



MAYA.2012

L O R D S O F T I M E

EDUCATOR'S GUIDE

Penn Museum
UNIVERSITY of PENNSYLVANIA MUSEUM
of ARCHAEOLOGY and ANTHROPOLOGY

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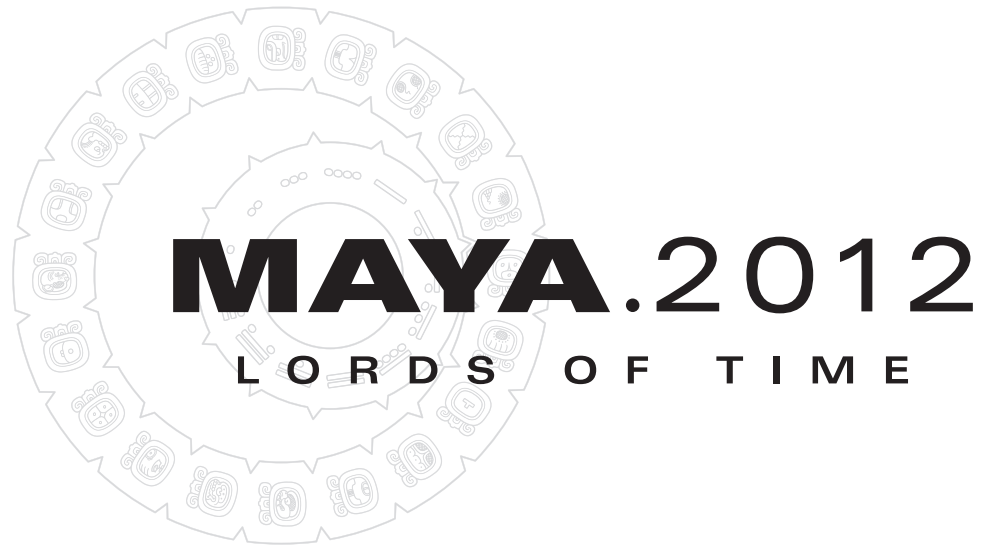
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INTRODUCTION

ABOUT THIS GUIDE

This Educators' Guide is designed to support teacher and student comprehension of and learning within **MAYA 2012: LORDS OF TIME**, a special exhibition at Penn Museum on view May 5, 2012 – January 13, 2013.

- The Exhibition Content with Corresponding Discussions and Activities section of the Guide is largely composed of exhibition text. Imbedded within the text are corresponding classroom discussions and activities. Educators may decide whether each discussion and activity would be more appropriate as a pre-visit or post-visit lesson.
- The **bold** words within the text are glossary terms defined on pages 20-21.
- The Field Journal activity at the back of this guide is designed to be copied, cut, and stapled for students to complete during a visit to **MAYA 2012: LORDS OF TIME**. Students may complete the Field Journal in pairs or small groups. Groups should split up to locate the answers in order to complete the entire packet, or teachers can select which activities students should complete. Each question within the Field Journal complements suggested discussions and activities within the Educators' Guide.



EXHIBITION OVERVIEW

DID THE MAYA BELIEVE THE WORLD WOULD END ON DECEMBER 23, 2012?

MAYA 2012: LORDS OF TIME confronts the current media frenzy with the year 2012—comparing predictions of a world-transforming apocalypse with their supposed origins in the ancient Maya civilization. The exhibition explores the Maya’s view of the universe through their intricate calendar systems and investigates our own cultural awareness of time. Using remarkable finds and unique works of art including many excavated from the site of Copan, Honduras, the story of how divine kings used their control over the calendar to assert their power is told. The exhibition traces the fall of those rulers and follows how ideas about time and the calendar changed before and after the Spanish Conquest, up to the present day.

THE EXHIBITION INCLUDES:

Over 150 remarkable objects many excavated from the ancient site of Copan, Honduras—including highlights from Penn Museum excavations.

- Large sculptural pieces from collaborating museums and our own Penn Museum collections
- A rare 19th-century Maya manuscript and facsimiles of pre-Columbian Maya folded books
- Full-size replicas of some of the most important Maya monuments
- Interactive experiences appropriate for all students
- Interviews with contemporary Maya people allowing them to tell their own stories and convey what it means to be Maya in the modern world, as well as what they really think about 2012

TIMELINE OF MAYA CIVILIZATION

With Western and Maya Dates

Image courtesy of Anne Marie Kane

1697 CE

1697 CE

K'atun 8 Ajaw

The Spanish conquer the last independent Maya city of Tayasal.

1523–1527 CE

K'atun 13 Ajaw

Pedro de Alvarado conquers the K'iche' and Kaqchikel Maya in the highlands of Guatemala.

1521 CE

K'atun 13 Ajaw

Cortés captures the Aztec capital, Tenochtitlan. **Colony of New Spain established.**

ca. 1470 CE

The Kaqchikel Maya establish a new highland kingdom with a capital at Iximche.

ca. 1441–1460 CE

K'atun 8 Ajaw

Mayapan sacked; kingdom fractures into many smaller kingdoms.

ca. 1185–1204 CE

K'atun 8 Ajaw

Founding of the city of Mayapan.

ca. 1000 CE

The island of Cozumel begins to develop into a major center of trade.

ca. 900–1520 CE

Postclassic Period. Major construction ceases at most cities in the Maya heartland.

ca. 800–900 CE

Signs of significant decline in almost all major cities in the Maya heartland.

May 4, 755 CE

9.16.4.1.0 6 Ajaw 13 Sek

Copan recovers its political strength and dedicates the final version of its famous Hieroglyphic Stairway.

August 8, 695 CE

9.13.3.8.1 1 Imix 14 Ch'en

Tikal defeats its long standing rival Calakmul spurring its decline.

April 29, 562 CE

9.6.8.4.2 7 Ik 0 Sip

Tikal is conquered by the *Kaan* (Snake) Dynasty of Dzibanche allied with Caracol, beginning a 130 year gap in sequence of Tikal's carved monuments.

July 8, 292 CE

8.12.14.8.15 13 Men 3 Sip

Earliest Long Count date carved at Tikal.

ca. 250–900 CE

Classic Period

ca. 400 BCE–100 CE

Political dominance of early Maya states such as Kaminaljuyu in the highlands and El Mirador in the lowlands.

ca. 400 BCE–250 CE

Late Preclassic Period

ca. 400 BCE

Early evidence of Maya carved hieroglyphic text on stone monument at El Portón.

ca. 800–500 BCE

Tradition of erecting standing stone monuments and altars begins at Maya sites.

ca. 1000–400 BCE

Middle Preclassic Period

ca. 2000–1000 BCE

Preclassic Period

1540–1546 CE

K'atun 11 Ajaw

Francisco de Montejo conquers the Maya of the Yucatan.

January 6, 1542 CE

K'atun 11 Ajaw

The Spanish found the city of Mérida on the existing Maya city of Tiho. This date is recorded in both Western and Maya calendars.

ca. 1500 CE

K'atun 4 Ajaw

First recorded outbreak of smallpox in the Maya area.

1519 CE

K'atun 2 Ajaw

Hernán Cortés arrives in the Yucatan Peninsula and makes contact with the Maya.

ca. 1275–1475 CE

The K'iche' Maya establish a kingdom and expand control over the highlands.

ca. 1200–1300 CE

Revival of Tayasal and other Postclassic kingdoms in the old Maya heartland.

ca. 950–1050 CE

Chichen Itza dominates northern Yucatan, showing influence and connections with many cities.

January 10, 909 CE

10.4.0.0.0 12 Ajaw 3 Wo

Last known Long Count date ever carved is recorded on a Maya monument at the site of Tonina.

869 CE

10.2.0.0.0 3 Ajaw 3 Keh

Last stela erected at Tikal.

April 28, 820 CE

9.19.10.0.0 8 Ajaw 8 Xul

End of the royal house at Copan recorded on Stela 11.

ca. 800 CE

Maya cities in the Puuc region, north of the Maya heartland, begin to expand.

April 29, 738 CE

9.15.6.14.6 6 Kimi 4 Sek

Copan king Waxaklajuun Ubaah K'awiil captured and sacrificed by his vassal, the king of Quirigua.

657 CE

9.11.4.5.14 6 Ix 2 K'ayab

Calakmul and allies conquer Tikal and force its king to flee.

February 8, 427 CE

8.19.11.0.13 5 Ben 11 Muwann

Founding of Classic dynasty at Copan by K'inich Yax K'uk' Mo'.

February 24, 37 CE

7.19.15.7.12 12 Eb 0 Keh

Earliest Long Count date at a Maya site found at El Baúl.

ca. 100 BCE

Collapse of early Maya states, and El Mirador abandoned. Founding of Classic dynasty at Tikal.

ca. 800–500 BCE

Rise of first Maya cities in both highland and lowland regions.

ca. 1600–1400 BCE

Emergence of maize agricultural communities in Maya area.

2000 BCE

EXHIBITION CONTENT WITH CORRESPONDING DISCUSSION TOPICS AND ACTIVITIES

WHAT IS THE 2012 PHENOMENON?

