

Aloha 'Āina Packet

'Ahu'awa Is Super Pa'a!

Aloha! 'O _____
ko'u inoa.
(*Hi, my name is...*)

No _____ mai au.
(*___ is where I'm from*)

Manawa (date): _____

The purpose of this Aloha 'Āina Packet is to provide keiki with fun activities that can connect them to 'āina from home while we “shelter-in-place” during the COVID-19 crisis. We want to encourage our keiki to go outside and to open their senses to the environment around them in a safe and healthy way.

All activities in this packet can be done with your 'ohana!

The Aloha 'Āina Packet was brought to you by the Wai'anae Wellness and Place-Based Learning Alliance:

The Cultural Learning Center at Ka'ala
Hoa 'Āina O Mākaha
Mālama Learning Center
MA'O Organic Farms
PALS & PLACES, University of Hawai'i at Mānoa,
Searider Productions
Wai'anae Coast Comprehensive Health Center

The Wai'anae Wellness and Place-Based Learning Alliance is an informal association of community-based organizations that are dedicated to providing hands-on, place-based learning experiences and connections to healthy living for Wai'anae children and families.

Mahalo to Hoa 'Āina O Mākaha, Nānākuli Elementary School, Ulu A'e Learning Center, University of Hawai'i at Mānoa Cooperative Extension Service, PALS & PLACES, Corteva Agriscience, and all of our partners for making it possible to get these packets into the hands of our keiki.

Produced in May 2020

If you have any questions about this packet, please contact Mālama Learning Center at info@malamalearningcenter.org or 808-305-8287.



Mālama
Learning
Center

'Ahu'awa Is Super Pa'a (Durable, Sturdy)!

Why are Native Plants Important?

Native plants are important to Hawai'i's ecosystems. Native plants arrived to the islands naturally, arriving by one of the three W's: Wind, Wings (birds), and Waves. Native Hawaiian plants are either indigenous (occurring naturally in Hawai'i and other locations) or endemic (found only in the Hawaiian Islands). Native plants provide services such as creating habitat for other native species, recharging our groundwater aquifers, and providing resources to practice Hawaiian culture. Many native plants can be used for multiple purposes such as medicine, tools, canoe, hale building, and much more making their existence vital to our cultural identity. Today, native species are being threatened by invasive species, development, wildfires, and other human causes.



'Ahu'awa is versatile! It is flood tolerant and can grow in dry, wet, and moist environments, as well as in standing water. Photo from: <http://hawaiiannativeplants.com>

Importance of the Native 'Ahu'awa

Scientific Name: *Cyperus javanicus*

Status: indigenous to Hawai'i

'Ahu'awa is a very important plant for our native water ecosystems - this plant is great for flood and erosion control along the coast, stream banks, and along lo'i beds. 'Ahu'awa tolerates a variety of conditions (salty water and soils, drought, salt spray, and heat) making it a very pa'a (durable, sturdy) plant and is great for restoring muliwai or estuaries where the stream and ocean come together. 'Ahu'awa can also provide habitat for species such as native waterbirds like the Ae'o (Hawaiian Stilt). 'Ahu'awa is a sedge - be careful, sedges have edges! Leaves of this plant have sharp edges that can easily cut you so it's best not to plant it in a high traffic area. Native plants are not only important for the ecosystem, but provide many benefits for humans. The fibrous stems of 'ahu'awa can be woven into durable cordage. Cordage was traditionally used as nets, carriers for 'umeke (containers), fishing line, and canoe rigging. The cordage was also used as strainers for 'awa, niu (coconut), and medicines. Finally, many native plants have multiple uses for lā'au lapa'au or natural medicine. 'Ahu'awa can be made into a powder that, combined with other ingredients, are remedies to treat deep cuts, bruises, boils, and cold sores. All native plants have a purpose so let's continue to grow more native plants like 'ahu'awa!

Plant Info Source:

http://nativeplants.hawaii.edu/plant/view/Cyperus_javanicus#top

‘Ōlelo No‘eau
(Hawaiian Wise Saying/Proverb)

‘Ōlelo No‘eau:

‘A‘ohe hana nui ke alu ‘ia

No task is too big when done together by all.
Many hands make light work.

