



# Using Art and Aesthetics to Promote Positive Dietary Behavior

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Final Proposals

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# Meet the Team



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Theater*



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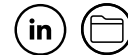
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# Prompt

Using art and aesthetics to promote healthy eating and positive dietary behavior change.



# Executive Summary

## Problem

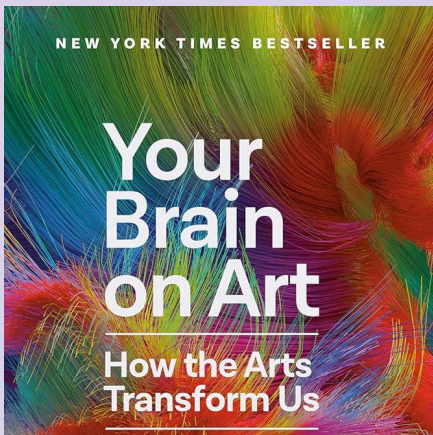
- Nearly **40%** of Marshallese living in NWA have diabetes
- The Marshallese Population in NWA has **significantly higher rates** of hypertension and obesity than the American average.
- These **poor health outcomes** are linked to nuclear testing in the RMI, which caused both complications from radiation and forced dietary change towards **processed foods**.

## Opportunity

- A “**food as medicine**” approach is already incorporated into traditional Marshallese culture (*manit*).
- Tapping into the strengths of the NWA community to **promote access** and culturally relevant nutritional **education** for the Marshallese population

## Solution

- A **Marshalllese specific** expansion of existing food bag services which better **engages the community** and inspires healthy eating habits.
- Three main products: an artistic **food bag**, a recipe **coloring book**, and a food proportion **educational toy**
- Designed to **increase the positive perception and use of healthy foods**.



# Inspiration

*How did we get from the prompt to identifying our specific problem and understanding the opportunity that is available?*

Most of our inspiration just came from talking to people!

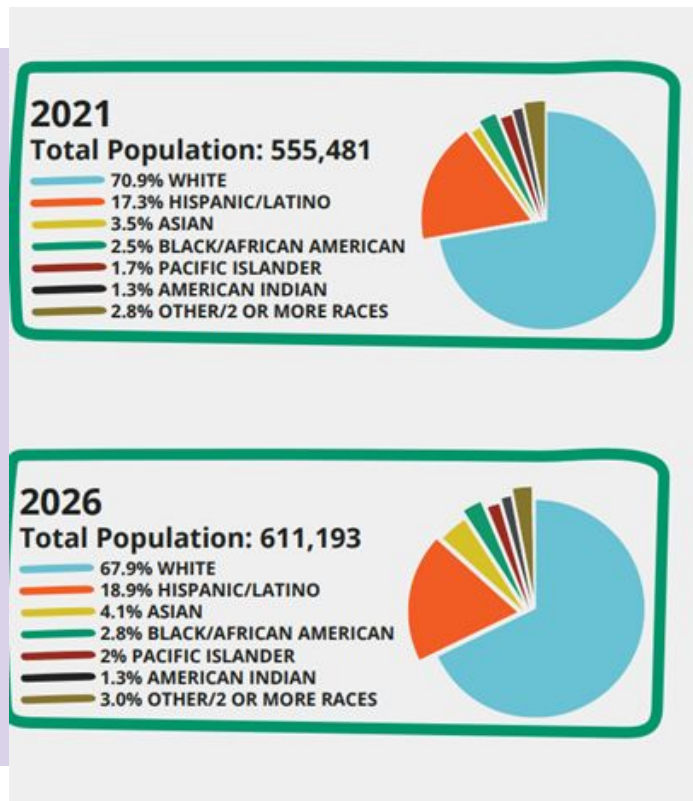
- Heartland Whole Health Institute
- Aileen Godreau, MD, MPH
- Community Clinic
- Spring Creek Food Hub
- Apple Seeds in Fayetteville
- Your Brain on Art
- Crystal Bridges, the Momentary
- MEI, UAMS Marshallese Staff, Marshallese Consulate

# Demographic Breakdown

As of 2021, Marshallese or “Pacific Islander” as referred to in this graphic from NWA Council accounted for **1.7% of the population of NWA**.

There were approximately **9,443 Marshallese** in the region, with around **12,000** throughout the entire state.

By 2026, the regional number is expected to have grown to around **12,225**. That is **roughly a 30% increase** in only 5 years (NWA Council Report).



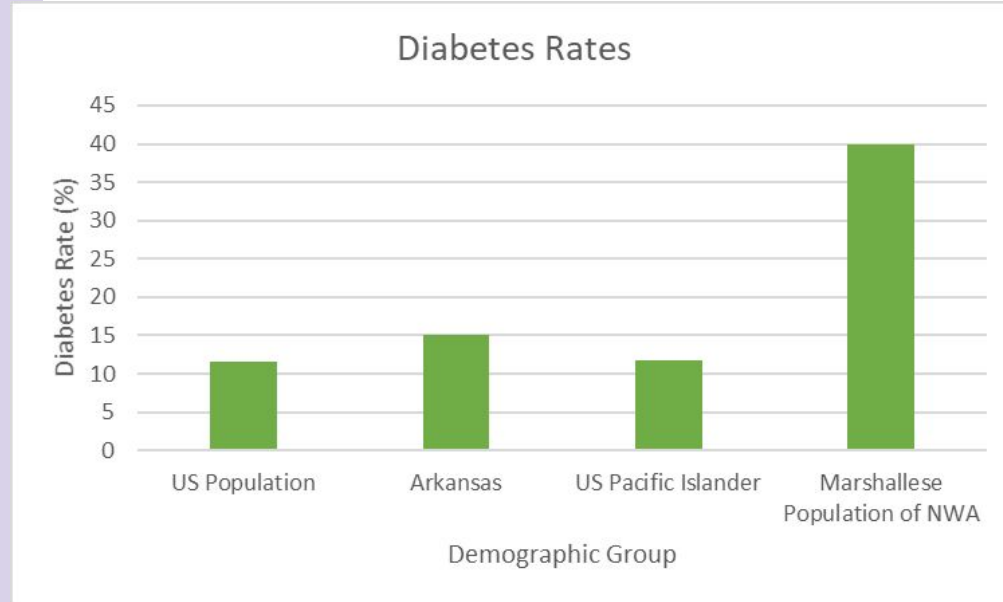
# Diabetes Breakdown

The US Diabetes rate is 11.6%

The rate for Arkansas is 15%

The rate for Hawaiian Native or Pacific Islanders across the US is 11.7%<sup>1</sup>

The rate for Marshallese Population of NWA is 40%<sup>2</sup>



# Hypertension Breakdown

*High blood pressure defined following CDC definition of at or above 130/80 mmHg*

The US Hypertension rate is 48.1%

Numbers from a UAMS trial and sample group from NWA Marshallese population:

**39.1%** in prehypertension/early range  
(120-139/80-89)

**41.2%** rate of hypertension

**19.2%** both diabetes and hypertension  
(CDC)





# Problem Statement

Marshallese women and children have higher rates of diabetes, obesity, and hypertension, making them at higher risk of developing metabolic syndrome, due to...

