Slide 1
Text: Ancient Peoples of the Southwest 10,000BC to 1500AD
Arizona History Lecture #1
Heidi J. Osselaer
Audio: Ancient Peoples of the Southwest

Slide 2
Text: Aztlan
Pimeria Alta
El Norte
The American Southwest

Audio: The Ancient Aztecs who traveled north to trade refer to it as Aztlan. Early Spanish explorers call it Pimeria Alta. Mexicans in the early nineteenth century named it El Norte and it was only after the Mexican-American War of 1848 that this region became known as the American Southwest.

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Audio: While this series of lectures focuses on Arizona, when we talk about the early history of the region before the state existed, sometimes we will talk about the people who lived in the wider known as the Southwest, which includes the southern regions of Nevada, Utah and Colorado; the northern states of Mexico which includes Sonora and Chihuahua, as well as Arizona and New Mexico.

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Audio: The geography of Arizona includes three distinct climate zones: the Colorado Plateau; the Mogollon Rim, which includes the White Mountains; and to the south the Sonoran Desert.

Slide 5

Audio: [Photo of storm clouds over the desert]
Audio: Climate has always been the prevailing influence of the region.

Slide 6

[Photo of desert landscape and mountains]

Audio: Low levels of rainfall have dictated the availability of plants and wildlife and in turn have had dramatic influence on how humans have inhabited the region.

Slide 7

[Photo of Roman ruins]

Audio: Before we proceed, I must noted that compared to ancient civilizations found in Europe and the Middle East, we do not know much about the ancient peoples of the Southwest. These cultures in America did not have a written language and so, unlike the ancient Egyptians, or Greeks, or the Romans we cannot read about theirs lives from the writings they left behind.

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[Photo of a pueblo]

Audio: Furthermore, stone building materials were rare in the Southwest, so most structures were fashioned from dirt, wood, adobe and other organic materials that decomposed or washed away over time.

Slide 9

[Photo of pottery shards]

Audio: Archeologists and anthropologists must piece together what life was like through shards of pottery and excavated walls.

Slide 10

[Photo of stonewalls of a ruin]

Audio: it is only when we find ruins of the Pueblo Indians, built around 700 to 1100 AD, that our understanding increases dramatically. Our knowledge of these cultures changes every time an archeologist makes a discovery and puts another piece in this giant jigsaw puzzle.

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Text: Bering Straight Migration

Approximately 10,000 BC
The first signs of human habitation in the American Southwest date to roughly 10,000 BC. People from Asia Minor migrated across the Bering Straight during the final Ice Age. Great sheets of ice never made it as far south as present day Arizona, but there the cooler, wetter climate during the Ice Age had an effect on vegetation and animal life.

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**Text:** Paleo-Indians

- Clovis or Folsom tools made of stone, bone or wood
- Baskets
- Highly mobile
- Traded extensively
- Petroglyphs

**Audio:** Pushed south by the growing population, the Paleo-Indians that dwelled in the Southwest had fire, domesticated dogs and simple tools made of stone, bone or wood. These included knives, lance points, dart tips, scrapers and awls. These Paleo-Indian groups named Clovis or Folsom people were primarily hunters who lived in lived in highly mobile groups moving across the region after game.

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**[Rendering of Paleo-Indians making baskets and other daily activities]**

**Audio:** They made baskets to carry food because they were light and not breakable; and they lived in shelters made of hide, ideal for a highly mobile people. These baskets, tools, along with decorative materials are excavated throughout the Southwest and are evidence that these people traveled and traded widely.

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**[Drawings of men hunting Ice Age animals]**

**Audio:** Hunter-gatherers found an abundance of now-extinct Ice Age animals, such as mammoth and even the American camel and lion, as well as modern animals such as the rabbit, deer and antelope.

**Slide 15**

**Text:** Atlatl
Audio: using atlatl and spears, they became adept at killing game. Their diet was supplemented with berries, pinion nuts and edible grasses found in abundance. Archeologists and anthropologists continue to debate whether the Ice Age animals disappeared because of overhunting or because of climate change, or perhaps both. But the evidence is clear that life was changing between 7,000 BC and 200 AD. As temperatures rose, the streams and rivers dried up, and wildlife became scarce. Human inhabitants of the Southwest adapted and gradually transitioned to agricultural lifestyles.

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Text: Maize arrives from Mesoamerica around 2000 BC

Audio: Maize, or corn, arrived from Mesoamerica, present day Mexico, in the Southwest as early as 10,000 BC and the plant was firmly established by 1,000BC. The increasingly arid climate of the Southwest was not particularly suited to the cultivation of corn, which required more rainwater than usually fell in the region.

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Text: Corn, beans, and squash

Also known as the “Three Sisters”

Audio: The cultivation of corn, squash, and later on beans, was not an alternative to hunting and gathering but rather an addition to the food supply. Farming has its plusses and its minuses for a civilization. Farming is hard work but it is less dangerous than killing wild animals. Tending crops is time consuming and it means less mobility to travel after game. Corn, beans can be dried and stored for food supplies during winter or summer months when wildlife is difficult to find. Farming requires cooperation to be effective and a social system of rules and authority to make sure the crops are properly cared for, an alien concept to earlier hunters and gatherers. Finally, malnutrition and even starvation is common when environmental conditions change and crops are destroyed. Native plants and animals are well adapted to the local ecosystem and are therefore more likely to survive during droughts or freezes. However, dependence on imported corn, beans and squash, cultivars that came from a more tropical climate meant that they were more susceptible to failure in an arid southwest.
Audio: By the end of the Archaic period, around 200 AD, the people of the Southwest were far less mobile and evidence of a more stationary life is found in abundance. These people are usually referred to as Paleo-Indians by archaeologists.

