MaYan Modern ReCreations

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Memorial Elementary School

INTRODUCTION

Memorial Elementary is the place I teach; it is located right across from the beautiful Memorial Park. This school consists mostly of Hispanic students, among the 360 students attending during the 2006-2007 school year. The majority of classes are Bilingual or ESL educational programs ranging from Pre-Kinder to 5th grade level. I teach a bilingual split Kindergarten and first grade class with seven subjects (reading, language arts, mathematics, science, social studies, ESL, and fine arts). Since all my students' first language is Spanish and they come from Hispanic backgrounds, studying Pre-Columbian Mayan culture will be as fascinating for them as it was for me. This will be a fantastic way for my students not only to learn about Mayan math but to help them get involved with and interested in the Mayan culture.

RATIONALE

My basic purpose in teaching Pre-Columbian Math is to take the opportunity to explore and expand my students' minds. Teaching and learning about a new culture like the Mayan civilization can show my students a new counting strategy using symbols and objects. The new strategies will teach the rudiments of a non-base 10 system. The Maya used a vigesemal (base 20) system; the students will learn more about Mayan mathematics, Mayan culture, and how math was important to these people. Thus math and history will be combined to make the notion of another mathematical system come alive for the students.

My aim with teaching Pre-Columbian Math to my kindergarten and first grade split class is to help them recognize simple patterns and identify symbols, and to develop their counting skills, quick thinking skills, addition, subtraction, and multiplication. I can accomplish these goals first by creating an interesting educational enriched environment by keeping my students involved in student-centered group activities and positive reinforcement support from both the teacher and the students themselves.

OBJECTIVES

113.2. Social Studies, Kindergarten

(b) - Knowledge and skills.

(15) - Social studies skills. The student applies critical-thinking skills to organize and use information acquired from a variety of sources, including electronic technology. The student is expected to: (B) obtain information about a topic using a variety of visual sources such as pictures, symbols, television, maps, computer images, print material, and artifacts.

113.3. Social Studies, Grade 1

(b) - Knowledge and skills.

(17) - Social studies skills. The student applies critical-thinking skills to organize and use information acquired from a variety of sources including electronic technology. The

student is expected to: (B) obtain information about a topic using a variety of visual sources such as pictures, graphics, television, maps, computer images, literature, and artifacts.

Math, Kindergarten

(K.1) - Number, operation, and quantitative reasoning. The student uses numbers to name quantities.

(A) - Use one-to-one correspondence and language such as more than, same number as, or two less than to describe relative sizes of sets of concrete objects;

(B) - Use sets of concrete objects to represent quantities given in verbal or written form (through 20); and

(C) - Use numbers to describe how many objects are in a set (through 20) using verbal and symbolic descriptions.

Math, Grade 1

(1.1) - Number, operation, and quantitative reasoning**.** The student uses whole numbers to describe and compare quantities.

(A) - Compare and order whole numbers up to 99 (less than, greater than, or equal to) using sets of concrete objects and pictorial models;

(B) - Create sets of tens and ones using concrete objects to describe, compare, and order whole numbers;

(D) - Read and write numbers to 99 to describe sets of concrete objects.

112.2. Science, Kindergarten

(a) - Introduction.

(1) - In Kindergarten, science introduces the use of simple classroom and field investigations to help students develop the skills of asking questions, gathering information, communicating findings, and making informed decisions. Using their own senses and common tools such as a hand lens, students make observations and collect information. Students also use computers and information technology tools to support their investigations.

(7) - Science concepts. The student knows that many types of change occur.

(C) - Observe and record weather changes from day to day and over seasons; and

(D) - Observe and record stages in the life cycle of organisms in their natural environment.

112.3. Science, Grade 1

(a) - Introduction

(3) - Science is a way of learning about the natural world. Students should know how science has built a vast body of changing and increasing knowledge described by physical, mathematical, and conceptual models, and also should know that science may not answer all questions.

