



Palm Desert/Indian Wells – 47-900 Portola Avenue – Palm Desert, CA 92260
760-346-5694 / Fax 760-568-9685 – www.LivingDesert.org

THE CAHUILLA

Pre- & Post-visit Materials
Second Grade through High School Activities

What Is A Desert?

The Cahuilla People

Get to Know a Tree

Tasting the Desert Making Rain Plants as Symbols Native

Food Recipes Book List

WHAT IS A DESERT?

- A. Low rainfall and uneven distribution: This means that rainy days are more likely to be rainy hours, or in the summer, brief rainy minutes with long periods of dryness. There may be downpours and flooding in one neighborhood, while, a few miles or blocks away the sun shines. An entire year's rainfall may fall in a single storm.

- B. High evaporation rates: When it does rain, the water doesn't hang around for long. If the vegetation doesn't suck it up where it's stored in roots, stems and leaves, the heat of the sun evaporates it. Sometimes within minutes, the ground appears as if no rain fell at all.

- C. Extreme temperatures: Temperatures can be cold enough for snow to form or hot enough to burn your feet on the ground. These temperatures changes can happen literally overnight. During the day the thermometer can rise above 100 F; after the sun goes down, temperatures can chill down to 30 and even lower. Mammals that live in the desert have furry coats. During the day, this may be a problem, so they usually stay underground until nightfall. Their coats protect them against the cold night air.

- D. Strong winds: The changes in pressure from the heating and cooling temperatures as well as few wind-blocking landforms result in strong, dry winds whipping through the desert without much warning. Add sand to the mix and you can have a blinding sandstorm. At times, windblown sand has been so thick and strong that it sanded the paint right off cars driving through it!

WHAT CAUSES A DESERT?

Deserts occur where the sun strikes the earth most directly. If you look on a map or globe, you will see that most of the desert regions are between the latitudes of 15° and 40°. (Latitudes are lines running across the map or around the globe; not up and down – this is easy to remember if you think of latitude as being the rungs of a “ladder”, which sounds very similar. You would use these lines to climb up the map or globe.)

North of the equator is the Tropic of Cancer and to the south is the Tropic of Capricorn. The sun most directly strikes the earth between these tropics.

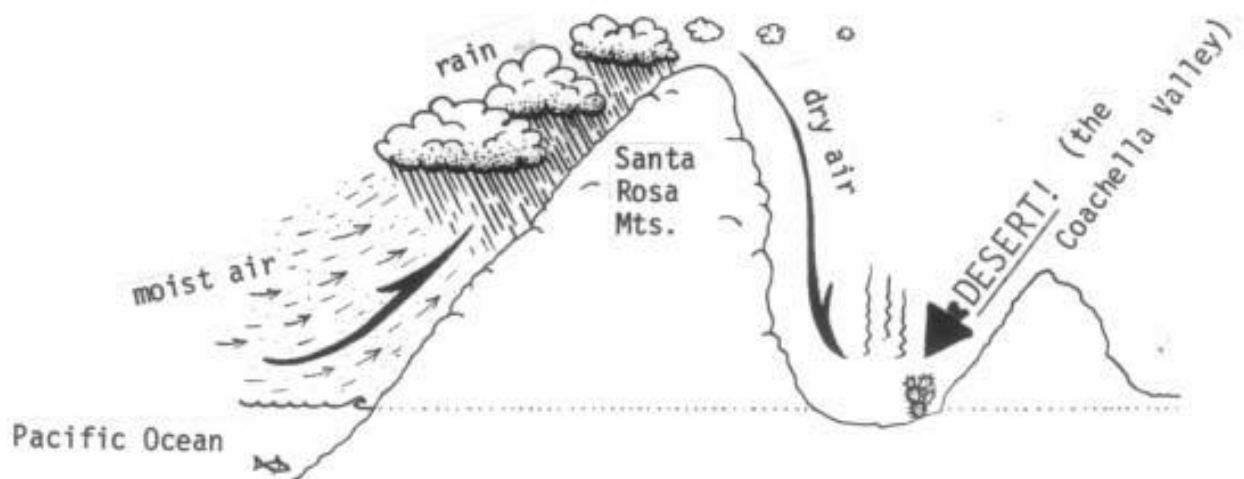
Air circulation also contributes to the creation of a desert. At the equator the air is hot and moist. Hot air can hold moisture, but hot air also rises. As the moisture filled air at the equator heats up, it rises up away from the earth. As it rises it begins to cool, and cool air doesn't hold moisture well. Eventually it has to dump the moisture as rain near the equator. The air is now cooler and dryer than when it started and is about 10 miles above the earth's surface. It begins to move toward the poles. Air in the Tropic of Cancer heads to the North Pole. And air in the Tropic of Capricorn moves toward the South Pole. Cool air is heavier and denser than warm air. As the air moves to the poles it continues to cool. The heavier denser cool air sinks around 30° latitude. This increase in pressure from compression reheats the air and evaporates any remaining moisture before the air reaches the earth's surface. It is in this region, where there is a combination of high pressure and descending hot dry air, that we find deserts.

