

**RIVERS OF NORTH AMERICA**

*13 PART SERIES*

ARKANSAS  
COLORADO  
COLUMBIA / SNAKE  
CONNECTICUT  
HUDSON  
INDIAN / INLAND WATERWAY  
LOWER MISSISSIPPI  
UPPER MISSISSIPPI  
MISSOURI  
OHIO  
POTOMAC  
RIO GRANDE  
SACRAMENTO / AMERICAN

**Consider Visiting These Web Sites:**

<http://www.cqs.washington.edu/papers/sacramento.html>

<http://www.sfmuseum.org/hist2/gold.html>

<http://www.goldrushtrail.org/>

<http://www.coloma.com/sfam/intro.html>



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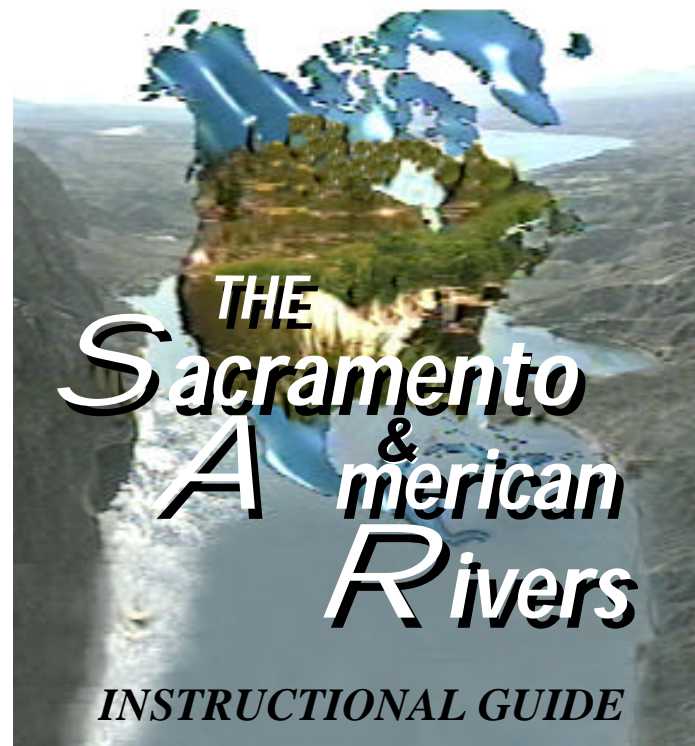
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Presents

**Rivers  
of  
North America**

*13 Part Series*



## INTRODUCTION TO SERIES

Rivers of North America Series brings a unique perspective to the role great rivers have played in the early development and subsequent settlement of a region and a nation. Each river has its own unique story to tell, it's own geology, geography and history.

As a complementary device with each video, an instructional guide suggests exercises to help teachers, parents and students. These interactive exercises will reinforce and further develop a student's level of comprehension.

The instructional guide provides:

Vocabulary  
Chronology / Q & A  
Native People / Explorers  
Discussion Points / Activities  
Geography / Geology  
River / Cities Development

**Permission granted to copy the exercises provided in this guide. For educational use ONLY.**

*E-Guides available at  
[www.filmideas.com](http://www.filmideas.com)*

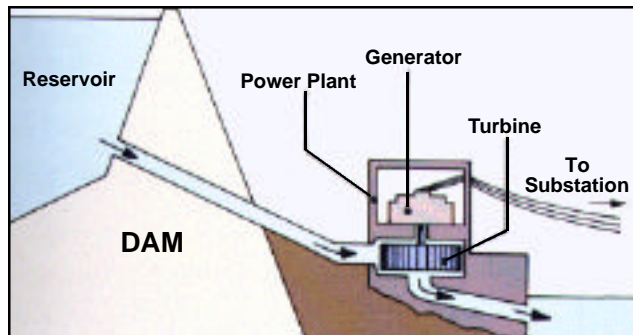
## Earthquakes of *The SACRAMENTO/AMERICAN*

For many years earthquakes have affected different parts of California including the Sacramento / American River region. On paper or a computer, explain and illustrate what earthquakes are and how they occur. If needed use the illustrations below or if possible draw your own graphics (use a computer).



## DAMS of The SACRAMENTO/AMERICAN

Both the Red Bluff Diversion Dam and the Folsom Dam have been built on the Sacramento and American Rivers. On paper or a computer, explain and illustrate what dams are and why they are built. Also mention how dams affect the environment. If needed use the illustration below or if possible draw your own graphics (use a computer). Gather information on the internet.



