Grand Canyon National Park

Human History
Lesson Plans

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You may also find the following website useful:
http://www.cr.nps.gov/archeology/public/kids/index.htm.

United States Department of the Interior
NATIONAL PARK SERVICE
Grand Canyon National Park
PO Box 129
Grand Canyon, Arizona 86023-0129

Glossary of Human History Terms

Ancestral Puebloan: ancestors of today's Pueblo people. These include the Hopi, Zuni, and all New Mexico's pueblo tribes.

Architect: a person who designs buildings and directs their construction.

Architecture: a style or way of building.

Civilian Conservation Corps: unemployed young men who worked for the government building trails, roads, campgrounds, and buildings on public lands to earn money for their struggling families between 1933 and 1942.

Colorado Plateau: a large geologic area uplifted thousands of feet in elevation covering parts of Arizona, Colorado, New Mexico and Utah.

Colorado River: a major river of the southwestern United States, flowing 1450 miles from its headwaters in the Rocky Mountains of Colorado, through the Grand Canyon, and ending in the Gulf of California.

Economy: the way a certain place uses and distributes its money.

Entrepreneur: a person who owns and operates a business.

Geography: the study of the earth's surface features and the distribution of life, including human life and the relationship of humans to their environment.

Great Depression: a time in United States history when many people were out of work.

Inner Gorge: the steep-walled gorge at the bottom of the Grand Canyon where the Colorado River flows.

North Rim: the top of the north side of Grand Canyon, a less visited part of the park that is closed from mid-October through mid-May due to snow. The North Rim is approximately 8000 feet in elevation, which is 1000 feet higher than the South Rim.

Petroglyph: an image pecked or scratched into rock, creating a negative rock surface and revealing the lighter rock underneath.

Pictograph: an image created by applying pigment to rock, leaving a positive color image on the surface.

Pueblo: a house made of Adobe or stone built by Native Americans in the southwestern United States. Pueblos are shared by the community and usually several stories high.

South Rim: the top of Grand Canyon on the south side where most people visit; open year-round. The elevation at the South Rim averages 7000 feet.

Split-twig Figurine: small animal figures made by ancient North Americans from twigs. The figures may have been used in hunting rituals.

Creating a Cover

School Subjects Science; Art
Grade Level 3rd - 5th
AZ Standards Addressed

SC03-S1C4-01: Communicate investigations and explanations using evidence and appropriate terminology.
SC03-S1C4-03: Communicate with other groups to describe the results of an investigation.
SC04-S1C1-04: Locate information (e.g., book, article, website) related to an investigation.
SC04-S1C4-01: Communicate verbally or in writing the results of an inquiry.
SC04-S1C4-03: Communicate with other groups to describe the results of an investigation.
SC05–S1C1-03: Locate information (e.g., book, article, website) related to an investigation.
SC05 S1C4-01: Communicate verbally or in writing the results of an inquiry.
SC05 S1C4-03: Communicate with other groups to describe the results of an investigation.
VA-S1C4-302: Create artwork that communicate substantive meanings or achieve intended purposes
VA-S1C2-202: Demonstrate purposeful use of materials, tools, and techniques in his or her own artwork

Lesson Overview
Students create their own cover for the journal they will complete during the Time Travelers or Rails & Tales program. The cover can include a collage of photos and/or drawings of people live(d) in the students' hometown and at Grand Canyon.

Lesson Objectives
Students will be able to identify some people in Grand Canyon's history and how they valued/used this place. They will be introduced to the idea of a journal as a tool for studying Grand Canyon and understand how a creative and personal approach to their journal will increase their memory and understanding of Grand Canyon.

Materials

- Construction paper (various colors may be used; size can be 8 ½ x 11 or 9 x 12)
- Journal insert included in your confirmation packet for your in-park program with the Environmental Education Office (make enough copies so each student will have one)
- Magazines, brochures, or other media with people from near your hometown and/or from Grand Canyon (for a listing of prominent Grand Canyon people and events, see the Human History Timeline on page 22).
- Scissors
- Glue
- Colored pencils, crayons, or markers
- Staples and stapler
- Optional: reference books on animals, encyclopedias, field guides, etc.

Background Information
There are many events in Grand Canyon's human history that dates back at least 14,000 years. Native Americans lived off of the land in Northern Arizona long before European explorers first encountered Grand Canyon. People have valued the Grand Canyon region for many different reasons: home, survival, riches, beauty, and heritage. The Native Americans valued this place because it was their home and was means for survival. The first Europeans, the Spanish conquistadors, were not interested because of an obvious lack of the Seven Cities of Cibola (and the significant obstacle to continue on their quest). The first European settlers at Grand Canyon also valued this land for their survival, but thrived on income from visitation. Management of this land and the attitudes toward it are reflected in the protection of Grand Canyon starting in the late 1800s.

All the people in Grand Canyon's history, whether 50 or 10,000 years ago, add to the rich cultural heritage each person can experience in a visit to this park.

Procedure

1. Prior to conducting the activity, begin collecting magazines, brochures and other printed media with photos of people that both live in your area and at Grand Canyon (for pictures of people in Grand Canyon history, see the activity titled "Human History Timeline". Additional pictures can be found in an alternate set of cards on our website, http://www.nps.gov/grca/forteachers/lessonplansandteacherguides.htm). You can also have students start bringing some of these items in from home, too.
2. Tell the students that they will be making the front and back covers of a journal they will use during their field trip to Grand Canyon. Discuss the value of journals; in addition to recording observations, feelings and impressions, they are places to record important data to refer to later. Both words and artwork can be important ways to record all these things; and both recording methods will be used in the Time Travelers or Rails & Tales journal.
3. Have the students identify at least one person or group of people that lived at Grand Canyon and one that lived in the part of the state they live in.
4. Hand out the construction paper – if you have a variety of colors, they can come up and choose which color they want. Have students fold the construction paper in half. Get out colored pencils, crayons, marking pens, or the like. Also get out the scissors, glue, tape and stapler.
5. If you have collected a lot of pictures, have the students cut out at least one that live at Grand Canyon*. Have them glue the photos to what will be the front cover of their journal. They can label each if they want. Make sure they leave room to put their own name on the cover, too.
   *if you don't have enough photos, they can also draw the people or important buildings/artifacts that have been topic of discussion.
6. Now have students cut out a picture of someone important in your local history. Have them glue these on what will be the back cover and label them if they want.
7. Take the journal insert and have the students staple it into their journal cover such that their artwork forms the outside front and back covers of their journal.
8. Discuss why they think how different people reacted to or valued Grand Canyon. What are the differences in how people viewed your home? Do people always value different places in the same way over time?

