



# *San Elijo Lagoon* CONSERVANCY

*Preserving, Protecting and Enhancing San Elijo Lagoon Ecological Reserve and its Watershed*

# The Kumeyaay People at San Elijo Lagoon

Teacher's Guide • Grades 3–5 • Supplemental Curriculum & Field Experience



## Objectives

From the information and activities in this packet, students will gain:

- An awareness of the Kumeyaay (*pronounced: KOOM-e-eye*), Native Americans who have lived, and live today, in San Diego and Imperial counties and Baja California, Mexico.
- An understanding of how the Kumeyaay lived and what resources they used for thousands of years in and near San Elijo Lagoon.
- Familiarity with the plants found around San Elijo Lagoon that were especially important to the Kumeyaay.

## California State Standards

This packet will assist you in meeting these History-Social Science Content Standards for California Public Schools, which focus on local American Indian nations, how the physical environment affected their lives and their use of natural resources.

- 3.1.1** Identify geographical features in their local region (e.g., deserts, mountains, valleys, hills, coastal areas, oceans, lakes).
- 3.1.2** Trace the ways in which people have used the resources of the local region and modified the physical environment (e.g., a dam constructed upstream changed a river or coastline).
- 3.2** Students describe the American Indian nations in their local region long ago and in the recent past.
- 3.2.2** Discuss the ways in which physical geography, including climate, influenced how the local Indian nations adapted to their natural environment (e.g., how they obtained food, clothing, tools).
- 5.1.1** Describe how geography and climate influenced the way various nations lived and adjusted to the natural environment, including locations of villages, the distinct structures that they built, and how they obtained food, clothing, tools, and utensils.
- 5.1.2** Describe their varied customs and folklore traditions.

## Vocabulary

<b>archaeology</b>	the scientific study of past cultures by looking very carefully at what has been left behind (the material remains or artifacts), such as tools, fireplaces or middens
<b>‘ewaa</b>	a dome-shaped home
<b>mano</b>	a hand-held stone for grinding nuts, seeds or grains
<b>metate</b>	a flat stone or one with a slight depression (like a shallow bowl) for holding nuts, seeds or grains
<b>midden</b>	an ancient trash mound; a place where prehistoric people tossed trash, such as shells or animal bones
<b>olla</b>	a Spanish word for a pot with a wide bottom and a small neck used for food storage by the Kumeyaay
<b>natural resources</b>	materials supplied by nature that aid or help someone live
<b>shawii</b>	a thick mush made from acorn flour
<b>wetlands</b>	an area of land that is regularly wet or flooded

## Introduction

### Who are the Kumeyaay?

The Kumeyaay are Native Americans who have lived, and currently live, in San Diego and Imperial counties and Baja California, Mexico. Most of the ancestor of the Kumeyaay people lived in small family settlements along freshwater creeks. There was once a village near today’s El Camino Real, which is just east of San Elijo Lagoon and within the watershed of the San Elijo Lagoon Ecological Reserve.

There is evidence that people have lived in our area for 10,000 years. Scientists debate whether or not the earliest people were Kumeyaay ancestors, or if the Kumeyaay came to the San Diego area later. Most Kumeyaay believe they have always been here, from the start of creation. When the Spanish arrived in 1769, the Kumeyaay people were forcibly removed from their lands to live in or near the missions. In the 1870s, after the Americans began to rule California, they established an Indian reservation system. Today, there are 13 Kumeyaay reservations in San Diego County.

Today most Kumeyaay people live as part of our modern society. Some live on reservations and follow their traditional ways of life, but many do not. They work as nurses, teachers, businessmen and many other occupations. However, as people of the Kumeyaay Nation, they strive to maintain their unique language, customs and cultural identity.

## How did Kumeyaay ancestors live?

Most people long ago knew how to use **natural resources** — plants, animals, water, stones — to provide them with everything they needed. They did not have the conveniences we have today.

Many Kumeyaay did not remain in one place throughout the year. They traveled with the seasons. In the fall they moved to the mountains and deserts. There they gathered acorns and hunted animals for food, collected fiber for rope and clothing, and selected rocks for tools. During the winter the people lived near coastal **wetlands**, such as San Elijo Lagoon. They fished, gathered shellfish and trapped ducks and geese. In the spring they collected plants, seeds and fruits from nearby hillsides. They traveled by foot on trails they knew well. Some of our roadways today, such as El Camino Real, Highway 78, and Interstate 8, follow those same ancient trails.

