

# Aloha 'Āina Packet

**Let's get spicy with Nīoi,  
Hawaiian Chili Pepper!  
(Immunity Boosting 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 '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 Program, 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, 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](mailto:info@malamalearningcenter.org) or 808-305-8287.



Mālama  
Learning  
Center

# Let's get spicy with Nōi (Hawaiian Chili Pepper)

## Nōi - the Hawaiian Chili Pepper

**Scientific Name:** *Capsicum frutescens*

Nōi, or the Hawaiian Chili Pepper, is a very useful plant to have growing in your garden. Nōi is very nutritious and can be used as a spice in chili powder, chili pepper water, and practically any dish. It can also be used to make a natural insecticide. Nōi is sometimes referred to as bird peppers since birds enjoy eating the peppers and spread the seeds all over Hawai'i. The Hawaiian chili pepper is native to Central and South America and was introduced to Hawai'i in the 16th and 18th centuries by Spanish and Portuguese explorers. There are several varieties of chili peppers in this species.

## Health Benefits of Nōi

Did you know that nōi is an excellent source of vitamins C and A, which are antioxidants that help boost the immune system, improve the skin, and help rebuild tissue cells in your body? Nōi also has anti-inflammatory properties to help reduce pain and inflammation throughout the body.

## Adding Spice to your Dishes with Nōi

Along with all the health benefits, nōi can add a nice “spice” to the dishes we love to eat. Nōi is great for any dish that entails roasting, simmering, or stir-frying -- just add a little bit of this pepper and the flavor goes a long way. Nōi has a high level of spice- ranging from 100,000 to 250,000 SHU on the Scoville scale. In Hawai'i, the most popular use for nōi is to make Hawaiian chili pepper water. There are many different family recipes on how to make Hawaiian Chili Pepper Water. We've included one recipe later in this booklet that you can try to make once you have some peppers growing at home!

\*Source: [https://www.specialtyproduce.com/produce/Hawaiian\\_Peppers\\_13746.php](https://www.specialtyproduce.com/produce/Hawaiian_Peppers_13746.php)



# ‘Āina Activity - Grow Your Own Nīoi Plant

## How to Plant Nīoi Seeds

### Step 1

Collect materials

- Plant pot (you can make one if you don't have one; directions on how to make one are below)
- Potting soil
- Chili pepper seeds



Nīoi Plant

### Step 2

- Place potting soil inside pot. Lightly push down on soil, making sure there's not a lot of loose soil. Loose soil could be at risk of overflowing while watering.



Nīoi Pepper

### Step 3

- Poke a hole using pinky fingernail as indicator for depth. Place seed inside and cover with soil. Seed should remain at a depth of ½ inch maximum.
- **DO NOT touch your eyes after touching the chili pepper seeds - they're very potent and can sting the eyes. We highly suggest you wear gardening gloves while planting your chili pepper seeds and wash your hands with soap and water.**



Nīoi Seed

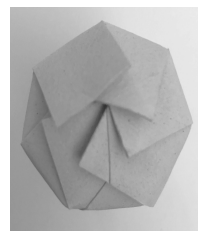
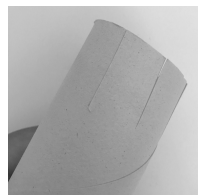
### Step 4

-Carefully water your plant, 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.

\*Take care of your seedling by watering everyday and giving sunlight. Gently move your seedling into a bigger pot once it outgrows its pot. Eventually, you can plant it in the ground.

### 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:

**Ma ka hana ka ‘ike.**

*In working one learns.*

There is knowledge to be gained through work.  
One can learn by doing.

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

What does this saying mean to you? Can you think of specific examples in your life at home, school, huaka‘i (field trip) where you learned by doing (i.e. gardening, fishing, hula, working in the lo‘i kalo, etc...). What did you learn about? Did you enjoy learning this way? Write your answers below.