Extension Activity

On the inside of the front and back covers, have them write something down about the person/people they chose. The students could even write a poem, haiku or other such creative writing about their historical figure(s).

One option is the following type of poem, called a "cinquain", which uses this format:

	EXAMPLE
Line 1: one word to name the subject (noun)	canyon
Line 2: two words to describe it (adjective)	huge, colorful
Line 3: three action words about it (verbs)	eroding, growing, changing
Line 4: four-word phrase about it	making me feel small
Line 5: one new word that renames the subject (noun)	chasm

As Big as a House!

School Subject Math; Social Studies (Introducing Archaeology)
Grade Level 4th – 6th
AZ Standards Addressed

SS04-S1C1-04; SS05-S1C1-05; SS06-S1C1-08: Describe how archaeological research adds to our understanding of the past.
SS04/SS06 S1C2: Describe the cultures and contributions of the Ancestral Puebloans (housing).
M04-S4C4-O3: Select an appropriate tool to use in a particular measurement situation.
M05-S4C1-O4: Identify the properties of two-dimensional geometric figures using appropriate terminology and vocabulary.
M06-S4C4-O1: Determine the appropriate measure of accuracy within a system for a given contextual situation.
M07-S4C4-03: Convert a measurement from U.S. customary to metric, and vice-versa.

Lesson Overview
Students will compare their bedroom size to that of the living space at Tusayan ruins.

Lesson Objective
Students will be able to compare and contrast the living space they use to the living space the ancient Puebloans used. They will list inferences that could be made from the use of rooms in the ruins.

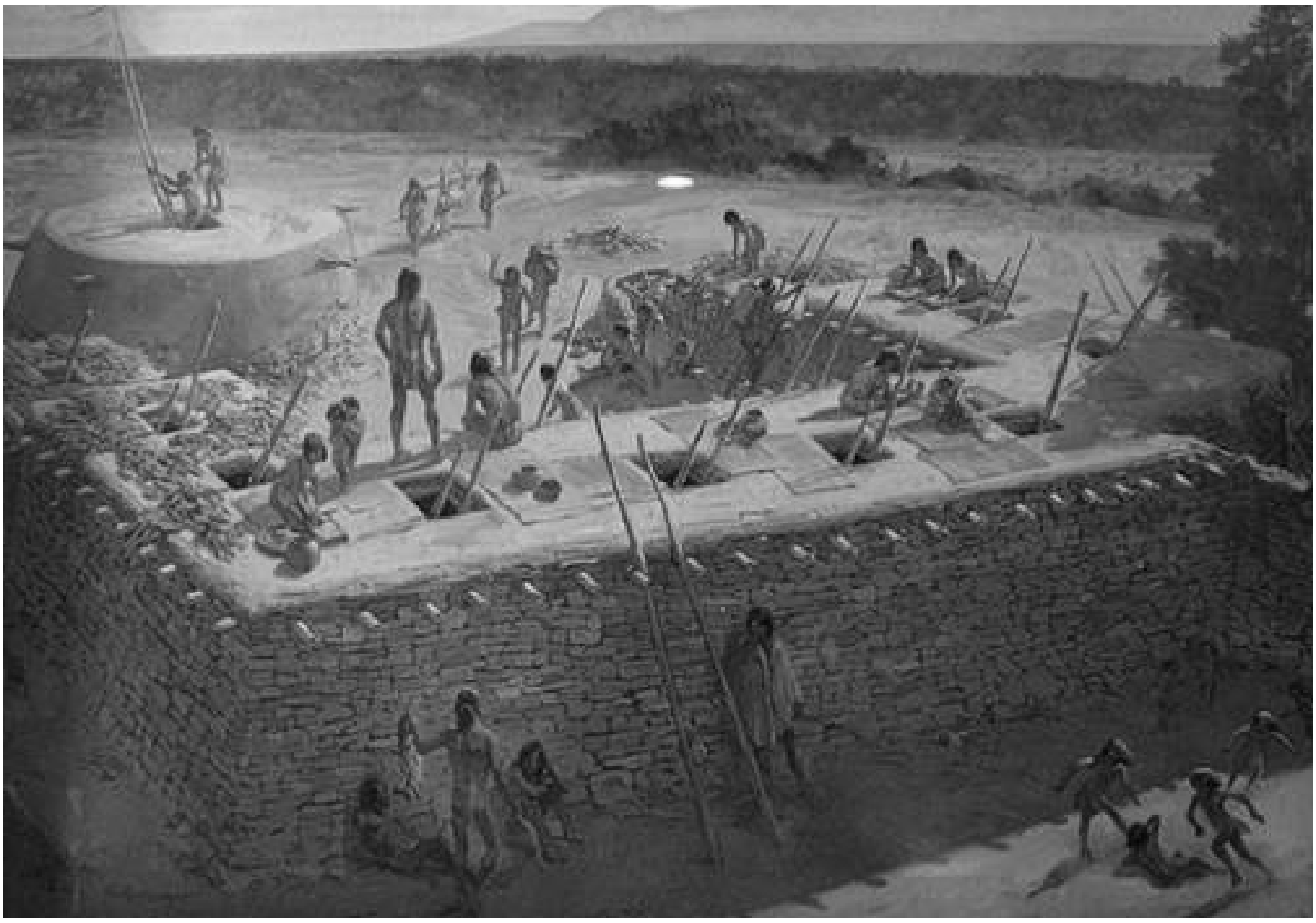
Materials
- Measuring tapes
- Calculators (optional)
- Conversion scale (1m = 3.28 ft.)

Background
We share many things in common with ancient Southwestern cultures. We still eat corn and beans, we still play games, and we still live together with our families. Our houses and how we use them, however, have changed over time. We often have a separate room for each family member to sleep, a room for eating, a room for cooking, and a room for TV and family time.

At archaeological sites, we can determine what rooms were used for based on what kind of artifacts we find in each of them. Ancient Puebloan (formerly called Anasazi) cultures used their houses a little bit differently than we do. There were separate rooms for storing food and for religious ceremonies. Ancient Puebloans slept in the same room as their whole family and did many of their activities outdoors in the "plaza" area. How is your house different from or the same as theirs?