Kumeyaay ancestors lived in a dome-shaped home called an **'ewaa**. They made the frame from willow branches and filled in the sides with woven walls of cattails and bullrush. They placed rocks along the base of the house to keep out the wind and small animals. An **'ewaa** had an opening for a door, as well as an opening at the top to allow smoke from indoor fires to escape. The people slept inside on reed mats or rabbit skin blankets.

The Kumeyaay people relied on plants for many of their foods and medicines. They also used plants to make baskets for storing food, carrying water, gathering seeds and cooking. Pottery made from clay was useful for cooking and storage. An **olla** stored water, as well as nuts and seeds.



## What did Kumeyaay ancestors eat?

Scientists know what Kumeyaay ancestors ate because they have studied the material left behind in **middens**, and have spoken to Kumeyaay elders. The native people relied on a variety of food sources — plant seeds, roots and leaves, mammals, birds, insects, fish and shellfish.

What the Kumeyaay ate each day largely depended on what was available. They gathered plant shoots and bulbs in the spring, seeds in the summer, acorns in the fall, and mushrooms in the winter. Acorns were a reliable food source and could be stored for many years in a large willow basket called a granary. Willow contains a natural chemical to keep out insects. The Kumeyaay pounded the acorns to remove the shells and then ground the nuts into a fine meal using a stone **metate** and a **mano**. They used water to leach bitter tannic acid from the meal, then made a porridge-like mush called **shawii**. The people also ate pine nuts, seeds and roots from a variety of plants, wild onions, cactus fruits and elderberries, to name a few.

Kumeyaay ancestors used bows and arrows to hunt deer, but relied more on small animals for food. They hunted birds, such as doves, geese, quail and ducks, and ate bird eggs. They caught rabbits, squirrels and wood rats with traps, nets, clubs and rabbit sticks. They dried meat and saved it for the winter. For additional protein, they ate insects, such as grubs, ants, grasshoppers and crickets when available. While living along the coast, they ate fish and shellfish.



### What did Kumeyaay ancestors wear?

The Kumeyaay women used willow tree bark to make skirts by pounding the inner bark of the tree into a soft texture. The men sometimes wore an animal hide breechcloth or a belt that carried their tools. On cold days, they kept warm by wearing shawls of rabbit skin, deer or willow bark. Although they usually went barefoot, for longer treks or over rocky terrain, they sometimes wore sandals made of yucca or agave fibers. They wore and traded necklaces made of shells, stones or seeds.



### How did Kumeyaay ancestors spend some of their free time?

Music, singing and dancing were, and continue to be, a big part of the Kumeyaay tradition. Many songs are passed down from generation to generation. The Kumeyaay used gourd rattles and elderberry flutes as musical instruments. They also played games. One game was like hockey with a ball made from a stuffed animal skin. Children enjoyed playing with dice, hoops, sticks, dolls, and miniature bows and arrows.

### What would Kumeyaay ancestors think about this area now?

The ancient Kumeyaay might not recognize today's San Elijo Lagoon area, with all the highways and houses. They might wonder how people live today. This area's earliest inhabitants appreciated the land and were thankful for the plants, animals, rocks and water it provided. They were able to live here for thousands of years by using nature's resources wisely. Despite all the local changes, today's San Elijo Lagoon is a valuable resource to the many plants and animals that depend upon it and to the people in the community who appreciate it.

## References and Suggested Readings

For more information about the Kumeyaay, look for these references at a local library or online.

### Adult References

Carrico, Richard. 2008. *Strangers in a Stolen Land: Indians in San Diego County from prehistory to the New Deal*. 3rd ed. El Cajon, CA: Sunbelt Publications.

Miskwish, Michael Connolly. 2007. *Kumeyaay: A History Textbook. Volume 1 – Precontact to 1893*. San Diego, CA: Sycuan Press.

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Hoffman, GERALYN MARIE and GAMBLE, LYNN H. 2006. *A Teacher's Guide to Historical and Contemporary Kumeyaay Culture. A Supplemental Resource for Third and Fourth Grade Teachers*. San Diego, CA: San Diego State University. Available online at [www.rohan.sdsu.edu/~irsc/docs/pubs/KumeyaayGuide.pdf](http://www.rohan.sdsu.edu/~irsc/docs/pubs/KumeyaayGuide.pdf)

### Children's Books

Alter, Ruth. 1995. *The Painted Rocks*. Escondido, CA: San Dieguito River Valley Regional Open Space Park Joint Powers Authority.

