

Chapter 3. The Face of the Sky

- Western constellations began to be developed about 4,000 yr ago in the Middle East. The stars were used as a calendar, to tell stories, and to honor gods and heroes.
- The constellations were passed down from Greeks → Romans → Arabians → Europeans, ending up in 48 ancient constellations. The constellation Argo was later divided into three smaller constellations (Carina, Puppis, and Vela), resulting in 50 ancient constellations.
- The ancient constellations did not cover the whole sky; therefore, 38 modern constellations were defined to complete the coverage of the sky. A total of 88 constellations are currently adopted.
- The ancient constellations are often parts of groups that tell stories of myths. For example, the Orion group contains constellations Orion (hunter), Canis Major (greater dog), Canis Minor (lesser dog), and Lepus (hare).
- Asterisms are names given to a group of bright stars that form obvious patterns in the sky, e.g., the Big Dipper, the Pleiades, the Summer Triangle, the Winter Triangle, and the Northern Cross.
- About 6,000 – 8,000 stars can be seen with naked eyes.
- About 130 B.C., Hipparchus ordered the naked-eye stars into 6 magnitudes (1-6), with the 1st magnitude being the brightest and the 6th magnitude the faintest. Modern measurements have revised the brightest stars to 0 or -1 magnitude, and have detected stars to fainter magnitude (up to at least 20 magnitude).
- About 1,000 stars have proper names, e.g., Sirius, Deneb, and Vega.
- In the early 1600s, Johannes Bayer applied Greek letters to stars in constellations in order of brightness. Deneb = α Cyg, Polaris = α UMi.
- in the 18th century, John Flamsteed numbered stars in constellations from west to east. Vega = α Lyrae = 3 Lyrae.