Answers to Cultural History Section

ANSWERS TO "DIG THAT PAD":

1. The Rule of Superposition applies to these layers. Artifact E is older than artifact A. The bowl was deposited first. After many years, layers of dust and rock covered it up. After the layers of earth built up, the shell pendant was left on the floor of the younger room.

2. There was another room under the exposed room, because you can see the ends of roof beams sticking out of the layer.

3. The upper exposed room was probably a living quarters, because a fire pit was used there for cooking and warmth.

4. Archeologists can learn much from the fire pit by examining bone and plant fragments in the ash., They can determine what kinds of animals lived in the area, and which ones people were eating. Burned pieces can be radiocarbon dated, too.

5. The builders of this dwelling were probably members of an agricultural community, because usually only farmers would take the time and energy to build a house of stone that they lived in near their fields all the time.

6. Many things in the room can be used to date it. The roof beams can be tree ring dated. Animal and plant remains from the fire pit can be radiocarbon dated. A sample of the fire pit clay can be archaeomagnetically dated. Probably more than one of these would be done. If the dates gathered from all the dating methods were around the same time, then archeologists would be very sure when the room was built and lived in.

7. The shell pendant is made of seashells. The Gulf of California, the California Pacific coast, and the Gulf of Mexico are the nearest source for shells. These ancient people traded for shells from one or more of these distant places or traveled there to collect shells themselves.

8. Macaws are found in the rainforests of Mexico and South America. Like the shell pendant, the macaw skeleton tells us that these people traded/traveled far to the south.

ANSWERS "TREES OF TIME":

1. Tree A is older. It was cut down in A.D. 1286, while tree B was cut down in the A.D. 1300.

2. Tree B lived longer. It lived 38 years before it was cut down while tree A lived 36 years.

3. Tree A was cut down in A.D. 1286.

4. The pueblo roof that this beam was found in was probably also built in A.D. 1286.

5. Tree B was cut down in A.D. 1300, while tree A was cut down in the A.D. 1286. 1300 – 1286 = 14. Tree B was cut down 14 years later.

6. According to our calendar, the year A.D. 1300 was a wet year with abundant rainfall. The wide space between A.D. 1299 and 1300 tells us that there was much rainfall during that year. The tree was able to absorb more water, nutrients, and minerals. This allowed the tree to build more tissue in its stem, causing the space between the rings to be wider.

7. No. A.D. 1294 was within a severe drought that lasted about 23 years. Archeologists are sure of this because of tree ring dating. This is the only part of our calendar that is factual. The rest is hypothetical.

8. A.D. 1274 was probably a year with average rainfall. The early cultures probably had a sufficient harvest that year.

9. The years A.D. 1300 to 1303 were very wet years with abundant rainfall. Probably, major flooding was occurring near rivers. Structures that were situated near riv-

ers or on the lowlands were probably flooded out.

10. These were good years for planting crops, but the houses and the crops probably had to be situated away from water, because there may have been flooding. Crops near the rivers were probably washed away.

11. Yes. During this time of abundant rainfall, existing marshes were more extensive and new marshes probably formed in low areas.

12. Yes. Large, shallow standing bodies of water produce more plants and attract more waterfowl.

13. Our calendar shows at least four years before it ends.

14. Tree A germinated about A.D. 1250.

15. Tree B germinated about A.D. 1260.

16. Tree A germinated about A.D. 1250 and died in A.D. 1286. 1286 – 1250 = 36. Tree A lived 36 years.

17. Both tree A and tree B were burned in the year A.D. 1271.

18. This was a very wet year.

Some of the answers above are purely speculative, and could be wrong. But these are the kinds of clues that archeologists use to try to piece together the story of the past. Many times archeologists have little to go on, but dendrochronology is a science that can give them definite and precise numbers relating to spans of time between events.

ANSWERS FOR "WHAT DOES IT MEAN":

1. Anasazi is a Navajo, or Dine', term translated as "ancient enemy" or "ancient foreigners." When archeologists wanted to name this culture, they asked the Navajo people what they called the ancient people who had lived in the sites nearby. The Navajo, viewed them as strangers and called them "Anasazi." The Hopi, who consider the Anasazi their ancestors, prefer to call them Hisatsinom, which means "people of long ago."

