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1999 Volume II: Art and Identity in Mexico, from the Olmec to Modern Times

Broken Shields/Enduring Culture

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Rationale

The ancient civilizations of Mesoamerica that were brutally terminated by Cortes and his army in 1521 were so sophisticated and wondrous, both in intellect and imagination, that it is hard to know where to begin a study of them. For some it will be with the architecture, sculpture, or ceramics. For others it will be with the elaborate calendar and mythology or with the religious views that so tightly linked human beings and the natural order to the needs of the gods.

Wherever one decides to enter this world, it soon becomes clear that although the civilizations were destroyed, the cultures that informed them have endured, supporting and enriching the lives of the often racially mixed people who now live in Mexico and Central America. One routinely hears of the rich mixture of cultures in what came to be called New Spain: Spanish first, of course, and then Indian and African. But more and more people are coming to appreciate the strength, flexibility, and even subversive persistence of the supposedly weaker cultural strands, not only in Mesoamerica but in other places in the Americas.

Sometimes the survival is virtually intact, as in villages in the Chiapas Highlands of Guatemala; often it is in subtle but powerful adaptations of European ideas to the service of the Mesoamerican belief system. It is a portion of this surviving belief system that I wish my students to understand through this unit. After a discussion of the inevitable encounter in 1521 between Europeans and the New World, we will look at some ways in which the Maya, one of Mesoamerica's most important cultural groups, mapped--and still map--their universe.

The tenacity of Mesoamerican culture is everywhere in the literature. In the last chapter of his book The Maya, Michael Coe asserts:

> The six million or so Maya alive in the world today are survivors: they have endured repeated cycles of conquest that continue unabated even today. What have kept the Maya people culturally and even physically viable are their hold on the land (and that land on them), a devotion to their community and an all-pervading and meaningful belief system (202).

Similarly Richard F. Townsend writes in The Aztecs:

> Despite the general success over the past two centuries of the church and state in the creation of an enduring and coherent new society, the complete replacement of Indian life had never really been possible. In countless ways and in thousands of Indian communities, Spanish culture was adapted, transformed, and incorporated into traditional cultural frameworks in which the rhythms of life were governed by age-old aboriginal notions of time, space, and the relationship with nature (10).

Mary Miller would have us remember the horror of 1521 and what followed. She ends The Art of Mesoamerica with a grim statistic: "By the end of the sixteenth century...the ravaged indigenous population had shrunk...from twenty million on the eve of the Conquest to a mere million. Perhaps not quite the cosmic cataclysm predicted by the Aztecs, it was nevertheless one of the worst catastrophes in history" (230). But she and Karl Taube in An Illustrated Dictionary of The Gods and Symbols of Ancient Mexico and the Maya are also able to conclude that the

> eradication of native Mesoamerican customs was by no means total. Many of the more profound and lasting religious beliefs continue to the present day.....Although this volume specifically concerns Preconquest Mesoamerican religion, it should be remembered that we are describing but the ancient origins and history of a still living and vibrant culture (35).

Taube defines the dynamic further in Aztec and Maya Myths:

> Although modern Mesoamerican myths do often contain elements that are not pre-Hispanic in origin--such as Catholic saints and relatively recent historical events--these are not indications of a dying or decadent mythical traditions, but rather proof of a thriving oral legacy that continues to respond to a constantly changing world (77).

Throughout my reading, I have been struck not only by the acknowledgment of scholars such as Coe, Townsend, Miller, and Taube, but by the way popular writers have drawn upon these same perceptions. In her novel for middle school readers, The Corn Grows Ripe , Dorothy Rhoads' young hero has an official Western name, Dionisio, but the name "Tigre," by which everyone but the schoolmaster calls him, is precontact, connecting him to the jaguar, a creature that "played a prominent religious role in every Mesoamerican civilization" (Miller and Taube, 102). As a good Maya boy, Tigre understands that everything comes to his family from the bush and its gods. As part of the corn harvest feast, he and his father "offer the first cooked ears to Kunku Chac chief and to the Balams, and atole-of-new-corn to San Diego in the church" (83).

So also in Shark Beneath the Reef, Jean Craighead George's 14-year old Tomas Torres calls upon Quetzalcoatl, the great plumed serpent, "Tomas's hero and a god-hero of the ancient Aztec and Toltec Indians of Mexico." George explains,

> Although Tomas Torres went to the Catholic church, the gods of his Indian past were still very real to him and his family. He was, like most Mexicans, a mestizo, part Spanish and part Indian. And although Spanish was his native language and Spain his motherland, Tomas's memory--like that of his fellow mestizos--did not begin with the arrival of the Spanish in Mexico. It went back to the glorious Mexican past, when gods of good and evil reigned and warriors were eagles, jaguars and feathered serpents to a time when Mexico was young and ambitious (4).

In the same chapter, she lets us read his own thoughts on the matter:

> It did not seem strange to Tomas that he was calling on two histories, the history of the Mexicans before the Spanish conquest and the history after. Tomas called on the Lady of Guadalupe to help with his quest just as freely as he had called upon Quetzalcoatl. They were very much alike. Both were good (6).

A third novel, Heart of a Jaguar, leads readers not only into the mind-set of the ancient Maya but to those who are drawn to their culture. To save his village, Balam, the young hero, offers his own blood and finally autosacrifice to the gods. In the introductory note, the author Marc Talbert writes,

> I present this story of the Maya without apology and with reverence for their beliefs and practices. To make sense of the universe is not easy even today with our modern technology and our cultural sophistication. Indeed, perhaps our technology and sophistication create barriers to making sense of the seen and unseen forces and things around us. We have much to learn from the Maya about the universe, and about ourselves (3).

D. H. Lawrence's The Plumed Serpent is worth rereading in this context. For its two Indian revolutionaries, Don Ramon and Don Cipriano, and increasingly for the Irishwoman Kate Leslie, who comes to Mexico and finds that she cannot bring herself to leave, Quetzalcoatl is a living presence, a source of power and hope. "The Plumed Serpent is plainly mythical," writes William York Tindall in the Vintage introduction. "It owes this character not to the employment of Aztec myths...but to a recovery of the way of knowing that produced the myths" (xiii).

A recovery of the way of knowing seems key for understanding that, for example, the continued weaving and embroidering of cosmic designs in garments is far more than attractive decoration and the skill of the folk artist. Walter F. Morris, who has lived among the weavers and knows their language, tells us that

> the design of the universe is woven, with clarity and purpose, line by line into Maya cloth. The weaver maps the motion of the sun through the heavens and the underworld, through time and space. Through the repetition of the universe design the lordly sun is prompted to continue his journey (103).

Thus placing one's bed so that it faces East is not just a quaint superstition. It is prudent and a sign of spiritual health to start the day looking towards "blood, birth, and beginnings" (Becom and Aberg, 14), never towards the black of the West and death. One wishes to be part of "the cosmos as it awakens" (Morris, 103). And the smudging or offering of incense to the four directions by Native American priests at the start of communion reflects their acknowledgment that they and their sacrament are part of the whole natural order, a fact that can be forgotten only at the peril of priest, people, and cosmos.

By working in a number of modes with some basic assumptions about the Mesoamerican design of the cosmos and the way that design created and creates a pattern for daily life, my students will prepare themselves for understanding these cultures. They may also begin to internalize--recover the way of knowing--one of the fundamental themes of Mesoamerica, namely, that nature is sacred and that men and women are indissolubly connected to the forces that control nature and the universe.

Overview

"Broken Shields/Enduring Culture" is a two-part unit that can cover from four to six weeks, specifically the period in October and November right after the CMT. It should provide relief from that intense period of preparation and provide an appropriate curriculum for Hispanic Heritage Month. It has been designed for 5th or 6th graders but can be adjusted to younger grades as well. Note: I have created lessons based on the forty-minute periods that are common in Middle Schools. In a block schedule or in a self-contained classroom, there can be much more flexibility, combinations and extensions of lessons.

Part One

In Part One, we will be Picturing the World. Our first activity will be to go outside of the classroom, if possible, to work with compasses. Back inside, the students will label the walls of the classroom with the four directions of the compass written in as many languages as we can muster. The students are now partially prepared for a journey, but in order to be sure that they have some sense of place and space, we will next work with maps of the United States and Mesoamerica. Using our first glyph and our first pictograph, the foot that signifies "journey" and an Aztec drawing of a boat that signifies a journey over water, as well as our compasses, students will proceed to trek--or paddle--their way from Connecticut to Tenochtitlan, labeling as they go.