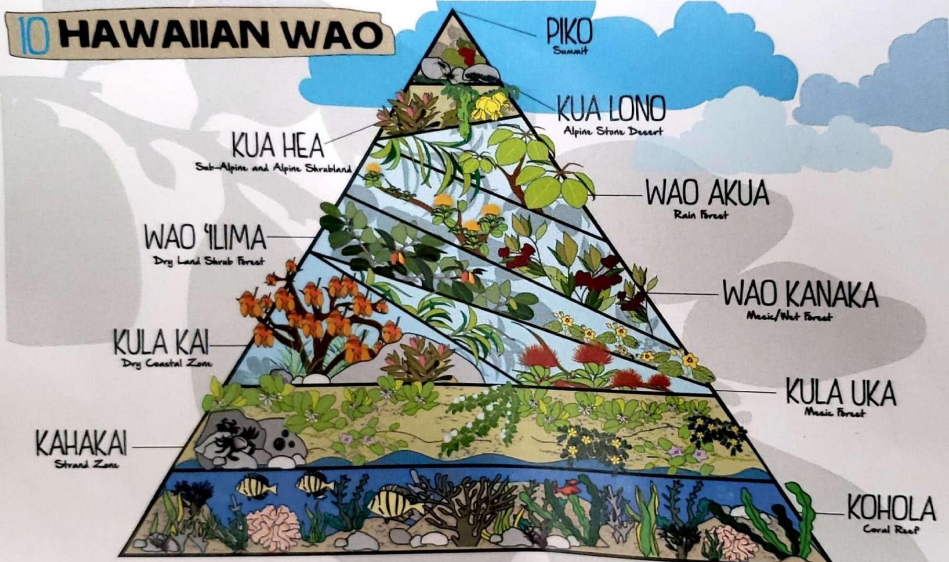
# Let's Reflect

Study the Hawaiian Wao (Hawaiian realms/regions) graphic below that extends mauka to makai (mountains to the ocean).

## 10 Hawaiian Wao

- Piko - Summit
- Kua Lono - Alpine Stone Desert
- Kua Hea - Sub-Alpine and Alpine Shrubland
- Wao Akua - Rain Forest
- Wao Kanaka - Mesic/Wet Forest
- Wao 'Ilima - Dry Land Shrub Forest
- Kula Uka - Mesic Forest
- Kula Kai - Dry Coastal Zone
- Kahakai - Strand Zone
- Kohola - Coral Reef

Thinking about your home. Where's your favorite place to be within one of these Hawaiian Wao (realms/regions) and what do you enjoy doing here?



Graphic Source: Hawai'i Department of Land and Natural Resources, Division of Forestry and Wildlife

Department of Land and Natural Resources  
Division of Forestry and Wildlife





## **We're sending aloha to you and your ohana!**

Your teachers are thinking of you and we want you to know your safety, health and well-being is our #1 concern!

### **COVID-19 can be scary but YOU can help your ohana be safe!**

Keep your hands clean, keep your hands away from your face, stay six feet away from anyone outside of your household...but it is safe and recommended that you get outside as long as you practice safe behaviors...be sure and ask your parents about safe locations to be outside and whether or not to wear a mask – even better, try outside activities WITH your ohana!

### **Activity #1 – Practice your “Kilo-Vision”**

Those who have the deepest understanding of a particular place are those that have lived there the longest – in our case, the Hawaiians. They called their observation practice **KILO** – a deep, sustained observation practice that was shared, discussed and used to create one of the most effective resource management systems in the world.

“Kilo” means to watch, observe, examine or forecast. Kilo can be used to describe the action of watching or to a person who is an expert in kilo practice. Kilo also references a Hawaiian observation approach during which practitioners focus on the less obvious, more subtle things in their environment.

**Kilo practice in the modern world creates a means for individuals, and communities as a whole, to gain knowledge and wisdom that enables better management of natural resources – in any place.**

### **Activity Instructions**

1. YOU can develop “kilo-vision” and become an expert observer!
2. The key to becoming a kilo observer is practice – daily if possible, starting today!
3. The length of time of your kilo practice is up to you but it is recommended that it is **AT LEAST 10 minutes** a day and you will be asked to share and/or record your observations at the end of your practice.
  - Find a place to sit (or stand) **AT LEAST** arms length from any other person.
  - Be totally quiet and do not talk or use any technology during your kilo practice
  - Breathe deeply, at your own pace 5-10 times and try to clear your mind
  - Focus on what all your senses are bringing to you – including your feelings – the 6th sense
  - **SLOWLY** allow yourself to observe the sky....the land...nearby water...plants....animals (yes, that sometimes includes humans)
  - It's OK to turn **SLOWLY** and look around you – you are not stuck looking straight ahead but please, stay in one place
  - When you're done, discuss your observations with at least one member of your ohana or start your kilo journal (write, sketch, diagram what you observed – including your feelings during kilo) – share or record questions that come up during or after your kilo practice.
  - Consider calling a friend and ask them to start their kilo practice with you and discuss your kilo observations (and your questions) at a pre-arranged time of the day