(4) - A system is a collection of cycles, structures, and processes that interact. Students should understand a whole in terms of its components and how these components relate to each other and to the whole. All systems have basic properties that can be described in terms of space, time, energy, and matter. Change and constancy occur in systems and can be observed and measured as patterns. These patterns help to predict what will happen next and can change over time.

117.2. Art, Kindergarten

(b) Knowledge and skills.

(3) Historical/cultural heritage. The student demonstrates an understanding of art history and culture as records of human achievement. The student is expected to:

(A) Identify simple subjects expressed in artworks,

(B) Share ideas about personal artworks and the work of others, demonstrating respect for differing opinions, and

(C) Relate art to everyday life.

117.5. Art, Grade 1

(b) - Knowledge and skills.

(3) - Historical/cultural heritage. The student demonstrates an understanding of art history and culture as records of human achievement. The student is expected to:

(A) - Identify simple ideas expressed in artworks through different media,

(B) - Select artworks that show families and groups, and

(C) - Identify the use of art in everyday life.

UNIT BACKGROUND IN MAYAN HISTORY

Mayan Civilizations

The Pre-Columbian Era in Mesoamerican consists of the Mayan civilization that was around as early as 2000 BC. There are five pyramids: Palenque, Uxmal, Copán, Tikal and Chichén Itzá . These pyramids are a symbol of how powerful, creative, and intelligent the civilization was. "The chronology of Mesoamerican civilization – following on from an Archaic period of hunter-gathers – is traditionally divided into three eras: the Preclassic, Classic and Postclassic" (Martin and Grube 8). A Mesoamerican timeline will be used to help students keep track of the three major time periods.

A visual of the Mayan pyramid will make my students understand that the Mayans lived in types of pyramids similar to the Mayan Pyramid Staircase I will have displayed on the bulletin board. It will be a great demonstration while the class is studying about the Mayan culture. I will ask my students to imagine that we as a class are archeologists exploring the Mayan world. The timeline can help students discover around the time when each pyramid was built and place the pyramids in chronological order: first, second, and so on.

I will explore the geography of the Maya area to give the students a sense of the physical ambience. We will discuss the plants and animals of the rainforest. I will read from a Memorial elementary library book, "Petén is in Northern Guatemala. It is a large area covered with jungles. The jungles hide the remains of many Mayan buildings. Petén is also full of caves. Some people visit the Mayan ruins. Others explore the caves" (Dahl, 19). Then I will show my students the photograph of Petén. After my introduction of the Mayans, I will precede the lesson with two short videos, the first one called *Sunrise Earth: Mayan Pyramid.* This video will give students an insight into what kind of environment the Mayans lived in. The Discovery Channel website describes the brief video as, "Native wildlife creates a symphony of music as the sun lights up the ancient Mayan Pyramids at Chichén Itzá" (*Cancun, Mexico: Chichén Itzá*). This first video should spark an interest in students and set a tone and mindset to start learning and working with the Mayan numeric system in a calm and relaxed manner. The second video comes from the website Travelistic; *The Mayan Cities of Guatemala* has even more information about the Mayan culture. "Focus hikes into the Central American jungle to the atmospheric ruins of Tikal, and learns how the Mayans used their natural resources in the Maya Biosphere Reserve" (*The Mayan*

Cities of Guatemala). The thing about this short film is that it states the importance of the Mayan mathematical intelligence and their development of the concept of zero. This second video states important key factors that are in my lessons plans.

After making my students familiar with the Mayan topic, I will get students to work on their own pyramids that appear in Appendix H, Pyramid -- Stencil forms, and Appendix F -- Day signs (list of Maya days and signs/pictures). From these two handouts students will recreate their own Mayan pyramids. Students will color and cut out the signs or illustrations to paste and decorate their own Mayan pyramids. When finished, all pyramids will be displayed throughout the classroom, which will let my students see how beautiful and wonderful their artwork is. I will assist and give time extensions to students that are having trouble putting the pyramid project together.

