

Chitactac-Adams Heritage County Park



Teaching and Activity Guide

Developed by the Interpretive Staff of Santa Clara County Parks & Recreation

Revised July 2019

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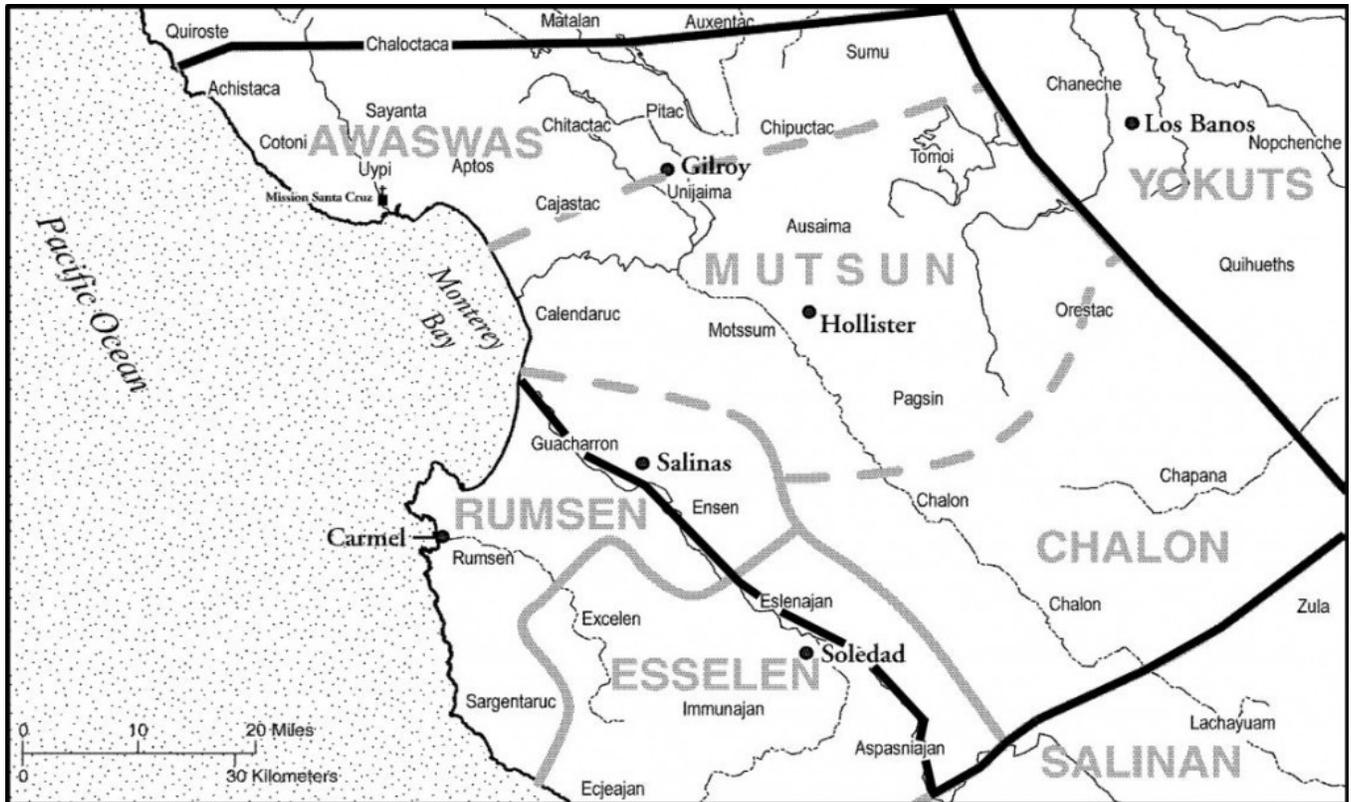
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Chitactac Overview

Thank you for your interest in Chitactac-Adams Heritage County Park. The activities and information in this teaching guide will help you prepare for your park visit. You may print any of the materials for educational use within your classroom.

Before bringing your class to the historic area, we suggest that you:

- Visit the site ahead of time (in person or at parkhere.org) to locate and familiarize yourself with the facilities.
- Explore the history of the local tribal region by visiting the website of the [Amah Mutsun Tribal Band](http://AmahMutsunTribalBand).



Source: AmahMutsun.org

Site Policies

Chitactac is a sensitive and valuable cultural and historic site. Please respect it as you would your home. To preserve and protect this area, it is important to follow all park rules and regulations, including the following:

- Please stay on marked pathways.
- Do not climb on rocks, fences or any structures.
- Picking of plants or flowers is prohibited.
- Removal of artifacts or any other items from the park is prohibited.
- If any artifacts are discovered, please advise park staff or the site host. Do not touch or move artifacts.

School Field Trip Programs

The Chitactac school field trip program is designed to give third and fourth grade students a deeper understanding and appreciation for the variety of natural resources used in the local tribal region. Field trip programs are led by a combination of park staff and volunteers and take place weekday mornings throughout the school year.

The park and exhibit shelter are open daily from 8:00 a.m. to sunset. Please call and confirm availability of the site before choosing a date to visit the site with a group, even if you will be self-guiding through the park. This will avoid conflicts with other groups visiting on the same day. Groups with reservations have priority using the site.

Scheduling Information

To schedule a field trip, follow a link to our Field Trip Request form on [our website](#) or email interp@prk.sccgov.org. Field trip programs are subject to the availability of interpretive staff and docents and are generally open for reservation in late summer for the school year ahead.

Directions to Chitactac-Adams Heritage County Park

- Chitactac-Adams Heritage County Park's address is 10001 Watsonville Rd., Gilroy, CA 95020.
- From Highway 101, take the Tennant Avenue exit in Morgan Hill and proceed west towards Monterey Highway. Turn left (south) on Monterey Highway and travel approximately 0.5 mile south to Watsonville Road. Take Watsonville Road west 5.5 miles to the park site which is located on the west side of the road across from the intersection of Watsonville Road and Burchell Road.

Cancellations

In the event that you need to cancel a field trip program, please contact the park interpreter *at least* one week before your scheduled field trip date. Each field trip requires the coordination of multiple staff and volunteers that may travel an hour or more to present this program to your class, so we highly discourage any last-minute cancellations. In the event of bad weather on the day of your visit, an alternate "rain-out" date or an alternative classroom outreach program *may* be scheduled.

