

2.7

Grade Level

6-9

Subjects

Health
Science
Humanities

Time Frame

Multiple Class
Periods

Teacher Materials

- California Native Foods List
- Sample Native Recipes
- Family Interview Worksheet/Guidelines

Family Recipe

In this lesson, students complete their exploration of nutrition and Indigenous foods by comparing the nutritional qualities of introduced and Indigenous foods. They interview a trusted adult about food, and practice substituting local Indigenous foods into recipes from their own cultures.

Teacher Background

Students continue to develop their understanding of nutrition and Native foods by exploring nutrition labels for introduced and Indigenous foods. Comparing the nutritional content of Indigenous and introduced foods emphasizes the differences specifically in cholesterol, saturated fat, added sugar, and fiber content.

Comparing Introduced and Indigenous foods prepares students to further explore their relationship with food and consider the role models in their lives that can support healthy eating habits.

While Native peoples' relationship with food has dramatically changed over time, the state of Westernized foods has also changed. To highlight this change, students will choose a trusted adult or mentor in their lives (preferably from their family), to interview about their food history.

Students will also outline a recipe that is important to them, analyzing the nutritional breakdown of that meal, considering Indigenous substitutes for Western ingredients, and finally, considering whether or not the food is healthy based on their previous lessons.

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Family Recipe

Healthy Ecosystems Feed Healthy Communities

Vocabulary

- **Indigenous:** Produced, growing, living, or occurring Natively or naturally in a particular region or environment
- **Food Sovereignty:** To achieve independence in terms of the production and provision of food. Communities who achieve food sovereignty grow, distribute, and consume their own food from their own food sources
- **Nutrition:** Related to eating foods that provide the nutrients needed to live. Nutrients found in food and drink help provide energy to the body.
- **Indigenous Foods:** Locally grown food that is originally from the area and has been eaten by Native people for thousands of years. Food is grown with no chemicals or pesticides; food is grown in just the right amount.
- **Settler/Introduced Foods:** Foods that come from other countries or from outside the local ecosystem. Foods are sometimes healthy and sometimes damaging to health. Sometimes these plants can harm the local ecosystem.
- **Processed Foods:** Foods that have been altered or changed from their original form. They often have added flavors, or artificial substances added, and might taste different than their original form
- **Whole Foods:** Foods that have very little, or no processing/have not been changed from their original form. Foods that do not have additives, or any artificial substances added.

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Engage

Ask students to answer the following quick write prompt:

Describe some foods that you and your family or friends eat on special occasions. What is the occasion? Do you know why the food is special?

Explain that students will have an opportunity to focus on some of their favorite family foods late on in this lesson.

Explore

Provide students with the **Indigenize Our Diet: Warm Up worksheet**.

Have students turn the nutritional content labels into bar charts that students can use to compare Native and introduced foods to one another.

Decide as a class which of the foods are healthiest, citing the nutritional information on the nutritional labels.

Explain

Explain to students that whole foods will almost always be healthier than processed foods. Because of this, it is important to try to incorporate many whole foods into our diets.

Sometimes, substitutions for common ingredients can be made in order to make our recipes healthier. For example, using natural sugars found in fruits to make syrups, as opposed to eating high fructose corn syrup, can achieve a similar purpose in a recipe while keeping your food healthy.

While eating whole foods is important for health, usually we process our food as we prepare to eat it, especially food that requires cooking with heat (baked things, for example). When we do process our food, we can make it healthy by avoiding highly processed ingredients, like white sugar, and try to use Indigenous ingredients when possible.

As an introduction to the next activity, project each of the attached **Pomo Recipes**. Both recipes are hybridized to include Indigenous foods and introduced foods, as many Pomo people have a variety of cultural influences.

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Healthy Ecosystems Feed Healthy Communities

The first is a **quail and mushrooms recipe** that is an example of creating hybridized dishes that incorporate both Indigenous traditional foods and introduced foods in a healthy way. Read through the example as a class, noting that the recipe avoids ingredients with saturated fats, refined/highly processed sugars, and high amounts of sodium.

The second is an **acorn bread recipe** that uses some Indigenous traditional ingredients, and some introduced ingredients. Read through the example as a class, again noting that the recipe avoids ingredients with saturated fats, refined/highly processed sugars, and high amounts of sodium.

Elaborate/ Extend

Provide students with the **Family Food Interview** and **Family Recipe directions**.

Have students choose an interview subject with which to conduct their interview, using the attached questions.

This activity requires students do some work outside of the classroom. We recommend providing students with **a week** to communicate with their interview subject and take time to record their interview answers.

Teacher Tip: Have students hone their interview skills before their actual interview by practicing with one another.

