

Aloha 'Āina Packet

**‘Āweoweo - Plant or Fish?
Let's Find Out!**

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.



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‘Āweoweo - Plant or Fish?

Let's Find Out!

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 and 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.



'Āweoweo. Photo Credit: Nakoa Goo/Keoki Stender

Importance of the Native 'Āweoweo

Scientific Name: *Chenopodium oahuense*

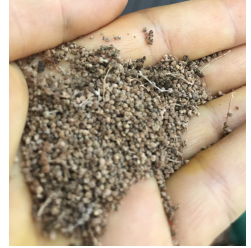
'Āweoweo - a plant or fish? Guess what, it's both! 'Āweoweo is not only a fish that swims in the ocean, but is also a plant that grows on land. 'Āweoweo is one of the plants named in the Kumulipo (Hawaiian Creation Chant) and is a prime example of dualities (land and ocean) when comparing the fish and the plant who share the common name. 'Āweoweo can be translated by breaking the name apart. 'Ā refers to a burning fire, weo refers to red or redness. The use of weo twice intensifies the red color that is found in both the animal and plant. The 'aweoweo plant grows in drier, harsh areas near the ocean, in the lowland dry forest, and all the way up to the sub-alpine forests such of Mauna Kea. This shrub or small tree has thick, fleshy green leaves, somewhat triangular in shape that are covered with tiny hairs to help the plant adapt to the harsh conditions. The older stems can have streaks of red, similar to the fish. Also, when the leaves and flowers are crushed, it smells like fish! The leaves and stems of the 'aweoweo were steamed and eaten in times of famine. The thicker stems of the plant can also be used to make fish hooks so you can catch 'aweoweo (the fish) with 'aweoweo (the plant). So cool!

Plant Info Sources: <https://hawaiiannativeplants.com/ourplants/aweoweo/>
https://www.papahanaumokuakea.gov/education/cultural_duality.html

‘Āina Activity - Grow Your Own ‘Āweoweo Plant

How to Plant ‘Āweoweo Seeds

1. Gather the seeds of the ‘āweoweo. The seeds grow in bunches at the ends of the branches of the plant. Gather the seeds when they are dry, brown, and shedding from the branches.
2. Get a small pot or make one (see instructions below).
3. Fill $\frac{3}{4}$ of the pot with loose soil that you can find around your house.
4. Sprinkle your seeds over the soil.
5. Lightly cover the seeds with a layer of soil so that they're covered.
6. 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.
7. Once you've planted your seeds, say "E Ola! E ulu e!". (Live and grow!)
8. 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.
9. Wait for ‘āweoweo seeds to germinate. The seeds may take 2 weeks to 3 months to germinate -- be patient!
10. Take care of seedlings by watering and giving them sunlight.
11. 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.



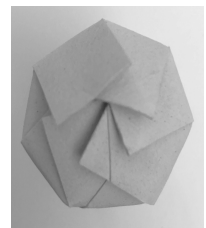
Seeds of the
‘āweoweo plant



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 - Egg Carton Flowers

Turn an egg carton into a beautiful bouquet of flowers!

Materials:

- One (or more) egg carton (plastic or paper will work)
- Paint
- Paint brushes
- Scissors
- Glue

Instructions:

1. Take the top off of the egg carton and set aside.
2. Cut the carton into three sections, as seen in the picture below (step 2).
3. Take the egg carton top and cut long strips to make the flower stems. Don't forget to save room to cut out the leaves.
4. Paint the flower petals, stems, and leaves any color and set aside to dry.
5. Once everything is dry, assemble the flowers by gluing it together (step 4).

Tip: It might help to glue the assembled flowers onto a piece of painted cardboard for stability.



‘Ōlelo No‘eau

(Hawaiian Wise Saying/Proverb)

‘Ōlelo No‘eau:

E mālama 'ia nā pono o ka 'āina e na 'ōpio

The traditions of the land are perpetuated by its youth.

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

What does this saying mean to you? What traditions are important to you and your ‘ohana? Write your answers below.

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!

Help reduce CRB breeding sites!

