

Maya: Lords of the Earth

Lessons to Support the K–5 Curriculum

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Maya: Lords of the Earth

Unit Objective: This unit was designed to introduce elementary students to the ancient and modern-day Maya. At the height of their development, around A.D. 250, six million Maya occupied approximately 120,000 square miles from Mexico to Honduras. Students will explore the culture and beliefs of the Maya through hands-on activities that actively bring the past alive. My goal is to bring the Maya to students who may never have a chance to visit Mexico in their lifetime.

This unit weaves language arts with social studies, math, science, and art. The lessons were designed for use by primary K–5 teaching teams (classroom, ESL/BIL, art, music). The intent is for teachers to pick and choose lessons based on the needs and interests of their students. Each lesson has background information for teachers as well as current Web sites for more in-depth study. The duration of the unit could span anywhere from a few days to several months depending on the depth of instruction chosen.

My Fulbright-Hays Seminar Abroad experience in Mexico and Peru has informed me to better understand my students, their families and myself. The more we learn about each other, the more we will understand how to live together in a global society.

Grades: K-5 Teachers may chose and adapt lessons to differentiate instruction to meet the needs of individual students in their classrooms.

Wisconsin State Teaching Standards:

A.4.4 Describe and give examples of ways in which people interact with the physical environment, including use of land, location of communities, methods of construction, and design of shelters.

A.4.5 Use atlases, databases, grid systems, charts, graphs, and maps to gather information about the local community, Wisconsin, the United States, and the world.

E.4.3 Describe how families are alike and different, comparing characteristics such as size, hobbies, celebrations, where families live, and how they make a living.

E.4.4 Describe the ways in which ethnic cultures influence the daily lives of people.

E.4.5 Identify and describe institutions such as school, church, police, and family and describe their contributions to the well being of the community, state, nation, and global society.

E.4.8 Describe and distinguish among the values and beliefs of different groups and institutions.

E.4.11 Give examples and explain how language, stories, folk tales, music, and other artistic creations are expressions of culture and how they convey knowledge of other peoples and cultures.

National Geography Standards:

#1: Understands the characteristics and uses of maps, globes, and other geographic tools and technologies. Level I (Grades K–2), #1; Level II (Grades 3–5), #1, 2.

#4: Understands the physical and human characteristics of place. Level I (Grades K–2), #1, 2; Level II (Grades 3–5), #1.

#9: Understands the nature, distribution and migration of human populations on Earth’s surface. Level II (Grades 3–5), #3.

#12: Understands the patterns of human settlement and their causes. Level I (Grades K–2), #1; Level II (Grades 3–5), #1, 4, 6.

#14: How Human Actions Modify the Physical Environment. Level I (Grades K–2), #1; Level II (Grades 3–5) #1, 2, 3.

#15; Understands how physical systems affect human systems. Level II (Grades 3–5), #1, 2, 3, 4.

#18: Understands global development and environmental issues. Level II (Grades 3–5), #1, 2.

Key Questions:

Where and when did the Maya civilizations flourish?

What were the main achievements of the Maya?

How were the Maya influenced by their geography?

Why did the ancient Maya abandon their temple cities?

Maya: Lords of the Earth—Unit Summary:

1. Introduction
2. Map Study
3. Maya Civilization Timeline
4. Temple Cities
5. Homes
6. Social Structure
7. People
8. Farming and Food
9. Religious Beliefs
10. Writing and Language
11. Number System
12. Calendar
13. Arts – Weaving and Ceramics
14. Theories – What happened to the ancient Maya?
15. Resources

Materials Note: This unit is complete and ready to use—handouts are included, full references to all books cited are in the Resources section, and the PowerPoint is available for download from this Web site.

Topic #1: Introduction

WI State Teaching Standards: Describe the ways in which ethnic cultures influence the daily lives of people. Introduce students to ancient Maya so they are motivated about what and who the Maya were and are today (E.4.4).

Background Information 1: Ancient Maya Accomplishments, PowerPoint (PP) slide #3 [available for download from this Web site]

- Intellectuals – developed the first written language in America using hieroglyphs
- Mathematicians – first to use the concept of zero (centuries before Europeans learned it from Arab scholars); studied motion of time and developed calendar systems
- Astronomers – studied motion of the stars and planets and developed astronomy
- Architects and engineers – highly decorated ceremonial architecture with temple pyramids, palaces and observatories, all skillfully built without metal tools
- Artists – pottery making was one of the Maya’s top skills (without a wheel)

Sequence of Activities 1:

- Ask students about their prior knowledge of the Maya
- Use KWL chart to elicit student’s prior knowledge and what students want to learn about the Maya (may use later to list what students learned)
- Show PP slide #3 to inform students that this unit is about the accomplishments of the ancient Maya

Background Information 2: Gum

- Chewing gum invented by Maya from the sap of the sapodilla trees
- Boiled the sap into a sticky mass called *chicle*
- Maya used *chicle* for trading

Sequence of Activities 2:

- Show students gum and ask where they think it comes from
- Show PP slide #4
- Allow students to chew sugarless gum
- View *From Tree to Glee* at www.leeegum.com/treetoglee/ to follow process of gum

Background Information 3: Chocolate

- Made from the seeds of the cacao tree
- Evidence from an ancient ceramic pot suggests that the Maya may have eaten chocolate as far back as 2,600 years ago (Trivedi, Bijal P. 2002. “Ancient chocolate found in Maya ‘teapot’.” *National Geographic Today*, http://news.nationalgeographic.com/news/2002/07/0717_020717_TVchocolate.html)
- Maya royalty were one of the first groups of people to consume the unsweetened liquid chocolate drink of the gods
- Maya called chocolate *Kakaw*
- Scientific name is “Theobroma Cacao” – “Food of the Gods”

Sequence of Activities 3:

- Show students cacao seeds (realia) and PP slide #5
- Generate discussion to see what students think comes from Theobroma Cacao
- Maya used cacao beans as money for trading
- Allow students to eat a chocolate bar
- Student may view how chocolate is made at: http://www.hersheys.com/discover/tour_video.asp

Resources: KWL Chart; Sugarless chewing gum; cacao seeds; chocolate; PP slides #3–5; and *From Tree to Glee* at www.bleegum.com/treetoglee/

Assessment:

Discussion about what students learned about ancient Maya.

KWL Chart

Name _____

K	W	L
What I KNOW	What I WANT to Know	What I LEARNED

Topic #2: Maya Map Study

WI State Teaching Standards: Use atlases, databases, grid systems, charts, graphs, and maps to gather information about the local community, Wisconsin, the United States, and the world (A.4.5).

Background Information: Maya

- Maya ancestors traveled from Siberia to Alaska over the frozen Bering Strait approximately 10–15,000 years ago
- Early Maya were hunters and gatherers living in caves, rock shelters and open camps
- Rose to prominence around A.D. 250 in present-day southern Mexico, Guatemala, Northern Belize, Western Honduras, and El Salvador
- Occupied approximately 120,000 square miles
- Influenced by the Olmec (from the Veracruz area) around 1500–100 B.C.
- Olmec created ideas the Maya expanded on like the pyramids and calendar
- Surrounded by three bodies of water: Pacific Ocean, Gulf of Mexico and Gulf of Honduras
- Major Maya geographical zones:

Pacific coastal lowlands:

Tropical climate – jungles; hunting and fishing; good land for growing cacao

Highlands:

Mountainous area that includes southern and northern highlands

Maya got obsidian (hard volcanic rock) and mined jade in this area

Sequence of Activities:

- Read *Civilizations Past to Present: Mexico*, Chapter 2, p. 6–7
- Choose students to locate Mexico, Guatemala, Belize and Honduras on the World Map Activity sheet, globe or wall map
- Distribute the Maya Map handout and ask students to:
 - 1) Locate Southern Mexico (Yucatan Peninsula), Guatemala, northern Belize, western Honduras and El Salvador
 - 2) Discuss uses for different kinds of maps
 - 3) Model how to gather information from a map
 - 4) Divide students into small groups, giving groups different Maya maps (see Maya maps 1–4)
 - 5) Allow groups 15–20 minutes to examine and discuss what the maps tell them about the Maya
 - 6) Each group should assign a Recorder who will write group ideas and a Reporter who will share group ideas with the class
 - 7) Compile a list of ideas from each group (chart paper or board) about Maya map observations
- Make a Jungle Diorama using the instructions on the Jungle Diorama Activity sheets

Resources: Overhead from *The Maya in the Past and Present; Building Background – Mexico and Central America; Mexico*; globe or map of the world; PP slides #7–10; and Maya Map Handouts 1–4.

Assessment:

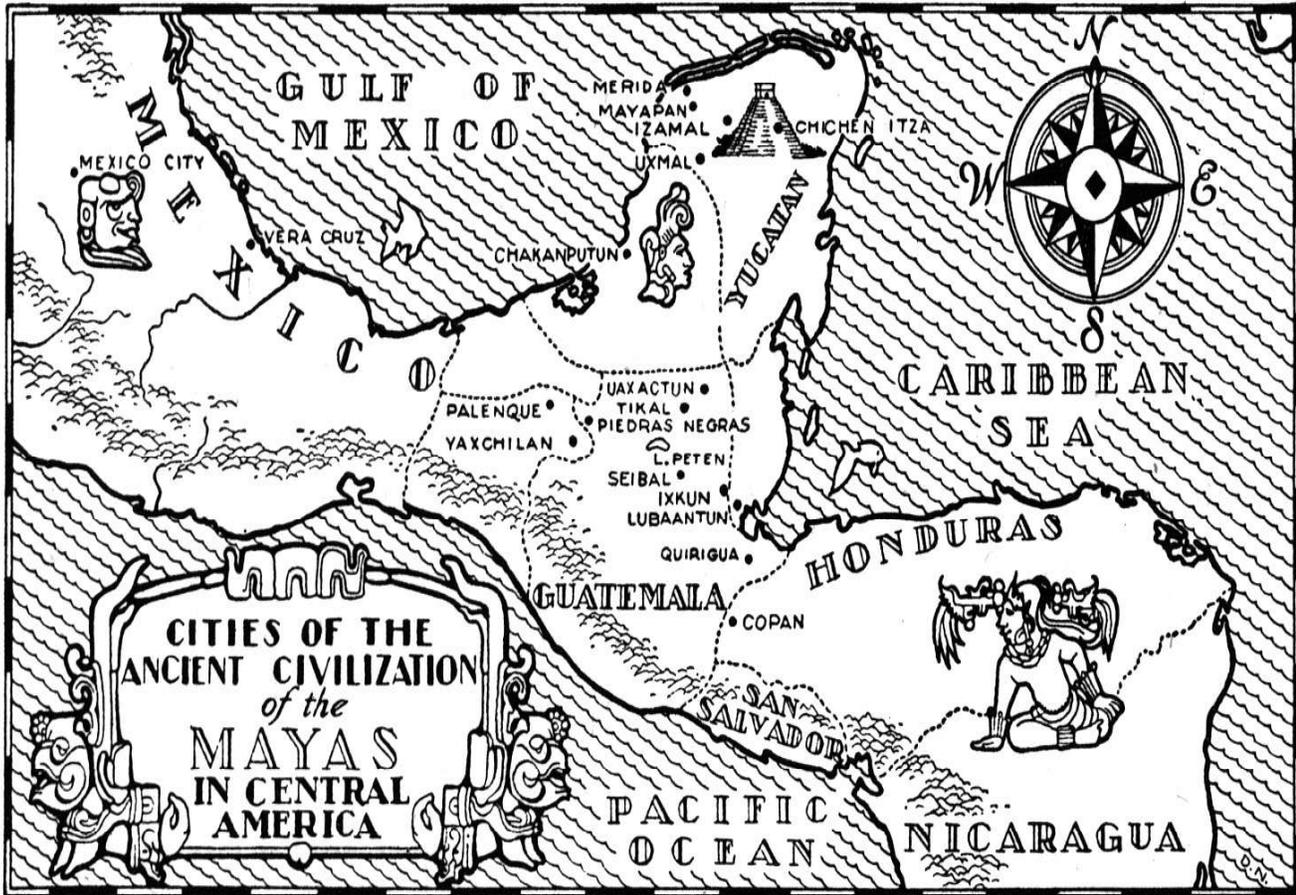
Student presentations of group map observations.

Student personal write-up on Maya Map Assessment handout describing what life might have been like for the ancient Maya based on map observations.