What to Bring on your Field Trip

- Sturdy walking shoes and clothing appropriate for weather (Dress in layers. Sweatshirt or jackets are advised. Shaded areas along the trail can be 10 degrees cooler than in town.)
- Sunscreen and/or hat
- Re-usable water bottles (water fountain available on-site)
- Snacks for 10-minute break (*and* lunches if staying in the park for lunch following the program)
- Name tags for students
- Band aids and first aid kit

Class Size and Chaperones

- Scheduled programs are limited to **35 students maximum**. We may occasionally offer programs for larger groups if staffing and volunteer availability allows. We strive to keep our group sizes small to allow for the most enriching experience possible for your students.
- Each group must provide one adult chaperone for every eight students (1:8 ratio).
- **Teachers and chaperones will be assigned duties and integrated into program activities.** Chaperones must be willing and able to be responsible for a group of students; therefore, only students enrolled in the class should be present. No young siblings should accompany chaperones.

Field Trip Overview

The California Indians who lived at Chitactac relied on their knowledge and management of the natural resources found along Uvas Creek to sustain a village at this site for many generations. The Chitactac field trip experience will help students gain a deeper understanding and appreciation for the variety of natural resources used in the local tribal region. Field trip activities will include examination of the natural resources found along Uvas Creek, experimentation with traditional skills or games, and discussion of ways in village life at Chitactac may be similar to or different than students own life experiences.

Educational Objectives:

- (1) Students will learn at least **3** methods by which the people of the Amah Mutsun people have kept their culture alive throughout the centuries.
- (2) Students will explore at least **3** ways in which the people of Chitactac utilized local wildlife for food, tools, or other purposes.
- (3) Students will identify at least **3** native plants the people of Chitactac utilized for food (i.e. acorns, berries, grasses), medicine (i.e. sagebrush, bay, soap plant), or other purposes.
- (4) Students will have the opportunity to experiment with traditional skills and games through hands-on activities such as hoop & spear practice, pounding acorns, and the staves game.

State standards supported by this field trip experience:

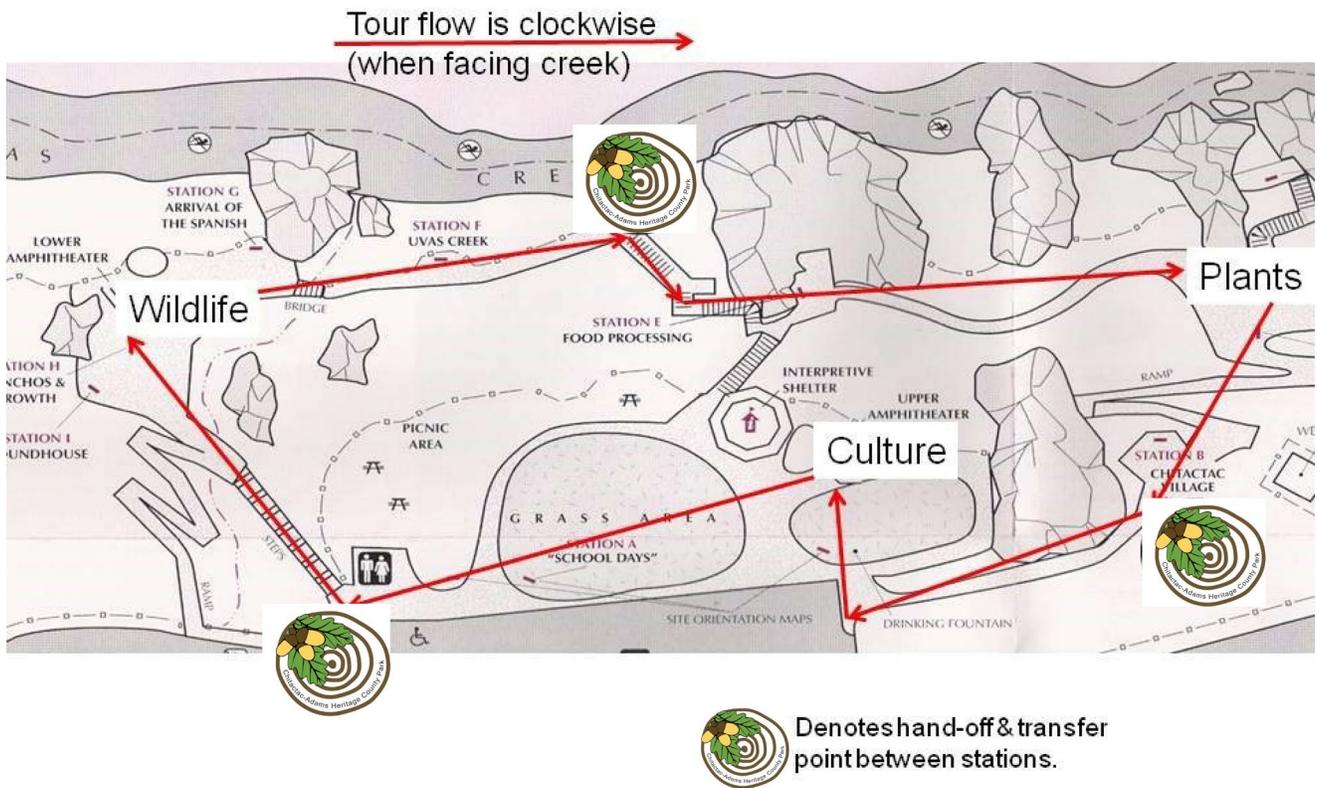
	California Content Standards - Social Studies	Common Core	Next Generation Science Standards	Environmental Literacy Standards
THIRD GRADE	3.2.2. Discuss the ways in which physical geography, including climate, influenced how the local Indian tribes adapted to their natural environment (e.g. how they obtained food, clothing, tools).	Speaking and Listening: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.	Disciplinary Core Ideas LS4.D: Biodiversity and Humans <ul style="list-style-type: none"> • Populations live in a variety of habitats, and change in those habitats affects the organisms living there. (3-LS4-4) 	Concept A: Students need to know that the goods produced by natural systems are essential to human life and to the functioning of our economies and cultures.
FOURTH GRADE	4.2.1. Discuss the major nations of California Indians, including their geographic distribution, economic activities, legends, and religious beliefs; and describe how they depended on, adapted to, and modified the physical environment by cultivation of land and use of sea resources.	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.	ESS3.A: Natural Resources <ul style="list-style-type: none"> • <u>Energy and fuels that humans use are derived from natural sources,</u> and their use affects the environment in multiple ways. 	

