This learning kit begins with a glossary of terms to help students learn about California Indians and their food. The kit explains that California Indians were the first people to live in the area now known as California, and that these tribes differed in the languages they spoke, the regions they lived in, and the foods that they ate. It explains that California Indians lived all over the state. The kit is divided into 18 sections: (1) "Glossary"; (2) "General Overview of California Indians"; (3) "Map of California Cultural Areas"; (4) "Topics of Discussion for Lessons"; (5) "Plants and Plant Processing"; (6) "Animals and Hunting"; (7) "Food from the Sea and Fishing"; (8) "Insects"; (9) "Beverages"; (10) "Salt"; (11) "Drying Foods"; (12) "Earth Ovens"; (13) "Serving Utensils"; (14) "Food Storage"; (15) "Feasts"; (16) "Children"; (17) "California Indian Myths"; and (18) "Review Questions and Activities." (BT)
CALIFORNIA INDIAN FOOD AND CULTURE
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Also included with the kit is a California Indian Resource Guide.
basin
an open, shallow, usually round container used for holding liquids

carbohydrate
Carbohydrates are found in foods like pasta, cereals, breads, rice and potatoes, and serve as a major energy source in the diet.

Central Valley
The Central Valley lies between the Coast Mountain Ranges and the Sierra Nevada Mountain Ranges. It has two major river systems, the Sacramento and the San Joaquin. Much of it is flat, and looks like a broad, open plain. It forms the largest and most important farming area in California and produces a great variety of crops.

cider
the juice pressed out of apples or manzanita berries used for drinking

condiment
a seasoning such as salt used to flavor a food

culture
the sum of the language, customs and beliefs considered characteristic of a particular group of people
**ecological zone**

an area with certain physical and/or cultural traits that make it different from other areas

**game**

wild animals hunted for food such as rabbits and deer

**granary**

structures often made out of plant materials, to hold acorns or other foods for storage

**Great Basin**

The Great Basin is a large desert region in the western United States. The basin covers land in California, Idaho, Nevada, Oregon, Utah and Wyoming.

**gruel**

thin boiled grain such as oatmeal

**hammerstones**

small hand held stones used for cracking open acorns and other nuts

**Klamath River region**

The Kiamath is California's second largest river. The Klamath River flows through the state's northwestern counties and to the ocean through Redwood National Park.

**leaching**

The process of using water to remove a poison from a plant, such as removing tannic acid from acorns so that they are safe to eat.
meal
crushedly ground grain, such as corn meal or dry cream of wheat

milling stone
a large long stone used to pound acorns into meal

mineral deposit
natural substances, usually having crystalline structures and a hardness, existing beneath the ground (such as salt)

mortar
a stone or wood object used with a pestle as a bowl to pound acorns, seeds and nuts into flour

natural resource
goods supplied by nature such as water, timber and oil that are valuable to humans

pestle
a stone or wood object used along with a mortar to pound acorns, seeds and nuts into flour

preserve
to prepare (food) for future use, to prevent food from decaying or spoiling

protein
Protein is found in foods like beans, cheese, eggs, milk, yogurt, meat, poultry, fish and nuts and is important for growth and development.
region
a land surface having certain common geographical features such as the Rocky Mountain region, like an ecological zone

saline
containing salt

stone anvil
a heavy, flat-topped stone on which acorns and other nuts are cracked open

tannic acid
a substance in acorns that tastes bitter and can make a person sick; the tannic acid is leached out of the acorns before cooking

toxin
a poisonous substance

tribe
a group of people with common social or cultural characteristics living near each other
California Indians were the first people to live in the area now known as California. California had a population of about 310,000 people when Spanish settlers reached the state in 1769. California tribes differed in the languages they spoke, the regions they lived in and the foods that they ate.