2. Hohokam is a Pima or Akimel "'okham phrase meaning "those who have gone" or "all used up." Archeologists named the ancient farmers of the Arizona desert the Hohokam after excavating Snake Town with the help of Pima workers.

3. Sinagua is a Spanish phrase meaning "without water." Spanish explorers noticed that the San Francisco Peaks area did not have water, so they called the mountains, sierra sinagua. When archeologists discovered ancient sites in the Flagstaff area, they took the Spanish name given earlier to the peaks for this culture.

4. Salado is a Spanish word meaning "salty." The Salado culture was named after the Salt River in Arizona where these people had lived.

5. Mogollon: Juan Ignacio Flores Mogollon is the name of an early Spanish governor of New Mexico. His name was given to the Mogollon Rim, Mogollon Mountains, and ancient Mogollon culture. The Mogollon lived in the mountainous regions between the Mogollon Rim and the Mogollon Mountains and southeast into Chichuahua, Mexico.

6. Casa Grande is a Spanish word that means "big or grand house." It is the name given to a Hohokam structure near the Gila River by Spanish explorers.

7. Montezuma (Castle and Well): "Montezuma" actually refers to Moctezuma II, the last Aztec emperor. Settlers from the U.S. gave this name to Montezuma Castle and Montezuma Well because they believed that Montezuma and the Aztec people had once occupied this area.

8. Tuzigoot is an Apache phrase, which has been roughly translated as "crooked water." It refers to the oxbow with Pecks Lake, which is near the pueblo. When archeologists excavated Tuzigoot pueblo, they were looking for a name for

the site. An Apache worker named Ben Lewis suggested "Tuzigoot." The archeologists liked the name and used it for the pueblo.

9. Wupatki is a Hopi phrase translated as "long house." Archeologists adopted this Hopi name for the Anasazi/Sinagua sites of Wupatki National Monument north of Flagstaff.

10. Canyon de Chelley (de shay): "Canyon de Chelly" is a mispronunciation of the Navajo word, 'tsegi," which means "rock canyon." Although the Navajo considered this canyon to be the heart of their homeland, it was the location of many Anasazi cliff dwellings before the Navajo moved to the area.

11. Tonto: "Tonto" is a Spanish word that means "fool." The Spanish had given the name "Tonto" to a group of Apache west of the White Mountains. Early settlers adopted the name, and called the lands where the Tonto Apache had lived that, too, including Tonto Basin, Tonto National Forest, and Tonto National Monument.

12. Gila Cliff Dwellings: The cliff dwellings were named for the Gila River, whose headwaters are nearby. The Gila River was named by the Spanish and means "a steady going to and from a place."

ANSWERS TO "YOUR VISIT TO THE NATIONAL MONUMENTS":

1. "Tuzigoot" is an Apache phrase. It has been translated as "crooked water." It refers to Pecks Lake, which is less than a mile north of the monument.

2. When settlers first saw Montezuma Castle, they did not think the local Apache had built it. They thought the Aztecs had come north and built the cliff dwelling for their emperor Montezuma.

3. "Sinagua" is a Spanish term meaning "without water." Dr. Harold Colton, who first studied this culture, named it after the Spanish name for the San Francisco Peaks, sierra sinagua.

4. The villages were first constructed approximately in the 12th century. The dates are based on pottery cross-dating and tree ring dates.

5. The Sinagua left the Verde Valley around A.D. 1400.

6. Macaws are native to Mexico and South America.

7. The seashells originated from the Gulf of California or the Pacific coast.

8. A metate is a trough-shaped mortar used to grind corn.

9. A mano is the hand-held stone used to grind corn on the metate.

10. The Sinagua mined salt from large deposits outside the present town of Camp Verde and traded it throughout the valley and to other regions.

11. The Sinagua generally did not usually decorate their pottery. Once in a while they experimented with simple designs on their red or brown plainware, such as the one at Tuzigoot decorated with white lines.