Source: ‘Ōlelo No‘eau: Hawaiian Proverbs and Poetical Sayings by
Mary Kawena Puku‘i.

What does this saying mean to you? Why is it beneficial to work together in life? Share an example where you accomplished an important goal/task by working with others (at school, home, sports, volunteering, etc...). Write your answers below.

'Āina Activity - Grow Your Own 'Ahu'awa Plant

How to Plant 'Ahu'awa Seeds

1. Gather the seeds of the 'ahu'awa when they are dry and brown. The seeds grow in bunches and can easily be removed from the spikes.
2. Remove the seed coat by using a strainer or paper towel and gently rubbing the seeds with your fingers.
3. Get a small pot or make one (see instructions below).
4. Fill $\frac{3}{4}$ of the pot with loose soil that you can find around your house.
5. Sprinkle your seeds over the soil.
6. Lightly cover the seeds with a layer of soil so that they're covered.
7. Try to make sure the seeds are close to the surface of the soil. You don't want the seeds to be buried too deep where they are unable to break through the soil.
8. Once you've planted your seeds, say "E Ola! E ulu e!". (Live and grow!)
9. Carefully water your plant everyday, sprinkling water with your fingers so that it is like a gentle rain. Provide enough water so that all of the soil is moist, but be careful not to overflow your pot. Don't let the soil dry out.
10. Wait for 'ahu'awa seeds to germinate. The seeds may take a few weeks to germinate -- be patient!
11. Take care of seedlings by watering and giving them sunlight.
12. Gently move seedlings to bigger pots once they outgrow the original pots. Eventually, you can put the plants in the ground if you have a yard.



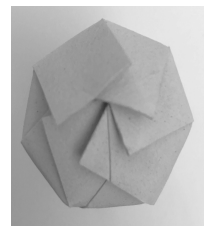
Use a strainer or paper towel to remove the seed coat of the 'ahu'awa



Seeds of the 'ahu'awa plant



Move your seedling into a bigger pot to allow it to grow bigger.



Recycled Toilet Paper Roll Plant Pot

1. Take an empty toilet paper roll and make 1-inch cuts around one end of the roll, approximately a half inch apart.
2. Fold the cut sections in towards the center of the roll, this will create the bottom of your pot.
3. Pau! Now you have a small recycled pot to get your plant started in. You may want to eventually plant the pot in the ground since it's biodegradable and will not last too long once watered.

‘Āina Activity: Homemade Plant Press

Materials:

- Plant specimens (leaves and flowers that are thin)
- Newspaper
- Heavy objects (2-3 books/textbooks, weights, wooden pieces) - this is to press the plant
- Index card
- Clear glue (for example, Modge podge)
- Pen/pencil

Directions:

1. Collect leaves, flowers, seeds, roots from your garden or yard (be sure they're in your own yard or an area where you're allowed to collect from).
2. Open a book and line the open pages with newspaper.
3. Place your plant specimens (as flat as you can) on the newspaper between the pages of a book.
4. Carefully close the book and weigh it down using heavy objects (more books, weights, etc...) to press the plant. Place in a warm, dry space.
5. Wait for them to dry - It will take at least a week for the plants to dry (longer for bigger plants).
6. Once dried, carefully arrange specimens onto index card(s).
7. Use glue to mount the pressed flowers onto the index card.
8. Label your card with the plant name and date.
9. You can make a greeting card or place it in picture frame and give it as a gift!

*Plant presses are a great way to practice your plant ID skills and save plant specimens in a creative way. Start your own native Hawaiian plant collection!



Activity & Photo Source:

<https://www.nhm.ac.uk/discover/how-to-press-flowers.html>

Kilo 'Āina

(Observing our Environment)

Take 15 minutes everyday to observe natural phenomena (wind, sun, moon, rain, clouds, plants, animals, ocean, etc...) and describe what you see, hear, and feel. You can also draw pictures. Try to do this in silence so that you can really connect to your place. You can also show progress of the seeds that you've planted!

