

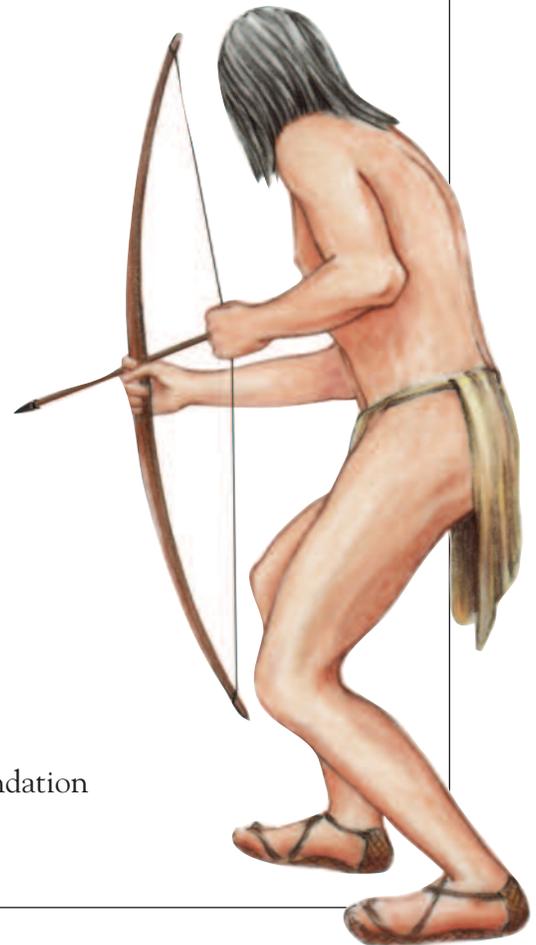
SUBSISTENCE STRATEGIES

IN MIDDLE TO LATE
PRECONTACT ARIZONA

Lesson Plan for Grades 4-7

Teacher's Materials

Lesson Plan



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Illustrations by: Cindy Elsner Hayward

ACKNOWLEDGEMENTS

I would like to thank the Arizona Department of Transportation (ADOT) for the opportunity to go beyond the basic standard outreach effort that is included in their compliance projects. Their willingness to listen to an idea and accept a proposal for an experimental project that could be used as a role model for future outreach efforts not only in Arizona, but across the country, is truly impressive. It proves that anything is possible, even within the restricted environment of a state agency. All it takes is a person with vision and an understanding of how the rules are a framework to work within as opposed to being rules to be restricted by. Though she is no longer with the ADOT, I would like to thank Serelle Laine, the original project manager for her spark and enthusiasm, and her ability to see what could be done. I would also like to thank Kae Neustadt and the others at ADOT who contributed to making this project happen.

Special thanks to Carol Warren, Social Studies Education Program Specialist at the Arizona Department of Education for her help in reviewing the materials and promoting them within the social studies education community.

The first stage of this project involved the presentation of a workshop for teachers within the project area. Ten educators participated in this initial outreach effort and each of them offered to continue their involvement in the project by reviewing draft materials. I would like to personally thank each teacher for their time and their support of these efforts

I would like to thank Monica Marquez, Yavapai Culture Director, Vincent Randall, Apache Culture Director, and Chris Coder, Archaeologist for speaking at the workshop, supporting the project, and reviewing the draft of the materials.

These materials were developed based on the information gathered during the State Route 89A archaeological project. The principal investigator for the archaeological project was Dr. Carla Van West. When it came time for ADOT to select a project to be used as a base for the development of educational materials, they selected the 89A project. This was as far as I was concerned, an excellent choice. Carla is not only a talented field archaeologist and project director; she is also gifted in presenting archaeological and cultural information to the public. Carla continued her involvement on this project by writing the essays and the Harvest Festival story included in the lesson plan. This was her first effort at producing a fictional story geared to a fourth through seventh grade audience and she did a spectacular job of it. I hope that everyone enjoys the essays and story as much as I do, and more than that, I hope it sparks the imagination of every child who reads them.

Cynthia Hayward deserves credit for the beautiful illustrations. She took words, painted them in, and brought them to life.