Online, in movies, on television, and in print, news has been spread that a world-transforming apocalypse will happen in December 2012. In recent years some have claimed that this cataclysmic event was foretold centuries ago in the calendar of the ancient Maya. Beliefs about the exact nature of this cataclysm vary. Some believe that a celestial alignment will bring a series of devastating natural disasters. Others argue that this event will bring enlightenment and a new age of peace. As this date draws closer, new predictions continue to emerge. But what did the Maya really believe?



CLASSROOM DISCUSSION:

What do you already know about the 2012 controversy? How did you hear about it?



STUDENT ACTIVITY:

Students will conduct Internet research to find some webpages, movies, and video about the 2012 phenomenon. Students will select one source, summarize the content, and differentiate facts from opinions. Discuss: On what evidence does the author predict the end of the world and how does that evidence agree/disagree with what you learned while visiting the **MAYA 2012: LORDS OF TIME** exhibition? How do these sources about the 2012 phenomenon effect our emotions?



What is BCE/CE?

BCE (Before Common Era) is used to replace BC (Before Christ), and CE (Common Era) replaces AD (Anno Domini – “In the year of our Lord”). This system provides a religiously neutral way to reference dates within our calendar.

DISCOVERING THE ANCIENT MAYA



CLASSROOM DISCUSSION:

What do you already know about the Maya? Students can work in pairs and interview each other about what they know. They will report their findings as a class.



STUDENT ACTIVITY:

Students will complete the *Maya Misconceptions* true/false quiz activity in the Field Journal, located in the back of the Educators' Guide.



Image courtesy of Loa Traxler

Ancient Maya civilization flourished long ago in what is now southern Mexico, Guatemala, Honduras, Belize, and El Salvador. Their distinctive culture gave rise to major cities by 500 BCE. For the next two thousand years, the Maya would rule this area, an independence that ended only with the Spanish Conquest of the New World.

The Maya built massive temple pyramids, palaces, and ballcourts, all arranged around broad plazas containing tall stone monuments called stelae (stee-lee). They excelled in astronomy and mathematics, using the concept of "zero" before any other civilizations of the Old World. Carvings in jade, stone, and shell, along with painted ceramic pots and murals, expressed their naturalistic artistic style. Artists often combined elaborate images with their hieroglyphic script. Recently deciphered, it is now revealed as one of the world's most complex writing system.



Maya, Mayas, or Mayan?

A common misconception is to use Mayan as an adjective, as in "Mayan calendar" or "Mayan culture." However, it is only appropriate to use Mayan when referring to the language, as in "Mayan hieroglyphs." Therefore, one would write "Maya calendar" and "Maya culture." Another common misusage is to refer to Maya people as "Mayas." The appropriate usage is "the Maya."



MAYA MISCONCEPTION:

The Maya, Aztec, and Inka (Inca) are all part of the same civilization.

TRUTH: The Maya were not related to the Inka (Inca) or Aztec, two other great civilizations of the Americas, who were later in time and developed in different regions.



CLASSROOM DISCUSSION:

Where is Mesoamerica located? In which present-day countries did the Maya live? What were the major Maya cities? What are the geographical features and climate of the Maya region?




STUDENT ACTIVITY:

Students will map the physical and human features of Maya civilization.

MAYA NUMBERS

The Maya created a simple system to write numerals. They could create any value from one to nineteen using a combination of two symbols:

A dot for one: ○ A bar for five: |

They also had several symbols to represent zero: 

Maya sculptors also developed figurative representations for numbers. The **glyphs** pictured above, which featured either the heads or full figures of gods, are often seen on monuments.



STUDENT ACTIVITIES:

Students will examine Maya bar and dot mathematics and create Maya math problems for a classmate to solve. Learn about Maya numerals here:

http://www.cerritos.edu/ladkins/a106/maya_math.pdf



Students will identify numbers found in Maya glyphs. This activity was created by the San Diego Museum of Man and can be downloaded from:

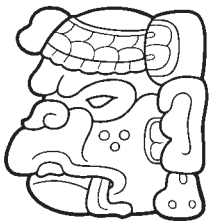
http://www.museumofman.org/sites/default/files/previsit_maya.pdf

(second page of document)

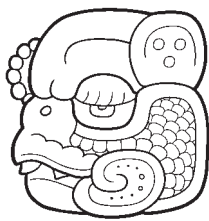


ADDITIONAL ACTIVITY: Students can learn other ancient numeration methods from Egypt, Mesopotamia, and Rome and complete associated math activities. Download Penn Museum's Ancient Numeration educational resource:

<http://www.penn.museum/documents/education/penn-museum-math.pdf>



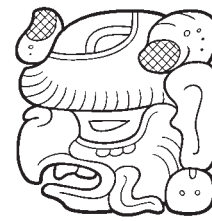
K'in
One day



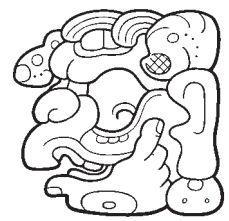
Winal
Twenty days



Tun
365 days



K'atun
7,200 days
(about 20 years)



Bak'tun
144,000 days
(about 400 years)

Maya glyphs for K'in, Winal, Tun, K'atun, and Bak'tun.
Images courtesy of Simon Martin

EXAMINING TODAY'S CALENDAR

Time-keeping systems are based on observations of the sky, especially the movements of the sun and moon. Ancient people created these systems for many purposes. Calendars helped guide cyclical activities, like seasonal planting and harvesting. People also used calendars to track and record important historical and religious events. In fact, many early calendars developed to record sacred days.

The calendar most commonly used today, called the **Gregorian Calendar** or **Common Era**, is based on one used by the Romans that was later refined by the Christian church. It has spread around the world, but coexists with calendars developed by other cultures and religions, such as Islam and Judaism.

INVESTIGATING THE MAYA CALENDAR



Aztec Calendar Stone. Image courtesy of Kenneth Garrett



Illustration of the Sacred Round Calendar



MAYA MISCONCEPTION:

The Maya recorded their calendar on a circular “calendar stone.”

TRUTH: There is no such thing as a Maya calendar stone. This was the creation of the Aztec culture. The Maya also never created a clock-like set of gears for their calendars, although it is a common and helpful illustration to describe how the system works.

In the **MAYA 2012** exhibition, visitors will have the opportunity to better understand the Maya calendar through a computer demonstrating the clock-like set of gears.

The ancient Maya created several interlocking calendar systems: the Sacred Round, Vague Year, and Long Count. To look at a single Maya date written with all three systems, the time-reckoning is much like Gregorian days, weeks, months, years, decades, and millennia.

- The **Sacred Round** is a tracking system combining 13 numbers with 20 day names, or the equivalent of 260 days. As each day advances to the next, so does an accompanying number. It takes 260 days for the days and numbers to cycle back to the original alignment of one and the month name “Imix.” The Sacred Round is still in use in some isolated Maya communities today, where it is used for divination and the timing of special ceremonies
- The **Vague Year** is based on an estimate of the solar cycle of 18 months of 20 days (360 days), followed by an unlucky five-day period at the end of the cycle (365 days total). The Vague Year gets its name because it is .2422 days short of the true solar year and therefore slowly slips against the seasons. The combination of the Sacred Round and Vague Year calendars helped identify the best times to plant crops, attack enemies, and crown new rulers. The cycle of the Sacred Round and Vague Year create the Calendar Round. The Calendar Round is 73 Sacred Round calendars which exactly matches 52 Vague Years. No combination repeats for 18,980 days or about 52 solar years
- The **Long Count** system kept track of longer spans of time projected from a single starting point. The Long Count is a cumulative count of days that ascends in magnitude from a single day to spans of about 400 years and beyond. They translate as follows:
 - One day is a K’in
 - Twenty days is a Winal
 - 365 days is a Tun
 - 7,200 days (about 20 years) is a K’atun
 - 144,000 days (about 400 years) is a Bak’tun

All units work on a **vigesimal**, or base twenty, system of counting. The Winal, however, works on a base eighteen, probably in order to approximate the 365.2422 days in a solar year.

The Long Count disappeared before the time the Spanish arrived in the Maya area around 1525 CE.

- The **Short Count** calendar is a pared-down Long Count calendar. The Short Count measured 13 K’atuns, or 256 solar years. The end of each 360 day period automatically fell on the day Ajaw, “lord”



STUDENT ACTIVITY:

Students will calculate their birthday in Maya Long Count. This activity was created by NOVA Online and can be downloaded at:

http://www.pbs.org/wgbh/nova/teachers/activities/2804_maya.html

2012 AND THE MAYA CALENDAR



The Long Count Calendar does not end in 2012

December 23, 2012 marks the end of 13 Bak'tuns, but not the end of the Long Count calendar. The system began on a specific start day many trillions of years in the past, and will continue for trillions more without any necessary end point.

The roots of the **2012 phenomenon** lie within the Long Count calendar. The current era began when the last **13-Bak'tun** (bahk toon) cycle ended on August 13, 3114 BCE (notated as 13.0.0.0.0). Quirigua Stela C records the conclusion of this last cycle, and describes the setting of three stones, which form a symbolic foundation of the new one. The current count of 13 Bak'tuns will be completed on **December 23, 2012** (also noted as 13.0.0.0.0). Believers in the 2012 phenomenon think that this date will bring either world-destruction or a new age of peace and enlightenment.