Maya Map Handout #1

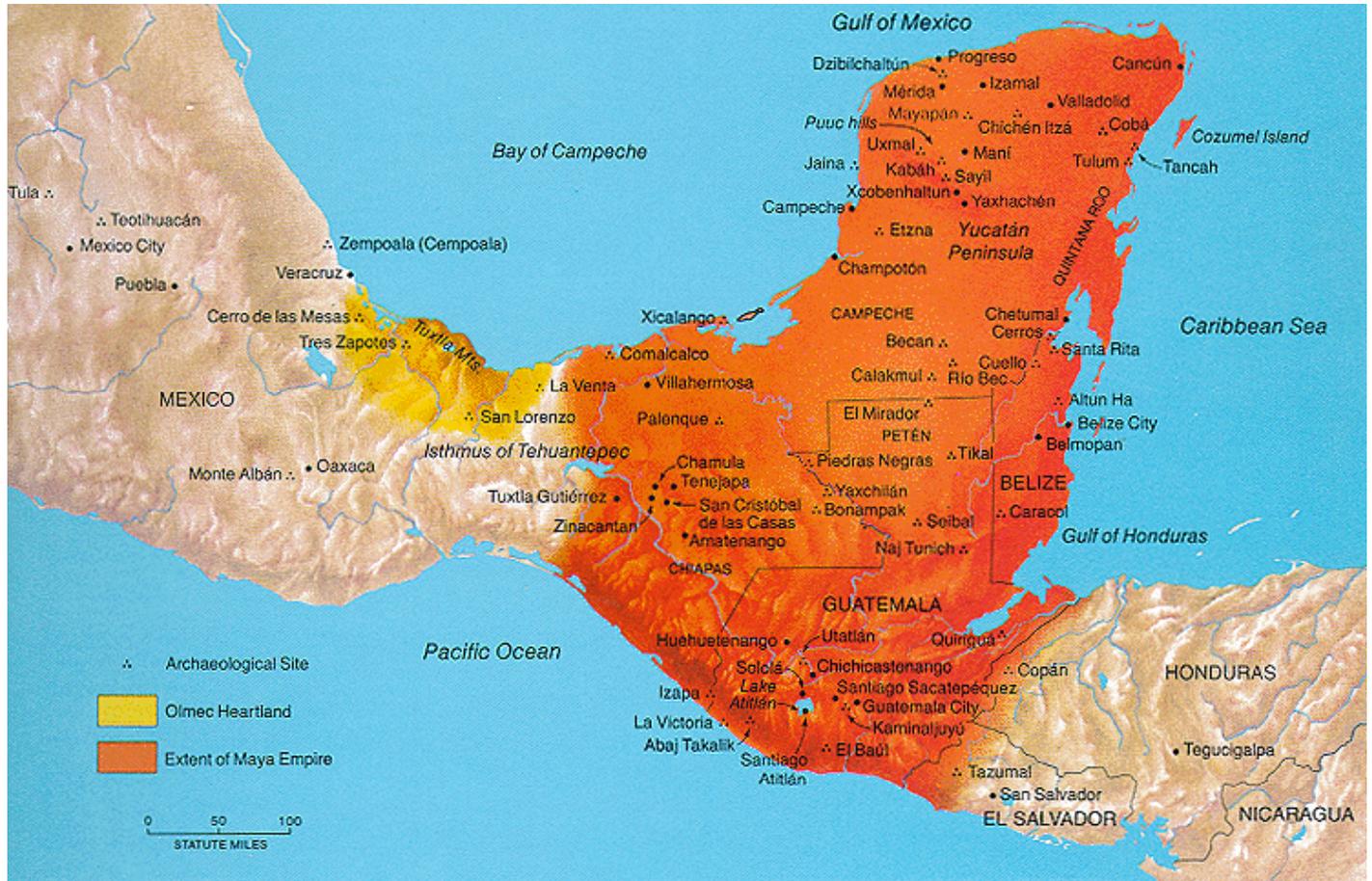


Maya Map Handout #2



Source: About.com: Ancient/Classical History, http://ancienthistory.about.com/od/maps/ss/mapsindex_3.htm

Maya Map Handout #3



Maya Map Handout #4



Source: History Link 101, Mayan Maps, http://historylink101.com/1/mayan/mayan_maps.htm

Jungle Diorama Activity

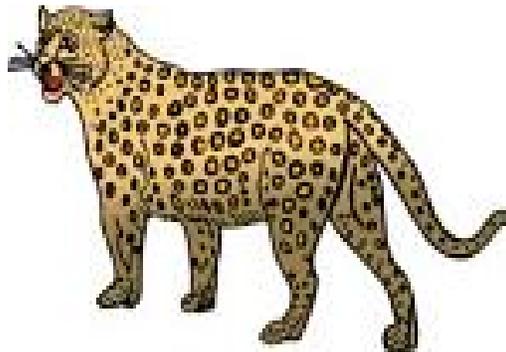
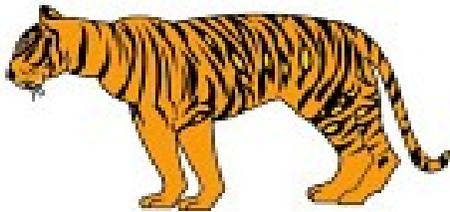
Supplies

shoebox	brown paper	green paper	soil	twigs
felt scraps	paints	scissors	glue	paintbrush
clipart	construction paper			

Steps

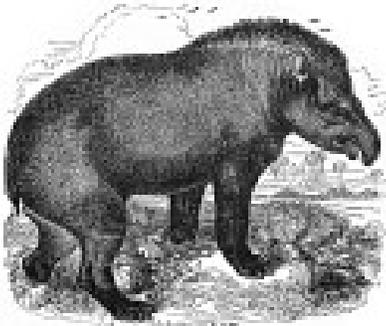
- Stand the shoebox on one side. Paint it inside and outside.
- Make trees with rolled-up brown paper (for trunks). Cut out green paper to make leaves and long vines.
- Cut out some rainforest animals and insects from construction paper, use the Rainforest Animals Clipart or use modeling clay to make your own. Cut others out of felt scraps.
- Glue the animals, trees, and leaves inside the box.
- Scatter soil and twigs on the ground.

Jungle Diarama Activity Clipart



Source: Classroom Clipart, <http://classroomclipart.com>

Jungle Diarama Activity Clipart

	
	
	<p>Draw your own jungle animal here.</p>

Source: Classroom Clipart, <http://classroomclipart.com>

Topic #3: Civilization Timeline

Background Information:

- Maya evolved from the Olmec
- Settled in the Yucatan ~ 2500 B.C. and cultivated maize (corn)
- Rose into a prominent empire ~ A.D. 250
- Maya civilization started about 4,500 years ago (although some researchers say Maya ancestors traveled by way of the Bering Strait to Mexico about 10–15,000 years ago)

Sequence of Activities:

- Review evolution of Maya timeline with students

Resources: Evolution of Maya Culture Overhead and Handout

Assessment: Students complete the Maya timeline handout either during or after discussion of the history of the Maya.

Source: Canadian Museum of Civilization, www.civilization.ca/civil/Maya/mmc09eng.html

Evolution of the Maya Culture

Overhead

Period	Years	Events
Preclassic Period	2500 B.C.– A.D. 200	Nomadic hunter/gatherers
Classic Period	A.D. 250–900	Large-scale city building; major advancements in arts, science, agriculture; large population growth
Postclassic Period	A.D. 900–1521	Many Maya cities abandoned
Spanish Invasion	A.D. 1521	First encounters with Spanish

Maya Timeline Assessment

Name _____

Directions: Fill in the timeline of the evolution of the Maya with the correct years and the major events that were happening at the time. Remember to use B.C. (Before Christ) and A.D. (Anno Domini, “In the year of the Lord”).

Period	Years	Event
Preclassic Period		
Classic Period		
Postclassic Period		
Spanish Invasion		

Topic #4a: Temple Cities – Chichen Itza – PP slide #11

WI State Teaching Standards: Describe and give examples of ways in which people interact with the physical environment, including use of land, location of communities, methods of construction, and design of shelters (A.4.4).

Background Information: <http://www.historylink102.com/mesoamerican/rf-ci-1-el-castillo.htm>

- Mayans cleared rainforests and built pyramids without metal tools, beasts of burden or wheel!
- Chichen Itza is a UNESCO New World Heritage Site
- Chichen Itza means “At the Mouth of the Well of the Itza”
- Earliest inhabitants were the Itza, a Maya group
- Blend of Toltec (indigenous group originally based in northern Mexico) and Maya architecture
- Located in the Yucatan Peninsula
- First Mayans occupied Chichen Itza from A.D. 500–900
- Chichen Itza seems to have been abandoned around A.D. 900
- Resettled around A.D. 1000 by Itza and Toltecs or fusion of both groups (seen in the architecture)

El Castillo (The Castle): PP slide #12

- Temple-pyramid dedicated to the Feathered Serpent God, Kukulcan (Quetzalcoatl to the Aztecs)
- Built from A.D. 950–1200
- Most important ceremonial building at Chichen Itza
- 90-foot tall pyramid
- Edge of the pyramid has a snake design with the head at the bottom
- Built for astronomical reasons (Spring and Fall Equinox)
 - ✓ Shadow of 7 triangles form to imitate the body of a serpent
 - ✓ Shadow slithers down until it joins the serpent’s head at the bottom of the stairway
- Architecture represents the Mayan calendar
 - ✓ Four rows of steps (one on each side)
 - ✓ 91 steps in each row
 - ✓ One shared step on the top platform representing 365 days of the year
- At the top of El Castillo is a temple built on top of an older pyramid
- A sculpture of Chac Mool was found inside the temple – PP slide #12

The Observatory (El Caracol): PP slide #13

- Known as “The Snail” for spiral stairway and roof structure resembling a snail’s shell
- Served as the observatory from which astronomers made incredibly accurate observations concerning the motions of the planets

The Great Ball Court: PP slide #14

- Largest ball court in ancient Mesoamerica
- Measures 545 feet from end to end
- Original rings with intertwining serpents in the center are 6 meters high
- Pure speculation as to whether winners or losers were sacrificed

Chacmool: PP slide #15

- God of Rain
- Over a dozen Chacmool sculptures have been found at Chichen Itza
- The figures, with basins on their laps for offerings, appear to represent captive nobles rather than being related to the Maya rain god Chac

Tzompantli: Wall of Skulls: PP slide #16

- Centrally located platform where the Maya displayed the heads of enemies who died in battle or were sacrificed
- The wall is richly decorated on all sides with skulls, snakes and eagles, all impaled on stakes
- Served as a reminder to anyone who might attack the city

The Nunnery: PP slide #17

- Royal palace complex

The Sacred Cenote (Wells): PP slide #18

- Cenotes are huge holes providing water year round
- Two large, natural limestone sink holes filled with water
- Objects like gold, jade, ceramics and humans were sacrificed here
- Sacred Cenote famous for being home of Maya rain god “Chac”

Sequence of Activities:

- Read *The Maya in the Past and Present*, p. 6–7 and *Mexico*, p. 16–17
- View PP slides #11–18 of Chichen Itza
- View *The 14 Wonders of the World—Ancient & New DVD*, Chapter 5.
- Take a Virtual Tour at Web site: www.geocities.com/atlantid01mx/yucatan_north/chichen_itza.htm
- View Web site: www.mesoweb.com/chichen/virtual/3D/visualization/Caracol.html

Resources: *The Maya in the Past and Present*; *Mexico*; PP slides #11–18; postcards.

Topic #4b: Temple Cities – Uxmal – PP slide #19

WI State Teaching Standards: Describe and give examples of ways in which people interact with the physical environment, including use of land, location of communities, methods of construction, and design of shelters (A.4.4).

Background Information: http://www.geocities.com/atlantis01mx/yucatan_north/chichen_itza.htm

- 800–500 B.C. Maya used wood and vegetation for buildings
- Center for Maya ceremonies
- Most important ceremonial buildings built ~ A.D. 700–1000
- Population reached about 25,000
- Priests, astronomers and mathematicians lived there
- Buildings have elaborate stonework with rich geometric facades
- Temples were painted bright colors of corn: yellow, white, red, black
- Built with limestone
- The ceiba (or ceiba) tree was the center of the earth's axis
 - ✓ Roots represented 9 levels of the underworld
 - ✓ Trunk was the common life
 - ✓ Branches and leaves were the 13 gods of heaven

Magician's Pyramid (Pyramid of the Dwarf): PP slide #20

- Legend: A dwarf built Uxmal to celebrate his defeat of the Lord of Uxmal (see activity below)
- The Dwarf possessed magical powers and created this structure in one night
- Tallest structure at Uxmal
- Considered unique because of its oval design with rounded sides, height, and steepness (as opposed to the precise four corners of the Pyramid of Kukulcan)
- Many buildings decorated with intertwining rattlesnakes made of stone, symbolizing divinity and power
- There are five earlier structures under the Magician's Pyramid (Maya built new structures on top of old ones)

Chac: PP slide #21

- Hook-nosed rain god
- Main God of Rain since there was no natural water source such as a cenote in the area of Uxmal
- Maya had to dig reservoirs into the limestone rock and depend upon water from the rains to provide water for the city
- Many Chac found on buildings (one building has 103 stone masks of Chac)

Nunnery Quadrangle: PP slide #22

- Nickname given by a sixteenth-century Spanish historian since it reminded him of a Spanish convent
- May have been a military academy or training school
- Finest of Uxmal's long buildings with elaborately carved façades on both the inside and outside faces

Corbel or Maya Arch: PP slide #23

- Unique Maya contribution to architecture
- Formed by projecting stone blocks from each side of a wall until they almost met, forming a peak
- A row of stone blocks at the top of the peak served as a bridge for the space between the two sides of the arch
- A corbel arch is actually weaker than a true arch which the Maya never mastered

Sacred Ceiba Tree: PP slide #24

- The Ceiba (ceba) tree is a common symbol in many cultures
- Represents the *axis mundi*, the stable world center
- Constitutes a symbolic vertical uniting the three realms of the underworld, earth, and heavens
- Maya believed the souls of Maya rulers resided in this type of tree

Sequence of Activities:

- Read The Dwarf of Uxmal Legend Handout or *The Dwarf-wizard of Uxmal* by Susan Hand Shetterly
- View Uxmal postcards
- View Uxmal PP slides #19–24
- Take a virtual visit at: www.geocities.com/atlantis01mx/yucatan_south/uxmal.htm

Resources: Uxmal postcards, PP slides #19–24, The Dwarf of Uxmal Legend Handout and/or *The Dwarf Wizard of Uxmal*.

