

Lesson 2.3: My Native Plate

LESSON INTRODUCTION

Time Frame: Multiple class periods

Materials:

- CIAT Food Origins [map](#) and [worksheet](#)
- My Native Plate [packet](#)
- My Native Plate [Google Slides](#)
- Personal computers
- Drawing utensils

In this lesson, students learn about their individual nutritional needs, and practice designing nutritious meals using Native foods. Students build awareness around where their food comes from and continue to consider the impact of their food choices.

Teacher Background:

Building off of **Lesson 2.2**, students continue to explore the diversity of foods within their diets. While **Section 1** of this curriculum explores the local food web and local Native food sources in Sonoma County, consuming a diet of only local Native foods is not necessarily realistic in the 21st century. Returning to an entirely Native and localized diet requires massive shifts in the way the local economy and ecosystem are currently structured and handled, as many Indigenous foods are inaccessible or endangered due to Westernized land management and extractive industrial practices. Despite this, many Native communities actively work to protect, revitalize, and consume their traditional foods.

This lesson begins by introducing students to a map highlighting the origin of the world's top 151 crops. Interestingly, although California has hundreds of edible Indigenous plants and animals, it is the origin of only six of the world's most common crops. This is due to a variety of factors, such as the increase in large scale industrial farming, a decrease in traditional land stewardship methods, and an overall lack of visibility of the Native community.

Healthy Ecosystems Feed Healthy Communities

Showing students the origins of their foods illuminates a few things. The first is that it highlights just how many foods come from the Americas. Tomatoes, for example, come from Mexico, despite being a staple in Italian food. Secondly, it shows how much of the typical diet in the United States relies on imported food. Indigenous food in the United States is diverse enough to satisfy a range of dietary needs and desires, if only it is given the attention it deserves.

Once students examine the map of food origins, they move into a lesson that requires them to reflect on their own eating practices and consider ways to incorporate more Native/Indigenous foods into their diets.

Note: If you completed the **Section 1** exercises that examine ecosystem health, this is a great place to remind students of the role that we play in supporting the ecosystem and protecting food webs that provide healthy Indigenous foods.

To complete this lesson, students will need a basic understanding of **carbohydrates**, **fats**, and **proteins**, which are defined here as well as in the “Explain” section of the lesson:

- **Protein:** 4 calories per gram, used to build healthy muscles and fuels important processes in your body.
- **Carbohydrates:** 4 calories per gram, used as a quick and easily available energy. Carbohydrates include sugar molecules which are broken down in digestion and are stored as fat if they are not burned within a few hours after eating.
- **Fat:** 9 calories per gram, stored in your body and burnt for energy when carbohydrates are not readily available. Fat is also stored in your abdomen to help cushion and protect your organs.

In addition, students will be introduced to the three major diseases that occur due to unhealthy eating and exercise habits. These diseases are pervasive in Native communities that do not have access to affordable, healthy food options that align with cultural norms and values. These three health outcomes are repeated in future lessons that address food insecurity and access.

- **Type 2 Diabetes:** When a person eats too many sugary foods for a long time, their body can no longer digest the sugar. The sugar they eat then builds up in their blood. High levels of sugar in a person’s blood can damage their kidneys, liver, and other important organs.
- **High Cholesterol:** When a person eats too many fatty foods, plaque can build up in their arteries and veins, stopping blood from getting where it needs to go.
- **Heart Disease:** There is an ideal size your body is meant to be, and it is normal to have a large body. When a person eats too many calories without exercising

Healthy Ecosystems Feed Healthy Communities

enough to burn off those calories their body can become larger than it is naturally meant to be, and their heart and other organs can become damaged. When the heart is damaged from having to work too hard to support a body that is larger than it is meant to be, there can be serious consequences.

By learning to design their own “**Native Plates**,” students learn the necessary elements of a nutritious diet, and begin to take control of their own relationships with food in a way that considers the needs of the ecosystem and traditional food ways for the Indigenous community at large.

It is important to note that, although the diseases listed above can be linked to food/eating habits, diet is only one of many factors that lead to disease. Within the Native community specifically, prolonged periods of historical trauma, poverty, and removal from Indigenous lands all work to contribute to negative health outcomes within the community.

ENGAGE

Provide students with the **Food Origins worksheet** and the **CIAT Food Origins map**.

Explain that this map only highlights the most popular plant crops in the world and excludes animal products and crops that are less popular or common.

Ask students to explore the map, noticing where their favorite foods come from, the number of imported foods they eat, and which food origins are surprising.

Ask students why they think North America has so few foods included on the map.

If students are unsure, ask how many of them knew much about Native foods before these lessons? Probably few. Like them, many people in the world are unfamiliar with foods indigenous to the United States or California.

If you worked through **Section 1** with your students, ask them to remember how colonization changed the way people tended their natural landscapes. How did these changes impact native/indigenous foods?

Explain to students that although North America, and especially California, has a wide variety of plants that are able to be consumed, and have been consumed by Native peoples since time immemorial, little attention is given to these foods. Instead, many

Healthy Ecosystems Feed Healthy Communities

people eat lots of introduced and imported foods without realizing that they are missing out on all the foods Indigenous to their local region.

EXPLORE

Introduce the “**My Native Plate**” activity to students and pass out the packet. Explain that students will get to explore Native foods and practice incorporating them into their diets.

Explain that they will first take a survey that lays out their personal nutrition needs based on their weight, age, and other factors.

They will then use the resources provided to build a healthy, nutritious meal for themselves using only native or indigenous foods. Why indigenous foods? Because they are usually less processed/whole, contain low amounts of added sugar, and low levels of cholesterol. They are also a major part of the local ecosystem and so it is important to have an awareness of them.

Direct students to the **My Native Plate Google Slides**.