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Text: Paleo-Indian

- 7000 BC and 200 AD
- Temperatures rise, less rainfall in Southwest
- Maize (corn) imported from Mesoamerica (Mexico)
- Hunter diet supplemented with corn, squash, and beans
- More sedentary life than the Clovis or Folsom people
- Farming requires cooperation and a system of rules and authority
- Pottery is more abundant
- Metates and manos used to grind corn
- Bows and arrows
- Lived in pit houses

Audio: Nomadic groups leave little evidence of their lives, but sedentary groups provide us with many useful artifacts for analysis. Pottery is an important indicator of a sedentary culture because it is easily broken when moved around often. Starting in 200 AD, large clay pots used for food storage and cooking are found in abundance in the Southwest and that’s evidence that people were settling down and not moving around as much. Pottery with lids kept food stores from moisture and invading rodents, but more importantly, allow people to cook foods down to make porridges that can be easily digested into nutritious meals.

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Text: Metates and manos

Audio: Another important innovation was in food processing. People used metates, or stone slabs with shallow basins, and mano, or oval stones to grind corn.

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[Rendering of a mammoth hunt]
Audio: Prior to this period, spears and atlatl were used by large groups to drive herds of animals. Now bows and arrows replaced the spears.

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[Image of a hunter using a bow and arrow]

Audio: This transition indicates that more individuals, who were also subsisting on agriculture, were hunting small game alone or in small groups.

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Text: Earthen pit house

[Drawing of an earthen pit house] [Photo of the inside of a recreated earthen pit house]

Audio: The first agricultural people dwelling in the Southwest built pit houses. Pit houses were very practical homes that kept out the heat in summer and the cold in winter.

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Text: Earthen pit house interior

[Photo of the inside of a pit house]

Audio: In the desert, a four to six foot pit was dug in the loose soil and the posts were driven in the ground to support the roof, which was constructed of beams, brush and soil. The pit was covered with wood and reeds, and a veneer of dirt in the desert. Fire pits were included to provide warmth in winter and for cooking.

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Text: Plastered pit house

[Photo of a pit house exhibit]

Audio: In the mountainous regions, the pit house exterior was plastered for better insulation. Archaeologists have determined that the average floor temperature in a pit house in Chaco Canyon, the home of the Anasazi in the Four Corners region, remain at 63 degrees in July and be as warm as 60 degrees in January. By 600 to 800 AD, the pit houses were found in clusters, indicating the villages were formed at that time.

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Text: beans (lysine) + squash + corn = protein
Audio: In storage pits connected to pit houses, archaeologists find remnants of a diet that included corn, squash and beans. The introduction of beans is important because they contain lysine, an amino acid that allows humans to create protein when combined with a diet of corn and squash.

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Audio: The period from 700-1130 AD is generally described by archaeologists as one of the most dynamic and interesting periods in the prehistoric Southwest. Population increased dramatically and large towns with multi-room houses appeared for the first time. Snaketown in southern Arizona and Chaco Canyon in the Four Corners region are two of the most famous of these communities.

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Audio: It is at this juncture that archaeologists begin to distinguish between three major cultural groups: the Hohokam, Mogollon, and the Anasazi. These three groups did not have distinct territorial or cultural boundaries between them. But rather, they traded, worshipped and inter-married with each other. Today we categorize cultures by their languages: Spaniards, Germans or Japanese, for example. The three major cultures of the Southwest did not have a written language, so it’s impossible from this distance of time to understand their spoken languages or even to know the names that they gave for themselves. There might have been many more language group divisions that we are unaware of, and divisions meaningful to their cultures are difficult to detect 1,000 years later just from the artifacts they left behind.

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Text: Puebloan People

- Includes Hohokam, Mogollon, and Anasazi
- “Pueblo” is Spanish word for “town dweller”
- More sedentary than Cochise People, but still continued to hunt and gather native plants
- Lived in permanent villages in buildings made of clay, wood, and plaster
- Employed dry-farming techniques to grow corn, beans and squash
- Worked communally in fields to ensure all members of society were fed
- Pottery is used in trade
Audio: Although there are important differences between these cultures, there are also striking similarities. They are commonly referred to as Puebloan, because of the earthen housing that they built. These cultures are more sedentary than their hunter-gatherers ancestors because they produce a significant proportion of their own food, which required commitment to one location during the growing season. Because they lived in permanent villages, they had more time to develop complex religious ceremonies and to make advances in their arts. However some cultures migrated seasonally because they still supplemented their diets with wild game and native plants like agave, cacti and mesquite beans. Other times they were forced to move because a changing environment made food production difficult. Because there is so little rainfall in the Southwest, the employed an intensive form of agriculture often referred to as dry farming, which uses irrigation. These cultures did not function like European feudal societies of the time. They did not build armies or routinely go to war to capture lands. Though they developed social hierarchies, these societies were much more communal in nature, with women working together to grind corn or plaster homes, and men tending common fields or hunting in small groups. It was a system that worked well in a harsh climate where cooperation was necessary for survival.

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Text: Hohokam

[Map of Arizona with Hohokam Culture Area outlined]

Audio: Let’s look at the Hohokam first. The Hohokam settled along the Gila River just south of present-day Phoenix around 200 AD. They are believed to have wondered up from Mesoamerica or modern-day Mexico.