Thanks to all who helped bring this project to life and give it a home.



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SUBSISTENCE STRATEGIES IN MIDDLE TO LATE PRECONTACT ARIZONA

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Guiding Question:

Once farming became known and used in the area we now call Arizona, why would some groups remain hunters and gatherers?

Elements of Understanding:

There are 5 key concepts that students will learn through the completion of the activities in this lesson.

- Archaeological research adds to our understanding of the past.
- According to the scientific record, people have lived on this continent for at least 12,000 years.
- During each time period, a variety of cultural groups lived throughout the territory we know as Arizona.
- People satisfy their basic needs from the resources available within their environment, through travel, and through trade.
- Through time, the area we know as Arizona has had people who follow a hunting-gathering subsistence strategy or an agricultural subsistence strategy, and during the later precontact period, both strategies existed.

Post the Guiding Question and the Elements of Understanding (on the following page) for all students to see. This should be available through this lesson for students to visit as they participate in the activities.

These materials
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for educational use.

Subjects: Social studies,
science, language arts

**Arizona Social Studies
Standards, Concepts, and
Performance Objectives
(Grades 4–7):** See the
Vocabulary, Resources,
Content Standards folder

Skills: Knowledge,
comprehension, application,
analysis, synthesis, and
evaluation

Duration: 2–4 Class periods

Instructional Groupings:
Individual, small group, and
whole class activities

To gain an understanding of the subsistence strategies and life-ways of precontact cultures in Arizona, students will:

- Conduct original research, using primary and secondary sources, on the topics of the cultural groups, territories, time frames, and land-use of the area.
- Develop timelines indicating both BC/AD and years before present (BP).
- Use maps, charts, and graphs.
- Create maps, charts, and graphs to convey information relating to cultural groups, territories, time frames, and landuse of the area.
- Use role-play to evaluate the cause, effect, and impacts of adopting new subsistence strategies.

Materials:

Included in the lesson: Tables, maps, and essays; folder of illustrations; Lesson 2, “Culture Everywhere” from, *Intrigue of the Past: A Teacher’s Activity Guide for Fourth through Seventh Grades*; and “The Archaic Hunter-Gatherers” from *Discovering Archaeology in Arizona*. Photocopy a sufficient quantity for groups or individuals. If students work in groups, each group could be assigned one time period.

From outside sources: Popped and un-popped popcorn, walnuts, pinyon nuts, pumpkin seeds, beef or turkey jerky; Dixie cups or small bowls; maps; research sources.

Inquiry and Learning:

Inquiry as Integral to Learning

Archaeological research develops understandings about and abilities to do scientific inquiry. This lesson will take students through a guided inquiry process to learn about subsistence strategies in precontact Arizona. Students will be asked to generate questions, examine and analyze data, and come up with some conclusions using essays based on real archaeological data.

The design of learning experiences is critical to the success of learning for the student. These materials use the following learning cycle:

- students are **invited to learn** through a question, problem, or scenario;
- students **explore** ideas through hands-on experiences, stories or scenarios, or by watching a demonstration or video;
- students **discuss** their ideas, questions, or discoveries about the content they explored;
- students have opportunities to develop and refine their own **questions**;
- through some guidance, students **review and analyze information based on real data** from archaeological sites while learning new content;
- students **synthesize and apply** their ideas about their own question and the group question, problem or scenario presented in their invitation to learn.

Why is Subsistence in Precontact Arizona an Important Concept to Teach?

All humans need food, shelter, and water. Examining how humans located and used land in historic and precontact time periods helps students connect past to present. What we eat, how we acquire our food, and how we live are fundamental to understanding human survival.