Lee, Melicent. 1937. *Indians of the Oaks* (1989 reprint ed.). San Diego, CA: San Diego Museum of Man.

# ACTIVITIES

We developed the activities in this packet to support your field trip.

## Pre-Visit

**Activity 1** is designed as a pre-visit activity. We recommend you spend some time familiarizing your students with the plant cards before they visit San Elijo Lagoon because your onsite leader (docent) will show you many of the plants described on the cards.



## Post-Visit

**Activities 2** and **3** are designed as post-visit activities that will help your students review what they learned while at San Elijo Lagoon.

## Teacher's Aid

### Activity Introduction

The Kumeyaay people relied on plants to meet their everyday needs — food, shelter, medicines, clothing and more. The Plant Cards in this packet show some of the plants they used and that can be found throughout the San Elijo Ecological Reserve. Before your visit, we hope you and your students will become familiar with many of the plants you will see during the field trip.

### Time & Materials

- This is a class activity and it should take you and your students about 20 to 30 minutes to complete.
- You will need copies of the Plant Cards (printed back-to-back) starting on page 9: one card for each student or each group of students.

### Instructions to Students *(to be given verbally)*

#### Introduction

I am going to give you a Plant Card. Each card has information about a plant you will see on our field trip to San Elijo Lagoon. All of these are plants that the Kumeyaay people used for making the items that they needed every day. They used plants to make their food, homes, household items and tools, medicines and clothing.

Look at the side of the card with the plant picture. I am going to read you a sentence describing a problem the Kumeyaay might have had. I want each of you to look at your Plant Card to see if your plant is the solution to the problem.

#### Here's an example:

I'm thirsty and need something to drink.

Does anyone have a card with a plant from which I could make a flavored drink?

(Answer: lemonade berry)

#### Wrap Up

Now you know something about the plants that the Kumeyaay people used. During our field trip we will get to see some of the plants and learn more about them.

### Extension

To help students identify the plants during your field trip, you might give each student a Plant Card. On a sheet of paper, ask them to draw the plant and identify on the drawing the plant parts, such as leaves, flowers, fruits, etc.

**Teacher Sheet**

*Read the Problem Sentence and have students respond based on their Plant Cards (see page 9).*

Teacher: Read Problem Sentence	Student: Offer Plant Solution
Ohhh, my stomach hurts.	buckwheat, monkeyflower
Sniff, sniff, I have a cold.	sagebrush, white sage, elderberry
I'm hungry. What's there to eat?	prickly pear, elderberries, toyon berries, cattail, yucca, agave
I need something to store my food in.	spiny rush basket, willow basket
I need a new house.	willow, cottonwood, cattail
I need a new hunting bow.	willow
I need a new skirt and shoes.	willow bark (skirt) and agave fibers (shoes)
My food tastes bland. I need some seasoning to spice it up.	black sage, pickleweed
I have a headache.	willow
Yow. A black widow spider bit me!	dodder
Yikes, the mosquitoes and fleas are bugging me.	sagebrush
I'm thirsty and need something to drink.	lemonade berry (soaked in water)
My hair is dirty and I want to wash it.	yucca root
I'm losing my hair and going bald.	wild cucumber fruit oil
Ouch. I cut myself.	sagebrush, toyon
I stink and need some deodorant.	white sage leaves
Time to brush my teeth.	coyote brush

## Agave (Shaw Agave)

*Agave shawii* subspecies *shawii*

Fuel in fire pits from stalks

Bowstrings, weaving and sandals from plant fibers

Food from roasted tender flower stalks



## Black Sage

*Salvia mellifera*

Food seasoning from leaves

Food from seeds



## Buckwheat (California Buckwheat)

*Eriogonum fasciculatum*

Headache and stomach ache medicine (tea) from leaves

Mouthwash from leaves

Eye medicine (eye wash) from flowers



## Cattail

*Typha* Sp.