December 23, 2012 marks the end of 13 Bak'tuns, but not the end of the Long Count calendar. This system began on a specific start day many trillions of years in the past, and will continue for trillions more without a necessary end point. A Maya text from the site of Palenque, Mexico records a date that translates to 4772 CE in the Gregorian calendar, long after the year 2012.



The Ancient Maya did not predict a galactic alignment for 2012.

Many believers in the 2012 phenomenon think the Earth will pass through the central plane of the galaxy causing worldwide disaster in 2012. Invisible to the naked eye, the galactic plane would be unknown to the ancient Maya who did not have telescopes. Such alignments do happen, but have no effect on Earth.

EXPLORING THE TIME OF MAYA KINGS



MAYA MISCONCEPTION:

The Maya made human sacrifices with huge numbers of victims.

TRUTH: Though the Maya practiced human sacrifice, there is no evidence of mass killings as attributed to the Aztecs, or as depicted in the Hollywood movie *Apocalypse*.

Royal power for the ancient Maya was closely entwined with their ideas about the cosmos and its grand procession of time. Between 250 and 900 CE, kings portrayed themselves as embodiments of individual days and performed calendar rituals that expressed their close affinity to the gods. Some of the best examples of these practices are found in the ancient Maya city of **Copan**, where their sequence of kings is celebrated in dozens of carved monuments.

The **Copan dynasty** reigned for almost an entire Bak'tun—nearly 400 years—from 427 to about 820 CE. The births, royal accessions, and deaths of Copan's 16 kings were each set within the Long Count, which became a symbol of their authority.

Over the past 25 years, archaeologists working at Copan have made major discoveries about these kings. Many of the artifacts uncovered from Copan, on display here, are associated with specific historical rulers and have contributed to a greater understanding of Maya civilizations.

Altar Q – West Side detail; Image courtesy of Kenneth Garrett



UNCOVERING A LORD OF TIME

The founder of the Copan dynasty, **K'inich Yax K'uk' Mo'** (kee neech yahsh kook moh, "First Radiant Quetzal Macaw") arrived in the fertile Copan valley in 427 CE, a few years before the beginning of the 10th Bak'tun (bahk toon). The passage of one Bak'tun to the next was similar to our celebrations at the turn of a millennium. In preparation for this auspicious date, the new king laid the foundations for his capital city and sought to establish his place as a sacred "lord of time."

Over the centuries that followed, his successors built on the foundations he established...quite literally. The layers of Copan's monumental buildings are constructed on top of originals created by the founder. Today archaeologists tunneling under these structures continue to uncover evidence for how his descendants developed the city. In the 1990s, a Penn Museum team excavated the tomb of K'inich Yax K'uk' Mo' underneath one of these temples.



MAYA MISCONCEPTION:

No one can read Maya writing.

TRUTH: Scholars have learned to translate the Maya writing system. Much of what we know about Copan's history comes from the hieroglyphic writing on its monuments.



CLASSROOM DISCUSSION:

Stelae recorded important dates and people, similar to our newspapers today. Take a look at today's newspaper. Imagine that this is the only document that survives 100 years from now. What will the people of the future think about our culture? Who and what is important to record in a newspaper? Why?



STUDENT ACTIVITY:

Students will create a miniature stela soap carving. Directions for the activity are found on page 22 of the Educators' Guide.

RULERS OF THE COPAN DYNASTY

RULER 13

NAME: Waxaklajuun Ubaah K'awiil (wahshak-la-hoon u-bah ka-weel,
"Eighteen (are the) Images of K'awiil")

RULED: July 6, 695 CE to April 29, 738 CE

9.13.3.6.8 7 Lamat 1 Mol to 9.15.6.14.6 6 Kimi 4 Sek

- His reign, which lasted for 43 years, saw the height of artistic achievement in Copan.
- He was a prolific builder, sponsoring seven elaborate stelae, several temples, and a grand ballcourt.
- He began construction of the Hieroglyphic Stairway, an immense text that chronicles Copan's dynasty.
- He conducted an elaborate burial for his predecessor, including the creation of 12 censer lids.
- He was captured and beheaded by the king of the nearby Maya city of Quirigua.
- No significant construction or monuments were produced at Copan for 17 years after his death.

RULER 16

NAME: Yax Pasaj Chan Yopaat (yahsh pasha chan yopaht,
"First Dawned Sky Lightning God")

RULED: June 28, 763 CE to sometime after 810 CE

9.16.12.5.17 6 Kaban 10 Mol (beginning of reign)

- He was the last ruler of the Copan dynasty.
- He commissioned Altar Q which records all 16 rulers of the Copan dynasty.
- He ruled for over 40 years and sponsored a monument commemorating the completion of his second K'atun (40th year) in office in 802 CE.
- He was alive to witness the end of the K'atun in 810 CE (9.19.0.0.0). There are no monuments commemorating the event at Copan.



Censer Lid with Founder Portrait; Image courtesy of Instituto Hondureño de Antropología e Historia



STUDENT ACTIVITY:

Students will examine their Field Journal and select a word cloud from the *Lords of Time: Rulers of the Copan Dynasty* exhibition activity. They will create a newspaper headline and brief article describing a ruler's achievements, persuading the reader of the ruler's power and importance. They will take a look at the daily newspaper for inspiration. For an additional challenge, students will date the newspaper in Maya Long Count numerals. Alternative activity: Students will personify one of the "lords of time," using the exhibition and additional research to dress as a figure of Maya royalty.

THE MARGARITA TOMB

One of the most elaborate burials discovered at Copan contains not a Lord of the city, but perhaps its first Lady. Evidence suggests that the woman buried in the Margarita Tomb could have been the wife of the founder, whose tomb lay nearby. The royal woman, who was between 50 and 60 years old at death, was laid to rest with many beautiful objects. One of the finest painted vessels found at Copan, nicknamed “The Dazzler,” came from her tomb. Numerous offerings were added to her tomb many years after her death, suggesting she was a beloved and important person.

STUDYING THE FALL OF COPAN



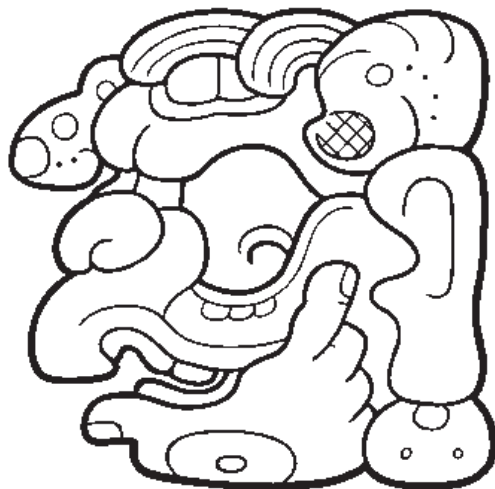
MAYA MISCONCEPTION:

Maya civilization disappeared after the “Collapse.”

TRUTH: The Maya did not vanish after the “Collapse,” but their society did change significantly.

Just as the Copan dynasty had aligned itself with the start of the 10th Bak'tun (baktun), so the close of this period would see the end of the dynasty as well. No one knows exactly why Copan fell into decline, but study of other Maya cities reveals that most of them were also experiencing severe difficulties by this time.

The 16th ruler of Copan, Yax Pasaj Chan Yopaat (yahsh pasha chan yopat) died near the end of the 10th Bak'tun in 820 CE. A new ruler tried to assume power a few years later, but the lone monument celebrating his accession was abandoned before it was even completed. The Maya continued to live in and around Copan after the fall of the sacred kings, but their lives changed dramatically. The leaders that followed did not carve monuments, so little is known about them and their history.



Maya glyph for Bak'tun. Image courtesy of Simon Martin.

REVEALING THE TIME AFTER KINGS



MAYA MISCONCEPTION:

The Maya ruled over an empire.

TRUTH: The Maya never created a single, unified kingdom or empire. Although ancient Maya people all shared many similarities, there were also regional variations in language and belief between different Maya groups.

The 9th and 10th centuries CE saw a dramatic decline in population in cities that had once been the Maya heartland. Each city faced unique problems including drought, warfare, soil exhaustion, and overpopulation. However, the Maya did not disappear. Some cities such as **Chichen Itza** (chee chin eet za) and **Uxmal** (oosh mahl) actually grew in size and power during this time. But the nature of government was changing and was soon in the hands of noblemen without divine kings. The far-reaching trade networks of this powerful elite introduced new people and ideas to Maya culture.

As the sacred lords of time disappeared, the Long Count fell out of use and was replaced by an abbreviated system called the Short Count. In this calendar, it was gods and prophecy, not kings, that played the most important roles. With no carved monuments, records are few, making it difficult for scholars to piece together the history of this period.

THE CODICES

Before the **Spanish Conquest**, thousands of Maya bark-paper books existed. Now parts of four books, known as the codices, are all that remain. Most of the codices contain predictions based on Calendar Round cycles, similar to our Farmer's Almanacs. The Dresden **Codex** features detailed charts for predicting eclipses and calculating the position of planets.