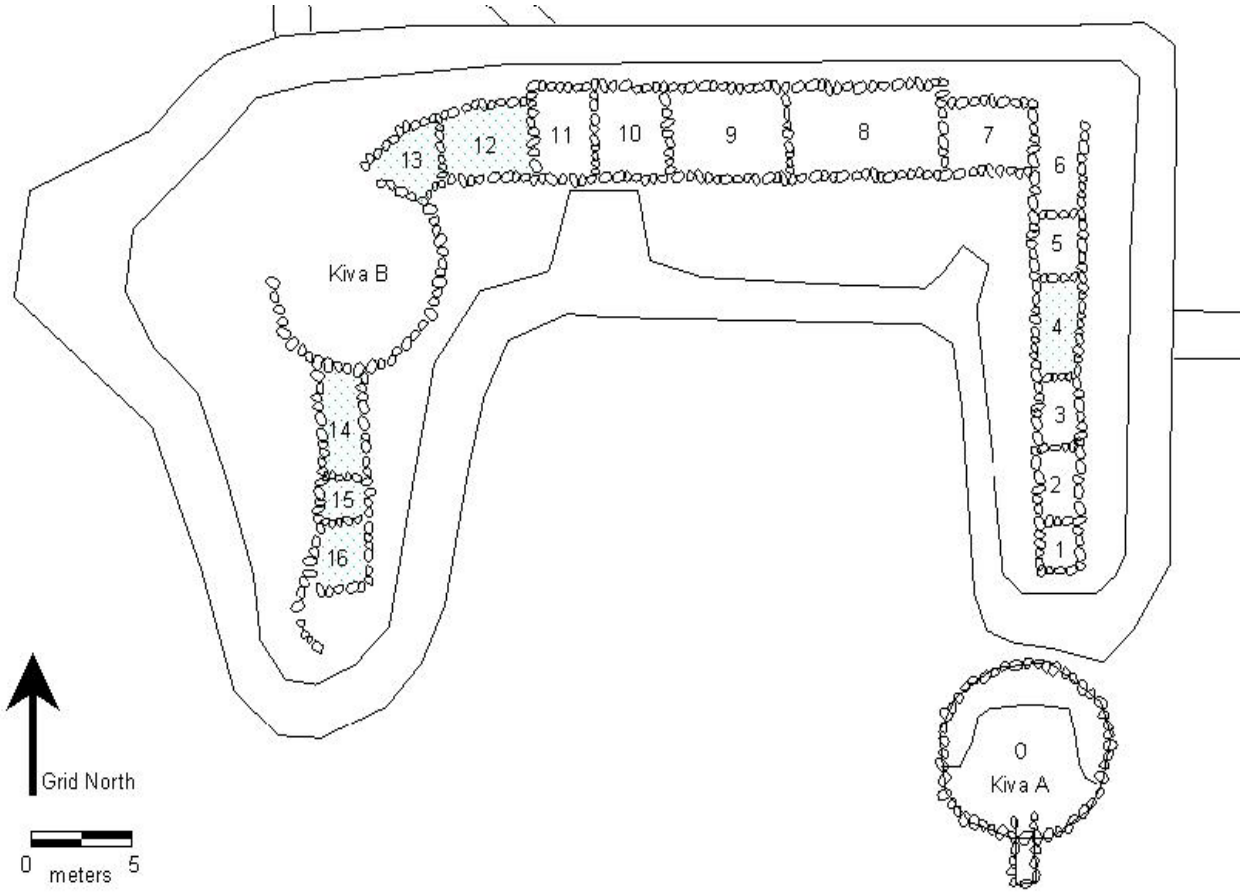
Procedure
1. Homework: Have students draw a map of their house and label each of the rooms. Have them measure their bedroom and include these dimensions on the map.
2. Scientists, including archaeologists, will often use the metric system when they are reporting what they have found. Have students convert the measurements of their bedroom into meters.
3. Looking at the map of the Tusayan Pueblo Ruins on page 7, have the students speculate what the rooms were used for. Explain that between 20 and 30 people are believed to have lived at Tusayan.
4. Having completed Step 3, explain that room numbers 8 – 11 were the living spaces. It is in these rooms that families would have slept and possibly cooked whenever the weather dictated that they should be inside. Many of the other rooms, including numbers 1 - 7 and 12 – 16 would have been used mostly for storage. The kivas are believed to have been used for ceremonial purposes. But most everyday activities were done outside in the plaza.
5. Discuss how we know this. Inferences are made on the basis of what artifacts have been found in the different rooms. Ask the students to guess in which rooms the following artifacts were found: plain pottery, decorated pottery, corn cobs, charcoal, pieces of turquoise, salt, beans, pine cones, sea shells, and bird feathers.

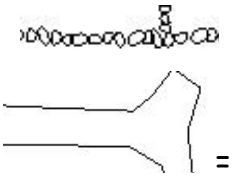
6. Have the students compare the size of their bedrooms to the rooms where the ancient Puebloans would have slept with their families. (Remind them that almost all other activities were done outside.)
7. Why is there no bathroom, separate living room, or family room in the pueblo?
8. Students can write or explain why and how their houses are different from those of the Ancestral Puebloans.



An artist depiction of life at the Tusayan Pueblo 800-900 years ago.
Painting by Roy Anderson, NPS Collection

Map





= ruin walls

= walking path

Pushing the Envelope**

School Subjects Science; Social Studies
Grade Level 4th - 6th
AZ Standards Addressed

SS04-S1C1-04; SS05-S1C1-05; SS06-S1C1-08: Describe how archaeological research adds to our understanding of the past.
SC04-S1C1-01: Differentiate inferences from observations
SC04-S1C4-01: SC05-S1C4-01 Communicate verbally or in writing the results of an inquiry.
SC04-S1C4-03: SC05-S1C4-03: Communicate with other groups or individuals to compare the results of a common investigation
SC06-S2C2-03: Applying scientific processes to other problem solving or decision-making situations

Lesson Overview
Students investigate cancelled envelopes and list observations and inferences to determine a historical sequence of events.

Lesson Objective
Students will be able to make observations and generate evidence to support an idea and inferences based on evidence.

Materials
- Two cancelled envelopes for each group of four students. Teachers may want to enlist the help of colleagues, friends, organizations, etc. to gather a variety of interesting envelopes (perhaps some handwritten, some from other countries, some with unique marks or smudges, some that have been forwarded or returned to sender, etc.).
- (Optional) Map of the world.