Creating an interesting learning environment is a brilliant way to keep the attention of my students. The first step in children's education is student involvement. I plan to get my students personally involved by displaying a Mayan Pyramid staircase bulletin board on the main or central bulletin board in my classroom (Sevaly 74). This bulletin board is on the farthest wall into the classroom, but the one facing the door, so that when my students walk into the classroom it will be the first thing they see. The wonderful display of a Mayan Pyramid will draw them into the classroom and cause their curious minds to start wondering and even asking questions. These are some questions that students would ask: "What is that? What is it called? Who lives there? Where is it from? What is that for? What are we going to study?" The students will start answering each others' questions as well. This will be an excellent way to pique my students' interest, and I have not even started my actual lesson. I have lured my students into a learning state of mind. With the help of the bulletin board, I will activate their prior knowledge with open discussions. I will hold most of my Pre-Columbian lessons in front of this bulletin board in a circle-time manner while students are receiving information, but any hands-on work will be done at the students' desks.

Students will gather around the Mayan Pyramid Staircase bulletin board; I will call out each student's name using my go-around cup -- popsicle sticks marked with my students' names. I use this method of classroom management to keep students in order and to give every student an equal chance of being called out in no particular order, so students need to pay attention and listen for their name. Once I call out the student's name, I will staple their name card on the staircase and explain to the students that for the next couple of weeks we will be learning about Mayan culture. I will explain that Mayans are a group of people with a civilization that was around as early as 2000 BC, a long, long time ago. The visual of the Mayan pyramid will give my students an understanding that Mayan people lived in types of pyramids similar to the one on the bulletin board, and while the class is studying about the Mayan culture, I will ask my students to pretend that we as a class are archeologists exploring the Mayan world.

The session will end with a short Discovery Channel video, *Cancun, Mexico*: Chichén Itzá, described on their website as a way to "learn more about the Mayan civilization by touring the pyramids of Chichén Itzá located in the Yucatan Peninsula." This video will show students the beauty of the ancient pyramids and give them a great visual picture to keep them interested in classroom assignments and projects.

Pre-Columbian Math

Math is the universal language that can come across all language barriers, for a number can hold its value in any language. There have been many studies on the Pre- Columbian Mathematical subject. A great technique I will use in teaching Mayan math is shown in Appendix C. Vigesimal Place Value will help explain the number system in Mayan and Roman numbers. This handout will be a reference sheet for students and parents. I will continue to

introduce the Mayan number system by reading to students some cultural history about the region the Mayans lived in, the great pyramids the Mayans built, and their astronomic beliefs. All these things contributed to the way the Mayans came up with their number system.

I will model Mayan numbers on the chalkboard to check student prior knowledge and see if students can follow the Mayan numeric patterns. I will explain to students that Mayans had discovered a number system to keep track of days for farming, human growth, and religious purposes. From my seminars and research, I have learned to count in the Mayan base-20 system. Sanchez states the following in describing the Mayan number system: "Their number system used a series of dots and dashes to represent numerals. One dot meant 1, one dash meant 5. It was like Roman numerals. But one thing the Mayan had that others lacked was zero. It took the clever Mayans to figure out the concept of zero in mathematics. This was one of their greatest contributions to science as we know and use it today" (16). I will continue to introduce the Mayan's number system by reading to students some cultural history about the region Mayans lived in, the great pyramids the Mayans built, and their astronomic beliefs. All these events are directly related to the Mayan number system.

Students will explore Pre-Columbian math to fulfill the CLEAR objective (MATH K. 1.03) that uses numbers to describe how many total objects are in a set and describe all parts of a set (through 20) in verbal and symbolic descriptions. Students will use library books and handouts to create a Mayan value place chart using construction paper, beans, sticks, and shells. Using a handout from Appendix A -- Number Bars and Dots -- the students will be asked to look over it so they can get familiar with the Mayan numbers. Then using manipulatives of sticks, beans, and oyster shells, I will give students an understanding of how the Mayans learned to count in a base-20 system and what they used to represent hands-on Mayan numbers.