Program Format:

Field trip activities are divided into three stations focused on: **Community and Culture, Wildlife and Hunting, and Native Plants and their Uses.** Stations are arranged throughout the interpretive loop trail and students will rotate through the stations in a clockwise fashion.

Following a whole class introduction at the upper amphitheater, the class will split into 3 chaperone-led groups and rotate through three stations before ending with a whole-class wrap-up at the upper amphitheater. Each station will be led by a County Park interpreter or docent volunteer, but the chaperones will be in charge of guiding the students safely from station to station.

*Chitactac Field Trip
Tour Flow Map*



Field Trip Schedule:

(Arrival should be at 9:45 a.m. to allow for a restroom break. Students will be divided into 3 smaller groups.)

<i>Time</i>	<i>Hawks</i>	<i>Turtles</i>	<i>Foxes</i>
9:45 am	Arrival and Break into Small Groups		
10:00 am	Whole Group Introduction in Upper Amphitheater		
10:15 am	Community	Wildlife	Plants
10:45 am	Wildlife	Plants	Community
11:15 am	Plants	Community	Wildlife
11:45 am	Whole group Conclusion, Wrap up and group photo* (*optional)		
12:00 to Departure	Lunch	Lunch	Lunch

Supplemental Resources

California Indians Traveling Trunk

Santa Clara County's Park Interpretive Staff has assembled two traveling trunks that may be checked out by educators. The trunks contain authentic reproductions, photographs, Teacher's Activity Guide, lesson plan, and activities for hands-on classroom instruction. These materials may be used to complement a class visit to Chitactac-Adams or used alone when a fieldtrip experience is not possible.

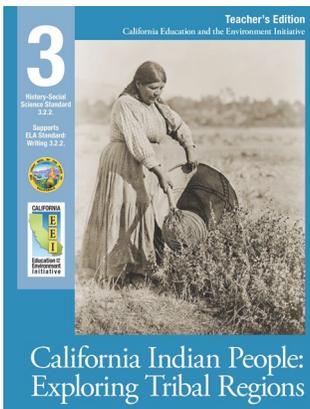
A traveling trunk must be reserved, picked up and returned by teachers to the Quicksilver Mining Museum at 21350 Almaden Rd, San Jose, Ca 95120. Reservations and arrangements may be made through (408) 918-7770 or by emailing education@prk.sccgov.org. Trunks are available for a maximum of two weeks.

Educators who borrow a traveling trunk must agree to replace or pay for any items that are lost or damaged. Individual item replacement value varies from \$5-\$200. Normal wear and tear is expected and teachers will not be charged for periodic replacement of certain items.

California Education and the Environment Initiative (EEI) Curriculum

The state of California's Education and the Environment Initiative curriculum includes comprehensive teacher's guides and classroom lesson plans for third and fourth grade teachers as they study the California Indians with their students. Educators can obtain a free password to download all curriculum materials by visiting the EEI website at <http://www.californiaeei.org/Curriculum/>.

We recommend the following units:

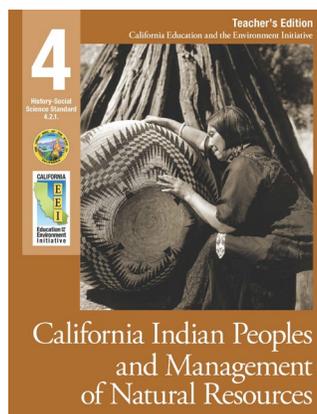


California Indian People: Exploring Tribal Regions

Grade: Third Grade
Subject: History-Social Science
Content Standard: 3.2.2

Description: Explore the interactions between the California Indian nations (peoples) and the components and processes of the natural systems in their local region.

<http://www.californiaeei.org/curriculum/unit?unitid=19>



California Indian Peoples and Management of Natural Resources

Grade: Fourth Grade
Subject: History-Social Science
Content Standard: 4.2.1

Description: Students compare the ecosystem goods and services available to California Indian people of the past, their worldviews, how they used and manage resources, and how they established trade networks to access goods from far-off regions.

<http://www.californiaeei.org/curriculum/unit?unitid=26>

Background Information

Excerpt below is from *California Indian People: Exploring Tribal Regions*



Teacher's Background

Cattle grazing in oak woodland

When Europeans first gazed on the rolling hills and towering oaks of California, they were not glimpsing a virgin landscape. The abundance of the land bore testament to the work of the California Indians who lived there.

On the western edge of North America, intense land management sustained a wide variety of communities, from seasonally moving groups of several dozen to permanent settlements of several thousand. Like all people, California Indians changed the land to produce what they wanted. In a few places, people grew irrigated crops. Mostly, though, the people's management

blended so seamlessly with the environment that few 16th century explorers recognized its full extent or effect. The results of the California Indians' environmental practices looked quite different from what the Europeans called agriculture.

Through intentional management, California Indians affected the extent and composition of the natural communities on which they



Tule elk

depended. Perhaps nowhere was this more evident than in the grasslands. Abundant grasslands supported large populations of deer, elk, pronghorn, rabbits, and ground squirrels. The long, flexible stems of tall grasses were used in making baskets. The people also gathered, stored, and toasted grass seeds for food. A variety of plants, such as wild hyacinths and mariposa lilies, grew nutritious, edible bulbs. In fact, records of encounters between California Indians and Europeans state that the main food served was a porridge of bulbs and grass seeds, which the Spanish called *pinole* (pea-no-lay).

Spanish Records

Historical sources note the abundance of grasslands at the time of the Europeans' arrival. In his journals, Father Juan Crespi notes seeing "not a bush" between San Juan Bautista and Santa Barbara, an area that is almost entirely blanketed in chaparral today. To encourage the growth of grass, people used fire to clear brush and create openings in forests. Although burning is commonly associated with dry regions of California, people used the practice to maintain grassy meadows even in the wet redwoods, providing a habitat that supported elk and other game. Burning was so extensive that it earned Los Angeles harbor its first Spanish name, *Bahía de los Humos* (Bay of Smoke).