Deserts are sometimes caused by a combination of landforms, location on a continent and localized weather patterns.

Continental deserts are formed when an area of land is just too far inland to receive any water. The Gobi desert in Asia is an example of a continental desert.

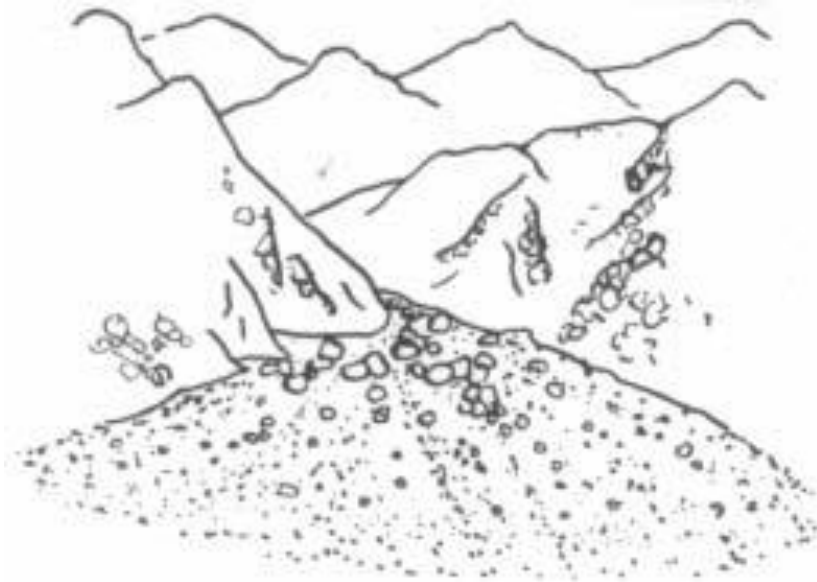
Fog deserts are areas that are almost completely rainless, but they are covered in fog. This happens when there is a combination of hot dry air above the land, moist warm air coming in from the sea and cooler currents flowing from the poles. The moist air from the seas and cooler currents from the poles cross. Because of high pressure in these areas, the moist air can't rise to form clouds and rain. Instead, it condenses into fog. Three examples of fog deserts are the Namib in southwest Africa, the Atacama in Peru and the Vizcaino Desert region of the Pacific Coast of Baja California.

Rain Shadow deserts are formed when moisture-carrying air is blocked by tall and wide landforms like mountain ranges. When moist air moves from the ocean inland, it may run into a mountain range. In order for the air to get through, it has to rise over the range. As it does it cools and condensation forms, releasing moisture in the form of rain or snow on the windward side (the side of the mountain the wind is blowing into). When the moisture is released, the drier air rises over the range. On the other side of the mountains, called the lee or inland side, the air descends. As it does, the air compresses and pushes the heat down into the valley. This hot, dry air not only has no moisture to give to the valley, but it evaporates most of the moisture that is already there. This leaves the valley hot and dry, creating a desert condition. Because the rain is dropped on the other side of the mountains, we say that these deserts are in the shadow of the rain. Our desert is a rain shadow desert. The San Jacinto Mountains (10,000ft.+) to the west block most of the rain, while some is blocked by the Santa Rosa Mountains to the south.