12. All but one of the decorated types were traded into the region from other cultures.

13. Those fields are modern copper tailings, the refuse left from smelting copper. They have nothing to do with the ancient Sinagua or Tuzigoot.

14. The Sinagua cultivated corn/maize, beans, squash and cotton.

15. Most archeologists surmise that it was protection from animals, enemies and/or drafts.

16. The Sinagua may have had enemies, but little evidence of warfare has been found.

17. The Sinagua got their water from the Verde River and its tributaries, such as Beaver Creek, and from springs, such as Montezuma Well.

18. Many answers are possible. Examples would be banana yucca for rope and food, mesquite for flour and fuel,

desert willow for baskets and building material, etc.

19. Some examples could be an awl and a hairpin.

20. An axe head and a hand hoe are possible answers.

21. Many answers are possible. Archeologists have many theories, such as soil depletion, warfare, disease, drought, flooding, overuse of the environment, or a combination thereof.

22. Cotton, yucca, and bear grass may have been sources of fiber for twine string or rope.

23. Yes. It gets very cold here during the winter. During the summer they may have worn fewer clothes. Pieces of cotton clothing and blankets have been found at the monuments.

24. They probably made their clothes out of cotton, animal skins, bear grass, and yucca.

25. They made beads out of argillite, turquoise, and shell.

26. They ground the roughly shaped stone or shell on a harder stone, and drilled the holes using stone drill bits and a bow drill.

27. Many answers are possible here.

28. The answer is left to the imagination.

29. The answer is left to the imagination.

ANSWERS TO "WILL I SURVIVE":

WATER: There is no water. You need to acquire water in order to survive. Your best source is the prickly pear cactus. If the fruit is in season, you can cut, peel and eat it with your knife. Although there is not very much moisture in prickly pear cactus pads, you can cut up and mash the pulp of many pads to get a very refreshing juice. Depending on how long you are in the desert and how many prickly pear cacti are available, you should be able to get enough moisture to survive. If there are any areas where many plants are growing, such as a dry wash, there may be water underground that you can dig for. Another option is to construct a still. Dig a pit about one to two feet deep. Get cactus pads and crush them in the hole. Hang a plastic sheet over the hole and put a pebble in the middle of the plastic to make it sag. Put a cup or other container underneath the plastic where the pebble sits. The sun's heat will cause water from the cactus and the dew to evaporate and condense on the plastic. Droplets will roll down the plastic and drip into the cup over night. When the cactus seems dry, cut more and crush them in the hole.

FOOD: Again, you can eat the prickly pear fruit and pads. They will not only provide water but also sugar for energy. If you can make a fire with the matches, you can also cook the cactus pads until they are tender. If the stems of the agave are green, you can also cook that and eat them. Salt bush leaves can be added to the agave or prickly pear pads to add seasoning and replace salt. Many other plants are probably available to eat, but you should not try them unless you know they are safe.

Don't use your flare to start a fire, you need that to signal a plane that may come looking for you.

Eat only foods that have some moisture in them, and that do not require much exertion to collect and process. The human body uses water to digest and process food. Because digestion and exertion will dehydrate you, eat only if you have enough water available. A person can go many days without food while sitting in one place, but only four days without water.

SHELTER: At 120 degrees Fahrenheit, your body will lose lots of water through perspiration. You can find a shady spot near the plane or build a lean-to with rocks and branches to create shade. You can use the parachute to make a small

tent for shade and to keep the moisture of your sweat close to your skin. This may reduce the amount of water evaporating from your body. You can use the agave poles or part of the plane to suspend the parachute. Besides shelter, the opened parachute may be easily spotted by passing aircraft.

STRATEGY: Sit in that one location. If you try to travel on foot in 120-degree weather, without water, you will probably die. Help will probably arrive to look for the plane in a few days. If they find the plane and you are not there, they may not find you if you are hurt or dying miles away. Tracking dogs do not work in extreme heat.

Don't use the flare, except to signal a low-flying plane. An airliner or other high-flying aircraft will not see the flare.