### **Activity #2 – Focused Kilo Practice**

Pick **ONE** thing in nature to focus your kilo observations on. We like checking out the moon phase every night (at the same time) or clouds, waves, birds – you pick!

### Activity #3

Look outside for plant seeds and try growing it! Collect more than one of the same type of seed and try DIFFERENT ways of getting it to grow. Your seeds may not all grow – they don't in nature but it's a fun thing to try!

### Activity #4

Make up a simple story about something you see outside – a bird, a plant, the clouds, etc. You can sketch or take photos while your outside to add to your story. Once you're back inside, turn your story into a fun, little book.

### Activity #5

Take an outside walk with at least one ohana member and ask them about their favorite outdoor place or memory

- If they were raised in the place you live ask them what it was like when they were young
- If you could both visit any outdoor place in the world, where would it be and why do you want to go there?

### Activity #6

Design simple machines that you can test outside. Good old fashioned paper airplanes, windmills, catapults are all fun to start with but let your imagination soar. Consider something your family can use like a device to catch rain that does not allow mosquitos to grow or making your machine out of things your family might recycle or throw away.

### Activity #7

Figure out creative ways to measure things outside. For example:

- How much distance do you cover in each step when you walk (your pace)?
- How long does it take for the breeze to move an object a certain distance?
- How can I use the sunrise, sunset or natural landmarks to determine direction?

**All of these activities will help you build skills for projects you'll do when  
you're back in school!**

**Until then, have fun, stay safe and remember...**

**We're Thinking of You**



# **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!

## *Hunting for invasive snails...*

### **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.

### **Invasive Snails in Hawai'i**

Snails are considered invasive when they've been introduced to Hawai'i and cause harm to the native ecosystem and/or to human health. Invasive snails outcompete and sometimes even eat our native snails, causing a very large decrease in the native snail population. The invasive snails also tend to carry more diseases such as Rat Lungworm Disease.

### **Threats to our Native Snails**

Before western contact, there were 750-1200 native snail species in Hawai'i. Today, about 60% of our native snails are now extinct primarily due to the introduction of invasive species. For example, invasive snails take over the native ecosystem and outcompete native snails for all of the resources. Invasive snails also tend to be much larger and carnivorous- meaning that they like to feed on the native snails.

### **The Native Kāhuli Tree Snail**

*Achatinella mustelina*; the native kāhuli tree snail, is endemic to Hawai'i- this particular species can only be found on the island of O'ahu! Kāhuli tree snails are very small, only growing to about 2.5 centimeters long. The snails live on native trees and eat the fungus that grows on the leaves of trees and shrubs. The kāhuli's shells 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 kāhuli tree snails.

### **Did you know?**

**Slugs are considered snails without shells.**

**Slugs are snails!**



*Achatinella mustelina* - the native kāhuli tree snail can only be found on the Wai'anae Mountains!  
Photo credit: David Sischo.

# 'A'ole Invasive Species!

## *Hunting for invasive snails...*

**Invasive Snail Survey** Let's take a survey of the number of invasive snails you can find around your house/neighborhood! Look at the following pictures and see if you can find & identify these invasive snails. How many were you able to find of each species?

Touching a snail (or slug) with your bare hands will put yourself at risk of getting Rat Lungworm Disease. **Always wear gloves if you're going to touch a snail (or slug) & REMEMBER TO ALWAYS THOROUGHLY WASH YOUR HANDS!**