Background
An observation is information gathered directly by using one or more of the five senses—seeing, touching, hearing, tasting, or smelling. An inference is a logical conclusion based on observations and past experiences. When archaeologists find ruins, they only find part of the story. They might find homes, tools, pottery sherds, toys, or even stored food. They may not even find these all in the same place. Archaeologists need to use both observation and inference to put together the story of ancient people. Often their conclusions raise more questions to be answered.

Procedure
1. Discuss the difference between an observation and an inference, perhaps revealing an observation you made on the way to school today and having students make inferences from the fact you presented.
2. Distribute two cancelled envelopes to each group of four students. Ask them to observe each envelope carefully and figure out what they can about its history, such as who sent it, its destination, how it traveled there, how many people may have handled it, who received it, etc. Have them list their observations.
3. Ask students to make a list of questions they can't answer about the envelope.
4. Have students make inferences about the envelope. They may be able to make inferences about the persons sending and receiving the envelope. What do they think the story of this envelope is? What is the sequence of events that has transpired in this envelope's "life?"
5. Have groups trade envelopes and then share their observations and inferences with each other.
6. (Optional) Distribute contents of envelopes so that students might compare their inferences with the new information gained from the contents and modify their stories.

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Is a Picture Worth 1,000 Words?

School Subject History
Grade Level 4th-6th
AZ Standards Addressed

SS04-S1C1-04; SS05-S1C1-05; SS06-S1C1-08: Describe how archaeological research adds to our understanding of the past.
SC04-S1C1-01: Differentiate inferences from observations.
SS05-S1C1-05: Describe how archaeological research adds to our understanding of the past.
SC06-S2C2-03: Applying scientific processes to other problem solving or decision-making situations

Lesson Overview
Students will evaluate a picture, listing observations and making inferences.

Lesson Objective
Students will be able to make observations and generate evidence to support an idea. They will also be able to make inferences based on evidence.

Materials
- Grand Canyon Sailors on Bikes photograph (on the following page)

Background
An observation is information gathered directly by using one or more of the five senses—seeing, touching, hearing, tasting, or smelling. An inference is a logical conclusion based on observations and past experiences. When archaeologists find ruins, they only find part of the story. They might find homes, tools, pottery sherds, toys, or even stored food. They may not even find these all in the same place. Archaeologists need to use both observation and inference to put together the story of ancient people. Often their conclusions raise more questions to be answered.

Procedure
1. Discuss the difference between observation and inference.
2. Distribute copies of the Grand Canyon Sailor photo. Have students list their observations of the photo. (The men have bikes and are wearing sailor uniforms. They are at Grand Canyon. They are chained to their bikes. Etc.)
3. Have students make inferences. (Why are the sailors at the edge of Grand Canyon? What are they doing? How did they get there? Etc.)
4. Have students write or story and share it or present their ideas to at least three other students.
5. Present what *is* known about these two men. This photo was taken by the Kolb Brothers, used for a postcard printed around 1925. The description on the back read:

   Two discharged US sailors going coast to coast demonstrating the endurance of the US Navy boys handcuffed to bicycles. Handcuffs sealed at Ship Café, Venice Beach, CA by Rosco "Fatty" Arbuckle, movie star. Handcuffs must be sawed off- cannot be opened. They crossed the American Desert- the painted desert. Making their expenses with postcards. "Wheel goes wherever we go."
6. There are still many unanswered questions about these men. What happened to them after they left Grand Canyon? Did they make it to their destination?

LOS ANGELES to NEW YORK
CROWN BICYCLES
MORROW BRAKES
FISK TIRES

Oral History Interview

School Subject History, Genealogy
Grade Level 4th - 6th
AZ Standards Addressed

SS04-S2C1-02: Describe the difference between primary and secondary sources.
W04-S2C1-02/W05-S2C1-02/W06-S2C1-02: Provide content and selected details that are well-suited to audience and purpose.
W04-S3C1-01/W05-S3C1-01: Write a narrative based on imagined or real events, observations, or memories that includes: characters, setting, plot, sensory details, clear language, logical sequence of events
SS05-S2C1-03: Describe the difference between primary and secondary sources.
SS06-S2C1-05: Describe the difference between primary and secondary sources.
SS06-S2C1-04: Formulate questions that can be answered by historical study and research.

Lesson Overview
Students will interview an older person and present their findings orally or in writing.

Lesson Objective
Students will be able to explain the importance of including information from primary sources when telling history and present a written account of their interview with an older adult.

Materials

- a sheet of paper with questions for the interview written on it
- a pen or pencil
- each student will interview an older family member or friend

Background
Archaeology is the study of ancient material remains of human life and activities. For years, archaeologists studied the remains from past human cultures, trying to guess what symbols meant, what tools were for, or which rooms were used for what. It was difficult for them to know whether they were accurate or not. Once archaeologists started working with anthropologists, who study human culture, they were able to learn much more about the ruins. The native cultures today still share things in common with their ancestors, the ancient Puebloans, and can help us understand the artifacts and symbols that we see at ruins.

Imagine if you were walking through the woods and found an old house. You walk in and look around the dust-covered house. You pick up a black plastic wheel. It has a red center, is extremely thin, and has grooves in the sides. You are surprised because it doesn't seem strong enough to use as a wheel. You decide it must have been attached to a small wagon that carried something light like a doll. When you go back to your house, your mom explains that it is a record. Instead of CD's, music was played by putting a needle in the plastic grooves of the record. If you had not asked your mom, you would have guessed that the record was something very different than it really was. Talking to other people who have connections with the past can teach you a lot.

Procedure

1. Each student will interview someone they know who is at least four times the student's age (the older, the better). A great person to interview is someone from a senior citizen center or other places where elderly persons are likely to be found. In class, prepare at least ten questions for that interview.

