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# WESTWARD EXPANSION

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In addition to Native American habitation, explorers, miners, cattle ranchers, and homesteaders have shaped the Mojave Desert. Iron work from abandoned wagons, dirt roads, pieces of mining equipment, mine shafts, dams, reservoirs, and remains of early homes dot the desert as reminders of past inhabitants.



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## Early Explorers

**L**ong before the Spanish and travelers from the American colonies arrived, a trade trail stretched across the Mojave Desert. The trail, blazed by the Mohave Indians, allowed trade with west coast Native Americans. It crossed the desert along the bed of the Mojave River, then climbed over the Cajon Pass, one of the best passes from the California desert to the coast.

In 1776, while the American colonies were winning their independence from England, Father Francisco Garcés, a Spanish priest, was exploring the Mojave Desert. Using the Mohave Indian Trail, he walked across the desert with Native American guides, arriving at the San Gabriel Mission. In 1826 Jedediah Smith became the first American explorer to

reach California via this trail. He was a fur trapper looking for new hunting areas, as were many to follow, and was also one of the first to travel through Death Valley. The Mormons came west in 1846, and later in 1855 Brigham Young established the Las Vegas Mission. According to legend, early Mormons named the Joshua tree. In the often-strange silhouettes of branches, they saw the outstretched arms of the biblical prophet Joshua leading them westward.

When the war with Mexico ended in 1847, California passed into American hands. The next year gold was discovered, and gold seekers crossed the Mojave Desert on their way north. In 1849, a group of emigrants known as the Bennet-Arcane party passed through Death Valley looking for a shortcut to the California gold fields. The shortcut cost

them their wagons, oxen, and almost their lives. Because of this experience, a departing member of the party waved and said, “Good-bye, Death Valley,” giving the area its name.

The push for commercial trade between California and other young western states caused the development of other routes. The Old Spanish Trail took a circuitous route from Santa Fe, New Mexico, through Utah and on to the Los Angeles basin. It followed a route through the Mojave Desert that today is Interstate 15.

Later, in the 1850s, more direct routes were surveyed and improved by François X. Aubry and Edward Fitzgerald Beale. Besides the need for passable wagon routes, there was a strong drive to establish a railroad reaching from the Atlantic to the Pacific. The huge land acquisitions resulting from the Mexican War, along with the discovery of gold in California and its admission as a state, made such a railroad a necessity to keep the distant parts of the Union connected. The most direct route established to Los Angeles became known as the 35th Parallel Route or Beale’s Wagon Road. The route this trail followed through the Mojave Desert eventually became the site of the Santa Fe Railroad and Interstate 40.

Beale’s Wagon Road opened in 1858. During the first summer, five emigrant trains attempted the trail. Mohave Indians attacked the trains, killing many people. At the same time, a postal route was established over the 35th Parallel Route from Kansas City, Missouri, to Stockton, California. When the first mail arrived in Stockton, it was reported that the Mohaves attacked the carriers. Because of these incidents and others, Major William Hoffman led the “Colorado Expedition” against the Mohaves in early 1859. The Mohaves surrendered to Major Hoffman, and Fort Mojave and the Fort Mojave Indian Reservation were



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established on the Colorado River at the east (Arizona) side of Beale's original crossing point.

In the late 1800s steam-powered boats, similar to Mississippi river boats, traveled the sixty miles up from the mouth of the Colorado River. These boats, carrying both cargo and passengers, were pulled through the canyon using winches and cables strung through ring bolts in the canyon wall. Originally, these steamboats were to supply Fort Mojave. However, when it was discovered they were incapable of the task, another route had to be found.

Using government teams with civilian teamsters, wagon masters, and herders, the Mohave Indian Trail became a wagon road. Supplies could then be brought overland from Los Angeles. Emigrants rarely used the road, but prospectors and frontiersmen did provide traffic for the road and a purpose for Fort Mojave. When Prescott became the capital of Arizona, a new road was opened from there to Fort Mojave. Prescott was also supplied through California, so the Mojave Road became an important route for twenty years, until the opening of the railroad.

## Dreams Of Wealth

**M**ining in all areas of the desert created boom towns with colorful names and characters. On Christmas Day, 1860, the first producing mine in Death Valley was opened. The mine was named Christmas Gift. The mining boom in Death Valley began with Panamint City and continued with Chloride City, Keane Wonder, Bullfrog, Rhyolite, Greenwater, Harrisburg, Skidoo, and Ashford Mill. Borax, "the white gold of the desert," was discovered and has been mined profitably in the Death Valley area since the 1880s.