To foster productivity, grasslands needed to be continually maintained in many areas. Grass seeds were gathered in autumn. A tightly woven basket was placed under ripe seed heads, which were then beaten with a paddle-shaped basket to release their seeds. That method allowed many seeds to fall to the ground. Large bulbs were harvested with hard digging sticks. The practice loosened packed soil so that seeds could

be planted and smaller, younger bulbs could grow big. Fires were then burned over the grass, destroying trees and bushes and making nutrients available for next year's grass. Fires were also used to drive grasshoppers and small game into pits and roast them for food. Spring rains brought a new crop of grassland plants: long, straight deergrass for baskets; large, swollen bulbs for roasting; and nutritious grasses and wildflowers that would yield hundreds of pounds of seeds.

Today, forest and chaparral cover many areas that were once grassland. Native grasses have been largely replaced by introduced species.

The actively maintained beds of bulbs that once carpeted those areas in spring blossoms are a thing of the past.



Resource Use and Management

Early California Indians used fire as a management tool in many other habitats. In conifer forests, oak woodlands, and chaparral, burning cleared brush and opened areas for easier hunting and travel. Burning under oak, mesquite, and palm trees helped control harmful insects and encourage new plant growth. Burning other plants, such as hazelnut, encouraged



Flower-covered hill



Lemonadeberry tree

them to grow in patterns that were useful for baskets and tools.

Most of the items that early California Indians used in their daily lives were made from plant materials. Left to grow on their own, few plants could produce the quantity or quality that people needed. A single cradleboard, for instance, might require 500 straight lemonadeberry sticks. Lemonadeberry naturally produces branches that are short, cracked, and crooked. To produce straight, flexible branches, people pruned and coppiced the lemonadeberry. They employed the same methods on other plants, too, to produce the materials they needed for making products, such as hard, straight arrows and watertight baskets.

Another way California Indians managed the environment was through careful inventory, judicious use, and strategic trade of certain resources. One such resource was the acorns of oaks. The people in every cultural region ate nutritious acorn meal. Unlike almond or walnut trees, oaks take many years to mature and

bear nuts. They are also genetically complex. For this reason, large, flavorful acorns from one tree do not predictably grow into trees bearing large, flavorful nuts. California Indians identified the desirable trees and carefully monitored them to gather the harvest before it was devoured by animals.

From the Yurok in northwest California to the Cahuilla (Kah-wee-yah) in southeastern California, individual families owned the rights to the desirable trees. These families kept watch and gathered the harvest when the acorns came into season. Once harvested, acorns could be dried and stored for long periods.

Because oak trees vary widely in their productivity from year to year, one region might have a boom acorn crop while another area has low productivity. For that reason, acorns were among the items most widely traded by early California Indians. The use of shell beads helped groups moderate trade of this important resource. The beads served as a unit of exchange.

Location, Location

Most pre-Columbian California Indian communities were centered on a **watershed**. Boundaries usually followed ridgelines, with a permanent stream or river in the center. Most communities were comprised of several different natural habitats. This diversity offered a variety of resources at different times of the year. Even those tribes who moved considerable distances during the year generally had large villages that served as a permanent home. The people who lived in the western Sierras, for instance, generally had temporary camps in higher-elevation areas where they hunted and gathered in the summer.

Tribal Designations

Anthropologist Alfred Kroeber faced a difficult task when he attempted to classify the overwhelming diversity of the California Indians. Traditionally, many California Indians named themselves after the places where they lived, much as we might say we are San Franciscans or Angelenos. Identifying people who spoke dozens of languages by their association with thousands of independent areas was impractical for Kroeber's purposes, though. Instead, he drew borders around areas where people spoke closely related languages.

Thus, Kroeber's map of California Indian "tribes" or "nations" (the basis of most modern maps) does not correspond to the usual interpretation of those terms. A similar classification of Europeans would lump Swedes, English, Germans, and other speakers of Germanic languages together as a single "tribe," failing to acknowledge their unique identity, history, cultures, and traditions.

A close examination of Kroeber's "tribes" reveals a complex picture of early California Indian cultural diversity. The Ohlone people, who



Pomo gift basket

lived in the area from the San Francisco Peninsula to Monterey Bay, for example, consisted of 50 politically autonomous tribal groups who spoke eight distinct languages (Karkin, Chochenyo, Ramaytush, Tamyen, Awaswas, Mutsun, Rumsen, and Chalon). Their languages were as different from one another as Spanish is from Russian.

Another method of classification used by some anthropologists was based on the groups' interactions with the landscape. Although they

spoke unrelated languages, the Tolowa (Chush), Karuk, and Yurok (Oohl) all built large permanent houses from redwood planks. They also built salmon weirs (dams) and used tusk-shaped *Dentalia* shells as currency. The three peoples traded extensively, participated together in cultural rituals, and managed their landscape—the redwood and conifer forests of the far northern California coast—in similar ways. Despite their diversity in language and history, the peoples in each of the natural



regions of California used the landscape in similar ways and created similar cultural items. Their traditions and belief systems were strongly influenced by the natural landscapes in which they lived. Legends from early California Indian cultures depict a **worldview** in which natural and human social systems are closely linked.

Continuing Traditions

Today, California has more than 100 registered tribal entities. Even as California Indians fully participate in 21st century society, they maintain their history in many ways, from the Natini-xwe celebrations in Hoopa Valley to the Quechan museum in Winterhaven.

California Indians continue to shape the state's landscapes through their practices, from the tending of sedges by Pomo basket weavers to net fishing by Tolowa fishermen. Though many traditions have changed, modern resource managers continue to learn from the California Indians as they strive to maintain the diversity and productivity of California's landscapes.



Hoopa Valley tribe gathering

Glossary

Ecosystem goods: Tangible materials, such as timber and food, produced by natural systems, that are essential to human life, economies, and cultures.

Ecosystem services: The functions and processes that take place in natural systems, such as pollination, that support or produce goods and help sustain human life, economies, and cultures.

Natural region: A geographic region characterized by similar physical features, climate, types of ecosystems, plants, and animals.

Natural resources: Materials, such as water, minerals, energy, and soil that people use from nature and natural systems.

