Aloha 'Āina Packet

Let's get ma‘a (familiar) with the ma‘o plant!

Aloha! ‘O _____
ko‘u inoa.
(Hi, my name is…)

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

Manawa (date): _____

The purpose of this Aloha ʻĀina Packet is to provide keiki with fun activities that can connect them to ʻāina 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 ʻohana!

The Aloha ʻĀina Packet was brought to you by the Waiʻanae Wellness and Place-Based Learning Alliance:

The Cultural Learning Center at Kaʻala
Hoa ʻĀina O Mākaha
Mālama Learning Center
MAʻO Organic Farms
PALS/PLACES Program, University of Hawaiʻi at Mānoa,
Searider Productions
Waiʻanae 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 ʻĀina O Mākaha, Ulu A'e Learning Center, and all of our partners for making it possible to get these packets into the hands of our keiki.

Produced in April 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

Native Hawaiian Plants & Our ʻĀina

Why are Native Plants Important?

Native plants are important to Hawaiʻi'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 Hawaiʻi 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.

The Native kāhuli tree snail is endemic to Hawaiʻi - only found here! Kāhuli tree snails live in the forest and are eaten by predators such as the invasive rosy wolf (cannibal) snail and rats. Photo Credit: The Lyman Museum

Maʻo flowers can be used to make lei and a green dye.

Maʻo leaves have three-to five lobes (sections).

Importance of the Native Maʻo Plant

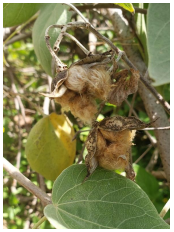
Maʻo (Hawaiian Cotton) is a small shrub or tree growing 2-4 feet tall with attractive bright yellow flowers. The maʻo plant is endemic to Hawaiʻi, meaning that it can only be found here and nowhere else in the world. Maʻo does not need a lot of water and was once common in dry, rocky, coastal sites. However, they have significantly declined due to people's actions. The leaves have three-to-five lobes (sections). Maʻo have seed capsules that contain two to four seeds that are covered with short, brown, cotton fibers. The fibers are too short to make cotton fabric, but the maʻo was used to breed with the American cotton because of its resistance to certain pests. This resulted in a stronger hybrid plant that saved the cotton industry. The bright yellow maʻo flowers can be used to make lei and a green dye.

**Source: *Growing Hawai'i's Native Plants* by Kerin E. Lilleeng-Rosenberger

ʻĀina Activity - Grow Your Own Maʻo Plant

How to Plant Maʻo Seeds

1. Hold the fuzzy maʻo seeds and examine their texture and size. The seed is hidden inside of the fuzz and should feel hard.
2. To speed up the germination process, you can scrape the seeds against a rough surface such as the sidewalk or sand paper to make a small break in the seed coat. *Weakening or opening the coat (outside) of a seed to encourage germination is called seed scarification.
3. You will know if you broke the seed coat when you can see a slight change in color on the seed. Be gentle!
4. Get a small pot or make one (see instructions below).
5. Fill ¾ of the pot with loose soil that you can find around your house.
6. Make a small hole in the middle of your soil about ½ inch deep.
7. Place your seed in the small hole you created.
8. Lightly cover the seeds with a layer of soil.
9. Carefully water your plant everyday, sprinkling water with your fingers so that it is like a gentle rain. Water the seeds with enough water to make all of the soil moist without overflowing your pot. Don't let the soil dry out.
10. Wait for your maʻo seed to germinate. Please be patient, native plants take time to grow.
11. Take care of your seedling by watering everyday and giving sunlight.
12. Gently move your seedling into a bigger pot once it outgrows its pot. Eventually, you can plant it in the ground.



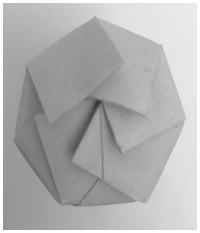
Maʻo Seed Capsules

Maʻo Seed

Students scarifying maʻo seeds using sand paper.

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.



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

‘Ōlelo No‘eau:

He wa‘a he moku, he moku he wa‘a.

A canoe is an Island, an Island is a canoe.

To be good stewards, we should think of our resources on our island as finite (having limits) as they would be on a wa‘a (canoe). Communities need to work together in order to be hoa’ āina (good stewards) of our island resources.

