

RIVERS OF NORTH AMERICA

13 PART SERIES

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

Consider Visiting These Web Sites:

www.nps.gov/rigr/
www.waterwest.org/riverbasins/riogrande/riogrande.htm
www.encyclopedia.com
www.abqjournal.com/news/river/
www.utdallas.edu/dept/sci_ed/torch/bb00_geo-rf.htm



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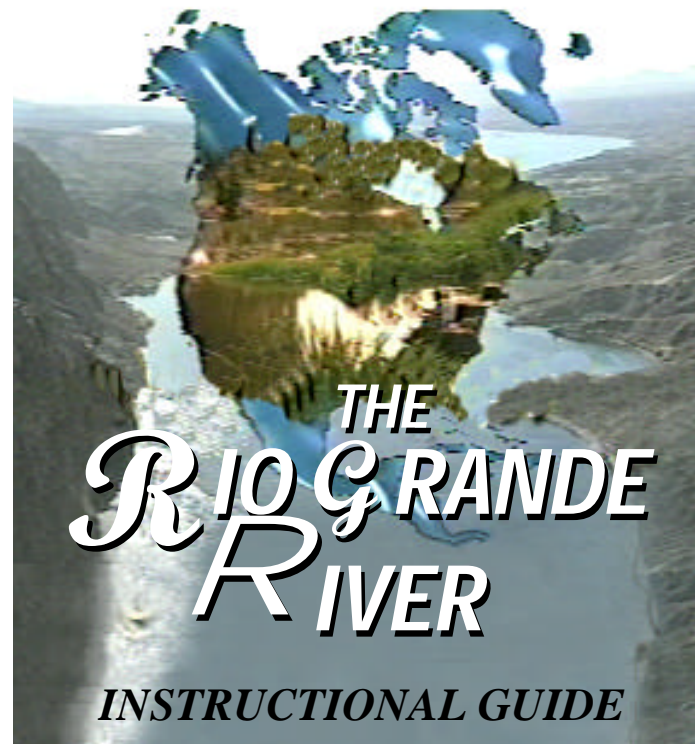
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Presents

**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*

NOTES:

ENVIRONMENT of *The RIO GRANDE*

There are several wildlife refuges located along the Rio Grande to protect endangered species. On the solid black lines name some of these species and explain why they are being pushed to extinction.



THE *RIO GRANDE RIVER*

At over 12,000 feet above sea level, on the eastern slope of the San Juan Mountains of Colorado, snow begins to melt. Cold, clear water drips and trickles, then runs and rushes down through pine covered mountain sides into the broad San Luis Valley Basin. It is one of the largest mountain valleys in the world. But the San Luis Valley is just a small portion of the Rio Grande's vast drainage system that covers 336,000 square miles.

The Rio Grande is the 3rd longest river in the United States and the 5th longest in North America. The "Great River" travels 1,900 miles through the states of Colorado, New Mexico and Texas, also bordering the country of Mexico, before finally emptying into the Gulf of Mexico. Along its route the Rio Grande, due to the movement of the earth's crust and volcanoes which developed 38 million years ago, is scattered with a litany of majestic canyons.

After the river's early geological process, about 20,000 years ago Paleo-Indians began to occupy the river basin. These early Indian cultures shared this vast landscape with mammoths, sabre tooth tigers, giant bison and dire wolves. Since the river provided food, crop irrigation and transportation descendants of these ancient Indian tribes began to build adobe villages along the river. In 1540 Spanish conquistador, Francisco Vasques De Coronado, was the first European to arrive onto the scene. Through time both Spanish and Indian cultures were integrated and created what is known today as a "southwestern" lifestyle. However Spanish integration also had its consequences. Spanish colonization introduced European diseases like measles, chicken pox, small pox and other incurable diseases into the region. Unfortunately because there was no natural immunities for these diseases thousands of Indians died. As European colonization expanded cities and church missions began to emerge. This new growth transformed the river area into an industrial resource.

Today, the Rio Grande River offers an abundant of natural beauty while revealing an historic past. The river's heritage remains an essential piece to the North American puzzle. As the Rio Grande River continues to flow it will be forever embodied into the North American landscape.