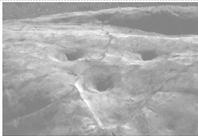
Natural system: The interacting components, processes, and cycles within an environment, as well as the interactions among organisms and their environment.

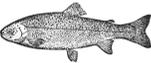
Watershed: The land area that drains water into a particular body of water, such as a stream, river, lake, or ocean.

Worldview: The perspective from which one thinks about the world as a whole.

Chitactac Vocabulary

These vocabulary words will help you better understand the history and culture of the people who once lived at Chitactac.

abalone		<ul style="list-style-type: none"> ▪ an edible shellfish harvested by coastal tribes ▪ necklaces, pendants, and fish hooks were often made from abalone shells
acorn		<ul style="list-style-type: none"> ▪ the fruit of the oak, a smooth oval nut in a rough cuplike base ▪ good source of protein and fiber; high in fat, vitamins and minerals ▪ pounded to a flour or “meal” (usually in a bedrock mortar), leached of tannic acid, and boiled into a mush or baked into bread
berry basket		<ul style="list-style-type: none"> ▪ “sawiy” basket shown at left ▪ The ice cream cone shape was useful when gathering berries so the berries at the bottom would not get smashed
bay tree		<ul style="list-style-type: none"> ▪ seeds of the bay tree were roasted and eaten ▪ aromatic bay leaves were placed into granaries to repel insects
bedrock mortar		<ul style="list-style-type: none"> ▪ stone bowl carved into rock outcrops used for grinding up powders such as acorn flour or pigments for paint
boat		<ul style="list-style-type: none"> ▪ made of tules bundled together ▪ used throughout many California bodies of water for transportation or fishing
chert		<ul style="list-style-type: none"> ▪ a very hard sedimentary rock found throughout the California Coast Ranges ▪ used to make arrowheads, knives and drill points ▪ sometimes referred to as flint (as in “flint knapping”)
chia		<ul style="list-style-type: none"> ▪ nutritious seeds of chia flowers were collected and eaten raw, or toasted and mixed with other seeds to form a food called pinole
cooking stone		<ul style="list-style-type: none"> ▪ fist-sized stone heated in the fire and then stirred into foods in water-tight baskets ▪ used for cooking liquids
decoy		<ul style="list-style-type: none"> ▪ duck decoy made of tules ▪ covered with feathers to resemble a live duck ▪ used to attract ducks for hunting

deer		<ul style="list-style-type: none"> ▪ hunted for food and used to make clothing, tools, rattles and many other things
granary		<ul style="list-style-type: none"> ▪ designed to keep stored foods dry and away from insects and animals ▪ storage structure for acorns
manzanita		<ul style="list-style-type: none"> ▪ evergreen shrubs, 2-12 feet high, with small leaves and reddish bark ▪ manzanita berries were made into a refreshing cider ▪ manzanita is the Spanish word for “little apple”
mortar and pestle		<ul style="list-style-type: none"> ▪ stone bowl (mortar) and hand tool (pestle) used to process acorns, nuts, seeds, etc.
obsidian		<ul style="list-style-type: none"> ▪ a volcanic rock that breaks to produce very sharp edges ▪ often used to make arrowheads and spear points
petroglyph		<ul style="list-style-type: none"> ▪ markings that are pecked or carved into rock ▪ Chitactac has 2 kinds of petroglyphs: concentric circles (left) and cupules
ramada		<ul style="list-style-type: none"> ▪ 4-legged structures with the top covered with tules or branches; used as a shaded workplace ▪ much of a village’s work was done under ramadas
string (cordage)		<ul style="list-style-type: none"> ▪ tules and cattail leaves may have been used to make coarse twine and rope ▪ milkweed, dogbane and stinging nettle were used to make finer cordage
trout		<ul style="list-style-type: none"> ▪ high protein food source found in local rivers ▪ could be smoked for future use
tule		<ul style="list-style-type: none"> ▪ tall (6-9 feet), grass-like plant that grows in wet, marshy areas ▪ used to cover the willow frames of houses, granaries, roofs of the ramadas, etc. ▪ tule was used in making cordage

Chitactac Word Search

Directions: Circle the words listed below as you find them.

C T A L S A W K F R D A Y Q V C L D V A
 O X N J D Q A L V R B A V G H C O U H H
 H U Q A L O P A I A Z K C I Q I D B R L
 F A M P K I W B L P G Q A O J C C I B G
 E A Y E G G G O G O H Q Y F R J U X Q Q
 R Q L U A N N R E E D E C F U N Z L E V
 E Y H M I E N O V Y G V C Y Q K H B T C
 L E R M A U Z W X C A I C B R X V P B Y
 L S M A C N E B E B G B C V M J C S W H
 H U Y T N H Z M J P S R H P R A B B I T
 H P A U M A N A G W H C I S I R C Q Z P
 V G B Z H X R S N S D N T Q C X Q Y D F
 Y Z Q C I U G G E I L T A U R U H Q A N
 C N L F L Q Y C O W T R C P N U G U I I
 P E T R O G L Y P H S A T K C O R D E B
 D B L W G K W X B P A T A C T Z M L O O
 G U N U S Q K T F W T R C H U D I D W Q
 B M D X T Z P K P W L O S E E V X S R D
 L R Y C Q I Q F C Q V M S R N R V G I H
 F U X J Z W Y V D Z C T K T M Z M J F C

ABALONE
 ACORN
 BAY
 BEDROCK
 CHERT
 CHIA

CHITACTAC
 DEER
 GRANARY
 HUMMINGBIRD
 MANZANITA
 MORTAR

OAK
 PETROGLYPH
 RABBIT
 RAMADA
 TULE

Chitactac Foods

Plant Foods

In general, women and girls tended and harvested plant foods. They knew when and where to find the best food for each season of the year. Once gathered, women also processed and prepared many plant foods – such as acorns. Evidence of their work is visible in the many bedrock mortars at Chitactac.