California Indians lived all over the state. They lived in different ecological zones. Some tribes lived near the sea, while others lived near rivers or lakes. There were also tribes that lived in the mountains, valleys and the desert. Certain natural resources were found in one part of the state but not another. Groups from different ecological zones often traded. The Nisenan in the mountains traded black oak acorns and sugar-pine nuts for salt, game, fish, roots, grasses, beads and shells with tribes living near the sea. Tribes living away from the ocean, such as the Cahuilla, traveled to the coast to fish and gather seafood and seaweed.
Culture Areas of Native California

Northwest
Northeast
Central
Great Basin
Southern
Colorado River

BEST COPY AVAILABLE
TOPICS OF DISCUSSION FOR CALIFORNIA INDIAN FOOD AND CULTURE LESSONS

This kit is designed to explain the various ways in which Native Californians collected, prepared, and stored the foods they ate. There was a great variety of plant and wildlife resources available to these groups, and we will describe differences in food preferences, and common lifeways patterns.

You may teach the kit in lessons, organize it into chapters, or rearrange the materials to best suit your curriculum. We have included a glossary where many words may be found; you may wish to supplement this list. You will also find a number of review questions at the back of the binder to spur further discussion, as well as activities which can be used as the starting point for hands-on interaction with the material.

Here are some questions you might ask before beginning the lesson to get students interested in the topic:

What type of foods do you like to eat?

What do you usually eat for dinner?

Do you know how your food is cooked?

What type of foods do you think California Indians ate?
California Indians ate many different plant foods; such as acorns, mushrooms, seaweed and flowering plants. Seeds, berries, nuts, leaves, stems and roots were all parts of plants that were eaten. Plants were gathered from both the land and the sea. These plants supplied most of the carbohydrates for California Indians. Acorns were a popular food for many groups because during the harvest season they were plentiful and could be dried and stored easily for the winter.
ACORN PREPARATION TOOLS

soaproot brushes

mortar

looped stirrers

Pomo boiling stones, boiling basket, tongs, mush paddle
From centuries of experience, California Indian women learned how to gather the very best acorns from oak trees.

Newly picked acorns are too soft to cook with. After being collected in baskets, the acorns had to be dried. Fresh acorns were usually stored for one year before they were used.

Once the acorns dried, their shells were cracked open in order to reach the nutmeat. Acorn shells could be opened with small hammer stones and stone anvils. The shells were then removed by hand.
WINNOWING

Once all the acorns were cracked open it was time for winnowing. Like peanuts, acorns have a thin skin around them that needs to be removed. The acorns were put into a scoop shaped basket and rubbed by hand until the skins loosened. Then they were tossed into the air and their lightweight skins blew away in the breeze. The heavy acorns dropped back into the basket.
ACORN POUNDING

California Indian women used two types of tools to pound acorns. These tools are called **mortars** and **pestles** and **milling stones**. Acorn pounding was hard work. Women often spent an entire day pounding acorns into **meal**. Women sang songs and made time for talking, teasing and laughing while pounding acorns to make the chore fun.
ACORN SIFTING

After the acorn meal was pounded, it was then carefully sifted into a fine flour like powder. A few handfuls of meal were put in the sifting basket and the basket was shaken carefully. The fine meal stuck to the basket and the heavier pieces rose to the surface. The larger pieces were put into another basket and the fine flour was swept into a third basket with a soaproot brush. The larger pieces were then pounded again with the next batch of acorns.
Essie Parish (Kashaya Pomo) leaching acorn meal, shore of Gualala River, Mendocino Co.; 1961

LEACHING

Acorns contain a poison called tannic acid. Once all the acorns were pounded into meal, this poison would be removed in order to make them safe to eat. A large amount of water was needed to remove the poison. First, women scooped out a large basin in the ground. Next, they spread the acorn meal out in the basin and placed branches over it. Then, they poured water through the branches into the basin. Once the acorn meal no longer tasted bitter, the soaking could stop. After the acorn meal drained, it was scooped out of the hole by hand. This is called leaching. Now the meal was ready to be cooked.
Essie Parish (Kashaya Pomo) boiling acorn meal, shore of Gualala River, Mendocino Co.; 1960

**BOILING**

Water and acorn meal were mixed together and boiled into a thin soup or thicker mush. There were two ways that California Indian women boiled food. One way was to boil the mush in a clay or stone pot over a fire. The other way was **stone boiling**. Hot rocks the size of tennis balls were heated by fire. Then, they were put into baskets filled with water and acorn meal. Boiling baskets were often coated with a thin layer of acorn **gruel**. The gruel was like a glue that coated the basket so that no water would leak from it.
The stones were stirred in the baskets gently and slowly with a **wooden paddle** or **looped stirrer**. When the mixture began to boil it was cooked. The stones were then removed from the basket with wooden tongs. The mush that dried onto the rocks was a special treat that children liked to peel off and eat. These pieces were called "acorn chips."