The codices' striking images show a major shift in the Maya concept of time. Gods replace kings as the center of calendric power. Some pages depict what some people choose to interpret as apocalyptic visions, showing that concepts of cosmic disaster were familiar to the Maya. However, these are symbolic ends to the solar year and not connected to 2012.



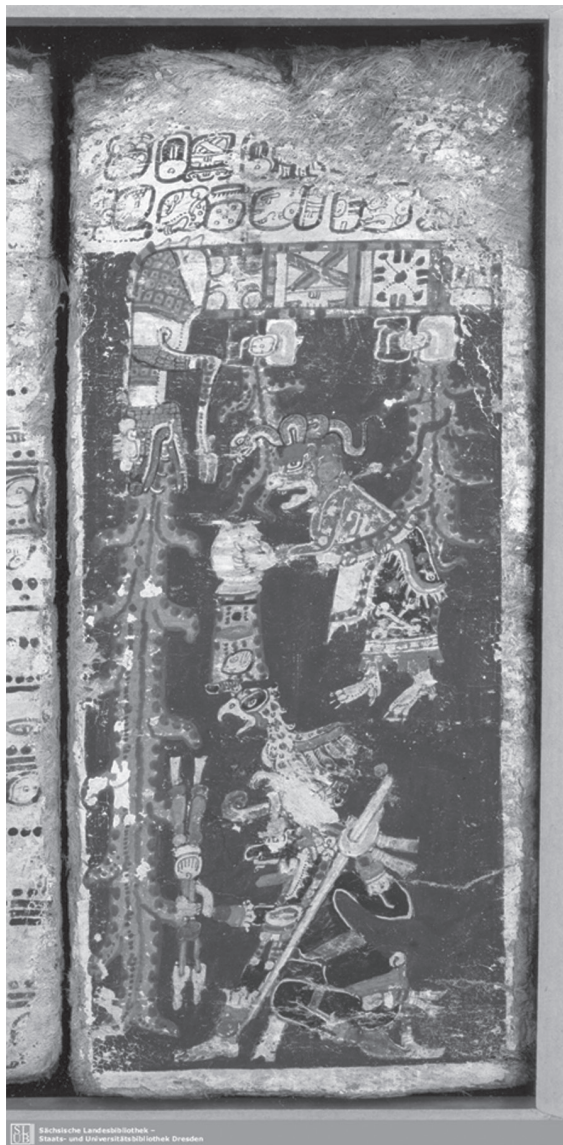
STUDENT ACTIVITY:

Students will create a replica of a codex. Directions can be found on page 24 of the Educators' Guide.

THE *POPOL VUH*

The *Popol Vuh* (poh-pul voo) tells the Maya story of the creation of the universe. According to this great epic, the gods created and destroyed three previous versions of humanity—animals, creatures of mud, and then of wood—before producing the people of today. The gods rejected each form due to the creature’s inability to worship the gods, speak, and think, among other reasons. The gods then made humankind from the perfect material, maize-dough, meaning no further annihilations are necessary. The Maya marked this occasion as the sacred date of August 13, 3114 BCE, the beginning date of the 13th Bak’tun.

Interestingly, none of the ancient inscriptions mention this sequence of creations and destructions—it’s only found in the *Popol Vuh*, which was written down only after the Spanish Conquest. This idea of repeated world destructions may have been introduced to the Maya from Aztec sources, whose story of “**five suns**” follows a similar pattern.



Dresden Codex. Image courtesy of Saxon State & University Library (SLUB)



CLASSROOM DISCUSSION:

What other creation myths did we learn about this year? Does the Maya creation myth have themes similar to those stories?

Only fragments of four codices remain from ancient Maya civilization? What happened to the other codices? Why?



STUDENT ACTIVITIES:

Students will explore a translation of the *Popol Vuh*. Assign roles and recite a dramatic reading of the Maya creation myth. Produced by Norine Polio of the Yale-New Haven Teachers' Institute:

<http://yale.edu/ynhti/curriculum/units/1999/2/99.02.09.x.html#b>

Students can see digital images of several codex illustrations and read translations at: <http://mayacodices.org/>

Working alone or in small groups, students can create their own creation myth of how the world or humanity began. Students can draw an illustration of their story or reenact the story in small groups.

THE MAYA "COLLAPSE"

Early archaeologists were baffled by the dramatic population decline in Maya cities starting in the 9th century CE. It initially appeared that the Maya simply vanished overnight. Today, archaeologists have a clearer understanding of this time in Maya history, but many questions remain.

Short intense droughts likely had disastrous consequences for food supplies. Overpopulation and its impact on health also affected many communities. All of these problems seem to have contributed to increased warfare and the unraveling of the whole Maya political order. The failure of major capitals briefly led to the expansion of some smaller centers, but eventually all the old cities were abandoned.



CLASSROOM DISCUSSION:

What other civilizations have we learned about this year declined due to drought, overpopulation, or government in-fighting?

TRACKING TIME AFTER THE CONQUEST

A devastating change came in the 16th century, when Spanish **conquistadores** invaded the Maya region. Many Maya died in battle, but many more from European diseases, especially smallpox. Maya culture also came under attack. Christian missionaries began a systematic destruction of indigenous heritage, religion, and traditions. However, the Maya continued to rebel against foreign rule and, often secretly, continued to keep time in the ancient ways.

As the tragedy of the Conquest ravaged Maya culture, these events were mirrored in their calendar. During this time, the prophecies of **Chilam Balaam** (chih lahm ba lahm), the “jaguar prophet,” circulated among the Maya of the Yucatan. These prophecies, marked with the despair of oppression, gave broad forecasts for the 20-year periods of the Short Count Calendar. Though none of these prophecies included the end of the world, their dark tone would be used as evidence for an apocalypse in 2012.



MAYA MISCONCEPTION:

Mayan language and culture are lost to the past.

TRUTH: Despite the Spanish Conquest and modern globalization, Maya people continue to retain their languages and a strong cultural identity.



CLASSROOM DISCUSSION:

What other cultures did we learn about this year came in contact with Europeans?



STUDENT ACTIVITY:

Take a look at today’s newspaper. Where do you see stories of cultures interacting with each other? What are the outcomes of the interaction? What could it mean for the future of these two cultures?

MEETING THE MAYA IN 2012



MAYA MISCONCEPTION:

The Maya today live in remote villages.

TRUTH: Despite the common depiction of rural village life, many contemporary Maya live in large cities, including several communities in the United States. There are over 7 million Maya living in Central America and Mexico today. They are a diverse group connected by their languages and ancestry.

The Maya have not disappeared. People of Maya descent, speaking a range of Mayan languages, with some using aspects of the ancient Maya Calendar, live today in many parts of Mexico and Central America.

Like other Native American groups, they seek social justice, prosperity, and political participation in the countries in which they live. Many strive to preserve the unique parts of their heritage while playing a full part in the contemporary world. In some communities, ancient calendar specialists called **Daykeepers** still practice traditional rituals, but many others live far removed from such traditions. As throughout the world, for many contemporary Maya, a cell phone is their principal tool for tracking time.



Maximon (contemporary Maya). Image courtesy of Simon Martin

REBELLION AND REFORM

In 1847, the Maya of the Yucatan Peninsula led one of the most successful indigenous revolts in world history. This rebellion, called the Caste War, almost succeeded in restoring Maya rule. Even though the Maya were forced to give up their assault, much of the area remained independent of Mexican rule for over 50 years.

A more recent revolt took place in the Chiapas region of Mexico in 1994, when the Zapatista movement emerged to demand local autonomy and economic reform. Since employing peaceful means of protest, the movement has gained international support, and has set up some self-governing communities in remote parts of the region.



CLASSROOM DISCUSSION:

Can you name other historical figures or groups of people who advocated peaceful protests? Did his/her/their message succeed?



STUDENT ACTIVITY:

Students will research other Native American groups who are working to reinvigorate the cultural traditions of their ancestors. Students will select one organization or project of interest and write a report about their research.

CONSIDERING 2012 AND BEYOND

For as long as humans have recorded their thoughts and fears, we know that they have pondered the end of the world. Almost all societies have endured times of danger or decline, and many have sought insight from ancient civilizations. The misguided connection between the ancient Maya calendar and the end of the world in 2012 is only the most recent example of this. The fear of impending world destruction often lies more with the theorists than the people they study. The Maya did not believe that we would face world destruction in 2012, but do you?



The Maya did not predict the end of the world in 2012. We did.

Scientists, religious figures, and cultural icons have been making predictions about the end of the world for thousands of years. Many predictions are superficially based on 'ancient knowledge.' Apocalyptic theories often include the return of advanced ancient races and collisions of Earth with unknown planets, none of which have occurred.



CLASSROOM DISCUSSION:

How does it feel to learn that the Maya did not predict the end of the world? Is it a let-down or a relief? How can we look to the future positively?

Why do you think people are fascinated with end of the world theories?

What would you do if you knew the date for the end of the world?