## THE Sacramento & American Rivers

Today California is famous for many things; its oceans and beaches, its movie stars and theme parks, but the first thing that made it famous worldwide was the “gold rush” of 1849. Those searching for the path to gold followed not a road but two rivers now named the Sacramento and American Rivers.

The Sacramento is the longest river in California. Its headwaters spring from the slopes of Mt. Shasta. From there the Sacramento flows mainly southwest for 380 miles through California’s Central Valley. Eventually the Sacramento flows into the San Francisco Bay under the Golden Gate Bridge before finally emptying into the Pacific Ocean. As one of its main tributaries, the American River with its headwaters high above the Sierra Nevada Mountains, joins the Sacramento River in the downtown area of California’s capital city, Sacramento. As the two rivers travel along California’s Central Valley terrain, earthquakes have become a part of the two river’s history. In 1906 one of the most powerful earthquakes occurred killing 700 people.

About 20,000 years ago the first inhabitants of the rivers valley basin were nomadic Indian tribes. These tribes migrated throughout the river region hunting for large, now extinct animals, known as “Mega-Fauna”. Later inhabitants to the region were Native American tribes who were descendants of the early nomadic cultures. The Native American tribes occupied the river basin during the arrival of the European explorers.

It was on the American River, that John Marshall first discovered gold at a place called Sutter’s Mill in 1848. Word soon spread and the river valley basin became flooded with gold hungry miners. Chaos swept the area as miners fought over the valuable claims and land. Over 15 million dollars in gold were excavated in the first year of the gold rush. However, because of extensive mining practices the ecosystems of both the Sacramento and American Rivers were heavily damaged.

From their headwaters high in the Sierra Nevada Mountains and the spawning ground for Chinook Salmon, to the panning of gold nuggets and San Francisco’s Golden Gate Bridge, the Sacramento and American Rivers are forever reminders of the great American landscape.

**VOCABULARY of *The SACRAMENTO/AMERICAN***

**AMERICAN RIVER (THE):** A tributary of the Sacramento River. The confluence of these two rivers is in California's capital city, Sacramento. Its headwaters originate in the Sierra Nevada Mountains where it then travels through California's Central Valley before finally emptying into the Pacific Ocean.

**CONFLUENCE:** The point where two rivers join together. i.e. The American & Sacramento Rivers.

**FORTY-NINERS:** A mass migration of miners who traveled to California in 1849 seeking to discover gold.

**GOLDEN GATE BRIDGE (THE):** Located in San Francisco, California, this bridge was completed in 1937, and stands 8,981 ft. long and 750 feet tall. Site where the Sacramento and American Rivers empty into the Pacific Ocean.

**GOLD RUSH:** In 1848 John Marshall discovered gold at Sutter's Mill. As word spread "Gold Rush" is a term used to describe the mass migration of gold seeking miners who quickly traveled into the California region.

**EARTHQUAKES:** A series of shock waves generated at a point within the Earth, and caused by the movement of rocks on a fault plane releasing stored strain energy.

**ESTUARY:** Area where the fresh water from a river mixes with the salt water from an ocean. (i.e. Sacramento River and Pacific Ocean).

Letters A thru C describe three **Sacramento & American River** cities. Write the name of the city on the solid black line. Then with a Black Marker write the letter **A, B, C** to indicate where on the California map each city is located.

**A)** \_\_\_\_\_ is home to the "Golden Gate Bridge" one of the longest single span suspension bridges ever built.

**B)** California's capital city \_\_\_\_\_, is also where the confluence of the Sacramento and American Rivers occurs.

**C)** The town of \_\_\_\_\_ is approximately 35 miles northeast of Sacramento and began as a supply center for miners during the Glory Days of the "Gold Rush".



## GEOGRAPHY of *The SACRAMENTO/AMERICAN*

The **Sacramento & American Rivers** journey through one state before emptying into a body of water. On the solid black line name each of these areas.

STATE:

BODY OF WATER:

① \_\_\_\_\_

② \_\_\_\_\_



**HEADWATERS:** The mixture of melting snow and rain form into the little creeks and streams which become the initial water source for larger bodies of water i.e. The Sacramento & American Rivers.

