Mayan Art & Architecture

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Visual Arts-Language Arts-
Math-Social Studies
Multi Cultural, Multiple
Intelligences

This unit is a total of 4 lessons.

You can choose to do one of them or all of them to create a unit on the art and style of the tombs found in the Yucatan.

Art Lesson I: “Mural; Popol Vuh”
Learning about the Mayan myth of creation. Creating a wall mural based on the Bonampak Art Style.

Art Lesson 2: “Writing our names using Mayan glyphs”
Understanding that Mayan writing is phonetic, and can be written several ways.

Art Lesson 3: “Writing Mayan numbers”
Learning how other cultures base numbers on 20, (not 10 like ours), and how they write numbers, (not like ours!)

Art Lesson 4: “Creating a Mayan Tomb”
Learning the Mayan Corbel arch, creating a tomb.

Objective: Students begin to learn about how the Mayans thought. Begin with the Mayan Story of Creation. Very age appropriate, as the Hero Twins play ball, and that’s all they want to do! Students watch the Mayan Quiche myth of creation. Discuss with students the Hero Twins, the ball game, the lords of the underworld and how the twins tricked the lords. (I would edit the narration depending on age of students, religious make-up of the class etc.)
**Question:** How can we retell the story of creation (in sketches) by listening to the story read aloud?
Create a wall chart with students noting; characters, locations (Xibalba) clothing design of main characters animals listed actions of characters. In the second session, students take the items from the chart, break into groups and start sketching one of the scenes from the story. Complete the sketches on small 8.5x11 paper to be worked up in session two as wall murals.

**Web sites for this lesson:**
video animated.
http://www.youtube.com/watch?v=1kAE_TW24a4&feature=related
This is in Spanish, you can turn off the sound and narrate it yourself.
http://en.wikipedia.org/wiki/Popul_Vuh Photos available on pearlinpalenque.blogspot.com

**The New York City 5 Art Strands for all 4 lessons;**

1. **ARTS MAKING:** Students will use paper, markers, paint, foam, plaster of paris, collage, painting, writing, planning, topography and geography. They will learn to use primary sources, books, and photos. They will learn about Mayan art motifs, designs, architecture, language and music.

2. **Literacy:**
   **Vocabulary:**
   Stele – stone bas-relief carving, usually vertical.
   Epigraph, Epigrapher - an inscription on a building, the person who studies them.
   Maize - ancient corn that was cultivated over time.
   Codex – the hand made bound books written in glyphs, usually on “paper” made from pounding tree bark.
   Hieroglyph - literally “sacred writing”. Today used to describe any kind of picture writing for Egyptians and Mayans.

3. **Making Connections**
   This links to Social Studies, History, Geography, terrain, music, foreign language (Spanish and indigenous)

4. **Community and Cultural Resources:**
   Metropolitan Museum of Art has Mayan Art in the Michael C. Rockefeller wing.
   Smithsonian Museum of the American Indian in Battery Park
   American Museum of Natural History
   Non-permanent exhibits on in winter 2012-13; Princeton University Museum, Mayan pottery, University of Penn State Museum of Archeology, the Mayan Calendar, and Yale University Art Gallery.

My school has a very large Mexican population. Learning about the great cultures of the past is
very empowering for them.

5. **Careers and lifelong learning:** How can people’s intellectual curiosity solve riddles of the ancient past?

Museum curator, archeologist, artist, photographer, writer (books, magazines, travel) epigrapher, linguist, textiles, linguist

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**Art Lesson I: “Mural; Popol Vuh”**

*Learning about the Mayan myth of creation.*

*Creating a wall mural based on the Bonampak Art Style.*

**Essential Question:**

What Mayan art styles and motifs are used in tombs from the 800’s in Chiapas, Mexico?

**Sources:**

Famsi web site --http://www.famsi.org

(_FOUNDATION FOR THE ADVANCEMENT OF MESOAMERICAN STUDIES)

Arqueologia, Mexicana (in Spanish)Edicion Especial www.arqueomex.com

“Codices prehispanicos y colonials tempranos Catalogo. Mayas, Mexicas, Mixtecos y Grupo Borgia

I have several PowerPoints depicting Palenque, Tonina, Chichen Itza, Yaxchilan and Bonampak. All are Mayan Ruins in Mexico. email: PLau2@schools.nyc.gov to receive it.