Kilo Day 1

Manawa (date):

Mahina (moon):

Kilo (observation):

Kilo 'Āina

Kilo Day 2

Manawa (date):

Mahina (moon):

Kilo (observations):

Kilo Day 3

Manawa (date):

Mahina (moon):

Kilo (observations):

Kilo 'Āina

Kilo Day 4

Manawa (date):

Mahina (moon):

Kilo (observations):

Kilo Day 5

Manawa (date):

Mahina (moon):

Kilo (observations):

Kilo 'Āina

Kilo Day 6

Manawa (date):

Mahina (moon):

Kilo (observations):

Kilo Day 7

Manawa (date):

Mahina (moon):

Kilo (observations):

'A'ole Invasive Species!

The CRB Life Cycle

Coconut Rhinoceros Beetle

The Coconut Rhinoceros Beetle (CRB) was first detected in Hawai'i (on O'ahu) in December 2013. CRB is considered a highly invasive species in Hawai'i due to the damage they cause to our palm species including our native Loulu palm.



Coconut Rhinoceros Beetle Life Cycle

CRB has four life stages: egg, larva or grub, pupa, and adult.

Egg: A Coconut Rhinoceros Beetle (CRB) female adult can lay up to 4 clutches of up to 50 eggs within their lifetime (9 months).

Larva/Grub: Larvae/Grubs feed only on decaying vegetation and do no harm to people. There are three larval stages. The larvae are usually yellowish-white in color and may grow to about 2-4 inch long.

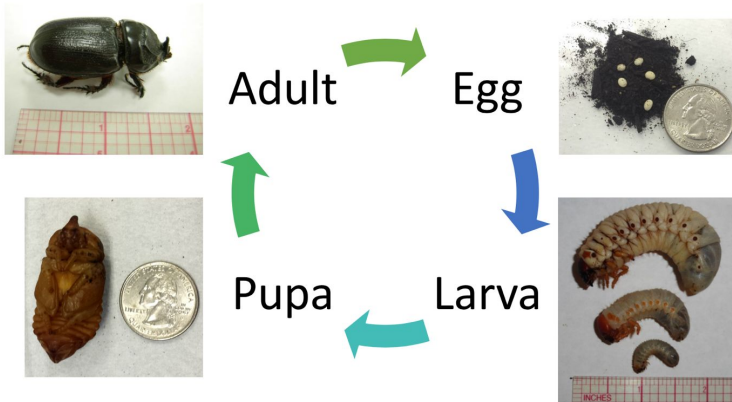
Pupa: The pupa is yellowish-brown in color and measures up to 2 inches in length. The length of its segmented bottom can help indicate the sex of the adult.

Adult: Only the adult stage causes damage. Adults can live up to 9-10 months. Adults grow up to 1.5-2 inches long. Adult males and females bore holes (a sign of CRB damage) into the crowns of coconut palms and other palms to feed on sap. Damaged crowns cause damaged leaves to eventually emerge from the crown, they have v-shaped cuts in them (another distinctive sign of CRB damage). Each adult feeds on sap for only a few days. It then leaves the crown to search for a breeding site – in mulch, and other decomposing matter. If the CRB continue to bore into the trees, the trees will eventually die.

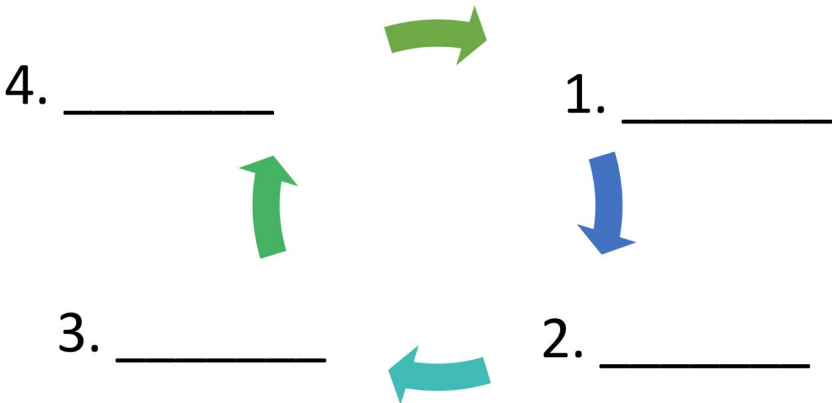
'A'ole Invasive Species!