Evaluate

The evaluation activity requires students to explore a traditional or special recipe from their family and analyze the nutritional content. Additionally, students use their familiarity with Indigenous foods to consider potential substitutions to the recipe. Considering substitutions challenges students to think about how they might be able to make their food healthier, and how they can alter their diet to be more appreciative of the Indigenous foods in their local ecosystems.

The **Family Recipe-Model** provides an example of how students might choose to represent their work once it is complete.

We recommend providing students with an opportunity to share their work, possibly through a class potluck

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Lesson Resources

Supporting resources for educators:

- <https://hungerandhealth.feedingamerica.org/understand-food-insecurity/hunger-health-101/>

Sources::

- https://www.nutritionvalue.org/Nuts%2C_dried%2C_pinyon%2C_pine_nuts_nutritional_value.html
- <https://fdc.nal.usda.gov/fdc-app.html#/food-details/826128/nutrients>
- <http://www.cafreshworks.com/hoopavalley/>
- <https://www.youtube.com/watch?v=aDjSLxHoo5E>
- <https://www.youtube.com/watch?v=OMYk6J13htw>
- <https://www.youtube.com/watch?v=mjDdYeSaEog>
- [National Institute of Health](#)
- [U.S. Department of Agriculture](#)

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Learning Standards

CA Indian Essential Understandings

Essential Understanding 2: California Indian identity is individual and the range of Tribal identity from assimilated to traditional is unique to each individual. The diversity of identity means there is no standard or cookie cutter appearance or behavior. There is no generic American Indian, in California, or in the United States.

CA Content Standard

California Health Standards

1.5.N Differentiate between diets that are health-promoting and diets linked to disease.

4.2.N Practice effective communication skills with parents, guardians, or trusted adults regarding healthy nutrition and physical activity choices.

5.1.N Use a decision-making process to evaluate daily food intake for nutritional requirements

7.1.N Make healthy food choices in a variety of settings.

Common Core:

CCSS.ELA-LITERACY.SL.7.1.C

Pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed.

Family Recipe

Name: _____

Date: ____ / ____ / ____

Indigenize Our Diets: Warm Up

Directions: Compare the Indigenous food to the processed, introduced food. Use the nutritional label to create a bar chart comparing the carbohydrates, protein, and saturated fat, and added sugar content.

Pine Nuts

Nutrition Facts	
Serving Size	100 g
Amount Per Serving	
Calories	629
	% Daily Value *
Total Fat 61g	78 %
Saturated Fat 9.4g	47 %
Sodium 72mg	3 %
Total Carbohydrate 19g	7 %
Dietary Fiber 11g	39 %
Protein 12g	24 %
Vitamin D 0.00mcg	0 %
Calcium 8.00mg	1 %
Iron 3.06mg	17 %
Potassium 628mg	13 %

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contribute to a daily diet. 2,000 calories a day is used for general nutrition advice.

Butter

Nutrition Facts	
Serving Size	100 g
Amount Per Serving	
Calories	717
	% Daily Value *
Total Fat 81g	104 %
Saturated Fat 51g	255 %
Cholesterol 215mg	72 %
Sodium 643mg	28 %
Total Carbohydrate 0.1g	0 %
Dietary Fiber 0g	0 %
Sugar 0.1g	
Protein 0.9g	2 %
Vitamin D 0.00mcg	0 %
Calcium 24.00mg	2 %
Iron 0.02mg	0 %
Potassium 24mg	1 %

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contribute to a daily diet. 2,000 calories a day is used for general nutrition advice.

Analysis:

1. On a separate sheet of paper, make a bar chart for saturated fats, sugars, sodium, and protein for each ingredient.
2. Compare the two charts. Remember, a healthy diet is low in saturated fats, low in added sugars, high in fiber, and high in protein.

Which ingredient do you think is the healthier form of fat? Discuss why.

Family Recipe

Name: _____

Date: ____ / ____ / ____

Indigenize Our Diets: Warm Up

Directions: Compare the Indigenous food to the processed, introduced food. Use the nutritional label to create a bar chart comparing the carbohydrates, protein, and saturated fat, and added sugar content.

Wild Blackberries

Nutrition Facts	
Serving Size	100 g
Amount Per Serving	
Calories	
	52
% Daily Value *	
Total Fat 1.1g	1 %
Sodium 6mg	0 %
Total Carbohydrate 9.8g	4 %
Dietary Fiber 3.2g	11 %
Sugar 3.7g	
Protein 0.8g	2 %
Vitamin D mcg	N/A
Calcium 5.00mg	0 %
Iron 0.21mg	1 %
Potassium 75mg	2 %
* The % Daily Value (DV) tells you how much a nutrient in a serving of food contribute to a daily diet. 2,000 calories a day is used for general nutrition advice.	