*Essie Parrish (Kashaya Pomo) cooking acorn bread on hot rocks, Kashaya Rancheria, Sonoma Co.; 1960*
California Indians ate many different kinds of animals. Meat and fish provided them with the protein they needed. Small animals were plentiful, and many groups ate rabbits, rats, squirrels, mice and chipmunks. Water and land birds such as quail and grouse were also important food for California Indians, especially for those groups that lived in the marshy Central Valley. Large animals such as deer, elk, antelope, mountain sheep and bear were also eaten, though they were more difficult to hunt and kill.
Hunters used many different tools to capture and kill the animals they ate. They used bows and arrows, throwing sticks, clubs, spears, knives, slings, snares, nets, traps, pits, and dogs. Individuals or small groups of men usually did the hunting, although women and children helped catch rabbits, squirrels, mice and other small game. When families left the village on food-gathering trips, the men hunted and the women collected plants.


**FOOD FROM THE SEA, RIVERS AND LAKES**

Fish such as salmon, trout and eel were often the main animal food for many California Indians. Like acorns, fish can be dried and stored easily. Fish was also eaten by tribes living close to rivers and streams.

Clams, mussels and crabs were eaten by groups living near the ocean. The clam shells were often used to make beads. Groups living near the ocean also hunted sea mammals such as seals, sea lions and sea otters. Although California Indians did not hunt whales, if one died and was washed ashore, it was eaten.
FISHING

Fish were caught with nets, hooks, harpoons, traps and poison plants. Soaproot, buckeye nuts and wild cucumber root can be used to capture fish. The plant or nut is mashed up and thrown into the water. The toxins in the plant paralyze the fish and they float to the surface of the water. The fish are easily gathered up in this paralyzed state. The fish only stay paralyzed for a short time. If they are not gathered quickly enough, they come back to their senses and swim away. The toxins are not dangerous to humans and they do not change the taste of the fish or make it harmful to eat.
Salmon cooking over an alder wood fire, Yurok Brush Dance, mouth of the Klamath River, 1993

SALMON RECIPE

Ask an adult if they will help you make this recipe sometime when you are camping or at the beach.

Ingredients: Salmon

Preparation:
1. Build a fire.
2. Clean the fish and cut it in half or cut into meal size chunks.
3. Skewer the fish on a stick (preferably a sturdy willow).
4. Place the fish on a stick into the ground very close to the hot coals (like the picture shows.)
5. Turn the fish over, as the bottom will cook quickly.

This is a great campfire meal. Serve with salad, a baked potato or corn on the cob.
YUROK FISHING EQUIPMENT

Yurok, salmon dip net

Yurok, sea lion harpoon point

Yurok, eel trap
Many kinds of insects were gathered especially in the Great Basin Area. These included grasshoppers, crickets, caterpillars, earthworms, and flies. Insects are high in protein. They were gathered by hand and collected in baskets. The Maidu really liked dried locusts and crickets, and they traded them. The Nisenan preferred grasshoppers. The Eastern Mono ate caterpillars. Insects were often roasted over hot coals. The Maidu liked to eat grasshoppers that were dried or roasted. The Wintu usually boiled and dried grasshoppers. The Cauhilla liked to roast or dry crickets.
Josepa Dick (Central Pomo) with a basket of army worms, near Ukiah, Mendocino Co.; 1904
Drinks included water, berry juices, ciders, nut drinks and herbal teas. Berry ciders and herbal teas were popular, especially as medicines. Berry juices were a favorite. The Pomo made juices from elderberries and manzanita berries. The Chukchansi Yokuts drank fresh wild grape juice. Many groups made drinks from pounded nuts. Tübatalabal mixed small seeds with cold water to make a thick gruel. Mothers often served the gruel to their children as a snack between meals.
SALT

The most important mineral was salt, which was used by almost all California groups as a *condiment* to flavor food. A lump of salt might also be chewed by itself. In some areas salt was considered a medicine for curing stomach aches and colds. Salt came from seaweed, grass, *mineral deposits* and *saline* water (from marshes, springs, lakes and the ocean).