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Text: Hohokam

- Lived in the Salt River Valley
- Hohokam means “those who have gone” or “all used up”
- Built pueblo homes and used dry farm irrigation techniques

[Image of Hohokam pueblo]

Audio: The word Hohokam is an O’odham word that may be translated to as “those who have gone” or “all used up.” They dominated the arid desert region of southern Arizona below the Mogollon Rim and south, to the northern parts of Mexico, what we call Sonora today.

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Text: Snaketown around AD1000
Snaketown site today

[Rendering of Snaketown around AD1000] [Photo of Snaketown site today]

Audio: Their largest village is called Snaketown today because the Hohokam used to place their trash in mounds, which they plastered over. Over time, the plaster washed away, leaving soft soil that had decomposed from organic materials. And that provided excellent burrows for small rodents. When rodents live in the desert, snakes follow and they reproduce in tremendous numbers by the time archaeologists uncover the area. By the 12th century, perhaps as many as 24,000 to 50,000 people lived in the Phoenix basin, the highest population density in North America during the prehistoric era. None of these villages was fortified, leaving the impression that this was a peaceful society. We are not sure, but is the impression at least.

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[Drawing of wattle and daub wall]

Audio: The Hohokam continued to build the wattle and daub pit houses, called jacal, throughout the Southwest. The structures were built in clusters, indicating that extended family lived close to one another.

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Text: Recreation of a pit house at the Pueblo Grande Museum

[Photo of a recreated pit house]

Audio: During this period, temperatures would reach up to 115 degrees in the summer and as low as 20 degrees below zero in the winter. But these were very efficient homes that provide protection in this extreme climate. Here you see a reconstruction of one of these homes.

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Text: Pueblo Grande was built AD500

[Photo of ruins at Pueblo Grande]

Audio: Over time, many larger dwellings were built in the center of Snaketown, indicating that a social elite was developing. There are two prime examples of Hohokam sites that remain for us today, one at Pueblo Grande and one at Casa Grande.

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Text: Pueblo Grande Museum

[Photo of entrance to Pueblo Grande Museum]
Audio: The Pueblo Grande Museum and Archaeological Park is located at 44th Street and Washington in Phoenix, where this village was built 1500 years ago.

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Text: Excavation of a Hohokam pit house

[Photo of an excavation of a Hohokam pit house]

Audio: Very little of Pueblo Grande is left for us to see today. Excavation continues all of the time.

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Text: Excavation site at Pueblo Grande

[Photo of an excavation site at Pueblo Grande]

Audio: Most of the city is buried under the current city of Phoenix.

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Text: Ruins at Casa Grande

First prehistoric and cultural site preserved by the US government, 1892

[Photo of ruins at Casa Grande]

Audio: The ruins at Casa Grande, which is a 4-story structure built around 1325 AD, are very unique for the Hohokam culture. This striking building was larger than any other structure for hundreds of miles in any direction. It’s unclear what its purpose was. Perhaps it was a monument. Today you can visit the Casa Grande Ruins National Monument, just outside of Coolidge, about an hours drive down the I10 from Phoenix. It was the first prehistoric and cultural site to be preserved by the US government, in 1892.

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Text: Ancient ball court at Pueblo Grande

[Photo of an ancient ball court at Pueblo Grande]

Audio: Several characteristics distinguish the Hohokam from other cultures. Ball courts, constructed beginning in the 8th century, were among them. Balls made of rubber plant native to the region, as well as balls made of mesquite wood have been excavated in the area. The balls were all about 3 inches in diameter.
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Text: Hohokam ball court

[Drawing of a Hohokam ball court]

Audio: The largest ball courts could accommodate several hundred spectators. More than 200 ball courts have been identified to dates in the region.

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Text: Artist concept of Pueblo Grande platform mound

[Artist concept of Pueblo Grande platform mound]

Audio: Platform mounds are also unique to the Hohokam. Archaeologists do not know what purpose they served, but believe they may have had religious ritual significance. The ball courts and platform mounds are similar to those that are found in present-day Mexico and indicate a close exchange of ideas between the Hohokam people and the Mesoamerican cultures to the south.

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Text: Snaketown pottery

[Photo of a Hohokam pot]

Audio: Pottery was also unique to this culture. The Hohokam probably started making pottery around the 2nd century AD. Their pottery was made from large coils of clay that was paddled smooth.

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Text: Hohokam red on bluff pottery

[Photo of a Hohokam pot]

Audio: The designs evolved over time, but the style most closely associated with them was the red on buff, which persisted for over 500 years. It was polished, it was this, but it was not quite completely smooth. It feels like an orange to the touch.

Slide 45

Text: Caliche sediment

[Photo of Caliche sediment]
Audio: The Hohokam cremated rather than buried their dead and we are not sure why. They perhaps did this for religious reasons, but also they might have done it for more practical reasons. The soil in the area tends to be very hard. You find a substance called caliche often the Phoenix basin area. It’s a hard rock made of hard calcium substance and it’s very difficult to dig. If you have ever tried to dig a pool in the Phoenix area, you know that caliche exists and really takes a lot of effort to dig that down. We think perhaps because of that, they chose to cremate their dead. If you bury your dead to close to the top of the soil, wild animals can uncover the dead. So that may be the reason for this practice.

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Text: Excavated Hohokam canal

[Photo of an excavated Hohokam canal]

Audio: Canals are also very unique to the Hohokam. They lived along the Gila, the Salt and the Verde Rivers and they pioneered the use of canal systems to irrigate their fields of corn, beans, squash, cotton, agave and other native plants. Wild foods like mesquite beans and cactus fruit were also gathered. Local deer and rabbit completed their diet.