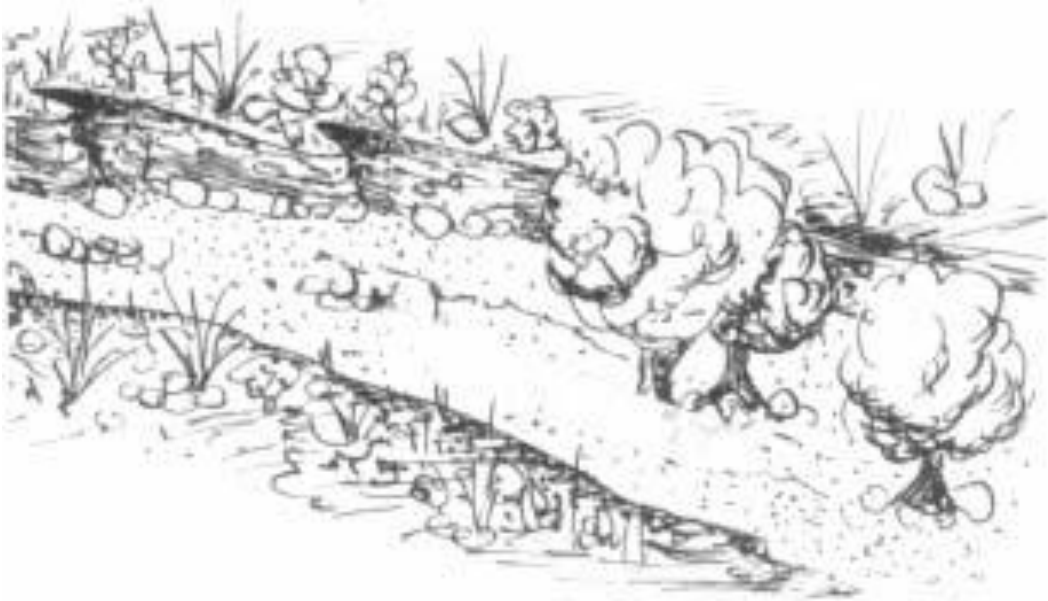
DESERT LANDFORMS

The extreme weather of the desert creates extreme habitats. Wind and water are two major influences. The desert is sometimes described as a land without water. But if everything needs water to live and there are a lot of things that live in the desert- where is the water? When you walk in the desert, look around; you will see signs of water everywhere in the landforms and life forms that live there.



Alluvial fans are created when floodwaters rush out of a canyon or mountain range onto a flat, open plain. All the water and debris that was contained by the sides of the canyon gets dumped out and spreads to form what looks like a fan. When the water absorbs into the ground or evaporates into the air, it leaves behind all the rocks and debris it carried down the canyon or mountain. When you look at an alluvial fan you will see the larger, heavier debris sitting right near the canyon exit or the narrow end of the fan, and the lighter material farther out on the edge, or wide end of the fan. The power and strength of the water is reduced as it spreads out. It drops the heavier items first, so they remain near the exit of the canyon. The water carries the lighter items as long as possible but Bajadas are formed when several alluvial fans join together. Canyons can have several exits, and water can escape from any of them. After several floods, the alluvial fans can overlap. More than one alluvial fan joined together is called a bajada. Bajada means slope in Spanish and is pronounced ba-HAH-da.

Washes are formed when the water coming out of a canyon or mountainside continues across the desert flats. This water can be forced up to the surface to form fresh water springs. If you look out in our desert you can identify springs by locating palm trees on mountain slopes. Palms like to have their feet in water, so they will only grow where water is close to or on the surface. When water is evaporated off the surface, salt can be leached out and may sit on the surface, creating large salt flats.



In some cases it is wind, not water that is most influential in creating landforms. Wind is responsible for the shifting of sand that creates sand dunes.

WHO LIVES IN THE DESERT?

Animals that live in the desert have adapted or changed over time to adjust to this environment. Through both behavioral and physical adaptations, these creatures have managed to survive and thrive in this ecosystem.



Nocturnal/ Diurnal: Many desert animals sleep during the heat of the day and are active at night, when it cools down. This behavior is called nocturnal. Diurnal creatures are active during the day and sleep at night. To avoid the heat, these animals may retreat to shady spots or go underground during the hottest times of the days.

Hibernation/ Aestivation: In late summer, most plants and water sources become scarce as the sun heats up the desert to over 100°F. To cope with the heat, some animals go into a deep sleep called aestivation. Those who have difficulty coping with extreme cold temperatures practice hibernation in the winter.

Animals that live in the desert may have specialized internal organs, like oversized bladders, to store liquids for long periods of time. The desert tortoise has a large bladder, which acts like a water storage tank. Animals, like the kangaroo rat, are so specialized and have so many adaptations that they may never need to drink water. They get all their moisture from seeds.