Imagine you were sailing on a canoe for thousands of miles with limited drinking water and essential supplies, how would you treat the supplies you brought? Imagine if we treated the resources on our island as if they were precious resources brought on a canoe.

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

What does this saying mean to you? How can YOU mālama (take care) our resources so that they are there for future generations? Write your answers below.

Let's Reflect

How does ʻāina make you feel? Explain and draw pictures if you want to.

Now that you've eaten all the eggs for Easter, what can you do with the **empty egg carton**?

Egg cartons have sections that are the perfect size for planting vegetable seeds!

1. If you use a plastic carton, punch a hole in the bottom of each section to let water drain.
2. Fill each section with loose and slightly moist soil.
3. Place a few seeds on top and cover with a bit more soil. Press down lightly.
4. Water gently everyday using a spray bottle (if you have one) or your fingers.
5. After your seedlings grow, gently take them out with a spoon and place them in bigger pots or in the ground.

Kilo ʻĀina
(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.

Kilo Day 1

Manawa (date):

Mahina (moon):

Kilo (observation):

Kilo ʻĀina

Kilo Day 2
Manawa (date): Mahina (moon): Kilo (observations):
Kilo Day 3
Manawa (date): Mahina (moon): Kilo (observations):

Kilo ʻĀina

Kilo Day 4

Manawa (date):

Mahina (moon):

Kilo (observations):

Kilo Day 5

Manawa (date):

Mahina (moon):

Kilo (observations):

Kilo ʻĀina

Kilo Day 6

Manawa (date):

Mahina (moon):

Kilo (observations):

Kilo Day 7

Manawa (date):

Mahina (moon):

Kilo (observations):

‘A‘ole Invasive Species!

Help look out for the invasive Coconut Rhinoceros Beetle in the Backyard Beetle Watch!

What are invasive species?

Invasive species have been introduced to Hawai‘i (either on purpose or by accident) and cause harm to the environment, economy, and/or human health. Invasive species tend to spread rapidly -- their populations become uncontrollable and can overtake native habitats.

The Coconut Rhinoceros Beetle

The Coconut Rhinoceros Beetle (CRB) was first detected in Hawai‘i in December 2013. CRB is native to the Asian tropics, however, was accidentally introduced to western and central Pacific islands. 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.

Why are CRB considered an invasive species?

Adult beetles bore into the crowns of coconut palms and other palm species 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 palm trees, the tree will eventually die. Coconut trees (niu) provide nutritious food products (coconuts) and resources (weaving material), and are important to Hawaiian culture. Niu is a representation of one of the four main Hawaiian gods - Kū.

Have you seen these traps around your neighborhood and wondered what they were for? These traps are used to trap and track the movement and location of coconut rhinoceros beetles.

Information provided by the Hawai‘i Department of Agriculture (HDOA)
http://hdoa.Hawai‘i.gov/pi/main/crb/

‘A‘ole Invasive Species!

Help look out for the invasive Coconut Rhinoceros Beetle (Backyard Beetle Watch)

Be the eyes and ears of your community by being part of the CRB Backyard Beetle Watch Team and looking for signs of CRB damage around your home and neighborhood! Take a walk around your yard or neighborhood with an adult and see if you can identify any palm trees. Once you find a tree, look and see if you can find any signs of damage caused by the Coconut Rhinoceros Beetle. To look for signs of CRB damage, look for bore holes within the crown (the top) of the tree and V-shaped cuts within the leaves of the palms. Hopefully the trees in your neighborhood are safe from this beetle and no signs of CRB damage can be spotted!

How many palm trees were you able to spot in your neighborhood? Were you able to identify what type of palm tree it was?

Fan Palm
Ex.: The Loulu Palm

# of trees spotted: _____

Royal Palm
Ex.: The Coconut Palm

# of trees spotted: _____

Date Palm
Ex.: The Japanese Sago Palm

# of trees spotted: _____

Did you find any signs of damage caused by CRB in your yard or neighborhood? If so, what damages were you able to identify? Any boreholes or V-shaped cuts?