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Text: Hohokam canal system

[Map of the Hohokam canal system]

Audio: Probably about 1,000 miles of canals were eventually built were by the Hohokam, and they were all dug with sticks and stone tools. Over time, the extensive canal system may have led to environmental problems in the region.

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Text: Canal irrigation of corn

[Rendering of Hohokam repairing a canal and farming]

Audio: As water was drawn off the river for the fields, the water level dropped. Scientists discovered a mineral crust began to appear in the 14th century canals, indicating that the saline level in the rivers and canals was increasing. In later centuries when the Spaniards arrived, they named the river Rio Salado, or Salt River. Over time, this lack of a fresh water supply may have forced the Hohokam to move.

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[Photo of hieroglyphs on a rock]
By 1450, most Hohokam sites, like Casa Grande, were abandoned. There’s evidence of major floods and a fire prior to this time, as well as lack of pure water from over cultivation. There is also some evidence that other people may have made incursions in this area. Perhaps the Salado or early Athapaskan immigrants made life uncomfortable for the Hohokam. Whatever the reason, they moved on to a better location. We’ll return to this later on.

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**Text:** Salt River Project canal

[Photo of the Salt River Project canal]

Later in 1868, American jack Swilling came to the Salt River Valley and reopened the canals. The Salt River Project expanded on them in the 20th century and continues to operate them for the benefit of the people in Maricopa County.

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[Map of Arizona and New Mexico, with location of cultural groups]

Let’s look at the Mogollon next. The Mogollon people lived in the mountain region along the rim country, stretching from Payson into New Mexico and throughout the White Mountains.

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**Text:** Mogollon Rim

[Physical map of northern portion of Arizona]

Their name is from the Mogollon Rim, which was named originally after the Spanish governor of Mexico.

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[Photo of a view from Mogollon Rim]

The region they lived in, north and east of the Hohokam was colder, wetter and contained more vegetation than the desert.

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**Text:** Mogollon

- Lived on the Mogollon Rim
- Cooler, wetter climate than the Salt River Valley
• Location required less irrigation, able to gather and hunt more
• Named for a Spanish governor of Mexico
• Famous for their pottery

[Photo of a view from Mogollon Rim] [Photo of a pottery bowl]

Audio: Their daily life was probably fairly similar to the Hohokam and revolved around farming, although they required less irrigation because they could count on more rain, and gathering nuts, cactus fruit, berries and hunting animals in greater quantities. They used manos and metates for grinding, stone tools hunting and preparing hides, and they produce pottery for cooking and storage.

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[Photo of a cliff dwelling]

Audio: The first type of structure was also a pit house, but by the late tenth and early eleventh century, they began to build cliff dwellings becoming what we now call Puebloan. These structures were a series of individual units that were added onto as families grew, giving them a haphazard and unplanned appearance. Each living area had an adobe floor, hearth with an ashbin and an opening in the roof used both as an entrance and a vent for the fire. Daily activities like grinding corn and cooking usually occurred either on the roofs or in adjacent plazas.

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[Drawing of the inside of a kiva] [Photo of a kiva]

Audio: Another important characteristic of the Mogollon was the kiva, a room for religious ceremonies. The kiva was round and dug into the ground.

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[Photo of a pottery bowl with two human figures]

Audio: Because they buried their dead, we know a little more about the Mogollon than we know about the Hohokam. Clothing, sandals, jewelry, pottery and other items were buried with them and provide us evidence of their culture. When someone died, he or she was buried with pottery. A bowl was placed on the head of the deceased, with a hole punched through to allow the spirit to escape.

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Text: Mogollon pottery: brownware => Mimbres

[Photo of brownware pottery] [Photo of mimbres pottery]
Audio: The Mogollon started making brown stone pottery around 400 AD, but by 500, it changed to something very similar to the Hohokam’s red on buff pottery. The best-known pottery was made by the Mimbres, a subgroup of the Mogollon. This black on white pottery has a distinctive and exceptional representational style that is valued by collectors today. The art is more intricate and accurate than anything from this period. Unfortunately that means many sites have been looted by collectors.

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Text: Mogollon Mimbres pottery

[Photos of Mimbres pottery]

Audio: Mythical figures and common animals, as well as humans appear on the pottery, giving us greater insight into the culture. They show scenes of human sacrifice and beheadings, supernatural creatures and the predecessors of kachinas, later associated with the Hopi Indians.

By 1150, the Mogollon had moved on. There’s evidence that as their population increase, they continue to cut trees for buildings and fuel and the forests in the region become overharvested. Also they started hunting smaller game like rabbit and birds rather than deer, perhaps because they had also depleted deer supply. Villages started to appear further from flood plains, indicating their population had grown too large for the land to support the Mogollon people. Some archaeologists speculate that they may have assimilated with the Anasazi, who later became the Hopi.

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[Photo of piece of pottery]

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[Map of Anasazi, Hohokam and Mogollon territories]

Audio: Now let’s take a look at the Anasazi Indians. In Navajo, the word “Anasazi” means the ancient ones, but it can also be translated as “ancestors of our enemies” which is true of early Navajo bands who simultaneously inhabited this region with the ancient Anasazis.