- **Acorns** came from a variety of Oak trees: Valley, Black, Blue, and Coast Live. They were gathered in the fall, leaving some for deer and other animals to eat, and stored in a granary. Acorns had to be pounded to a flour and then leached by pouring warm water over the acorn meal to remove the bitter tannic acid.
- **Bay nuts** grow on Bay trees. When the nut is ripe, the skin turns from green to purple – it tastes like an avocado. The nut itself can be roasted over a fire. It contains caffeine just like coffee and chocolate!
- **Pine nuts** are the edible seeds of pine cones. Some pine trees grew nearby, and some pine nuts were imported through trade.
- Tiny, nutritious **Chia seeds** were collected and eaten raw, parched (toasted), or mixed with other seeds to form pinole. At first the seeds crunch in your mouth like poppy seeds, but then they begin to develop a gel-like coating. It is this gelatinous material that allows them to adhere to the outside of the famous “Chia Pet.”
- **Black walnuts, blackberries, strawberries, huckleberries, wild grapes** were gathered and eaten.
- **Elderberries** came from the Elderberry tree. Some tribes referred to it as the music tree since flute whistles and clapper sticks were made from it. The center of elderberry branches are very soft and easily hollowed out.
- **Manzanita berries** were crushed to make a refreshing cider that was a good source of Vitamin C.
- **Wild onions, cattail roots** and **wild carrots** were gathered and eaten.
- The **soaproot plant** is one of the most versatile you can find. It was used to: make a brush; make a fish poison by crushing the bulb and sprinkling it over the water – it made it hard for the fish to breathe by clogging their gills and they floated to the surface; make a shampoo; make glue, and; you can even eat it like a potato.
- **Clover** and **Miner’s Lettuce** were gathered and eaten much like a salad.
- **Yerba Buena leaves** could be dried and made into a mint tea, good to drink if you have an upset stomach.
- **Seaweed** was gathered along ocean beaches. It was used as food source as well as basket-making material.

Animal Foods

In general, Men and boys did the hunting for the tribe. When they killed an animal they gave thanks for its life and showed respect by using every part they could. From the hide to the bones, to the meat, and even the brain, they never wasted any part.

Some Animals Used

- Many mammals were hunted, including: **deer, elk, antelope, bears, bobcats, skunks, raccoons, rabbits, squirrels, woodrats, mice and moles.** Deer meat was cut into strips and hung on poles to dry in the sun. Smoky fires beneath the jerky helped to keep insects away.
 - Some reptiles they relied on were **snakes, lizards and turtles.**
 - Some birds they relied on were **geese, American widgeon, ducks, teal, coot, doves, robins, quail and hawks.**
 - Some insect foods included **yellow jacket larvae, grasshoppers and caterpillars.**
 - Fish and shellfish were caught and collected from local waters. **Salmon, trout, sardines, anchovies, abalone, mussels, clams, oysters, chitons** (a type of mollusk) and **snails** were common.
- 

Activity

Make a Pine Nut Bracelet

Materials

- **The following materials are needed for this activity.**
 - › Raw pine nuts with the shells left on them. Approximately 2-4 pine nuts per student
 - › Hemp Cord
 - › Colored beads optional

Directions

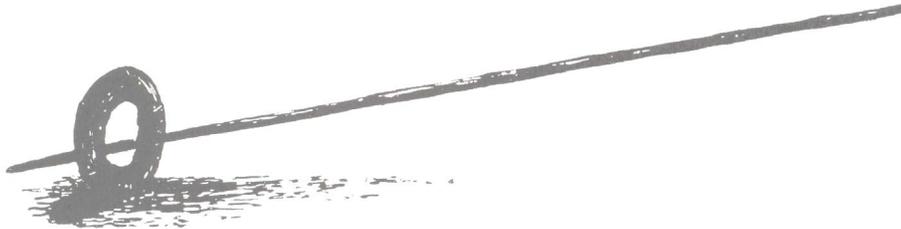
- **Here is how to make pine nut bracelets**
 - › Students will use sand paper to sand off edges of pine nuts.
 - › Next students put a paper clip through ends of paper clip to clean inside of nut.
 - › Students will then put hemp cord through the pine nut.
 - › Students may want to add extra colored beads if desired.

Chitactac Games

Games of Skill

Games of skill were used to increase eye-hand coordination. Good eye-hand coordination was important for hunting and other important tasks that were done on a daily basis. Children started playing these skill games when they were very young.

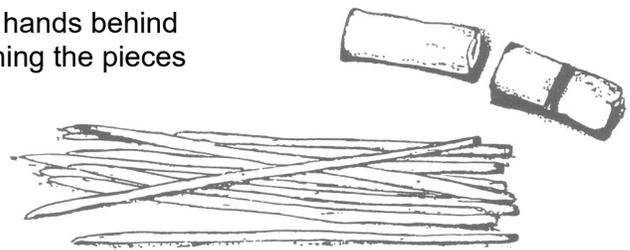
Hoop and Spear is one example of a game of skill. When rolled across the ground, the hoop represented a running animal. The goal was to throw a spear through the center of the hoop as it rolled. There were different sizes of hoops to symbolize different sizes of animals. Smaller and smaller hoops increased the skill of the hunter.



Games of Chance or Luck

These two games weren't used to increase skills. They were used for entertainment and sometimes played for days on end. Both adults and children played these games.

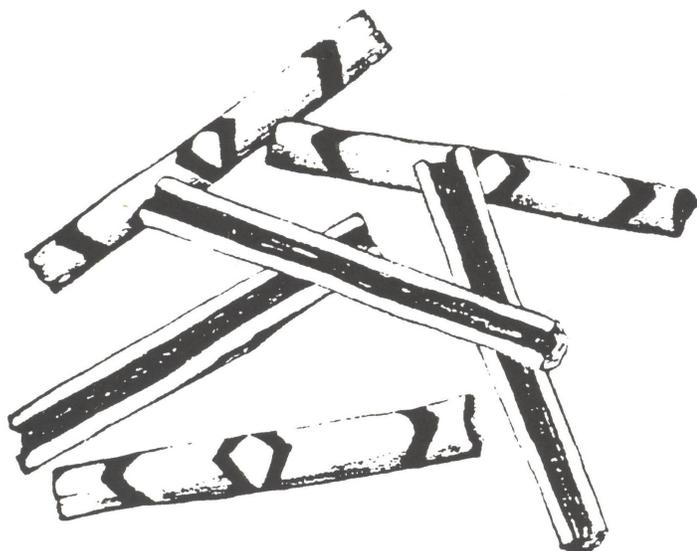
- The **Hand Game** required two objects, either completely different or marked differently. The most common objects were deer toe bones. One was plain. The other was wrapped with either string or deer sinew. A player placed his or her hands behind the back and hid one piece in each hand, switching the pieces back and forth for a short time. When ready, the player's hands were extended in front of another player who had to guess which hand held the marked playing piece.



hand pieces for hiding are above, counting sticks are below

If the second player guessed incorrectly, the first player got a counting stick (you can use pretzels instead!) and a chance to hide the game pieces again. If the second player guessed correctly, he or she got to hide the pieces for the next turn.