Assessment: The Dwarf of Uxmal Legend Assessment or students could illustrate the key elements of the legend (beginning, middle and end illustrations).

The Dwarf of Uxmal Legend Handout

In Uxmal, Yucatan, there are the ruins of the “Dwarf’s House,” the hero of this legend, and the “Old Woman’s House,” his mother. With the magical aid of the old woman who hatched the dwarf from an egg, the troll proves himself greater than the ruler of the city of Uxmal and takes his place as leader of the people.

In the tenth century, an old witch lived in the woods near the town of Uxmal. One dark, very windy night, the witch flew to the cave of the three wise old men and said to them, “Since I live alone with my owl and my black cat, I am very sad. Please give me a son as a companion.”

The oldest wise man took a large egg out of a basket. The three men, their hands placed over the egg, said some magic words. Then they gave it to the witch.

“Here’s a magic egg,” the oldest wise man said. “When you get home, you must wrap it in a towel and put it near the fireplace.”

“Thank you very much, wise friends,” said the witch, and she took the egg and flew to her hut.

Time passed and one fine day a beautiful little boy came out of the egg. He could already walk and talk. When he was three years old, he stopped growing. He was a dwarf, but he was so wise and intelligent that he was the object of admiration of the witch and all the people.

The dwarf noticed that the witch kept guard over the fireplace day and night. Since he was very curious, he wanted to know what was hidden there.

The next day, when the witch went to draw water from the well, the dwarf discovered two things underneath the grey stones of the fireplace. They were a small bell and a little rod.

“Let’s hear the sound of the little bell,” the dwarf said to the owl and the cat.

After saying these words, he rang the little bell with the rod.

There was a terrible sound, like thunder. Everybody heard it and was afraid, especially the old king. Everyone knew that, according to an old prophecy, the one who rang the little bell was going to be the next king of Uxmal.

The dwarf put the bell and rod underneath the stones again and sat down on a chair with his eyes closed.

The witch ran rapidly to the hut and said to the dwarf, “What are you doing, child?”

“Nothing, mother, I am sleeping.”

The witch knew the truth, but she didn’t ask any more questions. She also knew that the king’s servants were going to arrive soon to take her son before the monarch. And that is exactly what happened.

The old king was seated in his garden underneath a large tree. Since he didn’t want to give up his kingdom to a dwarf, he said, “In order to be king you have to pass three difficult tests. Do you want to try to pass them?”

“Yes, your Majesty,” the dwarf answered without fear.

“This is the first one: How much fruit is in that large tree over there?”

Without looking at the tree the dwarf answered, “There are ten times one hundred thousand and two times sixty-three times three. If you don’t believe me, you can climb the tree and count them one by one.”

The king and his servants thought that the dwarf was very stupid, but at that moment an owl flew from the tree and said, “The dwarf is telling the truth.”

The next day the dwarf had the second test. In front of the entire town, an official broke a basket full of hard coconuts, one by one, over the head of the dwarf. Since the witch had placed a piece of magic stone underneath the hair of the dwarf, he didn’t feel a thing.

“You have been successful in this test,” the king said. “Tomorrow you will have the third test. If you wish, you may spend the night in my palace.”

“No, thanks. I prefer to sleep in my own palace,” the dwarf answered.

The following morning, everyone was astonished to see a great stone palace near the old king’s palace. And out of this stone palace came the dwarf with his servants.

When the dwarf was standing before the old king, who was very nervous, the king said, “Today is the third test. If you pass it, you shall be the king of Uxmal. Now you and I are going to make statues of ourselves and place them in the fire. The statue that does not burn will represent the next king.”

The old king made three statues out of different kinds of wood and all of them were burned in the fire. But the dwarf’s statue, made out of clay, came out fine.

So the dwarf became king of Uxmal, and everyone, except the old king, was very happy.

The witch was also happy because her son was the king. The king’s mother deserved to have a palace too. So the dwarf had a palace built for her next to his.

Source: Genevieve Barlow and William N. Stivers, *Legends from Mexico*.

The Dwarf of Uxmal Legend Assessment

Directions: Circle the letter for the word that correctly completes each sentence.

- 1) In the woods near the town of Uxmal, there lived
 - a) an owl.
 - b) a witch.
 - c) a young man.

- 2) The witch wanted
 - a) a black cat.
 - b) a tortilla.
 - c) a son.

- 3) The wise men gave the witch
 - a) a basket.
 - b) an egg.
 - c) a rabbit.

- 4) One day, out of the egg came a
 - a) chicken.
 - b) stone.
 - c) little boy.

- 5) The next king of Uxmal would be
 - a) the one who rang the little bell.
 - b) the bravest one.
 - c) a policeman.

- 6) The dwarf had to
 - a) spend the night by himself.
 - b) pass three difficult tests.
 - c) go through the door.

- 7) The owl said,
 - a) "The dwarf is telling the truth."
 - b) "There is no fruit on the tree."
 - c) "You have coconuts inside your head."

- 8) An official broke coconuts over the head of the dwarf, but the dwarf
 - a) didn't feel a thing.
 - b) had a headache.
 - c) didn't eat coconuts.

- 9) The statue of the dwarf was made of
 - a) silver.
 - b) gold.
 - c) clay.

Topic #4c: Temple Cities – Palenque – PP slide #25

WI State Teaching Standards: Describe and give examples of ways in which people interact with the physical environment, including use of land, location of communities, methods of construction, and design of shelters (A.4.4)

Background Information: <http://www.palenquepark.com/generalinfo.htm>

History:

- Located in the state of Chiapas in lowlands of southern Mexico
- Began to be built in the foothills of the Sierra Madre Mountains around 100 B.C.
- Maya called it *L'akam Ha*, or “Big Water” because of numerous streams
- Earliest occupants dated from about 100 B.C. when it was a small farming village
- Flourished around A.D. 431–799 (368 years) when it was a power center
- Abandoned around A.D. 900
- First “Westerners” John Lloyd Stephens (American lawyer and diplomat) and Frederick Catherwood (English artist) found it in 1840

Accomplishments:

- Some of the finest architecture and sculptures Maya have produced
- Extensive writing system found carved on walls
 - ✓ Words, sentences, and stories written with *hieroglyphs*
 - ✓ *Hieroglyphs* are pictures for each word or syllable having its own meaning
- Abandoned in the tenth century for unknown reasons

Temple of Inscriptions: PP slide #26

- One of the best-known kings (or lords) was Pacal the Great:
 - ✓ Became king at age 12
 - ✓ Ruled for 68 years—from 615–683
 - ✓ Most great buildings were built during Pacal’s reign
 - ✓ Tomb with a sarcophagus of Pacal where offerings of jade (jade mosaic mask) were found
– PP slide #27

Palace: PP slide #28

- built over several hundred years
- several connected and adjacent buildings and courtyards
- four-story tower
- has many fine sculptures and bas-relief carvings

Aqueducts: PP slide #29

- Maya called this city-state *L'akam Ha*, meaning “Big Water”
- Area has numerous springs, creeks and streams
- Sophisticated water management system
- Had elaborate canals and aqueducts to channel the delivery and disposal of the water supply

Bas-Reliefs: PP slide #30

Sequence of Activities:

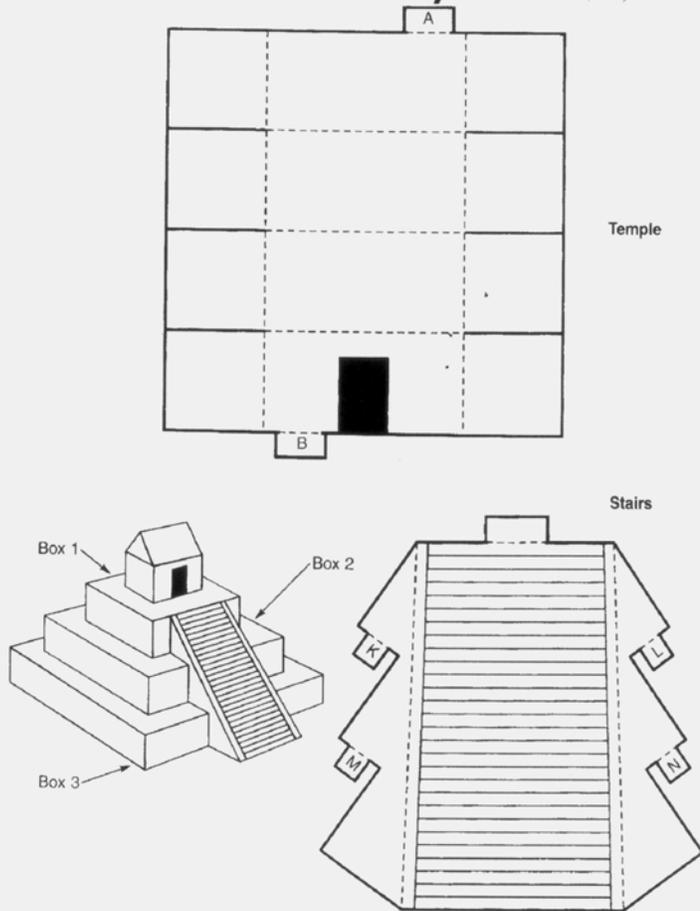
- Read *The Maya in the Past and Present*, p. 6–7 and/or *Mexico*, p. 16–17
- View postcards of Palenque
- View Palenque PP slides # 25–30
- View <http://www.palenquepark.com/generalinfo.htm>
- Students work in cooperative groups to complete one of the following Maya pyramid activities:
 - ✓ Make Your Own Model of a Maya Pyramid Activity
 - ✓ Mesoamerican Pyramids Activity
 - ✓ El Castillo (Pyramid of Kulkulkan) available at www.paperlandmarks.com/mayan-pyramid.htm.
Assembled Pyramid stands at 8.5 x 8.5 x 4 in.
 - ✓ OR sugar cube pyramid

Resources: *The Maya in the Past and Present*; *Mexico*; postcards; PP slides #25–30; Make Your Own Model of a Maya Pyramid Activity; Mesoamerican Pyramids Activity, El Castillo Pyramid or sugar cube pyramid; and <http://www.palenquepark.com/generalinfo.htm>

Assessment:

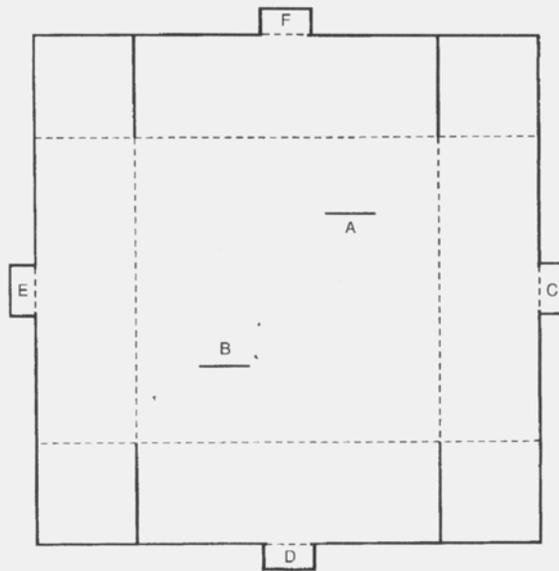
Use the Maya Pyramid Assessment Rubric to assess students' cooperative group work in making a model of a Maya Pyramid from the "Make Your Own Model of a Maya Pyramid" Activity, the Mesoamerican Pyramids Activity, El Castillo Pyramid (requires purchase) or a sugar cube Maya pyramid.

