



A River Through Time: Focus on the Gila River

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Grade Level	3-5
Duration	2 class periods

National Standards

GEOGRAPHY

Element 5: Environment and Society

14. How human actions modify the physical environment.
16. The changes that occur in the meaning, use, distribution, and importance of resources.

Element 6: The Uses of Geography

17. How to apply geography to interpret the past.

AZ Standards

ELA

Reading

Informational Text

Key Ideas and Details

3.RI.2 Determine the main idea of a text; recount and paraphrase the key details and explain how they support the main idea.

4.RI.2 Determine the main idea of a text and explain how it is supported by key details; summarize the text.

5.RI.2 Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.

3.RI.3 Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.

4.RI.3 Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.

5.RI.3 Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

Integration of Knowledge and Ideas

Arizona Social Science Standards

GEOGRAPHY

Human-environment interactions are essential aspects of human life in all societies.

3.G2.1 Explain how people modify and adapt to the Arizona environment. Key concepts include but are not limited to modification and adaptation of the environment by Paleo-Indians, Prehistoric-Indians, explorers, settlers, farmers, immigrants, migrants, and the 22 Arizona Indian Nations, and the use of Arizona's natural resources.

4.G2.1 Compare the diverse ways people or groups of people have impacted, modified, or adapted to the environment of the Americas. Key concepts include but are not limited to disease, farming, family structure, housing, cultural assimilation, cultural amalgamation, climate, transportation, domestication of animals, clothing, recreation, and utilization of renewable and non-renewable natural resources

5.G2.1 Describe how natural and human-caused changes to habitats or climate can impact our world.

Examining human population and movement helps individuals understand past, present, and future conditions on Earth's surface.

3.G3.1 Describe the movement of people in and out of Arizona over time. Key concepts include but are not limited to factors contributing to settlement, economic development, growth of major cities, major economic activities, and land use patterns

4.G3.1 Explain how the location and use of resources affects human settlement and movement. Key concepts include but are not limited to theories about the peopling of the Americas, the Columbian Exchange, treatment of indigenous people, triangular trade, searches for trade routes to Asia that led to exploration and settlement of the Americas

5.G3.1 Use key historical events with geographic tools to analyze the causes and effects of environmental and technological

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4.RI.7 Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.

Writing

Text Types and Purposes

3.W.1 Write

informative/explanatory texts to examine a topic and convey ideas and information clearly.

a. Introduce a topic and group related information together; include illustrations when useful to aiding comprehension.

b. Develop the topic with facts, definitions, and details.

c. Use linking words and phrases (e.g., also, another, and, more, but) to connect ideas within categories of information.

d. Provide a concluding statement or section.

4.W.2 and 5.W.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

a. Introduce a topic clearly and group related information in paragraphs and sections; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension.

b. Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.

c. Link ideas within categories of information using words and phrases (e.g., another, for example, also, because).

d. Use precise language and domain-specific vocabulary to inform about or explain the topic.

e. Provide a concluding statement or section related to

events on human settlements and migration.

Key concepts include but are not limited to consequences of territorial expansion on American Indians, the institution of slavery, the positive and negative impact of new technologies on the environment and the growth of cities, and the impact of transportation and infrastructure on settlement and migration

Global interconnections and spatial patterns are a necessary part of geographical reasoning.

3.G4.1 Describe how Arizona has changed over time. Key concepts include but are not limited to Paleo-Indians, explorers, settlers, farmers, immigrants, migrants, the 22 Arizona Indian Nations, plants, land use, and animals.

5.G4.1 Describe how economic activities, natural phenomena, and human-made events in one place or region are impacted by interactions with nearby and distant places or regions.

HISTORY

The development of civilizations, societies, cultures, and innovations have influenced history and continue to impact the modern world.

3.H1.1 Utilize a variety of sources to construct a historical narrative exploring Arizona's cultures, civilizations, and innovations.

Key concepts include but are not limited to impact of prehistoric peoples, Native Americans, Latinx, African Americans, Asian Americans, and newcomers from the United States and world on art, language, architecture, mining, agriculture, and innovations

Key concepts include but are not limited to explorers, settlers, trappers, missionaries, and colonizers

Key events include but are not limited to statehood

Influential individuals and groups in the history and development of Arizona

4.H1.1 Utilizing a variety of multi-genre primary and secondary sources, construct historical narratives about cultures, civilizations, and innovations in the Americas.

Key concepts include but are not limited to Olmec, Maya, Inca, Aztec, American Indians living in the Americas before and after European exploration, enslaved and free Africans living in the colonies, British, French, Dutch, Spanish explorers and settlers, and the thirteen colonies

6.H1.2 Explain the causes and effects of interactions between cultures and civilizations.

Key concepts include but are not limited to trade, competition, warfare, slavery, serfdom, innovations, and contributions.

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the information or explanation presented.

Cycles of conflict and cooperation have shaped relations among people, places, and environments.