The score was kept with 6 to 12 counting sticks. The sticks started in one pile and were taken by each player as earned. After the pile was gone, the sticks were exchanged between players. The first player to win all the counting sticks won the game.



- The **Staves Game** was played with six sticks, usually made

from an elderberry or willow tree; the sticks were small sections of branches cut in half. The round side of the stick was decorated and the flat side was left plain. The people who once lived at Chitactac created geometric patterns using red, black and white but feel free to use any available colors and symbols for your staves.

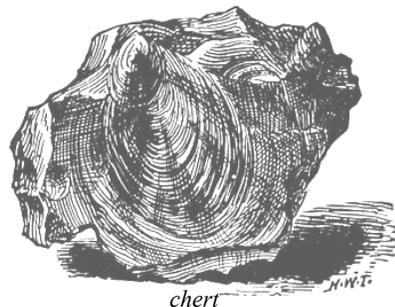
To play the game, the six sticks were tossed into the air. The sticks either landed decorated side up or plain side up. Depending on the way they landed, the player was awarded points. If they were all facing decorated side up or all facing plain side up, you got two points. If three were facing decorated side up and three were facing plain side up, then you got one point. Any other combination was worth zero points and you lost your turn.

Counting sticks or other natural materials were used to tally their points.

Chitactac Tools

Thousands of years ago, the California Indians learned to make tools using natural resources. Below are just a few examples of these natural resources along with information as to how they were used to make useful tools.

Chert and Obsidian



Chert is a fine-grained, very hard, sedimentary rock. **Obsidian** is a volcanic rock, a kind of glass that occurs when lava is cooled rapidly in water. It can be flint knapped to a very sharp edge. Compared to chert, obsidian is relatively soft. California Indians used both chert and obsidian to make arrowheads, spear points, knives, hand axes and other sharp tools for cutting and scraping.

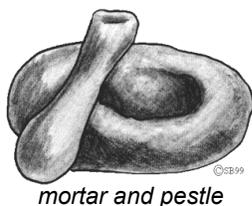
Flint knapping is the process of making stone tools by using another stone, a hammerstone, to strike off flakes and create edges. Wood, bone or antler can also be used to flint knap by applying pressure to strike off flakes to create a sharp blade or edge. To flint knap obsidian, place a piece of deer hide in the palm of one hand to protect it from being cut. Place a piece of obsidian on top of the hide. Then take a piece of deer antler in the other hand and use it to chip away at the edge of the rock until you've made your arrowhead, spearhead, scraper or knife.



Cordage (Rope or String)

The people of Chitactac made **cordage** by twisting 2 lengths of various plant materials around each other in a specific way. Some of the plants used were tule, dogbane, and iris.

Mortar and Pestle



Women used a **mortar and pestle** to pound acorns and other foods into a meal or a coarse flour. The mortar and pestle were also used to grind rocks into powder to be made into different colored pigments. These pigments were mixed with animal fat to make paint for staves, unshelled walnuts, and other decorative uses. The pigments were also used as body paint.

At the Chitactac village, women pounded acorns in bedrock mortars, mortars carved into large stone outcrops. The bedrock mortars were very close to Uvas Creek because a lot of water was needed to pour over the acorn flour to leach the tannic acid out before it could be cooked and eaten.



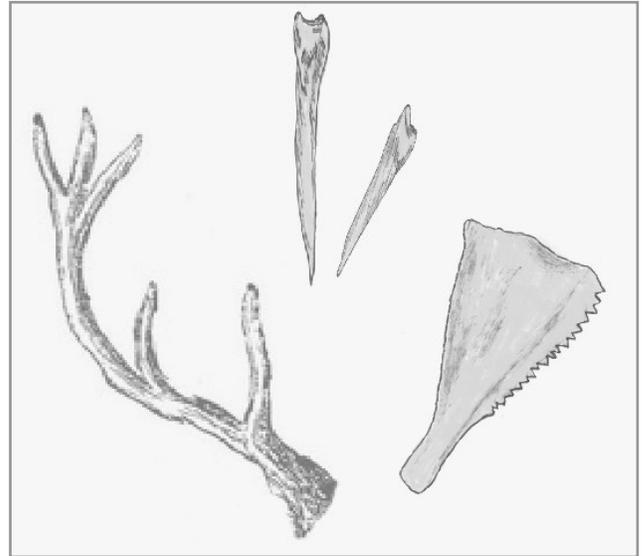
bedrock mortars

Bone and Antler Tools

A **deer bone saw** was made out of a deer's scapula, or triangular shoulder blade. It was made by chipping one edge of the bone to make teeth. This saw cuts tule easily but would probably break if used on harder materials.

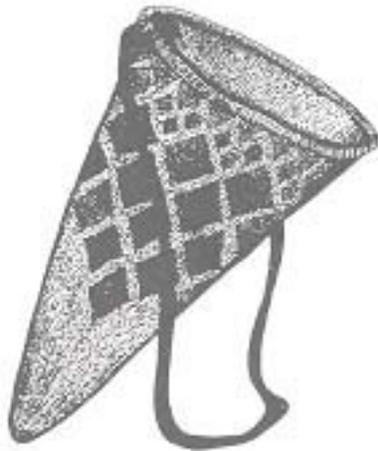
The deer **antler tip** was used in flint knapping. Obsidian or chert was held in the hand, protected by a small piece of deer hide. Then the antler tip was used to chip the edge or edges of the rock into the desired shape.