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[Photo of Canyon de Chelly]

Audio: The Anasazi culture, which was closely related to the Mogollon, resided primarily on the Colorado Plateau in the four corners region, a place of spectacular scenery. But evidence of their culture can be found as far west as the Grand Canyon.
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Text: Anasazi

- Four Corners region
- Anasazi means “the ancient ones” or “ancestors of our enemies”
- Closely related to the Mogollon
- First settled at Black Mesa 850 AD
- 10 to 15 inches of precipitation and snowfall a year

[Photo of interior walls of a pueblo] [Photo of Black Mesa]

Audio: Elevations range from 6300 to 7000 feet, and annual rainfall and snowfall is only between 10 and 15 inches, which make for a very short growing season. Native plants and animals are not readily available. Despite these drawbacks, the area has obvious physical characteristics that would draw humans and there is archaeological evidence that people lived here as early as 7000 BC.

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Text: Anasazi ruins at Black Mesa

[Photo of Anasazi ruins at Black Mesa]

Audio: But the first permanent villages at Black Mesa were not built until roughly 850 AD. Prior to that time, people were more nomadic. During the 11th century, the local population increased dramatically. Define normal population growth. It is likely that other people moved into the region, perhaps the Mogollon, and greatly increases the density in the area.

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[Drawing of daily life of the Anasazi]

Audio: The daily life of the Anasazi was similar to the Hohokam and Mogollon, and would have involved a seasonal calendar of planting corn in the spring, collecting native plants, hunting animals and harvesting corn in the fall. Originally they lived in pit houses, but then, slowly around 700 or 800 AD, they began to build the pueblo apartment style homes that are associated with the Anasazi culture. We know from pueblo oral traditions that houses were re-plastered and roofs were repaired in the spring. The original home sights were small, containing only 8-18 rooms, half of which were used for storage for their food.

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[Sketch of people climbing up to a dwelling]
Audio: But then suddenly, these imposing structures, built between 900 and 1125 AD, started to appear. These bigger buildings required months, or even years, to construct.

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Text: Exploring the ruins in Mesa Verde National Park

[Photo of Mesa Verde ruins]

Audio: The Anasazi are best know for their cliff dwellings Mesa Verde National Park, Navajo National Monument.

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Text: Canyon de Chelly ruins

[Photo of ruins at Canyon de Chelly]

Audio: Canyon de Chelly, and Chaco Canyon

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Text: Chaco Canyon

[Photo of ruins at Chaco Canyon]

Audio: Chaco Canyon was their religious center. The Anasazi built some of the most incredible buildings in the prehistoric southwest at this city.

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Text: Doorways at Chaco Canyon

[Photo of doorways at Chaco Canyon]

Audio: We are not sure how the great houses were used. Perhaps they were places of ritual and worship, but they might have been residences. Perhaps they served multiple purposes.

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Text: Pueblo Bonita

[Photo of Pueblo Bonita ruins]

Audio: The largest house at Chaco Canyon, Pueblo Bonita, has over 650 rooms. The Spaniards who found this spot named it Beautiful House, or Pueblo Bonita, and believed that an impressive civilization had once lived in this spot.
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Text: Architectural Plan of Pueblo Bonita

[Photo of architectural Plan of Pueblo Bonita]

Audio: Little did they realize that their Hopi guides were the descendants of these Anasazi.

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[Photo of inner walls of Anasazi pueblo]

Audio: These buildings were made of sandstone walls three feet thick at their base and the stone cut from nearby cliffs.

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Text: [Photo of inner walls of Anasazi pueblo]

Audio: Several hundred thousand trees were necessary to create the roofs and floors for all the great houses, most of which came from at least 50 miles away.

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Text: Chaco Canyon roads

[Map of Chaco Canyon roads]

Audio: They built extension roads, sometimes 15-20 feet wide, even though they did not have the wheel. Archaeologists and anthropologists surmise that because there were no domesticated draft animals in the western hemisphere—there were no horses, oxen or donkeys like there were in the old world of Europe—that because of that, there was no impetus to develop a wheel or cart in the new world. Those inventions would just be too cumbersome for a human to pull. It was better use of a human’s energy to transport materials in large baskets on the backs of men and women than it was for them to pull a cart.

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Text: Anasazi roads

[Photo of Anasazi roads]

Audio: However, wide roads were necessary for men were marching 20 abreast carrying these large trees along with them long distances. And that is what the Anasazi did on the roads that you see here to build their wondrous cities on the cliffs of the four corners region.
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Text: Kiva ruins Chaco Canyon

[Photo of Kiva ruins at Chaco Canyon]

Audio: To compliment the grandeur of the buildings, the Anasazi built the great kivas that were 34 to 63 feet in diameter. They dug six feet into the ground for the base; built masonry walls and then wood beams were constructed to enclose them on top. The stone was held together with the mud mortar and the walls were originally covered with a plaster veneer for protection from the rains. The stonework is simply amazing, cut perfectly to fit together. You can still see the beams or vigas, used for flooring, roofs and ____.

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Text: Chetro Ketl Great Kiva

[Photo of Chetro Ketl Great Kiva]

Audio: The Great Kiva at Chetro Ketl required a crew of 30 men working 10 hours a day for 100 days. Twenty-six thousand trees were used for this structure alone. The kiva was mostly the domain of men, who took charge of most religious ceremonies, but woman could enter the kiva to watch or to bring food. It is unclear what kinds of ceremonies were held. Some have speculated that these were the forerunner of sweat lodges, but that really has not been proven.