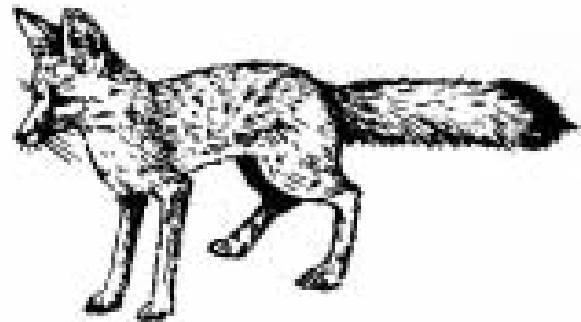
Desert animals are often sandy colored to blend in with the desert soils. They tend to be thinner and have longer extremities, which makes it easier to eliminate excess body heat. The short, stockier bodies of northern mammals help retain body heat in cold winter weather. Comparing arctic and kit foxes, you can see the difference between the small, lanky kit fox of the desert and the stout, compact arctic fox.

What about our Desert?

There are four North American desert regions. The region farthest north is the Great Basin region. It is much colder than our desert and is covered in snow for part of the year. The region farthest east and farthest south is the Chihuahuan desert region, which includes Big Bend National Park. This desert has the highest amount of species diversity of any of the desert regions and is the youngest, only forming within the last 10,000 years.

Just above our desert is the Mohave Desert, which includes Joshua Tree National Park and Death Valley. The Mohave is mostly (with the exception of Death Valley) a high desert and is cooler and moister than our desert. Our desert is the Colorado Desert, a subdivision of the much larger Sonoran desert. The Sonoran reaches from southern California into Arizona and northern and western Mexico. (See map)

Our portion of the Sonoran desert is very hot and dry. It includes the Salton Sink, which is 227 feet below sea level and is bordered on the west by Mt. San Jacinto, which is over 10,000 feet high. We typically get less than 4 inches of rain a year. In the winter we get longer soaking rains; in the summer, brief afternoon thunderstorms are more likely.



THE CAHUILLA PEOPLE

The People

The word Cahuilla probably means master or ruling one. This refers to mental, moral and spiritual strength or strength of character rather than physical strength. The Cahuilla people are not a past culture; they are an important part of today's desert community. Their lifestyles have changed due to European influences, but early Cahuilla life and language are well documented.

Traditionally, members of the clan have worked for the good of the whole. Since they believe that all things have a place interwoven in nature, they do not view themselves as the top of a pyramidal food chain. They are one link in an endless circle of life. Rather than control nature, Cahuilla feel an obligation to respect all life around them, to value what they have and use materials efficiently.

Knowing their Environment

Living in an unpredictable environment, the Cahuilla had to develop an intimate relationship with the natural world. They had to know every seasonal and transitional cycle of the plants and animals. The cycles changed from year to year as weather patterns changed. It was not a matter of following a monthly list of activities; they needed to be able to recognize subtle changes in plant and animal life and respond to these changes. Plant development that sometimes occurred in March might occur in April or May; and in some years, not at all. Learning how to recognize these patterns meant the difference between having enough food for the year and going hungry.

Most of the Cahuilla's daily life focused on food gathering, hunting, preparing or storing. Each individual had a responsibility that contributed to the survival of the whole community. Boys and elderly men were usually responsible for the hunting of small game like quail, rabbits, squirrels and lizards; insects like grubs, cicadas and bees, and the collection of honey. Boys learned from the elders how to stalk and hunt successfully, and eventually they would join the men in hunting large game. Women and girls were responsible for the collection of most plant materials. Exceptions were the collection of acorns, pinyon and agave, in which the men participated. Plant preparation and use required skill and knowledge that took years to develop.

Collecting and storing food from different plant communities were especially important. Food supplies varied at different elevations during different times of the year. After a heavy rain season in the spring, food at lower elevations might be plentiful, but by summer, several weeks of high heat might deplete these supplies. Storing the plentiful food of spring and moving collection efforts to higher elevations, where food supplies were still available, allowed the Cahuilla to get through each season.

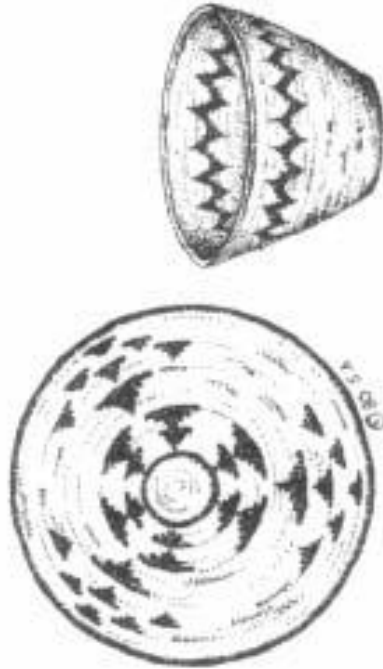
Sharing for Survival

Some plants and animals live only in specialized habitats within the larger desert. Different tribes had their own food gathering areas and became skilled at collecting, harvesting and hunting specific game. Trading between the people helped ensure a balance of materials for all and reduce the need for defensive control of live in relative peace.