GLOSSARY

13th Bak'tun (bahk toon)—one “great cycle” of the Long Count calendar, or 1,872,000 days. The current count of 13 Bak'tuns will complete on December 23, 2012, the date rooted in the 2012 phenomenon.

2012 phenomenon—a pop cultural belief of the world ending in December 2012, which is erroneously based on the Long Count calendar of the Maya, Maya creation myth, and the prophecies of from the 16th century manuscript, *The Books of Chilam Balaam* (chih lahm ba lahm).

Aztec—a Native American culture of central Mexico whose Empire lasted roughly between 1400–1521 CE.

Apocalypse—a great disaster; a prophetic revelation.

Bak'tun (bahk toon)—a cycle of the Long Count Calendar or 144,000 days.

BCE (Before Common Era)—replaces BC (“Before Christ”) as a denotation of time to provide a religiously neutral way to reference dates within the Gregorian calendar.

Calendar Round—the Maya calendar which combines the Maya’s Vague Year (365 days) and Sacred Round (260 days) calendars.

Caste War—1847 CE revolt by the Maya of the Yucatan Peninsula.

Cataclysm—a momentous and violent event marked by overwhelming upheaval and demolition.

CE (Common Era)—replaces AD (Anno Domini, “in the year of our Lord”) as a denotation of time to provide a religiously neutral way to reference dates within the Gregorian calendar.

Chichen Itza (chee chin eet za)—Maya city that flourished as the royal kingdoms of Copan and Tikal were ending.

Chilam Balaam (chih lahm ba lahm)—Maya priest who prophesized despair and oppression. Believers in the 2012 phenomenon have erroneously used his prophecies as evidence of the end of the world.

Conquistadores—16th century Spanish invaders of Maya communities.

Codex (plural codices)—a handwritten Maya bark-paper book. Only four codices remain after the Spanish Conquest.

Copan—Maya city occupied for over 1,500 years located in western Honduras. Known for its remarkably naturalistic sculpture and the longest Maya inscription.

Copan Dynasty—sequence of 16 kings, founded in 427 CE, and lasting until about 820 BCE. Like all Maya kings, the rulers saw themselves as “lords of time,” embodiments of individual days and performing calendar rituals that expressed their close affinity to the gods.

Daykeepers—contemporary Maya calendar specialists.

December 21, 2012—for those who follow the 2012 phenomenon, several choose this date as the end current Bak'tun since the date marks the winter solstice.

December 23, 2012—for those who follow the 2012 phenomenon, this date, marks the end of the current Bak'tun of the Maya.

Dresden Codex—Maya book featuring a Venus calendar and the mythic events associated with it.

“Fifth Sun”—a period of time within the Aztec calendar considered the “final creation,” an era without any specific endpoint.

Gregorian Calendar—the Common Era calendar most commonly used today, which is based on one used by the Romans and later refined by the Christian church.

Glyphs—the individual signs in Maya hieroglyphic writing.

Hieroglyphics—a system of writing using pictures and abstract signs to represent words and sounds.

Indigenous—produced, growing, or living naturally in a particular region or environment.

Inka (Inca)—a Native American culture that stretched from present-day Ecuador to Chile. The ancient Inka lived roughly between 1438–1535 CE.

K'inich Yax K'uk' Mo' (kee neech yahsh kook moh)—Maya king and founder of Copan dynasty.

Long Count—is associated either with world-destruction or a new age of peace and enlightenment. This date is more closely aligned with the 256 year cycle and Sacred Round.

Long Count Calendar—the Maya calendar that kept track of longer spans of time projected from a single starting point; the system responsible for the 2012 phenomenon.

Maya—Mesoamerican people native to present-day southern Mexico, Belize, Guatemala, Honduras, and El Salvador. The ancient Maya lived roughly from 1500 BCE to 1524 CE.

Mayan—term used only when referring to Mayan language. “Mayan” is often mistakenly used as an adjective when used to describe other aspects of Maya culture.

Maya “Collapse”—the dramatic population decline of Maya cities beginning in the 800s CE due to intense droughts, overpopulation, warfare, and political defragmentation.

Mesoamerica—a cultural and geographic region of southern North America, extending approximately from central Mexico through Belize, Guatemala, El Salvador, Honduras, Nicaragua, and Costa Rica. This region was home to several pre-Columbian civilizations, such as the Olmecs, Aztecs, Maya, and others.

New World—the Western Hemisphere continents of North America and South America.

Old World—the Eastern Hemisphere continents of Africa, Europe, and Asia.

Popol Vuh (poh-pul voo)—the Maya epic which contains the creation myth.

Pre-Columbian—period of history in the Americas before European contact; before Columbus’ voyage.

Sacred Round—the Maya calendar consisting of 260 days, divided into thirteen numbers with 20-day names, and still in use in some Maya communities today.

Short Count—an abbreviated form of the Long Count. It steadily replaced the Long Count calendar, which fell out of use before the Spanish arrived.

Spanish Conquest—colonization and overthrow of native governments of the Americas by the Spanish.

Stelae (stee-lee)—tall stone monuments constructed by the Maya to record important events and dates; plural for stela.

Uxmal (oosh mahl)—Maya city that grew in size and power as the Copan dynasty was ending.

Vigesimal—base twenty system of counting. This system may be based on the physical counting of ten fingers and ten toes.

Vague Year—the Maya calendar consisting of 365 days.

Waxaklajuun Ubaah K’awiil (wahshak-la-hoon u-bah ka-weel)—Ruler 13 in the Copan dynasty. His reign saw the height of artistic and architectural achievement in Copan.

Yax Pasaj Chan Yopaat (yahsh pasah chan yopaht)—Ruler 16 in the Copan dynasty. He commissioned Altar Q, which records all 16 rulers of the Copan dynasty.

Yucatan Peninsula—northern geographic region of the ancient Maya world.

Zapatista Movement—1994 CE protest by the Maya in the Chiapas region of Mexico to demand local autonomy and economic reform.

STELA GLYPH CARVING ACTIVITY

Students will carve a portion of their birthday stela or another Mayan glyph into a bar of soap.

BACKGROUND INFORMATION:

Ancient Maya writing was a complex system that used about 800 different signs, or glyphs. In 1952, Russian scholar and linguist Yuri Valentinovich Knorosov suggested that the glyphs represented consonant-vowel combinations, not just words and concepts. From this, experts determined that glyphs could also represent verbs, nouns, adjectives, numbers, days, and months.

Glyphs are generally read in pairs within a grid from left to right and from top to bottom. Most glyphs describe dates and accompanying ceremonies, rulers' histories, information about the city-states, wars, and astronomical and astrological information.

SUGGESTED TIME: 35 minutes

MATERIALS:

- Maya birthday glyphs bookmark, printed from the MAYA 2012 exhibition.
Please note: Each bookmark should be enlarged so that each glyph is at least 2 inches high. It is difficult to carve the glyphs as printed.
- Pre-covered desks
- Tracing paper, one sheet per student. Pre-cut to the dimensions of the bar of soap.
- Ivory soap bar, 1 per student
- Pencils
- Tape
- Toothpicks
- Cotton swabs
- Disposable cups with red, blue, yellow, and/or green food coloring (teacher choice).
These are traditional architectural colors of the ancient Maya.
- Tissues

STELA GLYPH CARVING ACTIVITY (continued)

1. Students will place the tracing paper on top of their bookmarks and trace the outlines of the glyphs in pencil.
2. Students will select the glyphs they wish to carve by centering the tracing paper on top of the bar of soap. They will secure the tracing paper onto the soap with tape.
3. Students will use pencil to retrace the glyph lines.
4. Students will remove the tracing paper and deeply carve the glyph lines with tooth picks. They will refer to the bookmark to add details to each glyph.
5. Students will dip the swab into one dye color. Then, they will dab the swabs along the grooved lines. Should additional colors be made available, students should be sure to not mix the dyed swabs into other colors. By pre-placing several swabs into each cup of color, mixing colors will be avoided. A tissue can be used to clean up the soap, should there be excess food coloring.

VARIATION:

If your class was unable to print a birthday glyph bookmark, glyphs can be retrieved on the following website: www.famsi.org/mayawriting/dictionary/montgomery/search.html. Students can type in common words, such as "water" or "monkey," and the website will generate equivalent Mayan glyphs.

*Please note: these glyphs will also need to be enlarged. To generate birthday glyphs, a Gregorian to Long Count calendar converter can be located at:
<http://www.pauhtun.org/Calendar/tools.html>.*

This activity is adapted from *Amazing Maya Inventions You Can Build Yourself*, by Sheri Bell-Rehwoldt. Nomad Press (2006), p. 91.

CODEX REPLICA ACTIVITY

Students will recreate a Maya codex. As an extension, students will draw an interpretive illustration of the Maya creation myth in their codex.

BACKGROUND INFORMATION:

Maya scribes held a prominent place in ancient Maya society because very few people could read or write. Considered upper class, scribes wore special clothes and lived in luxury. Scribes wrote or painted in codices using quills of feathers or animal-hair brushes. Considered publicists of the ancient world, they preserved the king's power through their writing.