Mats and roofing from leaves

Food from young roots and shoots

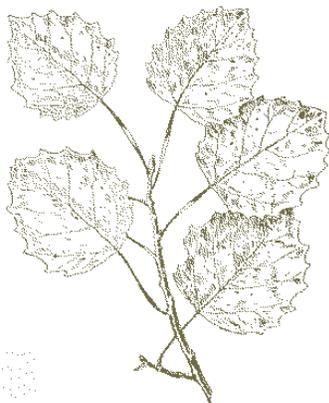
Padding for cradleboards from soft seed heads



## Cottonwood

*Populus fremontii*

Homes from trees



## Coyote Brush

*Baccharis pilularis*

Brooms, brushes and toothbrushes from twigs and branches



## Dodder

*Cuscuta californica*

Black widow spider bite medicine

Scouring pads

Dye from plant chemicals



## Elderberry

*Sambucus mexicana*

Food from berries

Whistles and flutes from twigs and branches

Cold, flu and stomach ache medicine (tea) from flowers



## Black Sage

Kumeyaay used black sage leaves to season food. They also dried, ground and ate plant seeds.

## Agave (Shaw Agave)

The stalks of the agave plant were a favorite fuel in pottery fire pits. The fire would burn hot and evenly. The fibers of the plant were very strong and the Kumeyaay used them for bowstrings, weaving and sandals.

## Cattail

Kumeyaay wove together cattail leaves to make mats and the roofs of their homes. They ate the young roots and shoots. Soft seed heads provided the padding in cradleboards, and served as diapers for babies.

## Buckwheat (California Buckwheat)

From leaves Kumeyaay brewed a strong tea to lessen the pain of headaches and stomach aches. They also made a mouthwash to strengthen gums and teeth. Flower blossoms made a soothing eye wash.

## Coyote Brush

Coyote brush, sometimes called chaparral broom, is a shrub with a rough texture that the Kumeyaay made into brooms, brushes, and even toothbrushes.

## Cottonwood

Kumeyaay used cottonwood trees to build shade structures called ramadas. They made a rectangular frame out of cottonwood and laid brush or willow branches across the top.

## Elderberry

Kumeyaay ate elderberry berries fresh or dried. They used twigs and branches to make whistles and flutes. A tea made from blossoms treated fevers, colds, flu and stomach aches.

## Dodder

Dodder is also called “witch’s hair,” “love vine” and “golden thread.” Kumeyaay discovered that this plant, when growing on buckwheat, could help lessen the pain of black widow spider bites. They also used dodder to make scouring pads and a colorful dye.

## Golden Bush

*Isocoma* sp.

Brooms from dry stalks



## Lemonade Berry

*Rhus integrifolia*

Drink from berries soaked in water



## Monkeyflower (Bush Monkeyflower)

*Mimulus puniceus*

Diarrhea medicine (tea) from flowers, leaves and stems

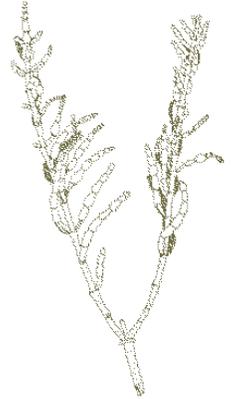


## Pickleweed

*Salicornia* sp.

Salty food seasoning from plant stems

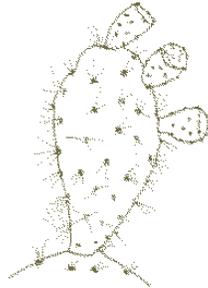
Food (flour) from seeds



## Prickly Pear (Coastal Prickly Pear)

*Opuntia littoralis*

Food from flower buds, fruit and pads



## Sagebrush (Coastal Sagebrush)

*Artemisia californica*

Bug (mosquito and flea) repellent from leaves

Infections and cold medicine (tea) from leaves

Human scent disguise from leaves



## Spiny Rush (Southwestern Spiny Rush)

*Juncus acutus*

Baskets from reeds

Needles from sharp plant tips

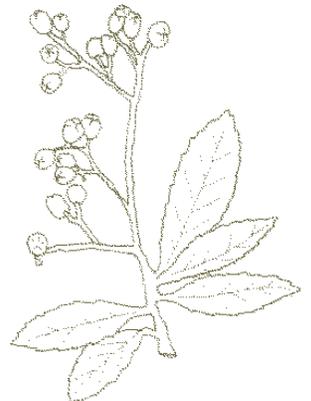


## Toyon

*Heteromeles arbutifolia*

Food from berries

Pain medicine (tea) from leaves and bark



## Lemonade Berry

Lemonade berry bushes produce small pinkish flowers in late winter that turn into sour red berries by late spring. Kumeyaay used the fruit to make a refreshing drink, similar to today's lemonade.

## Golden Bush

Goldenbush can often be seen along trail edges, and has yellow flowers that bloom in late summer. The Kumeyaay used the plant's dry stalks to make brooms.

