

# Hohokam Communities: Taking Risks and Making Trade-Offs

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<b>Grade Level</b>	4-5
<b>Class Period(s)</b>	3-4

Inspired by: [http://marsed.asu.edu/sites/default/files/pdfs\\_resources/Curiosity\\_Landing\\_Site\\_2012.pdf](http://marsed.asu.edu/sites/default/files/pdfs_resources/Curiosity_Landing_Site_2012.pdf)

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National Standards	AZ Standards	Arizona Social Science Standards
<p><b>Element 1: The World in Spatial Terms</b></p> <p>1. How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information</p> <p>3. How to analyze the spatial organization of people places, and environments on Earth's surface</p> <p><b>Element 2: Places and Regions</b></p> <p>4. The physical and human characteristics of places</p> <p><b>Element 4: Human Systems</b></p> <p>11. The patterns and networks of economic interdependence on the Earth's surface</p> <p>12. The processes, patterns, and functions of human settlement</p> <p>13. How the forces of cooperation and conflict among people influence the division and control of Earth's surface</p>	<p><b>ELA</b></p> <p><b>Reading</b></p> <p><b>Informational Text</b></p> <p><b>Key Ideas and Details</b></p> <p>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.</p> <p>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.</p> <p><b>Integration of Knowledge and Ideas</b></p> <p>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.</p> <p>4.RI.9 Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.</p> <p>5.RI.7 Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.</p> <p>5.RI.9 Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.</p>	<p><b>GEOGRAPHY</b></p> <p><b>The use of geographic representations and tools help individuals understand their world.</b></p> <p>4.G1.1 Use and construct maps and graphs to represent changes in the Americas over time.</p> <p>5.G1.1 Use and construct maps and graphs to represent changes in the United States.</p> <p><b>Human-environment interactions are essential aspects of human life in all societies.</b></p> <p>4.G2.1 Compare the diverse ways people or groups of people have impacted, modified, or adapted to the environment of the Americas.</p> <p>5.G2.1 Describe how natural and human-caused changes to habitats or climate can impact our world.</p> <p><b>Examining human population and movement helps individuals understand past, present, and future conditions on Earth's surface.</b></p> <p>4.G3.1 Explain how the location and use of resources affects human settlement and movement.</p> <p>5.G3.1 Use key historical events with geographic tools to analyze the causes and effects of environmental and technological events on human settlements and migration.</p> <p><b>Global interconnections and spatial patterns are a necessary part of geographic reasoning.</b></p> <p>4.G4.1 Explain the positive and negative effects of increasing economic interdependence on distinct groups, countries, and new settlements.</p>

**Element 6: The Uses of Geography**

17. How to apply geography to interpret the past

**Speaking and Listening Comprehension and Collaboration**

4.SL.1 and 5.SL.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4-5 topics and texts, building on others' ideas and expressing their own clearly.

- a. Come to discussions prepared having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
- b. Follow agreed upon rules for discussions and carry out assigned roles.
- c. Pose and respond to specific questions to clarify or follow up on information and make comments that contribute to the discussion and link to the remarks of others.
- d. Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.

**Presentation of Knowledge and Ideas**

4.SL.4 Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.  
 5.SL.4 Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

**SCIENCE**

**Life Science**

**4.L4U1.11** Analyze and interpret environmental data demonstrate that species either adapt and survive, or go extinct over time.  
**5.L4U3.11** Obtain, evaluate, and communicate evidence about how natural and human-caused changes to habitats or climate can impact populations.

5G4.1 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.**

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

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

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.

**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.

**ECONOMICS**

**A financially literate individual understands how to manage income, spending, and investment.**

5.E1.1 Give examples of financial risks that individuals and households face within the context of the time period studied.

**By applying economic reasoning, individuals seek to understand the decisions of people, groups, and societies.**

4.E2.1 Examine concepts of scarcity, choice, opportunity cost, and risk.

5.E2.1 Compare the benefits and costs of individual choices within the context of key historical events.

## Overview

Prehistoric Hohokam communities made decisions related to geographic space, irrigation, cooperation, and trade networks. What risks and what trade offs did they encounter? Understanding these some of these ancient factors can help students to make better decisions when looking at our modern world.

## Purpose

In this lesson, students will use multiple sources of information and data to explore the ancient Hohokam settlements of Arizona. Students will work in groups to discuss and debate information relative to an area of expertise: Farm, Trade, Building, Craft, and Wild Food. The end product will be presentations where each small group will propose which site is the best site to support a successful long-term community based on the risks and trade-offs they have decided to make.