Tools for Survival

Tools were generally made by the people who used them. In most cases, women made baskets, ollas (clay carriers) and tools for gathering, preparing foods and making clothing. Men made tools for hunting, homebuilding and ceremonies. Sometimes these lines crossed, as men were involved in gathering and weaving when projects required great strength.



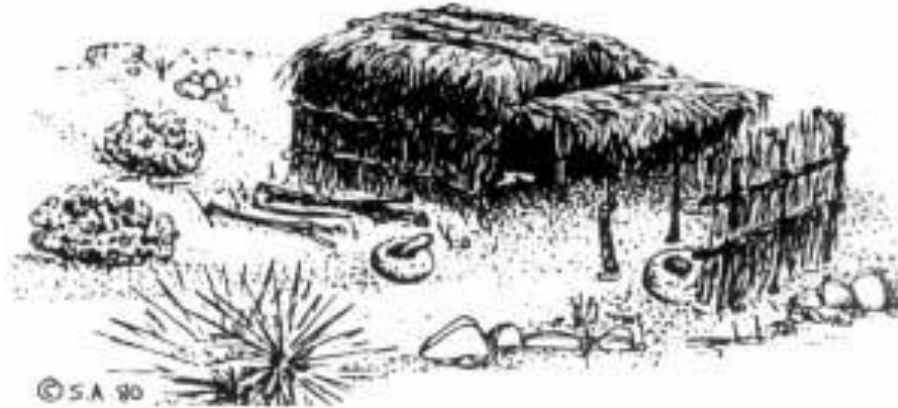
Women's Tools:

Ollas (made from coiling clay found in nearby areas) were often used for holding liquids and left plain or simply decorated. Baskets (made from tight coiling or twining methods using reeds and grasses) were designed in four main styles: flat, for a tray; shallow for holding seeds; deep with a support strap or net, for holding larger loads; and globular, for storing tools or trinkets. Grinding stones or mortars (made from bedrock or smaller stones with a bowl shape) were used for processing pods into meal. The process used a pestle (made from the same material as the grinding stone) or a rounded rock used in a pounding motion. A metate (made from a thin, flat slab of rock) was used with a mano (rounded rock with a flat bottom) to continue to process the meal into a finer flour texture. The mano was rubbed back and forth across the metate, grinding down the meal.

Men's Tools: the granary (made from tough stems and arrowweed woven into a 3- to 6- foot wide basket with a bird's nest design) was one weaving tool used by men because of the strength required to use the materials. Bows (made from mesquite or desert willow and agave fibers) were usually 3.5 to 4 feet long and used with arrows (made from a straight stalk of arrowweed). Carrying bags (made from animal skins) were used to carry extra arrows. The throwing stick (carved from a red shank, ribbonwood or other hardwood) was used for hitting small game. A club (made from cottonwood), also called a potato masher, could be used to strike an opponent when necessary. Men made building structures (homes and sweat houses), the tools to construct them and ceremonial tools- little is known about exactly what ceremonial tools were used.

Ritual and Play

Though much time was spent collecting materials and foods for survival, ritual and play were important elements of the Cahuilla life. Ritual was part of all activities and instilled a respect for the environment and all living things. Play was most common during the winter months when there was little collection activity.



String games resembling cat's cradle were not only popular but were used as part of divination and other ritualistic activities. Extremely complex patterns were designed, and it was believed that they had to remember these to gain entrance into the spirit world.

Bathing and bodily cleanliness were very important to the Cahuilla and a time for fun and ritual. When a boy in the village spotted a new moon, he would call the other boys to the pool for a swim and good luck. Another ritual involved the women of the tribe racing to the pool just before dawn when the moon was at a certain point in the sky, while the reflection of the moon remained on the water.