Mining in what is today the Mojave National Preserve began in the

Providence Mountains region. The Rock Springs Silver District began operating in 1863. This area later became known as the Macedonia Mining District. These mines were abandoned in 1866 due to a combination of Native American objections and isolation. During the 1870s, the Clark Mountain Mining District was established and with it the town of Ivanpah. This was the only community of any size within the eastern Mojave Desert.

Red Rock Canyon's Sandstone Quarry produced sandstone for buildings in San Francisco and Los Angeles. Gold was discovered in Eldorado Canyon in the late 1800s. This single mine produced \$1,700,000 worth of gold. In 1865 the first mining claim was filed in what is today Joshua Tree National Park. It was for the Jeff Davis Mine in Rattlesnake Canyon.

Small prospectors in the Mojave Desert made very little money. It was "boom-or-bust" mining. As soon as a strike played out, miners moved on, leaving ghost towns behind.

The biggest problem preventing profitable mining, even by organized companies, was the cost of transportation. The coming of the Santa Fe Railroad changed everything. Along the railroad line, water and other supplies were available to facilitate the exploitation of the desert. In the years 1900 – 1919, when rail transportation was fully developed, more mines were open and profitable than at any previous time. Towns such as Ivanpah, Cima, Kelso, Goffs, Fenner, and Essex owe their creation to the railroad.

Demand increased for copper, lead, zinc, gold, and silver. During World War I, demand also increased for chromium, manganese, tungsten, and vanadium. Mining slowed down after the end of the war. However, with World War II came another increase in demand for base metals; mines were reopened for the duration of that war. Today, most mining

is for gold and non-metals, such as clay and talc.

## The Coming Of Cattle

**C**attle ranchers in other areas probably heard rumors of fine pastures in the high desert from miners traveling through. The high desert then had adequate rainfall to provide good browse in the winter and fall. The first attempts at cattle raising took place in the early 1860s — stockmen grazed cattle in the high desert in the winter and along the river or wash bottoms in the summer. These ranches provided cattle, hay, and food for local miners. A decrease in rainfall and restrictions set after the establishment of some park areas have brought the cattle industry to an end in many areas of the Mojave Desert.

## Land For Free

**S**tarting in the early 1900s, land was homesteaded in the Mojave Desert. In many areas 160-acre parcels were available. Claimants had three years to "prove up" on their property. "Proving up" meant building a small cabin and an outhouse. When the "proof," a photo was mailed to Washington, D.C., the claimant received a deed to the property.

There were several wet years beginning in 1912, and crops were good enough to attract more people to the area. Veterans of World War I, suffering the effects of mustard gas, came hoping to benefit from the dry desert air. Later, because of hard times created by the Depression, some people sought out a rural lifestyle where they could raise their own food without relying on unstable markets and unpredictable prices.

But the rains didn't last. The scarcity

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of water led to conflicts between homesteaders and ranchers over water rights. In the Mojave National Preserve the Rock Springs Land and Cattle Company had enjoyed exclusive use of the water and the land for the last fifteen years and had filed claims on them. Homesteaders drilled water wells, but were unsuccessful. In many cases, water had to be hauled several miles even for household purposes. Crops depended on rainfall. Several years passed with little or no rainfall and the crops failed.

This scenario was repeated in many areas. Besides the scarcity of water, life in the desert presented other challenges. Temperatures were extreme for those used to more temperate climates. Few homesteaders met the challenge. Many farms and small homesteads were abandoned, leaving behind the tiny cabins which still litter the desert in some places.

## The Real Gold

**H**oover Dam, which was completed in 1935, created Lake Mead. It took five thousand men, working day and night, five years to complete construction of the dam. Davis Dam was completed in 1953, downstream from Hoover Dam, and controls the flow of water from Lake Mohave.

Today over twenty million people can prosper in the area, thanks to the availability of the real gold — water. The area's future depends on the wise use of this limited resource.

### Activity 1 Water Conflicts

**OBJECTIVES:** Describe circumstances in which interests may conflict in land and water rights. Evaluate points of view which may arise under such circumstances.

**MATERIALS:** A room arranged as a courtroom.

**SUBJECTS:** Drama, social studies.

**SKILLS:** Analysis, application, discussion, evaluation, inference, listening, problem solving, public speaking, research.