1

A limited access to nutritious foods

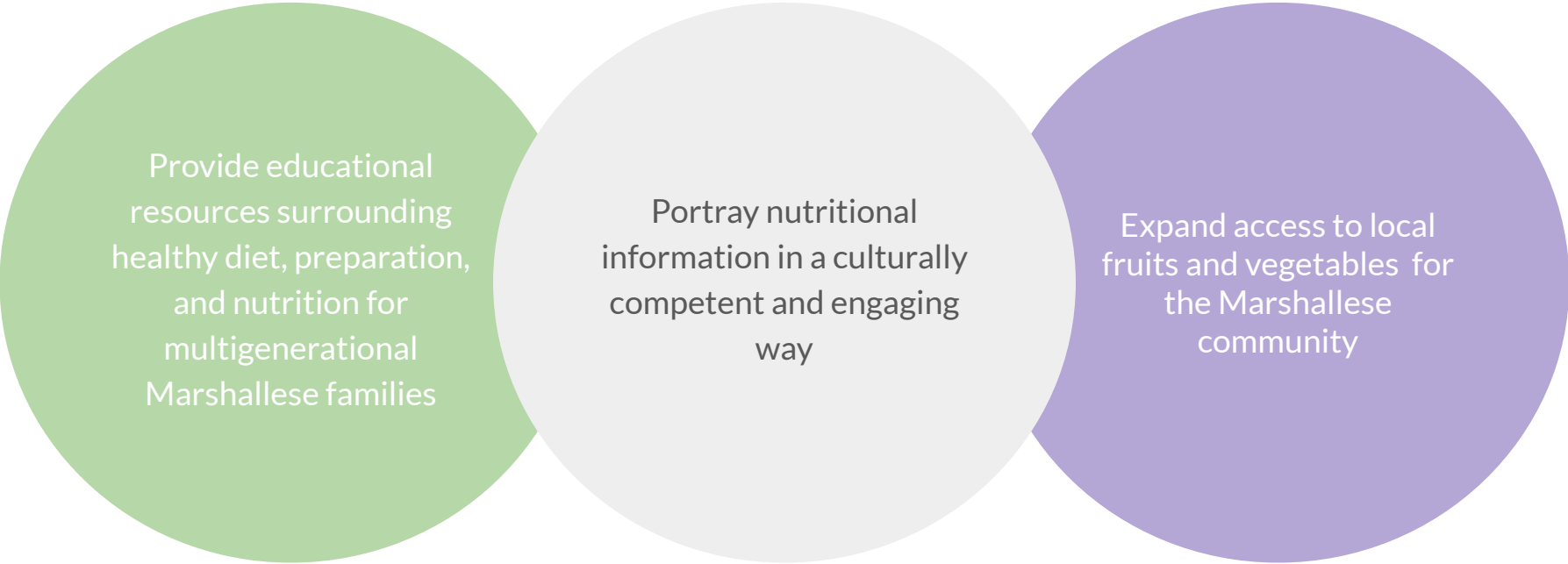
2

The absence of culturally relevant education regarding dietary practices

3

A lack of salient experiences that inspire healthy eating habits

# How Might We...



Provide educational  
resources surrounding  
healthy diet, preparation,  
and nutrition for  
multigenerational  
Marshallese families

Portray nutritional  
information in a culturally  
competent and engaging  
way

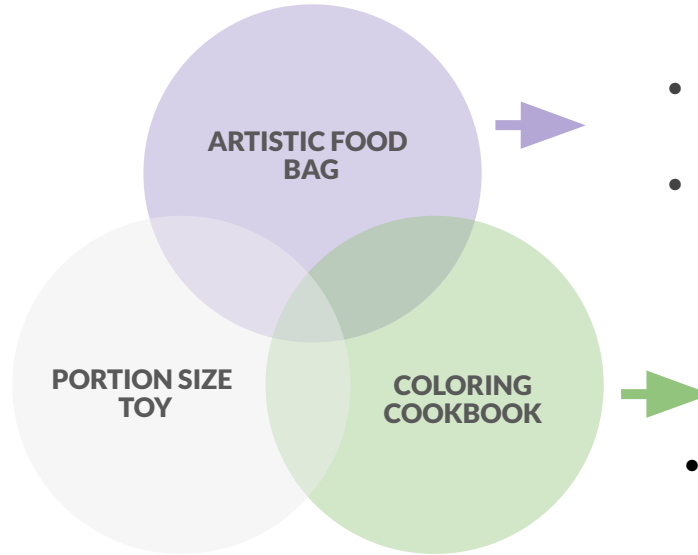
Expand access to local  
fruits and vegetables for  
the Marshallese  
community

**...to facilitate long term behavior change.**

# Our Solution

## Cultural Relevance

- Using traditional artforms to convey the MyPlate
- Tailored to Marshallese epigenetics and dietary preferences



## Expanding Access

- Increasing Marshallese involvement with the current food bag program
- Getting local produce to Marshallese families

## Providing Resources

- Providing mothers ways to use local produce in culturally appealing methods
- Give children an engaging experience with healthy foods

# Artistic Food Bag

**Bridging the Gap Between Traditional Diets and  
Local Foods**

# Existing Food Bag Program

Partnership between Spring Creek Food Hub and Community Clinic

Newtopia program (funded by  
Heartland Whole Health  
Institute)

Patient bags for purchase  
(subsidized by Community  
Clinic)

Existing program is not culturally tailored to the Marshallese Population  
Community Clinic currently serves approximately **4000** Marshallese individuals



communityclinic



# Culturally Tailored Food Bag Program



A Food as Medicine approach to addressing aspects of metabolic syndrome in the NWA Marshallese population targeting women and children.

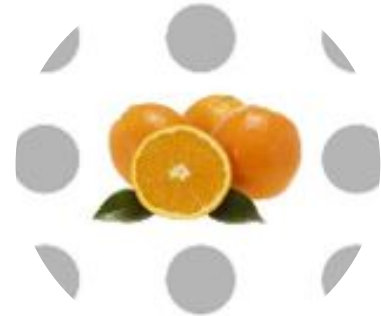
# Qualities of Salient Food Art According to Research?



Hedonic (pleasure) appeals



High interaction with foods and  
nature scenes for healthy food  
choice



Whole foods in high contrast  
with surroundings

(Samson & Buijzen, 2020)  
(Spielvogel et al., 2018) and (Stöckli et al., 2016)  
(Dai et al., 2020)

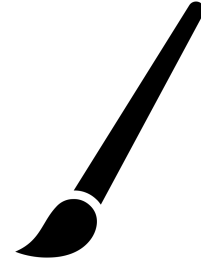
# Elements of Focus



Identifying cultural  
values that drive  
healthy behavior  
change

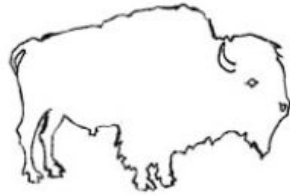


Depicting positive  
outcomes of these  
behaviors

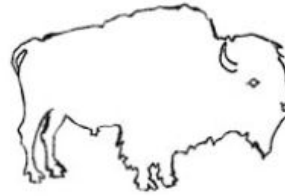


Using culturally  
relevant artwork

# Cultural Sensitivity and Relevance: A Case Study



b. Control label



"This label was initiated and created with input from the Rosebud community."

c. Tailored label

**Researchers found that images created and endorsed by the target community are more effective at encouraging healthy dietary change.**

# Cultural Sensitivity and Relevance: AI Art

## AI Art Strengths

- Efficient
- Cost-Saving
- Customizable

”

“These are not  
Marshallese People”

- UAMS Marshallese  
Focus Group

“

## AI Art Major Weakness

- Limited information on the Marshallese
- Biased data sets
- Not Culturally Accurate



## Local Artist

- While the art for this prototype is just some AI abstract art we whipped up to cast a vision and show you what the bag could look like, our vision for the actual product features art from a local Marshallese artist.
- Ideally, this artist would be commissioned to make artwork to be featured on the reusable bags, allowing the community to play a role in this solution, as well as making the art as culturally relevant and salient as possible.
- We have been in contact with Chantal Herrera at Crystal Bridges regarding facilitating a connection with local Marshallese artists, she has provided recommendations of artists to reach out to if this were to come to fruition!

# Artist Recommendation

Helmar Anitok (airbrush/spray painting): excellent local Marshallese artist, has worked with Crystal Bridges, Mobile Art Lab, and UAMS in the past.

[Yard Art Celebration of Artist Helmar Anitok | LIA Springdale \(live-in-america.com\)](https://live-in-america.com/yard-art-celebration-of-artist-helmar-anitok-lia-springdale)



# Bag Art Logistics



01

## Artist

Local artist commissioned to create art to be printed on reusable bags, artist relationship developed through existing Crystal Bridges connections.