White Refined Sugar

Nutrition Facts	
Serving Size	100 g
Amount Per Serving	
Calories	
	387
% Daily Value *	
Total Fat 0g	0 %
Sodium 1mg	0 %
Total Carbohydrate 100g	36 %
Dietary Fiber 0g	0 %
Sugar 100g	
Protein 0g	0 %
Vitamin D 0.00mcg	0 %
Calcium 1.00mg	0 %
Iron 0.05mg	0 %
Potassium 2mg	0 %
* The % Daily Value (DV) tells you how much a nutrient in a serving of food contribute to a daily diet. 2,000 calories a day is used for general nutrition advice.	

Analysis:

1. On a separate sheet of paper, make a bar chart for saturated fats, sugars, sodium, and protein for each ingredient.
2. Compare the two charts. Remember. a healthy diet is low in saturated fats, low in added sugars, high in fiber, and high in protein.

Which ingredient do you think is the healthier form of fat? Discuss why.

Family Recipe

Name: _____

Date: ____ / ____ / ____

Indigenize Our Diets: Warm Up

Directions: Compare the Indigenous food to the processed, introduced food. Use the nutritional label to create a bar chart comparing the carbohydrates, protein, and saturated fat, and added sugar content.

Acorn Flour

Nutrition Facts	
Serving Size	100 g
Amount Per Serving	
Calories	501
% Daily Value *	
Total Fat 30g	38 %
Saturated Fat 3.9g	20 %
Total Carbohydrate 55g	20 %
Protein 7.5g	15 %
Vitamin D mcg	N/A
Calcium 43.00mg	3 %
Iron 1.21mg	7 %
Potassium 712mg	15 %

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contribute to a daily diet. 2,000 calories a day is used for general nutrition advice.

Bleached White Flour

Nutrition Facts	
Serving Size	100 g
Amount Per Serving	
Calories	364
% Daily Value *	
Total Fat 1g	1 %
Saturated Fat 0.2g	1 %
Sodium 2mg	0 %
Total Carbohydrate 76g	28 %
Dietary Fiber 2.7g	10 %
Sugar 0.3g	
Protein 10g	20 %
Vitamin D 0.00mcg	0 %
Calcium 15.00mg	1 %
Iron 1.17mg	6 %
Potassium 107mg	2 %

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contribute to a daily diet. 2,000 calories a day is used for general nutrition advice.

Analysis:

1. On a separate sheet of paper, make a bar chart for saturated fats, sugars, sodium, and protein for each ingredient.
2. Compare the two charts. Remember, a healthy diet is low in saturated fats, low in added sugars, high in fiber, and high in protein.

Which ingredient do you think is the healthier form of fat? Discuss why.

Family Recipe

Name: _____

Date: ____ / ____ / ____

Native Recipe Example 1: Quail and Mushrooms

Servings: 8

Ingredients:

3 slices bacon
1 1/2 cups onion
sliced 3 cloves garlic
minced 8lb whole quail
1/4 cup acorn flour
3 cups mushroom sliced
1/2 teaspoons balsamic vinegar
2 cups chicken broth
1/2 teaspoon black pepper
1 teaspoon salt
1/8 teaspoon cayenne pepper, optional

Steps:

1. In a large skillet, over medium high heat, fry the bacon until crispy. Drain bacon, set a side.
2. Add the flour to the skillet stirring to make a brown roux. Keep stirring for 8 minutes.
3. Stir in the onion and sauté for 3 minutes or until wilted.
4. Add the mushrooms and continue to cook for 2 minutes.
5. Add the chicken stock and balsamic vinegar; stirring constantly until well mixed and bring to a boil.
6. Cut the quail down the middle of the breast and season with salt, pepper, and cayenne pepper.
7. Add the quail to the mushroom mixture and reduce heat and simmer for 30 minutes. Turn quail over after 15 minutes of cooking.

Main Dish

Per Serving (excluding unknown items): 272 Calories; 16g Fat (53.5% calories from fat); 25g Protein; 7g Carbohydrate; 1g Dietary Fiber; 85mg Cholesterol; 289mg Sodium.

Exchanges: 0 Grain (Starch); 3 1/2 Lean Meat; 1 Vegetable; 0 Fruit; 1 Fat.