The CRB Life Cycle

The Coconut Rhinoceros Beetle Life Cycle



What are the four stages of the Coconut Rhinoceros Beetle life cycle? Draw and label below. Write one fact about each stage below and how we could stop the life cycle at these stages.

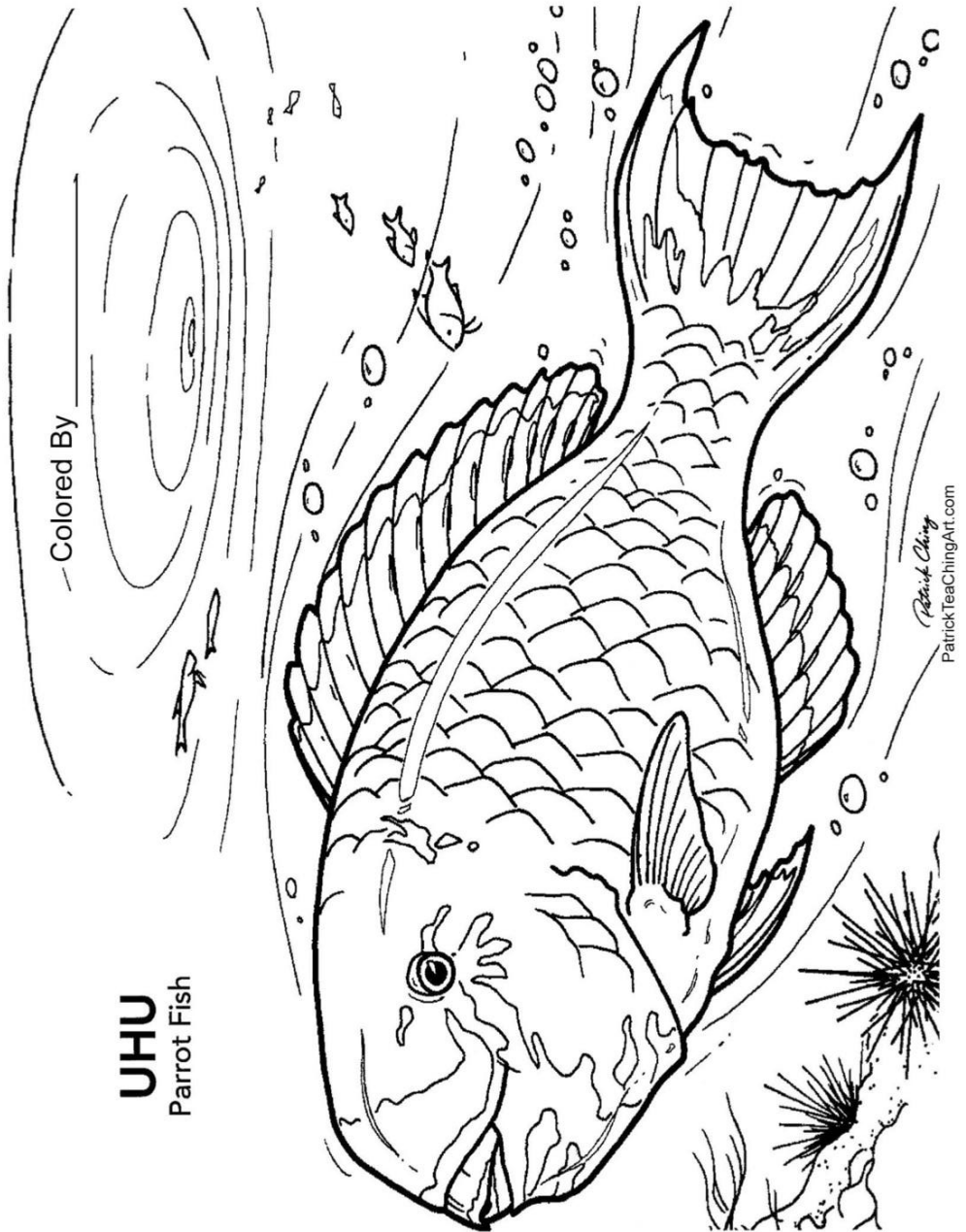


If you see any CRB or suspected damage (V-shaped cuts or bore holes) caused by CRB, please report it to the State PEST HOTLINE – 643-PEST (7378). Please ask an adult before calling. Please DO NOT kill or collect any CRB specimens. Report it to the PEST HOTLINE and take pictures!

Hana No'eau Activity

Enjoy this coloring sheet made by Native Hawaiian artist Patrick Ching.

Uhu are Hawaii's parrotfish. Uhu are colorful reef dwellers that feed on the coral. After they eat, they expel out sand. Interesting fact: Hawaii's white sandy beaches contain parrotfish poop. Another interesting fact: the female fish swap sexes and turn into males after the "supermale" of a spawning site dies. Uhu is such an interesting Hawaiian fish!!