The open parachute can be easily spotted from the sky.

You have a gun with six bullets. Don't use those bullets unless absolutely necessary. Three shots in a row—or three of anything—is a universal signal of distress: it is a simple SOS signal. Use the first three shots only if you are injured and in need of medical attention or if you hear or see people or vehicles far away.

ANSWERS TO THE REAL NATURAL FOOD AND SUPPLY MARKET

Name the plant and possible ways it could have been used:

1. Prickly pear cactus: The prickly pear fruit is edible. It is sweet and pulpy, and a good source of energy and moisture. The new pads can be skinned, diced, and boiled. This is a common dish for many cultural groups in the Southwest. The pads can also be used as medicine to reduce swelling or inflammation.

2. Mesquite: The mesquite is in the bean family *leguminosae.* The pods can be cut like green beans and boiled, or they can be ground into a meal, which can be eaten raw, baked into bread, or made into porridge. This meal is high in protein, and could be dried into cakes that were stored for the winter.

3. Bear grass: Bear grass can be used as fiber for basket weaving, or even making a soft fabric.

4. Banana Yucca: Banana yucca leaves can be stripped into fiber to make string, rope, baskets, sandals, or mats. The pointed end of the leaf can be used as a needle or chewed to form a paintbrush. The fruits are good raw or cooked. Roots of this and all yuccas can be made into soap and shampoo.

5. Agave: The agave, also known as century plant, maguey, or mescal, can be used in many different ways. The seeds can be ground into flour. The blossoms are edible. The stalk can be chopped, and the sections boiled and eaten. The hearts of the plant can be cut out and roasted into a nutritious meal. The fibers of this plant are also tough and can be used for making rope or woven into sandals.

6. Cattails: The cattail is a marsh plant. The new shoots are edible. It tastes like cauliflower and smells like licorice. The roots are starchy and can be boiled like potatoes. The new seed heads can be boiled and eaten like corn on the cob. The mature seed heads can be used as insulation for pillows or blankets.

7. Bulrush: The roots of the bulrush can be boiled and eaten. The hollow stems can be bound together to make a boat.

8. Willow: Willow branches can be used as building material. The pliable limbs can be used for basket weaving. The leaves can be used as medicine for headaches.

9. Arizona cypress: The branches of this tree can be used as building material. It also produces a sticky sap

that can be used as a strong adhesive.

10. Gambel oak: The acorns of this tree are edible but need to be ground into a meal; and then the meal is leached with water for several days to a month to draw out the tannic acid. This meal can then be made into a mush or bread.

ANSWERS TO "AGRICULTURE":

1. They probably used the same ingredients that were used in class, but juniper or salt bush ashes may have been added for leaven, and the bread heated on stone griddles.

2. They may have carried water from the creek or river, dug irrigation ditches, or diverted runoff with check dams.

3. They may have had to watch their fields all the time to chase animals away.

4. If they had stored enough corn from the previous year, they may have lived on that. If not, they may have lived on their other crops and the animals and plants they had hunted and gathered. Yet it would have been difficult for them to have made up for the lost corn crop by hunting and gathering, because they would not have time to hunt and gather many more wild plants and animals. Otherwise, they could have traded with their neighbors or moved in with them.

5. This answer will vary.

6. Many answers are possible here, such as corn on the cob, corn tortillas, corn flakes, nachos, corn dogs, popcorn, cornbread, corn mush, corn fritters, corn chowder, corn soup, corn chips.

7. No, not unless someone stays behind with the crops. They needed to be tended, watered, and protected from animals or enemies.

8. In general, the more helpers, the better attention and protection the crops had. Small families would have had a hard time tending the crops alone.

9. Farming allows large groups of people to live in one place together, because enough food can be grown and stored to feed them from year to year. Eventually, some farmers grew more than they needed, and could feed people who do other things besides farming, such as crafts, religion, and politics. Some farming societies with specialists may eventually become civilizations.

10. This answer will vary, since corn ear sizes vary. Add the weight of the kernels from each shelled ear to each other until they equal or are greater than the weight of one cup of cornmeal. The number of ears you used is the answer.