Lessons

There are many lessons we learn from the Cahuilla people that can be used in the classroom and in our daily life:

- *Wise use of resources and the reduction of waste materials
- *Teamwork to ensure not only the comfort of a community but its survival
- *Importance of personal responsibility to the entire natural community, which includes all living things
- *Benefits of acute environmental awareness and a close relationship with the environment
- *Importance of sharing and preserving resources for today and the future



GET TO KNOW A TREE

(All Grade Levels)

INTRODUCTION

To the Cahuilla, trees and plants were not viewed just as objects that could be used. They were living beings.

At School

1. Take a walk around the school grounds and stop at one or more trees. Ask the students what they notice about the tree. Does it have any defining marks? What makes it different from the other trees?
2. Explain to the class that you are going to play a game that uses similes. For example: "A tree is like a confidant; I can tell it anything and it will never repeat it." Or "A tree is like a true friend; whenever I need it, it is always waiting for me to visit." Discuss how similes are used to compare different objects in order to clarify a feeling. You can also use metaphors.
3. Explain to students that now they need to find their own tree. They will select a tree that they will be observing for a certain length of time-as a yearlong or monthly project.
4. The tree observations should expand as they go on. For the first observation students should take paper, a pencil and coloring supplies to draw their tree. They should pay attention to the characteristics of their tree: scars, broken branches, odd formations and signs of life such as insect holes or bird nests.

5. Based on the drawing, have students write about their tree (can be done in or outside). They should first write down what they see, the scars, coloration, etc. Then expand that with creative writing. They can create a story explaining how that tree might have received its markings. Who lives in the nest in its branches? How did it get there and how does it like living where it is? What is the most remarkable thing they noticed about their tree?
6. Each time the students return to the trees, have them observe the tree in a new way. Use simile or metaphor to guide the students. For example: Give them a simile or metaphor to work with each time they go out. Here are some suggestions:
 - My tree is (like) a protector. ...
 - My tree is (like) a confidant. ...
 - My tree is (like) a friend. ...
 - My tree is (like) a wild animal. ...
 - My tree is (like) a castle. ...
7. Have students compare the tree with themselves. How are they like their tree? Why did they pick their tree? What made it stand out from the others? Write a story giving the tree a viewpoint. What stories might their tree tell? Look at the tree and decide what kind of personality it would have. Describe the tree as if you were describing a friend.
8. As the project progresses, have the class read books about trees. (See enclosed Resource List.) Remind students about the connection between the Cahuilla and their environment. (See Introduction and Cahuilla Fact Sheet.) Every life form was significant. They came to know the plants and animals as they knew the human members of their community.
9. At the end of the year or project period, have students review their journals. How did they feel about their tree before they started? Did their feeling toward that tree change as the project progressed? Will they look forward to seeing it next year when they come back to school? Will they think about it and wonder how it is doing when they are gone? How would they feel if they came back next year and found that their tree was gone? Did getting to know their tree change the way they will look at other trees and plants? Do the students feel this type of activity is an important form of learning? Why?

AT THE LIVING DESERT

Have students notice the trees on grounds. Are there any trees that stand out? Do they see trees that are particularly attractive to them? Notice some of the important trees in our desert:

Suggested trees:

***Palo Verde:** or "green stick": This tree's green bark makes it easy to spot all over the grounds.

***Screw-bean mesquite:** It is found in the Ethno-botanical Garden or Cahuilla Garden. Depending on the season, it may have spiral pods. Its seeds and pods with their high protein content were a staple of the Cahuilla People.

***Desert willow:** This tree, though not really a willow, resembles the weeping willow with long branches and leaves that canopy up and back to the ground. It can be seen in the Wortz Garden and elsewhere on grounds.

***Smoke Tree:** If viewed from above, it looks like a puff of smoke in the desert. A resident of our wash, the gray, smoky colored foliage is dotted with deep purple blossoms in the summer.

TASTING THE DESERT

(All Grade Levels)

INTRODUCTION

The desert provided everything to the Cahuilla, including food. Since the early Cahuilla days, immigrants and visitors have come to the desert and learned to use its resources for a number of things. Often we aren't aware of the importance of a resource until it is gone. In this activity, students will sample foods derived directly" from desert plants. On the resource list, there are desert recipe books to sample for further reading and eating!

OBJECTIVES

1. Practice volume measurements
2. Determine the best way of sharing ingredients between different groups
3. Determine the amount of a recipe needed to feed the entire group

MATERIALS

- Enclosed recipe list
- Enclosed kitchen supply list
- Cahuilla Information Packet

DIRECTIONS –

1. Divide students into small groups.
2. Give each group a different recipe (All will be shared at the end)
3. Discuss with your students from where food comes. Prior to arriving at our table, and even before it arrives at the grocery store, where does it originate? Discuss the processes used to create foods we eat. From what are the foods made? Are they made from animals or plants? If they are made from plants, from what parts of the plant do they come? Are they leaves, seeds, fruits or flowers that make the food we eat?
4. Set up all the food in a central location. Label this "THE SOURCE."