02

## Bag Provider

Currently, Spring Creek uses single-use plastic bags that cost about 60 cents each, reusable bags would be slightly more costly but we believe this cost could be offset due to partnerships, sponsorships, or grants. More on bag cost later. Bags would likely be bought wholesale and then printed.

03

## Bag Printing

Bags would be printed by a design and printing company, we worked with DesignSteins in Rogers to create our prototype and really appreciated their friendliness and excellent service.

04

## Transportation

Bags fit the proper dimensions so that Spring Creek bag delivery to Community Clinic/pickup site does not change.

Swapping to using reusable bags promotes sustainability by reducing waste and saving money in the long-term

## Reusable vs Plastic Bags

Cost of Reusable Bags	
Cost per bag:	\$2.70
500 patients x 2 bags each	1000 bags
Total cost of reusable bags	\$2700

Hypothetical data for program with:

- 500 patients
- 2 reusable bags per patient
- Each patient receiving 1 food bag per week (WK)
- Plastic Food Bags Currently Cost \$0.60 each

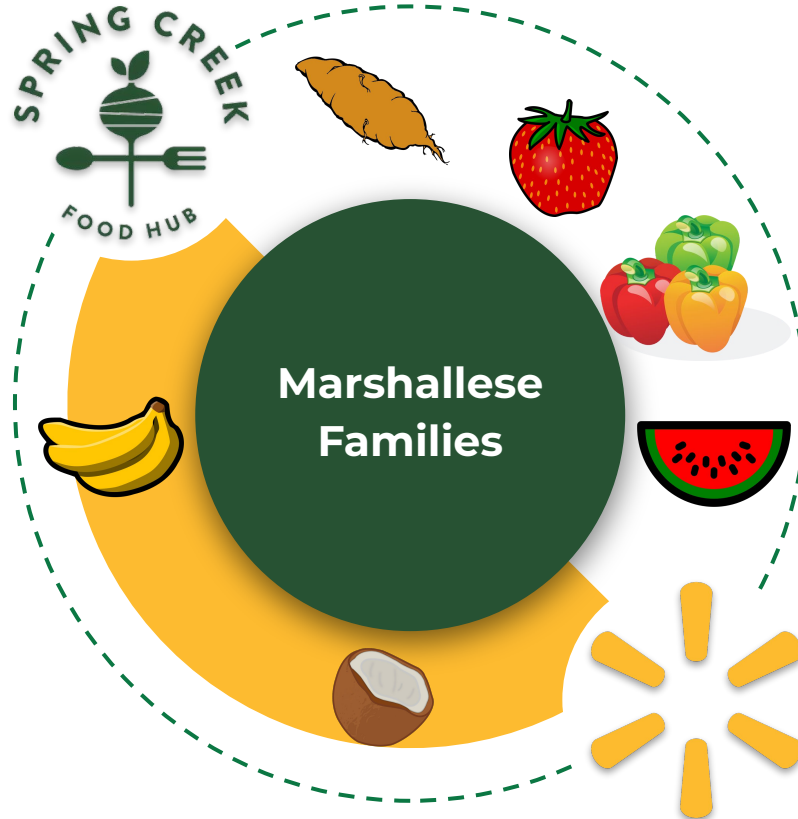
	WK 1	WK 2	WK 3	WK 4	WK 5	WK 6	WK 7	WK 8	WK 9	WK 10
Total Cost of Reusable Bags	\$2,700	\$2,700	\$2,700	\$2,700	\$2,700	\$2,700	\$2,700	\$2,700	\$2,700	\$2,700
Total Cost of Plastic Bags	\$300	\$600	\$900	\$1,200	\$1,500	\$1,800	\$2,100	\$2,400	\$2,700	\$3,000

Break-even  
point

# Combining Traditional and Local Foods

## Spring Creek

Provides local foods:  
consistent  
sweet potatoes  
and brown rice  
along with  
seasonal  
produce



## Walmart

Provides  
traditional,  
island foods:  
coconuts,  
papayas and  
bananas



# Justification for Culturally Tailored Foods

## Marshallese Cultural Food Preferences

**Bold, colored text** indicates items that are likely to be offered at pantries.  
\*Items with an asterisk indicate items commonly grown in the region.

### Fresh fruit

- Apples\*
- Bananas
- Breadfruit
- Coconut (brown, mature)
- Mangoes
- Oranges
- Peaches\*
- Pears\*
- Papayas
- Pineapple
- Plantains
- Strawberries\*
- Watermelon\*

### Fresh vegetables

- Bell peppers\*
- Broccoli\*
- Cabbage\*
- Carrots\*
- Cassava
- Lettuce\*
- Limes
- Corn\*
- Onions\*
- Radishes\*
- Pumpkins\*
- Sweet potatoes\*
- Taro
- Tomatoes\*
- Winter squash\*

### Fresh herbs & spices:

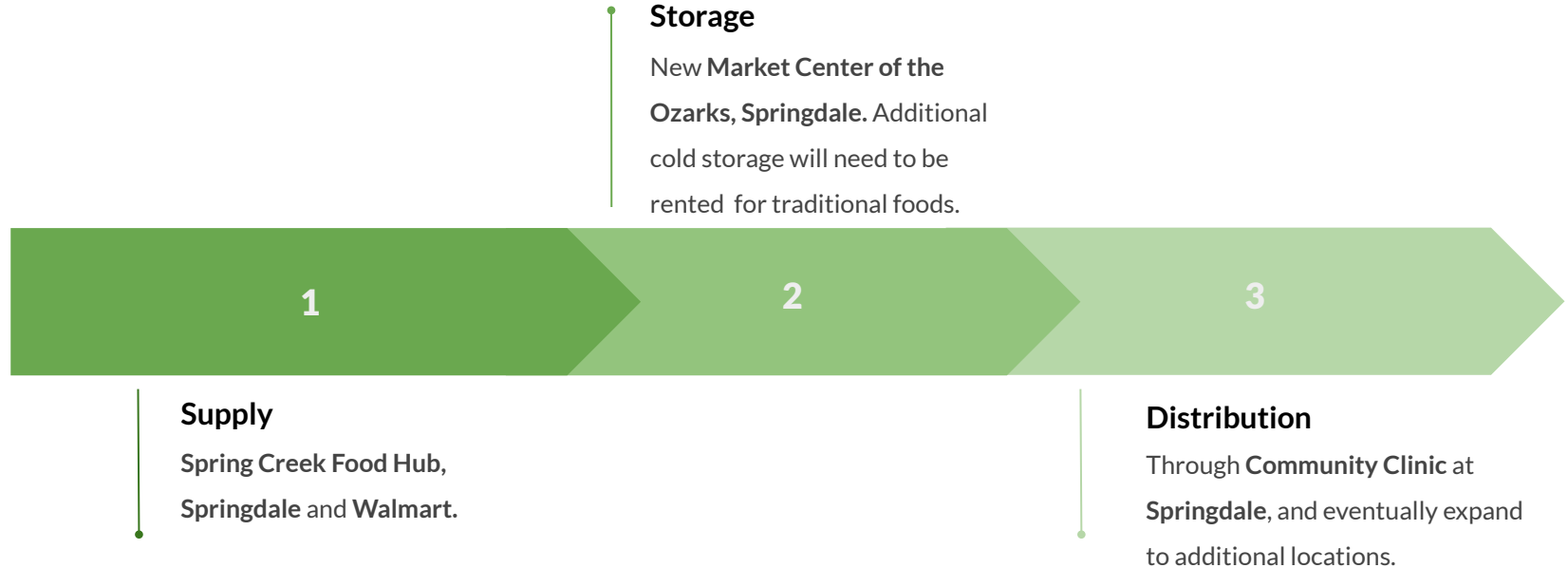
- Cinnamon
- Garlic (fresh or powder)\*
- Ginger (fresh)
- Onion powder
- Turmeric
- Vanilla extract



- “We are so used to having coconut in our foods. Back in the islands, if there were no coconut flakes, milk, the goods wouldn’t taste great.” (Johnson et al. 2019)
- Coconut products are traditional weaning foods (Johnson et al. 2019)
- Papaya has antioxidants that can lower the risk of heart disease (Medrano, 2023) and the juice likely contains antihypertensive properties (Eno et al. 2000).