**METHOD:** Students participate in a role-playing activity. In the early twentieth century there were many conflicts between ranchers and homesteaders, particularly over water rights. The main purpose of this exercise is to provide students with the opportunity to look at various points of view in a land use issue.

**1.** Set up a role-playing situation in which students become:

- cattle ranchers
- homesteaders
- jury (twelve members)
- judge
- two lawyers
- witnesses (as many as needed — identify characters and perspectives which would be useful)

**2.** Provide students with background information: The year is 1910. The cattle companies have had exclusive use of the water and land for the last fifteen years. The companies' claims are now up for renewal. The United States government has set aside parcels of land for homesteaders adjacent to the cattle ranches, and more people are beginning to move into the area. The homesteaders need water for irrigating their crops and for personal use. However, the springs used by the ranches are the sole water sources. Wells on the homesteaders' land have so far been unsuccessful in providing enough water. A conflict over water rights has arisen. Ask them to describe any similar situations they may know about.

**3.** Provide time (a few days to a week) for students to research their positions and to develop their cases. During this time, ranchers and homesteaders will prepare their testimony, judge and jury will prepare to hear the case (plan procedures, etc.), and lawyers and witnesses will also prepare.

**4.** After all testimony has been given and opportunity for rebuttal provided, the jury should meet briefly to reach a decision. They should then return to report to the entire class, explaining the reasons for their decision.

**5.** Ask the students to discuss the results. What were the issues involved? What arguments support each side? Which arguments, if any, seem most persuasive? Which do not and why? What additional information, if any, would have been helpful to have in reaching a decision in this situation? Where and how could we get that information, if we need it?

**EXTENDING THE EXPERIENCE:** Have students research any local conflicts regarding water and mineral rights and other land use issues. Select students to present varying points of view. Follow these issues with newspaper articles posted on a classroom bulletin board.

### Activity 2 Pulling Up Stakes

**OBJECTIVES:** Discuss and write about the inspirational value of the experience of the early settlers.

**MATERIALS:** Samples of pioneer poetry, cowboy songs, and early expressions; writing and drawing materials.

**SUBJECTS:** Art, language arts, social studies.

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## Fun Facts — A MINER'S VOCABULARY

**amalgamation** — a process using mercury to collect fine particles of gold or silver from pulverized ore. Both precious metals attach to the silvery liquid, while rock does not. They can later be collected by heating the mixture until the mercury forms a gas and rises, leaving the gold and silver behind.

**bonanza** — discovery of an exceptionally rich vein of gold or silver.

**claim** — a parcel of land that a person is legally entitled to mine because he had staked it out and recorded his title. The dimensions vary according to local laws and customs.

**claim jumping** — stealing someone else's mining property, usually after it had been staked out but before it had been officially recorded.

**colors** — the particles of gold gleaming amid the residue in a prospector's pan after washing.

**coyoting** — a method used by miners to reach gold deposits resting on bedrock without excavating all of the overlying soil. After a vertical shaft (called a coyote hole) was sunk, tunnels radiating like wheel spokes were dug along the bedrock.

**cross-cut** — a mine tunnel going across an ore vein, used for ventilation and communication between work areas.

**drift** — a mine tunnel following the direction, or "drift," of a vein, opposite of a cross-cut.

**giant powder** — a miner's expression for dynamite.

**grubstaking** — supplying a prospector with food and gear in return for a share of his findings.

**hard rock** — ore that can be removed only by blasting, as opposed to ore that can be worked with hand tools.

**high grading** — the theft of chunks of ore by mine employees, who usually took only the valuable high-grade pieces.

**lode** — a clearly defined vein of rich ore. The principal vein in a region is called the "mother lode."

**muck** — the debris left behind after blasting hard rock. The miner who shoveled this ore-bearing material into a car or chute was known as a mucker.

**placer** — a deposit of sand, dirt, or clay, often in an active or ancient stream bed, containing fine particles of gold or silver, which can be mined by washing.

**pyrite** — fool's gold, a mineral composed of silicon and oxygen that is often mistaken for real gold.

**quartz** — a crystalline mineral, often transparent, in which gold and silver veins are most commonly found.

**salting** — planting rich ore samples in an unprofitable mine to attract unwary buyers.

**shaft** — a vertical or inclined excavation, usually a mine's main entrance and hoist way leading to the tunnels where the ore is dug.