Mesoamerican Pyramids *(cont.)*



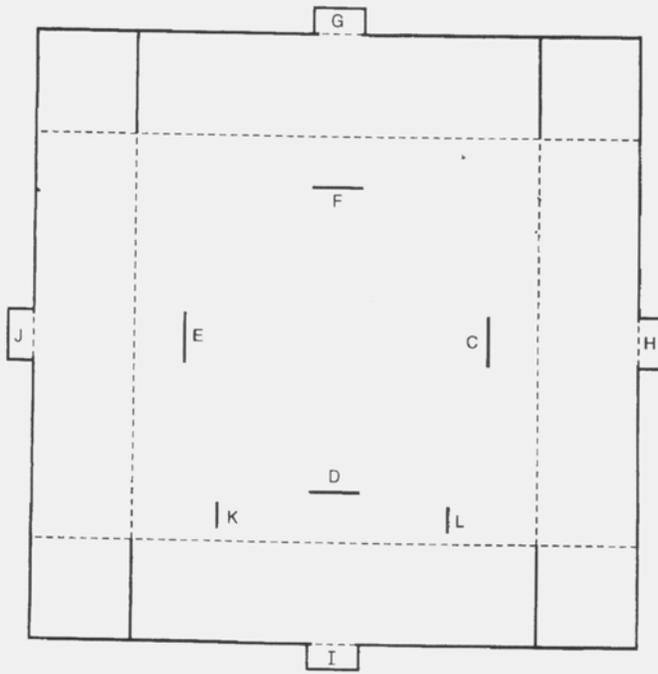
Mesoamerican Pyramids *(cont.)*

Box 1



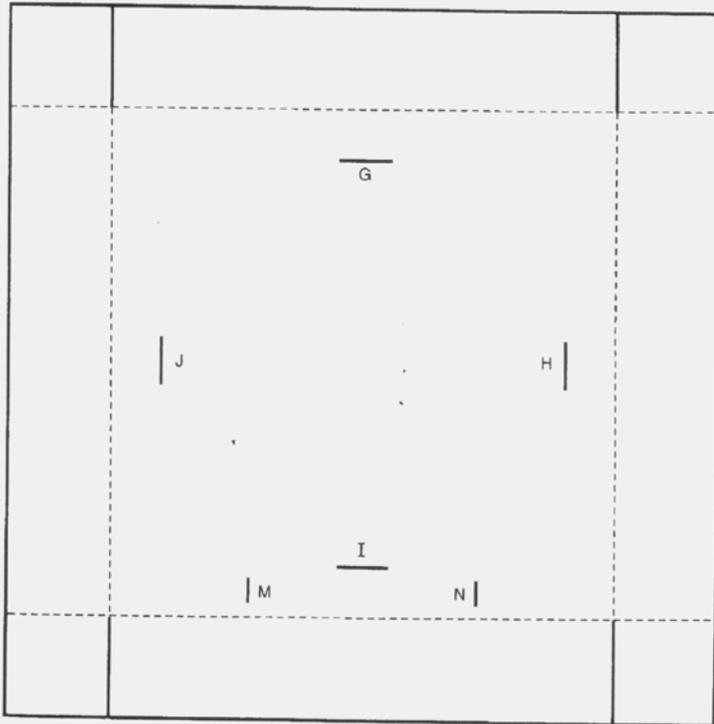
Mesoamerican Pyramids *(cont.)*

Box 2



Mesoamerican Pyramids (cont.)

Box 3



Make Your Own Model of a Maya Pyramid Handout



Make Your Own MODEL OF A MAYA PYRAMID

- 1 Use your ruler and pencil to draw an equilateral (all sides equal) triangle on your piece of paper. Make each side at least 6 inches long.
- 2 Cut out your triangle pattern and trace its shape onto each of four pieces of cardboard. Cut out each cardboard triangle, then stack them on top of each other. These will be the sides of your pyramid.
- 3 Draw a line across the top of each triangle, and cut off the top of each triangle at that height. Remember, the Maya built temples with flat tops! Set aside the snipped-off pieces—you'll need these to make the temple at the top of the pyramid.
- 4 Tape the four triangles together as shown. Turn over the taped triangles, fold them at the hinges, and stand it up. The tape should be on the inside.
- 5 From a scrap of one of the pieces of cardboard, cut a square big enough to cover the hole at the top of your pyramid. This will be the base of your temple.
- 6 In one of the four small triangles you set aside to make your temple, cut a small rectangle for a door. Tape these triangles together the same way you taped together the larger pieces.
- 7 Use your paintbrush to spread glue on the bottom of your temple walls. Place it atop the pyramid and allow the glue to set for a few minutes.
- 8 Cut four strips of paper about 1 inch wide and 8 inches long. Fold each like an accordion for steps. Attach each with glue to the center of a pyramid side. Allow the glue to set.
- 9 Cover your work surface with the newspaper, and then spread a thin coat of glue on one side of the pyramid and steps. Sprinkle red sand on top of the glue. Do this with the other three sides and the top. This will give the pyramid its distinctive red Maya appearance.

SUPPLIES

- ruler
- pencil
- piece of paper
- scissors
- 5 sheets of thin cardboard (the backs of old pads of paper are perfect!)
- masking tape
- glue
- paintbrush
- newspaper
- red sand



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Source: Nomad Press, www.nomadpress.net/activities/mayapyramid.pdf

Maya Pyramid Assessment Rubric

Category	4	3	2	1
Model Accuracy	Model accurately reflects Maya temple design elements and details as seen in renderings.	Model reflects most Maya temple design elements and details as seen in renderings.	Model shows basic elements, but lacks many of the design details.	Model is seriously incomplete.
Engagement	Enthusiastic and stayed focused at all times.	Enthusiastic and focused most of the time.	Worked at times but lost focus, became frustrated OR needed many reminders.	Rarely worked unless reminded or nagged.
Group Participation	Helped group stay focused and greatly helped group.	Participated in group activities willingly with some valuable effort to group.	Participated in some group activities and did not distract others.	Did not participate willingly and/or distracted others from working.

Topic #5: Homes – PP slide #31

WI State Teaching Standards: Describe and give examples of ways in which people interact with the physical environment, including use of land, location of communities, methods of construction, and design of shelters (A.4.4).

Background Information: <http://library.thinkquest.org/10098/mayan.htm>

- The Maya lived in extended family groups (parents, children, grandparents, and other relatives lived close to each other) in or near a city-state or in small villages
- Homes were built in family clusters (called a **compound**) of three or four homes around a shared patio
- Homes had one oval-shaped room, no windows, thatched-roof with an entry door facing east to greet the rising sun
- Homes were made of organic materials
- Outside was sun-dried mud brick, called *adobe* (sun-dried clay), or wooden poles covered with dried mud to keep cool in the summer heat
- Roof was made of dried grass
- Women cooked outside over open fires
- Everyone (rulers to slaves) sat and slept on mats

Today, many Maya descendants:

- Live in the same type of homes
- There is no stove since they use firewood to do daily cooking
- Family members sleep in the one room in hammocks that hang from the rafters
- Floor is made of pounded earth
- The roof is made of dried grass and is steep so the rain runs off
- Homes have an altar with a mix of Maya and Roman Catholic imagery, including statues of saints, the Virgin of Guadalupe, pictures of loved ones, candles and incense

Sequence of Activities:

- Read about Maya homes in *The Maya in the Past and Present*, page 10 and 18
- Show PP slide #32 of Ancient Maya Commoner homes
- Show PP slides #33–34 of modern-day Maya homes
- Make a model of a traditional Maya home

Resources: *The Maya in the Past and Present*; *Secrets of Ancient Cultures: The Maya—Activities and Crafts from a Mysterious Land*; PP slides #31–34; Maya Home Activity Handout; and Maya Homes Venn Diagram Assessment.

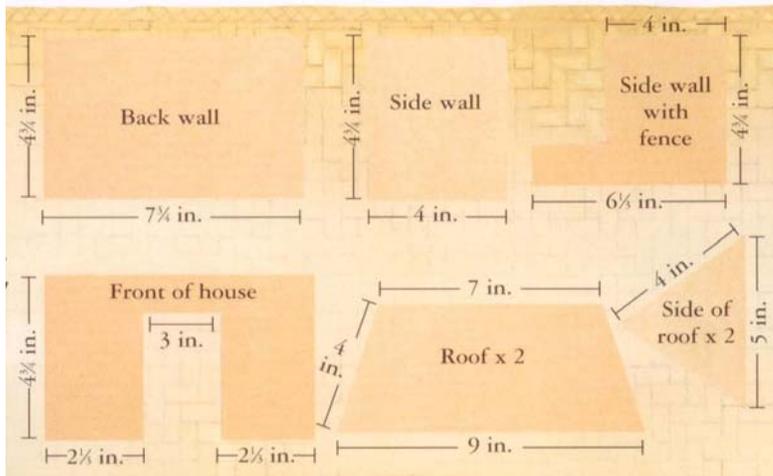
Assessment:

Students use the Maya Homes Venn Diagram Assessment handout to compare and contrast Maya homes and their homes.

Maya Home Activity

Directions: Follow the steps below to make a Maya family home.

Materials: thick cardboard, pencil, ruler, scissors, glue, masking tape, plaster paste (or thin plaster colored with paint), water container, wide gummed paper tape, paintbrush, balsa wood strips, short lengths of straw.



Draw shapes of the roof and walls onto thick cardboard, using the measurements shown. Cut the pieces out.



1 Cut out a rectangle 10 X 6 inches from thick cardboard for the base. Stick the walls and base together with glue. Use masking tape for support.



2 Paint the walls and base with plaster paste. This will make them look like sun-dried mud. You could decorate the doorway with balsa wood strips.



3 Put the house on one side to dry. Take your roof pieces and stick them together with glue. Use masking tape to support the roof.

Maya Homes, continued



4 Moisten the wide paper tape and use it to cover the joints between the roof pieces. There should be no gaps. Then cover the whole roof with glue.



5 Press lengths of straw into the glue on the roof. Work in layers, starting at the bottom. Overlap the layers. Attach the roof to the house using glue.



Maya Family Home

Source: Fiona Macdonald, *Step into the...Aztec & Maya Worlds*.

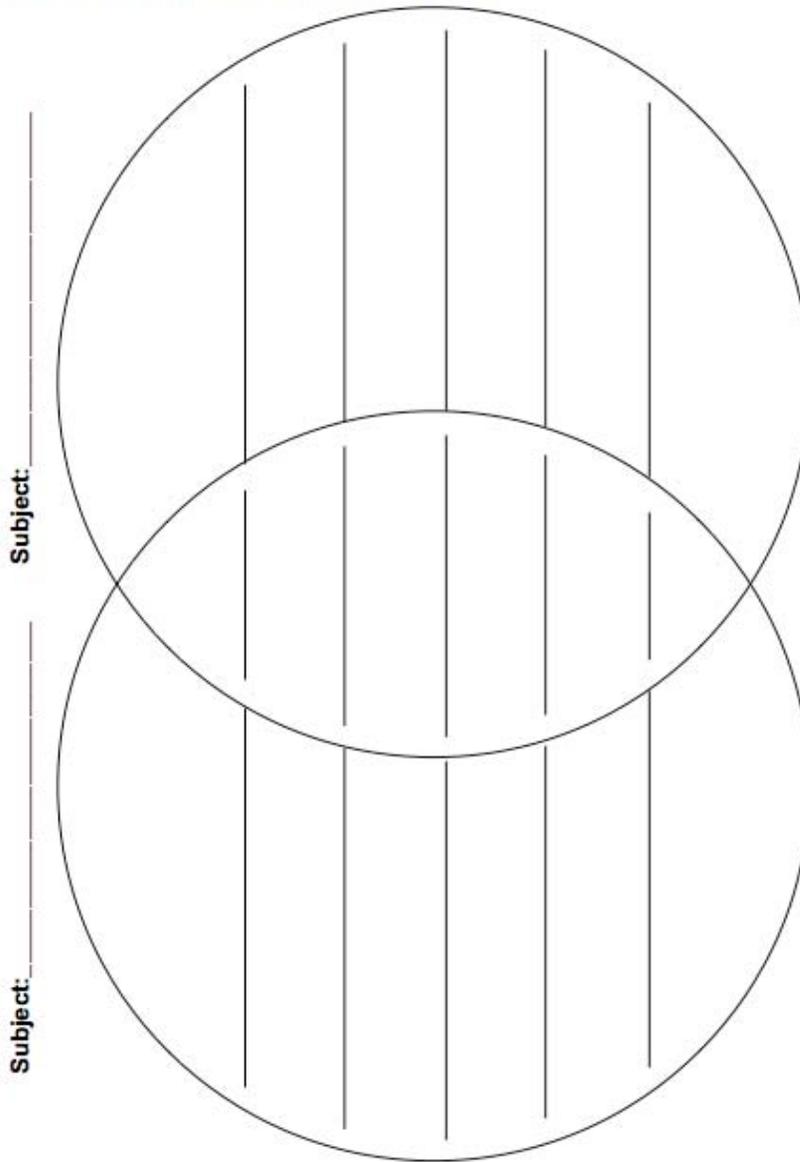
Maya Homes Venn Diagram Assessment

Directions: Compare and contrast how a Maya home is the same and/or different from your home.