**ARTS MAKING SUPPLIES:**

8.5 x 11 beige paper, markers, pencils, sheets of design motifs and pages from the Dresden Codex for students to see examples of headdresses, profiles of Mayans, colors used etc.

**Tell students:** The Mayan civilization lasted from about 500 BCE to the 1500’s CE, with a classical period from 250-925 CE. This cultural era is referred to as Mesoamerica or Meso-America. It extends from Central Mexico to Belize, Guatemala, El Salvador, Honduras and Nicaragua. Other groups that inhabited the areas are the Olmecs, Toltecs, Aztecs, Zapotecs and the Mixtecs.
You will hear the edited story of the Popol Vuh (you could hold up the Tedlock book for them to see how long it is). After you hear the story, you will select your favorite part and illustrate it. Hold your paper vertically, we need to be able to line them up on the wall. Be sure to include any details you hear in the story. Use the sheets from the Codex to style your lords and brothers.

(If you build the tomb, you can mount them on the walls, if you can’t build the tomb, a bulletin board or wall will do. Place them in order of the story. Have the students help with organization).

For the teacher: German ethnologist, Paul Kirchoff used the term “MesoAmerica” which literally means “middle America” in Greek.
He based this term on the intercultural similarities. The agriculture, specifically the cultivation of maize (corn), the use of two different calendars, (a ritual 260 day calendar and a 365 day calendar based on the solar year and a base 20 (vigesimal) number system, pictographic and hieroglyphic writing, practice of various forms of sacrifice and shared ideological concepts. Mesoamerica is recognized as a near-prototypical cultural area and the term is now part of the pre-Colombian (before Christopher Columbus or before the Spanish) terminology.
Michael D. Coe breaks this are into two broad categories: the lowlands and the altiplanos or highlands.
Linguists say there are 4 times where writing appeared in an original form throughout history; cuneiform, Egyptian, Chinese and Mayan.

In addition, the culture is broken up into the Paleo-Indian, Archaic, Pre-Classic, Classic, Post-Classic.

About the classic Mayan Ball-Game;
The Mesoamerican ball game was a sport with ritual associations played for over 3,000 years. The sport had different versions over the millennia. Some Mayan courts have rings and some don’t, some are longer than others. The balls were heavy, 8 to 10 lbs. and made of rubber, a Mesoamerican invention.

The rules of the game are not exactly known, it was similar to volleyball or soccer. You used your hips and your head, never your hands. The game sometimes featured human sacrifice.

Design Motifs: Mayan art is mostly of people, who are rendered in profile. Two feet showing, one foot placed in front of the other. The headdresses are incredibly important as they depict the wearer. It’s as if they wrote his name on top of his head. When showing a humiliated captive, they will depict him without all his jewelry but he will still have on his headdress so all will know whom they captured.
Depending on the age and ethnic diversity of your students you may want to edit your own version.

**The Popol Vuh Story**

*story edited for the classroom by Pearl Lau*

In the beginning, there was nothing but sky and water. The gods decided to make animals, then humans. The first humans were made from mud but when it rained they melted.

The gods then decided to make people from wood (they had already made trees). But the wood people were stiff, they had no soul or brains. They walked into the walls. They couldn’t speak which was terrible because the lords wanted the people to say “oh gods you’re so great!”

Finally the gods took white and yellow maize (corn, which has sacred significance. Maize was developed from a grass with very few kernels, into the corn we have today. This past summer because of the drought out west, our corn grew only a few inches long. It looked almost like the original maize).

They mashed it up and created arms and legs for their third version of people. These people could walk, talk and most importantly they could say “oh gods you’re so great!”

One day, many years later, 2 boys named Hun Hunahpu and Vucub Hunahpu were playing ball. The lords of Xibalba (sha-bal-ba) the Underworld were very annoyed at all the noise being made. They invited the boys down and eliminated them!
Luckily the two boys left their ball game equipment up on the earth that was found years later by the sons of the original two boys.