Photo from NCSN Online

### **Giant African Snail (*Lissachatina fulica*)**

**Description:** large (5.0-10.0 cm), shell typically brown and banded (tough shell)

**Origin:** East Africa

**Where to find them:** humid agricultural areas, gardens, wetlands, low-mid elevations

*# of snails spotted:* \_\_\_\_\_



Dylan Parker

### **Rosy Wolfsnail (*Euglandina rosea*)**

**Description:** medium (7.0-10.0cm), shell is cone shaped & brownish-pink color

**Origin:** Southern U.S, Florida

**Where to find them:** lowlands, mid-high elevation

*# of snails spotted:* \_\_\_\_\_



Photo from wikipedia.org

### **Marsh Slug (*Deroceras laeve*)**

**Description:** small (1.5cm-2.0cm), body is translucent gray or brown in color

**Origin:** subpolar zones & Europe

**Where to find them:** lowlands, marshes, wet habitats, greenhouses

*# of snails spotted:* \_\_\_\_\_



Photo from malamaopuna.org

### **Cuban Slug (*Veronicella cubensis*)**

**Description:** larger (1.5cm-5.0cm), body has various colors/patterns: shades of brown, speckled, striping

**Origin:** Cuba

**Where to find them:** under moist rocks or objects, low elevations

*# of snails spotted:* \_\_\_\_\_



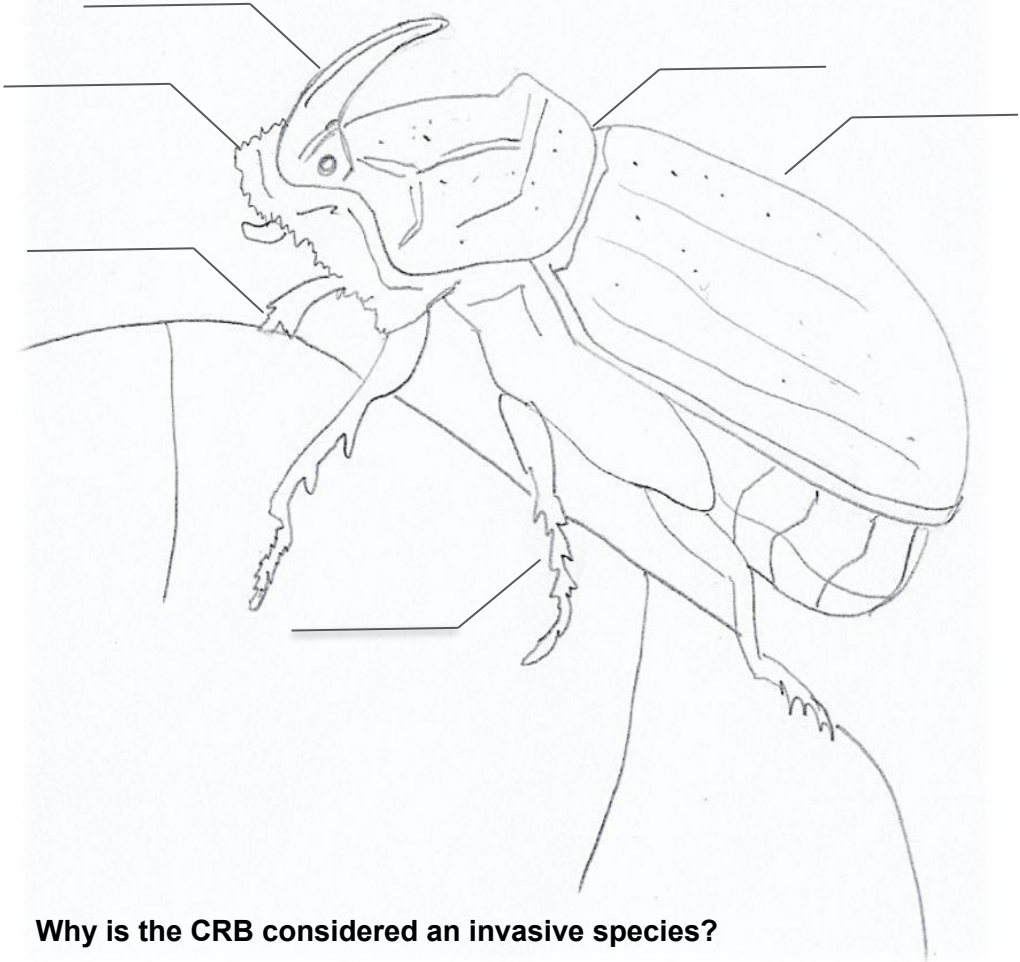
# Hana No'eau Art Activity

Color & label the parts of the invasive Coconut Rhinoceros Beetle (CRB)

*Scientific Name: Oryctes rhinoceros*

Label the following parts of the Coconut Rhinoceros Beetle:

- (1) Rhino Horn (2) Legs (3) Abdomen  
(4) Thorax (5) Head (6) Antenna (*hint- by the mouth*)



## Why is the 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.

# 'Ohana Activity

## Homemade Insecticide for Pests

Get together with your 'ohana and make a homemade insecticide using Nōi!