Once there, they will copy the way in which pre-conquest Maya and Aztec recorded important events and information by making what we would call screenfold books. In them, they will record the first part of their journey. Since these documents or codices were written on both sides, there will be space to use them a number of times during this unit and in Part Two, as well as at the end of the entire unit, to record what they consider most important.

We must then move consciously to 1519-21, that terrible time of irreversible change for first the Aztec Empire and then the Maya polities. To do so, we will study three books: The Flame of Peace, by Deborah Nourse Lattimore, Pyramid of the Sun, Pyramid of the Moon by Leonard Everett Fisher and then the extraordinary eyewitness lament of the fall of the Aztec capital, Broken Shields. Students will record their retelling of the events in their screenfolds.

We are now ready to look at that universe that was so badly shaken. In the last section of Picturing the World, therefore, we will make Maya maps. Each student will now fit together two Maya cosmological maps using nine squares, six colors, and the tree and creatures believed to stabilize the center of the world. After reflecting in writing in their screenfolds about the colors and their significance, students will look at embroidery patterns of some of the symbols sacred to the Maya. They will each choose one creature and one directional color to write about, justifying their choice from what they are coming to understand about Maya color. After gluing the creature on the color they have chosen for it, the students will turn one of their maps into a warp for paper weaving and then, as a class, fashion an immense woven and embroidered shawl out of all of them as a wall or hall hanging.

Part Two

In Part Two, we begin Living in the World. Here the students will do more independent work and the teaching of one another or reciprocal teaching that facilitates assessment. My text will continue to guide but become less scripted. As their first project, students will work with the Maya Map of Lesson Eleven in a three dimensional way. Since the universe is thought of as a field or a house, they will make both. Now teams of students will construct a small village, based on photographs from books in the classroom. They will also

explore the tasks basic to the ecology of such a village by building their own irrigation project and planting corn. Five Key Witness Teams will then begin their Expert Testimony Projects, each addressing a different question: about archeologists, the founding of Tenochtitlan, Aztec childhood, Maya math, El Dia de los Muertos, the properties and preparation of chocolate, and the nutrition of the pre-Cortes diet. Note that these questions will cover Aztec as well as Maya topics so that the unit becomes a blend of both. Finally the students will stage a fiesta in which they present their work either to families or to another class, act out an Aztec folk tale, and serve chocolate caliente Mexicano.

Finally we must go back before the time of ordinary human beings and look at two boys, the Hero Twins, who lived and survived despite immense odds, not only in our world but in Xibalba, the Underworld. What is more, they secured the universe for us by limiting the power of the evil gods of Xibalba and by returning their father, Hun Hunahpu, the maize god, to the earth. Thus they gave the gods something to make us out of--namely corn!

The exploits of these two are recorded in the much translated and studied Popol Vuh, or Council Book, the sacred book of the Quiche Maya that is regarded as the masterpiece of Native America literature. Although the themes are serious, portions of the Popol Vuh, especially Parts II and III that record the deeds of the Twins, are filled with conversation and wit and would be delightfully appropriate for students to read. We, however, will be watching a brilliant video version whose animations are taken from designs and drawings on precontact ceramics. There will be several writing assignments in conjunction with the film. The final writing project will be an overview of our unit, recorded in the screenfold books.

Materials for Classroom Use

Materials for individual lessons will be listed when required. The general requirements for setting up the classroom for this unit are:

1) A large wall map of the United States and one of Southern Mexico and Central America is essential. If your school cannot provide one, go to a copy center like Tyco's and have a small map enlarged to poster size. A similar enlargement of Karl Taube's map of Mesoamerica, reproduced here with his permission would dramatically help visual learners. A good Mesoamericn map was published in the December 1997 National Geographic Magazine. There is a 1-800 number for "School Services."

2) A sense of place and of world directions is sufficiently central to this unit to justify at least one compass for every three students. These should be fitted with a baseplate and rotating capsule, which the small elementary-school models usually do not have. I have been more than satisfied with a Suunto A-1000 Partner Compass, $9.50 from Eastern Mountain Sports. Your local Department of Environmental Protection will often have a set to lend. For New Haven, call the Kellogg Environmental Center in Derby, at (203) 734-2513. Local Boy or Girl Scout troops may also have a set to borrow.

3) A number of books listed in the Student's Bibliography are so crucial to this curriculum that I would urge teachers to obtain multiple copies for students: Broken Shields, because of the quality of the contemporary illustrations; Angela Weaves a Dream, because of the drawings and photographs of sacred designs; and issues of Calliope and Faces entitled The Ancient Maya and Guatemala respectively.

4) Similarly, a teacher will be greatly aided by owning or borrowing copies of ten of the books that are annotated in the Teacher's Bibliography: the six paperbacks by Mary Miller, Karl Taube, Michael Coe, and Richard Townsend; the paperback edition of the Popol Vuh, translated by Dennis Tedlock, which is important for Lesson Nineteen, in many ways the climax of this unit; Living Maya, Maya Color, and Painting the Conquest, which are expensive, but the photography is so outstanding that the students, as well as the teacher, should be able to pore over it.

5) Beyond this, a classroom library--or frequent access to a Media Center collection-- with as many of the books listed in the Student Bibliography as possible, will facilitate research for the Village and Expert Testimony Projects and generally stimulate and inform discussion and writing.

6) Two items must be ordered in advance: A Day of the Dead Curriculum Handbook and the Popol Vuh videocassette. El Dia de los Muertos, celebrated on November 2nd, is close enough to the timeframe of this unit and important enough in Mexican culture so that I have included it as one of the Expert Testimony Projects and as a fiesta on its own. The Mexican Museum in San Francisco has prepared an excellent guide for teachers to use with students, Ritual and El Dia de los Muertos. Write to the museum at Fort Mason Center, Building D, Laguna and Marina Boulevard, San Francisco, CA, 94123 or call (415) 441-0445. The Museum shop, "La Tienda," sells posters, postcards, and other items of interest to teachers. The Popol Vuh video may be ordered from the University of California Extension Center for Media and Independent Learning, 2000 Center Street, Suite 400, Berkeley, CA, 94704 or call (510) 642-0460. It is possible that the Yale New Haven Teachers Institute may have a copy to loan.

7) Finally there will need to be a source for art supplies--art teachers, Koenig's, and Staples, for starters--such as yarn, burlap, colored paper, paint, brushes, glue, tape, scissors, and triptych-style project display boards. There will be specific lists for the lessons that require these supplies, but be sure to gather them in advance. Do not wait until the last minute. It is also never too early to ask students to bring on old over-sized shirt from home with long sleeves so that they are protected while painting. These must be clearly marked with the students' names. Be prepared to gather some shirts yourself since some students will not be able to bring them.

Unit Objectives

"Broken Shields/Enduring Culture" aligns a variety of assignments from social studies, geography, and nutrition; language arts; fine and applied arts; science and some math to empower students to synthesize through discussion three elements: projects that they create, a variety of writing assignments, and new information about a foreign culture that is at the same time part of the heritage of anyone living on this continent. In the course of this unit, students will:

1) discuss and compare both orally and in writing a tradition that is radically different from the prevailing culture of 20th century America;

2) increase the elaboration in their writing through the new vocabulary learned (key words are underlined in the text) during a concentrated thematic project approach to new events, experiences, and ideas;

3) identify, copy, and use elements of the writing system of Mesoamericans; make and enter information in

screenfolds, the documents that predate books in Mesoamerica, following the nonlinear system that was sometimes used of "right to left on the lower register, then in the opposite direction on the upper register" (Gruzinski, 18).

4) study, through the technique of Guided Reading, seven books spanning the genre of realistic fiction, fantasy, history, first-person account, biography, folktale and myth;

5) identify characters, places, and symbols of a major epic when they first begin to study it because of prior study of those story elements;

6) undertake a research project and then by using the techniques of reciprocal teaching--asking for questions, clarification of difficult words and ideas presented, and summaries--share that information with their classmates and families;

7) plan two fiestas based on what they have learned during the unit;

8) progressively create their own environment in the classroom through extensions of their academic work;

9) create their own assessment rubrics for major projects within the unit;

10) synthesize findings from a number of disciplines to create both projects and writing samples during the course of the unit, including their own final assessment. Students might decide to use portions of these final assessments to persuade administrators that aspects of Mesoamerican culture should be a regular part of the curriculum.