**sluice** — a wooden trough for washing placer gold. As soil is shoveled into a steady stream of water, gold and other heavy particles sink to the bottom where they are caught by cleats, known as riffles. Some small, portable sluices, or rockers, can be rocked back and forth like a cradle to hasten the washing of gold.

**stamp mill** — a device that was powered by steam or water in which ores were pounded to a fine powder by heavy iron stamps, rising and falling like pile drivers.

**widow-maker** — a compressed-air drill, used to bore holes for dynamite in hard rock. Prolonged inhalation of the fine dust created by early models of this drill subjected miners to a deadly lung disease called silicosis.

**winze** — a passageway usually connecting two tunnels at different levels.

**SKILLS:** Description, drawing, invention, observation, writing.

**METHOD:** Students will imagine themselves to be early settlers in the western desert (miners, ranchers, trappers, explorers, homesteaders, etc.)

and then write a poem or story.

1. Ask everyone to close their eyes for a few minutes and imagine what it must have been like to be one of the early settlers. Imagine crossing the desert, on foot or by wagon, looking for

water, shelter, and food. Imagine being a miner and searching for gold. Imagine homesteading and creating a farm out of the desert. Imagine yourself to be a rancher and raising cattle. You can guide their imagery with a few words or leave them on their own. Read to the students

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from an actual pioneer diary or pioneer poetry related to early life in the desert.

**2.** Have students draw pictures to describe what they imagined and then ask everyone to write a short poem or story. Poems can be free verse or rhyming. Consider writing a group poem or story. Stories might begin with “The first day I arrived in the desert I . . .”

**3.** Encourage students to share their poems and stories with the class. Put them together in a class book about the westward movement. Share the book with other classes.

#### EXTENDING THE EXPERIENCE:

Do research on early routes that settlers followed coming west. Have students draw maps to go with their stories or poems, showing the possible route their story or poem might be describing.

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## Activity 3 To Tell The Truth

**OBJECTIVES:** Name an early American tool or piece of machinery and describe its use.

**MATERIALS:** Butcher paper; drawing materials; index cards; masking tape; pictures of old tools, machinery, and appliances.

**SUBJECTS:** Art, drama, language arts, social studies.

**SKILLS:** Description, discussion, drawing, invention, observation, public speaking, small group work, writing.

#### METHOD:

**1.** Find pictures of old tools, machinery, and appliances. Excellent sources are books by Eric Sloane, such as *A Museum of Early American Tools*. Enlarge the pictures, attach a description

of what it is and how it was used on the back of each, and laminate. Make enough to give one to each group of three or four students.

**2.** Split the class into groups. Give each group a picture, telling them not to let other groups see the names or descriptions. Allow groups to go off to separate areas to discuss their pictures. Each group will decide who is to present the real description of the object. Others in the group are to make up phony, yet perhaps believable, descriptions (and names, if they wish).

**3.** When the class gets back together, have each group come to the front one at a time. Holding up the picture, each student describes what it is and how it was used.

**4.** The class votes to select which group member they think is telling the truth. Repeat for each group. Discuss the creativity of the other descriptions.

#### EXTENDING THE EXPERIENCE:

Place a butcher paper time line along a classroom wall. Copy the dates and the inventions from page 7 onto index cards. Pass out cards to students. Have them place the cards on the time line. Then have students select a date and draw a picture of how their early home might have looked, inside and outside. Remind them to pay attention to furnishings and other items.

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## Activity 4 Way Back Then

**OBJECTIVES:** Name two activities people did in the 1800s that are still done today and two that are no longer done by most people.

**MATERIALS:** Discovery Activity Page #1.

**SUBJECTS:** Language arts, social studies.

**SKILLS:** Comparison, discussion, interview, listening, writing.

#### METHOD:

**1.** Hand out the activity page, go over the directions, and have students complete it at home.

**2.** When the activity page is completed, discuss the results. How old were the oldest people they talked with? Can they think of other activities they've done that people did way back then?

#### EXTENDING THE EXPERIENCE:

Have students interview older people they know who have lived in the community a long time. Help prepare questions to ask. The interviews could be done in small groups. They may want to tape-record them. Select some of these old-timers to come to talk to the whole class. Use the information gathered to put together a class book on local history.