The Coconut Rhinoceros Beetle

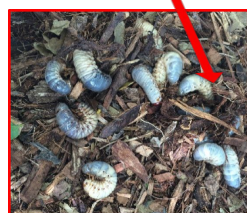
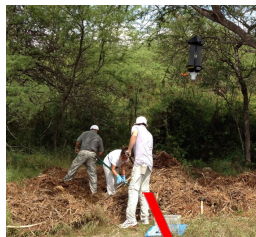
The Coconut Rhinoceros Beetle (CRB) was first detected in Hawai‘i (on O‘ahu) in December 2013. CRB is considered a highly invasive species in Hawai‘i due to the damage they cause to our palm species including our native Loulu palm. Adult beetles bore into the crowns of palm trees to feed on sap. Damaged crowns cause damaged leaves to eventually emerge from the crown with V-shaped cuts in them, a distinctive sign of CRB damage. If the CRB continue to bore into the trees, the trees will eventually die.

Coconut Rhinoceros Beetle Breeding Sites

The Coconut Rhinoceros Beetles breed in places such as green waste (ex. dead leaves and branches on the ground), compost, saw dust, and manure.

You can help do your part by getting rid of your green waste, frequently turning any mulch/compost piles and by keeping mulch/compost piles hot. (Turning the compost helps to speed up the decomposition process.)

Look around your yard and make sure there are no green waste piles. If there is one, rake it up and put it in the green waste bin (green trash can) or another container. If your family has a mulch or compost pile, take a few minutes and slowly turn the pile with a shovel to make sure everything is well mixed and exposed to the sun. While you turn the pile, look for any critters you can identify such as worms, ants, grubs, etc..



Sift through your mulch piles and make sure there are no CRB larvae present!

‘A‘ole Invasive Species!

Help reduce CRB breeding sites!

Beetle Mistaken Identity

The Coconut Rhinoceros Beetle can commonly be mistaken as the Oriental Flower Beetle, especially during the larval stage. Some of the key points to distinguish the two beetles is by the following: CRB- large (~2-2.5 inches) adult beetle, larva curls into a C-shape and crawls on its side, and larva has a larger head; Oriental Flower Beetle- adult beetle is smaller (~.75 inches) with spots all over, larva crawls on its back and larva has a line on its rear end. If you find any larva, make sure they are CRB larvae and not the Oriental Flower Beetle larva!



Did you do your part to help reduce CRB breeding sites this week? If so, did you find any interesting critters in your green waste/mulch/compost piles?

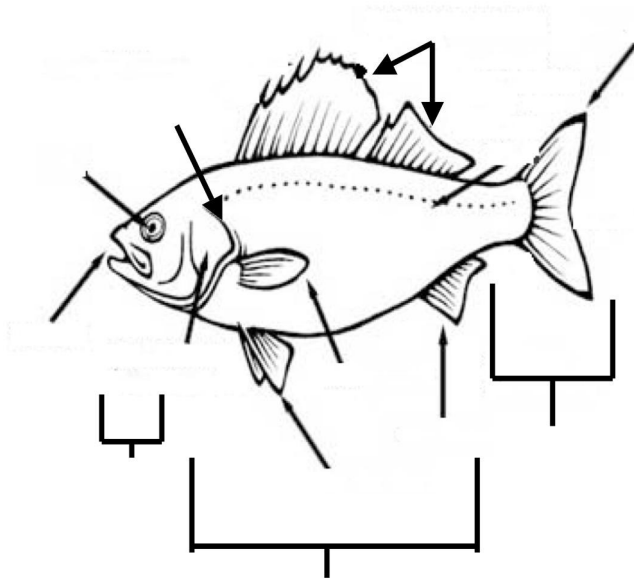
If you see any CRB or suspected damage (V-shaped cuts or bore holes) caused by CRB, please report it to the State PEST HOTLINE – 643-PEST (7378). Please ask an adult before calling. Please DO NOT kill or collect any CRB specimens. Report it to the PEST HOTLINE and take pictures!