# Partnership Pipeline

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# Utilizing Food Pantries to Implement the Program

*“Bring your grant [proposal]. Any grant [proposal] that you bring me has to touch and change the lives of somebody. Leave us with a plan that we can actually implement.” - Dr. Naccaman Williams, The Walton Family Foundation*



# Bag Composition

Culturally Tailored Food Bag containing...

Produce grown locally  
in NWA

Traditional, “island”  
foods

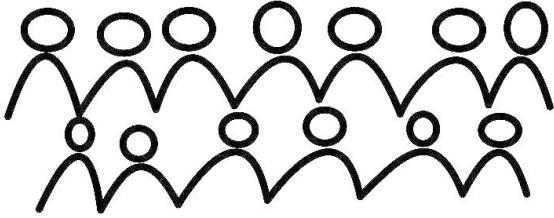
Tailored themes and  
storylines to increase  
saliency and drive behavior  
change



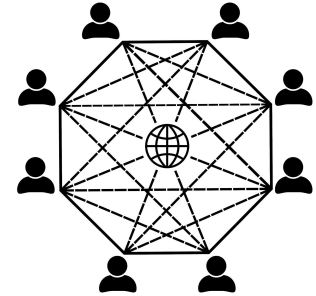
Art with Marshallese  
stylistic choices

# Potential Population Reach

Large Multigenerational Family Units



An average household size of 7.2 people (Ayers et al. 2022)



A box distributed to one family could reach 7 individuals.  
*Reach 25 families, impact 175 people*

# Recipe Coloring Book

**Equipping mothers with recipes  
while exposing children to art**

# Feedback on Current Food Bag Program



*"The first 3 bags - I really don't know how to use them - probably out of the bag I took the three onions"*

*"It wasn't really useful for me"*

*"I didn't know what to use in the bags except for the rice"*

*-Hilma Lemari, Vice Consul for the Marshall Islands*

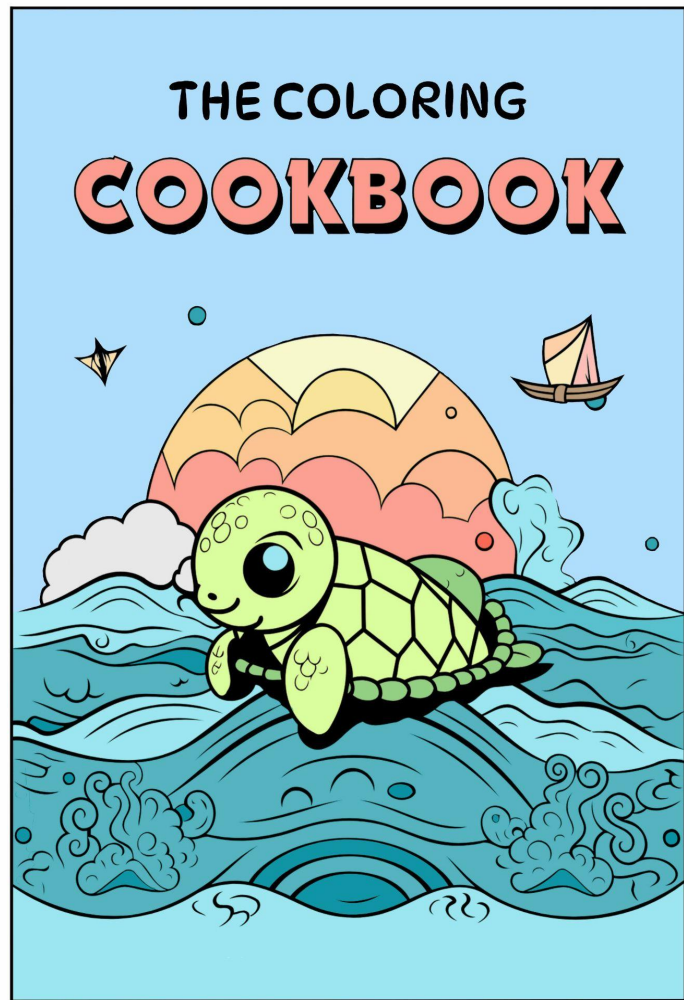
**The Food Bag Program is underutilized by the Marshallese population due to a lack of education around how to prepare local produce**

# Our Product: A Recipe Coloring Book for Mothers and Children

- Combines local NWA foods with traditionally Marshallese foods
- Features produce provided in food bags
- Exposes children to art and provides a salient experience surrounding food
- Provides mothers with educational resources (recipes, preparation instructions, introduction of solid foods)

*“Marshallese are more visual than readers”*

- Hilma Lemari, Vice Consul for Marshall Islands





# Cultural Relevance of Recipes



## Origin of Recipes

Recipes adapted from:

- **“Guide to Cooking Vegetables in the Marshall Islands”** drafted by the Marshall Islands Organic Farmers Association and supported by the Pacific Community and Government of the Republic of the Marshall Islands.
- **Pacific Island Food Revolution**, an innovative program that promotes local, healthy food in the Pacific to combat the non-communicable disease crisis through communications and partnerships.

## Incorporating Feedback

**“The cookbook looks great! Something that has worked for me is to connect personality into the recipes and weave that into the narrative. You’ve done a great job! The pumpkin porridge! Yum!”**

**- Robert Oliver, Global Executive Director of Pacific Island Food Revolution**

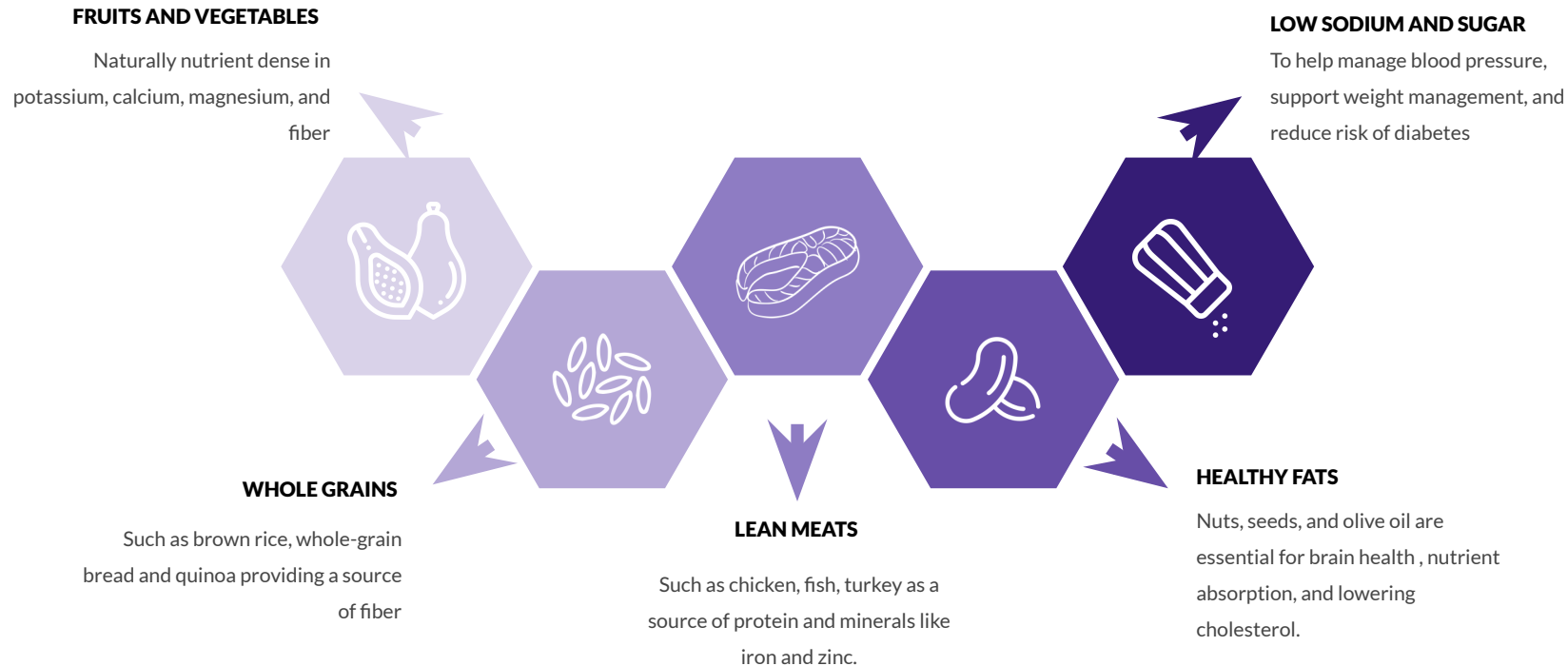
To ensure cultural relevance, nutrition, and taste we consulted the following organizations and individuals:

