

Adventures in Archaeology

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Grade Level 4-5
Duration 2 class periods

National Standards

GEOGRAPHY

Element 2: Places and Regions

4. The physical and human characteristics of places.

Element 5: Environment and Society

14. How human actions modify the physical environment.

Element 6: The Uses of Geography

17. How to apply geography to interpret the past

AZ Standards

MATHEMATICS

Measurement and Data

4.MD.A.2 Use the four operations to solve word problems and problems in real-world context involving distances, intervals of time (hr, min, sec), liquid volumes, masses of objects, and money, including decimals and problems involving fractions with like denominators, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using a variety of representations, including number lines that feature a measurement scale.

5.MD.A.1 Convert among different-sized standard measurement units within a given measurement system, and use these conversions in solving multi-step, real-world problems.

ELA

Reading

Craft and Structure

4.RI.4 and 5.RI.4 Determine the meaning of general academic and domain-specific words in a text relevant to a grade 4/5 topic or subject area.

Writing

Text Type and Purposes

4.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 the information or explanation presented.

Arizona Social Science Standards

GEOGRAPHY

The use of geographic representations and tools help individuals understand their world.

4.G1.1 Use and construct maps and graphs to represent changes in the Americas over time.

5.G1.1 Use and construct maps and graphs to represent changes in the United States.

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

4.G2.1 Compare the diverse ways people or groups of people have impacted, modified, or adapted to the environment of the Americas.

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

HISTORY

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

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

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

a. Introduce a topic clearly, provide a general observation and focus, and group related information logically; 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 and across categories of information using words, phrases, and clauses (e.g., in contrast, especially).

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

e. Provide a concluding statement or section related to the information or explanation presented.

innovations in the Americas.

Patterns of social and political interactions have shaped people, places, and events throughout history and continue to shape the modern world.

5.H4.1 Use primary and secondary sources to describe how diverse groups (racial, ethnic, class, gender, regional, immigrant/migrant) shaped the United States' multicultural society within the historical timeframe.

SIOP Elements		
<p>Preparation Adapting content Linking to background Linking to past learning Strategies used</p>	<p>Scaffolding Modeling Guided practice Independent practice Comprehensible input</p>	<p>Grouping Option Whole class Small groups Partners Independent</p>
<p>Integrating Processes Reading Writing Speaking Listening</p>	<p>Application Hands on Meaningful Linked to objectives Promotes engagement</p>	<p>Assessment Individual Group Written Oral</p>

Arizona English Language Proficiency Standards
<p>Grade 4 and 5 Basic Listening and Reading Standard 1 By the end of each language proficiency level, an English learner can construct meaning from oral presentations and literary and informational text through grade appropriate listening, reading, and viewing. B-1: determine the central idea (in informational text) and theme (in literary text) and explain how they are supported by key details. B-2: recount a text including specific details and information. B-4 utilize visual information to understand the text Speaking and Writing Standard 3 By the end of each language proficiency level, an English learner can speak and write about grade appropriate complex literary and informational texts and topics. B-3 compose informational text that includes details to develop a topic while using appropriate conventions. B-5: use examples of precise language and domain-specific vocabulary within informative texts. Listening, Speaking, Reading, and Writing Standard 7 By the end of each language proficiency level, an English learner can conduct research and evaluate and communicate findings to answer questions or solve problems.</p>

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B-1: gather information from multiple provided resources to answer questions.

Overview

Knowing about our past is an important part of learning about who we are and where we come from. It is also important to know about the cultures of the past in the region we live. In this lesson, students will explore the cultures of the Southwest by learning from archaeological evidence left by Indigenous people who lived there.

Purpose

In this lesson students will work in small groups to create a replica of a petroglyph from an archaeological site in the Southwestern United States. They will work with mean and median to determine the site's distance from Arizona. This lesson includes strategies for diverse learners (ELLs).

Key Vocabulary

archaeology: the science of studying cultures of the past by looking at what they have left behind

petroglyph: a picture carved into a rock

mean: the average of a set of numbers--add the terms, then divide the sum by the number of terms

median: the middle number in a set of data

Materials

- Vocabulary Pre and Post Test
- Student Readings 1-4
- Reading Worksheet
- *Ultimate Field Trip 2* by Susan Goodman
- Day 1 Exit Ticket
- Southwestern United States Map with locations for archaeological sites marked
- Calculating Which Site to Visit
- How Does Archaeology of Past Cultures Link to the Present Scoring Guide
- How is Archaeology of the Past and the Present?
- Petroglyph Drawing Rubric
- Construction paper or card stock
- Colored pencils/markers
- Rulers
- Ethics reading (optional)

Objectives

The student will be able to:

1. Describe how archaeology helps us better understand the past links us to the present.
2. Work cooperatively.
3. Calculate mean and median distances.
4. Create their own petroglyph.

Procedures

Prerequisites: Students should have some knowledge of the Indigenous people of the Southwest and how to obtain a mean and median of a set of data.