The sons names were Hunahpu and Xbalanque (sha-ba-lan-kay).

They started splaying ball making all kinds of noise.

“AH!” The lords yelled, “we have to get those boys down here, we’ll give them tests and they’ll surely fail it! Then we can eliminate them like we did their fathers!”

The two boys came and were told to go into the cave of darkness. They were given a cigar and a torch. They were told to keep both lit all night!

The two boys were smart and clever. They pulled out of their pockets a brightly colored feather and a pocket full of fireflies!

Each time a lord passed by to see if the things were still lit, they looked like it was! The next morning the boys came out with the cigar and torch and they were like brand-new!

“Rats!” Said the lords; “they passed the test, now we have to make up another one!”

The lords said, “if you can name all of the lords then we’ll let you go, you’ll have passed all the tests.”

One of the boys pulled a hair out of his leg and it turned into a mosquito!

The mosquito flew over and bit the first lord named One Death, “OUCH!” He yelled. The second lord, Seven Death said, “Lord One Death what’s the matter?”

“That mosquito bit me!” Said Lord One Death.

Two seconds later Seven Death said “OUCH!”
“Lord Seven Death, what’s the matter?” Asked Scab Scraper.
“That mosquito bit me!” Said Lord Seven Death.

Two seconds later Scab Scraper said “OUCH!”
“That mosquito bit me!” Said Lord Scab Scraper.

Two seconds later Demon of Pus said “OUCH!”
“Lord Demon of Pus, what’s the matter?” Asked Demon of Jaundice.
“That mosquito bit me!” Said Lord Demon of Pus.

Two seconds later Demon of Jaundice said “OUCH!”
“Lord Demon of Jaundice, what’s the matter?” Asked Bone Scepter.
“That mosquito bit me!” Said Lord Demon of Jaundice.
Two seconds later Bone Scepter said “OUCH!”
“Lord Bone Scepter, what’s the matter?” Asked Skull Scepter.
“That mosquito bit me!” Said Bone Scepter.

Two seconds later Skull Scepter said “OUCH!”
“Lord Skull Scepter, what’s the matter?” Asked Wing.
“That mosquito bit me!” Said Skull Scepter.

Two seconds later Wing said “OUCH!”
“Lord Wing, what’s the matter?” Asked Packstrap.
“That mosquito bit me!” Said Wing.

Two seconds later Packstrap said “OUCH!”
“Lord Packstrap, what’s the matter?” Asked Bloody Teeth.
“That mosquito bit me!” Said Packstrap.

Two seconds later Bloody Teeth said “OUCH!”
“Lord Bloody Teeth, what’s the matter?” Asked Bloody Claws.
“That mosquito bit me!” Said Bloody Teeth.

Two seconds later Bloody Claws said “OUCH!”
“Lord Bloody Claws, what’s the matter?” Asked One Death.
“That mosquito bit me!” Said Bloody Claws.

Not a single name was missed, and the boys remembered them all.

“Rats!” Said the lords; “they passed the test, now we have to make up another one!”

One of the lords said, “wait for me and sit on the chair”.

One of the boys said, “NO, that’s a stove and you’ll cook me for dinner if I sit there!”

The lords went off to think about another test while the boys decided to play a trick on the lords.

One brother said, “let’s do that trick where you cut me up and put me back together again”.

So they did, and when the lords came back they found the one brother all cut up laying around. “What did you do?” Said the lords.

“Oh my brother and I love to play this game, watch this!” Then all of a sudden the cut up brother got put back together again and said “Oh I love it when he does that! I get all chopped up then go back together again, so much fun!”

“Do me too” said Lord One Death, “No do me first said Lord
Bloody Teeth!” And all the lords fought over who would go first.

The brothers said, “OK, don’t worry you’ll all get chopped up”. So the brothers chopped up all the lords...and walked away!”

They returned to the land above the Underworld and continued to play ball and make lots of noise to this day!