### Ingredients

- 1.5 teaspoons of chili powder or crushed chili
- 1 quart of water
- Liquid dish soap
- Onion (small)
- Spray bottle
- Gloves

### Instructions

1. Add 1.5 teaspoons of chili powder or crushed chili to 1 quart of water.
2. Add two drops of liquid dish soap to help the spray stick to surfaces.
3. Finely chop or puree a small onion and in a separate container, let it soak in water for an hour.
4. Strain the liquid to remove the onion pulp.
5. Add the onion infused water to chili pepper water solution in a spray bottle.
6. Go into your garden and spray plants being attacked by insects.\*

\*Like human skin, some plants can be irritated or burned by chili pepper sprays so always spray one or two leaves as a test. Do this in the early morning or near sunset, not in the hot sun as that could burn your plants. Leave the spray on the test leaves for several days to watch for a reaction. If the sprayed leaves are wilted, yellow or look burned, do not spray the plant with chili spray. The spray can be applied to the soil around sensitive plants and still be effective against many insects and garden pests.

**Important Note - Use disposable gloves to protect your hands when working with chili pepper to avoid irritation and burning of your skin. Avoid touching your eyes, other areas of the body, and surfaces while working. Throw away gloves when pau and wash hands.**

Recipe Source:

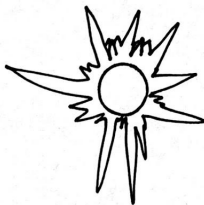
<https://homeguides.sfgate.com/homemade-chili-powder-sprays-insecticide-86195.html>

# 'Ohana Activity

# Basics of CONTAINER GARDENS

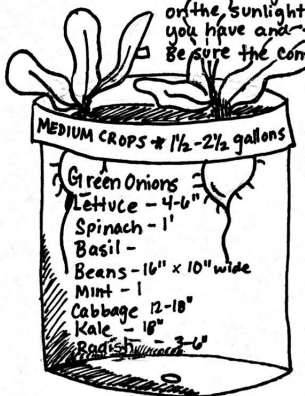
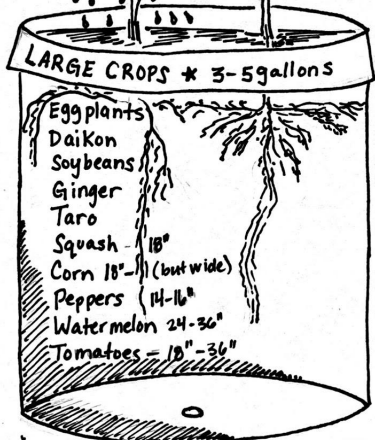
## Benefits of Container Gardens

- + You can have a garden anywhere!
- + Minimize Pests and control disease
- + Control water usage
- + Freedom to be creative and artistic!



## Selecting a Container

- How much sunlight does the area get?
- Select what you want to plant based on the sunlight and the amount of space you have and the mature plant needs
- Be sure the container has proper drainage.



**TIP:** clip flowers from herbs such as basil and parsley to encourage more leaf growth!

## Preparing your soil

- \* Soil prep is important since that is the only place your plant gets any nutrients.
- \* Soil should hold moisture and nutrients while allowing drainage and oxygen to get to the roots.

### BASIC SOIL RECIPE

- 1/3 part soil
- 1/3 part compost or worm castings
- 1/3 part perlite or vermiculite

### FERTILIZER CHEATSHEET

- N • Nitrogen • Leaf growth
- P • Phosphorus • Root, flower fruit growth
- K • Potassium • overall plant functions

## Watering Tips

- \* Over or under watering your plants can be detrimental to their health.
- \* Check soil to determine if plants need to be watered.
- \* Know your plants - most plants prefer moist but not wet soil. Some prefer to dry out between waterings. Each plant is different.
- \* Water in the morning when plant roots are most receptive to absorbing water. Plants left too moist are more susceptible to disease and mildew.
- \* Water the soil NOT the leaves.
- \* Water deep. Watch water come from the bottom of the container but not overflowing as that depletes nutrients from the soil.