*Sara Smith Ballard (Coast Miwok) gathering salt with brush and shell spoon, Bodega Bay, Sonoma Co.; 1961*
Drying Foods

Many foods were dried either by the sun, by fire, or by smoke before they were eaten. Drying food was a way to preserve it so it would not spoil. Food was also dried to be stored for the winter months. If fish like salmon was not eaten fresh, it was cut into strips and smoke-dried. Some groups also smoke-dried deer meat and acorns. The Tolowa dried their seaweed cakes in the sun. The Tübatulabal laid out wild grapes in the sun to make raisins. The Owens Valley Paiute dried berries. The Luiseño dried the peeled fruit of the prickly pear cactus in the sun. The Mohave dried corn, beans, muskmelons and wild plants by the sun.
Family of Essie Parrish (Kashaya Pomo) opening up a pit oven with acorn bread, Gualala River, Mendocino Co.; 1961

EARTH OVENS

California Indians made different kinds of earth ovens to cook meat or plants in. A hole was dug in the earth and was lined with hot rocks. A layer of green leaves was then put over the hot rocks. Then a thin layer of food, then another layer of leaves, then stones were added. These layers were repeated several times until the pit was filled to the top. Finally, a layer of soil was placed on the top and a fire was lit. The food was left to cook overnight. The Wintu used pits for baking salmon. The Pomo baked Indian potatoes and buckeyes in earth ovens. The Sierra Miwok baked greens and acorn bread in pits.
SERVING UTENSILS

The most important utensil was a spoon. Knives were only used to prepare food. Forks were not used. The most common kind of spoon in the region was a large mussel shell. The Tübatulabal used antelope horn and wood for their spoons, and the Mohave made spoons and ladles from clay. In the Klamath River Region they made spoons from elk antler.
Food was often stored in baskets and pots. The Yurok and the Pomo stored dried fish in large baskets.

Southern groups such as the Cahuilla stored seeds and other foods in large clay pots. Southern tribes also stored large amounts of food in granaries made of twigs. Miwok granaries could hold up to 500 pounds of dry acorns! In the northern and eastern regions, pits were often used to store food. These pits were dug in the ground and lined with bark or grass. The Karuk stored dried fish in a pit at the back of the house.
FEASTS

Native Californians looked forward to feasts where they would have a chance to eat special foods. Neighboring groups met and socialized at feasts. They were a time for trading, games and dances. Many occasions called for feasts. Weddings were celebrated with feasts, as well as seasonal events such as the arrival of the first salmon or the acorn harvest. Feasts were often a time for trading foods after a harvest. Owens Valley Paiute traded salt, pine nuts, and other seeds for acorns and manzanita berries brought by the Western Mono, who lived nearby.
CHILDREN

California Indians learned to gather food when they were about the same age as a fourth grader. As children played they also learned how to look for food. When Atsugewi children were about 8 years old they went food gathering with their parents. Boys went with their fathers and girls with their mothers. Girls played "house". Using sticks they pretended to dig roots and pound dirt like acorns. At the age of ten a boy would hunt with his father, and a girl would gather and help prepare acorns with her mother.

Rae Navarro (Chumash) with an ear of roasted corn
Pow-wow, Santa Ynez, 1996
WOODRAT IS REFUSED FOOD
BY HIS BROTHER-IN-LAW