Colored By _____

UHU
Parrot Fish

Patrick Ching
PatrickTeaChingArt.com

Did You Know?

‘Opihi

There are 3 types of ‘opihi endemic to Hawai‘i.
They are found nowhere else in the world.



‘Opihi Makaiuli
Lives highest out of water

‘Opihi ‘Ālinalina
Known as the lū‘au ‘opihi

‘Opihi Kō‘ele
Largest of ‘opihi

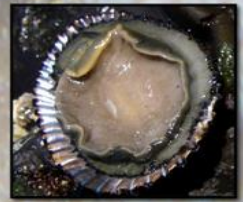


He i‘a make ka ‘opihi

The ‘opihi is a fish of death. Very dangerous to collect. (Pukui 1983)



*Did you know that
‘opihi have gills?*



© 2010 Pelika Bertelmann · Pilina Kai, 2nd Edition · pelikaok@hawaii.edu

Source: Pilina Kai

<http://www2.hawaii.edu/~pelikaok/resource.html>

Hana No'eau Activity

PICTURE CROSSWORD

<https://marinedebris.noaa.gov/>

Types of Marine Debris



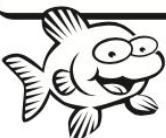
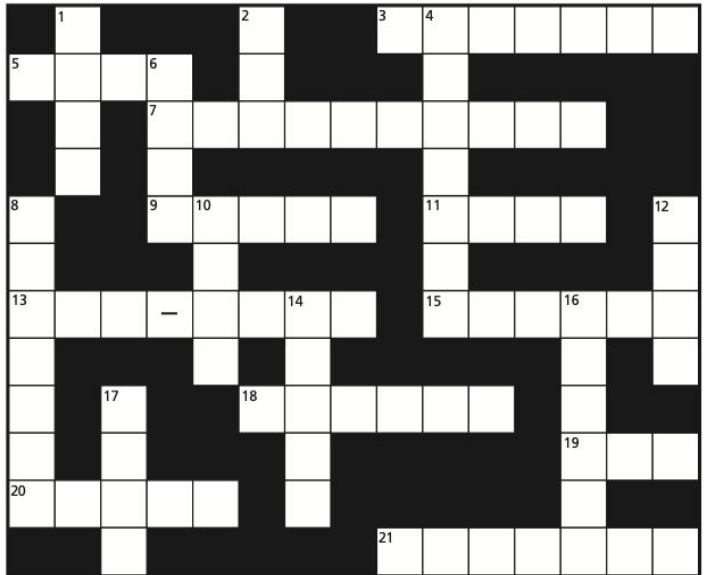
MARINE DEBRIS COMES FROM MANY SOURCES

ACROSS:

These litter items are generated by people on land such as beachgoers, picnickers, and those who improperly dump their trash.