Codices were made from the bark of the fig tree and were folded like an accordion. Scribes painted in yellow, blue, white, and brown, colors which represented specific gods, aspects of nature, and the cosmos. After the codex was written and folded, it was sometimes covered with jaguar pelts.

SUGGESTED TIME: 40 minutes. The extension activity will take an additional 50 minutes.

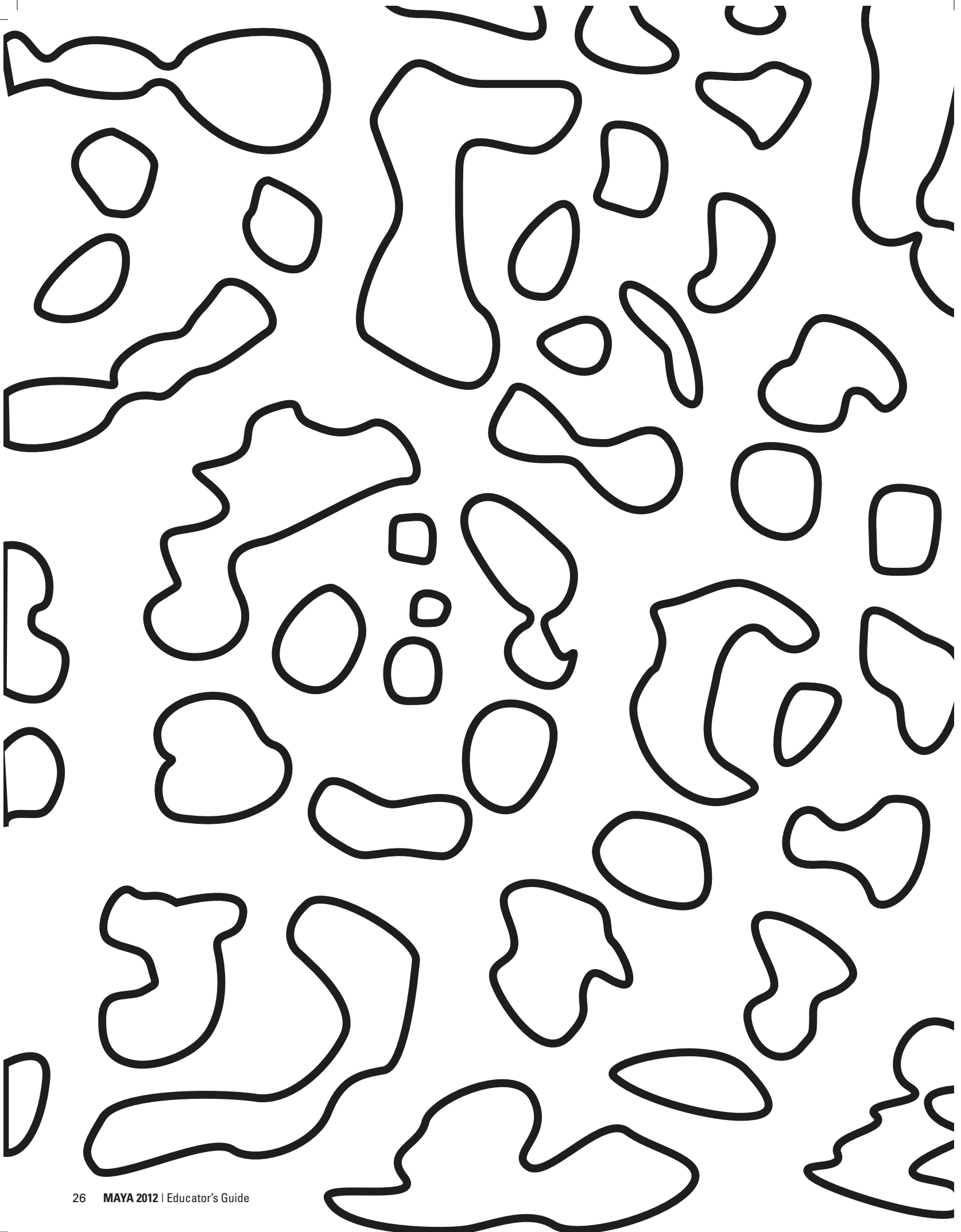
MATERIALS:

- 2 pieces of 8 1/2 x 11-inch white construction paper (per student)
- Rulers
- Pencils
- Scissors
- Clear tape
- 8 1/2-inch tall x 6 1/4-inch wide thin sheet of cardboard (as from a cereal box or bottom of a writing pad)
- Jaguar pelt pattern sample, found on page 26
- Black and brown markers
- Ribbon
- Colored pencils
- Maya creation myth script:
<http://yale.edu/ynhti/curriculum/units/1999/2/99.02.09.x.html#b>
- Photocopies of codex illustration examples at: <http://mayacodices.org/>

CODEX REPLICA ACTIVITY (continued)

1. Students will lay one sheet of paper lengthwise and measure 9 inches from the left margin of the paper. They will draw a vertical line for the measurement and cut along the line. The paper should now measure 8 1/2 by 9-inches.
2. Students will measure 3 inches from the left edge, mark the spot with a pencil, then move the ruler three inches to the right and mark that spot. The paper is now evenly divided into three 3-inch sections.
3. Students will lay the ruler vertically on the first 3-inch mark and carefully fold the paper over the left edge of the ruler. Students will then move the ruler to the 6-inch mark and fold the paper over the ruler again. Students will then refold the second crease in the opposite direction, under the sheet, so that the paper is folded like a fan or accordion.
4. Students will repeat steps 1-3 for the second piece of paper. Students will connect the two pieces of paper with the clear tape, making sure the folds alternate in an accordion before the ends are taped together. The codex book is complete.
5. Students will fold the cardboard in half, creating a tall rectangle that is the same shape as the codex. Students will refer to the jaguar pelt pattern to decorate the cover with markers in the manner of a jaguar pelt. A ribbon may be used to tie the book shut.
6. Extension: After completing the dramatic reading from the *Popol Vuh* (the activity is described on page 15), students will select one scene within the Maya creation myth and illustrate with pencils and colored pencils inside the codex. They will use illustrations from codices for visual reference.

This activity is adapted from *Amazing Maya Inventions You Can Build Yourself*, by Sheri Bell-Rehwoldt. Nomad Press (2006), p. 99.



EDUCATORS' GUIDE ACADEMIC STANDARDS

Pennsylvania

Arts and Humanities

9.1.5.A

9.1.5.B

Geography

7.1.6.B

7.2.5.A

7.3.5.A

History

8.1.5.B

8.4.5.B

New Jersey

Social Studies

6.2.8.B.4.h

Visual and Performing Arts

1.2.8.A.3; 1.3.2.D.2; 1.3.5.D.1; 1.3.5.D.2

Delaware

Geography

Standard 1: 6-8a

History

Standard 2: 6-8a; 6-8b

Visual Arts

Standard 1; Standard 4

National Standards

Geography

G.K-12.1

G.K-12.2

Visual Arts

VA.5-8.4

World History

WH.5-12.4

WH.5-12.5

WH.5-12.9

Visual Arts

VA.5-8.4

Common Core Standards

Language Arts

RL.5.9

W.5.2

SL.5.1

RESOURCES FOR MORE INFORMATION

Aveni, Anthony. *Ancient Astronomers* (Smithsonian, 1993)

Aveni, Anthony. *People and the Sky* (Thames and Hudson, 2008)

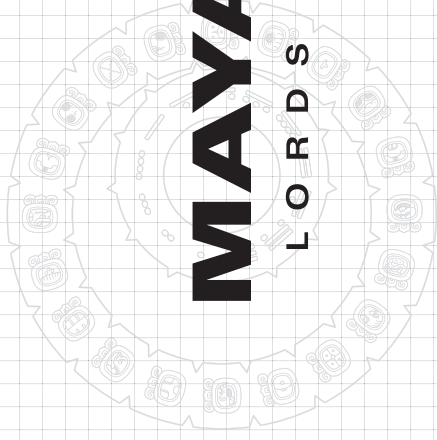
Aveni, Anthony. *Stairways to the Stars* (Wiley, 1997)

Aveni, Anthony. *The End of Time: The Maya Mystery of 2012*
(University Press of Chicago, 2009)

Expedition magazine, Volume 54, Issue 1, Special Issue on **MAYA 2012: LORDS OF TIME.**

STUDENT FIELD JOURNAL

1. Follow dotted lines and cut out Student Field Journal.
2. Staple Student Field Journal together.
3. Work in groups of two or three to explore **MAYA 2012: LORDS OF TIME**.
4. Locate the answers to the questions by using the headings in bold as a guide to find bold headings on labels and banners throughout the exhibition.



MAYA.2012

LORDS OF TIME

STUDENT FIELD JOURNAL

EXPLORER NAME(S):

DATE:

**CHECK OUT THE MASKS ON THE WALL.
CAN YOU NAME FIVE DIFFERENT ANIMALS THAT YOU SEE?**

UNCOVERING A LORD OF TIME

List four facts about the Maya king in the word cloud below.
Don't forget to answer Maya Misconceptions Questions 4 and 5!