11. Divide the answer to #10 by 3 to find out how many plants would feed a person for one day. Then multiply that answer by 365. This is the number of corn plants it would take to feed one person per year.

ANSWERS TO "PITHOUSE TO PUEBLO" :

1. The earth around the sunken floor acts as insulation. It will keep the house warmer in the cold, and cooler in the heat. Also, fewer building materials are needed.

2. A pueblo could last hundreds of years with repairs, while a pithouse often caught fire or deteriorated from insects and other natural causes after only 15 to 20 years.

3. Some archeologists believe that having no door was a form of defense against people or animals. It may also have been to reduce drafts and to maintain the insulation properties of the thick stone-and-mud walls. The pueblo room would have been similar to a basement, cave, or ancestral pithouse.

4. Caves are naturally insulated shelters. They are cooler in the summer and warmer in the winter. Also they are a safe, dry place to store food.

If someone builds in a cave, they do not have to build all the walls, since the cave walls are already there.

5. Although we do not know for sure, they may have done so, because pueblos are more durable, hold more people in less space, and provide protected storage for crops.

EXTRA CREDIT ANSWER:

Many answers are possible. Archeologists have proposed many theories based on what they have recovered from excavations. Yet they continue to revise theories as they find new evidence. One of the newer theories states that the Sinagua left in the 15th century, because they could not sustain the large immigrant population that had come to the Verde Valley after the "Great Drought" of the 13th century. Famine, disease, and warfare resulted after decades of high flooding interspersed with drought. The remaining population gradually left to go to other places where they could continue a similar life style.

ANSWERS TO "TRADE" :

1. The Sinagua may have traded many different things for decorated pottery, such as salt, minerals for paint and dye, cotton, and shell, turquoise, and/or argillite jewelry.

2. Sea shells were traded from the Gulf of California.

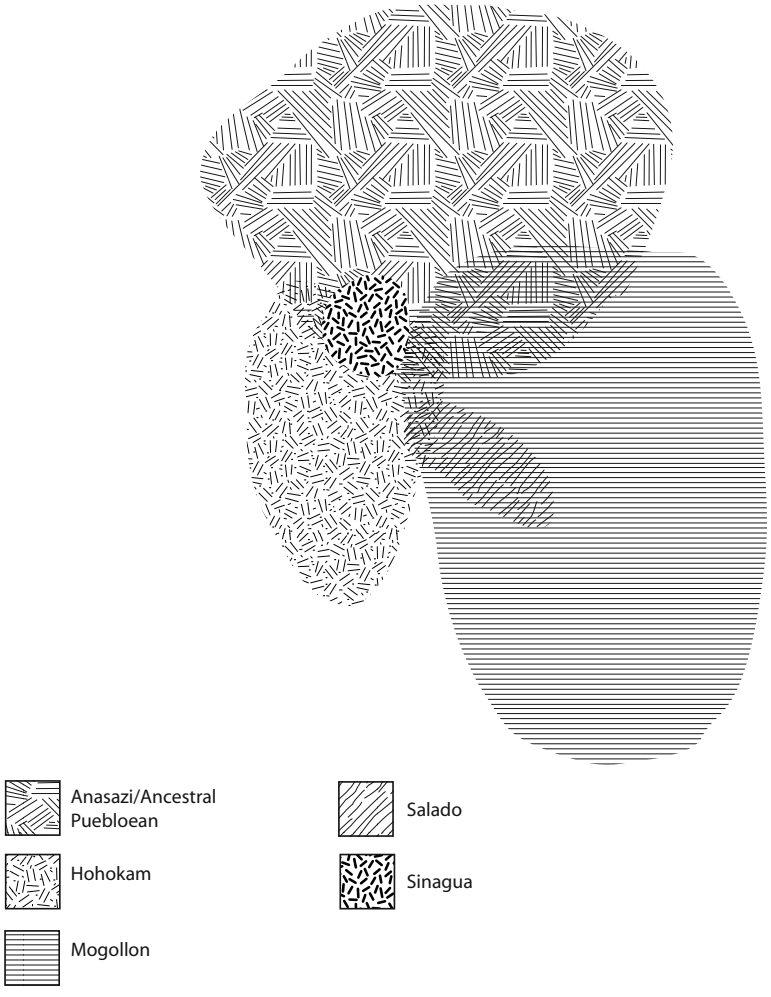
3. Macaws are found naturally in the rainforests of Mexico and South America. This shows that the Sinagua had trade connections at least as far south as Mexico. Remember that all travel back then was done on foot!