   Some ideas for questions:

   -What was the happiest moment of your life?
   -What was the most important thing that ever happened to you?
   -What do you remember about when you were (the student's age)?
   -What major local, state, national and/or world events have happened during your lifetime?
   -Have you been to any National Parks? Which ones? Which was your favorite and why?
   -How has life changed since you were a kid?
   -If the person has lived in the area a long time, ask about how things have changed in the area over time.
   -How have things changed for women/minorities in your lifetime?
   -How have natural resources been important to you?
   -How do you think the management of natural resources has changed over time?
   -How do you think values have changed in your lifetime? How have your values changed?
   -Who have been your favorite political leaders and why?
   -What was the economy like when you were a kid…a teen….in your 20s, 30s….etc.?
   -What was fashionable when you were a kid…teen…in your 20s, 30s…etc.?
   -If you could pass along one thought of wisdom based on your life, what would it be?
   -Encourage the students to ask the interviewee to share old photos.
   -Have them ask the interviewee to walk around with the student, showing them items that were not available when they were a kid and discussing what was used in place of those items (example: a microwave, computer, cell phone, DVDs, etc.).

2. Have students present some of their findings in class or write a biography of the person interviewed.

History Detectives

School Subject History
Grade Level 4th - 8th
AZ Standards Addressed

SS04-S1C1-01: Use the following to interpret historical data: timelines – B.C.E. and B.C.; C.E. and A.D. and graphs, tables, charts, and maps
SS04-S1C1-03: Locate information using both primary and secondary sources
SS04-S4C1-03: Construct maps using symbols to represent human and physical features
SS05-S1C1-01: Use the following to interpret historical data: timelines – B.C.E. and B.C.; C.E. and A.D. and graphs, tables, charts, and maps
SS05-S1C1-04: Locate information using both primary and secondary sources
SS06-C4S6-01: Describe ways geographic features and conditions influenced settlement in various locations (e.g., near waterways, on high terrain, with adequate fresh water, on good land for farming, in temperate climates) throughout different periods of time, places, and regions.
SS07-S4C5-01: Identify the physical processes (e.g., conservation of natural resources, mining, water distribution in Arizona) that influence the formation and location of resources.
SS07-S4C6-01: Describe ways geographic features and conditions influence history. (Connect to time periods studied as well as current events.)
SS08-S4C6-01: Describe ways geographic features and conditions influence history. (Connect to time periods studied as well as current events.)

Lesson Overview
Students use a variety of sources to study the history of selected areas. Multiple options are presented so teachers may select the option that best fits their resources and time.

Lesson Objective
Students will be able to explain how historical items or buildings can tell about the people who used them and make inferences using clues from historical items or buildings.

Materials

For historic walk (Option 1):
- local map (check with your clerk of courts)
- journals or paper for writing/drawing
- colored pencils, pencils and/or crayons
- cameras and film (optional)

For building a miniature historic district (Option 1):
- rubber cement
- cardboard or poster board
- milk cartons or boxes

In-class "Artifact" Investigation (Option 3):
- old photos and/or objects
- journals or paper for writing

For rubbings (Options 1 & 5):
- coins or other object to make rubbings
- paper
- fat crayon, pencil and/or artist's charcoal

History Investigation (Option 3):
- local library with historic newspapers on microfiche
- journals or paper for writing

Historic Auction (Option 4 *Extension*):
- copies of old catalogs (pre-1970s) or newspaper ads with pictures

Procedure
This activity has multiple procedure options. Students will write or tell a story that suggests what an object or place can tell us about the people who built it or use(d) it. You could use several of the following possibilities as the impetus for the activity:

Option 1- For Historic walk or virtual tour:
1. Give students an orientation to the area by conducting an investigation of a local map; pay close attention to street names and any labeled geographic features.

2. Take the students on a walking tour of your town (especially if you have an historic district).
3. What structures or objects are very old, are not being used anymore, or are being used for something other than what they were originally intended? Have the students try to guess the original use of the item or structure.
4. Have students choose a building. (It works best if each team selects a building next to another team's so that an entire block of buildings get recorded.) Collect information about the assigned/chosen building: What is it made of? Are there features of this building that were designed for a specific purpose? Are there features that make the building unique? Are there any historical signs or markers on the building?

   Optional- Build a miniature historic district: Have students sketch or photograph all the sides of the buildings. They can cut them out and glue them to milk cartons or boxes to create a 3D village. Do the same with Grand Canyon village after your field trip!
5. What clues are there to tell about the areas history?
   - Names of streets
   - Buildings
   - Geographical features

   Example: There may be a lot of Spanish names in communities of the southwest because this area of the country once belonged to Mexico. The influence of the original inhabitants of an area, the native peoples, may also be evident. Perhaps there are names of historically well known members of the community. Schools are often named for local people who made a contribution to education for example.
6. Have the students make a rough map as they walk.
   - Where is the historic section of town located? Can you figure out why? For example, is it near water or easy access to transportation?
   - Record dates found on buildings, cement sidewalks, historic designs, historic plaques, commemorative markers, or even manhole covers. (Students can also do rubbings of these dates. Practice rubbings ahead of time in class by putting a piece of paper on a coin and rubbing the paper with the side of a fat crayon, fat lead pencil or artist's charcoal until the details of the coin show on the paper.).
   - Record the types of businesses found and any clues about ethnicity.
7. Make a timeline of the buildings. Have students make inferences about the historic section of town. How and when did the town begin? What are your clues?
8. Do you find symbols of democracy, the United States, Arizona, or others?

Option 2- "Artifact" Investigation:

1. Bring old items or photos of old structures from home for this activity. Or visit an antique shop or history museum.
2. Have students pick an object and write or tell a story about what it might tell about the people who used it. Were they farmers? Did they play games? Etc.

Option 3- History Investigation:

1. Go to the local library and have students look at the oldest newspapers they have (they will probably be stored on microfiche) or choose a decade and look at a newspaper from that decade.
2. Have the students answer questions and/or write a story about life during that time period.
   - Possible topics students could focus on: entertainment, fashion, the economy, politics, regional or national events, world events, values, humor, sports, attitudes toward natural resources, attitudes toward women and minorities, attitudes towards other countries, popular leisure activities, etc.
3. Have the students imagine going "back in time" to the era they read about and write a letter to a relative about what their week might have been like.
4. Have the students share their findings and/or stories with the class.

Extension:
While at the library, make copies of adds from the oldest newspaper or catalog you can find (make sure its old enough that prices have changed dramatically). You might also be able to find old catalogs to buy and/or copy at thrift shops, museums, or antique stores. Cover up the prices with a taped-on flap of paper and play "The History Auction Game". Have students take turns trying to auction one of the items for sale by showing its picture to the class and describing its many attributes. The rest of the class bids on the item. The student to bid closest to the original sales price gets to "buy" the item. After all items are "sold", the student who was able to "buy" the most items wins the game.