Hana No'eau Activity

Fish Anatomy

Directions:

Write in the correct **Hawaiian Name** next to the arrows pointing to the different parts of the fish.

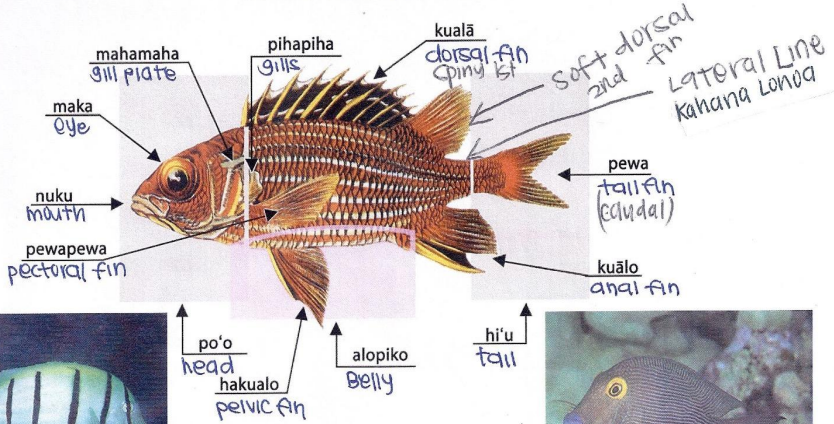


English Name	Hawaiian Name
Eye	Maka
Mouth	Nuku
Caudal Fin	Pewa
Pelvic Fin	Hakualo
Gills	Pihapiha
Gill Plate	Mahamaha
Dorsal Fin	Kuala
Pectoral Fin	Pewapewa
Anal Fin	Kualo
Lateral Line	Kahana Lonoa
Head Section	Po'o
Belly Section	Alopiko
Tail Section	Hi'u

*Compare your answers on the next page.

Fish Anatomy Answer Key

NĀ I'A KĀKALA



(1) manini



(2) kole



(3) māikoiko



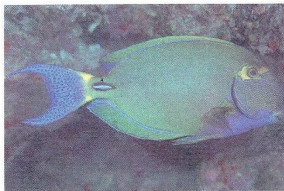
(4) mā'i'i'i



(5) pāku'iku'i



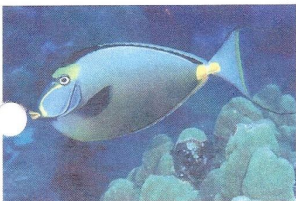
(6) na'ena'e



(7) palani



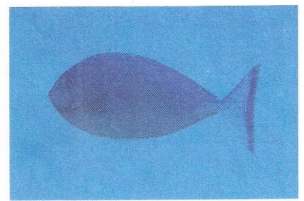
(8) pualu



(9) umaumalei



(10) kala maoli



(11) kala 'ōpelu

Hana No'eau Activity

Color the school of 'āweoweo fishes!

'Āweoweo are known as the Hawaiian Bigeye! They can be found in dark holes during the day and emerge at night to feed upon zooplankton. You can find these red fishes swimming by themselves or in large schools of fish. 'Āweoweo are endemic to Hawai'i - they can only be found here and nowhere else in the world! *Info source: marinelifephotography.com*



Hana No'eau Art Activity

Coastal Restoration

Planting native plants along the coast helps to prevent erosion and create nesting areas for birds. Help restore this coastal scene by drawing the native plants pictured here.

