

# Libra constellation essay sample



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The brightest stars in Libra form a quadrangle that distinguishes it for the unaided observer. Alpha Librae, called Zubenelgenubi, is a binary star divisible in binoculars, 77 light-years from Earth. The primary is a blue-white star of magnitude 2.7 and the secondary is a white star of magnitude 5.2. Its traditional name means “the southern claw”. Zubeneshamali (Beta Librae) is the corresponding “northern claw” to Zubenelgenubi. The brightest star in Libra, it is a green-tinged star of magnitude 2.6, 160 light-years from Earth. Gamma Librae is called Zubenelakrab, which means “the scorpion’s claw”, completing the suite of names referring to Libra’s archaic status. It is an orange giant of magnitude 3.9, 152 light-years from Earth. Libra is home to several other binary and double stars. Iota Librae is a complex multiple star, 377 light-years from Earth, with both optical and true binary components. The primary appears as a blue-white star of magnitude 4.5; it is a binary star indivisible in even the largest amateur instruments with a period of 23 years.

The secondary, visible in small telescopes as a star of magnitude 9.4, is a binary with two components, magnitudes 10 and 11. There is an optical companion to Iota Librae; 25 Librae is a star of magnitude 6.1, 219 light-years from Earth and visible in binoculars. Mu Librae is a binary star divisible in medium-aperture amateur telescopes, 235 light-years from Earth. The primary is of magnitude 5.7 and the secondary is of magnitude 6.8. There are many variable stars in Libra as well. Delta Librae is an Algol-type eclipsing variable star, 304 lightyears from Earth. It has a period of 2 days, 8 hours; its minimum magnitude of 5.9 and its maximum magnitude is 4.9. FX Librae, designated 48 Librae, is a shell star of magnitude 4.9. Shell stars,

like Pleione and Gamma Cassiopeiae, are blue supergiants with irregular variations caused by their abnormally high speed of rotation. This ejects gas from the star's equator.

### Draco Constellations

The star Thuban ( $\alpha$  Draconis) was the northern pole star from 3942 BC, when it moved farther north than Theta Boötis, until 1793 BC. The Egyptian Pyramids were designed to have one side facing north, with an entrance passage designed so that Thuban would be visible at night. Due to the effects of precession, it will once again be the pole star around the year 21000 AD. It is a blue-white giant star of magnitude 3.7, 309 light-years from Earth. The traditional name of Alpha Draconis, Thuban, means “head of the serpent”. Draco is home to several double stars and binary stars.  $\eta$  Draconis is a double star with a yellow-hued primary of magnitude 2.8 and a white-hued secondary of magnitude 8.2 located south of the primary. The two are separated by 4.8 arcseconds. Mu Draconis, traditionally called Alrakis, is a binary star with two white components. Magnitude 5.6 and 5.7, the two components orbit each other every 670 years. The Alrakis system is 88 light-years from Earth. Nu Draconis is a similar binary star with two white components, 100 light-years from Earth. Both components are of magnitude 4.9 and can be distinguished in a small amateur telescope or a pair of binoculars.

Omicron Draconis is a double star divisible in small telescopes. The primary is an orange giant of magnitude 4.6, 322 light-years from Earth. The secondary is of magnitude 7.8. Psi Draconis is a binary star divisible in binoculars and small amateur telescopes, 72 light-years from Earth. The

primary is a yellow-white star of magnitude 4.6 and the secondary is a yellow star of magnitude 5.8. 16 Draconis and 17 Draconis are part of a triple star 400 light-years from Earth, divisible in medium-sized amateur telescopes. The primary, a blue-white star of magnitude 5.1, is itself a binary with components of magnitude 5.4 and 6.5.

The secondary is of magnitude 5.5 and the system is 400 light-years away.

[1] 20 Draconis is a binary star with a white-hued primary of magnitude 7.1 and a yellow-hued secondary of magnitude 7.3 located east-northeast of the primary. The two are separated by 1.2 arcseconds at their maximum and have an orbital period of 420 years. As of 2012, the two components are approaching their maximum separation. 39 Draconis is a triple star 188 light-years from Earth, divisible in small amateur telescopes. The primary is a blue star of magnitude 5.0, the secondary is a yellow star of magnitude 7.4, and the tertiary is a star of magnitude 8.0; the tertiary appears to be a close companion to the primary. 40 Draconis and 41 Draconis are a binary star divisible in small telescopes. The two orange dwarf stars are 170 light-years from Earth and are of magnitude 5.7 and 6.1.