(This is a heavily edited version that I did for my elementary school-age children)

Art Activity:
• After the students have heard the story, ask them to do a drawing retelling one scene they liked. Use a beige tinted paper or create your own. We want it to look like stone. All art should be horizontal to stack and put in order of the story. Use watercolor markers, after drawing with them, apply plain water with a brush to create a more painterly effect. Remind them about the “Mayan Blue” background to add.
These will be the drawings you can use to put on the inside walls of the temple, if you can build one from foam insulation. If you can’t, you can arrange them on a bulletin board to retell the story of the Popol Vuh.

Art Lesson 2:
“Writing our names using Mayan glyphs”

Essential Question:
How did the Mayans write their names if they didn’t have the alphabet we use?

Introduction: The Mayan civilization lasted from about 500 BCE to the 1500’s CE. The earliest known writing in the Mayan script dates from about 250 BCE, but is thought to have developed at an earlier date. Recent archeological finds indicate that the Mayan civilization started much earlier; around 3,000 BCE.
In about 1566, the first bishop of Yucatan, Diego de Landa, compiled a key to the Mayan syllabary consisting of 27 Spanish letters and the Mayan glyphs with similar sounds. This became known as the Landa Alphabet and helped with the decipherment of the script, even though it was based on the false premise that the script was alphabetic.
For a long time many scholars believed that the script did not represent a language at all, or that it
wasn’t a complete writing system. The first major breakthrough in decipherment came during the 1950s when a Russian ethnologist, Yuri Valentinovich Knorosov, proposed that the Mayan script was at least partly phonetic and represented the Yucatec Mayan language. His ideas were not welcomed by other Mayanists, but he was eventually proved correct.

Further progress in the decipherment was made during the 1970s and 1980s when more linguistics began to take an interest in the script. Today most Mayan texts can be read, though there are still some unknown glyphs.

A gripping account of the decipherment of the Mayan script can be found in *Breaking the Maya Code*, by Michael D. Coe.

The Yucatec Maya continued to use the Mayan script until at least the 16th century. Recently, their descendants have started to learn the script once again from the scholars who have deciphered it.

**Notable features**

- The Mayan script is logo syllabic combining about 550 logograms (which represent whole words) and 150 syllabograms (which represent syllables). There were also about 100 glyphs representing place names and the names of gods. About 300 glyphs were commonly used.
- Examples of the script have been found carved in stone and written on bark, wood, jade, ceramics, and a few manuscripts in Mexico, Guatemala and northern Belize.
- Many syllables can be represented by more than one glyph.
- The script was usually written in paired vertical columns reading from left to right and top to bottom in a zigzag pattern.

You can find examples of the glyphs at:
http://www.omniglot.com/writing/mayan.htm and on the FAMSI site.

**ARTS MAKING SUPPLIES;**

5 x 5 inch white paper, markers, pencils, sheets of Mayan glyphs.

**Students will learn:**

- How to write their names using the Mayan syllabary (Mayan syllables). The language is phonetic but does not have all the sounds in the English language. Students will learn how to compensate. They names end in the syllable “na” so everyone gets to add that at the end. (see my “name” at the end of this lesson.)

- Students will be able to find Mexico and in particular Chiaps and the Yucatan on a world map. Students will be able to learn Mayan architecture through primary sources of photos taken on my trips to Mexico. We also have posters, postcards and books all around the room for more research.

- Design motifs and attributes of Mayan art are also displayed for use on the robes of visiting dignitaries at Bonampak. They will also see how the Mayans used their numbers within their glyph writing system.

- The importance of Mayan Blue in the murals. The Maya associated the color blue with their rain
deities. When they offered sacrifices to the god Chaak, they would paint them blue in hopes he
would send rain to make corn grow. The blue paint has been found on objects for a long time, but
scientists have debated how the Maya created the pigment.
(Secret to Mayan Blue Paint found) [http://www.livescience.com/2322-secret-mayan-blue-paint.html](http://www.livescience.com/2322-secret-mayan-blue-paint.html)

• Linda Schele and Tatiana Proskoriakoff were two women artists who were hired to copy the
glyphs they saw in Mexico, Guatemala and Honduras. After many years both women saw relation-
ships in the combinations of the characters. It was Tatiana who discovered that the stele at Piedras
Negras was a history record of the dynasties of rulers.