Since there are art as well as writing projects in this unit, teachers may wish to give their students a chance to enter an annual state-wide competition offered by IAIS (Institute for American Indian Studies) in Washington, CT (860 868-0518) every spring. Called Connecticut Children's Views of Native America, it invites students kindergarten through high school to submit 2D or 3D works of art and students from the fourth through twelfth grades to submit poetry, essays, or short stories. Works of art in 2D must fit into a 16" x 20" frame; works of art in 3D may be any size but must be submitted for consideration by photographs; poetry and essays must not exceed 500 words and short stories must not exceed 1000. All written pieces must be typed and double-spaced. The submission date for the year 2000 will be on or around the first of May. The education director of the Institute is Mary Foster.

It is my hope that students will gain confidence in their speech and writing as a result of the multidisciplinary approach of this curriculum unit, that they will be excited about becoming experts. It is also my hope that as we move from one mode of learning to another, students will take ownership of their own learning style by identifying and seeking to extend what most enhances their own intellectual growth. Frustrations and the tendency "to shut down" are alleviated as students see the classroom as their own laboratory; some tasks are more pleasant than others, but there will be tasks to perform with success and joy.

Part One: Picturing the World

Lessons One and Two: Compass Work

Introduction

Teachers will have to gauge the timing of this lesson according to the prior knowledge and energy level of their students. Doing so, it may well turn out to be a lesson in two parts. It is best to get the students outside as soon as possible to use the compasses themselves, especially if the class is only forty minutes. On the other hand, students may want to absorb the posters and ask questions about the history as well as the workings of the compass and about the illustrative drawings you will put on the blackboard. You may wish to do the classroom introduction as a shorter piece on the day before or extend it on the day after. Or, probably better, you may decide that you will allow time for the classroom introduction to develop and then take them outside if there is time. The next day can be spent entirely outside, so that the work there with the compasses is not rushed or shortchanged.

When the students enter the room for the first day of the unit, there will be maps, posters, and reproductions of Mesoamerican works of art, both past and present, on the walls. I will tell them that we are about to go on a journey and that to do so we need to know how to use an instrument that has been used on land and sea for over 1000 years, the compass. The compass was not only a useful tool; it was the inevitable means by which Europeans reached their "New World" and the privacy of that world was breached. Once they had the means of reliable navigation, it was only a matter of time before curious and ambitious captains reached this continent.

Some alert student is going to mention Columbus, especially since very near the beginning of this unit schools will observe his three-day weekend . There are a number of historical developments of which students should be aware, not only because they are interesting but because they help students go beyond a binary approach to events that labels them either good or bad. Briefly, then, there was a new technology, driven by economic and political pressures: The compass facilitated bigger boats which permitted longer voyages for greater profit which encouraged mariners to attempt the Atlantic.

Once mariners knew that with the compass they could go over the horizon and get back again, they were motivated to build larger and more seaworthy boats, specifically the galleon that had three masts and two decks. Such a vessel could carry home more pay cargo or payload and the extra space before loading up could be filled with food for a larger crew. The galleons also carried cannon. All of this was more expensive, it is true, but with surer navigational tools, there was a better chance for a return on the investment Ironically, Columbus set off with smaller ships, coastal vessels really, that were all Spain felt she could afford for his particular exploration.

Next I will check for prior knowledge about how and why compasses work. Students should understand that the earth itself is a magnet and has a liquid metal center (molten magnetic core). This core creates/generates lines of force that at the same time/simultaneously go through the earth from top to bottom at the poles and return from bottom to top on the outside of the globe.

These lines of force are weak, but a small magnetized piece of metal will follow these force lines. The needle of the compass has been magnetized. (The needle can be ruined/demagnetized by heat or by an alternating current. Leave it on a rock in the sun all day and it and it may no longer work. It also should not be dropped.

To ruin it with an alternating. current, you need to put it near a powerful a.c. electric motor, like a generator.) Since the South Pole or red end of the magnet seeks the North Pole of the earth, we can always tell where magnetic north is. It is best to learn to use a compass outside where metal desks and chairs will not confuse it.

Lesson Two: Outdoor Compass Work

Materials

You should have at least one compass for every two students (see description in Overview above) and a playing field or park, preferably with trees or objects that will allow you to set up a compass course. Since students will be dividing up into teams, at least one team member should be equipped with a clipboard and pencil attached to it by string; heavy cardboard and a clip serves just as well.

Local Girl or Boy Scout leaders might like to help with this lesson; teaching younger students to use a compass might even fit into an Eagle Scout project. It's

worth a few phone calls. Do not forget New Haven's exceedingly able and helpful educational office for the DEP listed above under Materials for Classroom Use, item two. For additional information about how to teach with compasses, see "Activities for Map and Compass Study, Grades 4-6," E.E. Series Bulletin 2471, 11 pages, Montgomery County Public Schools, Rockville Md. or Elementary Science Study: Mapping Teacher's Guide, Delta Educational, P.O. Box MD; Nashua, NH 03061, order number: 16-416-0353.

Objectives

1) Students will demonstrate their understanding of the compass by performing the tasks outlined below.

2) Students will acquire social skills by working with a partner who may or may not understand how to use a compass.

3) Students will demonstrate their new vocabulary (words underlined) in their discussions and subsequent writing.

Procedure

Once students are outside and teamed with a partner, hand out compasses and line them up. They should then spend a few minutes keeping a steady course for ten paces when you tell them to walk North and then in the opposite direction, which is South. Keep it simple and at a comfort level at first. There will always be one student who breaks the line by going in the opposite direction. You will explain that the red part of the needle must point to the N on the compass dial. Point out the white lines on either side of the N and tell them always to "keep the red in the shed."

For West, have them turn to the left approximately 90 degrees. The N on their compass face will now seem to be aimed in the new direction, but when they rotate the dial of their compass so that the red is once more in the shed, they will find a small white line under the compass dial that is marking their new direction as somewhere near 250 degrees. They will call the position NW, if it is on the W or beyond it; SW, if it is on the other side of W. To find E, they will turn 90 degrees to the right. Here, logically, their position will be close to 90.

For each direction, suggest that they site a prominent object to help them keep their bearings so that they can walk in a fairly straight line without having to look at the compass all the time. Explain that when using a compass to find the way, it is wise to site a number of objects--pine tree with missing top, church steeple, dead tree with one outstretched branch--since as one goes up hill and down dale, objects may temporarily disappear. Again, have students test their understanding by holding a steady course while walking ten paces in a westerly direction and then in an easterly.

They should then follow a course, marked at a number of points by tape or ribbon, that you have set for them. It would be good to use the Maya colors for each direction, although I would not explain the significance of the colors at this time. Thus the course that is heading northerly would be marked in white, southerly would be yellow, easterly would be red and westerly would be black. I would suggest creating at least four courses not only so there is one for each point of the compass but so the class can move in teams rather than as a crowd, each with its own destination. The students' job is to agree as a team on the compass reading that takes them to each point and then to their final destination. These are to be written down and given to the teacher when the course is finished. One student on each team can be the scribe; the rest are scouts, with a head scout who will be the final arbitrator if there are disagreements about readings.

At the end of the entire course there should be a written, cryptic message: "You are now ready to begin your journey to an ancient civilization; you will begin, in a few days, by going...." and then draw the appropriate glyphs (see Figures 1 through 12 below) not only for the direction they have reached but the special color of this glyph for the Maya, which is the color they have just been following.

These messages should whet appetites, unify this first lesson, and bring the class back to you for translations--which if you are smart, you won't give. Impress upon the students that these messages must be saved in their class notebooks; they will be held responsible for them. When they begin their own map trip in Lesson Four, it will be their job to plan a course that starts by moving either North, South, East, or West, even though the general direction from Connecticut to Mesoamerica is southwesterly. Students who end up with East as a direction will get to figure out that they can use the boat pictograph and begin their journey by water, quickly turning south--unless there is a storm--and taking what is essentially the inland waterway.

If you have time, there is another introductory exercise in which students on a team--or you--decide upon one object out of three that are spread over at least 90 degrees. They must take readings of the chosen object from two directions. The player who is not privy to the choice must identify the correct object through her or his own readings.

For homework, each student must try to bring the words for the four directions in at least one other language. Explain that this is research that may or may not yield immediate results. What they must do is record how they have tried to learn these new words, whether they actually find a source at this time or not.

