Calendars of the Ancient World

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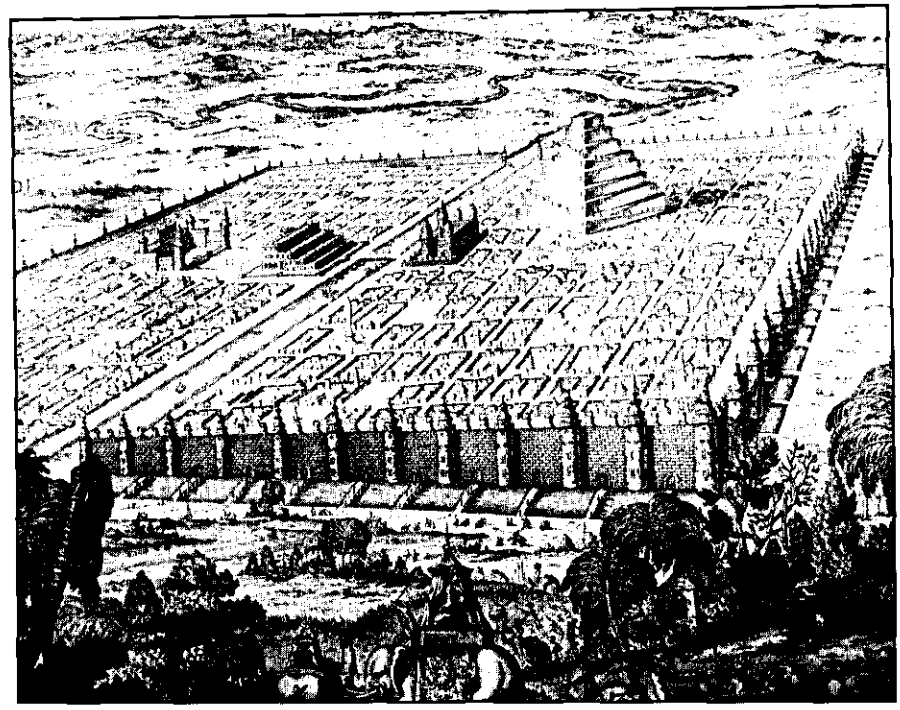


The city of Babylon, capital of Babylonia (ca 1900–539 B.C.). Situated on the Euphrates River, this famous city housed the Hanging Gardens of Babylon, one of the Seven Wonders of the World. From Peter Van der Aa's Le grand theatre historique *(Amsterdam, 1703).*

Many ancient peoples kept records of astronomical events for agricultural, ceremonial, and administrative purposes. Years of astronomical observation were necessary before accurate calendars could be constructed, and many different systems of calendrical mathematics were developed to conveniently divide units of time.

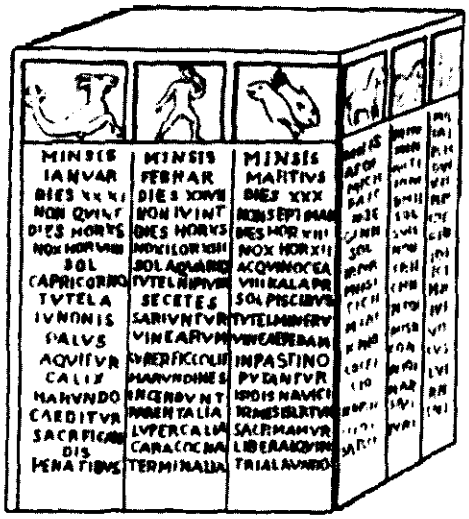
European bone: A 25,000-year-old piece of bone found in Grotte du Tai, France, may be the oldest known solar calendar. The bone contains more that 1,000 engraved marks whose arrangement suggests that they were grouped into years.

Babylonian lunisolar calendars: The Babylonian calendar was constructed to accommodate both the solar and the lunar cycles so that it would coincide with important agricultural events. The months of this calendar were alternately twenty-nine and thirty days long, and each month began with the first appearance of the crescent moon. Twelve months equaled 354 days, so the Babylonians created a system of seven leap years every thirteen years—a leap year was thirteen months long.

African farming cycles: To ensure that a community's food supply was sufficient for a given year, Yoruba farmers of Africa learned to understand the growth patterns of their crops and how seasonal changes affected those crops. Over time, farmers related these natural cycles to such astronomical events as the cycling of the moon though the night sky. As a result of this process, the Yoruba determined that a year consisted of thirteen lunar months.

Sacred Chinese cycles: In the ancient Chinese agrarian society, an accurate calendar was a necessity, and calendar makers had to be skilled in coordinating the lunar, solar, and seasonal cycles. Additionally, Chinese calendars were used as instruments for maintaining harmony with heavenly cycles, so they had religious as well as practical meaning. Because people were fascinated by what are called resonance periods—the length of time it takes one cycle to move from agreement with another cycle, though disagreement, and back to agreement—calendars were reformed at the beginning of each new dynasty.

Greek calendrical computer: In the late sixteenth century, an astrological calendar dating back to about 80 B.C. was found near the Greek island of Antikythera. One of the most sophisticated pieces of mechanical engineering from the ancient world, the device contains thirty-one interlocking wheels and was



Engraving of a Roman calendar found incised on a marble cube at Herculaneum, an ancient Italian city buried by the eruption of Mount Vesuvius, A.D. 79. From H. Roux's Herculaneum et Pompeii *(Paris, 1875).*

probably used to compute the changing positions of heavenly bodies.

Khmer temple calendar: An ancient Cambodian temple calendar served as the mausoleum for Yasovarman, king of the Khmer kingdom from A.D. 899 to A.D. 910. On each of its four sides were twenty-seven towers, representing the number of days in the lunar cycle. Twelve towers stood on each of its seven terraces, symbolizing the months of the year in Jupiter's twelve-year cycle.

For more on calendars, see vignettes 6, 30, 40, and 48. ★

Activities

1. Why were lunar calendars used in some ancient societies, solar calendars in others, and seasonal calendars in still others? What benefits did each type of calendar provide?

2. Read about an ancient Chinese calendar. How did Chinese calendar makers reconcile the lunar and solar cycles?

3. Many scholars believe England's prehistoric Stonehenge megalith was constructed to align with certain astronomical events. What were these events? Why would they have been important to prehistoric peoples?

4. Read about a calendar constructed by an ancient culture not mentioned in this vignette. Prepare a visual presentation of what you learn and share it with your class.

Related Reading

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