Naupaka



Scaevola sericea

'Ōhai



Sesbania tomentosa

Naio

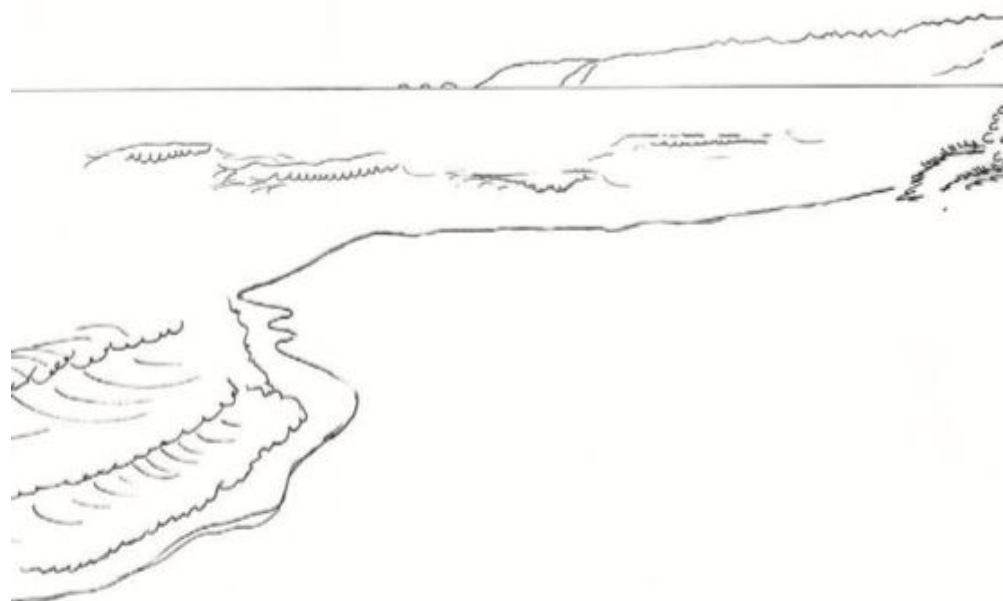


Myoporum sandwicense

'Ilima



Sida fallax



Hana No‘eau Activity

Can you find the following hua‘ōlelo (words) related to the kai (ocean) in this crossword?

HULI HUA‘ŌLELO

moana	‘ina	pūnohu	hāwa‘e
kahakai	‘opihī	pipipi	limu
palekai	‘a‘ama	pūpū kōlea	leho

p	ū	p	ū	k	ō	l	e	a	w	l	ō
w	‘	k	m	n	l	‘	o	p	i	h	i
k	p	ū	h	o	‘	e	‘	ū	‘	p	ō
ē	p	ū	n	o	a	m	h	n	p	e	l
l	i	p	ī	m	w	n	n	o	h	l	e
h	p	‘	a	‘	a	i	a	h	a	‘	k
m	i	i	ī	w	a	a	p	u	a	a	a
i	p	n	p	m	k	ē	a	w	a	p	h
l	i	a	a	u	k	l	ā	w	k	k	a
k	h	‘	a	ā	m	h	i	ī	o	ū	k
n	a	e	p	a	l	e	k	a	i	k	a
‘	k	w	h	ā	l	l	i	m	u	u	i

Activity Source: Pilina Kai

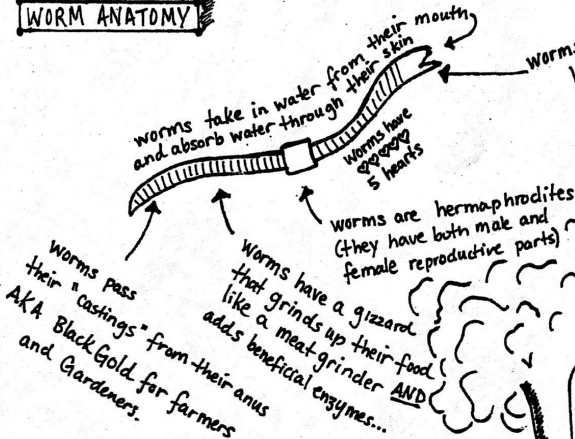
<http://www2.hawaii.edu/~pelikaok/resource.html>

'Ohana Activity

EVERYTHING YOU NEED TO KNOW ABOUT:

WORM COMPOSTING

WORM ANATOMY



Worms have NO eyes or nose or teeth! Instead the entire body of the worm is a mucous membrane that can pick up tiny dissolved particles, which are interpreted by nerve sensors!