VOCABULARY of *The RIO GRANDE*

BATTLE OF THE ALAMO: Originally a Spanish mission located in San Antonio, where 200 Texan Rebels fought 2,000 Mexican troops. Although the rebels lost the battle a month later Texans won the war and became an independent country known as the Republic of Texas.

CONFLUENCE: The point where two rivers join together. i.e. The Rio Grande & Alamosa Rivers.

CONTINENTAL DIVIDE: Arbitrary line located in the middle of the Rocky Mountain Range which separates the east and west. Waters along the western slope of the divide flow into the Pacific Ocean or Gulf of California. Waters along the eastern slope of the divide flow into the Mississippi River and/or the Gulf of Mexico.

DAMS: A barrier built to prevent the flow of water. Dams are used to store water, control floods and produce electricity.

FOSSILS: An impression of an animal or plant from past geologic ages that have been preserved in the earth's crust. Fossils found in the Rio Grande River region date as far as 590 million years ago.

FRANCISCO VASQUES DE CORONADO: A Spanish conquistador who in 1540 became the first European to explore the Rio Grande region.

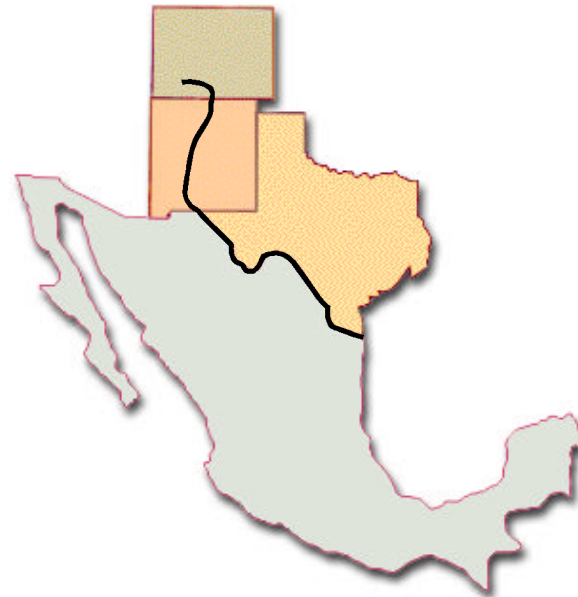
HEADWATERS: The mixture of melting snow and rain form into the little creeks and streams which become the initial water source for larger bodies of water i.e. The Rio Grande River.

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

A) The Alamo was originally a Spanish mission located in _____ where 200 Texan Rebels fought 2,000 Mexican troops.

B) _____ is the southernmost city in the continental U.S.

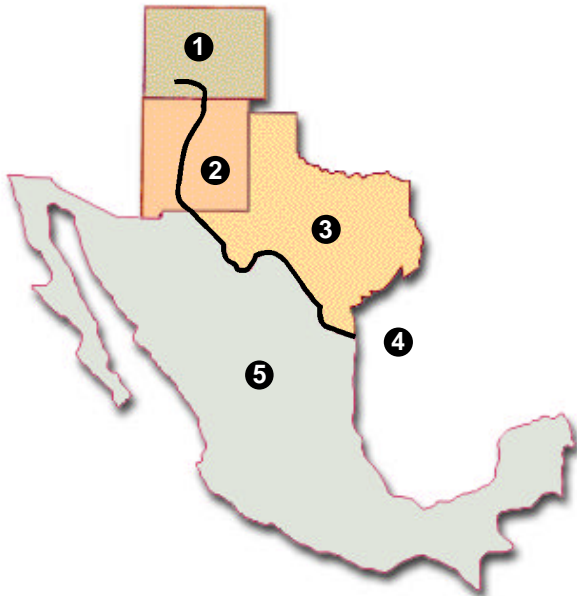
C) Located in New Mexico, _____ blends the old and new southwest and means "The Crosses" in Spanish.



GEOGRAPHY of *The RIO GRANDE*

The Rio Grande River journeys through or around **three states and one country**, before emptying into a body of water. On the solid black line name each of these areas.