QUESTION	CIRCLE "TRUE" OR "FALSE"	WRITE A CORRECT STATEMENT OR AN ADDITIONAL FACT:
1. The ancient Maya were related to the Aztecs.	TRUE FALSE	
2. The Maya calendar is carved in a circular stone.	TRUE FALSE	
3. The Maya created a set of interlocking gears to illustrate their calendar system.	TRUE FALSE	
4. Maya hieroglyphic writing has been deciphered.	TRUE FALSE	
5. The Maya practiced human sacrifice.	TRUE FALSE	
6. The Maya died out because of the Spanish Conquest.	TRUE FALSE	
7. The Maya established a great, unified empire.	TRUE FALSE	
8. No Mayan languages have survived to present-day.	TRUE FALSE	
9. Some Maya live in the United States.	TRUE FALSE	
10. The Maya are preparing for the end of the world because their calendar ends in the year 2012.	TRUE FALSE	

MAYA 2012 FIELD JOURNAL: IN-GALLERY ACTIVITIES

Work in groups of two or three to explore **MAYA 2012: LORDS OF TIME**.

Locate the answers to the questions by using the headings in bold as a guide to find bold headings on labels and banners throughout the exhibition.

MAYA MISCONCEPTIONS (answers found throughout the exhibition):

How much do you think you know about the Maya? Before visiting **MAYA 2012: LORDS OF TIME**, complete the following questions. When you visit, find the correct answer to each question in the exhibition.

1



Cut here

DISCOVERING THE ANCIENT MAYA

Check out the computer station in this room. Pick a Maya name for yourself and print it out!

MAYA NUMBERS

Can you find examples of the numbers three, seven, and eleven? How about the glyphs for twelve and six? Draw some examples of Maya numerals in the boxes provided. *Did you find the answer to Maya Misconceptions Question 1? Don't forget to write your answer on page 1 of your journal!*

BAR & DOT GLYPHS

3	7	11
12	6	

3

**WHAT ANIMAL WOULD YOU CHOOSE TO REPRESENT YOURSELF?
DRAW YOUR IDEAS BELOW.**

14

MEETING THE MAYA IN 2012

Check out one of the computer screens. What question did you ask a Maya? What was your answer?

Question: _____

Answer: _____

12

REBELLION AND REFORM

List the two revolts led by contemporary Maya and describe each rebellion in the space below.

Rebellion: _____

Describe: _____

Rebellion: _____

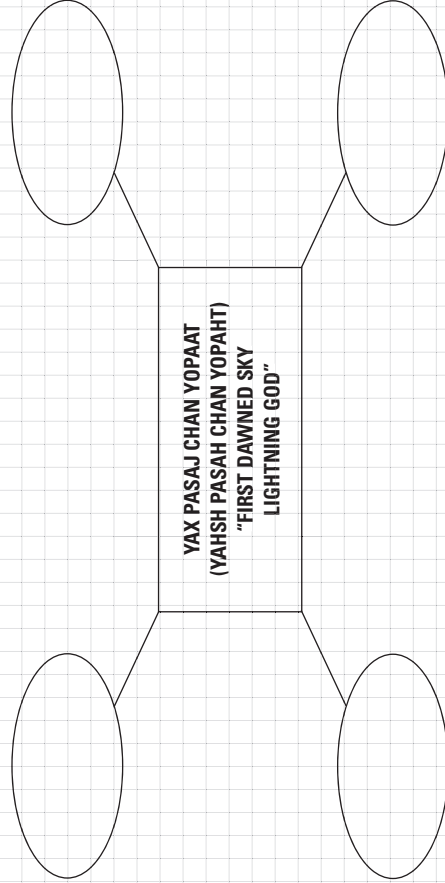
Describe: _____

Did you find the correct answer to Maya Misconceptions Question 9 yet?

INVESTIGATING THE MAYA CALENDAR

List the three systems of time tracking utilized by the ancient Maya. List an additional fact for each system. Don't forget to convert your birthdate into Maya glyphs at the computer station! *Did you find the answers to Maya Misconceptions Questions 2 and 3 yet?*

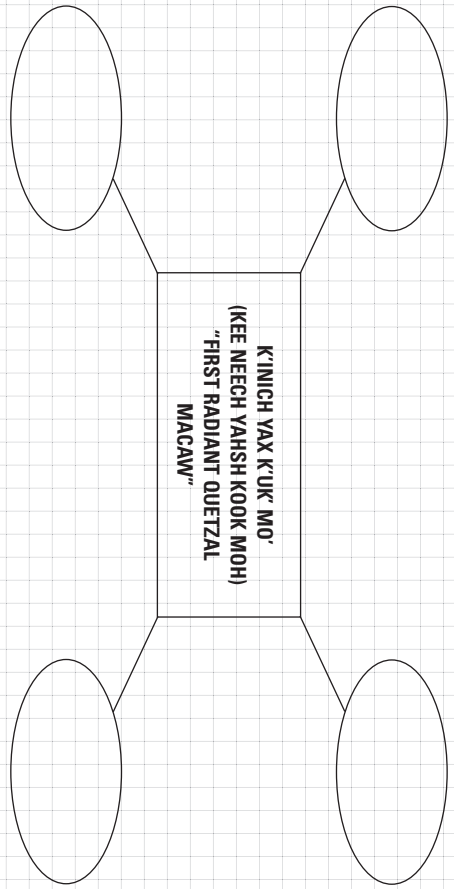
CALENDAR NAME	NUMBER OF DAYS IT TRACKS	ADDITIONAL FACT



DON'T FORGET TO CHECK OUT THE TOUCHSCREEN TABLE. FIND ONE OBJECT IN THE HUNAL TOMB. DRAW A PICTURE OF WHAT YOU DISCOVERED AFTER YOU BRUSHED AWAY THE DIRT.

UNCOVERING LORDS OF TIME

List four facts about each of the following Maya kings in the word clouds provided. *Don't forget to answer Maya Misconceptions Questions 4 and 5!*



5

THE MAYA "COLLAPSE"

LIST 2 REASONS WHY MAYA COMMUNITIES BEGAN TO DECLINE STARTING IN THE 9TH CENTURY CE:

Reason #1: _____

Reason #2: _____

THE POPOL VUH

According to the *Popol Vuh*, the people of today are made of: _____.

Did you find the answers to Maya Misconceptions Questions 6 and 7 yet?

9

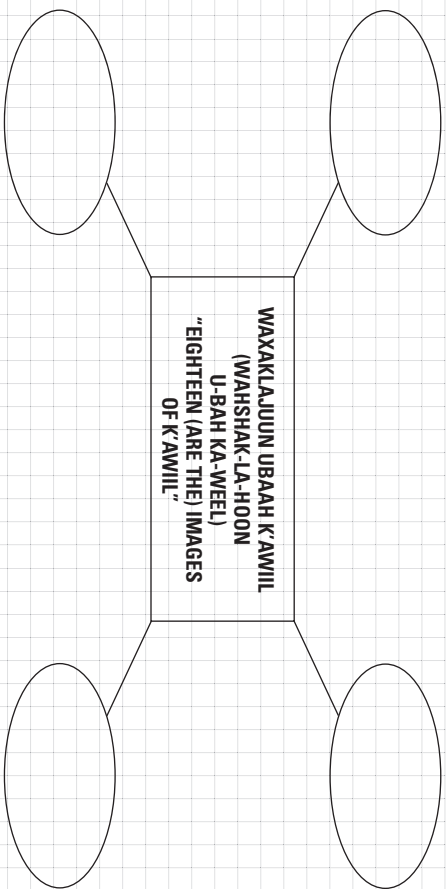
TRACKING TIME AFTER THE CONQUEST
WHO ENCOUNTERED THE MAYA IN THE 16TH CENTURY? WHAT WERE THE CONSEQUENCES?

The Maya encountered _____ . As a result, the Maya

_____ .
_____ .

Did you find the answer to Maya Misconceptions Question 8 yet?

10



6

SELECTED ANSWERS: MAYA 2012 FIELD JOURNAL


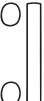

QUESTION	CIRCLE "TRUE" OR "FALSE"	WRITE A CORRECT STATEMENT OR AN ADDITIONAL FACT:
1. The ancient Maya were related to the Aztecs.	TRUE <input checked="" type="radio"/> FALSE	The Maya were not related to the Aztecs. The Aztecs developed in a different region and time period.
2. The Maya calendar is carved in a circular stone.	TRUE <input checked="" type="radio"/> FALSE	The Maya did not have a calendar stone, but the Aztecs did.
3. The Maya created a set of interlocking gears to illustrate their calendar system.	TRUE <input checked="" type="radio"/> FALSE	The Maya did not have an illustration for their calendar system.
4. Maya hieroglyphic writing has been deciphered.	<input checked="" type="radio"/> TRUE FALSE	True. Much of what we know about Copan's history comes from hieroglyphic writing found on monuments.
5. The Maya practiced human sacrifice.	<input checked="" type="radio"/> TRUE FALSE	Yes, but there is no evidence of mass killings.
6. The Maya died out because of the Spanish Conquest.	TRUE <input checked="" type="radio"/> FALSE	The Maya did not disappear from history, but their society changed significantly.
7. The Maya established a great, unified empire.	TRUE <input checked="" type="radio"/> FALSE	The Maya never created a single, unified empire.
8. No Mayan languages have survived to present-day.	TRUE <input checked="" type="radio"/> FALSE	Maya people have retained their languages and strong cultural identity to this day.
9. Some Maya live in the United States.	<input checked="" type="radio"/> TRUE FALSE	The Maya are commonly depicted as rural villagers, but many contemporary Maya live in large cities.
10. The Maya are preparing for the end of the world because their calendar ends in the year 2012.	TRUE <input checked="" type="radio"/> FALSE	Most contemporary Maya pay little or no attention to our fascination with 2012.



