):

1. Show ki‘i of a wa‘a. Talk about its parts.
2. Introduce simple aho tying techniques using string or vines. (starting with a simple knot tying activity may work best)
3. Give keiki materials and encourage building their own mini wa‘a.
4. Guide keiki to try tying aho knots or weaving with vines.
5. Ask keiki how they solved problems during building.
6. Share and celebrate each wa‘a creation.

Pehea e palapala ai i ia hopena (How to Document This Evidence – System of collection):

Haumāna portfolios (drawings, journals, models)

Ka Ha‘awina (Activity): Kūkuluokalani & Noio

Ka Wehena (Description): Haumāna will explore directionality and spatial relationships by engaging with the Kūkuluokalani and learning how manu like noio are used in ho‘okele.

Ke Kālaimana‘o (Objective): Keiki will explore Kūkuluokalani and learn how birds like the noio help navigators find direction. This ha‘awina strengthens spatial awareness and understanding of natural navigation.

Nā Kālai‘ike (Standards):

Nā Honua Mauli Ola (NHMO):

- ‘Ike Kuana‘ike
- ‘Ike ‘Ōlelo
- ‘Ike Na‘auao

Hawai‘i Early Learning and Development Standards (HELDS):

- Language – Vocabulary Acquisition and Use: LA.KE.ff
- Reading Literature – Key Ideas and Details: LA.KE.g
- Social Studies – Geography: GK.KE.bb
- Science – Earth’s Place in the Universe: GE.KE.x

Culturally Responsive Principles:

- Indigenous knowledge systems and language: 4, 13
- Relationality: 16, 17

Nā Lako (Materials):

- Kūkuluokalani
- Ki‘i of noio
- Compass

Nā Ki‘ināa‘o (Teaching steps):

1. Share the Kūkuluokalani and explain its history.
2. Kukulu-o-ka-lani translates to the circle of the heavens. Maud W. Makemson wrote, “Malo further specifies it to be ‘the walls of heaven; the border of the sky where it meets the ocean,’ while Kamakau adds, ‘the place above the dark clouds encircling the earth’ (Makemson, 1938).
3. Nainoa Thompson created Kūkuluokalani after studying, learning, and becoming a Pwo master navigator under Pius Mau Piailug, also known as “Papa Mau.” He was a master navigator in Satawal who used a star compass, similar to the one in which Kūkuluokalani was created, known as the Paafu.
4. Kūkuluokalani is a special star map that helps wayfinders know which way to go when sailing the moana. It is to be memorized and is still used today in ho‘okele.
5. Introduce the noio and tell how it helps find direction.
6. The noio is a smart seabird. It flies out from land to look for fish, but it does not go too far. At night, it flies back home to land. So, if a wayfinder sees a noio flying in the evening, they know that land is in the direction the bird is going.
7. Practice using a compass or direction wheel to find ‘ākau, hema, hikina, komohana.
8. Using Kūkuluokalani, figure out where the noio would be flying in your space, and everyone flies there!
- 9.

Pehea e palapala ai i ia hopena (How to Document This Evidence – System of collection):

Haumāna portfolios (drawings, journals, models)

Ka Ha‘awina (Activity): Na‘au

Ka Wehena (Description): Through a simple mo‘olelo about Nainoa Thompson, keiki will reflect on na‘au (their feelings, intuition, and inner knowing), connecting to the Hawaiian value of ‘Ike Ku‘una.

Ke Kālaimana‘o (Objective): Haumāna will identify and express feelings of intuition or internal knowing (na‘au) through listening to a mo‘olelo about Nainoa Thompson and discussing times they felt something important in their na‘au.

Nā Kālai‘ike (Standards):

Nā Honua Mauli Ola (NHMO):

- ‘Ike Pilina
- ‘Ike Mauli Lāhui
- ‘Ike Na‘auao

Hawai‘i Early Learning and Development Standards (HELDS):

- Emotional Development – Emotional Expression: SE.KE.j
- Learning Approaches – Reflection and Interpretation: AL/LA.48-KE.e
- Language – Vocabulary Acquisition and Use: LA.KE.ff
- Reading Literature – Key Ideas and Details: LA.KE.g

Culturally Responsive Principles:

- Indigenous knowledge systems and language: 4, 13
- Critical understandings: 9
- Relationality: 16, 17

Nā Lako (Materials):

- Mo‘olelo about Nainoa Thompson
- Drawing paper
- Crayons

Nā Ki‘ināa‘o (Teaching steps):

1. Tell or read the mo‘olelo of Nainoa Thompson, focusing on his courage and listening to his na‘au.
2. Ask keiki if they ever felt something important inside their heart or mind.
3. Invite keiki to draw or share their feelings of na‘au.
4. Reinforce that na‘au helps guide us like the hōkū guide voyagers.
5. Close with a quiet breathing activity to connect inwardly. (ie. hanu mai i nā pua, hanu aku i ke ahi)

Pehea e palapala ai i ia hopena (How to Document This Evidence – System of collection):

Haumāna portfolios (drawings, journals, models)

Ka Ha‘awina (Activity): Hō‘ike

Ka Wehena (Description): This culminating ha‘awina is an ‘ohana event where keiki share their learning about ho‘okele through demonstrations, art displays, and mo‘olelo. It honors community and cultural pride while strengthening relationships. .

Ke Kālaimana‘o (Objective): Haumāna will share what they learned about ho‘okele with their ‘ohana through demonstration and display.

Nā Kālai‘ike (Standards):

Nā Honua Mauli Ola (NHMO):

- Ike Pilina
- ‘Ike Mauli Lāhui
- ‘Ike ‘Ōlelo

Hawai‘i Early Learning and Development Standards (HELDS):

- Emotional Development – Emotional Expression: SE.KE.j
- Learning Approaches – Reflection and Interpretation: AL/LA.48-KE.e
- Language – Vocabulary Acquisition and Use: LA.KE.ff
- Reading Literature – Key Ideas and Details: LA.KE.g

Culturally Responsive Principles:

- Indigenous knowledge systems and language: 4, 13, 21, 22
- Critical understandings: 9
- Relationality: 16, 17

Nā Lako (Materials):

- Keiki artwork
- Wa‘a models
- Journals
- Ki‘i
- Display boards
- Mele
- Puke

Nā Ki‘ināa‘o (Teaching steps):

1. Prepare keiki to explain or show something they learned (a hua‘olelo, a ki‘i, a mo‘olelo).
2. Invite ‘ohana to visit the papa.
3. Help keiki share their wa‘a, art, journals, or retell mo‘olelo.
4. Read puke together.
5. Celebrate keiki learning and ‘ohana support.
6. Close with a shared mele or ‘oli.

Pehea e palapala ai i ia hopena (How to Document This Evidence – System of collection):

‘Ohana reflections and participation in hō‘ike

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