Have students go to the website provided and fill in the individualized nutrition information they receive into their **My Native Plate graphic**.

TEACHER NOTE: Provide students with the option of using information other than their own when completing the survey. Students may feel body conscious and unwilling to use their personal information. In addition, refrain from requiring students to share their My Plate work with the class, unless they volunteer.

EXPLAIN

Explain that diversity is critical to the resilience of ecosystems. The same can be said of a person’s diet. We need to eat many different foods to obtain the energy, vitamins, and nutrients needed to live long, healthy, and happy lives. There are three macronutrients that provide our body with energy (measured in calories) that can be found at different levels in different foods.

Healthy Ecosystems Feed Healthy Communities

- **Protein:** 4 calories per gram, used to build healthy muscles and fuels important processes in your body.
- **Carbohydrates:** 4 calories per gram, used as a quick and easily available energy. Carbohydrates include sugar molecules which are broken down in digestion and are stored as fat if they are not burned within a few hours after eating.
- **Fat:** 9 calories per gram, stored in your body and burnt for energy when carbohydrates are not readily available. Fat is also stored in your abdomen to help cushion and protect your organs.

We need specific amounts of these macronutrients to have enough energy and biological building blocks to keep our bodies active and healthy. Micronutrients are special vitamins and minerals that help our body stay healthy by assisting the body in everyday processes and supporting the immune system.

When a person does not consume a diverse diet (whether through choice, lack of access, or by not knowing what makes a diet diverse), their overall health may suffer as a result.

Some poor health outcomes from not having a diverse and healthy diet include:

- **Type 2 Diabetes:** When a person eats too many sugary foods for a long time, their body can no longer digest the sugar. The sugar they eat then builds up in their blood. High levels of sugar in a person's blood can damage their kidneys, liver, and other important organs.
- **High Cholesterol:** When a person eats too many fatty foods, plaque can build up in their arteries and veins, stopping blood from getting where it needs to go.
- **Heart Disease:** There is an ideal size your body is meant to be, and it is normal to have a large body. When a person eats too many calories without exercising enough to burn off those calories their body can become larger than it is naturally meant to be, and their heart and other organs can become damaged. When the heart is damaged from having to work too hard to support a body that is larger than it is meant to be, there can be serious consequences.

Eating a healthy, diverse diet is easier said than done. Today we will be exploring what makes a diet diverse, how to practice healthy eating habits, and how to choose the best foods to nourish your body.

ELABORATE

Have students put this information into practice through the rest of the **My Native Plate activity**. Students use the nutritional information they received through the **Choose My Plate website** to explore new, indigenous, healthy food options.

EVALUATE

Lead a class discussion exploring the following questions:

1. **What are some native or indigenous foods you are interested in trying?**
2. **When deciding what you will eat when hungry, what are some things you should consider?**
3. **Do you know where to obtain some of the native ingredients you chose for your plate? What are some possible options?**

VOCABULARY

Indigenous: Produced, growing, living, or occurring Natively or naturally in a particular region or environment.

Nutrition: Related to eating foods that provide the nutrients needed to live. Nutrients found in food and drink help provide energy to the body.

Immune System: The system in the body that protects one from becoming ill or negatively impacted by foreign substances like viruses and bacteria, tissues, etc.

Indigenous Foods: Locally grown food that is originally from the area and has been eaten by Native people for thousands of years. This food is grown with no chemicals or pesticides, food is grown in just the right amount.

Import: Goods that are brought into one place from another place for the purpose of selling or trading.

Healthy Ecosystems Feed Healthy Communities

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 much different than their original form.

Whole Foods: Foods that have very little, or no processing/have not been changed from their original form. Foods do not have additives, or any artificial substances added.

Macronutrients: any of the nutritional components of the diet that are required in relatively large amounts: protein, carbohydrate, fat, and the macrominerals (i.e. calcium, iron, zinc, etc.)

Micronutrients: an essential [nutrient](#), as a trace mineral or vitamin, that is required by an organism in minute amounts.

STANDARDS

CA Health Standards:

- 1.1.N Describe the short- and long-term impact of nutritional choices on health.
- 1.2.N Identify nutrients and their relationships to health.
- 1.5.N Differentiate between diets that are health-promoting and diets linked to disease.
- 1.10.N Identify the impact of nutrition on chronic disease.
- 4.1.N Demonstrate the ability to use effective skills to model healthy decision making and prevent overconsumption of foods and beverages.
- 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:

Healthy Ecosystems Feed Healthy Communities

CCSS.ELA-LITERACY.RI.7.1

Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

CCSS.ELA-LITERACY.SL.7.1

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 7 topics, texts, and issues, building on others' ideas and expressing their own clearly.

CCSS.ELA-LITERACY.SL.7.2

Analyze the main ideas and supporting details presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how the ideas clarify a topic, text, or issue under study.

CCSS.ELA-LITERACY.W.7.9

Draw evidence from literary or informational texts to support analysis, reflection, and research.

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.

Essential Understanding 4: California Indian peoples' histories and cultures have been and continue to be impacted by foreign, state, and federal policies. Policies developed during the Mission Period, the Gold Rush Allotment, the Boarding School Period, termination policies, and self-determination policies are integral parts of the history of tribes in California.

Essential Understanding 5: Land and place are unique and inextricably tied to Tribal cultures.

SOURCES

- Tongvapeople.org: This source provides information on some of the tools and methods used to prepare traditional foods. It is anthropological in nature,

Healthy Ecosystems Feed Healthy Communities

focusing only on historical perspectives, and leaves out contemporary people and traditions.

- CIAT website - [Where Our Food Comes From](#)
- [MyPlate Plan](#)
- [Indian Health Service](#)
- Tending the Wild by Kat Anderson
- Food in California Indian Culture by Ira Jacknis