**MEGAFUNA:** Large sized pre-historic animals that lived during the ice age near California's Central Valley area.

**MOUNTAINMEN:** Rugged fur trappers who occupied the Sacramento/American River area during the mid 1820's.

**NEW SPAIN:** A chain of missions established by Spanish explorers located along the California coast.

**RED BLUFF DIVERSION DAM:** Located near the headwaters of the Sacramento River. Built in 1964 to divert water to the Corning and Thama-Colusa canals for irrigation. However its adverse effect is upon the Chinook Salmon's difficulty to travel up river to spawn.

**SACRAMENTO:** The Capital city of California. Also the location of the confluence where the American River joins the Sacramento River.

**SACRAMENTO RIVER (THE):** Longest river in California. Its headwaters originate on Mt. Shasta located in the Sierra Nevada Mountains. Travels 380 miles through California's Central Valley before finally emptying into the Pacific Ocean.

**SUTTER, JOHN:** A Swiss National who became a successful American settler. He established Fort Sutter in 1844 a major trading post in California and later in 1847 he built Sutter's Mill where John Marshall first discovered gold.

**TRIBUTARY:** A smaller river or stream which flows into another larger body of water (i.e. American River).

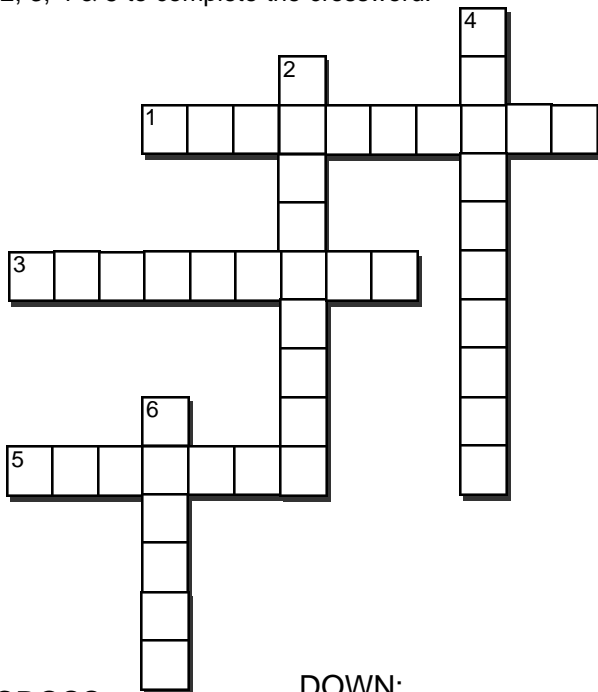
## CHRONOLOGY of *The SACRAMENTO/AMERICAN*

- **Millions of years ago:** Volcanoes form into Mountain ranges.
- **20,000 years ago:** Nomadic tribes travel throughout the river region in search of large prehistoric animals called "Mega-Fauna".
- **1542:** Portuguese explorer Juan Cabrillo travels along the California coast.
- **1579:** English explorer Sir Francis Drake sails into California waters .
- **1595:** Spanish explorer Sebastian Vizcaino claimed California for King Philip of Spain.
- **1808:** Spanish explorer Gabriel Moraga is first to travel up the Sacramento River. The Province of New Spain is established and Missions are built along the California coast.
- **1811:** Jose Sanchez leads an expedition to map out the Sacramento River.
- **Mid-1820's:** Rugged fur trappers known as the "Mountainmen" migrate into the river area.
- **1839-44:** Fort Sutter is built and serves as the only major trading post in California.
- **1846:** United States and Mexico declare war.
- **1848:** John Marshall discovers gold at Sutter's Mill.
- **1849:** The "Gold Rush" begins as gold seeking miners quickly migrate to California.
- **1850:** California is admitted as the 31st state of the Union.
- **1884:** All forms of Hydraulic mining is outlawed in California.
- **1906:** Major earthquake kills 700 people.
- **1937:** Golden Gate Bridge is completed.
- **1963:** Deep water channel is built between Sacramento and San Francisco.
- **1964:** Red Bluff Diversion Dam is built.