Woodrat and his sister were both married. His sister's husband was Red-headed-woodpecker. The two families lived in separate houses and had, of course, separate stores of food. All the year round, Red-headed-woodpecker had plenty of acorns. Woodrat also had saved up a large store of acorns, but during the winter his store became exhausted. He heard his sister pounding acorns to make mush so he went over to visit her. After she had pounded the acorns into meal, she took it home and leached it in the usual manner. Then she placed the meal in the basket and began to cook mush with hot rocks. Woodrat thought he had better wash his hands so he could eat some of the mush when it was cooked. He did this and sat down on the opposite side of the fire and waited. Presently, however, Red-headed-woodpecker who was a very stingy fellow came home. Woodrat's sister had, at times before this been generous and given Woodrat something to eat, but Red-headed-woodpecker would give him nothing.
Woodrat sat there and watched them eat but ate no food himself. Then he began to weep and he wept so long that his eyes became red and his eye-lids swelled until they nearly closed his eyes, so that he has had very small eyes ever since. When his sister began to cook mush he thought he was going to eat some, so he went out and washed his hands very thoroughly and this is the reason why he has always had white hands ever since.
Once Coyote was traveling along and he was very hungry. He saw a woman and he thought to himself, "How can I trick this woman into feeding me?" The woman did not know that Coyote was a great trickster. And so he walked up to the woman and said, "I can make a fine stew out of stones." The woman asked, "How are you going to do that?" Coyote said, "Well, watch me!"

He asked for the frying pan, and he put some rocks in it. Then he asked the woman for a little lard, and then he asked her for a little meat, and then a little garlic, and then a little tomato and onion and some salt. He put each of the ingredients together in a frying pan. The woman was astonished at Coyote's way of cooking. He said, "That's my way of cooking stew!" He then ate all of the stew, leaving only the rocks.
Now that you have read two California Indian myths, write your own!

I. Illustrate your story with a picture.

II. Divide your class into groups. Choose a myth from each group to act out in class. Each character should wear a mask to represent the character they are playing. Make these masks in class using paints, crayon, magic markers, paper plates and string.
TAKING THINGS A STEP FURTHER

WRITING ACTIVITY

Write a short story about a feast you are going to prepare. What are you celebrating with this feast? Describe the foods you will serve and how to prepare them. Write about what you will cook in your earth oven and describe how you will cook your acorn mush.

* Will you make acorn bread for the feast?
* What else will you prepare for people to eat?
* Will you hunt game or catch fish?
* What types of sea creatures or land animals will you catch and how will you catch them?

Draw a picture of the feast to go along with your story.
TAKing Things A Step Further

RESEARCH REPORT

Now that you have completed all the lessons on California Indian Food and Culture, pick one tribe to do a research report on. Go to your library and look up this California tribe. What else would you like to learn about this tribe that was not taught in these lessons? For example, what type of clothing did the tribe wear, what types of games did they play or what types of homes did they live in? Write a one-page report. Read your report out loud to the class so that all your class members can learn more about each tribe.
ART PROJECT

The Mojave made spoons out of clay, like the ones pictured on this page. Bring in some air-dry clay from home and make your own spoon similar to a Mohave spoon. Let your spoons dry overnight, then paint them in a similar style to the ones you see pictured. You won't be able to eat with your spoon but you'll get an idea of what it was like to make your own utensils. Display your spoons in class.
California Indian Word Search

Find the California Indian tribes listed below. Words are horizontal, vertical, diagonal and backward.

CHUMASH  EASTERN MONO  YANA
MAIDU  CAHUILLA  MODOC
SIERRA MIWOK  LUISENO
ATSUGE WI  WINTU
YUROK  MOHAVE
KARUK  KUMEYAAY
TUBATULABAI  OHOLONE
POMO  SHASTA
NISENAN  YUKI
Vocabulary Word Scramble

1. betir

2. gernoi

3. reservep

4. tunalar seroucer

5. logocalie noze

6. bohcardratey

7. sinba

8. lucrute

9. dimentnoc

10. nixto
Answer sheet

1. betir (tribe)

2. gernoi (region)

3. reservep (preserve)

4. tunalar seroucer (natural resource)

5. logocalie noze (ecological zone)

6. bohcardratey (carbohydrate)

7. sinba (basin)

8. lucrute (culture)

9. dimentnoc (condiment)

10. nixto (toxin)
REVIEW QUESTIONS

1. California Indian women were responsible for gathering plants.
   List three plant foods California Indians ate.

2. California Indian women boiled food in two ways.
   Name the two ways California Indians boiled foods.

3. List three types of animals that California Indians ate.

4. California Indians that lived near the ocean, rivers and lakes fished often. What types of tools did they use to catch fish?
5. Insects were high in protein and California Indians ate earthworms, crickets and flies. How were insects gathered?

