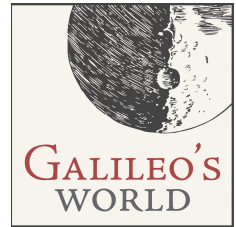


Introduction to the Zodiac

EXHIBIT: *Galileo's World*
GALLERY: Music of the Spheres, The Sky at Night



Each year the Sun moves slowly eastward, against the background of fixed stars, eventually completing a full circle around the sky. The path followed by the Sun is called the **ecliptic**, and any constellation containing the ecliptic is called a **zodiac** constellation.

On a celestial globe, trace the ecliptic circle around the sky, identifying the constellations it touches.

Zodiac literally means “circle of the animals.”

Which zodiac constellation does NOT represent a living thing?

There are 12 traditional constellations of the zodiac (not counting Ophiuchus).



*Identify the four and a half **human** forms among the 12 traditional zodiac constellations.*

Look for illustrations of the zodiac constellations on books and instruments throughout the Galileo's World exhibition.

The constellations of the zodiac are listed in the table on the back side of this page, in order as the Sun moves eastwardly through them, starting from Pisces, the constellation containing the Sun at the March or vernal equinox* (thus Pisces is visible overhead at night in the fall, six months later).

**Note:* Because astrologers still calculate from the First Point of Aries instead of the current March equinox location in Pisces, all modern horoscopes have shifted out of phase with the actual stars. That is, the actual zodiac of constellations now differs from the zodiac signs or houses as used by astrologers, because the zodiac of signs refers to the location of the Sun in the epoch of Hipparchos, circa 150 BCE, disregarding precession. For example, if a contemporary of Hipparchos were born in early March, the Sun would then at that time have been in the constellation of Pisces, and his astrological sign would have been Pisces. But someone born in early March in our time would still be given the sign Pisces by an astrologer, despite the fact that the Sun was actually in the constellation of Aquarius at the time of birth. Those who read horoscopes are one sign out of phase with the constellations.

Provided by the **OU Academy of the Lynx:**
Collaborating in exhibit-based learning, oulynx.org
(Ask about the *Galileo's World* iPad Exhibit Guide)



Zodiac Constellation	Mythological identity	Notes and Appearance	Season in evening sky
Pisces (Pie-seez)	Two fish. Venus and her son Cupid escaped from Typhon by swimming through the sea as two fish.	Near Pegasus and Andromeda. Red star TX Piscium varies in brightness.	Fall
Aries (Air-eez)	Ram with Golden Fleece, could fly through the air.	A small constellation, with only two easily-visible stars.	Winter
Taurus (Tore-us)	Bull. Babylonian constellation. Jupiter turned himself into a bull to carry off Europa, daughter of the King of Crete.	Reddish eye the star Aldebaran, one vertex of the Winter Hexagon, in a V-shaped grouping called the Hyades. Look at Pleiades, a jewel-box of stars, with binoculars.	Winter
Gemini (Jem-eh-ni)	Twin brothers. Protectors of ships and sailors, who swore oaths "By Jiminy!"	Look for the two bright stars, Castor and Pollux, which together form one vertex of the Winter Hexagon.	Winter
Cancer (Kan-ser)	Crab, sent by Juno to kill Hercules, who squashed it with his foot.	Faint stars. Look with binoculars for the Beehive star cluster, faintly visible to the naked eye.	Spring
Leo (Lee-oh)	Lion. Prehistoric constellation, often associated with royalty.	Look for sickle-shaped or backward-question-mark asterism. Bright star Regulus.	Spring
Virgo (Vir-go)	Maiden, goddess of farms and harvest, holding a shock of wheat.	Second-largest constellation in sky. Bright star Spica. Cluster of galaxies. Bright quasar.	Spring
Libra (Lee-brah)	Scales (balance), because the Sun was in Libra during the autumn equinox when the Romans chopped off the claws of Scorpius to create this constellation.	Two faint stars. Includes the traditional claws of Scorpius. Alpha-Librae is a double-star resolvable by binoculars.	Spring
Scorpius (Scor-pee-us)	Scorpion sent by Gaia to kill Orion when Orion boasted he would slay all the animals of the Earth; now Orion and Scorpius circle each other on opposite sides of the sky.	Fish-hook to Polynesians; rises right out of water in the SE in the summer. Bright star Antares, the heart of the Scorpion, rivals Mars in its reddish tint.	Summer
Ophiuchus (Oh-fee-uke-us)	The serpent holder, Oph. ("Gus" for short) represents Aesclepius the healer. Although not traditionally considered part of the zodiac, the Sun now is actually within Oph. longer than it is in Scorpius.	Faint stars. Look for Ophiuchus holding the Serpent (Serpens) between Arcturus (Bootes; locate with Big Dipper) and Altair (Aquila; cf. Summer Triangle).	Summer
Sagittarius (Saj-eh-tair-ee-us)	The Archer, a centaur (half man and half horse) archer named Chiron, shooting an arrow.	Look for teapot asterism. In direction of the center of the Milky Way galaxy, rich with many stars. Try binoculars.	Summer
Capricornus (Kap-rih-corn-us)	Sea Goat. Pan only partly succeeded in turning himself from a goat into a fish.	Dim stars. Look for large laughing mouth.	Fall
Aquarius(Ah-kwair-ee-us)	Water Carrier. Babylonian constellation.	Water jar asterism. Near Pegasus.	Fall