**National and NYS Indicators:**
Art Room: Students demonstrate how history, culture (drama and theatre design) and the visual
arts can influence each other in making and studying works of art.
Students obtain information from oral (music), visual and print sources.

Show students some other written languages such as Egyptian Hieroglyphs. You can explain how
this is a misnomer. Hieroglyphs literally translate as “sacred writing”. This name was given when
the original archeologists saw the writing as purely religious.

Students like to hear how adults don’t always get it right! Tell them how for the longest time, they
thought the pictures stood for something. It took several people to crack the
code and understand that these pictures are phonetic and are akin to making
“letter sounds” something they will know from learning how to read.

Using a square format. Students will sketch out their name using as many of
the letter sounds on their sheets that they can find.

Not all English sounds can be translated into Mayan. For in-
stance;

PEARL is “pi” + “l” + “na”.
The “na” is a sound added at the end.

(in Mayan over my head)
Art Lesson 3: “Writing Mayan numbers”

Learning how other cultures base numbers on 20, (not 10 like ours), and how they write numbers, (not like ours!)

(If you have an iPhone, you can download for free, “MAYACALC” you’ll have a calculator with Mayan numbers. You can change the setting to Arabic numbers too.)

Students will learn:
• How to write Mayan numbers
• how they think in numbers
• how to use the Mayan system of counting

One bar=5
One dot=1

Example for the number 13= __ __ ••• (5+5+3=13)

Mesoamerican numbers are literal and symbolic. It is VIGESIMAL (based on 20).

In representing numbers a series of bars and dots are used.

2 is related to origins as all origins can be a combination of two.

3 related to household fire.

4 represents the four corners of the Universe.

5 represents instability. (You can ask why “3” was not labeled “stability” as in all cultures, the tripod is one of the first footed design for a vase as the triangle is the most stable of geometric numbers.)

9 relates to the underworld and night.

13 is the number for light.

20 for abundance.

400 is for infinity.

They had the concept of “0” also. In the late Pre-Classic period it is considered one of the earliest uses of zero in human history.

Activity: In a style of illustrative whimsey tell students they can write the bars and dots any way they want to. Mayans often changed things, it depended on the calligrapher. Use colors, patterns, outlines etc.
Write your birthday. Today’s date. Play a game calling out numbers and they write them down.
Art Lesson 4: “Creating a Mayan Tomb”
Learning the Mayan Corbel arch, creating a tomb.

Students will learn how math and art and connected through architecture.

Show examples of Gothic arches (Europe 12th century) and post and lintels (Stonehenge example) to display how people tried to “hold things up”.

Engineering and human nature can open a diverse dialogue with the different disciplines in society. Was it for religious reasons to raise the ceiling? Was it built to honor a fabulous person, what culture did they base their architecture on? And why?

The Mayan arch was not stable, and Mexico had many earthquakes. Ask what could this have done to the belief in the gods? The ruler? Could he have (as in China) lost the right to rule?

Activity: The above tomb is designed to be created from foam insulation. A saw or long utility knife is what cuts up the blocks. You only need to cut up the opening pieces. The rest can be just painted to look like stones.

Use wooden barbeque skewers to hold the foam pieces together. Cut approximately 30 blocks to create the area around the arch and up. This arch is designed for the top rows to cantilever. You could build this in miniature, use blocks borrowed from other classes, or cut up the foam pieces with a saw. If you make it large enough for a student to go into, you can line the walls with the illustrations from the Popol Vuh.

It will be a magical transformation in the classroom.

Added activity:
1. Create the tomb like brand new. Paint it, the art work inside is fresh.

2. Based on primary sources of descriptions, how did it look when the Spaniards came? When the other Europeans came to sketch and explore? Age it to that appropriate time to give a sense of what it was like for people to stumble across these places centuries later.

3. Discuss the modern idea of not excavating and reconstructing everything. Many pyramids in Mexico are only reconstructed on 2 sides, the other 2 left as they found it. Why is this done? Do you think is valuable evidence?