## Materials

- Hohokam Trade Expert (pages 1-6)
- Hohokam Farm Expert (pages 7-11)
- Hohokam Building Expert (pages 12-17)
- Hohokam Craft Expert (pages 18-23)
- Hohokam Wild Food Expert (pages 24-30)
- Who Were the Hohokam? reading
- Hohokam Settlement: Taking Risks and Making Tradeoffs PowerPoint
- Community Notes for the different Expert groups (pages 1-10)
- Expert Group Chart
- Reflection Assignment
- Scoring Guide for Hohokam Communities: Taking Risks and Making Trade-offs
- 5 pieces of chart paper for Expert Group Charts

## Vocabulary

**trade-off** - something that you do not want but must accept in order to have something that you want

**risk** - to do something that may result in loss, failure, etc.

**competition (compete)** - the process of trying to get something that someone else is also trying to get

**pro** - an argument for something (positive details)

**con** - an argument against something (negative details)

**compromise** - a way of reaching agreement in which each person or group gives up something that was wanted in order to end an argument or dispute

## Objectives

The student will be able to:

1. Explain ideas and relationships with appropriate and descriptive details that show knowledge gained from the texts on the written assignment
2. Participate in discussions, follow discussion rules, ask and answer questions, and gain knowledge through the discussions
3. Present a report or opinion using appropriate facts and relevant details
4. Describe the Hohokam's legacy, culture, and contributions during discussions, on written assignment, and during report
5. Evaluate physical environments, natural resources, and ecosystems using multiple sources of information during discussions
6. Evaluate the components of trade using multiple sources of information during the discussions
7. Solve problems related to natural events, human activities, and utilization of resources during discussions, on written assignment, and during report

## Procedures

### SESSION ONE

#### ENGAGE – How do we decide where to live?

1. Ask the student to brainstorm about how people decide where to live. Ask them to write their thoughts and ideas on paper. Ask the students to share ideas with the class. Discuss: Is there one of these ideas or factors that is first or most important? The students may realize that this is a circular pattern that depends on many of the other factors.
2. Provide the definition for the vocabulary word, **trade-off**. Offer examples such as, I am saving up to buy a new computer, so I cannot buy toys. I don't like to live where it snows, so I live in Mesa, but the trade-off is that I have to put up with the very hot summers. Ask students to give examples of trade-off they have had to make. Provide the definition for the vocabulary word, **risk**. Offer examples of risks. If you live close to the river, in a time of drought, you will be closest to the source. However it is a risk to live close to a river because in a time of flooding, crops and buildings can be damaged.

3. Explain to the class that they will be working as a team to select the best place to live as if you were the Hohokam living in Arizona about 1,000 - 2,000 years ago. "In this activity, you will act as an Hohokam expert and work with your team to select the best community to for your Hohokam group. You will be working with other experts to choose a community that will meet many of your needs. You will be using maps, graphs, data, and information from ancient Hohokam sites in Arizona."

4. Use close reading strategies to understand the text in the Hohokam of Arizona reading. Show the Hohokam Settlement: Taking Risks and Making Tradeoffs PowerPoint [up to slide 23](#).

### SESSION TWO

#### EXPLORE – Analyze data

5. Divide students into five groups each representing an expert role. Later the expert teams will divide up into community teams with one expert from each of the roles in the community team.

6. Say: "Ancient people had lots of knowledge and expertise that they shared orally for many generations. Nowadays we use text, graphs, and images to share knowledge and expertise. Today you will think like a Hohokam using this information in the form of texts, charts, maps, and tables." Then distribute the Expert readings to the respective expert groups. (Wild Food group receives the reading for Wild Food Expert.) Support the students as they read, interpret, and discuss the information. Encourage students to use the vocabulary cards that are in each reading to help clarify words they are not sure of.

7. Pass out the Community Notes graphic organizer to each student in the expert group (Wild Food group receives the Community Notes: Wild Food Expert, etc.). Discuss the word, **competition**. Have students share some examples of competition. Working within their expert group, each student will write down important notes about each community using the questions to guide their analysis and discussions of all five communities.

### SESSION THREE

#### EXPLAIN – Rank and reason

8. After the students have written down notes for each site, ask them to work individually to rank the community on a decreasing scale from 5-1 and to identify the most important factors for his or her choice. Ask the Expert groups to get back together and take turns discussing their ranking of the communities and their reasoning.