Procedures:

Invitation to Learn

1. Bring in various food props: grass with seeds, corn on cob, popcorn, pumpkin seeds, turkey jerky, walnuts, pinyon nuts, etc. Ask the students: Do you know where your food comes from? How did people who lived before modern times acquire their food?
2. Students have opportunities to sample foods and share ideas. This provides an opportunity for students to share their prior knowledge about food and subsistence.
3. Further engage students by asking them to read a story or scenario about how young Ancestral Puebloans (for example) acquired their food for the year.
4. Ask students to record all evidence of food and how people got their food as they read or listen to the story. After the story is complete, give students a chance to share their ideas with each other in small groups. The small groups then share with the larger group.
5. Ask students to develop a list of questions about how people got their food in precontact Arizona. A sample of possible questions could include the following:
 - What is the process involved in hunting and gathering as a subsistence strategy?
 - Who practiced hunting and gathering?
What were the benefits and hardships of this practice?
 - What is the process involved in agriculture as a subsistence strategy?
 - Who were the first people to practice agriculture in Arizona?
 - What were the benefits and hardships of this practice?
 - When was agriculture introduced in Arizona?
 - Why did some people adopt agricultural practices? Hunter-gatherer practices? Both subsistence practices?

Explore

1. Begin the next phase of learning with the lesson “Culture Everywhere” from, *Intrigue of the Past: a Teacher’s Activity Guide for Fourth through Seventh Grade*. This lesson provides the base for the knowledge by introducing basic human needs, how people obtain the resources to satisfy those needs, and how archaeologists define culture based on the material remains. The focus will be on 3 cultures: one that practices hunting & gathering (Archaic period people), one that practices agriculture (precontact, first farmers in Arizona), and one that practices both (early settlers). A copy of this lesson has been included as a separate file.
2. Working in small cooperative groups of 3–5 individuals, students will explore more about each of these subsistence practices. Each group will be given a subsistence strategy practice to explore. They will be asked to find out as much as they can about that practice.

Discuss

1. Students will discuss their findings with the rest of the class. They will be asked to present evidence for how people met the basic needs and the benefits and hardships of their practice.
2. After each student group shares with the class, the listeners will be asked to develop questions and comments about that particular practice.
3. After every group has shared, students will be asked to refine the list of their questions forming the questions that they would like to investigate.

Data Analysis

This part of the lesson has been developed from the research conducted on the Arizona State Route 89A project. Essays in this lesson provide students with basic information on the peoples and subsistence patterns within Arizona and the Verde Valley.

The lesson is designed for fourth grade upwards. For grades 4–5, use only the essays appropriate to the reading levels and the available time. **At a minimum, students will need to read the essays “People of the Verde Valley”, “To Farm or Not to Farm”, and “The Harvest Festival” fictional story.** For grade 6 and above, students should read the cultural history of Arizona, as well as the others, so that they may synthesize and evaluate a broader spectrum of information.

To answer the research questions and ultimately, the Guiding Question, students will analyze data and synthesize, and evaluate the information that they have gathered through individual research and group projects.

The lesson plan includes structured tables in which students will lay out their data on territory, time period, and subsistence strategies. To better understand people and environment, students will illustrate maps of territories by time period. These worksheets may be completed by individual students or by students working in groups. The tables, maps, and answers to the questions will provide students with the information they will need to answer the Guiding Question.

Synthesize and Apply

Lower grade-levels or those only reading “People of the Verde Valley,” “To Farm or Not to Farm”, and “The Harvest Festival” fictional story will compare and contrast subsistence patterns of the peoples listed in these texts. They will use the information to answer their questions, the questions on the Questions for Understanding page and ultimately, answer the Guiding Question: “Once farming became known and used in the area we now call Arizona, why would some groups remain hunters and gatherers?” Students may also construct a timeline for the Verde Valley using the information contained in the essays and the data recorded on the activity pages.

A file folder has been provided that contains artifact illustrations. Students may illustrate the cultures and time periods with this or with other images located during independent research.

Students completing all of the readings will compare and contrast the cultures and subsistence patterns of the Verde Valley area with those in other parts of the state.

Closure: As a group, reflect back on and discuss the *Elements of Understanding* that should have been gained through this lesson. Based on all of the information, discuss the final two questions of *The Harvest Festival Questions for Understanding* page and the *Guiding Question*.

Extension Activities: If time permits, end this lesson with the role-playing activity, “The Archaic Hunter-Gatherers” from *Discovering Archaeology in Arizona*. A copy of this lesson is contained in a separate folder. Students may also consider drawing alternative scenes from the essays and stories.