6. California Indians drank other beverages besides water. Name two types of beverages that California Indians drank.

7. California Indians gathered salt from four sources. List one source California Indians gathered salt from.

8. California Indians often dried foods like fish and acorns. Drying is a way to preserve food so that it does not go bad. Can you think of two other types of foods that California Indians dried?

9. What foods can you think of that are dried today?

10. What are some other ways of preserving food today and what are some of these foods?
11. California Indians did not eat with forks.

What types of utensils did Native Californians use to eat with?

12. California Indians stored dried acorns for the winter months.

List two types of storage containers that different California Indian groups used.

13. We have feasts for birthday parties and holidays.

What types of important events did California Indians have feasts for?

14. Children often helped their parents hunt and gather food.

At what age did children learn to hunt or gather food?
California Indians lived in different ecological zones. Certain foods were available in one region but not in another. The Nisenan in the mountains traded black oak acorns and sugar-pine nuts for salt, game and fish with those who lived by the sea.

1. What type of region do you live in? Do you live close to the sea or close to a river or do you live in the desert?

2. Are there foods available that are not from the region you live in? Where do you think these foods might come from? Why are they available? How are they preserved?

3. Acorns were a natural resource for California Indians. Can you think of some natural resources and how they are used?
1. California Indian women were responsible for gathering plants. List three plant foods California Indians ate. 
   acorns, mushrooms, seaweed, flowering plants, seeds, berries, nuts, leaves, stems, roots

2. California Indian women boiled food in two ways. Name the two ways California Indians boiled foods.
   A day or stone pot was filled with water and was placed over a fire until the water began to boil or by stone boiling, placing hot rocks that were heated by fire in baskets

3. List three types of animals that California Indians ate.
   rabbits, squirrels, mice, quail, grouse, deer, elk, antelope, mountain sheep and bear

4. California Indians that lived near the ocean, rivers and lakes fished often. What types of tools did they use to catch fish?
   hooks, harpoons, traps and poison plants

5. Insects were high in protein and California Indians ate crickets, earthworms and flies. How were insects gathered?
   They were gathered by hand or collected in baskets.

6. California Indians drank other beverages besides water. Name two types of beverages that California Indians drank.
   berry juices, ciders, nut drinks and herbal teas
7. California Indians often dried foods like fish and acorns. Drying is a way to preserve food so that it does not go bad. Can you think of two other types of foods that California Indians dried? 
- wild grapes, berries, the peeled fruit of the prickly pear cactus
- corn, beans, muskmelons, wild plants, deer meat, seaweed cakes

8. What foods can you think of that are dried today?
- fruit roll-ups, beef jerky, dried fruits, raisins, beans, pumpkin seeds, sunflower seeds

9. What are some other ways of preserving food today and what are some of these foods?
- Canning is another way of preserving foods today, such as fruits and vegetables.

10. California Indians gathered salt from four sources. List one source California Indians gathered salt from.
- seaweed, grass, mineral deposits, and saline water (marshes, springs, lakes and the ocean)

11. California Indians did not use forks. What types of utensils did Native Californians use to eat with?
- mussel shells, spoons, pots, ladles, baskets, bowls, trays, mats

12. California Indians stored dried acorns for the winter months. Name two types of storage containers that different California Indian groups used.
- baskets, pots, granaries

13. We have feasts for birthday parties and holidays. What types of important events did California Indians have feasts for?
- weddings, the first salmon arrival, acorn harvests

14. Children often helped their parents hunt and gather food. At what age did children learn to hunt or gather food?
- eight to ten years old
California Indians lived in different ecological zones. Certain foods were available in one region but not in another. The Nisenan in the mountains traded black oak acorns and sugar-pine nuts for salt, game and fish with those who lived by the sea.

1. What type of region do you live in? Do you live close to the sea or close to a river or do you live in the desert?

2. Are there foods that are not available in the region you live in? Where do you think these foods might come from?

3. Acorns were a natural resource for California Indians. Can you think of some natural resources and how they are used?

   Timber is used to build furniture and homes, oil is used to heat buildings and fuel automobiles.
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