## Pickleweed

Kumeyaay gathered pickleweed seeds and ground them into flour. The salty tasting plant was a seasoning for food. Pickleweed is the most common plant in the salt marsh.

## Monkeyflower (Bush Monkeyflower)

Monkeyflowers bloom year-round. A tea brewed from the flowers, leaves and stems treated diarrhea.

## Sagebrush (Coastal Sagebrush)

Sagebrush leaves have a strong smell and Kumeyaay use them to keep away mosquitoes and fleas. They brewed tea for medicine. Hunters rubbed leaves on their skin to cover up their human scent while hunting rabbits and deer.

## Prickly Pear (Coastal Prickly Pear)

From the prickly pear, the Kumeyaay carefully harvested the pink buds, juicy red fruits and pads. They ate fresh or cooked plant parts, and also dried and stored them for later.

## Toyon

Toyon, also called Christmas berry, produces red berries in the winter. The berries are a favorite food of birds and other wildlife. The Kumeyaay cooked and ate them, too. They brewed a tea from leaves and bark to make a painkiller.

## Spiny Rush (Southwestern Spiny Rush)

Spiny rush leaves were picked green, dried, split and woven into baskets. The Kumeyaay used the baskets to store food and to carry shellfish from the ocean to their homes. They used the sharp tips of the plant as needles.

## White Sage

*Salvia apiana*

Deodorant from leaves

Cold and cough medicine (tea)  
from young branches

Burning dried leaves during ceremonies



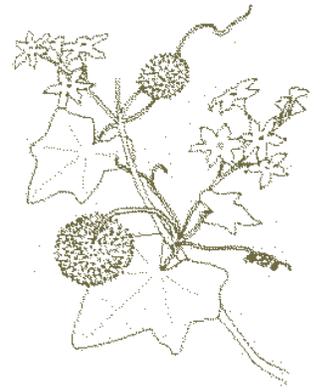
## Wild Cucumber

*Marah macrocarpus*

Necklaces and baby rattles  
from seeds

Baldness medicine from fruit oil

Catching fish with ground root



## Willow (Arroyo Willow)

*Salix lasiolepis*

Hunting bows, house frames and  
baskets from branches

Skirts from soft inner bark

Headache medicine from bark,  
leaves and branches



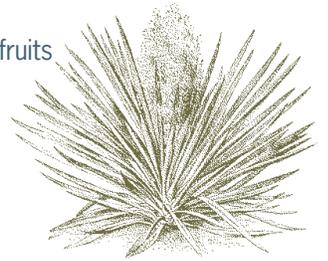
## Yucca (Mojave Yucca)

*Yucca schidigera*

Food from flowers and young fruits

Rope, thread, blankets and  
baskets from leaves' fibers

Soap and shampoo from  
plant roots



## Wild Cucumber

You can't eat the prickly fruits, but the Kumeyaay ate and used the fruit's oil as a cure for baldness. They made wild cucumber seeds into necklaces and baby rattles. They also ground up the root and put it in water to stun fish, which floated to the surface and were easy to catch.

## White Sage

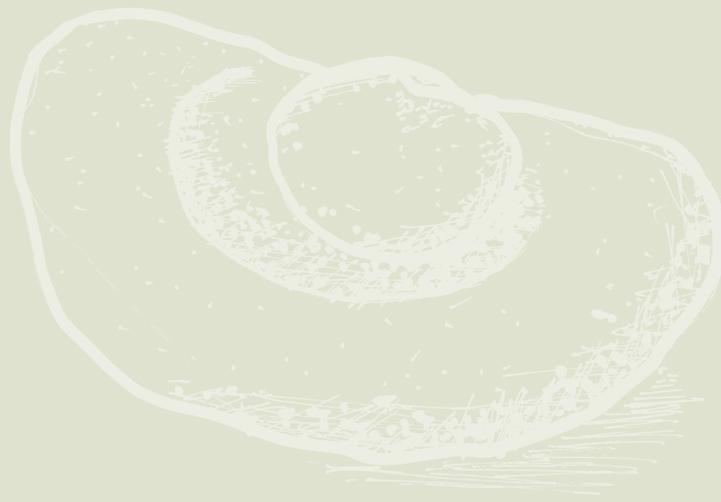
Kumeyaay used crushed fresh white sage leaves as a deodorant. They dried and crumbled young branches to make tea to fight chest colds and coughs. They also burned dried leaves during purification and other ceremonies.

