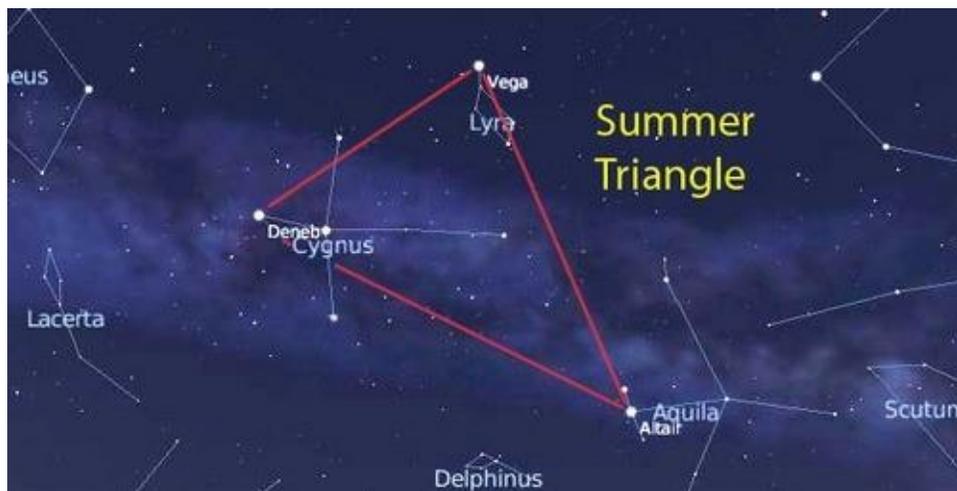


Summer Constellation Worksheet

This is an extension to the Spring Constellation. It is taken for granted that patrons have reviewed and are familiar with the Constellations discussed in that write-up. If this is not the case, patrons will need to start with the Spring Constellation Activity and complete the activities through the or have existing knowledge about the 5 circumpolar constellations: Big Dipper, Little Dipper, Draco, Cassiopeia and Cepheus. The circumpolar constellations remain in our sky view all year long and are used as reference points for finding the seasonal constellations.

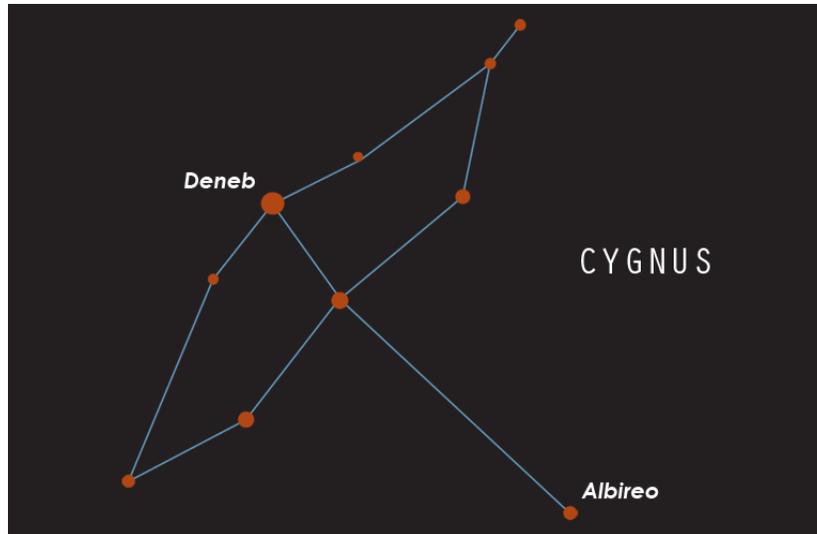
Activity 1. Summer Triangle

While it is not a formal constellation, it is a prominent feature of the evening sky during the summer. The triangle is made up of three first magnitude stars and is located in the eastern sky. To find the triangle, use the two non-pointer stars of the Big Dipper's pot, and extend a line from them that goes through Draco, until you come to the triangle in the eastern sky. As mentioned, these three stars of the triangle are first magnitude stars: Deneb – the brightest star that is to the north, Vega, is the first star you should come to, while Altair is the last of the stars you will reach.



Activity 2. Cygnus, the Swan

Starting on Deneb and extending in a southerly direction there are four other stars that make up a simple cross. These are the brightest stars in the constellation of Cygnus and is often referred to as the Northern Cross. The rest of the constellation is made up of dimmer stars that make the wings of the swan by using Deneb and the arms of the cross as the focus.



