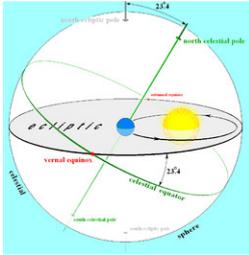


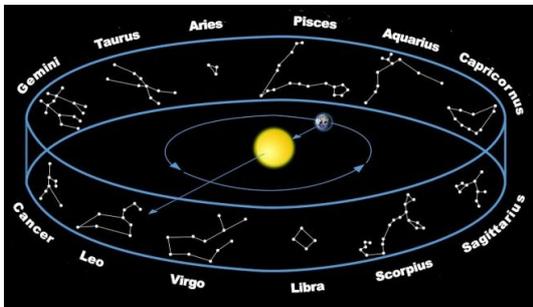
Zodiac constellations 2 – The zodiac



The zodiac is the area of the sky extending approx. 8 degrees North and South of the ecliptic (the apparent path of the Sun across the celestial sphere). It is the strip of sky against which the Sun, Moon and planets are seen to orbit.

The ecliptic compared with Earth's tilt

Historically, the zodiac was divided into 12 areas, each occupying 30° of celestial longitude. These blocks correspond roughly to the constellations of Aries, Taurus, Gemini, Cancer, Leo, Virgo, Libra, Scorpio, Sagittarius, Capricorn, Aquarius and Pisces. The system forms a co-ordinate system with the ecliptic as the origin of latitude and the Sun's position at the vernal (March) equinox as the point of origin of longitude. As the Sun was in Aries when the system was developed, it is Aries that is considered the first sign in astrology, with that sign beginning on 21 (or 22) March.



'Zodiac' is the Latinised form of the Greek for 'cycle or circle of little animals'. The name reflects the prominence of animals and mythological hybrids among the zodiacal constellations. Although the term 'zodiac' commonly refers to astrology, it is also used in astronomy to identify the zodiacal area encompassing the lunar and planetary orbits. The constellations through which the ecliptic and the adjacent area of sky pass are called the zodiac constellations.

The history of the zodiac goes back to Chaldean (Babylonian) astronomy dating back to around 500 BCE. It draws on star groupings described in earlier Babylonian catalogues. The Babylonians decision to divide the area around the ecliptic into twelve parts because they followed a 12-month lunar calendar. Unlike modern placing of the start of zodiac with Aries at vernal equinox, Babylonian astronomers fixed the zodiac in relation to stars eg Cancer began at the end of a designated star in Gemini, the beginning of Aquarius started at the end of a named star in Capricorn.

The equal divisions did not correspond exactly to where constellations started and ended in sky; this would have created irregular sized divisions. Also, the Sun actually passes through 13 Babylonian constellations. In order to reconcile this with number of months in year, they decided to omit Ophiuchus.

In reality, the situation is even more complicated. Modern astronomers have counted at least 21 constellations which, by definition of being within the zodiac, qualify as zodiac constellations. Constellations through which the planets also pass include Orion, Perseus, Auriga, Andromeda, Crater, Sextans, However, only the historic twelve retain their status as zodiac constellations.

Sources: Ridpath, I (Ed) 2012 Oxford dictionary of astronomy Oxford, OUP, Ridpath, I (Ed) 2006 Astronomy London, Dorling Kindersley, en.wikipedia.org