# Changing Times

## FAIRY TALES

9th century	<i>Cinderella</i>
1553	<i>Puss-in-Boots</i>
1636	<i>Sleeping Beauty</i>
1697	<i>Little Red Riding Hood</i>
1697	<i>Mother Goose</i>
1812	<i>Hansel and Gretel</i>
1812	<i>Snow White</i>
1831	<i>Goldilocks and the Three Bears</i>
1835	<i>The Princess and the Pea</i>

## SONGS

1609	Three Blind Mice
1744	London Bridge
1765	Twinkle, Twinkle Little Star
1818	Silent Night
1832	America
1848	Oh Susanna
1853	Pop Goes the Weasel
1867	Mary Had a Little Lamb
1883	Polly Wolly Doodle
1884	Clementine
1899	She'll Be Coming Round the Mountain

## AMUSEMENTS

40,000 ago	dolls, Africa and Asiays.
3,000 B.C.	marbles, Egypt
2,000 B.C.	tops, Babylonia
1,200 B.C.	checkers
	kite, China
	(first used as military signaling device)
1,000 B.C.	hula hoop, Near East
1,000 B.C.	yo-yo, China
5th century	chess
10th century	firecrackers, China
1570	Parcheesi, China
1902	teddy bear (named for bear cub Teddy Roosevelt refused to shoot)
1913	crossword puzzle
1931	Scrabble
1933	Monopoly

## FOODS

4,000 B.C.	pie
2,000 B.C.	cookie
1847	doughnut with hole
1853	potato chip

1880s	hotdog (called frankfurter, came from Frankfurt, Germany with immigrants)
1880s	hamburger (came from Hamburg, Germany with immigrants)
1893	Cracker Jacks
1895	fig newton
1902	ice cream cone
1928	Double Bubble gum
1930	chocolate chip cookie (at Toll House Inn)

## CONVENIENCES

1826	matches
1870	can opener
1870s	rubber hose (used leather fire hoses before)
1883	brown paper bag
1884	toilet paper
1907	paper towel
1920	hair dryer
1924	Kleenex
1947	aluminum foil
1940s, 1950s	plastics

## CLOTHING

1820	blouse
1860s	Levi jeans (Levi Strauss began making pants for gold miners)
1893	zipper (to replace shoelaces on high boots, not on clothing until 1920s)
1910	sneakers (Keds started in 1917)

## AROUND THE HOUSE

early 1800s	people used spinning wheels, candles for light, and plows
1803	ice box (wooden chest with tin container to hold ice)
1860s	gas lights
1870s	flush toilets becoming popular

1879	first electric light
late 1800s	bath tub (tin or wooden tub used before)
1890s	flashlights
1906	electric iron
1939	washer, dryer automated

## COMMUNICATION, MUSIC, AND PHOTOGRAPHY

1860	pony express between St. Joseph, Missouri and Sacramento
1876	first telephone communication
1877	cylinder phonograph
1887	first flat record
1899	Kodak box camera
1920	radio shows
1945	television
1970s	VCR searly
1980s	personal computers
1980s	Nintendo

## GETTING AROUND

mid-1700s	Conestoga (covered) wagon
1810	steamboat
1813	buckboard wagon
1830s	railroad car and engine
1869	transcontinental railroad
1903	Wright brothers fly
1909	first model T on sale
1939	jet engine
1961	first man in orbit

## SPORTS

10th century	lawn bowling
1572	ice-skatingearly
1800s	roller-skating
mid-1800s	swimming as a sport
1855	ice hockey
1860	croquet comes to
U.S.1866	baseball becomes
popular1869	football (developed from rugby)
1873	tennis, Wales
1880s	skiing as a sport (first used in war)
1885	modern bicycle
1886	soccer comes to U.S.
1891	basketball invented

# Discovery Activity Page #1

## Way Back Then

This is a list of some activities people did in the 1800s and early 1900s. How many have you done? What about your parents? How about one of the oldest people you know?

HAVE YOU EVER:	YOU	YOUR PARENTS	AN EVEN OLDER PERSON
Carried firewood?			
Cut wood with a hand saw?			
Watched a hen lay an egg?			
Fed chickens?			
Ground corn for corn bread?			
Baked bread?			
Churned butter?			
Milked a cow?			
Planted a vegetable garden?			
Picked and eaten wild greens?			
Ridden a horse?			
Brushed a horse?			
Ridden in a horse-drawn wagon?			
Seen a field plowed with a horse-drawn plow?			
Dyed yarn with plant dyes?			
Spun wool?			
Tracked an animal?			
Gone fishing?			
Cleaned a fish?			
Visited a farm, mine, or cattle ranch?			
Sung a pioneer song?			
Made a pioneer toy?			
Dug a fence post?			
Panned for gold?			