Did you see bore holes?
Yes or No

If yes, where was this tree located?
(Describe the location)
Location: _____

Did you see V-Shaped Cuts?
Yes or No

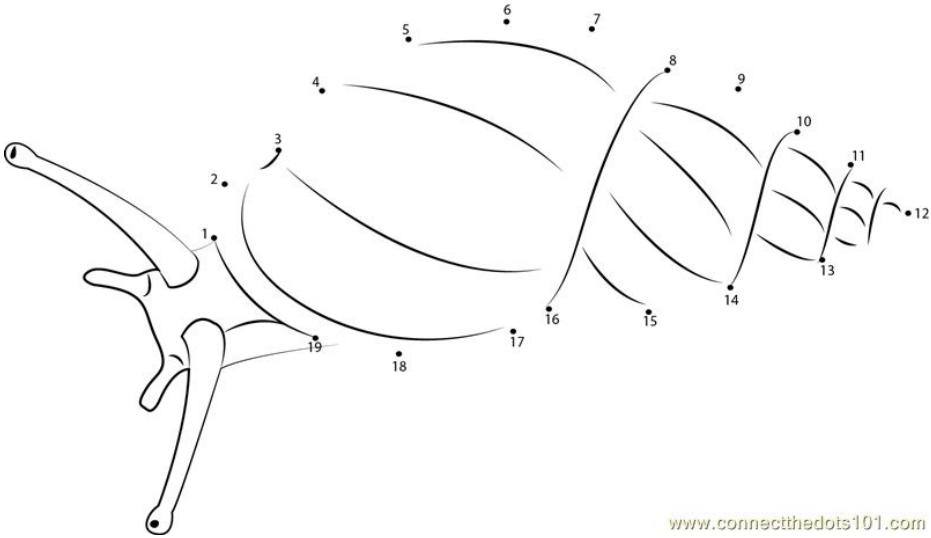
If yes, where was this tree located?
(Describe the location)
Location: _____

Suspected CRB on coconut and palm plants should be reported to the Hawai‘i Department of Agriculture's PEST HOTLINE – 643-PEST (7378). Please ask an adult before calling. Please DO NOT kill or collect any CRB specimens. Report it to the state’s PEST HOTLINE and take pictures!

RHINO BEETLE WATCH

Hana No‘eau Art Activity

Kāhuli Snail Connect the Dots - Kāhuli tree snails are tiny mollusks with colorful, elongated shells representing different species. Kāhuli tree snails are very small, only growing to about 2.5 centimeters long! Kāhuli tree snails are endemic to Hawai‘i and some species are only found on the island of O‘ahu! The snails live on native trees and eat the fungus that grows on the leaves of trees and shrubs. Kāhuli snails were once used to make lei, causing an initial decline in their population. Today, predators such as rats, Jackson chameleons, and introduced snails such as the rosy wolf snail are the greatest threats to the kāhuli tree snails. *Information from The National Wildlife Federation*



Can you find all the words related to C.R.B.?

Q	G	Q	H	G	G	P	M	H	G	M	S	I	N	D	S	O	I	C	H
A	S	O	U	T	H	E	A	S	T	A	S	I	A	R	U	R	N	T	I
Z	F	A	J	E	H	O	K	S	G	N	N	L	A	H	A	Y	G	T	B
X	C	Z	I	D	F	S	A	D	D	U	A	A	D	I	C	C	M	I	H
C	O	C	O	N	U	T	N	F	S	K	L	C	L	N	A	T	I	V	E
S	F	C	U	I	W	F	I	G	G	I	I	P	O	O	S	E	E	D	S
E	S	E	T	Q	C	H	F	W	G	S	Y	N	C	E	I	R	O	V	E
D	Z	T	R	A	I	J	D	E	T	Y	X	Y	S	R	Y	H	B	I	T
Y	A	G	W	A	N	K	S	R	D	J	F	K	I	O	L	I	E	W	E
C	Q	L	A	R	V	A	E	T	E	W	I	N	G	S	U	N	C	I	R
V	P	Y	S	E	A	Q	G	Y	V	K	X	E	Y	D	M	O	A	N	A
F	L	M	X	A	S	P	E	C	I	E	S	Y	L	A	A	C	R	D	C
R	O	U	O	U	I	D	M	U	T	I	E	Y	L	E	R	E	E	B	E
T	I	L	Q	V	V	C	H	T	P	J	B	J	R	W	T	R	A	O	T
G	U	C	E	J	E	W	Y	T	A	K	U	E	S	E	E	O	Y	R	Y
B	T	H	W	M	B	M	T	H	D	N	I	K	E	S	M	S	I	T	T
N	Y	U	F	E	A	G	E	R	A	D	I	C	A	T	I	O	V	A	S
M	U	J	E	W	E	T	G	N	E	M	O	T	I	O	L	A	E	E	L
J	U	N	D	T	H	S	B	N	T	Y	P	H	W	A	V	E	S	A	T