Family Recipe

Name: _____

Date: ____ / ____ / ____

Native Recipe Example 2: Acorn Bread

Servings: 18

Ingredients:

2 cups acorn flour
3 cups whole wheat flour
1 package dry yeast
1/2 cup water, very warm
1 cup water, very warm
1 teaspoon salt
1 teaspoon baking powder
2 tablespoons honey
2 tablespoons olive oil

Directions:

1. In a large bowl dissolve yeast in 1/2 cup very warm water.
2. Add the honey, oil, salt, baking powder, and 1 cup all-purpose flour to the yeast mixture; using a hand mixer blend for 2-3 minutes.
3. Slowly add more water and 1 cup flour to yeast mixture. Add the acorn flour slowly stirring by hand to form a soft dough that is not sticky to handle.
4. Turn out on floured surface; knead until smooth and elastic. 6- 8 minutes.
5. Place dough in a bowl with oil; turn to coat both sides. Cover and place in warm area and let rise until double in size. About a 1 1/2 hour.
6. Punch down and turn out on a floured surface. Knead and shape into loaves. Place on cookie sheet and let rise until double in size about and 1/2 hour.
7. Preheat oven to 375 degrees. After dough has doubled in size bake in a preheated oven for 30-45 minutes.
8. Remove from oven and let cool for 5 minutes. Serve hot or cold.

Bread

Per Serving (excluding unknown items): 159 Calories; 6g Fat (32.7% calories from fat); 4g Protein; 24g Carbohydrate; 3g Dietary Fiber; 0mg Cholesterol; 147mg Sodium.

Exchanges: 1 1/2 Grain (Starch); 0 Lean Meat; 1 Fat; 0 Other Carbohydrates.

Family Recipe

Name: _____

Date: ____ / ____ / ____

Family Food Interview

Directions: Interview a family member or a trusted adult about food using the interview questions below. Afterwards, you will write out the recipe from your interview, and analyze the nutritional content.

Optional: Record your interview as a podcast using the StoryCorps app. (ages 13+) OR, you may record on a voice recorder app on your phones, or with actual handheld recorders.

Questions:

Childhood:

1. Describe your cultural heritage. When you were my age, did you eat food that traditionally comes from your heritage?
2. When you were my age, what were your eating habits? When and at what time of the day did you eat?
3. When you were my age, what kinds of foods did you enjoy eating?
4. When you were my age, where did most of your food come from? Did you prepare it, or did someone else?
5. How often did you get to go out to restaurants and/or fast-food places?
6. Would you describe the food you ate as a kid as healthy or unhealthy? Why?

Food Over Time:

1. How has your diet changed over time? Do you think it has become more or less healthy?
2. What changes in the way people eat in your culture have you noticed over time? Do you think those changes have been positive or negative? Why?
3. What is one special meal that you remember from your childhood? Why is it special?

Food Today:

1. What is one special recipe that you like to cook and/or eat today?
2. What are the ingredients, and what are the steps for making it?
3. Do you think this food is healthy? Why or why not?

Family Recipe

Name: _____

Date: ____ / ____ / ____

Family Recipe-Model

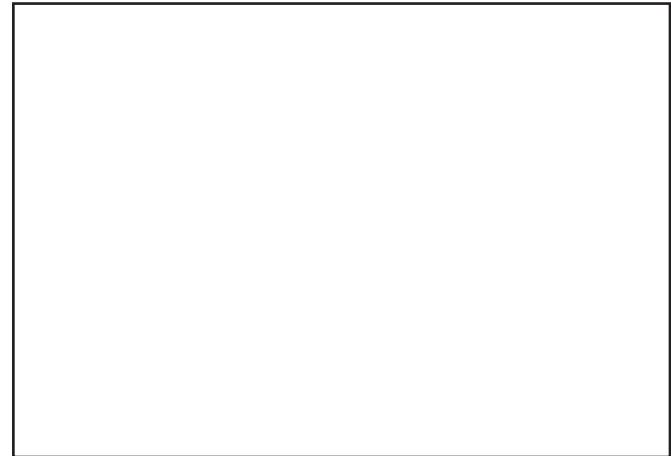
Directions: Choose one special meal to explore in detail. This recipe can be a family recipe from your own family, or from another trusted adult. Use the template below to describe the recipe and analyze its nutritional content.

Recipe Title:

Ingredients:

List all of the ingredients and ingredient amounts here.

Recipe Photo:



Directions/Steps:

Explain the steps needed to prepare and cook your recipe.

Nutritional Content:

Break down the nutritional content of your recipe for one serving. Include calories that come from:

- Carbohydrates
- Fat
- Protein
- Dietary Fiber
- Cholesterol
- Sodium

Family Recipe

Name: _____

Date: ____ / ____ / ____

Family Recipe-Model

Directions: Choose one special meal to explore in detail. This recipe can be a family recipe from your own family, or from another trusted adult. Use the template below to describe the recipe and analyze its nutritional content.

Ingredient Break Down:

Which of your ingredients are:

Settler/introduced foods:

Indigenous/Native to North America:

Indigenize your meal with California Native foods!

Use your **California Native Foods list** to create substitutes for one or more of the ingredients in your recipe.

Recipe Analysis:

1. Why is this meal important to you or your family?

2. Do you think this meal is healthy? Why or why not?

3. What are some substitutions you could make to make this recipe healthier than it is currently?