5. Pass out the recipe lists to each group.
6. Each group takes a turn at THE SOURCE, collecting their ingredients and selecting the measuring and kitchen supplies they will need.
7. Each group has to problem-solve how many people each recipe will feed and decide if they need to increase the ingredients.
8. Have students work in small groups with one adult supervisor assigned to each group.
9. Students do all the preparation with adult help where needed.
10. Students clean all the dishes and cooking surfaces when completed.
11. Have a tasting party! During this time discuss why it was important to share ingredients and how easy it was to increase measurements. Relate these issues to the Cahuilla people and their responsibilities to their community. Did each student have a task in pre-paring the food? What would happen if one of those students didn't do their job? How well did the group cooperate?



MAKING RAIN

(Lower Elementary)

INTRODUCTION

Rain in the desert is a remarkable thing to see and hear. It is infrequent; yet can come to us with such power, it can be awe-inspiring. From sporadic drops that dry up almost before they touch the sand to torrential downpours that rush into waiting washes, it seems that almost everything stops to watch, because it may be a long time before the rain visits again. In this group activity, students will enjoy making their own rain whenever they want it.

OBJECTIVES

1. Pay close attention to the actions of the teacher.
2. Practice following instructions.
3. Practice group cooperation.

MATERIALS

What is Desert? Information Packet
Students will use their hands and feet.

DIRECTIONS

At School:

1. Begin by talking to students about water in the desert. (See, what is Desert? Information sheet.) How does water get to the desert? Why is it so important for plants, animals and people to store water? How often does it rain? What happens when it rains for a long time in the desert?
2. Have students stand or sit in desks. Standing is more effective.
3. Tell the students that they are going to make it rain. Explain that this is a very important activity and requires that they pay close attention to everything you do. Tell the students that they need to mimic your actions, BUT they are not to do any of your actions until you look at them or you are right in front of them.

4. Start on one side of the room and move back and forth, doing each of the following actions. As you get in front of each student or row of students they should copy your action and continue to copy your action until you pass again to change it. (This will allow for a gradual change in the sounds you will create.)

ACTION LIST

1. Put your finger to your mouth as a signal to be very quiet. Walk across the room and look at each student to be sure he or she IS quiet.
2. Rub your hands back and forth. Walk across the room. One by one the rows of students should copy you.
3. Snap your fingers. Walk across the room. One by one the students should change from rubbing hands to snapping fingers.
4. Slap your hands on the sides of your legs. Walk across the room. The students again change to what you are doing as you get in front of them.
5. Stomp your feet. Walk across the room. Students again gradually change the sound by, copying your actions.
6. Reverse the actions. Stomp feet, slap thighs, snap fingers and rub hands. You can make the rain build and die and build by going up and down the list of actions. As long as the change is gradual, it will sound like a rainstorm building and fading until it dies out all together.

AT THE LIVING DESERT:

Look for the topography map across from the Upper Colorado Desert Garden. It is directly, in front of the site of our new Tennity Wildlife Hospital and Conversation Center. Using a water bottle or spray bottle; pour water over the mountain ranges on the map. How does the water get to the desert floor? Where does the water eventually go? Have students make the rain sounds they learned as you pour the water over the map.

PLANTS AS SYMBOLS

(Upper Elementary to High School)

INTRODUCTION

Native American cultures like the Cahuilla held different views of plants from the immigrant cultures that moved into the desert in later years. Modern views of plants are different as well. In this activity you will research the modern day view of plants. What do they symbolize to people today? Using modern publications such as magazines, encyclopedias, garden guides and newspapers, students will search for symbolism in modern views of plants.

OBJECTIVE

1. Explore different cultural views toward plants.
2. Understand how we use symbols to create atmosphere or send a message.