DOWN:

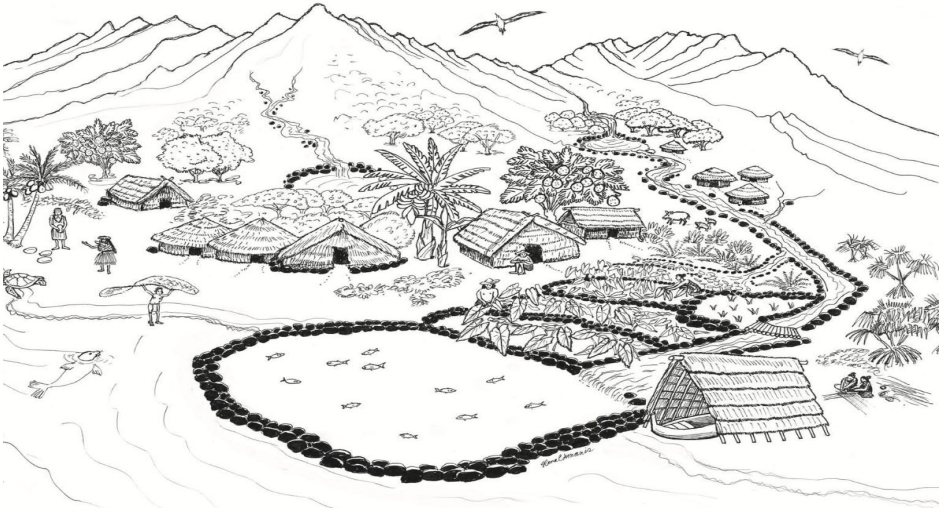
These litter items are generated by people at sea such as boaters, fishermen, and passengers on cargo or cruise ships.



For more great activities, information, and what you can do to prevent marine debris visit <https://marinedebris.noaa.gov/>

‘Āina Reflection

How does the traditional Hawaiian ahupua‘a system compare with the modern city landscape? Look at the two drawings and compare and contrast (on the next page) how the land is used. Feel free to color in the two drawings to add more detail.



Traditional Hawaiian Ahupua‘a



Modern City Landscape

'Āina Reflection Continued

Fill out the diagram below to compare and contrast the two drawings on the previous page. What is unique (different) about each drawing and what is alike about them?

Traditional Hawaiian
Ahupua'a

Modern City Landscape

Contrast - Different

Contrast - Different

Alike -
Compare

If you need more space, you can add to your answers here:

'Ohana Activity

SPROUT SOME SPROUTS!

Materials:

- * Wide mouth Quart Jar
- * Sprouting screen
- * Jar lid
- * Sprouting seed of your choice

Steps:

- 1 Sterilize your jar, screen + lid with boiling water. Sterilize your sprout seeds in 1 quart water with 1 teaspoon bleach.
- 2 Measure 2 Tablespoons (or desired amount of seed) into your clean jar
Ex: * alfalfa yield about 7:1
* onion seeds yield 4.5:1
* mung bean sprouts yield 2:1

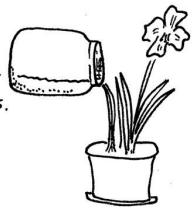


3 Rinse seeds. TIP: USE RINSE AND SOAK WATER TO WATER YOUR PLANTS.

4 Soak your seeds 8-12 hours.
* Cool, clean water (60°-70°)

5 Rinse and drain your seeds.
* Add water until your sprouts and seeds move freely. Vigorously shake and swirl. Water your favorite plant.

- 6 For Growing period: Rinse and drain every 8-12 hours.
 - * alfalfa - about 3 days
 - * onion - about 10 days
 - * mung beans - about 4 days



NOTE: IMPORTANT DRAIN VERY THOROUGHLY AT EACH RINSE AND DRAIN STEP



7 Greening: for sprouts such as alfalfa and onion, a day with indirect sunlight - Experiment to see how little light you need!
PHOTOSYNTHESIS IS AMAZING!



- 8 Final Rinse: transfer your sprouts into a large bowl filled with cool, clean water. Loosen the sprout mass with your fingers. Skim off any loose hulls and compost.

Drain sprouts well, refrigerate and **ENJOY!**

* Consuming raw or under cooked foods may increase your risk of food borne illness.