INVESTIGATING THE MAYA CALENDAR

CALENDAR NAME	NUMBER OF DAYS IT TRACKS	ADDITIONAL FACT
Sacred Round	260	It's still in use in some Maya communities today.
Vague Year	365	It combines with the Sacred Round to create the Calendar Round calendar.
Long Count	Trillions	The calendar has no ending date.

MAYA NUMBERS

BAR & DOT GLYPHS

3 	7 	11 
---	---	--

12 	6 
--	---

UNCOVERING A LORD OF TIME

K'inich Yax K'uk' Mo

- Founder of Copan dynasty
- Arrived to Copan in 427 CE
- Arrived to Copan before the beginning of the 10th Bak'tun
- The passage of one Bak'tun to another was a major event
- Laid the foundations of his capital city
- Sought to establish himself as a "Lord of Time"

Waxaklajuun Ub'aah K'awiil

- His name means "Eighteen (are the) Images of K'awiil"
- He ruled from July 6, 695 CE to April 29, 738 CE
9.13.3.6.8 7 Lamat 1 Mol to 9.15.6.14.6 6 Kimi 4 Sek
- His reign, which lasted for 43 years, saw the height of artistic achievement in Copan.
- He was a prolific builder, sponsoring seven elaborate stelae, several temples, and a grand ballcourt.
- He began construction of the Hieroglyphic Stairway, an immense text that chronicles Copan's dynasty.
- He conducted an elaborate burial for his predecessor, including the creation of 12 censer lids.
- He was captured and beheaded by the king of the nearby Maya city of Quirigua.
- No significant construction or monuments were produced at Copan for 17 years after his death.

Yax Pasaj Chan Yopaat

- His name means "First Dawned Sky Lightning God"
- He ruled: June 28, 763 CE to sometime after 810 CE
9.16.12.5.17 6 Kaban 10 Mol (reign start date)
- He was the last ruler of the Copan dynasty.
- He commissioned Altar Q which records all 16 rulers of the Copan dynasty.
- He ruled for over 40 years and sponsored a monument commemorating the completion of his second K'atun (40th year) in office in 802 CE.
- He was alive to witness the end of the K'atun in 810 CE (9.19.0.0.0). There are no monuments commemorating the event at Copan.

THE MAYA “COLLAPSE”

List 2 reasons why Maya communities began to decline starting in the 9th century CE:

- Drought
- Warfare
- Soil exhaustion
- Overpopulation
- Government changes
- Major capitals failed

THE *POPOL VUH*

According to the *Popol Vuh*, the people of today are made of: maize-dough.

TRACKING TIME AFTER THE CONQUEST

Who encountered the Maya in the 16th century? What were the consequences?

The Maya encountered the Spanish conquistadores.

As a result, the Maya:

- Died in battle
- Died from disease, especially smallpox
- Had their heritage, religion, and traditions attacked
- Rebelled against foreign rule
- Kept time in ancient ways

REBELLION AND REFORM

List the two revolts led by contemporary Maya and describe each rebellion in the space below.

Rebellion: Caste War

Describe:

- Took place in 1847
- Almost succeeded in restoring Maya rule
- Much of the area remained independent of Mexican rule for over 50 years

Rebellion: Zapatista Movement

Describe:

- Took place in 1994
- Demanded local autonomy and economic reform
- Was a peaceful protest
- Movement gained international support

EDUCATOR EVENTS

MAYA 2012: LORDS OF TIME EDUCATORS' EVENING

Tuesday, May 8, 2012, 4:00pm - 7:00pm

FREE, drop-in event open to all educators

Registration is due by Friday, May 4, 2012.

RSVP: education@pennmuseum.org

Explore the newly installed **MAYA 2012: LORDS OF TIME** special exhibition. Receive a copy of the exhibition's teachers' guide, plan your fieldtrip visit, and network with fellow educators. Refreshments will be served.

Please note: Professional development credit cannot be offered at this event.

MAYA 2012: LORDS OF TIME EDUCATORS' EVENING

Wednesday, September 12, 2012, 4:00 pm - 7:00 pm

FREE, drop-in event open to all educators

Registration is due by Friday, September 7, 2012.

RSVP: education@pennmuseum.org

Explore the newly installed **MAYA 2012: LORDS OF TIME** special exhibition. Receive a copy of the exhibition's teachers' guide, plan your fieldtrip visit, and network with fellow educators. Refreshments will be served.

Please note: Professional development credit cannot be offered at this event.

MAYA 2012: LORDS OF TIME TEACHERS' WORKSHOP

Tuesday, October 2, 2012, 4:00 pm - 7:00 pm

Price: \$30

Credit hours: 3

Advance registration by September 28, 2012 is required.

Payment is due at time of registration.

RSVP: education@pennmuseum.org

Tour **MAYA 2012: LORDS OF TIME** and meet the exhibition's specialists. Learn how you can teach Maya-related curriculum in your classroom. Refreshments will be served.

Please note: Unlike other evening professional development events, this program is designed for credit and a full three hour's attendance is required.

GROUP ADMISSION TICKETS

Advance discounted timed tickets for groups of 10 or more (includes admission to the rest of the Museum) are available for purchase:

ADULT: \$17.50

SENIOR (65+)/MILITARY/STUDENTS (FULL-TIME WITH ID): \$15

CHILDREN (6 TO 17 YEARS): \$12

Call or email about tailored package options and reservations:

K-12 STUDENT GROUPS: (215) 746-6774

education@pennmuseum.org

ADULT, SENIOR, AND COLLEGE STUDENT GROUPS: (215) 746-8183

grouptickets@pennmuseum.org

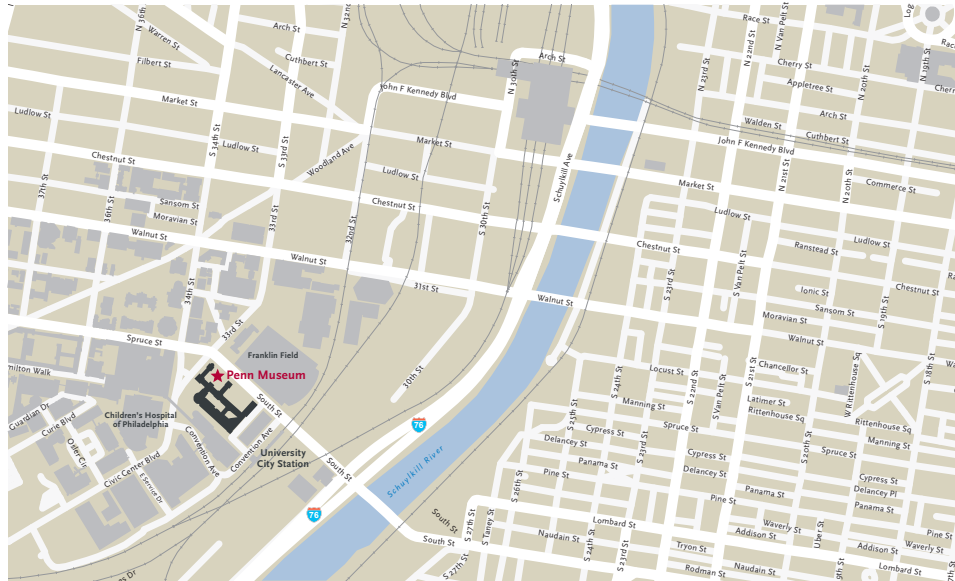
MUSEUM HOURS

Museum hours during the **MAYA 2012: LORDS OF TIME** exhibition are:

TUESDAY: 10:00 am to 5:00 pm

WEDNESDAY: 10:00 am to 8:00 pm

THURSDAY THROUGH SUNDAY: 10:00 am to 5:00 pm



Penn Museum is located at 3260 South Street, Philadelphia, PA, at the intersection of Spruce Street and 33rd Street. Nearby landmarks include Franklin Field, across South Street, and the Hospital of the University of Pennsylvania, across 34th Street. For directions and parking, visit www.penn.museum/directions-and-parking.html

IDENTIFIED AND EXPLORED MAYA ARCHAEOLOGICAL SITES

Maya sites that have been identified and explored are located in Mexico, Guatemala, Belize, Honduras, and El Salvador.

This map shows the location of various sites mentioned in the special **MAYA 2012: LORDS OF TIME** issue of *Expedition* magazine.

Image courtesy of Jennifer McAuley



Penn Museum
UNIVERSITY of PENNSYLVANIA MUSEUM
of ARCHAEOLOGY and ANTHROPOLOGY

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