Lesson Three: Orienting the Classroom

Materials

Compasses; several packs of white, unlined 5x7 index cards; funtack or a roll of masking tape; broad black markers for each student and at least ten sets of red, green, and blue markers; a number of bottles of whiteout or a number of broad pens that write in white; sheets of construction paper for each of the directions sacred to the Maya: black, yellow, white, red, blue, and green. The colored papers that I like to use are the shiny Origami papers with their true, strong colors; if these are too expensive, fall back on construction paper

or find rolls of gift wrap. Samples of paint colors or paint chips can be used to extend the discussion on defining colors. Finally, you will need a table, at least as substantial as a student desk, for students to use to mark the center of their classroom.

Objectives

Students will apply their knowledge of the compass to label the walls of their classroom: North, South, East, and West

Students will teach one another the words for these directions in at least one other language.

Students will practice speaking and writing the name for each of these directions in Maya and will practice drawing the glyphs both for each direction and for the color the Maya believed was appropriate to it using a pen of that color.

Students will record on 5x7 cards their own associations with each of these directions and then post their reflections on the appropriate wall.

Students will establish a center for their own classroom, following the Maya convention of a fifth direction.

Procedure

The first task of the next class will be to use compasses indoors to identify the four directions in the classroom, to make a sign for each one of the 5x7 index cards and black magic marker, and to post it as high on each of the four walls as possible. Those who have brought words for these directions in other languages should work with a partner to make signs for those as well.

After making an inventory of the languages represented, discuss some additional possibilities and ask students, as homework, to try to find them, through the library or through interviewing people in their neighborhoods. Ask especially whether anyone could learn how to form the characters for these four words in an Oriental language or in Hindi. See whether someone is willing to contact the Pequot Museum in Mashantucket (860 396-6981) or IAIS (the Institute for American Indian Studies) in Washington, CT (860 868-0518) to learn the signs for North, South, East, and West in Native American languages. All of this need not be done overnight but can be part of ongoing research. There are also schools in New Haven that have a rich diversity of foreign students; it might be possible to contact the ESOL (English as a Second Language) teachers at East Rock Magnet or W. Hooker Elementary, or find students from Yale who are willing to help.

After the students' present research has been recorded and posted, it should be read out loud, first by the students who brought in the words. The students who are comfortable with the pronunciation are then responsible for the patient teaching of those who are not and should take a few minutes to begin to so one-on-one. Everyone should be given a chance to speak and teach, if they would like. Spanish pronunciations especially will vary and it is worthwhile to have everyone aware of the differences in what is sometimes thought of as one language.

The next step is to spend some time asking students to record privately on the 5x7 cards any meanings that directions have for them. They should use a separate card for each of the compass points. How do their own houses or apartments face? The room in which they sleep? When are they conscious of directions? And finally do they associate any color with any particular direction? Invite students to post any of their cards that they would like on the appropriate wall of the classroom. They may also discuss what they have discovered with

one or two partners.

Now ask whether there are questions. If no one mentions the pictures that they received on their little notes at the end of the outdoor compass class, ask them to pull them out. First the teacher speaks the Mayan word for each of the directions, writing them on the board on English letters. They are easy to pronounce and everyone should speak and then use them as needed. Explain that for the Maya each direction was associated with a particular color and that both direction words and color words had their own glyphs or symbols, sometimes looking very much like the word they represent but sometimes standing for the word in a way that would not immediately be obvious to us. Make sure that everyone connects these words for the directions and colors to the colored ribbons on their compass course.

Pass out copies of these glyphs copied from Figures 1 through 12 (Miller and Taube, 77 and 67). Students should begin practicing writing them in the correct colors with pens, backing them with colored paper, if they like. They can then plaster each wall with these efforts. White for North can be painted with a whiteout pen or drawn on white paper and then backed with a colored paper or papers that the students devise. I insist that students initial their cards. Encourage students to be creative; I would ban only bubble letters.

This is also the time to introduce the fact that for the Maya there was also a fifth direction, namely the center of the universe or that place where one is. See Figure 13 (67). In Maya Color, Becom and Aberg write that "traditional Maya see themselves living on a blue-green island surrounded by the dark blue sea." (31) The color of the earth's center, therefore, is blue or green. Both colors are represented by the same word in the Mayan language. If this seems strange, ask students to identify the one red in the classroom or the one yellow or brown. There will be healthy arguments. You might bring out paint samples or chips from a hardware store to heighten the discussion.

Tell the students that in their next lesson, they will explore the relationship between green and blue by creating a range of these colors to mark the classroom center. In time, as they study the significance of this central point, they will place other objects there as well. (These will be plants to represent trees; possibly a live turtle in a tank, if it can be well cared for; or at least pictures to represent the animals that the Maya believed were the basis of their world. You may decide--appropriately--to set your village for Part II here.) As more is added, you may want to substitute a larger table. For now, it will be well to establish it with something at least as solid as a student desk. The lesson should close with the students doing the math to decide where to place it and doing so.

For homework, students should reflect upon the Maya colors and write on five individual cards what they feel about each direction/color pairing. In preparation for their painting during the next lesson, they should bring to class samples of green or blue that they particularly like so that we can get some sense of the range of these colors. These samples may be small objects or they may decide to wear a shade of blue or green. Remind them as well to bring an old shirt to use as a smock for painting.

Lesson Four: Coloring the Center

Materials

The materials for this lesson will be some of those that will be needed for Lesson Six, Painting the Journey, and subsequent work in the Screenfolds. Now you will need only three tubes of acrylic paints, ultramarine, cadmium yellow pale, and white. Winsor and Newton's student quality Galeria is good and reasonably priced ($2.44 at Koenig's). For this lesson, I would suggest using inexpensive sponge brushes, ideally one inch and

one half-inch for each student (poly-brush, .39 and .59). These can be washed and reused. At least one, preferably two jars to hold water for rinsing brushes; peanut butter jars are good. Cans rust and plastic containers tip. Regular household sponges (not pre-soaped!) to wipe and lay brushes on, at least one styrofoam egg carton to be cut in half for each student to use as a palatte, a throw-away cafeteria breakfast tray for each student to lay out brushes, water jar, egg carton, sponge. Plenty of half-size sheets of paper, newspaper, and large shirts for smocks.

Objectives

1) Students will learn how to use acrylic paints and sponge brushes.

2) In mixing at least five different shades of blue-green from tubes of ultramarine and pale cadmium, students will demonstrate their understanding of the effects of mixing these two primary colors. They will contribute one painted sample, marked with their initials, to the table that marks the center of the classroom universe.

Procedure

After comparing the greens and blues brought in or worn by students, the teacher will explain that we will mix various shades of blue and blue-green by combining pure primary colors of blue and yellow in varying proportions. Explain that you will be squeezing three small but potent amounts of each in their egg cartons and that they are to start with either color and then gradually add more of the other color to it so that they create different hues.

They should record each hue that they like on a piece of paper, marked first with their initials on the back. Each student must produce at least five differently hued sheets, but should try to create many more. At the end of the session only, you may let them see what happens when they add a little white, and they may create additional sheets with the colors that result. Paint must be applied evenly and with only one coat so that it dries quickly and does not drip. Although it will be tempting to overlay several colors on one sheet (and you may allow students to do so for themselves when they finish the exercise), an overlay will be created at our classroom's center by the juxtaposition of each of their sheets. Someone should remember to place at least one pure ultramarine sheet there as well. By the time each has laid her or his paper down, the entire surface should be covered in a collage of the color the Maya--and now the students--call yax (yash).

Students must collect and use their supplies carefully. Student clean-up is mandatory.

As homework to prepare for Lessons Five and Six, give the following prompt which they can work on over two nights: Describe a journey that you will never forget. Be sure to include your preparations, any family or companions who traveled with you, your destination, and what it was that made the journey unforgettable. Only the thesis and, for extra credit, the graphic organizer are due the next day. When you assign the prompt, make sure that the students can define "journey." Assure them that it can be a very short journey, if they have not yet traveled long distances--a field trip, an expedition to New York, a visit to relatives they rarely see--but that it must have impressed them as an experience in one way or another.

Lesson Five: Map Work

Materials

Prepare copies of the three maps included in this unit and provide colored markers or colored pencils for decorating them. Each student will need two copies of Maps One and Two; provide at least to allow for

mistakes. If you can enlarge Map One (of Canada, the United States, and Mesoamerica), do so. Prepare, as well, the glyphs and signs that students will use to indicate the regions of Mesoamerica (Figures 14-17); each student should have multiple copies of each.