Name _____ Date _____

Venn Diagram

Write details that tell how the subjects are different in the outer circles. Write details that tell how the subjects are alike where the circles overlap.



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Topic #6: Social Structure

WI State Teaching Standards: Describe the ways in which ethnic cultures influence the daily lives of people (E.4.4).

Background Information: <http://www.ancientsites.com/aw/Article/427711>

- Maya lived more than 3,000 years ago
- Greatest period of development was between A.D. 200–900
- Two distinct classes: Nobility and Commoners
- Family origin was the determiner of class

- **Nobility** included: kings, priests, nobles, scribes, merchants, architects and professional warriors
 - ✓ Nobility was determined by family origin
 - ✓ Each independent city-state had its own royal family
 - ✓ Kings were revered as gods
 - ✓ Rulers were always men who offered their blood (bloodletting) to the gods to ask for help
 - ✓ Priests observed the stars, looked for signs about the future, held special ceremonies including human sacrifices, served as doctors and helped teach
 - ✓ Scribes kept records and painted ceremonial pottery

- **Commoners** included craftsmen, hunters, fishermen, farmers and slaves
 - ✓ Commoners had to work for their own subsistence and pay tribute to the nobility
 - ✓ Commoners gave food, weapons or tools or labor
 - ✓ Each farmer was responsible for feeding ~ 20
 - ✓ Labor was construction of the numerous buildings in the cities
 - ✓ Commoners fought in the wars organized by the nobility
 - ✓ Criminals were forced to be slaves
 - ✓ Prisoners were taken by warriors and sacrificed

Today, Maya descendants:

- Have Maya leaders
- Pay taxes with money, not crops or goods

Sequence of Activities:

Read *Mexico* by Kevin Supples, p. 12 (Rulers)

Read *The Maya in the Past and Present* by John Perritano, p. 8 (Chiefs and City-States)

Discuss Maya Social Structure using the overhead

Resources:

Mexico; The Maya in the Past and Present; Secrets of Ancient Cultures: The Maya—Activities and Crafts from a Mysterious Land; Maya Social Structure Overhead; T-Chart Assessment—Maya Social Structure.

Assessment: Use a T-Chart list for students to describe their understanding of two distinct ancient Maya social classes: Nobility and Commoners.

Maya Social Structure Overhead

Highest Class - Nobility

Chieftain, Lord or King
Priests
Military Advisors
Scribes
Astronomers

Middle Class - Commoners

Merchants
Artisans
Traders
Warriors
Farmers/Laborers

Lowest Class

Slaves/Criminals
Prisoners of War

T-Chart Assessment – Ancient Maya Social Structures

Name _____

Directions: Write what you learned about the ancient Maya social classes on the T-Chart below.

Nobility	Commoners

Topic #7: Maya People – PP slide #35

WI State Teaching Standards: Describe how families are alike and different, comparing characteristics such as size, hobbies, celebrations, where families live, and how they make a living (E.4.3).

Background Information:

Men:

- Produced food or worked to earn/barter for food
- Wore plain white cotton clothing
- Ruling class clothing was embroidered with bright colors
- Burned their hair to form a bald spot on top of the head
- Wore their hair long
- Spent time farming, hunting and fishing
- Wore loincloths
- Nobility wore large headdresses decorated with colorful feathers

Women:

- Cared for babies and the home
- Wore plain white cotton clothing
- Tattooed the upper half of their bodies
- Wore their hair long, parted in the middle and braided
- Spent time spinning thread and weaving and preparing food
- Wore skirts and long shirts or loose dresses

Children:

- Maya parents tried to get their children’s eyes slightly crossed by tying small beads to their hair that hung over their noses
- Parents thought flat heads (like an ear of corn) were attractive so they put their baby’s head between two boards to flatten and lengthen the head

Both men and women:

- Wore white clothing to stay cool in the heat
- Filed their teeth to points or the letter “T”
- Inlaid their teeth with small, round precious stones
- Inserted lip plates during special occasions
- Wore sandals of straw or leather or went barefoot
- Had tattoos
- Wore jewelry – huge earrings, necklaces and bracelets

Today many Maya descendants:

- Most Maya wear the same clothes that we wear
- Some women still weave white cloth for shawls, men’s shirts and children’s clothes
- Women embroider bright designs using ancient patterns

Sequence of Activities:

- View PP slides #36 of ancient Maya paintings
- View PP slides #37 of modern-day Maya huipils (blouses)
- View *Special Edition: Arqueologia – Textiles del México de ayer y hoy*
- View PP slides #38–40 of Maya people today

- **Resources:** PP slides #35–40 of Maya clothing; *Special Edition: Arqueologia – Textiles del México de ayer y hoy*

Topic #8: Farming and Food – PP slide #41

WI State Teaching Standards: Describe how families are alike and different, comparing characteristics such as size, hobbies, celebrations, where families live, and how they make a living (E.4.3).

Background Information:

- Most Maya were skilled farmers
- Used a technique called “slash and burn” to clear large sections of tropical rain forest – see PP #42
- Areas that flooded grew crops in raised fields of soil and mud
- They ate vegetables and fruit most of the time
- Most important crop was *maize*, or corn
- Used a grinding stone to make cornmeal
- Other tools like obsidian and ceramic were used for cutting, chopping, grinding and cooking
- Maya thought corn was a gift from the gods and called it “sunbeam of the gods”
- Other crops included tomatoes, chili peppers, sweet potatoes, squash, cacao and beans
- Chili peppers mixed with honey were used as medicine to stop infection
- Chili tea was used for headaches, earaches, chest congestion and intestinal problems

Today, Maya people:

- Eat many of the same foods as their Maya ancestors – see PP slide #43
- Continue to slash and burn the land
- Hot chocolate is a popular drink using a special utensil called a “molinillo”
- Many people still grind corn to make tamales and tortillas

Sequence of Activities:

- Show Maya “slash and burn” farming method – PP slide # 42
- Show ancient Maya crops – PP slide #43
- Ask students what they think Maya eat today and list
- Discuss Maya food today – PP slide #44
- Read *Tortilla factory* by Gary Paulsen and *Big moon tortilla* by Joy Cowley. In *Tortilla factory*, Gary Paulsen pays tribute to a cycle of life—from seed to plant to tortilla. Workers till the black soil, operate the clanking machinery of the factory, and drive the trucks that deliver the tortillas back into the hands that will plant the yellow seeds
- Make tortillas with the assistance of a parent or community volunteer adjusting the recipe below for the number of students in your class
- Teach the Chocolate Rhyme from *Spanish Rhymes*, Houghton Mifflin, 1999
- Make chili chocolate drink (Chilcacahuatl) adjusting the recipe for the number of students in your class

Resources: *The Maya in the Past and Present*; *Secrets of Ancient Cultures: The Maya—Activities and Crafts from a Mysterious Land*; *Tortilla Factory* and/or *Big Moon Tortilla*; PP slides #41–44; Chocolate Rhyme Overhead; ingredients for tortillas and/or Chili Chocolate Drink Recipe.

Tortilla Recipe

Yield: about 12 tortillas

Ingredients:

2 cups masa harina (corn flour)
1 teaspoon salt
1 cup warm water, more or less

Utensils:

Measuring cup	medium bowl	mixing spoon
kitchen towel	rolling pin	floured work surface
Cast-iron griddle	spatula	plate

Steps:

- 1) Put masa harina in a medium bowl.
- 2) Mix in the warm water to form a soft dough.
- 3) Shape dough into 16 balls the size of an egg.
- 4) Flatten using a rolling pin or your hands until the dough is slightly thinner than a piecrust or thin pancake and about 4 inches wide.
- 5) Preheat an ungreased cast-iron griddle or frying pan to medium heat. Cook each tortilla about 1 minute per side or until light brown.
- 6) Wrap the tortillas with a kitchen towel so they stay warm and moist until ready to serve. Repeat this process with each ball of dough.
- 7) Tortillas may be filled with cheese or served plain. Serve hot.

Adapted from: Carole Lisa Albyn and Lois Sinaiko Webb, *The Multicultural Cookbook for Students*.

Chocolate Rhyme (Overhead)

One, two, three, cho-

One, two, three, -co-

One, two, three, -la-

One, two, three, -te

Stir, stir the chocolate.

Rima de Chocolate

Uno, dos, tres, cho-

Uno, dos, tres, -co-

Uno, dos, tres, -la-

Uno, dos, tres, -te

Bate, bate chocolate.

Source: *Spanish Rhymes*.

Chili Chocolate Drink Recipe (Chilcacaahuatl)

Serving: 3

Ingredients:

3 cups hot water
2 tsp mild ground chili ancho (optional)
¼ tsp medium chili chipotle (optional)
½ tsp ground allspice
1 T vanilla powder
½ C unsweetened cocoa powder
½ C honey

Utensils:

Measuring cup measuring spoons molinillo or blender
Large bowl cups

Steps:

1. Measure and pour water into the blender, or if you don't have a blender, a large bowl.
2. Measure the spices one at a time, and place in the blender or bowl of water.
3. Measure and pour the cocoa powder and honey into the blender or bowl.
4. Mix well in the blender or with a molinillo so all ingredients are blended.
5. Pour into cups and serve.



Mexican Molinillo

The molinillo [moh-lee-NEE-yoh] is the Mexican chocolate “whisk” or “stirrer.” It is made of “turned” wood and it is used to froth warm drinks such as hot chocolate, Atole, and Champurrado.

History and Lore

This tool was actually invented by the Spaniard colonists in Mexico around the 1700s. Prior to the invention of the molinillo, chocolate was frothed by pouring it from one cup to another. The first molinillos were made to fit into a container with the handle extending out of the top. The molinillo was then rotated between the users two hands placed palm-sides together. The twisting motion frothed the chocolate.

Source: Arlette N. Braman, *Secrets of Ancient Cultures: The Maya—Activities and Crafts from a Mysterious Land*.

Topic #9: Religious Beliefs – PP slide #45

WI State Teaching Standards: Identify and describe institutions such as school, church, police, and family and describe their contributions to the well being of the community, state, nation, and global society (E.4.5).

Background Information: <http://philtar.ucsm.ac.uk/encyclopedia/latam/maya.html>

Ancient Maya

- Vast pantheon of Gods they worshipped – <http://www.nga.gov/exhibitions/2004/maya/gods.htm>
Chac – God of Rain, Thunder, Fertility and Agriculture – PP slide #46
Ix Chel – Earth and Moon Goddess, Patroness of Weavers and Pregnant Women – PP slide #46
Huracan – God of Gale Force Winds – PP slide #47
Kinich-Ahua – Sun God – PP slide #47
Coqueelaa – God of the Cochineal Harvest – PP slide #48
Cama-Zotz – God of Bats – PP slide #48
Yum Kaax – God of Agriculture and Maize – PP slide #49
Ah-Puch – God of Death, Underworld, Disaster, and Darkness – PP slide #50
Ek-Chuah – God of Chocolate – PP slide #50
- Kings/rulers were believed to have come from the Gods
- Each location (city-state) had their own patron god
- Human sacrifices (enemy prisoners) were offered to the Gods
- After people died, Maya believed the soul went to the Underworld where sinister gods tested and tricked their unfortunate visitors

Maya Religious Beliefs Today – PP slide #51

- Most Maya today are Christians
- Colorful cross between Catholicism and ancient Maya beliefs can be seen at San Juan Chamula – PP slide #42
- Some Gods still worshipped today like Chac
- Now have statues of saints that remotely resemble their European counterparts
- Make offerings of chickens, candles and incense with a ritual alcoholic drink called “posh”
- Healers perform curing rituals
- Mexicans strongly believe in the Virgin of Guadalupe – PP slide #53

Sequence of Activities:

View Ancient Maya Gods PP slides #46–50

View of San Juan Chamula Church and Basilica de Guadalupe PP slide #52–53

Resources: PP slides #46–50 of Ancient Maya gods; San Juan Chamula – PP slide #52; Basilica de Guadalupe – PP slide #53; Ancient Maya Gods – Teacher Background Notes; Ancient Maya Gods Assessment; *The 14 Wonders of the World—Ancient & New DVD*; *Gods and Goddesses of the Ancient Maya*; *Mayan and Aztec Mythology*; and Web sites.

Assessment:

Students match the picture of the ancient Maya God with the name of the God on the Ancient Maya Gods Assessment activity.

Ancient Maya Gods – Teacher Background Notes



Chac – God of Rain, Thunder, Fertility and Agriculture



Ix Chel – Moon Goddess of Pregnant Women



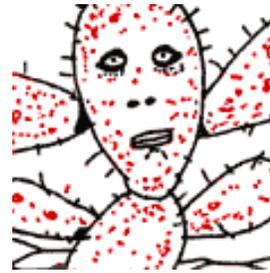
Huracan – God of Gale Force Winds



Kinich-Ahau – Sun God



Cama-Zotz – God of Bats



Coqueelaa – God of the Cochineal Harvest



Yum Kaax – God of Agriculture and Maize



Ah-Puch – God of Death



Ek-Chuah – God of Chocolate

Source: GodChecker.com, <http://www.godchecker.com>

Ancient Maya Gods Assessment

Directions: Write the correct letter on the line next to the name of the Maya God.



