

How did the Ancient Maya tell the time?



This is a contemporary Maya calendar used at Melody Primary School in Guatemala

Monday, August 29, 2016 CE is

Long Count: 13.0.3.13.7

Julian Date: August 16, 2016 CE

Calendar Round: 12 Manik' 10 Mol

Year Bearer: 5 Kab'an

Lord of Night: G6

13 Bak'tun



0 K'atun

3 Tun



13 Winal

7 K'in



12 Manik'

G6



10 Mol

Using their knowledge of astronomy and mathematics, the Maya developed one of the most accurate calendar systems in human history.

Maya Calendar Cycles

For counting the days in a year, the Maya used two counting cycles, called the tzolk'in and the haab.

THE TZOLK'IN (the sacred year)

The tzolk'in is a cycle of 260 days, composed of 20 day names (similar to our Monday, Tuesday, etc.) plus the numbers 1 to 13 (similar to our saying Monday is the first day of the week, Tuesday the second day of the week, etc.). These days and numbers are intermeshed for example: 1 Imix, 2Ik, to 13 Ben. Each day had its ritual significance, similar to an astrology chart.

20 K'IN (Day) NAMES of the TZOLK'IN and HAAB' CALENDARS

Imix'	Ik'	Ak'b'al	K'an	Chikchan	Kimi	Manik'	Lamat	Muluk	Ok
1	2	3	4	5	6	7	8	9	10
Chuwen	Eb'	B'en	Ix	Men	K'ib'	Kab'an	Etz'nab'	Kawak	Ajaw
11	12	13	14	15	16	17	18	19	20

These glyphs all are from a wall painting unearthed at Ek Balam, Yucatan, dating to the early ninth century AD



A Maya representation of the Tzolkin from the Madrid Codex. Time is represented by 260 dots marking a path or a journey of twenty days and thirteen numbers.

THE HAAB

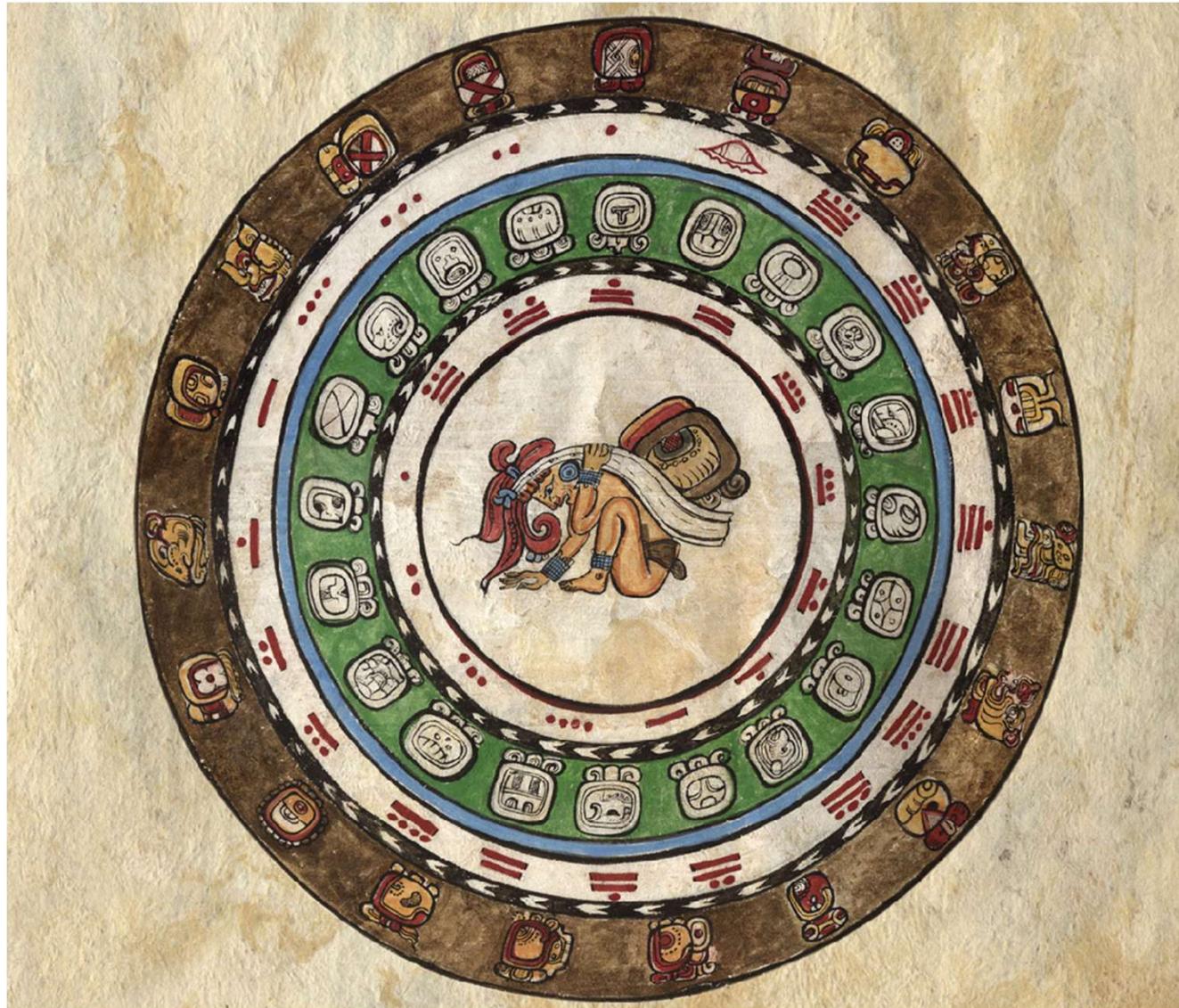
The other cycle is the haab, a 365-day cycle similar to our solar year. The haab consists of 18 months of 20 days each; the first day of the first month, Pop, was 0-Pop, and the last day of the month was 19 Pop. The haab was made to coincide with the solar cycle by adding a 5-day “short month” called the Uayeb (or Wayeb) at the end of the cycle.

