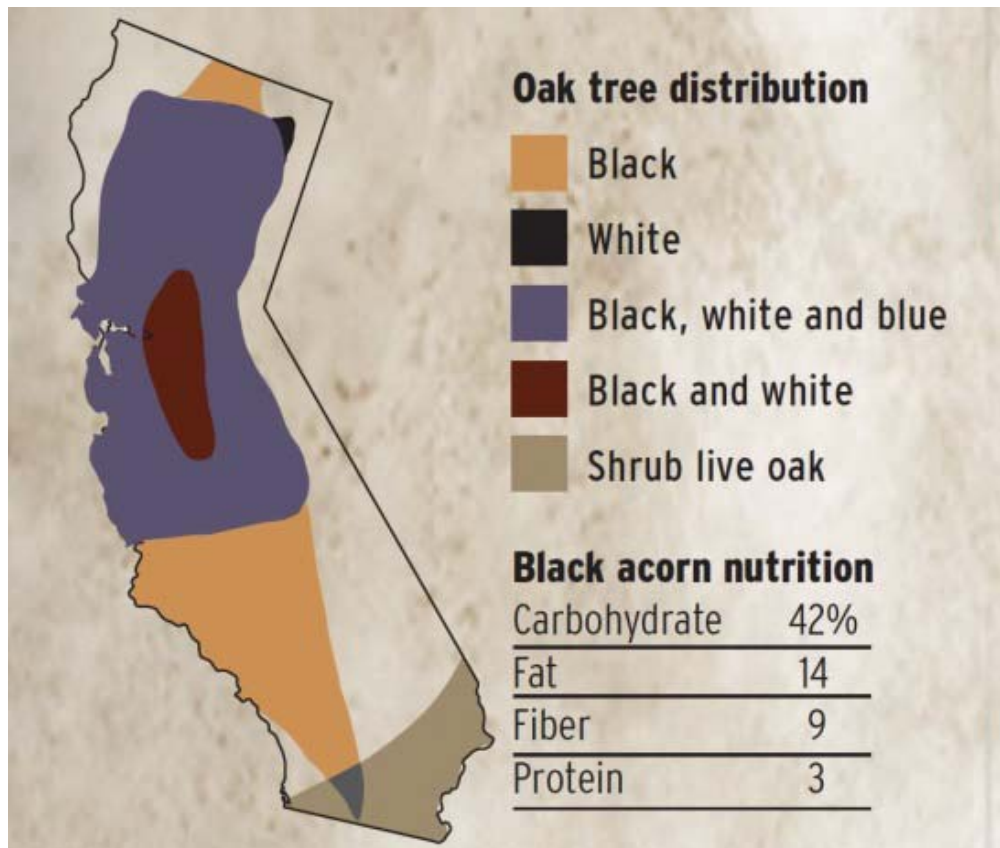




Native Maker Program Lesson Plan

Acorn



Coronilla, S., (2013) *California Indians Food*. Orange County Register.

The CIMCC Native Makers Program was funded by a grant from the Institute of Museum and Library Services and The San Manuel Band of Mission Indians.



Native Maker Program Lesson Plan

Summary:

Acorn is an important part of the diet of California Indian Tribes. Students will learn about the importance of Native diets to familiarize oneself with the traditional and contemporary way of acorn process.

Goal:

Material:

Acorn

Acorn

There are in the United States more than 50 species of oaks, of which 30 occur in the Eastern States and about 15 in the single State of California. Acorn flour makes a rich glutinous food and contains a surprisingly large quantity (18 to 25 percent) of nut oil of obvious nutritive value. (Merriam, H. C., (1918) *The Acorn, A Possibly Neglected Source of Food.*)

Acorns are also highly nutritious, and flours made from them, like other nut flours, are gluten free. A pound of shelled acorns yields 1,265 calories, and the nuts are high in carbohydrates, fat, vitamin B6, magnesium, potassium and calcium. (Edible Monterey Bay, (2015) *Roadside Diaries: Acorns.*)

Diet has changed dramatically for American Indians. Colonized diet is known to be a contributing risk factor to diabetes, obesity and CVD. Current foods eaten by American Indians contain more fat, sugar, preservatives, and artificial ingredients than the traditional foods. Eating a regular diet of native and natural foods will help American Indians prevent and control many of today's chronic diseases. (Kennedy, S., (2005) *California Food Guide: Health and Dietary Issues Affecting American Indians.*)

Cultural Information

For thousands of years, acorns were life for the majority of California Indian peoples. As a staple food source, acorns figured prominently in the diets and daily lives of individuals for countless generations.

A few hundred years later, despite catastrophic demographic collapse, removal from ancestral lands, and vast environmental change, California Indian peoples continue to consider acorn use important in sustaining their cultural identities.

In pre-contact times, acorns were eminently suitable as a food resource because of their availability, productivity, storability, and nutritional content. Anthropologist Alfred Kroeber estimated that more than 75 percent of native Californians relied on acorns for food on a daily basis. In all, 18 species of oak,



including shrubs and trees, are distributed throughout the state of California. Indian people probably had little trouble accessing oaks except in some areas of the Central Valley as oaks grow principally in riparian zones, alpine environments, and desert areas. With the exception of the Tanbark Oak (*Lithocarpus densiflora*), all of the oaks belong to the genus *Quercus*, meaning “fine tree” in Latin.