## Yucca (Mojave Yucca)

The Kumeyaay used the tough, stringy fibers curling out of the leaves of a yucca to make rope, thread, horse blankets, sandals and baskets. They used other parts of the plant for soap and shampoo, and also as food.

## Willow (Arroyo Willow)

Kumeyaay made houses and hunting bows from willow branches. Women wore skirts made from bark. Bark, leaves and branches contain an aspirin ingredient (salicin) and was a pain killer. Willow baskets stored acorns and plant chemicals kept out the insects.



## Teacher's Aid

### Activity Introduction

As you learned on the field trip, the Kumeyaay people were able to find almost all of their everyday items for food, clothing, medicine and shelter from natural resources. They survived off the land and were able to do so for many years by using resources wisely.

### Time & Materials

- This activity should take you and your students 20 to 30 minutes to complete.
- Students can work on this individually, in small groups or as a class activity.
- You will need copies of the Student Worksheet for each student or group of students.

### Instructions – Provide students with Student Worksheet (see page 17)

Can you match products that we use today with the plant that the Kumeyaay used? Try to remember what you learned on the field trip. If you get stuck, refer to the Plant Cards. Draw a line from what we use today to the plant that the Kumeyaay used.

#### What we use

1. Salty seasoning
2. Baby rattle
3. Bug spray
4. Diaper
5. Toothbrush
6. Aspirin
7. Lemonade
8. Sandals
9. Flute
10. Deodorant

#### What the Kumeyaay used

- A. Wild cucumber
- B. Cattail
- C. Coyote brush
- D. Willow
- E. Lemonade berry
- F. Agave
- G. Elderberry
- H. Pickleweed
- I. White sage
- J. Sagebrush

**Answer Key:** 1-H; 2-A; 3-J; 4-B; 5-C; 6-D; 7-E; 8-F; 9-G; 10-I

### Extension 1

Ask your students: Can you remember other uses for the plants listed above?

Examples: Yucca was also used for soap and shampoo. Willow was used for clothing (willow skirts), shelter, and bows and arrows. Sagebrush was used to treat colds.

## Extension 2

On a bulletin board, place a sign for each of the main categories of Kumeyaay plant uses: Shelter, Food/Drink, Housewares and Tools, Medicine, Clothing. Have students place their Plant Cards under the category they think their plant matches best.

**Answer Key:** Plants and Kumeyaay Uses

Plant	Shelter	Food or Drink	Housewares & Tools	Medicine	Clothing
Agave					
Black Sage					
Buckwheat					
Cattail					
Cottonwood					
Coyote Brush					
Dodder					
Elderberry					
Golden Bush					
Lemonade Berry					
Monkeyflower					
Pickleweed					
Prickly Pear					
Sagebrush					
Spiny Rush					
Toyon					
White Sage					
Wild Cucumber					
Willow					
Yucca					

## Student Worksheet

### Instructions

Can you match products that we use today with the plant that the Kumeyaay used? Try to remember what you learned on the field trip. If you get stuck, refer to the Plant Cards.

Draw a line from what we use today to the plant that the Kumeyaay used.

### What we use

1. Salty seasoning
2. Baby rattle
3. Bug spray
4. Diaper
5. Toothbrush
6. Aspirin
7. Lemonade
8. Sandals
9. Flute
10. Deodorant

### What the Kumeyaay used

- A. Wild cucumber
- B. Cattail
- C. Coyote brush
- D. Willow
- E. Lemonade berry
- F. Agave
- G. Elderberry
- H. Pickleweed
- I. White sage
- J. Sagebrush



## Teacher's Aid

### Activity Introduction

This is a great review activity for your students. It will also help them compare their lives to the way of life of the Kumeyaay ancestors.

### Time & Materials

- This activity should take you and your students 15 to 20 minutes to complete.
- Students will need pencil or pen and paper to complete this activity, and they can work on this individually.

### Instructions *(to be given orally)*

Think about what you've learned about the Kumeyaay people and how they lived at San Elijo Lagoon. Now draw a picture and write a poem or story about what it would feel like to live like the Kumeyaay used to live. Include your thoughts about living without the everyday items that you take for granted, such as riding in cars or buses, shopping at grocery stores, watching TV or using a computer.

### Extension 1

Have students share their thoughts with the entire class.



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Bring your class on a field trip to the lagoon.  
To learn about the different programs offered  
or to schedule a walk...

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