18 WINAL (20 Day Periods) plus WAYEB (5 Days) of the HAAB'

									
Pop	Wo'	Zip	Zotz'	Tzek	Xul	Yaxk'in	Mol	Ch'en	Yax
1	2	3	4	5	6	7	8	9	10
									
Zak'	Keh	Mak	K'ank'in	Muwan'	Pax	K'ayab	Kumk'u	Wayeb'	
11	12	13	14	15	16	17	18	5 nameless days	

A contemporary representation of the Tzolk'in (inner two circles) and Haab (outer two circles) calendars from www.mayaarchaeologist.co.uk





A contemporary representation of the Tzolk'in (inner green circle) and Haab (outer brown circle) calendars.

THE CALENDAR ROUND

The linking together of the tzolk'in and haab cycles results in a larger cycle of 18,980 days, or 52 years. Only after the completion of 52 years would the same combination of tzolk'in and haab occur again. This 52-year cycle is called the Calendar Round.

Both the tzolk'in and haab calendars were used by the ancient Maya for the planning of important events such as the best time to plant crops, hunt certain animals, cure sickness, ascend to the throne of kingship, or wage a battle against enemies.

The Calendar Round was also used to plan religious and ritual events and perhaps used to predict the future.

Calendar Round



A contemporary representation of the Calendar Round, interlocking the Tzolkin (left) with the Haab (right).



Roberto Poz Pérez, K'iche', is a calendar Day Keeper in a village near Quetzaltenango, Guatemala.

Long Count Calendar

The Long Count Calendar lasted for 5125 years. Like our own calendar, the Maya marked dates for more extensive time from a fixed starting point. In our calendar this begins with the birth date of Jesus Christ. For the Maya the beginning of present creation was 13th August, 3114 B.C. and it ended on 21st December 2012. This round is then repeated.

The first glyph at the top of the image is the introductory glyph



August 13, 3114 BC,
day 'zero' of the Maya calendar.
This reads 13 Baktun, 0 Katun,
0 Tun, 0 Uinal, 0 Kin, 4-Ahau 8-Cumku.

PERIOD NAMES of the MAYA LONG COUNT CALENDAR



Bak'tun

(20 Ka'tun)

144,000 days



Ka'tun

(20 Tun)

7,200 days



Tun

(18 Winal)

360 days



Winal

(20 K'in)

20 days



K'in

(1 K'in)

1 day

(5 Cycles of the Long Count Dating System)

Lets make our own.