The library is also a good place to explore the local history section. Special collections might also have information about your community's history.

Option 5:

1. Visit a local cemetery, the older the better. (Note: some cultures may not be comfortable with this activity).
2. Students can use information off the tombstones to determine maiden names of female family members and dates of family member lifetimes. Make a rubbing or draw a picture of artwork found on tombstones. Much information about history can be gathered from tombstones.
3. Have students find evidence of major events. Here are some ideas of things to look for:

    - Battles or wars
    - Age: A large number of children's tombstones from a particular time period may tell us something about how hard it was for children to survive during that time.
    - A large number of tombstones from the same year or two might reveal a medical epidemic.
    - A large number of tombstones from the same date may reveal a big accident or natural catastrophe such as a flood, tornado, heat wave, freeze, or earthquake.
    - Your census can also tell you something about occupations, nationalities, and immigration.

Extension:
If time permits before or after your ranger program, visit the cemetery at Grand Canyon National Park (next to the Shrine of The Ages building) and practice similar activities.

After visiting Grand Canyon, have the students imagine going "back in time" to visit one of the historic characters or re-live an event or era that occurred at Grand Canyon. The student's can write a letter to a friend or family member describing their imaginary adventure.

Split Twig Figurines

School Subjects History, Archaeology
Grade Level 4th - 6th
AZ Standards Addressed

SS04-S1C2-01: Describe the legacy and cultures of prehistoric people in the Americas: characteristics of hunter-gatherer societies and development of agriculture
SS06-S1C2-01: Describe the characteristics of hunting and gathering societies in the Americas
VA-S1C4-402: Reflect upon the cultural factors influencing artwork
VA-S2C4-301: Interpret meanings and/or purposes of an artwork using subject matter, symbols, and/or themes

Lesson Overview
Students will make a replica of a hunter-gatherer split-twig figurine.

Lesson Objective
Students will create and learn about a specific artifact to Grand Canyon that relates to survival of hunter-gatherer societies.

Materials
- several pipe cleaners (per student) twisted together or one 3-foot piece of wire for each student

Background Information
Split-twig figurines made of willow or cottonwood twigs have been found well-preserved in caves below the rim at Grand Canyon. The figurines were made by shaping and wrapping willow or cottonwood twigs into likenesses of deer or bighorn sheep. Figurines have also been found across Nevada and in parts of Utah. They may have been used as charms or used in pre-hunting rituals by the hunter-gatherers who created them. Using radiocarbon dating, these figurines have been dated to approximately 4,000 years old!

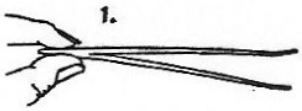
Procedure
1. Pass out wire or pipe cleaners to every student. Use the diagram on the next page to help instruct the class how to construct a split-twig figurine.
2. Discuss the importance of this artifact. What does it tell us about people of the past? Can you think of anything else that people have made which is 4,000 years old? What is the oldest thing in your family? Your community? Help your students realize how rare and special such an ancient artifact is.

Make a Split-Twig Figurine

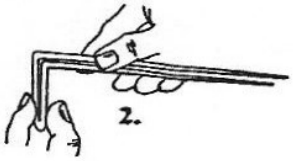
Humans have been living in and around Grand Canyon for at least 10,000 years. Split-twig figurine artifacts (items made and used by ancient people) have been found in caves in the canyon. These figurines were made of twigs from willow and cottonwood trees. They were shaped to look like desert bighorn sheep or mule deer and may have been used for good luck charms before a hunt or for religious ceremonies. See real split-twig figurines 3000-4000 years old at the Tusayan Museum!

You can make your own split-twig figurine using several pipe cleaners twisted together or one 3-foot piece of wire. Follow the steps and diagrams below.

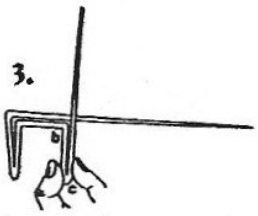
1. Fold in half.



2. Bend the fold down to form the back legs.

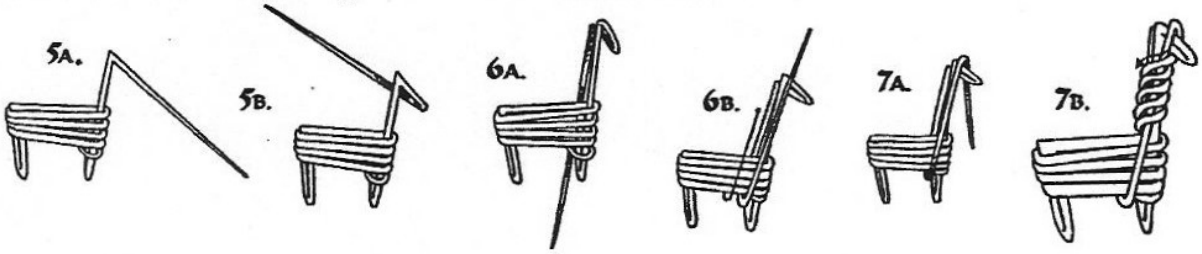


3. Bend one side down and then straight up, to form the front legs.



4. Wrap the other end around the outside of both legs to form the body.

5-7. Use the remaining end to form the head and neck.



Making and Understanding Rock Art

School Subjects History, Art
Grade Level 4th - 6th
AZ Standards Addressed

SS04-S1C2-01: Describe the legacy and cultures of prehistoric people in the Americas: characteristics of hunter-gatherer societies and development of agriculture
SS05-S1C3-01: Recognize that Native American tribes resided throughout North America before the period of European exploration and colonization.
SS06-S1C2-01: Describe the characteristics of hunting and gathering societies in the Americas
SS06-S1C2-03: Describe the cultures of the Mogollon, Ancestral Puebloans (Anasazi), and Hohokam: location, agriculture, housing, arts, and trade networks and how these cultures adapted to and altered their environment
VA-S2C2-102/VA-S2C2-202: Describe what tools, materials, and techniques were used to create artwork from diverse cultures and times
VA-S2C2-302: Describe and analyze what tools, materials, and techniques were used to create artwork from diverse cultures and times

Lesson Overview
Students will simulate making ancient petroglyphs and pictographs.

Lesson Objectives
Students will be able to explain the difference between petroglyphs and pictographs, why people made these markings, and what their meanings might be. Students will also have the opportunity to create their own rock art.