Evaluation: Evaluation is based on the accurate completion of the worksheets, cooperative work, and growth in understanding of the key elements presented through the readings, discussions, and research conducted during this lesson. Individual rubrics should be developed for evaluating work and knowledge gained for each worksheet as well as overall knowledge gain and personal growth. Since rubrics set the standard for measuring achievement, it can be helpful to provide the rubrics to students prior to beginning each activity. With rubrics in hand, students know exactly what is expected and can perform to the highest level.

An excellent FREE on-line tool for the creation of rubrics is available on the Rubistar Webpage: <http://rubistar.4teachers.org/index.php>.

Teacher’s Background Information:

The following background information is provided to assist you with directing student learning. Please note, the Native American groups included in this lesson plan include those currently in the Verde Valley area. There are many other contemporary Native American groups in the state of Arizona who may feel connected to the Verde Valley.

Essays included in this Lesson Plan

Native Peoples and Native Cultures in what is Now Arizona: Time Periods and Peoples

This essay covers the cultural history of the entire area that we now call Arizona. It is a general overview of the peopling of the area. The essay provides information necessary for filling in the geographic information and time periods segments of this lesson. *The use of this essay is optional for lower grade-levels. It is geared to grades six and above.*

People of the Verde Valley

This essay focuses specifically on the cultural history of the Verde Valley area. *“People of the Verde Valley” provides essential information for all students in all grade-levels.*

To Farm or Not to Farm: That is the Question

This essay helps students think about the benefits and drawbacks of a hunting-gathering subsistence pattern and an agriculturally-based subsistence pattern. *“To Farm or Not to Farm” provides essential information for all students in all grade-levels.*

Information to assist with directing student conversations and answer questions:

Advantage of being Nomadic

- Frequent movement might prevent certain health issues and sanitation problems (waste-borne diseases) caused by staying in one place too long. Frequent movement may also prevent local resources, like firewood, from being depleted.
- A predominantly wild food diet made possible by frequent residential moves provided greater access to a wide variety of nutritious wild foods, especially under challenging and unpredictable environmental conditions, as well as an opportunity to collect other desirable resources, such as special stone for making tools, weapons, and jewelry.

Advantage of being a Farmer

- In areas that were over-hunted or poor in wild plant foods, cultivation was the only reasonable way of securing a food supply.
- Women who have carbohydrate-rich diets often have more children than women that do not. Communities would become larger with more people contributing to the food supply and well being of the group.

Reasons for the Formation of Larger Villages

Archaeologists have suggested three reasons for the formation of larger villages. These include:

- Competition for the best-watered farmland during an era of frequent drought;
- Fear of raiding by other people who want to steal food and other desirable resources; and,
- The need for large groups of people to (1) share work, food, and social responsibilities, and (2) protect their village and its valuables.

The Harvest Festival

The Harvest Festival is a story based on archaeological information. It provides essential information for all students in all grade-levels.

The story is *fiction*, not *fact*. It is, however, based on facts gathered by archaeologists and others who are interested in Native American people and their traditional ways of life. It takes place in the year A.D. 1366, at Tuzigoot Pueblo, and tells the story of the friendship between a 12-year old Sinagua girl and a 13-year old Yavapai boy, who see each other every autumn when their families come together to trade and visit.

To extend this lesson and discuss the connection with modern-day descendents, the Hopi names may be introduced when the “Harvest Festival” essay is introduced.

See website:

- http://www.native-languages.org/hopi_animals.htm/ and
- http://www.native-languages.org/hopi_colors.htm for Hopi words used as names.

Yavapai words similar to the names in the story can be found in Kendall, Martha B. (1983) Yuman Languages. In *Southwest*, by Alfonzo Ortiz, pp. 4-12. Handbook of North American Indians, vol. 10, W. C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

	English
Hopi Name	Translation
Sikya-muuyaw	Yellow Moon
Paalang-wuuhti	Red Woman
Tawupu	Rabbit Skin Blanket
Hoonaw	Bear
Kwahu	Eagle
Toho	Mountain Lion
Pòoko	Dog

	English
Yavapai Name	Translation
Yamita	Bobcat Boy
Kwakta	Big Deer
Kathar	Coyote Woman