Students will work in groups to create a value placemat with sticks, beans, and oyster shells. Mayan numbers used a dot, representing one, and a bar, representing five. Traders used cacao beans and sticks to show dots and bars, with a shell meaning zero (Crosher 37). I will recreate these objects and teach students by modeling the Mayan number system for students on the overhead using the same materials Mayans used -- beans, sticks, and shells -- to help students understand the meaning of the Mayan's numeral system. Students will be given the same materials to work with so they can achieve these goals by using their number mats, beans, sticks, and shells. I will show students the examples from a book on how to work out Mayan numbers for more classroom support. I will model Mayan numbers on the chalkboard to check student prior knowledge and see if students will be able to follow the Mayan numeric patterns.

The first two weeks I will keep it simple and show students how to count to 10 or 15, depending on how students are reacting and picking up the new number system. The students should be able to understand how to work and able to see the simple patterns in the Mayan's number system before l go on to the number 20 on the third week. Here is where the brilliant Mayan place value system will come into play. I will explain that a single dot placed above the other Mayan numbers represents the number 20. I will also explain to students that the Mayans had a place value system just like the American version, only the Mayans read from the bottom up and from right to left. I will demonstrate this theory by using the overhead with the number place value system graph on it and using the same materials or manipulative from the days before. Students will count aloud with me so that they understand the visual showing the Mayan numbers. For the rest of the week, students will be working on Mayan numbers up to 50.

I will use flashcards with pictures of Mayan symbols and the numbers on the back for further reinforcement of student learning of Mayan numbers. Students will learn how to identify Mayan symbols quicker by using the flashcards. I will show them the cards as a whole group; then students will work in small groups with flashcards to write out Mayan numbers.

Once students are able to identify Mayan numbers, I will work with my students on the overhead and on their handouts. How to Add (explanation) shown in Appendix B. Using their picture graphs for a reference along with teacher assistance, students will be able to read small portions of a Mayan *Stela* or scribes on the overhead with handouts for further practices. Students will draw out numbers 1 through 20 for practice everyday. Students will learn when Mayans used their numbers the most and how they kept record of the days of the calendar. This takes us to the next subject area, Mayan science.

Mayan Calendar

One major idea behind the Mayan calendar is to keep track of days using their numerical system. According to Martin and Grube, "At the heart of the Mesoamerican conception of time lay a 260-day calendar of 20 named days and 13 numbers, now known in the Maya area as the Tzolk'in. This ritual count was usually intermeshed with another based on the solar year, a 365-day 'vague year' called the Haab" (12).

I would incorporate and link the Pre-Columbian math to science by teaching the children about the seasons. In my research, I have discovered that one of the reasons that the Mayans created a calendar or numbers was to keep track of seasonal changes for cropping and rituals. There are so many possibilities in studying and recreating a Mayan calendar. From books and handouts, students will be able to create their own calendar. Science has many definitions, but *The American Heritage Dictionary* states the following definitions: (a) The observation, identification, description, experimental investigation, and theoretical explanation of phenomena. (b) Such activities restricted to a class of natural phenomena. (c) Such activities applied to an object of inquiry or study. One of the main calendar tools I will be using is the pattern on Appendix E Calendar Wheel -- Stencil Forms; it will be printed on construction paper for sturdiness and better grip for the children.

Mayan Arts

In my last lesson, I will incorporate an art project with the students' Mayan math skills they have learned. This lesson will be one of the main artistic products the students will develop within the year. It will also be a personalized Mayan bowl. Students will create a bowl with Mayan designs and numbers. I will be asking students to write their age on the bowl in Mayan numbers along with the year. Students will study photos of original Mayan bowls to help them envision their creations. Students will be asked to draw and write out the information on paper before they are able to start on the bowl. I will assist students at all times with sculpting. Students will use Quick dry clay and a Styrofoam bowl to help mold the bowl to a nice shape. Students will have the choice to either draw or paint, or they can use clay to create a three-dimensional effect. Using handouts, I will help students transfer images or symbols to a vase to create a more Mayan look.

Students will be asked to paint their favorite image of Mayan culture with a number next to it and explore the meaning of their choice of drawing. For example, most Mayan artworks display kings, queens, and animal prints. My students and I will do some research on their selections. I will request a brief explanation on the artwork and the number.