- Marshallese Educational Initiative
- UAMS Community Innovation Centre
- Hilma Lemari, Vice Consulate of the Marshall Islands
- Brian Busker, former Executive Chef of Nobu
- Paul Brown, MS, RD, LDN, Senior Health Analyst, Heartland Whole Health

**Link to colouring  
book**

“Dietary Approaches to Stop Hypertension” promoted by the National Institute of Health

# DASH Guidelines



Scientific studies show that following DASH can help lower blood pressure and LDL cholesterol<sup>1</sup>.

<sup>1</sup>NIH, 2019

# Affecting Both Mothers and Children



## Children are changemakers

“The children buys [chooses] the foods and the parents prepare them.”  
(Ayers et al. 2019)



## “Weaponize the mothers” -Romaldo Kabua, UAMS Marshallese panel

UAMS Marshallese staff member discusses giving women the tools they need to prepare and provide healthy meals for their children.



## Entire healthy households

Mothers will only cook what they know their children will eat. If the children want healthy foods, the mothers will prepare healthy foods.

# Chef Brian Busker

- Former executive chef at Nobu
- Lived and worked in Hawaii where he fell in love with cuisines of Hawaii, Japan, Thailand, Korea, Vietnam and the Philippines
- Currently working as Warehouse Manager at Spring Creek Food Hub

## Prepared from our coloring cookbook today:

- Coconut vegetable noodles
- Pumpkin rice porridge
- Sesame rice balls



# COCONUT VEGETABLE NOODLES

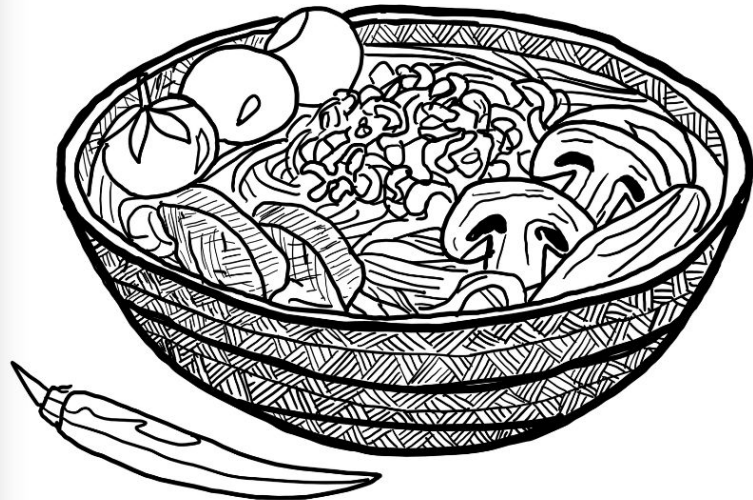
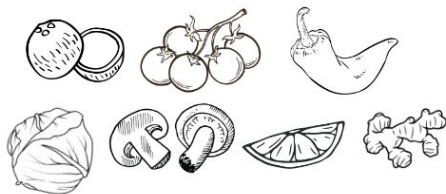
Refreshing noodle salad with a kick. Make it a full meal by serving with a protein of choice.

## INGREDIENTS

- 2.5 cups water
- 1 whole grain/brown ramen or noodle block
- 2 Chili Peppers
- 1 Cabbage
- 1/2 cup Green Pepper
- 10 Cherry tomatoes
- 4 Mushrooms
- 1/2 shell Fresh coconut (can also use coconut milk)
- 2 tsp chopped ginger
- 1 tbs lime juice

## DIRECTIONS

- 1 Boil water. Place noodles in water and cook for 3 minutes.
- 2 Grate coconut, add small amount of water, squeeze out milk from coconut and set aside.
- 3 Chop green pepper, chili pepper, tomatoes, and cabbage and put in a large bowl.
- 4 Slice mushroom and cook till tender, add mushroom to contents of bowl then add coconut milk. Add a pinch of salt, chopped ginger and lime juice.



This recipe was inspired by the Marshall Islands Organic Farmer's Association

# FOOD PREP

## Onions:



Cut off the top (stem end)  
and trim the bottom end



Slice in half



Peel the skin off



Place one half flat on the cutting board and make  
vertical cuts from top to bottom



Slice across the vertical cuts to  
create diced pieces.

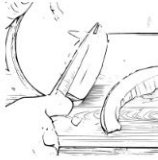
## Pumpkins:



Cut in half



Scoop out seeds and insides



Cut into wedges



Remove the skin  
from wedges



Cut wedges into  
chunks

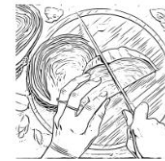
## Cabbage:



Peel off the tough or  
wilted outer leaves and  
discard them.



Cut in half



Cut in half again to  
make wedges

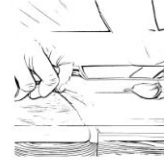


Lay each wedge on the  
cutting board and cut at  
an angle to remove the  
core from each piece.

## Garlic:



Break the garlic bulb into  
individual cloves by  
pressing down on it with  
the palm of your hand.



Press the garlic clove with a  
knife using the heel of your  
hand until you hear a slight  
crack.



Now the skin can be easily  
removed from the clove

## Bok Choy:



Remove individual Bok Choy  
stalks from plant



Rinse individual stalks  
under water



Cut Bok Choy



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- 3 Coconut Vegetable Noodles
- 4 Stir-Fried Rice
- 5 Pumpkin Rice Porridge
- 6 Vegetables in Ramen
- 7 Braised Okra
- 8 Papaya Slaw
- 9 Gourd Soup
- 10 Sesame Rice Balls
- 11 Rice pudding



## SOFT FOODS

Babies from 6 months should start being introduced to solid foods - these recipes by Ricky and Randy can be a great way! They were made during their time on the cooking show Pacific Island Food Revolution

### PUMPKIN, CARROTS & PLANTAIN

#### INGREDIENTS

3/4 cup pumpkin, peeled, seeded, and cubed  
3/4 cup carrots, peeled and cubed  
3/4 cup ripe plantain or banana, sliced



### GREEN MASH

#### INGREDIENTS

3 apples, peeled and roughly chopped  
1 cup broccoli  
1 cup spinach



### SWEET POTATO AND BANANA

#### INGREDIENTS

1 cup sweet potato, peeled and cubed  
1 banana (don't need to boil)

#### DIRECTIONS

- 1 Prepare chosen ingredients while bringing water to a rolling boil, add them in and cook until soft enough to mash or blend
- 2 Strain water or transfer ingredients to a bowl to mash/mix, adding water until its is the desired texture\*

\*You can use a blender/food processor to mix; added in water can be substituted with coconut water, breastmilk, or formula

# PUMPKIN RICE PORRIDGE

Make with boiled fish and greens for a hearty meal!