Materials
For petroglyphs:

- drawing paper cut into 4"x4" or 5"x7" pieces
- crayons
- paperclips or small nails
- newspaper

For pictographs:

- paper bags
- charcoal sticks or colored chalk

Background
Rock art was carved, pecked, or painted on rocks at Grand Canyon and other places throughout the world by people long ago. Figures that were carved or pecked into rock are known as petroglyphs, while those painted with pigment on rocks are called pictographs. Rock art may have been created for religious ceremonies, to tell a story, mark a trail, or leave a message. Some symbols represent animals and people, while others are mysterious in their meanings. Rock art provides important clues of people who lived long ago.

Procedure
Briefly share some background information about petroglyphs and pictographs. You might even see some during your Grand Canyon visit! Explain to the students they will create petroglyphs and pictographs, and convey a message or story of their Grand Canyon visit in the rock art they create.

<u>For petroglyph activity:</u>

1. Cover work area with newspaper.
2. Using earth-tone reds and browns, color heavily over entire paper.
3. Using black crayon, color over the red and brown layer.

4. Using the end of a straightened paperclip or a small nail, gently scratch designs into the crayon layer. The designs should tell a story about one or more aspects of the student's visit to Grand Canyon.
5. When completed, students exchange their work and try to figure out what story the petroglyphs are conveying.

For pictograph activity:

1. Cover work area with newspaper
2. If using large paper bags, tear into appropriate size
3. Crumple the paper bags; then smooth out.
4. Using charcoal or colored chalk, draw pictograph designs on the bag.
5. When completed, have each student briefly describe their designs and what they mean.

Hang them on the wall and have an 'art gallery' showing!

Human History Timeline

School Subject History
Grade Level 3rd - 8th
Standards Addressed

SS03-S1C1-01: Use timelines to identify the time sequence of historical data
SS04-S1C1-01: Use the following to interpret historical data: timelines – B.C.E. and B.C.; C.E. and A.D. and graphs, tables, charts, and maps
SS04-S1C3-01: Describe the reasons for early Spanish exploration of Mexico and the Southwestern region of the United States by: Francisco Vásques de Coronado
SS04-S1C7-01: Describe the economic development of Arizona: mining, ranching, and farming and dams
SS04-S1C7-02: Describe the advent of innovations in transportation (e.g., steamboats, freighting, stagecoaches, railroads) that helped Arizona's growth and economy
SS05-S1C1-01: Use the following to interpret historical data: timelines – B.C.E. and B.C.; C.E. and A.D. and graphs, tables, charts, and maps
SS05-S1C1-02: Construct timelines of the historical era being studied (e.g., presidents/ world leaders, key events, people).
SS05-S1C3-01: Recognize that Native American tribes resided throughout North America before the period of European exploration and colonization
SS06-S1C1-03: Construct timelines of the historical era being studied (e.g., presidents/ world leaders, key events, people).
SS07-S1C1-03: Construct timelines of the historical era being studied (e.g., presidents/ world leaders, key events, people).
SS08-S1C1-03: Construct timelines of the historical era being studied (e.g., presidents/ world leaders, key events, people).

Lesson Overview
Students present their character, culture or human history event in chronological order and place event cards along a relative timeline.

Lesson Objectives
Students will be able to place historical characters, cultures, and events in sequential order, name several people, cultures, and events of importance to the development of Arizona and Grand Canyon, and explain how Grand Canyon can be used as a model to study the development of Arizona and the West.

Materials
- timeline cards (found on page 22). An alternate set can be found on our website at: http://www.nps.gov/grca/forteachers/lessonplansandteacherguides.htm
- rope
- paper clips or other material to connect time cards to the rope

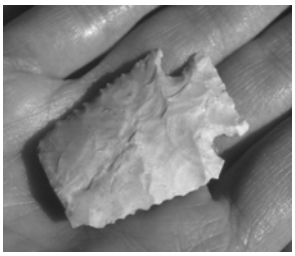
Procedure
1. Prepare the timeline cards you will be using for the activity so that each event is on a separate card.
2. Create a timeline with rope. Determine how long you want the rope to be. Remember we're covering 14,000 years of human history. The longer the timeline, the better it works. Here are some suggestions:
   - a 14 foot rope means 1 foot = 1,000 years
   - a 56 foot rope means 1 foot = 250 years
   - 1,400 foot (1/4 mile of running track + 80 feet) means 1 foot = 10 years
3. Pass out the timeline cards and give the kids a chance to read about their historical element/event. Explain that they all are holding a valuable piece of history that helped shape Grand Canyon, Arizona, and the West.
4. Discuss the process of chronology and sequential order and their importance as organizational tools. Tell the students they are creating a human history timeline and they must interact with one another to establish the proper order.
5. Allow the students to line up according to the relative age of their cards. In order, each student will read their card to the class. Attach the card to the rope at the correct, relative location.

Follow-up Questions

1. Where are most of the events and why is this?
2. How does the development of Grand Canyon represent the process of growth in Arizona and the West?
3. Why don't we have more knowledge of the blank areas on the timeline? How can we find out more about these time periods?
4. What time would you most like to visit along the timeline and why?

Extension

1. Following this compilation of initial timeline cards is a list of suggested supplementary events. If you wish to put the Grand Canyon relevant events into more perspective, assign some of these events to students before completing the timeline.
2. Give students their roles in advance. Have students research their role and come to class prepared to really act out their roles. Encourage them to come in costume and use props.
3. Have students do further research on their role and write a paper about that subject.



14,000-9,000 years ago: Paleo-Indians
Paleo-Indians were hunters. They followed the big game animals like mammoths south from Canada. They lived life on the go and traveled in small bands from camp to camp. Their spear points have been found in Clovis, New Mexico. For this reason, archaeologists call them the Clovis people.

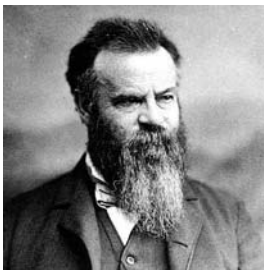
9,000-3,000 years ago: The Archaic Period
Animal figures have been found in caves at Grand Canyon. These were made of twigs, and some are 4,000 years old. They were left by hunters who were passing through in search of sheep, deer, or antelope. They may have been used as religious offerings to draw the animals near. They also left behind pictographs, pieces of sandals, and stone tools.