The higher-level students will be challenged with activities that will expose them to actual Mayan Stela and hieroglyphic handouts to explore and discover Mayan numbers. Students working on these activities will be reminded that when they are at this workstation, they should pretend to be archeologists in the Mayan pyramids studying real Mayan Stelas and hieroglyphics. This work station will be used at times when advanced students are finished with whole or small group assignments. When these students are finished finding all Mayan numbers in their handouts they are to compare and review with other students in an open discussion of their

discoveries. Students will be asked to write out three sentences on their discovery of Mayan numbers and whether their numbers were from a Stelas or a hieroglyphic.

Another activity that students who work quickly can get started on is to get into a small group to do a small script or play of their choice. I will make some suggestions in that they could act it out in costumes or they could create a puppet show that they could make during art time. Students will reenact a trading situation in the market, for example, if a Mayan wanted to buy some food and supplies. What supplies would they need and how much would they trade things for? Using the Mayan number system students are to write out price tags for food and supplies. This assignment will help students better understand how the Mayans used their number system in trading or buying items.

All activities will be assessed by a rubric system that I will create by dividing the Pre-Columbian math in four sections. I will explain to all students that in order to receive a crown symbol in the sections, they will have to finish completely and correctly all the assignments for that section. This rubric system will be a good visual to let the students see where they are in their own study of the Pre-Columbian math. The rubric system will also be a great motivational system for the students in completing assignments.

My Pre-Columbian lessons will be simple and to the point for students' level of learning and styles. I will challenge my students enough to bring in their higher level thinking skills. In teaching Pre-Columbian math to my students, I will give them a chance to think outside the box. I will help them expand their minds by using their prior knowledge in counting objects from a single point of view of counting to grouping the objects into fives, so students will not get confused. I have discovered that some of my students are making simple mistakes, like leaving out a dot or stick when counting, or getting confused because there are too many symbols put together in the single symbol counting. In teaching my students how to use the Mayan counting system, I can help my students with their counting, regrouping, and even their multiplication skills. Students will do this by regrouping the dot symbols in fives, so they will not get confused with all the little dots or sticks that students have previously been taught to count by applying some Mayan Math Methods. The key to learning Pre-Columbian math is simplify, simplify, simplify. The most basic and natural way to count was created by the Mayan civilization. With all the educational knowledge and reliable resources available to me, I am capable of teaching our schoolchildren about Pre-Columbian math. I will help them become more interested in knowledge. This educational knowledge can help all students with different ways in ideas, discoveries, and new answers.

LESSON PLANS

(This unit will take a nine weeks cycle. Each lesson is 45 minutes in length.)

Lesson One: Mayan History and Its Context

Objectives

Students will learn about Mayan locations using Appendix D -- Location Map of Mesoamerica. a Pre-Columbian pyramid, a historical symbol. The huge city of Teotihuacan, high in the Valley of Mexico, exerted a powerful influence over the Classic Maya. Among its many cultural exports, perhaps the best known is the architectural style called *talud-tablero* (Martin and Grube 9). Students will create their own pyramids. According to the Social Studies TEKS section Knowledge and Skills, it is important that students be educated with knowledge of the subject matter. I will accomplish this by reading information from the background resources including documentary videos and online activities.

After getting my students familiar and comfortable with the Mayan topic, I will have students work on their own pyramids that appear on Appendix H Pyramid -- Stencil forms and Appendix F -- Day signs (list of Maya days and signs/pictures). From these two handouts students will recreate their own Mayan pyramids. Students will color and cut out the signs or illustrations to paste and decorate their own Mayan pyramids. When finished, all pyramids will be displayed through out the classroom; this will let my students see how beautiful and wonderful their artwork is. I will assist and give time extensions to students that are having trouble putting the pyramid project together.

113.2. - Social Studies, Kindergarten.

(b) - Knowledge and skills.