Use the rounds, cut them up and put them into each other using a split pin.

How do we read one?

The number system

- The number system works like:

-  4 dots would mean 4

-  5 would equal 1 bar

-  10 would be 2 bars

-  13 is 2 bars and 3 dots.

- Line these up from the 1st ring:
 - Find 1 dot
 - Then Imix
 - Then 2 dots
 - Then Pop
-
- This date is 1 Imix 2 Pop.

- What would be tomorrow date if that was today's?

- Move the one dot to 2 – (anticlockwise)
- Move Imix to Ik – move one marker anticlockwise
- Move 2 dots to 3
- And why would you not move the last one?

- So the date will be:

- 2 Ik 3 Pop.
- You will always move them anticlockwise apart from the last one because there are 18 days in a month. You move the last one when your number becomes a shell.

Questions:

- 2. If today is 6 Men 10 Yax, what would be the date in 2 day's time?
- 3. If today is 6 Ben 2 Chen, what would have been the date 3 days' ago?
- 4. If today is 9 Kib 11 Xul what would be the date in a week's time (that is our week – in 7 days)

- Answers:

- 2. 8 Kaban 12 Yax

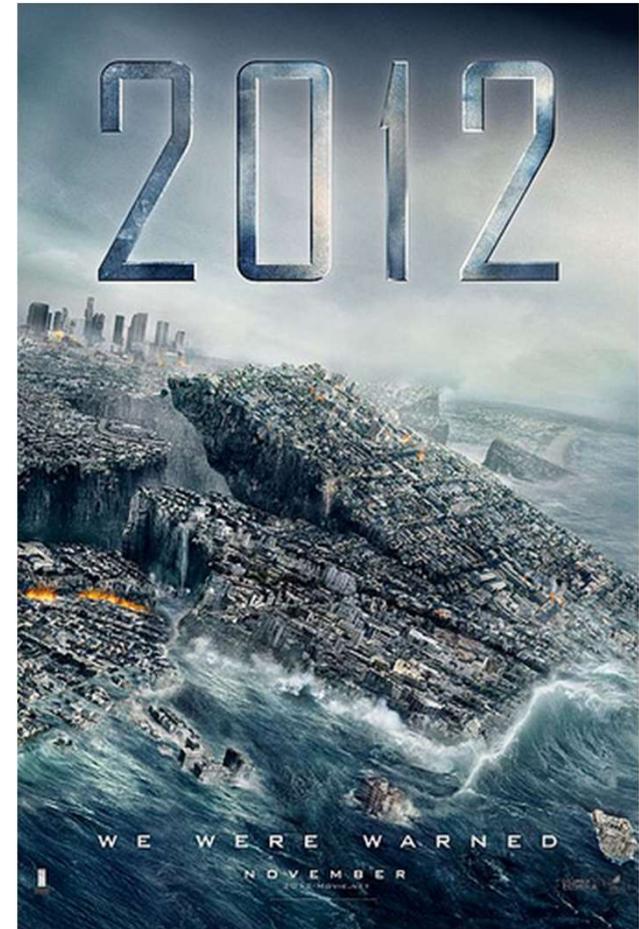
- 3. 3 Ok 19 Mol

- 4. 3 Akbal, 18 Xul

Did the Maya predict the end of world?

The Ancient Maya calendar finished one of its great cycles (Long count of 5125 years) in December 2012, which fuelled countless theories about the end of the world on December 21, 2012. There was even a movie made about it!

Of course this didn't happen. The following day a new cycle began. Just like our New Years Day or the start of the Millennium.



Aztec or Maya?





Blackpool Tower in England, UK



Eiffel Tower in Paris, France

Additional Resources

Maya Calendar System:

<http://www.mayan-calendar.org>

<http://www.ancientscripts.com/maya.html>

<http://maya.nmai.si.edu/>

<http://www.famsi.org>

<http://www.pauahtun.org/Calendar/Default.htm>

<http://www.mesoweb.com>

Glossary List in this “Living Maya Time” Website (In Resources Section)