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[Drawing of Anasazi harvesting corn]

Audio: Archaeologists have speculated how so many people could have been sustained in this area so removed from water sources and with such a short growing season. Despite the lack of rainfall in the region, there is no evidence of irrigation canals, terracing or other attempts at increasing agricultural production. One theory is that run off along the rim of the canyon in that region was significant and was channeled into gardens. Another explanation is that the Anasazis relied primarily on trade with other tribes. There’s a lot of turquoise found in the area and it was used to trade for food, like domesticated turkeys that were raised by the Mogollon people. The children tended the turkeys for the village. The Anasazi used turkey feathers, combined with yucca fibers and strips of rabbit fur to make warm blankets. Women were primarily responsible for tending the fields and the grinding the corn and seed. Men hunted and gathered firewood. By 800 or 900 AD, game was already so scarce in the region that it could not provide a significant contribution to Anasazi diet.
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Text: Anasazi 900-1100AD

[Photo of Anasazi pottery]

Audio: The first pottery arrived in the four corners between 300 and 800 AD and it was simple brownware – thick brown bowls. Pottery progressed and was similar to traditional Mogollon pottery. Red and white pots were decorated with geometric designs. The Anasazi paints came from boiling plants, while the Mogollon used minerals ground up for their paints.

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Text: Pictograph shows 1054 supernova

[Photo of petrographs of 1054 supernova]

Audio: The Anasazi were skilled astronomers and it was important for religious ceremonies to know the movements of the moon and the sun. On a butte in Chaco Canyon, three sandstone slabs, each just over six feet tall, deflect light in a way that the Anasazi could mark the rock to determine the spring and fall equinox, as well as the summer and winter solstice. Priests could determine when it was time to plant seeds or to harvest crops. There is also evidence that they recorded astronomical events such as supernovas with petrographs in the rocks as you see here. Now let’s look at three other cultures that left their mark on prehistoric Arizona.

Slide 82

[Map of Anasazi, Hohokam, Mogollon and Salado territories]

Audio: The Salado: The Salado derived their name from the Rio Salado River and they lived in the drainage basin of the Salt River Basin.

Slide 83

Text: Salado

- Name derived from Rio Salado, Spanish for Salt River
- Lived in the Tonto Basin 1100-1500 AD

[Photo of Salado cliff dwelling]

Audio: There is disagreement in the archaeological community about the Salado people. Many believe they are a subgroup of the Hohokam or the Anasazi, while others contend they are a separate people. They appeared in the Tonto Basin around 1100 AD and lived there until about 1500. This was a period of great change. There was less rainfall and the Hohokam, Anasazi and
Mogollon had all used their resources to the limit. Cultures faced environmental challenges and were forced to relocate. Some archaeologists believe that the Tonto Basin, where the Salt River drained, fields, irrigation and the cooler weather provided more plentiful game and diverse wild plants. It is possible, also, that many different groups moved into the area all at once and blended their cultures. As one archaeologist put it, the Salado were no one and everyone. There is disagreement whether or not they were a separate culture or just an amalgamation of multiple people moving simultaneously to the Tonto Basin.

**Slide 84**

**Text:** Besh-Ba-Gowah

[Photo of structure at Besh-Ba-Gowah]

**Audio:** The Salado lived in a unique adobe structure reinforced with stone from the river and posts from trees. Besh-Ba-Gowah was a large settlement located in present-day Globe.

**Slide 85**

**Text:** Salado dwelling AD 1150-1450

[Photo of a Salado dwelling AD 1150-1450]

**Audio:** The stone buildings resemble the Anasazi pueblos to the north and the earthen ceremonial mounds were doubtless borrowed from the Hohokam. Salado communities were built around plazas with beehive granaries and large open pits for cooking, but the signature of their civilization was their pottery.

**Slide 86**

**Text:** Salado pottery

Polychrome

[Photo of red with black interior pottery] [Photo of red on brown pottery] [Photo of polychrome pottery]

**Audio:** The Hohokam made red on buff pottery until around 1100 AD, and that’s when the Salado moved into the region. Then the Hohokam adopted the Salado style of pottery: red with black interior. This became the predominate style of pottery in the region. But then about 50 years later, a new form of pottery appears, called San Carlos, red on brown, which appears to be a copy of the Hohokam style. From all of these adaptations, it is that the Salado traveled and traded widely, and they copied from other cultures, and they were eager to innovate. By 1250-1350, they had major break through using black, red and white to create what we call polychrome pottery. They experimented with designs including animals and mythical features.
This was the most widely traded pottery in the prehistoric southwest and it became a marketable item desired by neighboring people. The Anasazi traded their turquoise. The Mogollon traded their turkeys and the Salado had their pottery that they could trade for food, tools and decorative items. Declining resources, drought and flooding forced the Salado to abandon the Tonto Basin in the 15th century.

Slide 87

Text: Sinagua = sin (without) agua (water)

[Map of Anasazi, Hohokam, Mogollon and Sinagua territories]

Audio: Now let’s look at the Sinagua. The early Sinagua settled in the area around Sunset Crater and lived in the Verde Valley. Sinagua is a Spanish word created by an archaeologist. Sin means without and agua means water.

Slide 88

Text: Sunset Crater

- Erupts AD 1064-1067
- Sinagua move south temporarily

[Photo of Sunset Crater] [Map of are near Flagstaff and Sunset Crater]

Audio: When the crater at Sunset Crater erupted repeatedly from 1064 to 1067, the Sinagua were forced to abandon this area temporarily. They moved to Walnut Canyon and Wupatki. They quickly returned to farm the area which now contained very rick volcanic ash.