4. One side of the Big Dipper points to Polaris, the North Star. The North Star always points to true north. If you are facing north, east will be to your right, west to the left and south will be behind you.

5. The sun always rises on the eastern horizon and sets in the west. If your right hand is pointed toward the sun rise, that would be east and your left would be west. You will be facing north. South will be behind you.

ANSWERS TO "WHO WERE THE PREHISTORIC SOUTHWEST PEOPLE?" :

EXERCISE 1: Following is a map with the regions that the Southwest cultures inhabited.



EXERCISE 2:

1. Anasazi or Ancestral Pueblo
2. Anasazi or Ancestral Pueblo
3. Salado
4. Hohokam
5. Mimbres of the Mogollon
6. Hohokam
7. Mogollon
8. Hohokam
9. Salado
10. Sinagua
11. Ancestral Pueblo or Anasazi traded to the Sinagua
12. Mogollon
13. Mimbres of the Mogollon
14. Hisatsinom or ancestral Hopi, traded to the Sinagua
15. Sinagua
16. Ancestral Pueblo or Anasazi
17. Sinagua
18. Hisatsinom, or Ancestral Hopi, traded to the Sinagua

ANSWERS TO "TO PLANT OR NOT TO PLANT" :

1. Although there is no definitive answer, archeologist often look at an environment's resources and changes in environment over time. For instance, after environmental changes in the 13th and 14th centuries, large populations of farmers decreased or were replaced in many areas by hunter-gathers or combination gardeners and hunter-gatherers such as when the Yavapai and Apache replaced the Sinagua.
2. Anthropologists have found that usually farmers need to work almost all the time tending, tilling, harvesting, and guarding their crops in order to survive.
3. Anthropologists have found that usually hunting-gathering bands all over the world have more spare time than any other life style. The work comes in spurts of high-energy consumption followed by long periods of idleness.
4. Due to the diversity of the natural environment, hunter-gatherers have usually had a more varied diet. Agricultural communities tend to concentrate their diet on one or several staples.
5. Because most hunter-gatherers are nomadic to seminomadic, they are exposed to more dangers in terms of enemies, competitors, and natural hazards.
6. Because farmers would be able to see their crops in front of them, they may believe the illusion that their food supply is under their control, while in actuality it is still subject to the fluctuations of the weather. Yet they developed strategies to maintain their food supply, such as multiple farming techniques, storage of food surpluses, trade, migration, and raiding.
7. Hunter-gatherers would be more subject to periods of feast and famine, but they moved more frequently to find other food sources.
8. In general, agriculture requires larger families or groups in order to tend and protect the crops. In general, hunting- gathering bands tend to be composed of small groups of several families, because it takes a variety of resources collected from a large area of land to feed just one person.
9. Hunter-gatherers are more mobile. They are not tied to one place, but rather range over a large territory. They will go where the food and resources are most abundant. Hunter-gatherers readily adapt to the conditions of their environment.
10. Of course, farmers would be required to settle in one location for long periods in order to tend and protect their crops.
11. Agricultural communities tend to build permanent structures. In contrast, hunting-gathering bands tend to build temporary shelters.

ANSWERS TO "MODERN CULTURES OF THE VERDE VALLEY" :

1. Tortillas: Are a flat, unleavened bread. Ancient Mexican people first made them after they domesticated maize. After the Spanish introduced wheat into Mexico, Mexicans made tortillas out of wheat flour, too.

2. Pueblo house: The Anasazi, or Ancestral Pueblo, cultures first utilized this type of communal construction in the Southwest. Later, other cultures such as the Spanish and Americans copied this style.