WORM ENVIRONMENT

- * Worms need a moist environment to move and breathe
- * Worms are photophobic and need a dark place to live
- * Worms can tolerate a temperature range from 50-85° F

WORM DIET

WORMS ARE VEGAN*
*NO MEAT OR DAIRY

EXAMPLES OF WORM FOOD:

- fruits:** apple cores and peels, banana peels, Strawberries, pears, any melons
- Vegetables:** beans, Cabbage, celery, Carrots, Cucumbers, tomatoes, all greens, corn, corn cobs, squash
- Cereals and grains:** oatmeal, pasta, rice, breads, non-sugared cereal, cornmeal, pancakes
- other:** newspaper (no shiny or colored paper), Cardboard, paper, egg cartons, brown leaves.
- misc:** coffee filter paper, coffee grounds, tea bags, dead flowers, egg shells or oyster shells



WORM NOTES

- * Happy worms can eat HALF their weight in food every day!!
- * Loose Shredded news paper at the top of your bin helps to keep the moisture level balanced AND minimize fruit flies.
- * Worms DON'T need to be fed daily if you go on holiday - feed as normal and add extra news paper. They will be fine for a month!
- * Because worms have no teeth, they need to take in grit with their food... pulverized egg shells are an excellent source of grit.

DO NOT FEED YOUR WORMS:

- meat, poultry, fish, dairy
- oily foods - chips, junk food
- Citrus - lemons, limes, oranges (Citrus has a chemical substance, limonene, that is toxic to worms.)

USE WITH CAUTION:

- ~ Breads - Can attract red mites
- ~ potato skins, onions, garlic, ginger - gets consumed slowly, STINKY!
- ~ Coffee grounds - too much will make the bin acidic
- ~ papaya - the seeds will cause infertility in the worms.

SC ©MLC 2014

‘Ohana Activity

**E Kama‘ilio Kākou
Let’s Converse!**

Inoa Piha (Full Name)

Practice saying your full name in ‘ōlelo Hawai‘i
(Hawaiian language).

Inoa Mua (First Name): _____

Inoa Waena (Middle Name): _____

Inoa Hawai‘i (Hawaiian Name): _____

Inoa Hope (Last Name): _____

Inoa Kapakapa (Nick Name): _____

Inoa Piha (Full Name): _____

Tell us the story of your inoa piha - What does it mean? Who gave you this name? Are you named after someone? What do you preferred to be called?

‘Ono Healthy Recipe

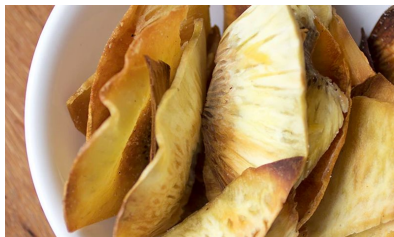
Enjoy this ‘ono ‘Ulu Chips recipe with your ‘ohana at home.

Ingredients

- 1 firm ripe ‘ulu
- ½ cup olive oil (or avocado oil)
- 2 tablespoons Hawaiian sea salt

Instructions

1. Use a firm, but ripe ‘ulu (you can tell it’s ripe when the skin is smooth and there is white sap coming out).
2. Quarter the ‘ulu and remove the inside “tongue” or core.
3. Slice into thin (1/4-1/8”) triangular shapes.
4. Put into a bowl and toss with olive oil and Hawaiian sea salt.
5. Spread out ‘ulu pieces on a baking sheet.
6. Bake 20 minutes at 400 degrees. Check and flip with spatula midway through baking. You could bake them a little longer if you like them extra crispy!
7. Add more salt to taste.
8. Enjoy!



Recipe Source: Kōkua Hawai‘i Foundation ‘ĀINA In Schools Program
www.kokuahawaiifoundation.org/aina

Photo Sources: Hawai‘i ‘Ulu Cooperative, Mālama Learning Center
<https://eatbreadfruit.com/>

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? Rat Lungworm is a parasitic nematode that needs both a rat and a snail to perform its entire life cycle. The nematode lives most of its life in the body and lungs of a rat. The nematode larvae leave the rat through the rat's feces which is then eaten by a snail and can then mature to its next stage. The infected snail is eaten by the rat and the cycle continues.

**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



Mālama
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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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