Objectives

1) Students will be able to identify the main areas of the Western Hemisphere and specifically identify ten individual countries.

2) Students will identify regions of Mesoamerica by using the four glyphs provided.

Procedure

Students will need maps on walls of classroom or in dictionaries to guide them; they will also need Map Three to help them with Mesoamerica. Working with partners they are to identify countries on Maps One and Two. Explain here how glyphs and signs will identify three regions of Mesoamerica: The marketplace sign, Figure 14, will identify Tenochtitlan (Ten-och-tee-tlahn), meaning "near the cactus," now Mexico City (Miller and Taube, 113) . Figure 15 depicts the water lily, signifying abundance (Turner, 9). Figure 16 is the glyph for cacao (Miller and Taube, 49). The seed from this plant was considered valuable enough to be used as money and, for the wealthy, as a drink; we know it, sweetened, as cocoa or hot chocolate. Both these plants flourished in the Maya Lowlands and can be said to represent them. The Maya Highlands can be marked by the glyph for mountain, Figure 17 (121). Students can place the marketplace and mountains where they see fit in the United States, Canada, and South America as well. Here and elsewhere, the figures can be reduced to a smaller size, or they can be placed on the side of the map with arrows showing where they belong.

First students will label and color their maps and add the glyphs and signs. Encourage them to practice drawing the glyphs and signs themselves; they need not do it perfectly but should try to get a feel for the designs and draw enough of each one so that someone could recognize them. Next they must take a second copy of Maps One and Two and label those ten countries they have decided to identify. They should write their names on ten small cards and then post them on those countries on the large classroom maps. In a few days, cover the classroom maps and test the students by asking them to label their maps without help. You might test them on the glyphs and signs they have been using as well.

Take some time to discuss homework and listen to the students' theses. It is important to learn how students understand the concept of journey before beginning the next lesson.

Lesson Six: Journey Work

Students should be given a compass, a second copy of Map One, enlarged if possible, a second copy of the glyphs and signs from the previous lesson, and a copy of the glyphs and signs from Figures 18-21 (125, 43, 187). Remind them of the direction that their compass work indicated they must first take and direct them to start planning their journey. They can use routes described in their essays, if they wrote about a journey out of state. But to complete their journey, they must pass through--and label--at least 12 states and one body of water. They must also decide where they wish to end up in Mesoamerica.

They must mark their route with the little glyph feet; indicate mountains, if they cross any; and note the number of nights they spend with the Aztec sign for starry night. Those who must go East first, or at any point when the route is by water, should use the boat picture. The wind god, Figure 21, to be used for storms or helpful breezes, is Quetzalcoatl (Ket-sahl-coh-atl), the feathered serpent himself, since he is not only god of

creation but also the god of wind. There are surely worse companions to have on a journey! The teacher can appoint scribes in the class to help those who have trouble with drawing. These maps should be displayed in the room; students will decide which wall is appropriate.

Lesson Seven: Screenfolding

Materials

Rolls of brown wrapping paper or three large brown grocery bags per student, dishpans for soaking, clothes line and pins, Elmer's glue, a ruler and pencil for each student, student quality acrylic gesso (Koenig's has a number of brands), sponge brushes, jars for gesso and for water, newspaper.

Background

Before the Conquest, what we would call books were in fact screenfolds, written and painted on the hide of deer or a paper-like substance made from "strips of pounded bark," often from the amate or wild-fig tree, and "painted on both sides with a fine coating of white lime gesso." Miller and Taube go on to explain:

These strips were carefully folded into equal widths, with each fold creating two pages on opposite sides of the manuscript. Once folded, intricate scenes were first carefully outlined and then frequently filled in with brilliant colors. Both sides of the manuscript were usually painted, with the pages tending to run left to right across one side, and then returning left to right across the other (65)

Procedure

Students can simulate the amate bark by treating brown wrapping paper or brown grocery story bags. If bags are used, start the project the day before because the bags must first be soaked for some twenty minutes until the glue is loosened; rinse this off well and allow overnight for them to dry on a line. The next day, ask the students to squeeze them into as tight a ball as they can. Care must be used for it is possible to tear the paper, especially if it has already been used as a bag, but the goal is to fill the bag with wrinkles. It should then be smoothed out on a table and ironed so that while the wrinkles remain, the surface is smooth.

Next, using rulers, students must measure out and mark the individual sheets with pencil so that they can fold them into screens. This must be done with care for the sheets must all end up the same size. I would suggest that the pages be 12" square. The final screen fold must have twelve sheets, six on each side, or a length of 72". If bags are used, students with have to glue two shorter strips of brown paper together to get the full length. Once the screenfolds have been measured and folded, a coat of gesso must fully cover one side and be left to dry. The other side can be painted in twenty-four hours. A little acrylic yellow ochre can be added to the gesso to give it an antique look. The two outer sheets or covers should not be painted with gesso. They can be covered with fabric to look like deerskin or painted yellow with brown spots to look like the hide of the revered jaguar.

During this lesson or at the start of the next, there should be a discussion of the rubric the class will create for guidance and assessment once painting and writing in the screenfolds begin. Before students start, they will have to plan and sketch. There can be some writing in the screenfolds--historically there was--but since there are other writing assignments, I would stress the visual elements here. I would suggest that students need to turn in a preliminary drawing for each sheet to show their care and craft, that there be at least two different glyphs on each sheet, that the students create a person, either to represent them or that will serve as their central character, that the sheets cover different topics, and that students use an authentic palette.

Lesson Eight: Painting the Journey

Materials

Painting the Conquest by Serge Gruzinski and tubes of acrylic to match the reproductions in Gruzinski. You will want plain white paper and fine-point black Sharpie pens for outlining; primary colors in acrylic, black, ochres, and several shades of red. Painting supplies from Lesson Four, but in addition to the smallest sponge brushes for filling in, each student will need at least one real brush. The best for fine work as well as the cheapest ($3.00) are number one or two synthetic since they will hold a point. This is a major investment and students must understand how necessary it is to care for them.

Procedure

This lesson will take two or even three periods. The first order of business is applying gesso to the verso side of the screeenfolds. The second is showing color plates from the codices (singular: codex) reproduced in Painting the Context. The third is creating a character, an alter ego, or a representation of the person one might have been in Mesoamerica. This character will appear on each sheet, unifying the screenfold. Students should examine the figures in the codices, and for this purpose the teacher may wish to xerox different pages to distribute. Before drawing begins, spend time first in pairs and then as a class, identifying the general characteristics of the figures in the codices: e.g., shown in profile and two dimensional, distinctive eye shape, costumes with patterns (These were elaborately woven.), feathers, jewelry, fingers and nails, sandals and toes, teeth, and prominent noses. Make sure that students notice as well that the images are outlined in black. Use the rest of this first class, for students to sketch their own version of this character.

The second class should open with a discussion of the tiny brushes and their care. Students will be told that after a period of planning and sketching on plain paper, they will begin trying out colors on those sketches. Then insist on at least a fifteen minutes block for planning the first sheet, the subject of which will be the trip to Mesoamerica, using glyphs and signs and images and the student's Mesoamerican.

Only when there is a well planned sketch should tiny amounts of color be put in the egg crates and painting begin on the sketch. When students are ready, they can begin working on the inside of the cover of their screenfold, sketching in pencil first, then using the Sharpie pen, and finally laying in the colors.

As the unit progresses, the students will do several sheets on the events in Broken Shields, moving from right to left and bottom to top. (See the fold-out sheets from Codex Borgia, pages 18-22 in Gruzinski.) They will paint in a Maya map of the world with the creatures that support that world; several village scenes; their favorite exploits of the Hero Twins; and a farewell page in which they can return to home and the twentieth century or make other choices.

Lesson Nine: Shields Aloft/Shields Cast Down

Start the class with Deborah Lattimore's The Flame of Peace, a sanitized account for children of the Alliance of Cities during the time of Itzcoatl in the early 15th century, roughly 100 years before Contact. In contrast to the next two books we will read, this book depicts major warfare that does not destroy the civilization and it stars a daring child hero. The historical facts and rituals are incorrect. For example, the new fire that young Two Flint gets from Lord Morning Star or Quetzalcoatl (Ket-sahl-coh-atl), the Feathered Serpent, is usually produced by fire priests: "They ripped out the heart of a sacrificial victim...and started a flame with a fire drill in his open chest cavity" (Miller and Taube, 87). But Two Flint's quest is a mini version of that of the Hero Twins whom we will read in Part Two and the illustrations, patterned on the codices, will be useful. Lattimore

also uses a Mesoamerican numbering system of dot, bar, and banner. As students peruse these, explain that "Mesoamerican peoples used a vigesimal, or base 20, system for counting, rather than the decimal, or base 10, system developed for Arabic numerals" (Miller and Taube, 124). Students may number the pages in the screenfolds in the same way.