3. Horse: Modern horses were introduced into the southwest by the Spanish, who brought them by ship to Mexico. Spanish and Mexican explorers and colonists brought horses and other livestock into the regions north of the Rio Grande from Mexico.

4. Chaps: Because the deserts of the Southwest were covered with brush and sharp, piercing plants, Spanish and Mexican vaqueros, or cowboys, developed leather leggings to protect their legs while herding livestock.

5. Moccasins: Many native cultures had their own style of soft hide footwear for walking and hunting. Moccasins may have been introduced into the Southwest by the early nomadic cultures, such as PaleoIndian or Archaic, thousands of years ago.

6. Sombrero: This broad-brimmed, high-crowned hat was worn in Spain and first introduced into the Southwest by the Spanish.

7. Cowboy hat: Although many styles of hats were worn by American cowboys, one known as the Stetson was specifically designed for the Western outdoors by John B. Stetson in 1865.

8. Kokopelli: The character of the hump backed flute player has been portrayed in Native American art throughout the Southwest. Some researchers believe that the character was a trader who traveled among the pueblos. Legend says that he was very popular with the maidens. This character has become a popular icon of the modern Southwest.

9. Katsina: To the Hopi, katsina are spirits that come down from the San Francisco Peaks to the Hopi villages to bring rain and bountiful blessings to the earth and the people. Portrayals of katsina have been found on kiva murals and pottery made by the hisatsinom as long ago as the 13th century.

10. Corn: Maize, or corn, was first domesticated from a wild grass by the ancient cultures of Mexico between 4000 and 3400 B.C. The ancient Mexicans produced many different varieties and colors. Through trade, this crop was adopted throughout the Southwest and everywhere else it could be grown in the American continents. Other Native Americans developed other varieties, too.

11. Cotton: Cotton was first domesticated from a wild cotton plant by the ancient cultures of Mexico about 5000 B.C.. Legend tells that the Toltecs were able to produce cotton in many different colors. Many ancient cultures throughout the Southwest learned to cultivate and weave cotton. In the Southwest, at least three different varieties of native cotton were developed by the Pima and Hopi or their ancestors. North American cotton is different from both Egyptian and South American cotton, although they are related species.

12. Tomato: Tomatoes were domesticated from wild cherry-sized berries in ancient Mexico. Eventually this crop was cultivated by many cultures throughout the American continents. The Spanish spread them throughout the world.

13. Potato: Although wild varieties of potato grow throughout much of the Americas, ancient peoples of the Andes domesticated it. Then the Spanish intro-

duced it to North America and the rest of the world.

14. Chile pepper: Chile peppers were domesticated from very small wild chiles in tropical America. Many different varieties of chile were developed and grown by many native cultures all over Mexico and Central and South America. At this time, it not certain if chiles came into the Southwest before the Spanish and Mexicans come north from Mexico.

ANSWERS: What's in a name?

1. Coyote: The Spanish borrowed the Aztec word "Coyotl" from the Nahuatl language.

2. Arizona: It comes from the name given to a Saric mission, in what is now Pima County, known as the Arizonac. It is derived from the Tohono O'odham words "ali shonak" or "place of the small spring." The Spanish borrowed the phrase and modified it to "Arizona."

3. California: This name came from the old Spanish novel "Las Sergias de Esplandian," by Garcia Ordanez de Montalvo, published in the year 1500. In this story is an island called California. Hernando Cortez knew this story and named the Pacific region north of the Rio Grande "Alta California," meaning "upper California."

4. Mexico: This name came from the Aztecs. When the Aztec people settled in the region that is now central Mexico, they changed their name to Mexica (pronounced "meshica"). Later, the Spanish and Mexican people named all their territory above Central America "Mexico."

5. Colorado: It is the Spanish word meaning "red."

6. Utah: It is a Spanish pronunciation of the Ute tribe.

7. Coconino: This is an assimilation of the term "cojnino" which is Lt. Sitgreaves' understanding of the Hopi name for the Havasupai and the Yavapai. Many places in northern Arizona bear this name.