## planting

- \* Starting from seed, place 2-3 seeds the allotted distance apart. Thin as needed.
  - often, it will be one per container.
- Water, Watch, Wait and Enjoy!

SC © MLC 2015

# 'Ohana Activity

E Kama'ilio kākou!

Let's Converse!

Practice introducing yourself in 'ōlelo Hawai'i (Hawaiian language).

'O \_\_\_\_\_ ko'u inoa. (My name is \_\_\_\_\_.)  
Name

No \_\_\_\_\_ mai au. (I'm from \_\_\_\_\_.)  
Island/City

Noho au ma \_\_\_\_\_. (I live at \_\_\_\_\_).  
Where you live now

He \_\_\_\_\_ o'u makahiki. (I'm \_\_\_\_\_ years old).  
Age

O \_\_\_\_\_ ko'u waiho'olu'u punahele. (My favorite color is \_\_\_\_.)  
Color

\*See numbers and colors on next page.

## Nā Helu

One	‘Ekahi
Two	‘Elua
Three	‘Ekolu
Four	‘Ehā
Five	‘Elima
Six	‘Eono
Seven	‘Ehiku
Eight	‘Ewalu
Nine	‘Eiwa
Ten	‘Umi
Eleven	‘Umikūmākahi
Twelve	‘Umikūmālua
Thirteen	‘Umikūmākolu
Fourteen	‘Umikūmāhā
Fifteen	‘Umikūmālima
Sixteen	‘Umikūmāono
Seventeen	‘Umikūmāhiku
Eighteen	‘Umikūmāwalu
Nineteen	‘Umikūmāiwa
Twenty	‘Iwakālua

## Nā Waiho‘olu‘u

Red	‘Ula‘ula
Yellow	Melemele
Purple	Poni
Blue	Polū
Black	‘Ele‘ele
Pink	‘Ākala
Orange	‘Alani
White	Ke‘oke‘o
Silver	‘Āhinahina
Green	‘Ōma‘oma‘o
Brown	Maku‘e

# 'Ono Healthy Recipe

Enjoy this 'ono (delicious) chili pepper water recipe with your 'ohana at home.

## Chili Pepper Water Recipe

Chili pepper water feeds the taste for those who are in search of adding some 'ono, spicy flavor to dishes. This is great to mix into shoyu, dabbed onto any meal, great with soups, poke, Hawaiian food, and more!

### Ingredients

- 16 ounces water (30 servings)
- 2 tsp salt (add salt to your preference)
- Hot (30), Mild (2-10) Hawaiian chili peppers
- 24 ounce Mason jar or glass bottle of similar size
- 3 garlic cloves and ginger (optional)
- Pot
- Gloves

**Important Note - Avoid touching eyes and avoid looking over pot. The steam of the pot is just as hot as touching eyes with a pepper finger. Highly recommend cooking on a portable burner outside to avoid burning eyes.**

### Step 1

- Mince garlic and peppers together in a pot.

### Step 2

- Add all ingredients to pot. Apply heat for a boil to occur. Boil 3 minutes. Keep in mind if boiled passed this time, water is lost through evaporation. Stir pot to mix the bottom.

### Step 3

- Remove from heat. Strain out peppers and ginger. Place into Mason jar or glass bottle of your choice. Leave out covered until it is cool enough to place in refrigerator.
- For best results, let sit for 5-7 days before using.

### Step 4

- Add chili pepper water to your meals to add some 'ono, spicy flavor.
- Enjoy!

Recipe Source: Jesse Mikasobe-Kealiinohomoku  
(Mālama Learning Center)



# 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?** If you touch a snail or slug with your bare hands you can put yourself at risk of getting Rat Lungworm Disease. Always wear gloves if you're going to touch a snail or slug & **REMEMBER TO ALWAYS THOROUGHLY WASH YOUR HANDS!**

# 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](mailto:info@malamalearningcenter.org)**



Mālama  
Learning  
Center

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](http://www.malamalearningcenter.org)