Prior to the Lesson: Give the Vocabulary Pre-Test.

SESSION ONE

Engage

- a. Introduce the lesson by asking what the students know about archaeology. Do we have any archaeological sites in Arizona?
https://en.wikipedia.org/wiki/Category:Archaeological_sites_in_Arizona
- b. Then show a map of the Crow Canyon Archaeological Center in the Mesa Verde region of Colorado. <https://www.crowcanyon.org/> Tell them that this is a famous place where the public can learn from an archaeologist what life was like thousands of years ago. Have students discuss their prior knowledge about the Indigenous people that lived in the Southwest. **(Preparation: Linking to Past Learning)**

Explore

- c. Read the selections of *Ultimate Field Trip 2* by Susan E. Goodman, aloud to students to give them an overview of the Crow Canyon Archaeological Center and what archaeology is. **(Integrating Processes: Listening)**
- d. Break class into small groups and discuss what it means to cooperate with other people in a group. **(Grouping Option: Small Groups, Application: Linked to objectives)**
- e. Distribute one reading to each group. Distribute the Vocabulary Cards and discuss what each one means. **(Scaffolding: Comprehensible input)**

Explain

- f. Inform students they are going on a virtual field trip to an archaeological site. They are now archaeologists looking for clues of the cultures that lived there in the past. They should record

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their findings on the Reading Worksheet.

(Integrating Processes: Reading, Writing)

- g. End the session by having students complete Day 1 Exit Ticket using information they learned from *Ultimate Field Trip 2* or the group reading activity. **(Application: Meaningful, Assessment: Individual)**

SESSION TWO

- h. Distribute the Southwestern United States map. Have them locate the 4 archaeological sites from the readings and locate Phoenix. Tell them that in order to go on a trip to these places, they need to do some calculations to determine which site they will visit. Using rulers and the maps provided, they will determine the distance to each site from Phoenix, Arizona using the map scale. They then will work together to determine the mean and median distance. **(Grouping Option: Small Groups, Application: Linked to objectives, Hands on)**

Elaborate

- i. Inform the students that they will be writing a multi-paragraph informative essay about how archaeology of past cultures is linked to the present. **(Integrating Processes: Listening) (Application: Linked to objectives)** To give them some ideas read and discuss the short paragraphs from *How Does Archaeology Link the Past and the Present?*

Evaluate

- j. Using information they have gathered from the previous session and with the class discussion that was just conducted, students will work on their paragraphs. Before the students begin, share the rubric that will be used to score their work. **(Scaffolding: Independent practice, Assessment: Individual, Written)**
- k. After students have completed the written paragraph, have students will create a petroglyph with pictures of what is important to them or describe who they are. **(Application: Hands on, Meaningful)**

Assessment

ELA

Essay on How is Archaeology of Past Cultures Linked to the Present can be scored with the Scoring Guide. Mastery will be considered 32 points or higher.

The Reading Worksheet can be graded for completeness and correctness. Mastery will be 80% or higher.

Vocabulary Post Test can be graded. Mastery will be considered 80% or higher.

Geography

The Southwestern United States map can be graded for correct identification of the archaeological sites. Mastery will be considered 100%.

Mathematics

The Calculating Which Site to Visit can be graded for correctness. Mastery will be considered 80% or higher.

Art

The petroglyph drawing can be graded using the Petroglyph Drawing Rubric. Mastery will be considered 12 points or higher.

Extensions

- Take a field trip to an archaeological site.
- Invite an archaeologist or someone in a related profession to speak to your class.
- Tailor this lesson to other times in history such as ancient civilizations in Greece, Egypt, etc.
- Extend the scope of archaeological sites beyond the Southwest.
- Make a road-trip out of it and have students come up with a budget and track mileage.
- Read and discuss the Ethics reading.

Sources

Article on Rock Art Canyon Ranch

<http://archive.azcentral.com/travel/articles/20121030-rock-art-ranch-climb-into-past.html>

Goodman, Susan. *Ultimate Field Trip 2: Digging Into Southwest Archaeology*. New York, NY. Aladdin Paperbacks. (Amazon \$14.99)

Archaeology as a social science

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3356624/>

Archaeology connects the past with the present

<https://www.in.gov/dnr/kids/6113.htm>

Guide to the Archaeological Site Las Labradas. Mexico

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What can archaeology teach us about humanity?

<https://science.howstuffworks.com/environmental/earth/archaeology/archaeology-teach-about-humanity1.htm>

Petroglyph National Monument website

<https://www.nps.gov/petr/learn/historyculture/what.htm>

Southwestern United States map

<http://geoalliance.asu.edu/sites/default/files/maps/SWUSA.pdf>

Painted Rock Petroglyph Site

<https://nextcampsite.com/painted-rock-petroglyph-site/>

Nine Mile Canyon website

climb-utah.com/ethics.htm