

A LONG HISTORY OF LOOKING AT THE STARS

In ancient times, astronomers did not fully understand how Earth, the Sun, and the stars moved. Nor did they have any idea the Universe is so vast. But they were keen observers of the sky and tried very hard to make sense of it.

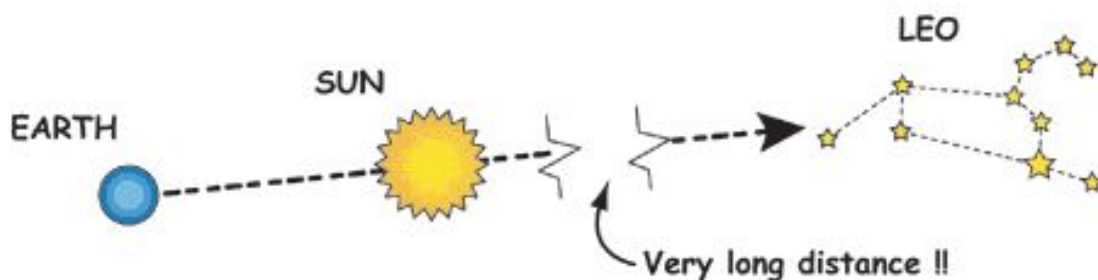
People had already imagined that the constellations might be important symbols, telling stories of their gods and other myths. It was not a big step to suppose that the changing positions of the constellations at different times of the year might be important to people and events on Earth.

The Babylonians lived over 3,000 years ago. They divided the zodiac into 12 equal parts--like cutting a pizza into 12 equal slices. They picked 12 constellations in the zodiac, one for each of the 12 "slices." So, as Earth orbits the Sun, the Sun would *appear* to pass through each of the 12 parts of the zodiac. Since the Babylonians already had a 12-month calendar (based on the phases of the Moon), each month got a slice of the zodiac all to itself.

But even according to the Babylonians' own ancient stories, there were 13 constellations in the zodiac. (Other cultures and traditions have recognized as many as 24 constellations in the zodiac.) So the Babylonians picked one, Ophiuchus, to leave out. Even then, some of the chosen 12 didn't fit neatly into their assigned slice of the pie and sloped over into the next one.

When the Babylonians first invented the 12 signs of zodiac, a birthday between about July 23 and August 22 meant being born under the constellation Leo. Now, 3,000 years later, the sky has shifted because Earth's axis (North Pole) doesn't point in quite the same direction.

Now an August 4 birthday would mean you were born "under the sign" of Cancer (one constellation "earlier"), not Leo.



The constellations are different sizes and shapes, so the Sun spends different lengths of time lined up with each one. The line from Earth through the Sun points to Virgo for 45 days, but it points to Scorpius for only 7 days. To make a tidy match with their 12-month calendar, the Babylonians ignored the fact that the Sun actually moves through 13 constellations, not 12. Then they assigned each of those 12 constellations equal amounts of time.