3.H2.1 Use primary and secondary sources to generate questions about the causes and effects of conflicts and resolutions throughout Arizona's history. Key concepts include but are not limited to conflicts over exploration, colonization, settlement, industrialism, and the 22 Arizona Indian Nations

4.H2.1 Describe the cycles of conflict and compromise that occurred in the Americas during the convergence of Europeans, American Indians, and Africans in the Americas before and after European exploration

5.H2.1 Use primary and secondary sources to summarize the causes and effects of conflicts, resolutions, and social movements throughout the historical timeframe.

Key conflicts can include but are not limited to cultural conflicts, political conflicts, economic conflicts, military conflicts, and conflicts related to resource use and availability

Overview

The Akimel O'odham (Pima Indians) have for centuries resided along the Gila River in central Arizona. They historically were farmers, using the waters of the Gila to irrigate their crops. Through the use of primary source material, students will investigate the effect that dam construction on the Gila River has had on the lifestyle of the Akimel O'odham.

Purpose

In this lesson, students will learn how the Akimel O'odham have depended on the physical environment including the Gila River for their existence. They will also learn that technological modifications in one place can lead to changes in other locations by examining the damming of the Gila River and its effect upon the lifestyle of the Akimel O'odham (Pima Indians).

Materials

- Pima Territory of Arizona 1700 map
<http://geoalliance.asu.edu/sites/default/files/maps/PIMA.pdf>
- Arizona's Indian Reservations map
http://geoalliance.asu.edu/sites/default/files/maps/AZ_Reservations.pdf

- Important Dams in Arizona map
<http://geoalliance.asu.edu/sites/default/files/maps/AZ-DAMS.PDF>
- Arizona's Cities with Compass Rose
<http://geoalliance.asu.edu/sites/default/files/maps/AzcitiesCompassLatLong.PDF>
- Timeline for A River Through Time or paper for each student to create their own (Years 1600 to 2100 -- 2 inches equals 100 years)
 - Markers - 3 colors (preferred blue, brown, red)
 - Primary Source Material
 - Student Outline for *A River Through Time*

Objectives

The student will be able to:

- Record dates and events on a timeline.
- Determine any effect of dam construction on the lifestyle of the Gila River Pimas.
- Write a summary.

Procedures

Prior to this lesson: Print a copy of the Pima Territory of Arizona map and mark Florence, Safford, and the Coolidge Dam to use when projecting the map.

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Prior Knowledge of Students: Students know how to write a summary. They have had some experience with primary sources.

1. Introduce the lesson by projecting the Pima Territory of Arizona map and locating the Gila River, Florence, Safford, and Coolidge Dam on the map.
2. Then introduce the Akimel O'odham (Pima Indians) as living in this area and locate their area of residence both historically and today.
3. Review the meaning of a primary source.
4. Distribute the Student Outline Sheet for a River Through Time and copies of the Primary Source Material. Read, as a whole class, the historical descriptions of the Piman lifestyle and the Gila River environment in Primary Source Material. As the primary source materials are discussed, have students record information on the Student Outline Sheet for a River Through Time.
5. Distribute blank paper or Timeline for a River Through Time worksheet and 3 colors of markers. Have students record dates and events on their blank paper or worksheet using their notes from the Student Outline Sheet. Then have students review their events and mark the timeline using a horizontal line and two colors. One color will be used for descriptions of ample water and crop growth (blue), and a second color for absence of water and lack of crops (brown). Students should then create a legend on the timeline explaining the colors and what they mean.
6. The third color (red) will be used to mark, with a vertical line on the timeline and include the dates of construction of the Florence Diversion Dam and Coolidge Dam.
7. After the timeline is finished, students will write a summary of what they learned from the primary source material about any effects the damming of the Gila River had on the lifestyle of the Pimas.

Assessment

Social Science and Writing

Student writing can be assessed using the 6-trait writing rubric focusing on Ideas and Content and Organization. Mastery will be considered 4 or higher on the rubric.

Social Science and Reading

Student reading can be assessed by students correctly identifying key events and dates on the timeline. Teacher can assign points for each date based on the events that should be listed and correct color coding. Mastery will be considered 80% or higher.

Extensions

Examine the government document, *Statement of Findings: Gila River Indian Community Water Rights Settlement Act of 2004*, as a primary source. http://www.nrel.gov/extranet/ngs/pdfs/gric_final_settlement_agreement.pdf

Share this *New York Times* article about the effects of water loss on the Pima diet and health and how the return of water is hoped to bring changes. <http://www.nytimes.com/2008/08/31/us/31diabetes.html?mcubz=2>

Students can locate the historical descriptions in the original primary sources. Most are available in many libraries.

Students can record the history of the Gila River on a paper calendar stick using symbols for crops, fish, trees, animals, flowing water/lack of water.

Students can look at other Arizona rivers that were dammed and complete an inquiry as to "What are the positive and negative affects to damming rivers?"

Sources

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