Slide 89

[Photo of cliff dwelling in shallow caves, inhabited by Sinagua]

Audio: Originally they also built pit houses, but then like the Hohokam, Anasazi and Mogollon, they learned to construct pueblo buildings. This group was also an amalgamation of several cultures.

Slide 90

Text: Sinaguan pottery

[Photos of Sinaguan pottery]

Audio: The Sinaguan architecture resembles that of the Anasazi, but their pottery – black and polychrome geometric designs – is closer to the Salado, and their ________ are similar to the Hohokam’s. They traded extensively and exchanged ideas with the people surrounding them.
During the 13th century, when there was less rainfall, they moved south of the Verde Valley and built Montezuma’s castle.

**Slide 91**

**Text:** Montezuma Castle

[Photo of Montezuma Castle]

**Audio:** Montezuma Castle is, of course, a misnomer. Montezuma, the leader of the Aztecs, lived long after this cliff dwelling was built and he never traveled this far north of Mesoamerica.

**Slide 92**

[Photo of view from a window in Montezuma Castle]

**Audio:** Nor was this a castle, but rather a large dwelling in the Verde Valley, built in a dramatic 150 cliff above Beaver Creek between 1100-1350. It was built up in the cliffs because Beaver Creek every once in a while overflows and floods the area. So this was a very safe location for the cliff dwelling.

**Slide 93**

[Photo of ceiling of dwelling]

**Audio:** Five stories tall with 65 rooms, it was constructed with small limestone rock and sycamore posts. The cliff held a different type of treasure for these people, as well. Here was a large a deposit of salt, necessary for diet and useful trade with other people.

**Slide 94**

**Text:** Montezuma Well

[Photo of Montezuma Well]

**Audio:** Six miles upstream from the Castle is Montezuma Well, a spot sacred to the Sinagua. The well was millions of years in the making.

**Slide 95**

[Screenshot from Montezuma Castle National Monument website with information on Montezuma Well]

**Audio:** Fresh spring waters enter the 55 foot deep well and the Sinaguans divert the water to irrigate their fields. It is unclear why the Sinagua left the Verde Valley in the early1400s. Perhaps a conflict with other tribes; perhaps to much pressure on the land or severe drought;
maybe trade networks vanished as other people like the Anasazi moved further away. Hopi legends suggest that the Sinagua may have joined them on their mesas up in the four corners regions, but no one can say for sure.

**Slide 96**

[Map of Anasazi, Hohokam, Mogollon and Patayan territories]

**Audio:** The last group we are going to look at is the Patayan and they lived in the western part of present-day Arizona.

**Slide 97**

**Text:** Patayan Culture

**Upland Yuman**

- Lived around Grand Canyon
- Relied on hunting primarily
- Descendants include: Yavapai, Hualapai and Havasupai

**River/Delta Yuman**

- Lived in western Sonoran desert
- Hunted, but also agriculture
- Descendants include: Quechen/Yuman
- Highly mobile

**Audio:** The Patayan are divided into two groups: the Upland Yuman and the Delta Yuman. The upland Yumans lived in the area around the Grand Canyon and around the tributaries of the Colorado River. These people relied on hunting game to a larger extent than the Delta Yuman. Their descendants include the Yavapai, Hualapai and Havasupai. The River or Delta Yuman occupied the western end of the Sonoran Desert, where the Colorado creates the border between present-day Arizona and California. This region is the hottest in the Southwest, with summer temperatures reaching 120 and annual rainfall averaging under three inches. These people were closely related to the Hohokam and their pottery closely resembles the work of the Hohokam. One theory runs that the Patayan and Hohokam lived so comfortably together that they occupied the village of Las Colinas together, the ruins of which lay under present-Pheonix. Archaeologists surmise that these people were fairly warlike. Their descendants are the Colorado River tribes today: The Quechens or Yumans living in the area around Yuma today. The Patayans relied on the Colorado River’s annual flood to irrigate their corn, beans and squash, but relied on hunting, gathering drought-resistant plants such as cacti, mesquite beans and creosotes.
more so than other people we have discussed. The Patayan traveled in highly mobile bands of several hundred people living in temporary villages along the river between floods.

**Slide 98**

**Text:** Patayan intaglios “incised designs”

[Photo of Patayan intaglios]

**Audio:** They left behind very few artifacts for scientists to study, so we don’t much about the Patayan people. However, there is one aspect of their culture that has been well preserved. They left behind unique intaglios, a word that means “incised designs” and these can be found near Blythe, California, right on the Arizona border. They intrigue scientists to this day. They were discovered by an Army air corps pilot who was flying in the region in 1931, because you really can’t see them from the ground. You can only see them from up above. The surface of the desert in this area is coated with alkaline soils.

**Slide 99**

[Photo of close-up of intaglio with inset hand-drawn image]

**Audio:** In this coating on the soils, Patayan etched enormous astronomical figures, animals and humans. Most are around 30 feet tall, but one is 300 feet tall. This art does not resemble that of anything else from any other southwestern culture and there is nothing else like it north of Peru.