INVASIVE	BEETLE
LARVAE	SOUTH EAST ASIA
WINGS	ERADICATION
PEST	RHINOCEROS
SPECIES	ORYCTES RHINOCEROS
MULCH	COCONUT
MOVEMENT	NIU

‘Ohana Activity

Reduce, Reuse, Recycle, Repurpose!
Make A Reusable T-Shirt Bag

Get together with your ‘ohana to make reusable t-shirt bags.

Materials

- Old cotton t-shirt that you don’t want anymore - the thicker/heavier the fabric, the sturdier the bag (big t-shirts will make bigger bags and small t-shirts will make smaller bags)
- Sharp scissors, preferably fabric scissors if you have
- Ruler

Instructions

1. Lay an old t-shirt flat on a table.
2. Use scissors to cut off the sleeves as well as the collar of the shirt. For the collar, it is recommended to cut a slightly oval or square shape. Make sure the back and front of the shirt line up and are cut to the same distance. This step creates the straps or handles of the bag.
3. At the bottom of the shirt, cut off the hem of the shirt. Then cut slits about every inch through both layers (length will depend on the size of the shirt) long enough that you will be able to tie them twice. Remember the shirt will stretch with weight so try to make sure your bag isn't going to hang to your feet when filled with goodies!
4. Keep the slits lined up.
5. Starting at one end, tie the matching front and back pieces together securely in double knots all the way to the end of the row. That’s it!
6. Enjoy and use this bag as a waste-free alternative to plastic bags!
7. If you don’t like the fringed look, turn bag inside out first before making the slits and go through the steps. When finished, turn the bag inside out (again) so that the fringe is on the inside and the design of the shirt is on the outside of the bag.
8. T-shirt bags are washable because they are T-shirts! Make sure to wash your reusable bag regularly between uses.

*See photo examples of each step on the next page.

‘Ohana Activity

Reduce, Reuse, Recycle, Repurpose!
Make A Reusable T-Shirt Bag

Step 1

Step 2

Step 3

Step 4

Step 5

Step 6

Photo Source: Recycle Ann Arbor
https://twitter.com/recycleannarbor/status/1039592408869203973

‘Ono Healthy Snack Recipe

Enjoy this ‘ono (delicious) recipe with your ‘ohana at home.

Macadamia Coconut Balls

Ingredients:

- 1 cup packed, soft pitted dates
- ¾ cup raw macadamia nuts (can be substituted with other nuts)
- ½ cup unsweetened fine coconut flakes
- ⅛ tsp sea salt (optional)

** You can add a little flax seeds, chia seeds, too.

- Blend all ingredients until it forms a dough. It is tough on an electric blender’s motor so be careful. If you don’t have a blender, you can mix it using a mortar and pestle or with your bare (and clean) hands!
- Roll into balls and dust with more coconut flakes.
- Store in the fridge.
- Makes 10 balls.

*Recipe Source: Kōkua Hawai‘i Foundation 'ĀINA in Schools Program

Weekly Mahalos!

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

1.

2.

3.

Olakino
(Healthy Body)

Here's 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? Snails carry a parasitic nematode- *Angiostrongylus cantonensis* (rat lungworm) - that causes rat lungworm disease. You can get Rat Lungworm Disease by eating raw vegetables with possible snails or snail residue present. **REMEMBER- ALWAYS THOROUGHLY WASH YOUR FRESH PRODUCE BEFORE EATING!**

Share Your Progress!

Mahalo for completing our Aloha ʻĀina 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 you can go back to school.

Mālama Learning Center

Social Media: #malamalearning #malamalearningcenter

Hashtags for this project: #alohaainapacket #growingseedsintimesofneed

Email: info@malamalearningcenter.org

Mālama Learning Center

Mālama Learning Center is a private non-profit organization in West Oʻahu that brings art, science, conservation, and culture together to promote sustainable living throughout Hawaiʻi.

www.malamalearningcenter.org