## INGREDIENTS

1 small pumpkin or 1 squash or 4 sweet potatoes

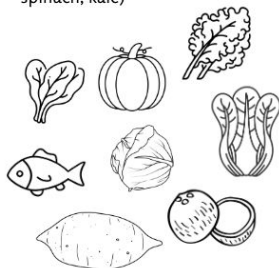
1 cup brown rice

1/2 cup coconut milk

1 whole fish

A pinch of salt

1 bunch greens chopped (bok choy, cabbage, spinach, kale)



## DIRECTIONS

- 1 Cut pumpkin in half, scoop out seeds, cut into wedges. Peel the wedges and cut the pumpkin into large chunks.
- 2 Place pieces in a pot, cover with water, add a pinch of salt. Bring to a boil, reduce to a simmer, and cook until pumpkin is tender.
- 3 Add rice to the pot along with the remaining salt. Cook until the rice is completely tender and the pumpkin is beginning to fall apart.
- 4 Add coconut milk. Stir together, mashing the pumpkin until it is broken and the rice has a porridge consistency.
- 5 Fill a pot large enough to cover the fish with water and bring to a boil with salt. Add fish and greens to the boiling water. Cook at steady boil for 5 to 7 minutes, or until the fish is cooked and bok choy is tender.

Dorris John brings back the flavors of the Marshall Islands to her family in NWA through this recipe.



## About the Chef:

"Little more than a year ago, Doris John prepared her family's meal crouched beside an open fire pit with views of the ocean and sounds of children playing freely on the island she called home. Today, she cooks on an electric stove in the multigenerational apartment she shares with her family in Springdale.

[In the United States] people struggle with the convenience of fast food and the beckoning tastes of sugar, salt, and everything fried. Efforts are underway to provide resources for healthy living [in NWA] which brings her community back to flavors of the island: fish, rice, fresh vegetables, and coconuts. Doris is learning to cook with less sugar and less salt, while still delighting in the foods that taste of the ocean and the open air."

- Edible Arkansas



# Portion Guide Toy

Exposing children to food groups and  
healthy portion sizes from a young age

# Why this is Important?



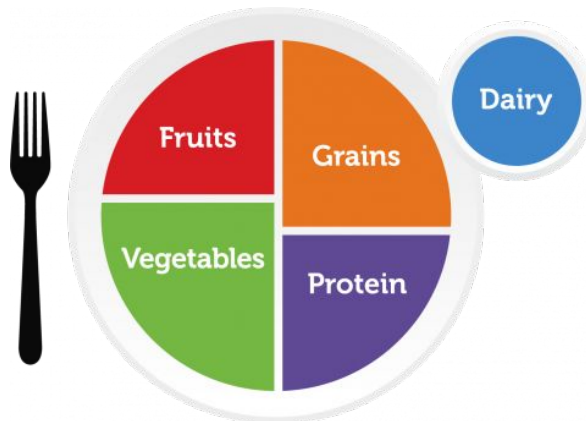
## MyPlate is a USDA Product

Made for American metabolisms with a Western plate layout



## Portion Control

Now in the US with access to processed foods everywhere “we eat anything and everything” -Trina Marty, MEI



“The concepts of games and toys have a very important role in children’s lives. It contributes to the development of cognitive, motor, psychosocial, emotional, and linguistic skills.”

(Dag et al. 2021)

## Healthy Eating Plate with Filipino/a/x American Recommended Foods

Our calorie needs are about **2,000 calories\*** a day. Below are the U.S. Department of Agriculture (USDA) guidelines to your daily recommended amount of each food group.

Try adding some of these ingredients to your sinigang, tinola, or nilaga!

### Fruits

2 cups

Mango, banana, orange, pineapple, berries, apple, peach, melon, calamansi, cucumber, eggplant, or avocado.

### Vegetables

2½ cups

Broccoli, lettuce, bok choy, spinach, cabbage, tomato, asparagus, cauliflower, carrots, or mushrooms.

### Grains, Bread, Cereals

6 ounces

Cooked rice, cooked noodles, 1 slice of bread, cooked taro/yucca/potato, or cooked oats

### Protein

5½ ounces

Eat fish and/or seafood at least 3 times per week. For healthier choices try lean skinless chicken, pork, or tofu. Other sources of protein: 1 egg, lean meat, cooked beans, edamame, peanut butter, or nuts.

### Dairy

3 cups

Low-fat yogurt or cheese

\* not including discretionary calories

## Our Filipino/a/x American Plate

A healthy and sustainable eating pattern considers personal preference, cultural tradition, budget, and nutrition.

### Eat More

**Brown Rice or Quinoa**  
**Spices and Aromatics** (lemongrass, herbs, ginger, lime)  
**Water or Flavored Water with Fruit/Mint**  
**Roasted, Baked, Grilled, or Sautéed Foods**  
**Lean Meats, Fish, Chicken, Shrimp**  
**Whole Fruits and Veggies** (cook more meals and snacks at home and make fruit-based desserts)

### Eat Less/In Moderation

**White Rice**  
**Salt**  
**Sugary Drinks/Juices**  
**Fried Foods**  
**Fatty Meats/Processed Meats**  
**Junk Food**

### Know Your Portion Sizes



# The Research: Differing from the USDA

AAPCHO: created variety of healthy eating plates with portions for Pacific Islanders

## FOODS THIS GROUP WILL LIKELY ENJOY

**Bold, colored text** indicates items that are likely to be offered at pantries.  
\*Items with an asterisk indicate items commonly grown in the region.

### Fresh fruit

- **Apples\***
- **Bananas**
- Breadfruit
- Coconut (brown, mature)
- Mangoes
- **Oranges**
- Peaches\*
- Pears\*
- Papayas
- Pineapple
- Plantains
- Strawberries\*
- Watermelon\*

### Fresh vegetables

- **Bell peppers\***
- Broccoli\*
- Cabbage\*
- Carrots\*
- Cassava
- Lettuce\*
- Limes
- **Corn\***
- **Onions\***
- Radishes\*
- Pumpkins\*
- **Sweet potatoes\***
- Taro
- **Tomatoes\***
- Winter squash\*

### Fresh herbs & spices:

- Cinnamon
- Garlic (fresh or powder)\*
- Ginger (fresh)
- Onion powder
- Turmeric
- Vanilla extract



Institute for Digital  
Health & Innovation

UAMS: created a list of Marshallese food preferences based on local food pantry usage

# Our Product: A Tailored Portion Guide Toy

## Modified Portions

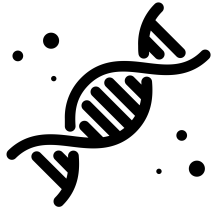
## A Relevant Layout

- Proportions made in accordance to AAPCHO measurements
  - Less Overall Quantity
  - Lower % of Grains
  - Higher % of Fruits
- Emulates how food is more traditionally served
  - Inside a bowl/basket instead of a plate
  - Food organized with Protein and Grains in the center
  - Woven nature ties back to cultural artforms and symbols





# Benefits of an Interactive Marshallese MyPlate



“Nutrition in early life induces long-term changes in DNA methylation that impact on individual health and age-related diseases throughout life”

(Tiffon, 2018)



“ If you had made it for them since they were little and they’re used to it, they would eat it. But if you didn’t add veggies into their diets since little when you would see very few of them eating their vegetables.”