A



B



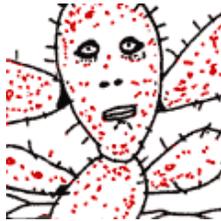
C



D



E



F



G



H

- _____ Sun God
- _____ Moon Goddess of Pregnant Women
- _____ God of Death
- _____ God of Agriculture and Maize
- _____ God of Rain and Thunder
- _____ God of the Cochineal Harvest
- _____ God of Bats
- _____ God of Gale Force Winds

Topic #10: Maya Writing System – PP slide #54

WI State Teaching Standards: Give examples and explain how language, stories, folk tales, music, and other artistic creations are expressions of culture and how they convey knowledge of other peoples and cultures (E4.11).

Background Information: <file://localhost/ttp://www.famsi.org/mayawriting>

- Maya created the first writing system in the Americas
- Used *hieroglyphs* or pictures and symbols
- Hieroglyphs were written on stone (stelae), wood, and buildings – PP slide #55
- Folding books from the inner bark of fig trees called *codices* (codex, singular) also found with glyphs but few survive. The **Dresden Codex** is held in the state library in Dresden, Germany – PP slide #56
- There are about 800 Maya hieroglyphs
- Palenque is famous for its well-preserved glyph inscriptions that have provided invaluable information to understand the history of the Maya – PP slide #56
- Maya used *logograms*, signs that represent words or morphemes (basic units of meaning) in the language instead of sounds – PP slide #57
- Maya writings tell about rulers, wars and celebrations
- Kings hired scribes to do the writing
- Yucatec Maya continued to use the Mayan script until at least the sixteenth century

Today:

- Only four books survived due to humidity of the tropics or invasion of the Spanish who thought the writing was the work of the devil
- Recently, Mayan descendants have started learning the script again from scholars
- Many Maya today need a scribe to write letters in Spanish for them – PP slide #58

Sequence of Activities:

- Read about the ancient Maya writing and language system
- Show PP slides #54–57 of glyphs taken from ancient Maya ruins of Mexico
- View glyphs from Web site: <http://www.famsi.org/mayawriting/>
- Ask students how they think some Maya write today
- View Scribe PP slide #58
- Students will use their artistic talents to create their own personal glyph clay necklace

Resources:

Mexico, p. 19 (Writing); PP slides #54–58; Maya Logograms Handout; Maya Syllabic Signs Handouts; Ancient Maya Glyph Necklace Handout; and Web sites.

Maya Logograms Handout

The Maya script has a large number of *logograms*, signs that represent words or morphemes (basic units of meaning) in the language instead of sounds. The following are a few of the logograms.



CHAN
'sky'



WINIK
'person'



WITZ
'mountain'



K'IN
'sun'



B'ALAM
'jaguar'



K'AK
'fire'



BAK
'bone'



WAY
'spirit'



JUUN
'book'



JA
'water'



AJAW
'lord'



MUYAL
'cloud'



IX
'woman'



CH'AM
'to grab'



K'UK
'quetzal'



CHAN
'snake'



CH'UL
'holy'



CHOK
'to scatter'



JAAB'
'year'



YAX
'blue/green'



PAKAL
'shield'



TOK
'flint'



NAJ
'house'



K'AL
'twenty'

Maya Syllabic Signs Handout

	a	e	i	o	u
b'					
ch					
ch'					
j					
k					
k'					
l					
m					

Maya Syllabic Signs Handout, continued

	a	e	i	o	u
n					
p					
s					
t					
tz					
tz'					
w					
x					
y					

Ancient Maya Glyph Prints

Note: There are two choices for this project. The first project below is an activity for advanced students to design their name with glyphs using the Maya Syllabic Signs Handout. Some students may choose the second project of drawing a Maya glyph of their choice using the Maya Logograms Handout or search the Maya Hieroglyph Dictionary by Peter Mathews and Péter Bíró found at:

http://research.famsi.org/mdp/mdp_search.html

Directions for Name Glyph:

- Say your name slowly out loud. Then say it again by clapping out the syllables in your name. For example, the name Jessica has three syllables: Je - si - ca.
- Use the Maya Syllabic Handouts to find glyphs representing the letter sounds in your name. Remember, D, F, G, J, Q, R, and V have no glyphs, so you can leave off that sound. For example, *Jessica* would be pronounced “Ye - si - ka.”
- Some letter sounds have more than one glyph so try writing your name glyphically at least three different ways and choose the one you like best.
- Using construction paper and markers, print your name using glyph combination you liked best.
- Display the name glyphs on a bulletin board in the hallway, display case or library along with students’ photos.
- This activity could be done in Spanish class with students writing their Spanish names with Maya glyphs and displaying them.

Topic #11: Spoken Mayan Languages – PP slide #59

WI State Teaching Standards: Give examples and explain how language, stories, folk tales, music, and other artistic creations are expressions of culture and how they convey knowledge of other peoples and cultures (E4.11).

Background Information:

- Modern Mayan languages descended from Proto-Mayan which is believed to have been spoken about 5,000 years ago – PP slide #60–61
- About 6 million Maya speak around 70 different Mayan languages today
- 800,000 speak Yucatec Maya, the most commonly spoken Mayan language
- Most Maya today also speak Spanish
- In Mexico, children play *Lotería* game to practice Spanish vocabulary

Sequence of Activities:

- Read *Playing Lotería (El juego de la lotería)* by Rene Colato Lainez and Jill Arena.
- Play *Lotería* game following rules as outlined below.
- Choose one of the following so students can have their own *Lotería* cards:
 1. Download a copy of *Lotería* cards at:
http://www.somethingsowrong.com/?page_id=777
 2. Collection of scanned *Lotería* cards from Mexico can be found at:
<http://gallery.elsewhere.org/v/loteria/>
 3. Make your own *Lotería* cards at this site but it will cost you:
<http://www.lotmex.com/>
 4. Or have students be creative and make their own!

Resources:

PP slide slides #59–61; *Playing Lotería (El juego de la lotería)*; *Lotería* (Mexican Bingo) game; and Web sites.

Assessment:

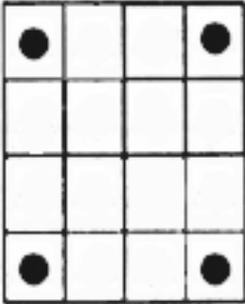
Students play *Lotería* game using the Spanish vocabulary (*Lotería* picture cards will be shown).

Rules to play Lotería (Mexican Bingo)

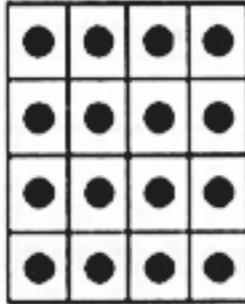
The traditional Lotería is a game of chance, words and images. A deck of 36 or 54 cards and 10 playing boards make a Lotería game set. Lotería can be played with at least 3 players; the announcer calls the cards name and riddles, verses or poems, while the other players mark their playing boards with beans or any small object. The first player completing the game will shout: "Lotería!" or "Buenas!"

Different games to call:

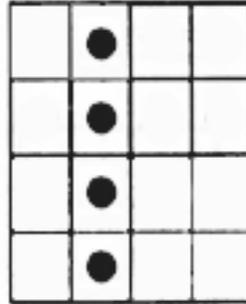
Four Corners



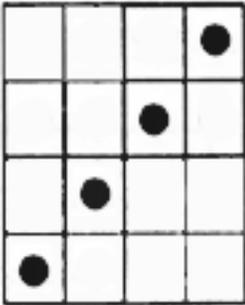
Full Card



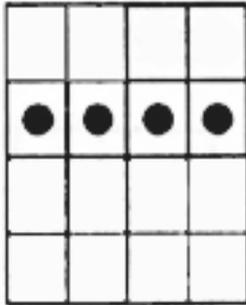
Vertical Line



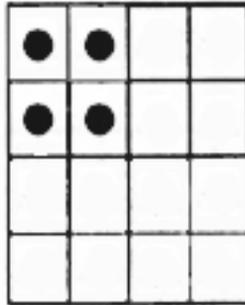
Horizontal Line



Diagonal



4 in the Corner



Original 54 Lotería Cards

Traditionally and broadly recognized in all of Mexico. Below each card name and number, are the riddles (in Spanish) that are sometimes used to tell the players which card was drawn.

Spanish Card	English Card	Riddles in Spanish
El gallo	The rooster	El que le cantó a San Pedro no le volverá a cantar.
El diablito	The little devil	Pórtate bien cuatito, si no te lleva el coloradito.
La dama	The lady	Puliendo el paso, por toda la calle real.
El catrín	The dandy/fop	Don Ferruco en la alameda, su bastón quería tirar.
El paraguas	The umbrella	Para el sol y para el agua.
La sirena	The mermaid	Con los cantos de sirena, no te vayas a marear.
La escalera	The Ladder	Súbeme paso a pasito, no quieras pegar brinquitos.
La botella	The bottle	La herramienta del borracho.
El barril	The barrel	Tanto bebió el albañil, que quedó como barril.
El árbol	The tree	El que a buen árbol se arrima, buena sombra le cobija.
El melón	The melon	Me lo das o me lo quitas.
El valiente	The brave one	Por qué le corres cobarde, trayendo tan buen puñal.
El gorrito	The Bonnet	Ponle su gorrito al nene, no se nos vaya a resfriar.
La muerte	The death	La muerte tilica y flaca.
La pera	The pear	El que espera, desespera.
La bandera	The flag	Verde blanco y colorado, la bandera del soldado.
El bandolón	The sitar	Tocando su bandolón, está el mariachi Simón.
El violoncello	The cello	Creciendo se fue hasta el cielo, y como no fue violín, tuvo que ser violoncello.
La garza	The heron	Al otro lado del río tengo mi banco de arena, donde se sienta mi chata pico de garza morena.
El pájaro	The bird	Tu me traes a puros brincos, como pájaro en la rama.
La mano	The hand	La mano de un criminal.
La bota	The boot	Una bota igual que la otra.
La luna	The moon	El farol de los enamorados
El cotorro	The parrot	Cotorro cotorro saca la pata, y empiézame a platicar
El borracho	The drunk	¡Ah, qué borracho tan necio, ya no lo puedo aguantar!
El negrito	The little black man	El que se comió el azúcar.
El corazón	The heart	No me extrañes corazón, que regreso en el camión.
La sandía	The watermelon	La barriga que Juan tenía, era empacho de sandía.
El tambor	The drum	No te arruges, cuero viejo, que te quiero pa'tambor
El camarón	The shrimp	Camarón que se duerme, se lo lleva la corriente.
Las jaras	The arrows	Las jaras del indio Adán, donde pegan, dan.
El músico	The musician	El músico trompas de hule, ya no me quiere tocar.
La araña	The spider	Atarántamela a palos, no me la dejes llegar.
El soldado	The soldier	Uno, dos y tres, el soldado p'al cuartel.
La estrella	The star	La guía de los marineros.
El cazo	The ladle	El caso que te hago es poco.
El mundo	The world	Este mundo es una bola, y nosotros un bolón.
El apache	The Apache	¡Ah, Chihuahua! Cuánto apache con pantalón y huarache.

El nopal	The cactus	Al nopal lo van a ver, nomás cuando tiene tunas.
El alacrán	The scorpion	El que con la cola pica, le dan una paliza.
La rosa	The rose	Rosita, Rosaura, ven que te quiero ahora.
La calavera	The skull	Al pasar por el panteón, me encontré un calaverón.
La campana	The bell	Tú con la campana y yo con tu hermana.
El cantarito	The water pitcher	Tanto va el cántaro al agua, que se quiebra y te moja las enaguas.
El venado	The deer	Saltando va buscando, pero no ve nada.
El sol	The sun	La cobija de los pobres.
La corona	The crown	El sombrero de los reyes.
La chalupa	The canoe	Rema que rema Lupita, sentada en su chalupita.
El pino	The pine	Fresco y oloroso, en todo tiempo hermoso.
El pescado	The fish	El que por la boca muere, aunque mudo fuere.
La palma	The palm	Palmero, sube a la palma y bájame un coco real.
La maceta	The flower pot	El que nace pa'maceta, no sale del corredor.
El arpa	The harp	Arpa vieja de mi suegra, ya no sirves pa'tocar.
La rana	The frog	Al ver a la verde rana, qué brinco pegó tu hermana.

Topic #11: Number System – PP slide #62

WI State Teaching Standards: Give examples and explain how language, stories, folk tales, music, and other artistic creations are expressions of culture and how they convey knowledge of other peoples and cultures (E.4.11).