Myth: While Cygnus represents a swan, the story starts with Phaeton, one of Apollo's sons. One day, Phaeton decided to take Apollo's Sun chariot for a joyride. He soon lost control of the horses and was about to crash into the earth. Upon seeing this, Zeus had to react. He threw a bolt of lightning that startled the horses and caused Phaeton to fall off the chariot and into a river. Cygnus, was a friend of Phaeton and saw all this happen. He dove into the river to try and save his friend. This so impressed Zeus that he turned Cygnus into a swan to enable him to dive beneath the river as he searches for Phaeton. Cygnus is still searching for his friend.

Activity 3: Lyre

Lyre, starts with Vega and is the closes of the three bright stars to the zenith point. (center point of the evening sky) Lyre is one of the smallest constellations in the sky and is made up of Vega and four dim stars that make up a parallelogram. next to the Vega. This parallelogram points in the direction of Altair.



Myth: Lyre represents the harp which was invented by the god, Hermes. Hermes gave the harp to Apollo, who in turn gave it to another of his sons, Orpheus. Orpheus would become one of the Greek's greatest musician. He even persuaded Hades to release his dead wife from the underworld with his music. The deal was that she had to follow him out of the underworld, but he could not look back at her until they reached the surface. On their journey, Orpheus could not resist the urge to look back at his wife and she was returned to the underworld.

Activity 4: Aquila

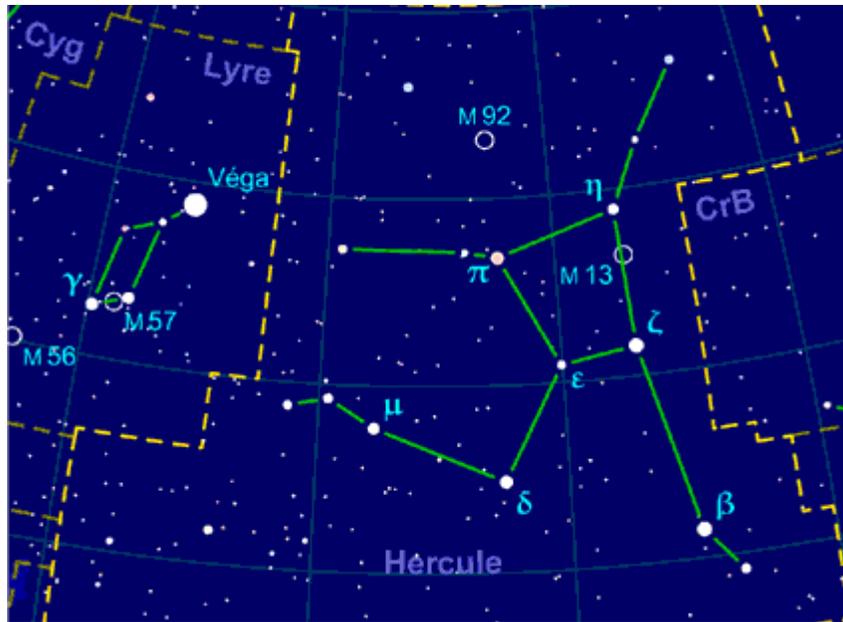
Starting on Altair, we will find the constellation Aquila. Altair is one of the base stars of two smaller and dimmer triangles that point in opposite directions and represent the wings of what is meant to be an eagle or another great bird. Extending a line from the bases of these triangles and moving slightly to the south you will find a star that represents the head and neck of the bird.



Myth: As mentioned, Aquila represents an eagle or another great bird. These birds were used as messengers by Zeus. On one occasion, Zeus wanted a new cupbearer to carry the nectar that the gods drink, known as Ambrosia. An eagle was sent to carry this message to earth and the bird soon brought back Ganymede, the son of the king of Troy, to be the cupbearer. Ganymede would soon become a favorite of the all the gods.

Activity 5: Hercules

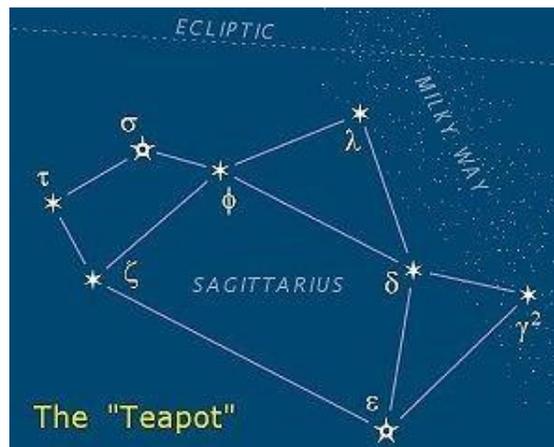
Half way between Lyra and Corona Borealis, (described in Spring Constellation Workshop Activity), is the constellation Hercules. The brightest section of the constellation is a parallelogram that resemble the side profile of a shopping cart basket to me. Each star of the parallelogram has an extension that represents his arms and legs. These extensions are best learned by studying the constellation's shape. There is no star that represents his head.