**Slide 100**

**Text:** Common Features of Southwest People

- Primarily sedentary
- Practiced dry-farming techniques and hunted
- Made pottery
- Traded extensively
- Lived initially in pit houses but then transitioned to pueblo structures
- Fairly peaceful

[Photo of skeletal remains with pottery]

**Audio:** Let’s summarize a little about the common features of the people that we have talked about in the Southwest: The Hohokam, the Mogollon, the Anasazi, and to a lesser degree the Sinagua, Salado and Patayan people. All of these people were primarily sedentary. They traveled occasional to trade, they moved around to follow game and they might move because of environmental reasons, but they stayed in one place for long periods of time. They also all practiced various forms of dry-farming techniques, which primarily meant irrigation, canals and
other ways to take advantage of the arid condition. They made pottery and they traded extensively. Different commodities were used by different tribes. Some used turkey feathers, some used turquoise and others pottery. They lived initially in pit houses that were dug into the ground, which protected them from the elements: from the heat in the summer and from the cold in the winter. But then transitioned to more spectacular buildings: pueblo structures. We’re not sure why this happened, but these larger buildings were used perhaps for religious purposes, as housing units, but they show an example of a much more sophisticated form of society. Overall they showed signs of being fairly peaceful until approximately 1100 AD and that is when we see some changes occurring.

When archaeologists excavate burial sites they analyze the health of the prehistoric people that lived throughout the Southwest. They tend to romanticize these early inhabitants, like the Anasazi and the Hohokam, but their lives, even in the best of times, were marked by poor diet and hard work. The work they did planting, harvesting, hauling wood and water, hunting, building canals and homes, was strenuous requiring thousands of calories a day and a diet rich in protein.

**Slide 101**

**Text:** Health Issues

- Hard work and accidents lead to arthritis
- Corn-intensive diet deprives body of sufficient calcium, leading to osteoporosis
- Anemia and malnutrition common
- Average age 25-27
- Only 5 to 15% live to age 50
- 83% of children under 10 are anemic

[X-ray of bones]

**Audio:** They were plagued by broken and poorly mended bones, the results of accidents, and a very work-intensive life. You’ve got to remember they were hunting game, they were planting, they were building with stones, chopping trees, they had no medicine, no method to fix broken bones. Arthritis was caused by carrying heavy loads and stoop labor was common. Osteoporosis, common today in older people, was rampant in people in the forties, thirties and even in their twenties. This is because their diet of corn tends to absorb calcium from the system that can lead to bone loss. Between 1100 and 1300 AD, the population of all the cultures in the Southwest increased dramatically. Most of the increase was due to increased fertility and birth rates, likely caused by a settled way of life and reliable food sources. They quickly depleted wild game and native plants, so there was increased reliance on corn. Scientists have discovered that anemia and malnutrition from irregular food supplies was evident in the bodies that have been found in the
ANCIENT PEOPLE OF THE SOUTHWEST

burial sites. The average age of an Anasazi was 25-27 years old. Only 5 to 15% of the population reached age 50.

Slide 102

Text: Enamel hypoplasia indicates malnutrition

[Photo of jaw and teeth of remains]

Audio: Many skeletal remains show evidence dental cavities, another sign of poor nutrition. Finally among burials at Chaco Canyon, about 26 percent of the dead were children under the age of five. In outlying areas, the number was closer to 45%. The deaths of these young children were caused by diarrhea from intestinal parasites, anemia which is a lack of iron, and malnutrition. If children did not have enough iron in their diet, they were highly susceptible to disease and 83% of children under age 10 in Chaco Canyon in the tenth century were anemic. So, even when times were good and food supplies were abundant, life was short and it was brutal.

Slide 103

Text: Drought begins AD 1090

Crop failures lead to famine

Few trees to supply food and homes for animals

Leads to population decrease

[Photo of withered corn crops]

Audio: But then something happened. From 1090 on, the consistent rainfall in the region ended and there were extended periods of drought. With the harvest diminished, there was less seed corn to plant and local populations could no longer be sustained. Periods of drought would have meant crop failures and famine. But drought alone cannot account for the great decrease in human activity at this time. It is clear the Mogollon and Anasazi had cut too many trees and wildlife could no longer flourish without a food supply and homes to shelter them. No trees, no place for the birds, the squirrels, the animals to live or to feed on. So, population growth depleted natural resources.

Slide 104

Text: 1100-1500 AD

• Increased violence
• Great migration
Audio: In the next decade, most construction at Chaco Canyon and Snaketown halted and many buildings were abandoned. The Anasazi Great Kivas, which served as religious sites, were turned into watchtowers and the bodies of warriors who died violently and were buried with their arrows are found and dated from this time period. All the evidence points to violence and warfare, perhaps over precious food supplies. After several years, the Anasazi food stores at Chaco Canyon were empty. The Hohokam canals abandoned. This period from 1100-1550 is marked by Great migration throughout the Southwest. These civilizations did not vanish but adapted to changing environmental conditions. The Anasazi of Chaco Canyon probably moved to the uplands and to the foothills around Albuquerque, where they intermarried with other cultures. But groups of them returned to their homeland later on and their ancestors, the Hopi, continue to dwell in the four corners region to this day.

Slide 105

Text: 1325-1850

- Summer rains vanish
- Apache (Athapaskan) tribes appear
- Adaptation to a new environment begins

Audio: Between 1325 and 1850, summer rains in the Southwest vanished and it became difficult farm with rain only in the winter. By 1400, there is evidence that raiding Apache might have forced out whoever remained in this region. Although we can only speculate about these events, by 1500, when the Spaniards arrived, it was clear that very few people were living in the area that is known as Arizona today and the people that remained relied primarily on raiding, hunting and gathering. Unlike their ancestors, who had been better farmers, this new form of life - returning to the old ways of the hunter-gather society - was much better suited for survival in this new, more arid environment.

Slide 106

Audio: Here are some questions for consideration

- How did the people of the prehistoric Southwest adapt to a changing climate? Give specific examples.
- List common cultural traits shared by the major groups of people living in the Southwest prior to contact with Europeans.