

## **Why Are the Zodiac Constellations Special?**

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Ever wonder why you don't see your zodiac constellation in the night sky on your birthday?

A short history about constellations relative to both Astronomy and Astrology should help answer that question. A constellation is a group of stars that form a pattern in the night sky. The twelve zodiac constellations were first named by the ancient Babylonians and later renamed by the Greeks and Romans. The zodiac signs are divided into 4 main groups of Fire (natural source of fire or heat – Aries, Leo and Sagittarius), Air (the power of the wind – Gemini, Libra and Aquarius), Water (rainy season soothing nature or moisture – Cancer, Scorpio and Pisces) and Earth (Virgo, Taurus and Capricorn). An easy mnemonic device used to help remember the 12 generally-recognized zodiac constellations is:

All The Great Constellations Live Very Long Since Stars Can't Alter Physics  
(Aries, Taurus, Gemini, Cancer, Leo, Virgo, Libra, Scorpio, Sagittarius, Capricorn, Aquarius, Pisces)

In modern times the word zodiac is generally associated with an astrological horoscope from the Greek words meaning "A Look at the Hours". A horoscope is a chart or diagram representing the placement of the planets at the time of an event or the moment of a person's birth. The zodiac sign symbols are conventional pictorial representations that have been used since Hellenistic times.

To better understand the zodiac, one needs a basic understanding of Astronomy and Astrology. Although both began as one concept around 3,000 BC, they eventually took separate paths. Astronomy became the scientific study of matter in outer space including celestial bodies, positions, dimensions, motion, composition and phenomena. Astrology is the study of the motions and relative positions of the planets, Sun, and moon interpreted in terms of human characteristics, past and present events, and predicting the future. Both consider the zodiac as a ring of constellations that line the Sun's apparent path across the sky over the span of 12 months. Astrology is purportedly based on the interplay of the positions of our Sun, our Moon and the other planets in the solar system as they "pass through" the background of the 12 zodiac constellations.

Imagine the sky as a circular disc or pie divided into an imaginary 12 slices with the paths of the Sun, Moon and primary planets passing through them. Every slice of the pie is 30 degrees wide (360 degrees divided by 12 = 30 degrees) and contains a constellation which is also called a zodiac sign. The Babylonian's calendar started with the position of the Sun at the vernal equinox (first day of spring) which meant at the time, that the Sun appeared against the background of the Aries constellation, and Aries was thus considered the first sign of the zodiac.

Because the 12 famous zodiac constellations don't perfectly line up with our 12 30-degree divisions of the sky, some recognize a 13<sup>th</sup> zodiac constellation (not designated as a general astrological sign) against which the Sun appears between November 30<sup>th</sup> and December 17<sup>th</sup>. This constellation is called Ophiuchus or Serpentarius (in English, the "Serpent Holder") and it is situated in the sky between Scorpio and Sagittarius.

Today, at the time of the vernal equinox, the Sun no longer rises against the background of the constellation Aries due to the slow precession of the Earth's orbit around the Sun. The other zodiac constellations are also in slightly different positions relative to the Sun's apparent path across the sky from when the Babylonians assigned each month a constellation. Because the relative position of Earth in the heavens shifts a miniscule amount continually, in thousands of years our constellations will be unrecognizable and future generations will have to invent new names and legends.

While we can't cast your horoscope, we welcome you to visit the Cameron Park Rotary Community in Placerville, any clear sky Friday, Saturday or Sunday evening (7:30 PM – 9:30PM) where docents will gladly show you the constellations currently viewable in the night sky. For more information about the observatory go to [www.communityobservatory.com](http://www.communityobservatory.com).