STATES:	BODY OF WATER
① _____	④ _____
② _____	COUNTRY
③ _____	⑤ _____



MAQUILADORA: Name given to “foreign owned” manufacturing companies located near the sister cities of Laredo, Texas and Nuevo Laredo, Mexico. Due to the conservation standards between the U.S. and Mexico, these factories have subjected the Rio Grande River with toxic waste and raw sewage.

MISSION DE GUADALUPE today known as CUIDAD JUAREZ: First Spanish-Indian settlement established in 1659 along the Rio Grande. Today it is called Ciudad Juarez in honor of Benito Juarez, one of Mexico’s greatest heroes.

PALEO-INDIANS: First known people to inhabit the Rio Grand River basin about 20,000 years ago.

RESERVOIRS: An artificial lake where water is collected and stored. The water behind river dams form deep water sources (reservoirs) that are used for drinking, irrigation of crops, recreation and sometimes electric power.

RIO GRANDE RIVER (The): Its headwaters originate in the San Juan Mountains in Colorado and travels 1,900 miles south, through Colorado, New Mexico, and Texas before emptying into the Gulf of Mexico. It is the 3rd longest river in the U.S. and 5th longest in North America.

SOUTHWESTERN: A lifestyle which blends both Spanish and Indian cultures.

TRIBUTARY: A smaller river or stream which flows into another larger body of water (i.e. into the Rio Grande).

WILD AND SCENIC RIVERS PROGRAM (The): In 1968 congress enacted programs to protect natural river environments. The Rio Grande Gorge of New Mexico was named America’s first “Wild and Scenic River”.

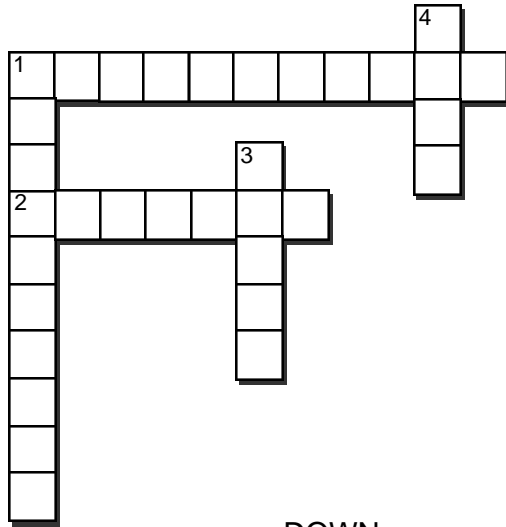
CHRONOLOGY of *The RIO GRANDE*

- **590 million years ago:** Fossils provide evidence of sea creatures, sponges, trilobites and ancient plants which lived in the Rio Grande region.
- **65 million years ago:** Dinosaurs roamed the Rio Grande River area.
- **38 million years ago:** Volcanoes erupt throughout the Rio Grande River Basin.
- **20,000 years ago:** Paleo-Indians inhabit the area.
- **1200-1540:** Areas north and west of the river become dry. Indian tribes migrate south to build adobe villages near present day Albuquerque, New Mexico.
- **1540:** Spanish conquistador, Francisco Vasques De Coronado becomes the first European to explore the Rio Grande River region.
- **1598:** Don Juan De Onate colonizes El Paso, Texas.
- **1659:** Mission De Guadalupe becomes the first Spanish-Indian settlement established along the river.
- **1810-1826:** Mexico fights for independence from Spain.
- **1835-1836:** The Battle of the Alamo and Texans fight for independence from Mexico.
- **1845:** Texas granted statehood.
- **1932:** Clovis, New Mexico becomes an important archeological site as the remains of ancient people are found.
- **1968:** U.S. Congress enacts the Wild and Scenic River Programs to preserve and protect river environments.
- **1971:** The largest ever fossil remains of a giant Pterodactyl are found at Big Bend National Park.