(15) - Social studies skills. The student applies critical-thinking skills to organize and use information acquired from a variety of sources including electronic technology. The student is expected to:

(B) - obtain information about a topic using a variety of visual sources such as pictures, symbols, television, maps, computer images, print material, and artifacts.

113.3. - Social Studies, Grade 1.

(b) - Knowledge and skills.

(17) - Social studies skills. The student applies critical-thinking skills to organize and use information acquired from a variety of sources including electronic technology. The student is expected to:

(B) - obtain information about a topic using a variety of visual sources such as pictures, graphics, television, maps, computer images, literature, and artifacts.

Materials Needed

Students name tags for bulletin board. Computer access for students, see Bibliography for Internet sites. Handout Pyramid -- Stencil forms --Appendix H , Handout Day signs (list of Maya days and signs/pictures) -- Appendix F, colors or makers, scissor.

Activities

- Students will participate in Mayan Pyramid Staircase bulletin board and students names.
- Provide students with copies of different Mayan Pyramid set-ups. Read aloud about the Mayan pyramid and civilizations.
- Students will be put in groups of four, for Mayan kids on-line activities. Students will identify places, symbols, and calendar with on-line glossary.
- Watch documentaries on the Internet. See the bibliography for Internet sources for these documentaries.
- Finally, students will create personal Mayan pyramids.

Assessment

Students will find important Mayan locations on map, identifying Mayan pyramids, and students' clip art printouts from the Mayan Kids website.

Lesson 2: Learning To Count in Another Basic System

Objectives

Students will use Mayan numbers to compare to today's modern numbers to learn how to read Mayan numbers (1-20). Students will use manipulatives, pictures, and drawings to create a picture graphs. Students will relate Mayan numbers to addition problems. Students will also work in centers or work stations for student and teacher support.

According to the Mathematics TEKS, it is important that students be educated with knowledge of the subject matter. I will accomplish this by reading information from resource full books from the school library students are expected to:

111.12. - Mathematics, Kindergarten

(b) - Knowledge and skills.

(K.1) - Number, operation, and quantitative reasoning. The student uses numbers to name quantities.

(A) - Use one-to-one correspondence and language such as more than, same number as, or two less than to describe relative sizes of sets of concrete objects;

(B) - use sets of concrete objects to represent quantities given in verbal or written form (through 20); and

(C) - use numbers to describe how many objects are in a set (through 20) using verbal and symbolic descriptions.

(b) - Knowledge and skills.

(1.1) - Number, operation, and quantitative reasoning**.** The student uses whole numbers to describe and compare quantities.

(A) - Compare and order whole numbers up to 99 (less than, greater than, or equal to) using sets of concrete objects and pictorial models;

(B) - Create sets of tens and ones using concrete objects to describe, compare, and order whole numbers;

(D) - Read and write numbers to 99 to describe sets of concrete objects.

Materials

1. For learning how to count in Mayan are as followed: Number mats, beans, sticks, shells, Number Bars and Dots handout and Vigesimal Place Value handouts in the Appendix section -- Appendices A, B, and C.
2. Review center/station: flashcards, paper, and pencil.

Activities: Mayan counting whole group, math centers or stations, and chart graphing.

I will create Mayan numbers on magnets so that students can practice with a different visual and manipulative. Students will be able to play with the magnets and write out the numbers with a dry erase marker. Students will use their handouts to learn the Mayan numbers for reinforcement. I will have two centers or workstations where students would be working independently. I will be monitoring the classroom and groups for further assistance.

Lesson 3: Mayan Science Calendar

Objectives

Students will learn about seasonal changes using calendars, relate the modern calendar to the Mayan calendar, and explore reasons for Mayan civilization to use the calendar. According to TEKS students are expected to:

112.2. Science, Kindergarten.

(a) - Introduction.

(1) - In Kindergarten, science introduces the use of simple classroom and field investigations to help students develop the skills of asking questions, gathering information, communicating findings, and making informed decisions. Using their own senses and common tools such as a hand lens, students make observations and collect information. Students also use computers and information technology tools to support their investigations.

(7) - Science concepts. The student knows that many types of change occur.