## Discussion Points / Activities

1. If possible visit some of the locations along the Sacramento / American Rivers as discussed in the video. SEE Pg. 5 of this guide. Also checkout the internet for web sites about the rivers rich heritage.
2. Like a science project, build a model river using paper mache, clay, dirt / mud etc. to illustrate the characteristics of the Sacramento / American Rivers. Perhaps use charts and maps to explain what happens to the river region during earthquakes or the building of dams etc.
3. Discuss how each of the following events have affected the past and present-day conditions of the Sacramento / American River:
  - 1) Building of dams
  - 2) Gold Rush
  - 3) The arrival of Indian cultures & European explorers
  - 4) Development of cities
4. The ecosystems along rivers and other bodies of water sustain many different life forms. If possible visit a river (the Sacramento / American River) and imagine you are an ecologist. Study these different life forms and document their relationships with the river environment. i.e. bring binoculars, take photographs, paint a river scene, write a poem, sample various vegetation to view under a microscope etc.

Use the words described in this guide on pgs. 2, 3, 4 & 5 to complete the crossword.



**ACROSS:**

- 1) California's capital city.
- 3) Large sized pre-historic animals.
- 5) Area where fresh water from a river mixes with salt water from an ocean.

**DOWN:**

- 2) A smaller river or stream which flows into another larger body of water.
- 4) The point where two rivers join together.
- 6) built a mill where John Marshall first discovered gold.

**ANSWERS:**  
**Across** - 1) Sacramento, 3) Megaloterna, 5) Estuary  
**Down** - 2) Tributary, 4) Confluence, 6) Sutter

**EXPLORERS of The SACRAMENTO/AMERICAN**

**JUAN CABRILLO:** Portuguese explorer, who in 1542 sailed up the California coast.

**SIR FRANCIS DRAKE:** English explorer who sailed the California waters in 1579.

**SEBASTIAN VIZCAINO:** Spanish explorer who in 1595 claimed California for King Philip of Spain.

**GABRIEL MORAGA:** Spaniard who became the first European to sail up the Sacramento River.

**PLACES OF THE SACRAMENTO / AMERICAN RIVER REGION:**

**FORT SUTTER:** Located in Sacramento where John Sutter established many enterprises including cattle herding, fur trapping, crop cultivation, and a distillery. Today it is a state historic park.

**FAMOUS SACRAMENTO / AMERICAN RIVER CITIES:** San Francisco; Sacramento; Auburn; Folsom - all located in California.

**GOLDEN GATE BRIDGE:** Located in San Francisco it is considered one of the longest single span suspension bridges ever built. Completed in 1939 it measures 8,981 feet long and 750 feet tall.

**ALCATRAZ ISLAND:** Located in San Francisco Harbor. Now a museum but this famous prison once housed Al Capone and Machine Gun Kelley.

**Q & A** for *The SACRAMENTO/AMERICAN*

1. Headwaters are created from melting snow and rain. Eventually this water forms into creeks and streams which become the headwaters for rivers. What is the name of the Mountain Range from where the headwaters of the Sacramento / American Rivers originate?
2. What is the name of the point at which two rivers join together.
3. The Sacramento / American Rivers end their journey by emptying into what body of water?
4. What is the longest river in California and what is its main tributary?
5. In 1848 John Marshall discovered gold at a place called Sutter's Mill. What changes occurred after this event and how did this discovery affect the environment of the rivers?
6. John Sutter became a prominent figure during the development of the Sacramento / American River region. Describe who he was and some of his achievements?
7. Earthquakes have caused major geological changes throughout the river region's history. What are earthquakes and how do they occur?
8. Starting in the mid to late 1700's, after the initial arrival of Spanish explorers, several missions were built along the California coast in the province known as "New Spain". What were these missions and why were they built?

**Fill in the blank by selecting the words from the answers list:**

**ANSWERS LIST :**

Statue of Liberty • Gold Rush • Gold Diggers  
Red Bluff Diversion Dam • Headwaters • Redirect Dam  
Golden Gate Bridge • Forty-Niners • Mountainmen

9. **A)** Rugged fur trappers known as \_\_\_\_\_ occupied the Sacramento /American Rivers region during the mid 1820's.

**B)** High above in the Sierra Nevada Mountains little creeks and streams form into the \_\_\_\_\_ for the Sacramento and American Rivers .

**C)** \_\_\_\_\_ is a term used to describe the mass migration of gold seeking miners known as the \_\_\_\_\_ who quickly traveled into the California region in 1849.

**D)** Built in 1964, the \_\_\_\_\_ diverts water into the Corning and Thama-Colusa canals for irrigation.

**E)** Located in San Francisco, California the \_\_\_\_\_ was completed in 1937, and stands 8,981 ft. long and 750 feet tall.