3,000-1,300 years ago: The Basketmakers
These Native Americans lived in rock shelters and pit-houses. They hunted bighorn sheep and harvested pinyon nuts but also grew corn. They traded for goods outside the region. They could weave with such skill that their baskets were watertight. They wove shoes
from yucca plants.

1,300-800 years ago: Ancestral Puebloans
Many families lived and worked together in a community. They raised crops such as corn, squash, and beans. They also collected wild foods and hunted game. They made beautiful pots for trade and household use. They enjoyed playing games and made games pieces out of bone, shells, and clay.

1540: Spanish Conquistadores are the first Europeans to see Grand Canyon

Spanish soldiers had heard stories of cities of gold. When they were looking for these cities, they found the Grand Canyon. They were not impressed. They wanted to go across to the North Rim to continue their search, but found the canyon impossible to cross. So they turned back. It was over 200 years before other Europeans visited.

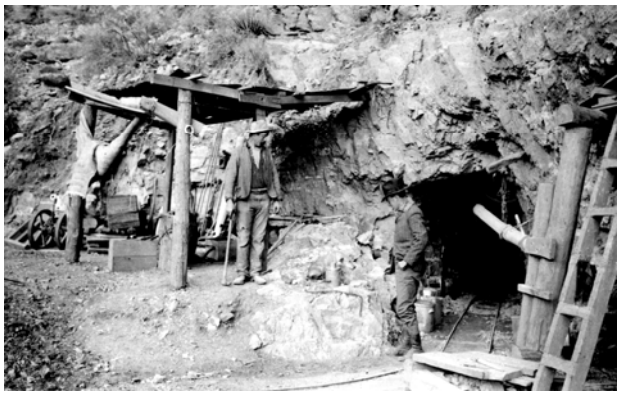


1869: The Powell Expedition

John Wesley Powell and his crew of ten men were the first known people to travel through Grand Canyon on the Colorado River. When they started the expedition, the maps of this region were blank. For almost three months, they faced dangerous rapids. Powell, who had lost an arm in the Civil War, was a geology teacher and lover of the outdoors.

1883: John Hance

John Hance was a fur trapper, miner, and a famous storyteller. He entertained early tourists with memorable “tall tale” stories. For instance, on one occasion, the canyon was clouded over. He said he strapped on his snowshoes and began walking across the clouds. About halfway through, a clearing appeared and he was stranded! Luckily the clouds came back in and he was able to continue to the other side.



Late 1880’s: Peter Berry

Pete Berry was another miner who decided he could make more profit from serving tourists. He boasted that his Grandview Hotel was the “only first class hotel at the Grand Canyon. “

1901: Grand Canyon Railway arrives at the South Rim.
Before the arrival of the railroad, visitors traveled 16 hours by stagecoach from Flagstaff or Williams. The train took only 3 hours and cost $3.95. As a result, visitation to Grand Canyon Village and the South Rim increased in a short time from hundreds per year to tens of thousands per year.

1903: Kolb Brothers arrive at Grand Canyon.
Emery and Ellsworth Kolb were brothers who opened a photography studio and took pictures of tourists. Although Ellsworth left in 1913, Emery lived at the Grand Canyon until his death at age of 95.

The brothers had many adventures in the canyon like rock climbing and white water boating. They kept in good shape by running in and out of the canyon to get fresh water for their film development- sometimes running over 25 miles a day. Thanks to the Kolbs, historians have thousands of photographs of Grand Canyon life.

1905 (a): The Fred Harvey Company opens El Tovar Hotel.
Fred Harvey had worked since1883 to provide quality restaurants and hotels along the Santa Fe railway. The El Tovar was an elegant hotel that attracted wealthy visitors to Grand Canyon. Harvey hired educated young women as “Harvey Girls” to work at his establishments.

1905 (b): Mary Elizabeth Jane Colter begins working at Grand Canyon
After studying architectural design in San Francisco, California, Mary Colter worked for the Fred Harvey Company. She designed eight structures at Grand Canyon. This was a time when a woman couldn’t even be called an architect.

1916: August 25: National Park Service was created to "conserve the scenery, the natural and historic objects and the wildlife…for the enjoyment of future generations."

1933: Civilian Conservation Corps (CCC)
Times were tough during the Great Depression. There was little work to be found. President Franklin Delano Roosevelt created the CCC to create jobs that would improve public lands. At Grand Canyon, the CCC built streets and roads, trails, picnic shelters, campgrounds, and telephone lines.

Today: Grand Canyon National Park is a World Heritage Site and one of the seven wonders of the natural world. Over 4.5 million people visit annually.

Suggested Supplemental Timeline Events

800 years ago - present: Cerbat/Pai and Southern Paiute present in Canyon Country
1492: Columbus “discovers” the New World
1520’s: Cortes commissions Coronado Expeditions
1820’s: Fur trappers and Traders
1832: Hotsprings Reservation, Arkansas (now Hot Springs National Park)
1848: Mexican American War
1853: Gadsden Purchase
1857: U.S. Military explores Grand Canyon
1863: Arizona became a territory of the U.S.
1864: During the American Civil War
1872: Yellowstone National Park (in northwestern Wyoming)
Early 1880’s: Atchison Topeka and Santa Fe Railroad was built across Arizona
Mid 1880’s: William (Wallace) and Ada Bass
Late 1880’s: Ralph Henry Cameron
1890: United States Bureau of the Census declares the Frontier at an end
Early 1890’s: Louis Boucher
1893: President Benjamin Harrison proclaims Grand Canyon Forest Reserve
Mid 1890’s: William (Buckey) O’Neill
1901: Theodore (Teddy) Roosevelt becomes President of the United States
1906: Portions of what would become Grand Canyon National Park declared a Game Reserve.
1908: Grand Canyon National Monument established by President Teddy Roosevelt.
1912: February 14: Arizona Territory becomes 48th state.
1919: February 26: Grand Canyon National Park established.
1929: The stock market crashes and the Great Depression begins.
1936: Hoover Dam completed and Lake Mead created
1955: Almost 1,000,000 people visit the park and river running gains popularity
1963: Glen Canyon Dam completed and Lake Powell created
1975: President Gerald Ford doubles the size of Grand Canyon National Park
and brings it to its current size of 1.2 million acres
1985: Nearly 3,000,000 people visit the park and the Central Arizona Project begins