Leonard Everett Fisher's Pyramid of the Sun, Pyramid of the Moon, is very different. A non-fiction account of the Conquest, it is an excellent and realistic preparation for the contemporary account in Broken Shields. I would suggest a guided reading with a picture walk-through, student predictions, and highlighting of unfamiliar words. There is a pronunciation guide at the end. After reading, I would ask the students what other things they feel they need to know about the Conquest.

Lesson Ten: Broken Shields

Having read Fisher's book, students can come to Broken Shields as knowledgeable readers and compare a version recounted by someone present at the events. The events themselves will not surprise them, although it is important to discuss the different way the story is told. The word lament is key here and students might be asked what they would lament. Once again, I would present this as a guided reading, writing down predictions, checking them, and explaining the words, particularly names and place names that are unfamiliar. There is a glossary. At the end, I would fill out a story map with the class, paying particular attention to the problem, the main events, and the outcome.

The lament is raised in the contemporary paintings as well as in the text. Be sure that students notice that these illustrations are different than those in the codices. Ask them to retell the story in three pages of their screenfolds and give them time to begin sketching. Remind them that their planning must include a different layout than what we are used to. The story will not move from left to right and top to bottom, as we read, but from right to left and bottom to top. The next class should be spent drawing and painting. Suggest that they place their alter ego in their account.

Lesson Eleven: Maya Maps

Materials

For each student: A paper 11"or 12" square with a clearly marked inner frame of 9" square. An envelope containing nine bright (origami paper, if possible) squares 3" x 3": one red, one white, one yellow, one black, one green, four blue. A second envelope will contain, in a contrasting shade of green, a circle to represent a tree and one Figure from the group 22-27 below. A third envelope will contain all of figures 28-34. Glue sticks. You will also have placed a green tree-like plant, a turtle, a toad, a crocodile on the table in the center of your classroom.

Procedure

Silently pass out the large framing square and the first envelope. From their compass work and color work, students should have a pretty good idea of the significance of these squares. Let them arrange them for a few minutes. Your new piece of information for them is that for the Maya, East is at the top of the map. Someone will figure out that the big framing shape is really a diamond and then it will not be hard to lay out the small squares, as long as they remember that the center is "a blue-green island surrounded by the dark blue sea" (Becom and Aberg, 31). Glue them down.

Now hand out the second envelope. Let them compare the different figures and connect them to those on the

central table. And don't let them forget their green circles. Begin to tell them about Maya ideas about the creation of the world: it could have been formed on the huge bumpy back of a caiman or crocodile. Ask them what they see in Figures 22 and they will see the tree, "the great ceiba, which has a green spiny trunk reminiscent of the caiman" (Miller and Taube, 49). This is a wonderful image, combining as it does a powerful earth-bearer and the world tree, the ceiba or yaxche (note: yax=blue-green plus tree). We call it the silky-fiber Kapok. This world tree reaches up to the heavens with its branches and pushes its roots into the underworld; it holds our world together. The Late Classic Maya flood caiman (Taube, 73) and the Aztec 1 Caiman (13) both speak of the beginning of things. Thus caiman and green circle can go right in the center of things.

The third great being that holds our world on its back is the turtle, shown in both Figure 25 and 26, with the plant that is seen as so life-sustaining that it is considered sacred, corn. In both figures, the maize god is bursting out of the turtle or earth, but in 25 (66) he emerges amid the power of the rain gods that allow him to grow, while in 26, a lowland Maya version (Tedlock, 140), his sprouting is the triumph of the sons who are on either side of him, the Hero Twins. Finally, in Figure 27 (114), we have toad or mundo, the creature who is essentially of the earth, earthy. Have some extra copies in case students would like a particular creature for their center. Glue them down.

Finally, pass out the third envelope. Students will find seven designs for weaving that are traditional but that I traced from Angela Weaves a Dream. Students ought to be able to guess Figure 28, the Universe, and perhaps 34, Serpent. Figure 29 shows the Ancestors, 30 is the Flowering Corn, 31 is Butterfly, 32 shows Toad twice, and 33 gives us three Scorpions. Ask the students to think about these creatures, especially in the light of what we have learned about the world. Ask them to practice drawing them since they will be part of the next sheet of their screenfolds.

For homework, they are to chose one of the embroidery figures to write a story about and they are to decide on what color to place it on their own map.

Lesson Twelve: Weaving the World

Materials

Angela Weaves a Dream: the Story of a Young Maya Artist with text by Michele Sola and photographs by Jeffrey Jay Foxx. This book is readily available and not very expensive. Foxx is also the photographer for Morris's extravagantly beautiful Living Maya. His photography captures Angela's world and, in the longer, more complex Living Maya, the essence of present-day Chiapas, Mexico; at this point, students should have a change carefully to examine both. To weave their own Maya world, students will also need another set of envelope number one from the previous lesson, rulers, pencils, scissors, glue sticks, masking tape.

Procedure

Start by reading Angela Weaves a Dream. Take time to show the pictures. Make sure that everyone has decided where to place the creatures on their maps. Now pass out another set of envelope number one . Have students assemble them. Then they are all finished, ask students to fold them in half. They will then take their rulers and measure off an inch on either side of the back of their square. They will also draw a line an inch from the top of the folded piece, where the two loose edges are. The remaining nine inches they will cut six times, at intervals of an inch and a half, making sure to stop at the long line they have drawn. The result is a warp. They will then choose six strips from those you have prepared and weave them into their square. If some wish to cut their weft or strips midway and add another color, they may of course do so, but should glue

down the shorter piece. All ends should be glued as well.

Take all the squares, woven and creature-filled, and assemble them on a wall in your classroom or in the hallway so that you will have a giant quilt or shawl to comfort the world.

Part Two: Living in the World

Lesson Thirteen: Village Building

Materials

Provide books with photographs that will show students what rural houses look like: Brill and Targ's Guatemala, Galvin's The Ancient Maya, Jenness and Kroeber's A Life of Their Own: An Indian Family in Latin America, McKissack's The Maya, Morris's Living Maya, and Rhoads' The Corn Grows Ripe, with its famous illustrations by Jean Charlot. Becom and Aberg's Maya Color: The Painted Villages of Mesoamerica, will give ideas not only about color and decorative elements but objects for the village. Since student responsibility is crucial here, the gathering of materials and the decisions about what may be needed to gather are part of the procedure of this lesson.

Procedure

Looking again at the quilt/shawl made in the last lesson, ask whether anyone has seen fields laid out in stripes or patterns from an airplane or even from a hill. The Maya thought of the universe as a field or as a house, and so we will make both. Teams of students will construct a village and its environment; each student will help make a house and also participate in creating a backdrop, either through painting or collage. In doing this work, they must apply what they have already learned, such as an awareness of the five directions. When the village is constructed, it will be recorded appropriately in each student's screenfold.

On this first day, to provide for the health of the village, a number of tasks are essential. Only if there is time may students spend time recording ideas that they garner from the books provided; particular care should be given to the architecture of the houses and their roofs and encourage sketching as preparation for building. But first students must be grouped into Key Witness Teams so that they can begin research for their Expert Testimony Projects which they will present for Lesson Sixteen and the Fiesta.

A key witness offers testimony or information, usually in an official hearing or court of law, that is critical to the issue being discussed; the term suggests personal involvement, someone who was there. Expert testimony, on the other hand, is usually presented by specialists. I have combined these somewhat contradictory roles to help students understand that research is a combination of information gathered and assessed (the expert testimony part) through prior knowledge and through one's own beliefs and ideas (the key witness part). These beliefs and ideas can be changed in the process. In the teams set up for this unit, therefore, each team member should be able to present, as though from her or his own direct experience, at least one piece of information that is crucial to the project or topic and explain why that is so. The full report of the team should have the force of intimate knowledge that key witnesses offer added to the informed, educated view that the students now have as experts on the subject.