Background Information: Maya Numbers

- Maya created a number system by A.D. 200
- Used 3 characters: a dot for ones, a bar representing the number five, and a shell-shaped glyph representing zero (one of first civilizations to use zero) – PP slide #63
- Numbers were written vertically and divided into tiers
- Characters in each tier of a column had a value twenty times that of the characters in the tier directly beneath them (we use base-10 system today)
- Adding the values of the tiers yielded the number represented in the glyph

Sequence of Activities:

- Read about the ancient Maya number system from *Secrets of Ancient Cultures: The Maya—Activities and Crafts from a Mysterious Land*.
- View Maya Positional Number System – PP slide #63
- Group activity: Students write Maya numbers using the Maya Math Overhead.

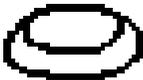
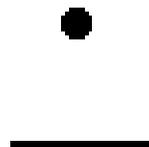
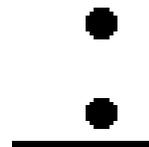
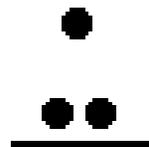
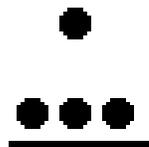
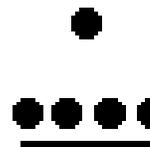
Resources:

Secrets of Ancient Cultures: The Maya—Activities and Crafts from a Mysterious Land; Maya Number System PP slides #62–63; and Maya Math Activity Handout.

Assessment:

Students complete the Maya Math Activity Handout.

Maya Number System – Overhead

0 	1 	2 	3 	4 
5 	6 	7 	8 	9 
10 	11 	12 	13 	14 
15 	16 	17 	18 	19 
20 	21 	22 	23 	24 
25 	26 	27 	28 	29 
Mayan positional number system				

Source: University of St. Andrews, School of Mathematics and Statistics, Mayan Mathematics,
http://www-history.mcs.st-and.ac.uk/HistTopics/Mayan_mathematics.html

0	 1	 2	3	4
 5	 6	7	8	9
 10	 11	12	13	14
15	16	17	18	19

Maya Math Assessment Activity

Directions: Write the Maya number for the following numbers.

18 _____

6 _____

0 _____

10 _____

3 _____

5 _____

1 _____

19 _____

7 _____

13 _____

Bonus Challenge:

21 _____

29 _____

25 _____

20 _____

Topic #12: Maya Calendar – PP slide #64

WI State Teaching Standards: Give examples and explain how language, stories, folk tales, music, and other artistic creations are expressions of culture and how they convey knowledge of other peoples and cultures (E.4.11).

Background Information: <http://www.mayadiscovery.com/ing/history/tiempo.htm>

- Probably dates from about the first century B.C.
- Extremely accurate, complex and intricate
- Used 20-day months
- Maya had two calendar years:
 - ✓ 260-day Sacred Round or *tzolkin*
 - ✓ 365-day Vague Year or *haab*
- These two calendars coincided every 52 years

Sacred Round or *tzolkin*: 260 days – PP slide #65

- Two smaller cycles
- Numbers 1–13 paired with 20 different day names
- Each day name is represented by a god who carries time across the sky, marking the passage of night and day
- Time moves in a repeating circle (not in a linear line like our calendar)

The Vague Year or *haab* of 365 days – PP slide #66

- 18 months of 20 days each with 5 unlucky days at the end (danger, death and bad luck)
- *Haab* had to do with the seasons and agriculture and was based on the solar cycle

Today:

- The ancient Maya cycle still survives in southern Mexico and the Maya highlands
- The calendar is under the care of calendar priests who keep the 260-day count for divination and other shamanistic activities

Sequence of Activities:

- View PP slides #64–66
- Students cut out Mayan Sacred Rounds calendar and turn them.
- Students make a Birthday Glyph Amulet

Resources: Mayan Sacred Rounds calendar activity; Maya Birthday Glyph Amulet activity; PP slides #64–66; and Web sites.

Adapted from: Canadian Museum of Civilizations, www.civilization.ca/civil/Maya/mmc06eng.html

Maya Birthday Glyph Amulet Activity

- Go to the following Web site that has a date converter you can use to figure out what each students' Maya birthdates and glyph:
http://www.xzone.com.au/maya/login.php?querystring=&ret_page=%2Fmaya%2Fcalendar.php
 - ✓ Enter your date of birth using the form provided and enter.
 - ✓ The Day Sign is the glyph for your birthdate.

Supplies:

Clay	Clay-modeling tool
Newspapers	Containers of water
Tempera paint	Ruler
Scissors	1 rawhide lacing, string, or yarn about 24 inches long

Steps:

- Make sure your clay has been wedged to remove any trapped air bubbles.
- Place the clay on a newspaper on the table.
- Take the palm of your hand and push down and out. The clay will only move in each direction so remember to turn and flip over.
- After using your palm, take a rolling pin and roll the clay smooth and even with a diameter of 2 inches and ¼ inch thick.
- Use the pointed end of your modeling tool to carve your birthday glyph into the amulet.
- Poke a hole near the top of the amulet.
- Let the amulet harden according to the clay directions.
- Paint the amulet with tempera.
- Cut a piece of rawhide, string, or yarn about 24 inches long.
- Push one end of the string through the top hole in the amulet.
- Tie the ends of the string together in a tight knot.

Adapted from: Arletter N. Braman, *Secrets of Ancient Cultures: The Maya—Activities and Crafts from a Mysterious Land*.

Sample Maya Birthday Glyph Amulets

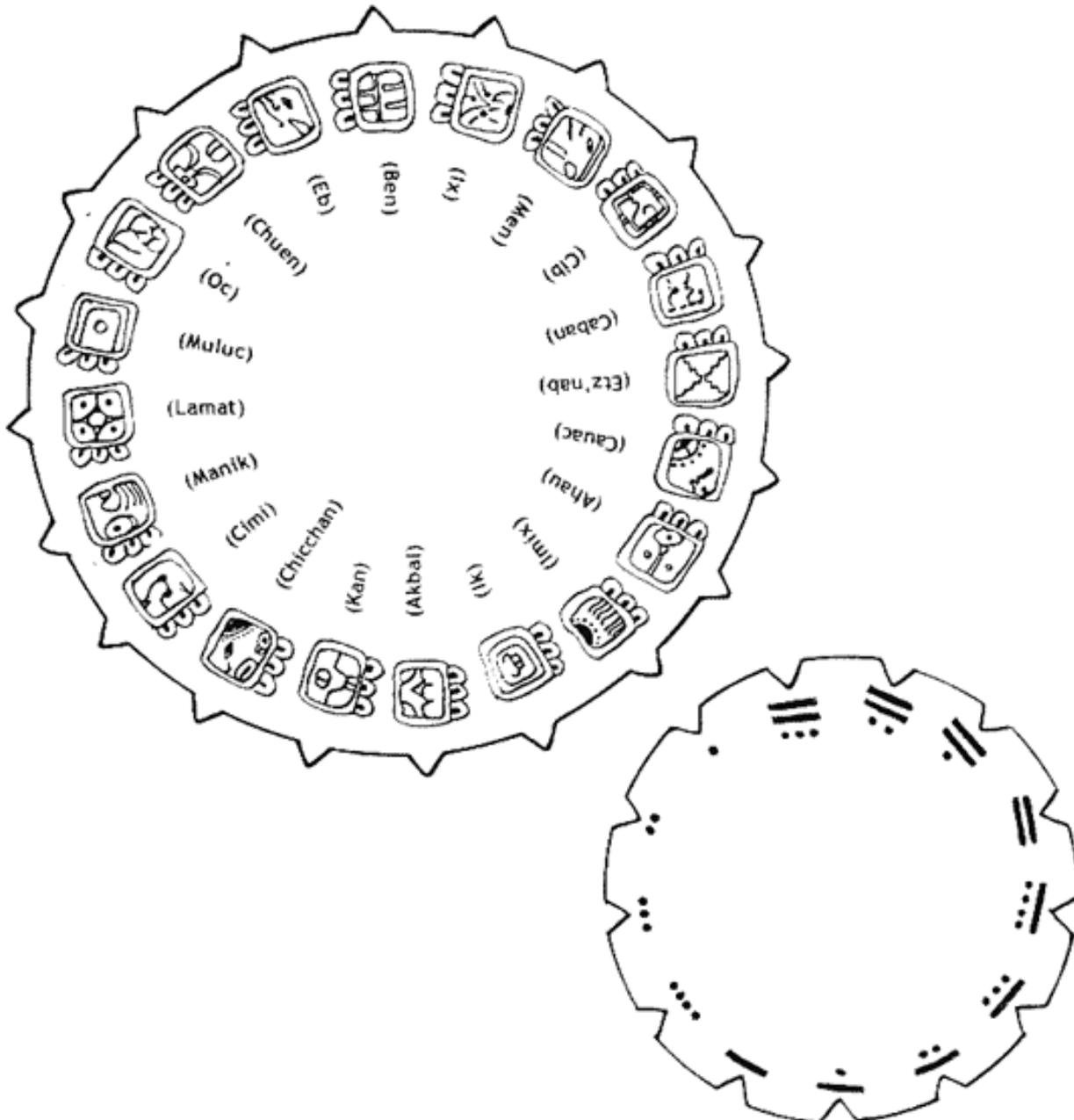


Maya Calendar Activity

Mayan Sacred Rounds(Appendix)

>Students: These are examples of the sacred rounds that the Ancient Maya used for specific computations of *their* calendar year.

>>Procedure: Make sure to cut them out according to the solid outer lines so that they fit together like a set of gears. When you turn them to complete the following exercizes, make make sure that the large 'round' moves "counter-clockwise", and the small 'round', "clockwise".



Topic #13: Maya Arts – Weaving – PP slide #67

WI State Teaching Standards: Give examples and explain how language, stories, folk tales, music, and other artistic creations are expressions of culture and how they convey knowledge of other peoples and cultures (E.4.11)

Background Information:

- Weavers have used the backstrap loom since around 1500 B.C. – PP slide #68
- Goddess of weaving is Ix Chebel Yax
- Maya women can weave anywhere
- Used nature to dye yarn (red from a tiny red insect that lives in the prickly pear plant; blue from the indigo plant; and purple from snails)
- Hundreds of ancient Maya designs based on mythology and symbolism were used in textiles
- Weavers used animals like the jaguar, snake, deer and monkey
- Other important symbols were the cornstalk and the Maya Tree of Life

Sequence of Activities:

- Read *Abuela's Weave* and/or *Angela Weaves a Dream*
- Show textile samples
- Show Maya backstrap weavers – PP slide #68
- Discuss the Seven Sacred Ancient Maya Weaving Designs of San Andres, Chiapas, based on mythology and symbolism. Maya weavers today continue to use these ancient symbols – PP slides #69–71
- Model backstrap weaving for students
- Students make a simple, colorful woven wall hanging in the style of the Maya weavers. See Woven Wall Hanging directions below. You may wish to view YouTube footage of Backstrap Weaving at www.youtube.com/watch?v=66tYpOoHYXg or www.youtube.com/watch?v=cSxMuuAG5oQ

Resources:

Abuela's Weave; textiles from Mexico; Maya weaving PP slides #67–71; Background Notes: Seven Sacred Ancient Maya Weaving Designs of San Andres, Chiapas; and Woven Wall Hanging Handout; YouTube footage of Backstrap Weaving; and Web sites.

Assessment:

Use Weaving Rubric to assess individual weaving projects.

Background Notes: Seven Sacred Ancient Maya Weaving Designs



Universe

The Maya universe consists of the earth, the sky, and the underworld. The center diamond denotes noon, when the sun is at its highest point in the sky.



Scorpion

The scorpion is easily recognized by its long, curling tail.



Ancestors

The Ancestors consist of a pair of figures, the Earth Mother and Earth Father. The Earth Father has 3 vertical lines at its center. The Maya believe the Ancestors live in a cave located in each village's sacred mountain.



Snake

The snake is a messenger between the earth and the underworld and lives in a cave of the Ancestors.

Background Notes: Seven Sacred Ancient Maya Weaving Designs, continued



Toad

The toad stands guard at the mouth of the Ancestor's cave and watches for signs of approaching rain.



Flowering Corn

The Flowering Corn is a symbol of the universe in harmony. The Maya believe that just as a corn plant has many branches, the Earth Mother has many arms with which to embrace her children.



Butterfly

A symbol of the sun, which is the center of the Maya universe, this diamond-shaped design has two curls on each side, representing the wings of a butterfly. Just like the sun, which rises in the morning and sets at night, butterflies are active only during the daylight hours.

Source: Michele Sola, *Angela Weaves a Dream*.