MATERIALS

- ***Publications**-try to get as wide a variety as possible.
- ***Magazines**-fashion, hobby, travel, home {Don't forget magazines in other languages don't worry about understanding the text; what can you tell from the use of plants in pictures?}
- ***Encyclopedias**
- ***Fiction books** (Look at the covers.)
- ***Atlases** Gardening journals
- ***Pictures** of signs or billboards
- ***Cardboard**
- ***Glue**
- ***Scissors**
- ***Pens or pencils**
- ***Writing paper**

DIRECTIONS

1. Those of native cultures or early immigrant cultures? What messages do plants convey when used in advertising or in art to create a mood? What was the most effective use of plants that the students found? What can we learn about our culture by reviewing modern use of plants as symbols?
2. To accompany their report, have students create their own collage using one of the following themes: How plants are used in modern advertising

3. My symbolic plants: Students can use pictures and words cut from magazines to create their own collage.

AT THE LIVING DESERT

As you walk through The Living Desert look at the plants in the gardens and in the exhibits. How are plants used at The Living Desert to send messages or create atmosphere? What do you notice about the different types of gardens? How effective are these gardens as teaching tools?

MESQUITE CORNBREAD

Ingredients:

¾ cup Cornmeal
½ t Salt
¾ cup Flour
1 cup Buttermilk or yogurt
½ cup Mesquite Meal
1 Egg
2 t Baking powder
3 T Maple syrup or honey
½ t Baking Soda
3T Oil

Instructions:

1. Preheat oven to 350° F.
2. Combine dry ingredients in medium bowl.
3. Combine wet ingredients and stir into dry ingredients just until combined.
4. Spread into greased 8" x 8" pan or muffin tins.
5. Bake 20-25 minutes.

Kitchen Supplies: Optional ingredients: Measuring cups: ½cup, ¾ cup, 1 Tablespoon, 1 cup fresh or frozen corn 1 teaspoon, ½teaspoon. 3T minced onion Stirring spoons, rubber spatula. ¾ cup grated jack cheese Oven. 1T chipotle flakes Medium bowl. ¾ cup chia seed Small bowl 8" x 8" pan or 12-muffin tin

Makes 12 muffins

DATE ICE CREAM

Ingredients:

2 Eggs
2 cups Cream
2/3 cup Sugar
2 t Vanilla
1³/₄ cups Milk
1 cup Dates,
Chopped & mashed

Instructions:

1. Beat eggs and sugar with an electric mixer or blender until thick and cream colored.
2. Add milk, cream and vanilla.
3. Mix well.
4. Pour into ice cream maker.
5. Add dates and turn on electric ice cream maker or begin to hand crank (Follow manufacturer instructions.)

Kitchen Supplies: Measuring cups: 1 cup, ³/₄cup, 2/3cup, and 1 teaspoon Blender or electric mixer and bowl Rubber Spatula Knife to chop dates or food processor Ice cream maker, electric or hand crank

Makes 1/2 gallon

PRICKLY PEAR FINGER FOOD

Ingredients:

3 cups Prickly pear,
Grated or chopped ½ cup Parmesan
½ cup Onion chopped
2 cloves Garlic, minced
1/3 cup Bacon bits (optional)
4 Eggs
¾ cup Baking
Mix to taste Salt and pepper
¼ cup Mesquite meal
½ cup Oil

Instructions:

1. Preheat oven to 350°F.
2. In a large bowl, beat eggs and blend in all ingredients.
3. Pour into a 7" x 11" baking dish.
4. Bake for 25 minutes until lightly browned.
5. Cool and cut into strips.
6. Makes approximately 25 pieces.

Kitchen supplies: Measuring cups: 1 cup, ½ cup, ¼ cup, 1/3 Cup Mixing spoons, rubber spatula Hand-held grater or food processor Oven Large mixing bowl 7" x 11" baking dish

Feeds approximately 18

BLUE CORN PANCAKES

Ingredients:

1 cup Blue cornmeal
½ cup Milk
1 t Salt
2 T Melted butter or applesauce
2-4T Mesquite meal
½ cup Flour
¼ cup Boiling water
2 t Baking powder
1 Egg

Instructions:

1. Blend cornmeal, salt and mesquite meal.
2. Add boiling water and let stand five to ten minutes.
3. Beat egg, milk and butter (or applesauce).
4. Add to cornmeal mix.
5. Add sifted flour and baking powder; blend swiftly into mix.
6. Cook on hot griddle.

Kitchen supplies: Measuring cups: 1 cup, 1½cup, ¼cup, 1 Tablespoon, 1 teaspoon
Whisk, mixing spoons, rubber spatula, pancake turner Large mixing bowl for dry ingredients
Saucepan, stove or microwave and microwavable dish to boil water
Small or medium bowl for wet ingredients Griddle or other surface for cooking pancakes

Makes 5-10 pancakes