9. Provide the definition for the vocabulary words, **pros** and **cons**. Each expert will fill out the Expert

Group Chart with a list of all the pros and cons of each site. The experts should work collaboratively to complete these charts to take back to their respective community team for a final meeting. Students may choose make changes to their ranking on the Community Notes page however, they do not have to reach consensus yet.

#### ELABORATE – Team consensus

10. Divide the expert groups into their community teams with one expert from each role on the team. Ask the students to take turns discussing their ranking of the communities, their reasoning, and their pros and cons for each of their top 2-3 choices of communities. The students should discuss, debate, and defend their choice for community. Provide each group with a large piece of chart paper with a similar pros and cons chart on it. The students can use this to write notes, ideas, and rankings.

11. Provide the definition for the vocabulary word, **compromise**. Offer examples of compromises. Ask the students to share a time when they had to compromise. Discuss that as a group, they will need to make compromises so not every expert will get their first choice. Review the definition for the vocabulary word, **risk**. There is also risk in making these compromises. The community will make decisions and weigh the risk. For example if farming is the most important factor, during a drought what will happen if the community does not have enough items to trade for food? What will happen if there is too much competition for trading items?

12. The team must reach consensus and chose the best community for their team. The team must select a presenter who will present their choice to the class and discuss how they came to that decision.

### SESSION FOUR

#### EVALUATE – Defend and reflect

13. Each group will take turns presenting their choice for the best site to support a successful long-term community. The teacher should ask each member of the group to participate in the discussion by asking each student a question such as:

- What was the most important thing to your community group? Why?
- What was the least important thing to your community group? Why?
- Which expert had to compromise the most? Why do you think so?
- Which expert compromised the least? Why do you think so?
- What did you learn about how important decisions are made?

14. Ask each student to individually complete the reflection assignment.

15. The teacher will provide information on each community that describes its long-term success (population estimates, time frame, amount of data recovered, etc.) using the Hohokam Settlement: Taking Risks and Making Tradeoffs PowerPoint (slides 24 to the end). End the class with a discussion comparing this modern information with the groups' choices.

### Assessment

Use the Scoring Guide for Hohokam Communities: Taking Risks and Making Trade-offs as an assessment tool. Students should be observed during small group discussions and during the presentation. A score of 3 or better in each area is considered mastery.

### Extensions

A field trip to one of the sites may be arranged. A research report can be assigned on the topics of canals, other communities, or other ancient groups of Arizona.

### Sources

If you need more information on cooperative learning, please go to <http://www.readwritethink.org/professional-development/strategy-guides/using-jigsaw-cooperative-learning-30599.html>

Vocabulary

<http://www.learnersdictionary.com>

Pronunciation

<http://dictionary.reference.com/browse/hohokam>

[http://www.merriam-](http://www.merriam-webster.com/dictionary/hohokam)

[webster.com/dictionary/hohokam](http://www.merriam-webster.com/dictionary/hohokam)

Inspiration lesson

[http://marsed.asu.edu/sites/default/files/pdfs\\_resources/Curiosity\\_Landing\\_Site\\_2012.pdf](http://marsed.asu.edu/sites/default/files/pdfs_resources/Curiosity_Landing_Site_2012.pdf)

Images

Pueblo Grande Museum Archaeological Park  
Hohokam Teacher Packet, Phoenix, Arizona

Archaeological Background:

Arizona Museum of Natural History

Hohokam! Educator Resource Guide, Mesa, Arizona

Cordell, Linda S. (1984) Prehistory of the Southwest. Academic Press.

Fish, Suzanne K and Paul R Fish. (2008) The Hohokam Millennium.

Grant Noble, David. (1991) The Hohokam: Ancient People of the Desert. School of American Research Press, Santa Fe, NM.

Johnson, Jolene K. (1997) Hohokam ecology: the ancient desert people and their environment. National Park Service.

Pueblo Grande Museum Archaeological Park.  
Hohokam Teacher Packet, Phoenix, Arizona

Maps

GIS Hohokam Canal and Site Layers courtesy of Pueblo Grande Museum

Howard, Jerry B. and Gary Huckleberry. (1991) *The Operation and Evolution of an Irrigation System: The East Papago Canal Study*. Soil Systems Publications in Archaeology No. 18. Soil Systems, Inc., Phoenix, AZ.

Woodson, M. Kyle. (2013) Map of Prehistoric Hohokam Canal Systems in the Middle Gila Valley. 4<sup>th</sup> edition. Cultural Resource Management Program, Gila River Indian Community, Sacaton, Arizona.