Woven Wall Hanging

Supplies

pencil	plastic fork	scissors	embroidery needles
ruler	heavy cardboard	embroidery floss	

Steps

1. Draw a 7-by-4 inch rectangle on the cardboard and cut it out. Along each short side, make 16 pencil marks $\frac{1}{4}$ inch apart. Then cut on the marks to make slits about $\frac{1}{4}$ inch deep. This is your **loom**.
2. Cut a piece of cotton floss in any color about 8 yards long. This is the **warp** (the stationary strands on a loom). Place the warp on the loom by putting it through the bottom left slit, leaving an 8-inch tail out the back of the loom. Wrap the floss around the loom, working from bottom to top and left to right through each slit in turn. When you reach the top right slit, leave an 8-inch tail out the back of the loom. Turn the loom over, facedown, and tie the two tails together in a tight knot.
3. Cut a piece of floss in any color about 84 inches long and thread it on the needle. This is the **weft**.
4. Turn the loom face-up and start weaving at the bottom right of the loom by placing the needle under the first warp, then over the next warp, under the next, and so on until you reach the left side of the loom. Gently pull the weft all the way through, leaving a 4-inch tail on the right. For the second row, weave back toward the right side of the loom placing the needle under the first left warp, over the next warp, and so on until you reach the right side. Pull the weft gently, making sure the left and right sides of the warp don't pull in. Use the plastic fork to pack, or push down, each row close to the previous one. Do this each time you weave a row.
5. Continue weaving, using many different colors to create narrow rows or fewer colors to create wider rows. Or weave a combination of the two. Alternate colors to create a pattern. When you need a new color, start weaving the new color on the opposite side of where you just ended. Remember to weave the new row opposite to the way you wove the previous row. Do not cut the floss ends sticking out. You will cut these later. Make sure the floss ends are about 2 inches long.
6. Remember to pack each row tightly. Continue weaving until you reach the top and can't weave another row. Turn the loom facedown and cut across the middle of the unwoven warp, cutting through the two knotted strands.
7. Turn the loom face-up and remove the warp strands from the slits along the bottom of the cardboard. Tie the first two warp strands on the bottom left together in a tight knot close to the edge of the weaving. Tie the next pair of strands together, and repeat until all pairs are tied.
8. Repeat Step 7 for the warp strands on the top of the weaving.
9. Trim the warp strands to a length of about $\frac{1}{2}$ inch.
10. Carefully trim the floss ends from the weft that are sticking out of the row

Source: Arlette N. Braman, *Secrets of Ancient Cultures: The Maya—Activities and Crafts from a Mysterious Land*.

Maya Weaving Project Rubric

Category	4	3	2	1
Maya Pattern	Used Maya pattern appropriately. Did best work.	Used Maya pattern. Did work, but did not do best.	Used Maya pattern but did just enough to be done.	Did not use Maya pattern.
Completed Weaving	Creative and gave 100% effort.	Only 75% effort. Not creative. Just did it to finish.	Only 50% effort. Not creative.	Did not even try.
Time	Worked diligently and stayed on task the entire time.	Worked hard most of the time.	Worked on the project some of the time.	Worked a little on the project.
Use of Materials	Used materials appropriately and put them away when done.	Used materials appropriately but did not put them away.	Used materials but played with them while making project and when done.	Used materials inappropriately and did not put them away.

Topic #13: Arts – Pottery – PP slide #72

WI State Teaching Standards: Give examples and explain how language, stories, folk tales, music, and other artistic creations are expressions of culture and how they convey knowledge of other peoples and cultures (E.4.11)

Background Information:

- Pottery making was one of the Maya’s top skills
- Pottery was used for cooking and storing food and also played an important role in religious rituals
- Scribes decorated ceremonial pottery using a substance called *slip paint*, a mixture of finely ground pigment, clay and water
- Ceremonial pottery was decorated with drawings of gods, kings and hieroglyphs
- There were no potter’s wheels so everything was done by hand
- Some pots the Maya made were as tall as an adult

Sequence of Activities:

- View Maya Pottery PP slide #72 of pieces from Mesoamerican Gallery UPM of Archaeology and Anthropology
- View other Maya pottery vessels – PP slides #73–74
- View Maya potters today – PP slide #75

Resources: Maya ceramics PP slides #72–75; Maya Pottery Activity; and Maya Pottery Rubric.

Assessment:

Refer to the Maya Pottery Rubric for assessing each student’s work.

Maya Pottery Activity

Directions: Follow the steps below to make a Maya pottery vessel.



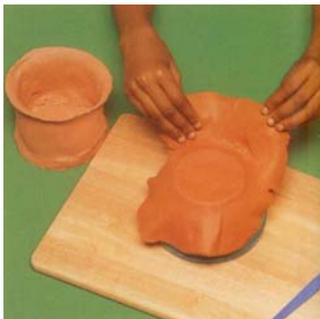
Materials: self-drying clay, board, rolling pin, masking tape, water bowl, small bowl, petroleum jelly, modeling tool, white glue, glue brush, tempera paint, paintbrush.



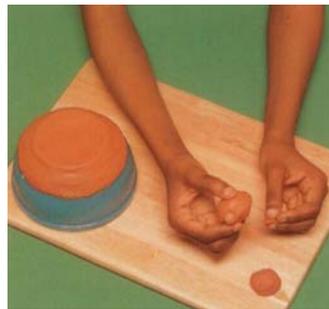
1 Roll out the clay until it is about $\frac{1}{4}$ inch thick. Cut out a slab base for the pot with a modeling tool. Use a roll of masking tape as a guide.



2 Roll out the clay with your palms. The long and skinny clay becomes your coil. Put the coil around the slab base to build up the sides. Join and smooth the clay with water as you go.



3 Model a lip at the top of the pot. Let it dry. Cover a small bowl with petroleum jelly. Make a lid by rolling out some clay. Place the clay over the bowl.



4 Roll out some long strings of clay. Coil them around the base of the pot to build up the sides. Join and smooth the clay with water as you go.

Maya Pottery Activity, continued



6 Roll three small balls of clay exactly the same size for the pot's feet. When they are dry, glue them to the base of the pot. Make sure they are evenly spaced.



7 Paint the pot and lid with Maya designs – 3 colors maximum. Clean the brush before and after each color. When you have finished, varnish the pot with a thick coat of white glue to make it shiny.

Source: Fiona Macdonald, *Step into the...Aztec & Maya worlds*.

Maya Pottery Rubric

Category	4	3	2	1
Craftsmanship	Pot and lid well crafted. Student took obvious pride in work.	Pot and lid are well made but do not have high-quality, finished appearance.	Box and lid need more work to give the final project a neat and polished appearance.	No attempt to produce a well-crafted final product.
Meets Challenges	Required elements (coil pot with lid) are present with excellent construction.	Required elements present but could have been more carefully constructed.	Pot and lid only partially constructed, lacking one of the required elements.	No attempt made to produce a coil pot with lid.
Design	Design well done to enhance project.	Maya design used but lacks quality work.	Some Maya designs used.	No Maya designs applied.
Glaze	Glaze carefully applied and neat.	Glaze could be more neatly applied.	Glaze overall appearance is lacking quality.	Little or no attempt to glaze the project.
Use of Time	Time wisely used and took obvious pride in work.	Used most time wisely and tried to do a good job.	Could have used time more wisely to produce a better final project.	Did not use time wisely and project lacks pride.
Engagement	Willing to experiment and take risks.	Generally willing to take risks and apply advice on project.	Somewhat willing to try new ideas and take risks.	Unwilling to learn new coil method with clay.

Grade: _____

Comments:

Topic #13: Arts – *Sellos* or Ceramics Stamps – PP slide #76

WI State Teaching Standards: Give examples and explain how language, stories, folk tales, music, and other artistic creations are expressions of culture and how they convey knowledge of other peoples and cultures (E.4.11)

Background Information:

- Scribes decorated clay and made ceramic stamps
- Everything was done by hand

Sequence of Activities:

- View Maya sellos PP slide #76
- View other sellos from *Symbols of Ancient Mexico: 18 Rubber Stamps*
- Make clay sellos (ceramic stamps) using the Maya Sello (Ceramic Stamps) Glyph Prints Activity
- Display students Maya Sello Glyph Prints

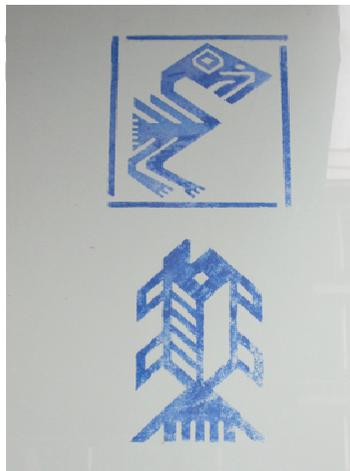
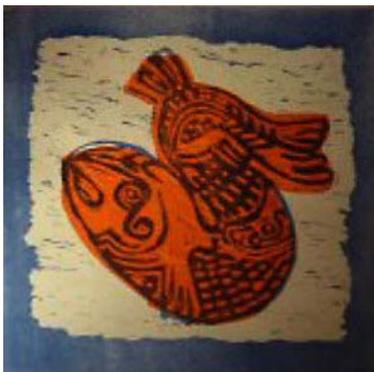
Resources: Maya Pottery PP slide #76; Maya Sello (Ceramic Stamp) Glyph Prints activity; Maya Sellos Assessment Rubric; *Symbols of Ancient Mexico: 18 Rubber Stamps*

Maya Sello (Ceramic Stamps) Glyph Prints Activity

Materials: balls of modeling clay, craft or cuticle stick for carving, craft sticks, newspaper, paper to print on, tempera paint, paper towels, paper plates or aluminum foil pie pans.

Directions :

- 1) Cover the area you will be working on with newspaper.
- 2) Tear off a ping-pong ball sized lump of clay.
- 3) Flatten it into a ¼ inch smooth slab with a diameter of about 4 inches.
- 4) Use a craft or cuticle stick to carve a design into the flat surface.
- 5) If the spaces in the carving start to close, gently open with the pointed end of the carving tool.
- 6) Pour a shallow puddle of tempura paint into a paper plate or aluminum foil pie pan lined with several thicknesses of paper toweling.
- 7) Spread the paint evenly over the toweling to make a stamp pad.
- 8) To print, press the clay with the glyph onto the stamp pad and transfer the design onto paper.
- 9) Place the print onto a solid construction paper for an art display.



Adapted from: Sara Bonnett, *The Kids' Kitchen Take-over*.

Maya Sello (Ceramic Stamp) Glyph Rubric

Category	4	3	2	1
Craftsmanship	Sello is well crafted. Student took obvious pride in work.	Sello is well made but does not have high-quality appearance.	Sello needs more work to give the final project a neat and polished appearance.	No attempt to produce a well-crafted final product.
Meets Challenges	Required elements are present with excellent construction.	Required elements present but could have been more carefully constructed.	Sello is partially completed, lacking one of the required elements.	No attempt made to produce a sello.
Maya Glyph Design	Maya glyph well done to enhance project.	Maya glyph used but lacks quality work.	Maya glyph used but poorly done.	No Maya glyph applied.
Use of Time	Time wisely used and took obvious pride in work.	Used most time wisely and tried to do a good job.	Could have used time more wisely to produce a better final project.	Did not use time wisely and project lacks pride.
Engagement	Highly motivated, great attitude and always willing to try new ideas.	Mostly motivated and willing to apply advice on project.	Somewhat motivated and willing to try new ideas and take risks.	Lacks motivation and interest in the project.

Grade: _____

Comments:

Topic #14: Theories - What happened to the Ancient Maya? – PP slide #77

WI State Teaching Standards: Describe and give examples of ways in which people interact with the physical environment, including use of land, location of communities, methods of construction, and design of shelters (A.4.4).

Background Information: <http://www.learner.org/interactives/collapse/mayans.html> – PP slide #78

- No one really knows why the Maya abandoned their city-states so it's pure speculation
- The northern Maya were integrated into the Toltec society by A.D. 1200
- A few centers continued to thrive (Chichen Itza) until the Spanish Conquest in the early 1500s
- Some theories from Jared Diamond's book, *Collapse: How Societies Choose to Fail or Survive*
 - ✓ Environmental Damage – The Maya cut down trees for more farmland and also to make a plaster called **stucco**. Deforestation and erosion led to decreased usable farmland
 - ✓ Climate Change – Many years (possibly several hundred) of intense drought caused people to move where there was water
 - ✓ Hostile neighbors – Wars over resources
 - ✓ Population growth exceeded resources
 - ✓ Society's response – Kings and nobles were focused on themselves and overlooked obvious societal problems

Maya today:

Urban Maya descendants today lead simpler, agricultural, communal, and highly spiritual lives
Concluding quote from John Stephens, American founder of Palenque – PP slide #80

Sequence of Activities:

- View PP slide #77–80
- Discussion as to what students think caused the ancient Maya to abandon their cities.

Resources:

Collapse: How Societies Choose to Fail or Survive by Jared M. Diamond; PP slides #77–80; and Web sites.

Assessment: Write-up of What Happened to the Maya? worksheet.

Topic #15: Resources for Maya – Lords of the Earth Unit

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