The nutritional value of acorns is high, and depending on the species, acorns can contain up to 18 percent fat, 6 percent protein, and 68 percent carbohydrate, with the remainder being water, minerals, and fiber. Modern varieties of corn and wheat, in comparison, have about 2 percent fat, 10 percent protein, and 75 percent carbohydrate. Acorns are also good sources of vitamins A and C and many essential amino acids.

The changes in native peoples’ use of acorn and of their cultures in general must be viewed in the context of Euroamerican contact, and colonization.

The initial version, Senate Bill 54, was authored by John Bidwell, who was a member of the first group of emigrants to arrive in California over land in 1841. Bidwell’s bill permitted Indians to continue their traditional practices or “usual avocations” of “hunting, fishing, gathering seeds and acorns for the maintenance [sic] themselves and families.” It also stated that “in no case shall [I]ndians be forced to abandon their village sites where they have lived from time immemorial.” The protection of California Indians’ traditional practice of gathering acorns, and explicit recognition of their ancestral lands were never included in the final version of the law passed by the Legislature on April 22, 1850.^α

A year later, in April 1851, three commissioners sent to California by President Millard Fillmore commenced negotiating 18 treaties with California Indian nations and tribes. The Indians who signed the second treaty, the Treaty of Camp Barbour (dated April 29, 1851), successfully negotiated recognition of their right to continue to hunt and gather acorns.

Although the acorn is no longer the focus of daily life, Indian people still prepare and eat acorn foods at special gatherings, Big Times, and other celebrations. Many autumn festivals are centered around the first acorn harvest, to this day, and many acorn foods are prepared and celebrated. **Adapted from Anthropology Museum, California State University, Sacramento, (2005) *Past and Present Acorn Use in Native California: eGuide for Acorn Use in Native California, a Mobile Classroom Outreach Trunk***

Overview:

- Brief history of Acorn
- Cultural information of Acorn
- View pictures of Acorn
- Distribute material for Acorn
- Describe the process by doing a demonstration
- Conduct activity
- Discuss end product



Lesson 1 – The Importance of Native Diets

Nutritionists believe that a man needs about 3,600 or more calories per day to maintain his weight and his health. 4,000 calories if he is doing hard physical work. Women and children need somewhat fewer calories per day than men, but women who are pregnant or nursing a child need more.

The missionaries did not allow neophytes to eat their traditional foods in the missions such as the grasses and other plants they cultivated, acorn, and game although this type of food is highly nutritional and was at first still readily available (before overgrazing by mission herds had taken toll). Instead the neophytes were restricted to a diet based on foods raised at the missions, such as wheat and corn. Researchers have determined that the diets in the missions contained only about 2,600 calories a day or less, yet Indians were forced to labor hard, burning up calories even quicker. What do you think happened to the people who had to live on this kind of diet?

Some of these are:

- It can cause people to be more susceptible to disease
- It can cause disease itself due to vitamin deficiencies
- It can kill through starvation
- It can cause birth defects in unborn babies

Comparisons of Acorns to Mission Foods and Contemporary Foods

(1 ounce = 28.3495 grams)

	Protein	Fat	Fiber	Carbohydrates
Acorns (leached) (1 oz)	1.3 g.	5.6 g.	.60g	21.1 g
Corn Meal (1 oz)	2.6 g.	0.5 g.	.30 g	21.1 g
Wheat Flour (1 oz)	3.2 g.	0.3 g.	.06 g	21.4 g
Beans (cooked) (1/4 cup)	3.7 g.	0.2 g.	5.00 g	9.9 g
Cheese Pizza (1/8 slice of 14 inch pie)	7.0 g.	12.0 g.	1.00 g	31.0 g
Macaroni & Cheese (1/4 cup)	4.3 g.	6.0 g.	0.24g	10.3 g
Peanut Butter (smooth) (2 Tbs.	8.0 g.	16.2 g.	2.50 g	2.6 g

Source: Indians of Northwest California



Compare the nutritional value of acorns, a traditional staple food of California Indian people and the typical mission foods of wheat and corn. Are acorns comparable to the mission foods?

Compare the nutritional value of acorns to foods that we often eat today. Are there differences?

One ounce of acorns contains 21.1 grams of carbohydrates. How many more carbohydrates does one ounce of wheat flour contain?

We know that fiber is important for a healthy body. Which food on the chart contains the most fiber? Which contains the least amount of fiber?

How many more grams of fiber do acorns contain than cornmeal?

What is the difference in grams of protein between acorns and corn meal?

Add up all the grams of fat for all foods listed. What is the total amount of fat?

Fats gives us energy and help to keep is healthy, although we know that too much fat is not good for us. List three foods on the chart that have the most fat.

List three foods on the chart that have the least amount of fat.

Find the four foods that have the highest amount of carbohydrates. Add them together and give your total.

What is the difference in grams between the food with the most carbohydrates and the food with the least carbohydrates?

If you ate a meal of one cup of beans and two ounces of corn meal (in a slice of cornbread) how many total carbohydrates would you consume? Show your work. **Adapted from Indians of Northwest California**

Resources:

Little Acorn: <https://www.youtube.com/watch?v=Eq7drk3wHuc>

Bread from Acorn: <https://www.youtube.com/watch?v=Rj7mgJUsQNA>

Acorns: <https://www.youtube.com/watch?v=OFwNomKqAbc>

Identity Acorns http://californiaoaks.org/wp-content/uploads/2016/04/investigating_the_oak_community.pdf
Acorn preparation

http://www.lessonsofourland.org/sites/default/files/CA%20food%20teaching_kit.pdf

<http://www.lessonsofourland.org/sites/default/files/ILTF%20acorn%20pp.pdf>