(C) - Observe and record weather changes from day to day and over seasons; and

(D) - Observe and record stages in the life cycle of organisms in their natural environment.

112.3. Science, Grade 1.

(a) - Introduction

(3) - Science is a way of learning about the natural world. Students should know how science has built a vast body of changing and increasing knowledge described by physical, mathematical, and conceptual models, and also should know that science may not answer all questions.

(4) - A system is a collection of cycles, structures, and processes that interact. Students should understand the whole in terms of its components and how these components relate to each other and to the whole. All systems have basic properties that can be described in terms of space, time, energy, and matter. Change and constancy occur in systems and can be observed and measured as patterns. These patterns help to predict what will happen next and can change over time.

Materials Needed: Mayan handout on construction, Mayan symbols calendar handouts, scissor, pencil, colors/markers, 8" paper plates, and two gold spinners. Handouts are posted on the Appendices E, F, and G for student guidelines. For computer access for students, see Bibliography for Internet sites.

Activities

Students will make their own Mayan calendar and keep track of days in our lesson using Mayan numbers.

Assessment

Each student will create a Mayan Calendar.

Lesson 4: Artic Mayan Arts

Objectives

Students will express their visual abilities in their artworks and identify simple Mayan symbols. Following the TEKS below students will be able to accomplish their final project goals:

117.2. - Art, Kindergarten.

(b) - Knowledge and skills.

(3) - Historical/cultural heritage. The student demonstrates an understanding of art history and culture as records of human achievement. The student is expected to:

(A) - Identify simple subjects expressed in artworks,

(B) - Share ideas about personal artworks and the work of others, demonstrating respect for differing opinions, and

(C) - Relate art to everyday life.

117.5. - Art, Grade 1.

(b) - Knowledge and skills.

(3) - Historical/cultural heritage. The student demonstrates an understanding of art history and culture as records of human achievement. The student is expected to:

(A) - Identify simple ideas expressed in artworks through different media,

(B) - Select artworks that show families and groups, and

(C) - Identify the use of art in everyday life.

Materials Needed

Clay, Styrofoam bowl, pencil, markers, paints, and Mayan number handouts from Appendices A, C, E, and F. For computer access for students, see Bibliography for Internet sites. There are some Mayan Clip arts on this website I would like the students to print out and use to decorate their bowls.

Activities

- Students will study Mayan ceramic bowls and other ceramic vessels to reproduce their own Mayan bowl.
- Mayan Stelas and hieroglyphic center
- Mayan Market play

An extended lesson for the higher-level students, they will be challenged with activities that will expose them to actual Mayan Stela and hieroglyphic handouts to explore and discover Mayan numbers. Students working on these activities will be reminded that when they are at this workstation they should imagine themselves to be archeologists working in the Mayan pyramids studying real Mayan Stela and hieroglyphics. This work station will be used at times when advanced students are finished with whole or small group assignments. When these students are finished finding all Mayan numbers in their handouts they are to compare and review with other students in an open discussion on their discoveries. Students will be asked to write out a sentence on their discovery of Mayan numbers and whether their numbers were from a Stela or hieroglyphic.

ANNOTATED BIBLIOGRAPHY

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Web Sites

Cancun, Mexico: Chichén Itzá. Video. *The Discovery Channel.* 2007. 3 March 2007. <http://www.discoverychannel.com>.
A short discovery channel video, *Mexico: Chichén Itzá.*

"Cities of Pyramids and Enchanted Dwarts." *Mayan.*2006. *Kids.* 15 March 2007. <http://www.mayankids.com>.
This website is children friendly and filled with great Mayan information and visuals. The website will be used thought out the four lessons.

The Mayan Cities of Guatemala. Travelistic. 2007. 10 March 2007. <http://www.travelistic.com/video/show/327>. (3/10/07)
The second video comes from website travelistic, *The Mayan Cities of Guatemala.*

Texas Education Agency. <http://www.tea.s.state.tx.us>
This is the website that were I found all my TEKS information.

Supplemental Resources

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