(Johnson et al. 2019)



“Children play an active role in their cognitive development, building understanding through exploration and engagement with their environment”

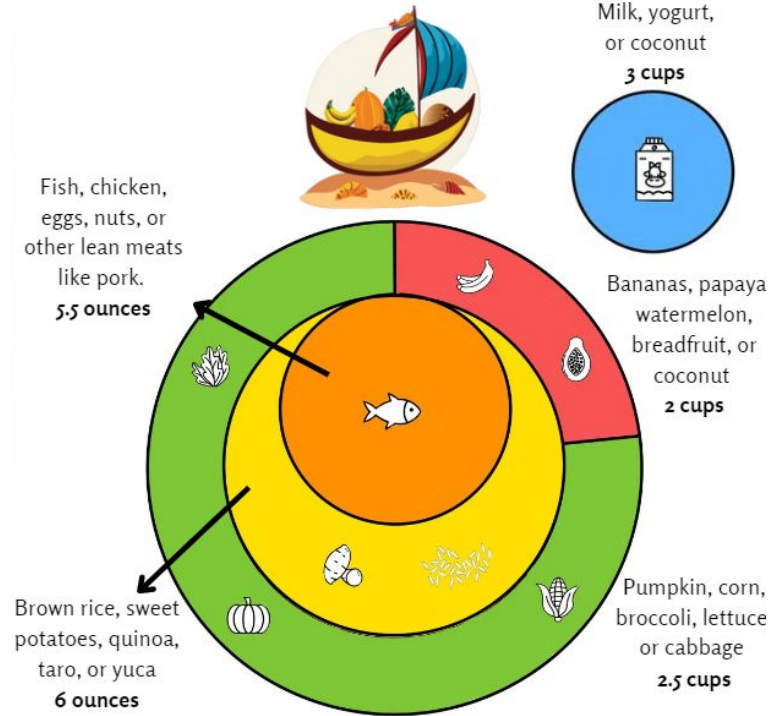
(By et al. 2024)

## Beyond the Toy

This template and its included information has potential to serve the Marshallese Community in a variety of outlets:

- Toy Plate for Children
- One Pager (Cookbook)
- Online Educational Material
- A “Functional” Plate
- Aid in Nutrition Classes (UAMS/MEI)

## A BALANCED PLATE



### Know Your Portion Sizes



# A Partnership with The Marshallese Educational Initiative

*"If you do this, then it will definitely work." - Carlnis Jerry, MEI*

- We have talked with MEI about how the portion guide toy and the coloring book can be used as tools for their educational programming.
- MEI works across different cities in NWA and can increase reach to those who might not have access to Community Clinic and resources in Springdale.
- They have requested 20 toys and coloring books if the program is to be picked up.



## Neonatal Care

Members of MEI shared that the toy would be a helpful visual for depicting what a balanced meal looks like for pregnant mothers. Additionally, the coloring book can give them ideas for what they can cook.

## Women enrolled in WIC

Women enrolled in WIC can use the coloring book to learn how to prepare the fruits and vegetables they receive, which can also increase the likelihood of them using WIC to purchase fresh produce.

## The Whole Family

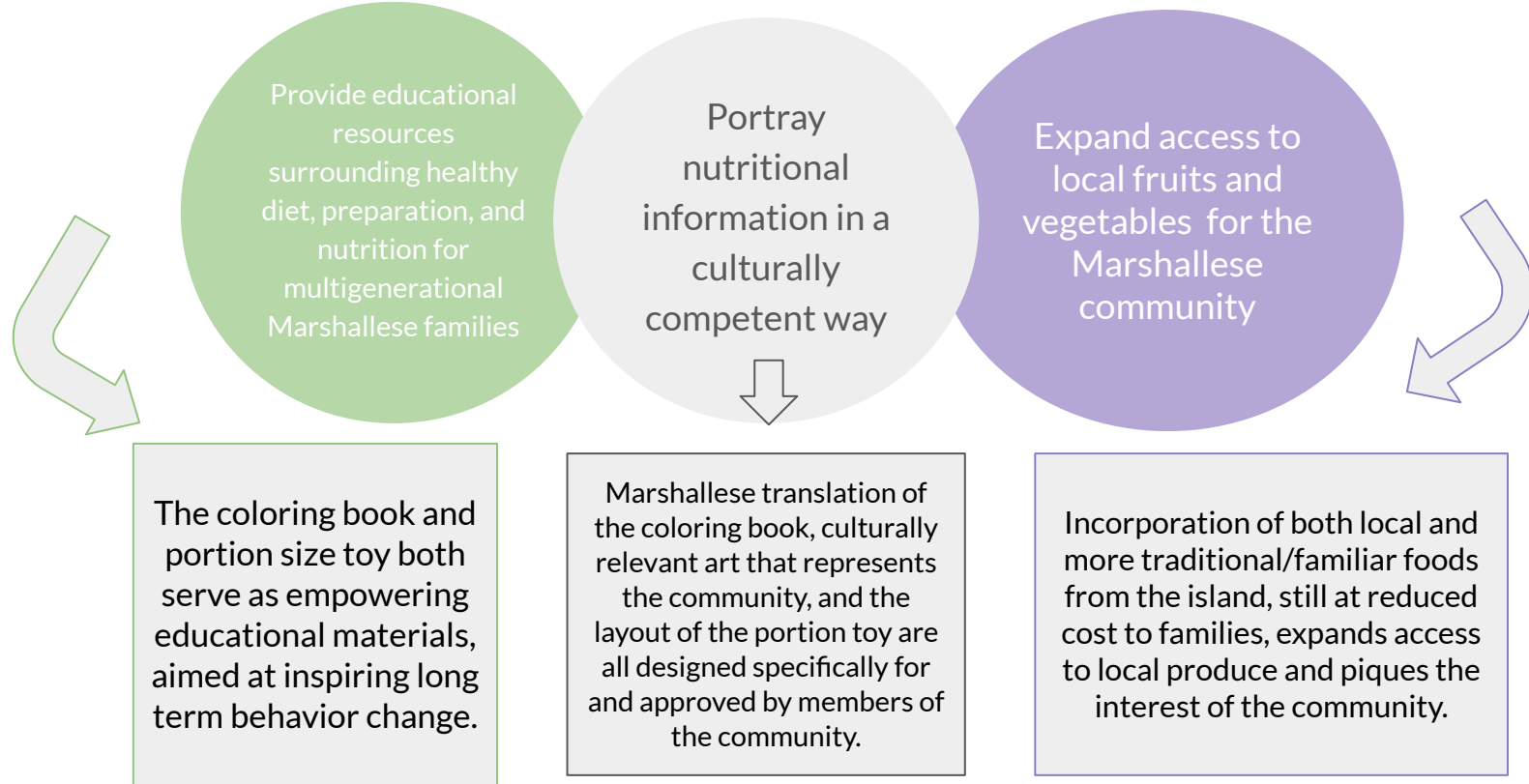
Families often seek guidance from MEI on what to cook, especially those who are food insecure. The coloring book is a resource that can be distributed to these families, while the toy is a practical, engaging tool.

# Moving Forward

Next Steps



# Outcomes and a Return to Goals



All these solutions inspire Marshallese towards dietary behavior change, following a “food as medicine” approach, a communal shift towards such changes will reduce rates of metabolic syndromes amongst the population.

These products will help provide access, education, and positive experiences with food, all leading to a more flourishing Marshallese community and a healthier Northwest Arkansas.

## Community Impact



### Corporate and Workplace Benefits

- Companies that employ large numbers of Marshallese workers, such as Tyson and Walmart, would benefit greatly from healthier and more productive workers.
- Participation in this program would decrease the amount of sick days taken, reduce costs of employee insurance benefits, and increase productivity and motivation.



### Changing the Narrative

- There are many current stereotypes surrounding the Marshallese community, especially when it comes to food and language.
- Using art as a universal language to draw people in and bring people together, the coloring book and other products provide culturally relevant educational resources to equip and empower.



### Building Trust Within the Community

- Currently, there is a mistrust of healthcare systems amidst the Marshallese community, a feeling that they are always “out to get” and not actually wanting to help.
- Studies show that when a group feels like they are intentionally deprived of resources or that there are systematic factors against them, they are more likely to consume unhealthy foods.
- By engaging the community and working alongside the Marshallese population, such as connections to non-profits for advertising, and the commissioning of a local well-known artist, this program builds trust, working to change the perception of the healthcare system.



### Longer Lifespans and Healthier Generations

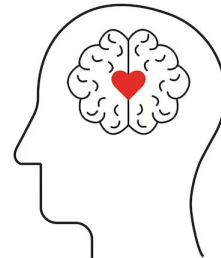
- “Funerals are common for 20, 30 year olds”  
-April Brown, Co-Founder and COO, Marshallese Educational Initiative
- People live longer, meaning they will work for longer, and can contribute meaningfully to the community for longer.

# The Impact of Representation on Mental Health

**“Participants agreed that representation of BIPOC PM has been increasing and can positively impact mental health”**

\*BIPOC: Black, Indigenous, and People of Color | PM: People who have been marginalized

This study and others have shown that being represented in media can have tremendous positive impacts on mental health. It is important that solutions and any program advertising depict Marshallese people to increase representation in this population.