8. Lariat: This word for a rope used to lasso cattle is derived from the Spanish "la riata," which means "the rope."

9. Chaps: The name for these leather leggings is short for the Spanish word "chaparajos."

10. Coati: Portuguese name for the animal coatimundi, which was borrowed from the Tupi language.

11. Metate': It is the Nahuatl word for the grinding stone used to grind maize.

12. Mano: It is the Spanish word means "hand," used for the hand-held grinding stone used with a metate.

13. Yuma: This name is from the Spanish word "humo" which means "smoke." The Spanish noticed that this tribe made many fires in the belief that it would cause rain. Thus they named the Yuma tribe. Later, the county and city were named after the tribe.

14. Tucson: It is derived from the Tohono O'odham phrase "chuk shon" which means "black base" and refers to Sentinel Mountain.

15. Mesa: It is the Spanish word for "table." It refers to flat-topped landforms.

16. Phoenix: The name for the capitol city of Arizona comes from a Greek myth. The phoenix was a mythical bird that lived in the desert lands of Arabia. When it died, it would be reborn from the ashes of its funeral pyre.

17. Palo verde: It is the Spanish name for a desert tree, which means "green trunk or stick."

18. Mingus: Mingus Mountain near Cottonwood, Arizona, was named after a miner named William Mingus, who lived and owned a mine on the mountain (1851 – 1911).

19. Prescott: In 1864, the citizens of this town named it after William Hickling Prescott (1796 – 1859), a historian from the eastern United States, who wrote

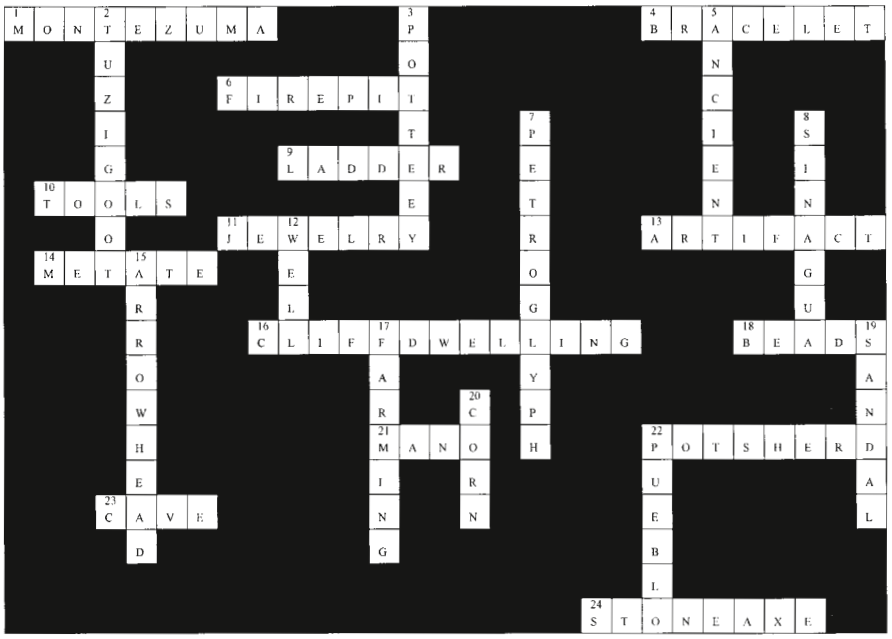
about the Aztecs and translated Spanish literature, including a journal of the "Conquest of the Aztecs."

20. Sedona: This town is named after Sedona Schnebly, who was the wife of Theodore Schnebly. In 1901, he applied for the first post office there, but the name he chose was too long. His brother suggested using Sedona, which the U.S. Postal Service accepted for the name of the town.

21. Mesquite: The Spanish name for this bean tree is derived from the Nahuatl word "mizquitl."

EXTRA CREDIT: The Apache and the Navajo languages are from Athapascan language family. These two cultures are more closely related to each other than to any of the others listed. That is why their words sometimes sound similar.

ARCHEOLOGY CROSSWORD SOLUTION



ANCIENT SINAGUA CROSSWORD SOLUTION