Here are the questions for the teams: What is it that archeologists do? How was Tenochtitlan (Ten-och-tee-tlahn) founded and what was it like? What was it like to be an Aztec child? How would you teach someone to translate Maya math into our system? How would you explain El Dia de los Muertos to someone who had never heard of it? Just how nutritious was the pre-Cortes diet? Note that these questions cover Aztec as well as Maya topics. The books listed in the Student Bibliography will provide information. Of special help for some topics are the issues of the magazines Faces and Calliope and the handbook from The Mexican Museum listed at the beginning of this unit under Materials for Classroom Use. Some research may need to be done during school time, depending upon availability of resources. Once the students understand the key terms, key witness and expert testimony, you will need to discuss objectives and devise, with them, a rubric for assessment

Corn must also be planted so that the village will have enough to eat (and so that it will have the 5-10 days required for germination before Lesson Fifteen). It is best to use a container that is deep enough so that the plant will be able to grow for a few weeks; half-gallon milk or orange juice containers will do. An aquarium is good for at least some seeds because if they are placed close enough to the sides students can see roots and even the disintegrating kernel. A large real clay pot would be good for the teacher's crop since the roots will have more room and the excess water that is trapped by plastic will evaporate through the clay. Best source for seeds is a bunch of decorative corn, preferably with the deep red or black ears familiar to the Maya. Students from kindergarten up love to predict the number of kernels in a row, the number of rows, and the total number on each ear. Older students can discuss the number of people who could be fed if each kernel germinates and produces even three ears.

Meanwhile the two or three students whose names are drawn out of a hat (or a gourd) can chip off the kernels from several differently colored ears. The other students can get busy making holes in the bottoms of their containers, covering them with colored paper to hide the 20th century printing and advertising, marking them with name or initials, spreading out plenty of newspaper, and using small yogurt cups to fill them almost to the top with potting soil. Plastic spoons are useful for smoothing the soil on top. Every student should then plant at least six kernels of different colors, pressing them a little more than one inch into the soil and two inches apart. Set in a good light on trays and warn students not to water carefully and not to excess.

Once all the planting materials have been cleaned up, time must be spent organizing the students so that they will help to gather the supplies needed to inspire the creation of a 3-D village. To begin, ask them to visualize what they will need and make lists. Augment these lists together and see who might be able to contribute; some materials will be free. A weekend might be a good time in which to round everything up. (The teacher may want to provide some backup supplies.)

To start, it will be essential to have: sticks and straws--with scissors, glue, and painting supplies--to make houses; dirt to make mud to pack the interstices; sugar cubes for those houses made of blocks; straw, grass, crumpled-up brown paper, or shirt cardboard with brown paint to make roofs; gluing thatch onto shirt cardboard will make it easier to manage. Some of these materials can be collected by students: dirt and sticks. It may be wise to buy a bale of straw from a Blue Seal or Agway Feed and Grain store, even though you will only need one or two sections (flakes or books) of a bale; donate the rest to a gardener for mulch. Since straw is sometimes difficult to find, coarse hay will do. The price for either can be anywhere from $3 to $8; don't pay more. C. L. Adams in Woodbury (203 263-2151) is a reasonable and reliable source for farm supplies; with advance notice, they will deliver to many towns.

Then there are the appointments for the houses: pebbles to lay the three hearthstones of the fireplace and

scrunched-up paper painted red/orange to create fires; loosely-woven cloth such as cotton dish-rags to make hammocks inside; straw (or even the paper-covered wire ties that come with various sizes of plastic kitchen bags) to weave into the mats that define space and have so many uses in a Maya house that does not have kitchen counters or many tables. terra-cotta clay for the family bowls, pots, vessels, and the essential metate, the stone upon which corn is ground; fine-cracked corn or "chick corn" from a Blue Seal or Agway Feed and Grain Store would be the right size to simulate the family's all-important food supply. Wisps of wool in different colors will be needed for the village weavers; the scale will be better if students untwist the yarn to get a single ply or even a portion of a ply.

For a backdrop for the village, students can use triptych-style project display boards and, again, painting supplies so that they can create mountains, the rising and setting sun, a starry night perhaps, and the milpa or fields of corn. They may wish wire, newspaper, and flour for paste, so that they can fashion trees, either real or-- remembering their Maya maps--symbolic.

Lessons Fourteen: Terracing the Village

The corn has been planted, village construction launched and recorded in the screenfolds, and independent research has begun. In the following lessons, the students may now enact some scenes from village life, including a fiesta. The first is a sample project for the ecology of the village, namely the terracing of the hillsides that the Guatemalan government has been urging. Terracing not only slows down erosion and the exhaustion of the soil, it can alleviate the crucial problem of water conservation.

To explain the traditional way of planting, the teacher can read "The Milpa," the short second chapter of The Corn Grows Ripe by Dorothy Rhoads and with superb--and famous--illustrations by Jean Charlot. For the new way, I would suggest the erosion experiment in Jenness and Kroeber's A Life of Their Own (102-104), complete with terracing diagrams. Suggest students read Diana Childress' article in Calliope about pollution even in Guatemala since it is important that they understand that this problem is everywhere. Finally, much as the village depends upon rain, it must have sun as well. Close the lesson by reading the Lizard and the Sun, published in a bilingual edition This folktale insists on the interrelationship between the sun and all creatures. Understanding the critical importance of the sun to the world and the need for balance between dark and light, the lizard hero will not give up searching until she has found out why the sun has disappeared.

Lesson Fifteen: As the Corn Grows

By now the corn should have germinated. Ask the students to imagine what will happen next to their corn plants. Read The Tortilla Factory, available both in English and in Spanish and written so that it could be set either in Mexico or America. Now ask each student to dig up one of their corn plants and poke the decayed kernels. (A box of kleenex will be useful for wiping fingers here.) The objective in this lesson is for students to observe the entire plant and then the images that the plant and its importance have inspired. That the corn deity was involved in all aspects of the life of the plant is explained by Figures 35-37, which you will now distribute. The head in Figures 35 and 36 is that of the god of corn or maize, whom they met in Figures 25 and 26 when they were making Maya maps. In Figure 35 (Miller and Taube, 99), we can see that the corn or maize god, Hun Hunahpu, is not simply like the corn plant--springing beautifully out of the earth--but is now depicted as the part of the plant that will be harvested and either eaten or sown. Figure 36 (135) depicts the terrible moment, before humans were created, when his head was cut off and hung on a cacao tree. Figure 37 (63) shows the Central Mexican maize god with ears of corn in his headdress.

The intimate connection between Hun Hunahpu and human beings is told in People of Corn, which you will

now read. There is some acceptable poetic license in this book concerning the Grandmother of Light (see Mary's notes). More important is that when students hear the story, they do not confuse the maize god, Hun Hunahpu, seen in their figures, with Plumed Serpent and Heart of Sky who finally use corn to create human beings. Tell them, for the Maya, the corn that not only sustains life but is the stuff of human life is sufficiently sacred to need its own god. Hun Hunahpu is thus not only the god of corn but "the ancestor of people" (Miller and Taube, 69). We will meet him again in Lesson Nineteen. Remember to record this work in screenfolds.

Lesson Sixteen: Expert Testimony as Reciprocal Teaching

Testimony by the teams concerning the various questions listed above.

Lesson Seventeen: The Chocolate Caliente Fiesta

Families can be invited or another class. The whole class can be involved as the students divide into committees that 1) send out invitations, 2) go shopping for supplies, which must include a trip to a local Mexican grocery and figuring out how much to buy , 3) set up the room for the party, including any additional decorations, 4) make the chocolate (there may need to be a trial cook-off for this before the big day!), and 5) plan the entertainment, which should involve explaining the map quilt, village, and the screenfolds that are still work in progress, as well as working up The Lizard and the Sun for an acted presentation, in English and Spanish, with a dress rehearsal. For music, a wonderful CD complete with conch shells, clay whistles, log drums, and turtle shells is Sirius Coyote: in the Land of the Nahuatl, (860) 945-0056.

Recipe for Chocolate Caliente Mexicano: Mexican style sweet chocolate comes in thick "coins" or bars. One box of Ibarra Chocolate (18.6 oz.) should be enough because it is very dense. You will need cinnamon sticks, salt, and probably milk, although real Chocolate Caliente is made with water. The chocolate can be found at a Latin American Market like Chico's on Truman off Boulevard in New Haven.