Discussion Points / Activities

1. If possible visit some of the locations along the banks of the Rio Grande River as discussed in the video. SEE Pg. 5 of this guide. Also check out the internet for web sites about the rivers rich heritage. SEE BACK PAGE.
2. Draw a map (if you like, use a computer or the map provided on page 11) of the river, indicating significant points of interest. For example, The Alamo, Continental Divide etc.
3. Discuss how each of the following events have affected the past and present-day conditions of the Rio Grande River:
 - 1) Building of dams
 - 2) The arrival of Indian cultures & European explorers
 - 3) Development of cities
4. The ecosystems along rivers and other bodies of water sustain many different life forms. If possible visit a river (the Rio Grande 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 & 5 to complete the crossword.



ACROSS:

- 1) This divide is an arbitrary line which separates east and west.
- 2) Impressions of animals or plants from past geologic ages.

DOWN:

- 1) The point where two rivers join together.
- 3) Old Spanish mission located in San Antonio, Texas where 200 Texan Rebels fought 2,000 Mexican troops.
- 4) Barriers built on a river to prevent the flow of water.

ANSWERS:
Across - 1) Continental, **2)** Fossils
Down - 1) Confluence, **3)** Alamo, **4)** Dams

People of *The RIO GRANDE*

FRANCISCO VASQUES DE CORONADO: Spanish explorer who in 1540 became the first European to discover the Rio Grande River region.

DON JUAN DE ONATE: Colonized the El Paso area in 1598.

PLACES OF THE RIO GRANDE RIVER REGION:

BIG BEND NATIONAL PARK: An array of canyons, rock formations, gorges, and wildlife are featured in this historic national park of the Rio Grande region. Activities include: kayaking, river rafting and tubing, hiking etc.

ALAMO: Originally a Spanish mission located in San Antonio, Texas where 200 Texan Rebels fought 2,000 Mexican troops. Although the rebels lost the battle a month later Texans won the war and became an independent country known as the Republic of Texas.

MAJOR CITIES ALONG THE RIO GRANDE REGION:

TEXAS: El Paso, Laredo, San Antonio, Brownsville, Port Isabel
 NEW MEXICO: Albuquerque, Santa Fe, Las Cruces
 MEXICO: Ciudad Juarez, Nuevo Laredo, Matamoros

SAN LUIS VALLEY BASIN, COLORADO: One of the largest Mountain Valleys in the world located in southwest Colorado where the headwaters of the Rio Grande River begin. Within this basin are an abundant of wildlife, panoramic views and a variety of geologically developed canyons.

LOWER RIO GRANDE VALLEY

NATIONAL WILDLIFE REFUGE: a refuge where hundreds of wildlife species are protected and thrive along the river.

Q & A for *The RIO GRANDE*

1. Headwaters are created from melting snow and rain. Eventually this water forms into creeks and streams which become the headwaters for rivers. Can you name the mountain range from where the headwaters of the Rio Grande River originate?
2. Many dams were built on the Rio Grande River. What are dams and why are dams built?
3. The Rio Grande River ends its journey by emptying into what body of water?
4. What is the 3rd longest river in the United States?
5. Who were the first people to inhabit the Rio Grande River region? Who was the first European explorer to discover the region?
6. Early Indian cultures built cliff dwellings, adobe villages and kivas near the Rio Grande River. Can you explain why these Indian tribes would build their homes near the river?
7. The Rio Grande River region experienced many changes during European colonization. Can you describe some of these changes? How did some changes affect the Indian population?
8. In 1968 the U.S. Congress created the “wild and scenic rivers program”. Define this government sponsored program and name the first area affected by this program.

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

ANSWERS LIST :

Tributary • Cherokee • Maquiladora • Don Juan De Onate
Mission De Guadalupe • Southwestern • Microsoft
Francisco Vasques De Coronado • Mission Spanito

9. **A)** _____ describes a lifestyle which blends both Spanish and Indian cultures.
- B)** “Foreign owned” manufacturing companies located near the sister cities of Laredo, Texas and Nuevo Laredo, Mexico are called _____ .
- C)** The Alamosa river is an example of a _____ which is a smaller river flowing into the Rio Grande.
- D)** In 1540, _____ a Spanish conquistador became the first European to explore the Rio Grande region.
- E)** Known today as Ciudad Juarez, _____ became the first Spanish-Indian settlement established in 1659 along the Rio Grande.