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'Ohana Activity

E Kama'ilio Kākou

Let's Converse!

Practice saying what you like or like to do in 'ōlelo Hawai'i
(Hawaiian language).

Makemake + au + i + _____ Object _____.
I like the _____.

Makemake + au + e + _____ Verb _____.
I like to _____.

Hua'ōlelo (Word) Examples:

Objects	Verbs
Ka Mea'ai - Food	Pā'ani - Play
Nā Hua - Fruits	Kanikapila - Play Music
Ke Kahakai - Beach	He'e Nalu - Surf
Ke Kuahiwi - Mountain	Holoholo - Walk, ride
Nā La'āu - Plants	Heluhelu - Read
Ke Kalo - Kalo	Kuke - Cook
Nā Holoholona - Animals	Hula - Dance
Nā Mea Pā'ani - Toys	Hiamoe - Sleep
Ke Kelepona - Phone	Wala'au - Talk

Check out the Online Hawaiian Dictionary to
research more hua'ōlelo: <http://wehewehe.org/>

'Ono Healthy Recipe

Enjoy this 'ono Koele Palau (Sweet Potato Pudding) recipe with your 'ohana at home.

Ingredients

- 3 pounds Okinawan sweet potato
- 2 cans (12 ounces each) frozen coconut milk, thawed
- Shredded coconut, if desired

Instructions

- Place sweet potatoes in large saucepan, cover with water.
- Bring to a boil, lower heat, and cook until tender (about 30-40 minutes).
- Peel and mash sweet potatoes.
- Stir in coconut milk.
- Garnish with shredded coconut if desired.
- Serve warm or cold.
- Enjoy!



Recipe Source: Hawaiian Electric

[https://www.hawaiianelectric.com/recipes/find-a-recipe/koele-palau-\(sweet-potato-pudding\)](https://www.hawaiianelectric.com/recipes/find-a-recipe/koele-palau-(sweet-potato-pudding))

Photo Sources: Frolic Hawai'i

<https://www.frolichawaii.com/stories/hfwf15-kamehameha-schools-presents-urban-luau?amp> & Windward CTE Twitter

<https://twitter.com/WindwardCTE/status/1084350163533975552>

Weekly Mahalos!

Write or draw three things you're thankful for this week:

1.

2.

3.

Olakino (Healthy Body)

Here are some reminders to keep you and your 'ohana safe & healthy during the health crisis we are facing with COVID-19:

- Drink lots of wai (water) to stay hydrated.
- Be active. Work your muscles!
- Get a good night's rest everyday.
- Eat well. Limit fast foods that are high in fat and sugar.
- Wash your hands with soap frequently for at least 20 seconds.
- Avoid touching your face (eyes, nose, mouth).
- Clean and disinfect frequently touched objects and surfaces.
- Avoid hugs, handholding, and handshakes. Give the shaka!
- Spread aloha always.

What else can you do to keep your 'ohana safe and healthy?



Did you know? Native snails play an important role in the ecosystem. Snails are decomposers; they help break down dead or decaying organisms. They are bioindicators, meaning the more species that are present in an ecosystem; the more healthy it is. We love native snails in the forest, just not in our food!

**ALWAYS THOROUGHLY WASH YOUR HANDS & FRESH PRODUCE
BEFORE EATING!**

Share Your Progress!

Mahalo for completing our Aloha 'Āina Packet! We hope you enjoyed the activities! Please share your progress with us by taking photos of anything you'd like to share and posting to your social media (tag us). Or send your photos directly to us through email. We would love to see how you're doing! We plan to make weekly packets with different activities until the end of your school year.

Mālama Learning Center

Social Media: #malamalearning #malamalearningcenter

**Hashtags for this project: #alohaainapacket
#growingseedsintimesofneed**

Email: info@malamalearningcenter.org



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Mālama Learning Center is a private non-profit organization in West O'ahu that brings art, science, conservation, and culture together to promote sustainable living throughout Hawai'i.

www.malamalearningcenter.org

Mahalo Nui Loa to Corteva Agriscience for providing a donation to assist in producing the Aloha 'Āina Packets!



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