Melt one coin (3.1 oz) for each cup of boiling water. Add a pinch of salt and drop in several cinnamon sticks. Stir until the chocolate melts and the mixture boils up. If you need to add sugar and milk, do so after the first boiling. Remove from heat and then let the mixture boil two more times so that the chocolate can cook; otherwise it is heavy on the stomach. The third time let it foam and remove from heat. Using a special Mexican eggbeater or molinillo, beat it until it is really foamy. The custom is to drink it through the foam. It is easier to beat up small quantities, so do not try to make too much at once. Mexicans use a special pot that it like a pitcher with a full skirt and a waist. Chico will also carry the pitcher and the molinillo.

Lesson Eighteen: Day of the Dead

The festival, on November 2, can be organized and work delegated by the appropriate Key Witness Team or by the entire class. Invite families and any bilingual classes.

Lesson Nineteen: Popul Vuh or The Council Book

The teacher's guide to the video tells us that "Around the year 1550, not long after the Spanish conquest of the Maya in what is now Guatemala, an anonymous Maya noble of the once-powerful Quiche state...committed to writing their legendary history of the creation of the world." He did so because the new Spanish lords forbade them from practicing their religion or telling the stories that had always guided them. The manuscript was lost that he bravely wrote in European script and then hid, but the surviving copies and translations have preserved the myths and the ethical and spiritual themes of the pre-conquest Maya culture with energy and a kind of matter-of-fact humor.

The video takes about 50 minutes, and you may want to show it initially in installments, asking the students to take notes on familiar images, characters, and ideas. Review the content by having students ask each other questions about it. There are at least three themes that the students will sense fairly quickly, although they may need help articulating them, and they may--legitimately--want to comment on all sorts of other things first: the fact that corn is sacred and connected to human life; that life is filled with tests, some of which you fail; but that it is also possible to be a survivor if you are resourceful enough and a trickster like each of the Hero Twins. They are pictured in Figure 38 (Miller and Taube, 175) taken from a famous cave painting in Guatemala.

Students will be able to remember other tricksters they have met in literature, and it will be important to review the tricks that the Twins pull off. Some of these can be recorded in the screenfolds. This is also a good time for the students to write about what happens when you fail (or when they themselves have failed), referring back to the story to see what happens when characters fail there. The film is rich enough to warrant watching at least one more time.

Lesson 20: Closing the Screenfold

Since Mesoamerica used 20 as a base for counting, it is fitting to end here. Students should spend their last class or two working in their screenfolds, preserving those parts of the unit that they most wish to carry away with them. They may then choose to depict their trek home, with or without baggage, or they may decide upon another destination.

Annotated Teacher Bibliography

Becom, Jeffrey and Sally Jean Aberg. Maya Color: The Painted Villages of Mesoamerica. New York: Abbeville Press, 1997. A personal journey with thought-provoking text and beautiful photographs. Coe, Michael D. The Maya. New York: Thames and Hudson, 1993. Highly readable yet sophisticated study of the Maya. Hocker, Bea Carrillo. Ritual and El Dia de los Muertos. San Francisco: The Mexican Museum, n.d. Excellent curriculum handbook for teachers. Gruzinski, Serge. Painting the Conquest: the Mexican Indians and the European Renaissance. Paris: Flammarion, 1992. Indispensable source for reproductions of art before and after the conquest. Lawrence, D. H. The Plumed Serpent. New York: Vintage International, 1992. Read for Lawrence's evocation of the mystique of Mexico. Miller, Mary Ellen. The Art of Mesoamerica from Olmec to Aztec. New York: Thames and Hudson, 1996. A clear and comprehensive guide to all the art you will want to understand for this unit. Miller, Mary and Karl Taube. An Illustrated Dictionary of the Gods and Symbols of Ancient Mexico and the Maya. My bible for this unit: filled with images, lucid explanations, and cross-references. Morris, Walter F., Jr. and Jeffrey J. Foxx. Living Maya . New York: Harry N. Abrams, 1987. Indispensable presentation in words and photographs of the life, work, and spirituality of the Highland Maya Popol Vuh. Trans. Dennis Tedlock. New York: Simon and Schuster, 1996.

Accessible and highly regarded translation, with introduction.

Talbert, Marc. Heart of a Jaguar. New York: Simon and Schuster, 1995.

Graphic and persuasive novel for young adults about autosacrifice.

Taube, Karl. Aztec and Maya Myths. Austin: University of Texas Press,

1993. Excellent guide to ideas and images. See for PopolVuh.

Townsend, Richard F. The Aztecs. New York: Thames and Hudson, 1992. Eloquent and detailed enough to be very helpful.

Annotated Student Bibliography

Ada, Alma Flor. The Lizard and the Sun. New York: Dell Picture Yearling, 1997. Folktale in a bilingual edition; used in lessons 14 and 17. Baquedana, Elizabeth. Aztec, Inca and Maya. New York: Alfred A. Knopf, 1993. Excellent graphics and background; lessons 7 and 16.

Brill, Marlene Targ and Harry R. Targ. Guatemala. Chicago: Childrens Press, 1993. Excellent, readable background; use for lessons 5, 6, 9, 10, 12, 13, and 16! Burr, Claudia, Krystyna Libura and Maria Cristina Urrutia. Broken Shields. Toronto: Groundwood Books, 1997. Central to lesson 10. Chapman, Gillian. The Aztecs. Des Plaines, Illinois: Heinemann Interactive Library, 1997. Craft ideas; use with care for lessons 7 and 8. Chrisp, Peter. Look into the Past: The Maya. New York: Thomson Learning, l994. Excellent background; good for lesson 16. Defrates, Joanna. What Do We Know About the Aztecs? New York: Peter Bedrick, 1992. Excellent background; good for lesson 16. Fisher, Leonard Everett. Pyramid of the Sun, Pyramid of the Moon. New York: Macmillan, 1988. Excellent history; central to lesson 9. Galvin, Irene. The Ancient Maya. New York: Cavendish, 1997. Excellent general reference for unit and for many lessons; a must. George, Jean Craighead. Shark Beneath the Reef. New York: Harper Trophy, 1989. Excellent Young Adult fiction; for extra credit. Gerson, Mary-Joan and Carla Golembe, illus. People of Corn: A Mayan Story. New York: Little, Brown, 1995. Central to lesson 15. Greene, Jacqueline D. The Maya. New York: A Franklin Watts First Book, 1992. Readable, full of information. Use for lesson 16. "Guatemala!" Faces, 13, no. 7 (March 1997), 1-41. Excellent for lesson 16. Hamilton, Virginia. In the Beginning: Creation Stories from Around the World. New York: Harcunt Brace Jovanovich, 1988. Lesson 19. Jenness, Aylette and Lisa W. Kroeber. A Life of Their Own: An Indian Family in Latin America. New York: Thomas Y. Crowell, 1975.

Excellent study with photos, projects; use in lessons 13 and 14.

Lattimore, Deborah Nourse. The Flame of Peace: A Tale of the Aztecs. New York: Harper Trophy, 1987. Lessons 5, 6, 7, and 19. MacDonald, Fiona. Aztecs. Hauppauge, New York: Barron's Educational Series, 1992. Excellent, readable background. Use for 13 and 16. McKissack, Patricia C. The Maya. Chicago: Childrens Press, 1985. Good source for photographs but the easy-to-read text is condescending. Paulsen, Gary and Ruth Wright Paulsen, illus. The Tortilla Factory. New York: Harcourt Brace and Co., 1995. Evocative, spare, strong, available in English and Spanish; a classic. Central to lesson 15. Rhoads, Dorothy and Jean Charlot, illus.. The Corn Grows Ripe. New York: Puffin Newbery, 1993. Young Adult fiction: text and drawings are excellent for reference. Use for lessons 13 and 14. Shalant, Phyllis. Look What We've Brought You From Mexico. New York: Julian Messner, 1992. Crafts, background; useful for lessons 16, 17. Sola, Michele and Jeffrey Jay Foxx, illus. Angela Weaves a Dream: the Story of a Young Maya Artist. New York: Hyperion, 1997. Lesson 12. Steele, Philip. The Aztec News. Cambridge: Candlewick Press, 1997.

Interesting and excellent source for lessons 13 and 16.

"The Ancient Maya," Calliope, 9, no. 6 (February, 1999),1-50. Lessons 14,16. Turner, Wilson G. Maya Designs. New York: Dover, 1980. A coloring book! Wood, Tim. The Aztecs. New York: Viking, 1992. Excellent for 9, 13. 16.

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