Deer bones were split and shaped into several tools such as **awls**, **needles**, and **fish hooks**. An awl is a pointed tool used for making holes in items such as baskets or tanned hides. Bone needles were often used to make baskets.



left to right: deer antler, 2 bone awls, deer bone saw

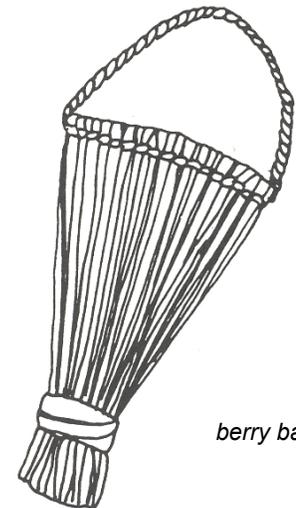
Baskets



crushed.

burden basket

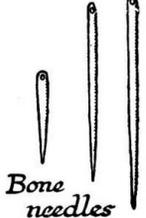
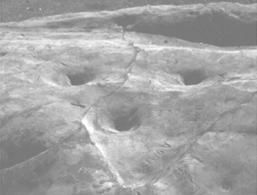
A variety of **baskets** were used for gathering, storing, cooking and decorating. These baskets were sketched by Linda Yamane. One is a burden basket and was used to carry almost anything: acorns, tools, firewood, gathered plant materials for making cordage, etc. Burden baskets were carried by the strap worn across the forehead or shoulders. The other is a berry basket – narrow at the bottom and wide at the top so the berries don't get



berry basket

Match the Tools

Test your knowledge of Chitactac tools. Match the pictures with the best descriptions.

 <p>_____</p>	<p>1. used to grind pigments to be made into paint; usually kept separate from those used to pound acorns</p>
 <p>Bone needles</p> <p>_____</p>	<p>2. often used in basket making</p>
 <p>_____</p>	<p>3. used in flint knapping to chip edges of rocks</p>
 <p>_____</p>	<p>4. very hard volcanic rock used to make arrowheads</p>
 <p>_____</p>	<p>5. burden basket used to carry many things.</p>
 <p>_____</p>	<p>6. used to pound acorns to a flour</p>
 <p>_____</p>	<p>7. special basket used to gather berries</p>
 <p>_____</p>	<p>8. used to lash or tie things together</p>

Credits and Suggested Reading

Credits

- Some images used from Linda Yamane; Doug Petersen; Santa Clara County Parks & Recreation;
- www.clipart.com © 2004.

Suggested Reading

- www.amahmutsun.org official website of the Amah Mutsun Tribal Band, Chairperson Valentin Lopez.
- Anderson, M. Kat, Tending the Wild; Native American Knowledge and the Management of California's Natural Resources, Berkeley: University of California Press, 2005.
- Bibby, Brian. The Fine Art of California Indian Basketry. Berkeley: Crocker Art Museum in association with Heyday Books, 1996.
- Gendar, Jeannine. Grass Games & Moon Races: California Indian Games & Toys. Berkeley: Heyday Books, 1995.
- Keator, Glenn and Linda Yamane. In Full View: Three Ways of Seeing California Plants. Berkeley: Heyday Books, 1995.
- Milliken, Randall. A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area 1769-1810. Novato: Ballena Press, 1995.
- Ortiz, Bev. It Will Live Forever: Traditional Yosemite Indian Acorn Preparation. Berkeley: Heyday Books, 1991.
- Petersen, Douglas and Linda Yamane. The Ohlone People of Central California: An Educator's Guide. San Jose: Santa Clara County Department of Parks & Recreation, n.d.
- Teixeira, Lauren S. The Costanoan/Ohlone Indians of the San Francisco and Monterey Bay Area: A Research Guide. Novato: Ballena Press, 1997.
- Yamane, Linda. The Snake That Lived in the Santa Cruz Mountains & Other Ohlone Stories. Berkeley: Oyate, 1998.
- Yamane, Linda. Weaving a California Tradition. Minneapolis: Lerner Publications, 1997.
- Yamane, Linda. When the World Ended/How Hummingbird Got Fire/How People Were Made. Berkeley: Oyate, 1995.

Local Resources

The following is a listing of resources within the San Francisco and Monterey Bay areas that you may wish to visit for further enrichment in California Indian culture:

Amah Mutsun Tribal Band

Explore the history of the local tribal region by visiting their website at amahmutsun.org.

Chitactac-Adams Heritage County Park

(interpretive trail; bedrock mortars; rock art; education programming by reservation)

10001 Watsonville Road
Gilroy 95020
408-846-5632 – Educational programs
www.parkhere.org

Coyote Hills Regional Park

(visitor center; mural; shellmound site with reconstructed traditional structures; annual public event, *A Gathering of Ohlone Peoples*, in early October; educational programming; books)

8000 Patterson Ranch Road
Fremont, CA 94555
1-888-EBPARKS
http://www.ebparks.org/parks/coyote_hills

Henry Cowell State Park

(annual *Ohlone Day* event; books)
101 N. Big Trees Park Road
Felton, CA 95018
(831) 335-4598
[Henry Cowell Redwoods SP](http://HenryCowellRedwoodsSP)

Pacific Grove Museum of Natural History

(Ohlone baskets on display)
165 Forest Avenue
Pacific Grove, CA 93950
(831) 648-5716
[Pacific Grove Museum of Natural History](http://PacificGroveMuseumofNaturalHistory)

Pacific House, Monterey State Historic

Park (Monterey Museum of the American Indian, baskets, pottery, other artifacts)
20 Custom House Plaza
Monterey, California 93940
831-649-7118
[Monterey SHP](http://MontereySHP)

Santa Cruz Museum of Natural History

(mural illustrating Awaswas life, school programs, classroom kits, bookstore)
1305 East Cliff Drive
Santa Cruz, CA 95062
831-420-6115
<http://santacruzmuseum.org/>

Santa Cruz Mission State Historic Park

(School programs, living history days and craft making)
144 School Street
Santa Cruz, CA 95060
831-425-5849
[Santa Cruz Mission SHP](http://SantaCruzMissionSHP)

Sunol Regional Wilderness

(visitor center)
Southeast end of Geary Road
Suñol, CA 94586
510-544-3249
<http://www.ebparks.org/parks/sunol>

Youth Science Institute – Alum Rock Nature Center

(school/group program on the Ohlone)
16260 Alum Rock Avenue
San Jose, CA 95127
408-258-4322
[School and Group Programs | Youth Science Institute](http://SchoolandGroupPrograms|YouthScienceInstitute)