Myth: Hercules was the Greeks' greatest champion. Hercules was the son of Zeus and a mortal woman. This angered Hera, queen of the gods and wife and sister of Zeus. Hera was insanely jealous of Zeus and would try to kill him several times. Hercules was eventually made temporarily insane by Hera and during this period, he killed his mortal family. To atone for this he completed his 12 famous labors. Zeus would ultimately reward him by placing him in the heavens.

Activity 6: Sagittarius

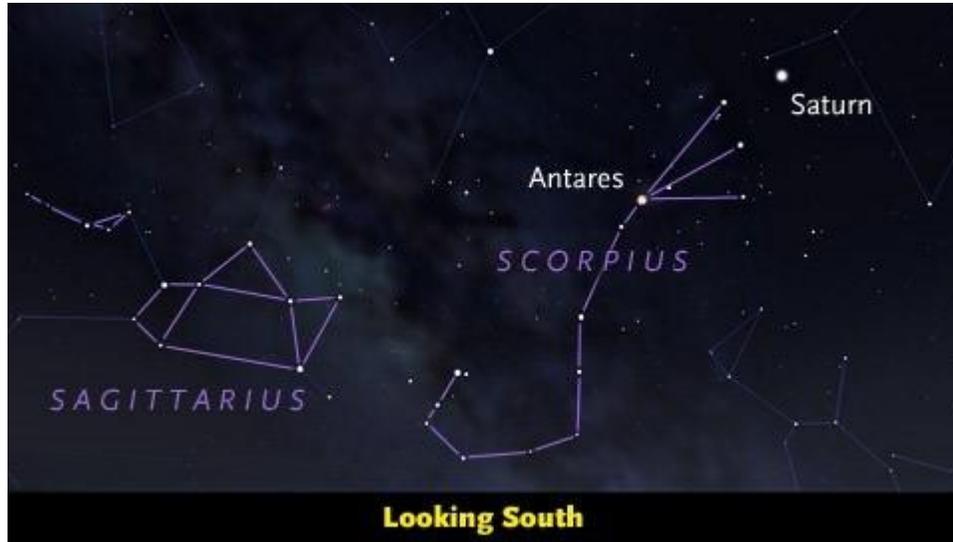
On the extreme southern horizon are two constellations that you may have trouble seeing if you have an extensive tree line or strong light pollution around you. The first constellation to be discussed is Sagittarius or what is referred to as the "Teapot". It is composed of two triangles and two parallelograms. It is made up of bright stars making it easy to find. . If you follow the line from the head of Aquila south to the horizon, you will come to it.



Myth: Sagittarius is said to be a Centaur, (half man/half horse). One must have a good imagination to see this in the constellation. Sagittarius was one of the crew members for the Argo as Jason quested for the golden fleece. Centaurs were known for being excellent archers.

Activity 7: Scorpius

Located next to the “spout” of Sagittarius is Scorpius. This constellation is shaped like a fish hook or the letter “J”. Scorpius is located extremely low on the horizon and is almost due south. Antares, another first magnitude star, is part of the constellation and is the brightest star in this region of the sky.



Myth: Scorpius is a representation for a scorpion. Orion was often boasting how he was the greatest hunter around, “No animal alive could escape or harm him.” Hera placed a scorpion on the path used by Orion. When the hunter went out on the path to go hunting, the scorpion stung him in the heel and killed him.

Activity 8: Ophiuchus (optional)

Ophiuchus is a difficult constellation to see. It is made up of fourth and fifth magnitude stars. The area can be just as known for as void in the sky depending on light pollution in your area. Ophiuchus is found in the area between Scorpius and Hercules. It is a very large constellation with the body made up of triangles and a rectangle. There is also a line of stars that weaves its way across the constellation as well and is sometimes considered its own constellation known as the “Serpens” or the serpent.



Myth: Ophiuchus is another son of Apollo and he was a physician. Ophiuchus was known as a miracle healer and was able to bring people back from the dead. He had discovered a special herb that was brought into his house by a snake. Ophiuchus killed the snake, but the herb that the snake was carrying brought the snake back to life. Hades, god of the underworld, complained to Zeus that Ophiuchus was stealing the dead from the underworld and was thereby making mortals into immortals. This reasoning won over Zeus and he chose to strike down Ophiuchus but placed him in the heavens for his accomplishments.