# Outcomes of Isolated Aspects of Interventions

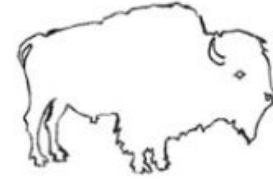
When a healthy item included the culturally tailored label, the amount the customer was willing to pay for it increased by over \$1 compared to no label ( $p < 0.001$ ) (Gustafson and Prate, 2019).

Simply adding an image of a nature scene next to a vending machine increased the amount of times a healthy item was chosen by 12% (Stöckli et al. 2016).

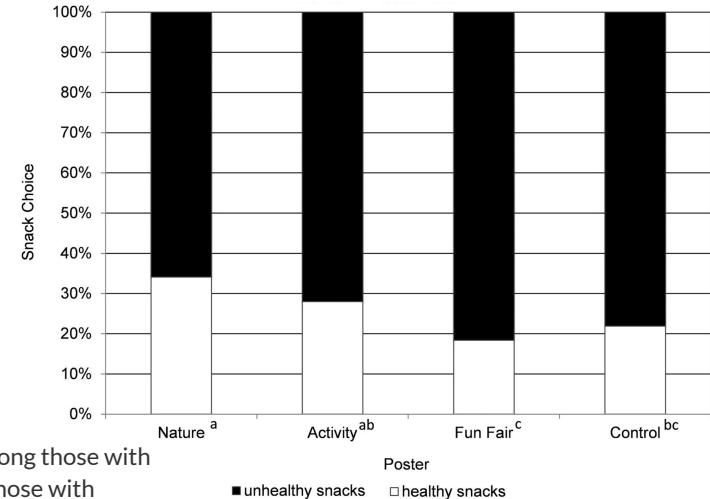
In a majority rural, Latina population, 98.2% stated that culturally tailored, artistic recipes and food demonstrations were very useful to them and motivated dietary behavior change (Cheney et al. 2023).

Produce prescriptions are associated clinically relevant improvements in blood pressure, BMI, and glycated hemoglobin for adults with poor cardiometabolic health\* (Hager et al. 2023)

\* Systolic and diastolic BP declined by  $-8.38$  mm Hg and  $-4.94$  mm Hg respectively, among those with stage I and II hypertension at baseline and by  $-11.10$  mm Hg and  $-9.43$  mm Hg among those with stage II hypertension



"This label was initiated and created with input from the Rosebud community."



An overview of the cost it takes to produce 1 bag

# Financial Breakdown

	Local foods from Spring Creek Food Hub	Transportation/packing/s storage	Storage of Traditional Foods	Traditional Foods from Walmart		Reusable Bag	Bag Art Printing	Artist Commision (1 time cost)
Expense	\$10.00	\$3.40 <sup>1</sup>	TBD	Bunch of bananas	\$1.00	\$2.70	\$1.30	TBD
				1 papaya	\$4.32			
				1 coconut	\$2.24			
Cost	\$13.40		\$5 - \$19.12 <sup>2</sup>					
Total	\$18.40 - \$32.52							

Cost for one month of food is \$44.00-\$70.24<sup>2</sup>. For reference, median monthly produce prescription cost on average in the United States are \$43 for adult and \$112 for pediatric programs.<sup>3</sup>

<sup>1</sup>\$0.60 cheaper to account for the price of the plastic bag

<sup>2</sup>Cost can range depending on quantity of traditional food purchased

<sup>3</sup>American Heart Association Journal

# Progress Made

*See more details in specific writeups and reports linked at the end of this presentation*

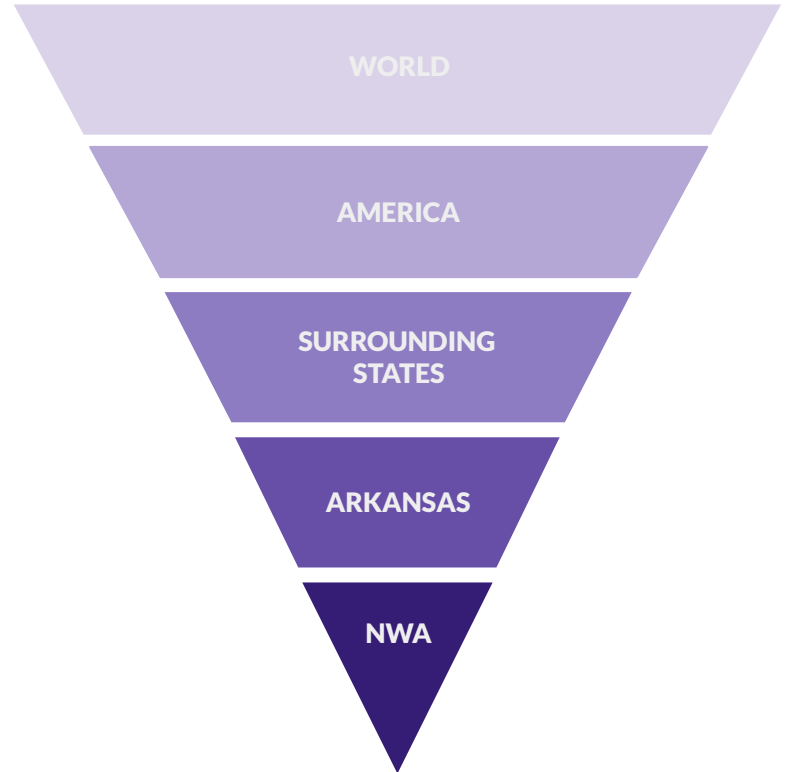
# Future Steps

*See more details in Next Steps Packet which provides details regarding big tasks and actionable steps forward.*

How this culturally tailored program can be expanded to any population

## Portability of the Food Bag Program

- Because of the culturally tailored nature of this program, we believe it could be expanded and adapted to fit the needs of any population!
- By utilizing local artists that are members of a specific group, food bag art will continue to be culturally relevant and appealing to community members.
- Contents of bags can also be tailored as a combination of regional produce, and foods used in traditional cooking, for any culture.
- We believe that if this program is a success for the Marshallese population in NWA, it could be a success for communities everywhere.





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## The Vision

A healthier Marshallese population in Northwest Arkansas, no longer fighting high rates of metabolic syndromes, but instead flourishing as a healthy and vibrant community- a community that weaves together both traditional culture (manit) and new experiences to create a story of hope and an atmosphere in which all may thrive.







# Thank You All!



**What Questions Do You Have For Us?**

# Testimonials

“I think this is a really good idea, the Marshallese population here is very special. Anything we can do to support them is a good thing.”

- *Rhianon DeLeeuw, Senior Vice President, Enterprise Strategy and Innovation, at Walmart*

“It’s the colors that drew me in. Other plates are pretty basic. Now I’m hungry!”

- *Marcina Langrine, Marshallese Education Initiative*

“I love love love the coloring book, the toy, and the idea of creating a bag design that is appealing and feels like something that honors their culture and foodways.”

- *Dr. Emily S. English, Food Systems Senior Program Officer at Walton Family Foundation & Walton Personal Philanthropy Group*

“You all are providing the know-how for a population that has been quite underserved in NWA. This is a great plan. I love the simplicity of it.”

- *Dr. Naccaman Williams, Director of Special Projects at the Walton Family Foundation*

Additional details you may need

## Important Links



Where can I see the coloring book?

[Coloring Book](#)



Where can I find the Marshallese Healthy Eating Plate?

[Digital Graphic \(Plate\)](#)  
[\(Graphic\)](#)



Where is the One-Pager for the Healthy Eating Plate?

[Guide](#)



Where can I see an actionable list of next steps?

[Next Steps](#)



If I want to laser cut more toys, where is the Healthy Eating Toy Adobe Illustrator File?

[Design File](#)



Where can I see the bibliography for these slides?

[Citations](#)



Where can I see a full summary of the three products?

[Full Summary Report](#)