MARCH 2019

10:00 pm CST on March 1
10:00 pm CDT on March 15
9:00 pm CDT on April 1

To use this chart: hold the chart in front of you and turn it so the direction you are facing is at the bottom of the chart.

- **Bright Stars**
- **Medium Bright Stars**
- **Faint Stars**

Scan dark skies with binoculars:

M-42: The Great Orion Nebula

M-44: The Beehive Cluster

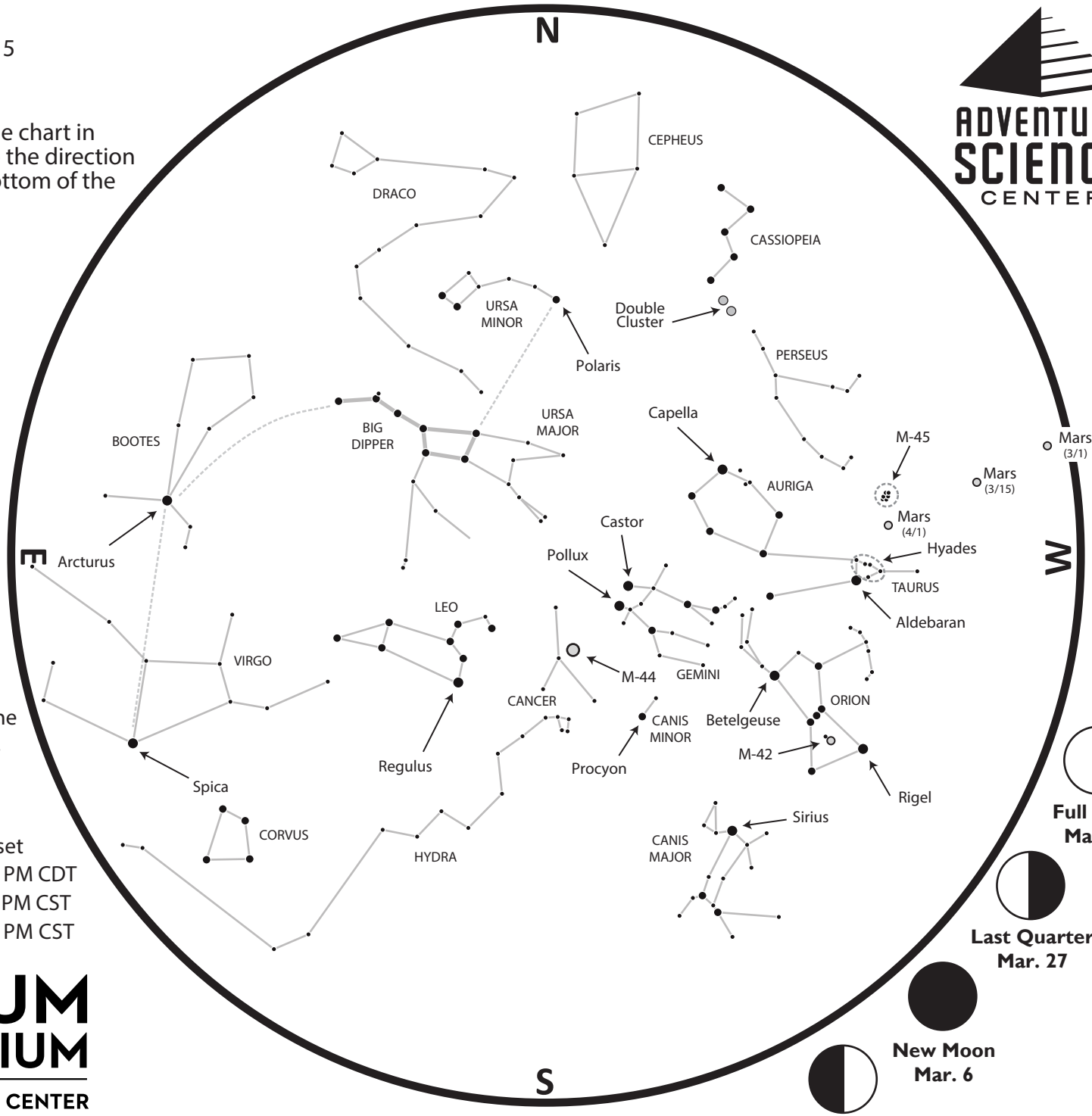
M-45: The Pleiades star cluster

The Double Cluster in Perseus

Spring begins on March 20! The days have been getting longer ever since the first day of winter, and will continue to lengthen until the first day of summer, June 21.

From Nashville:

	Sunrise	Sunset
Mar 1	6:18 AM CDT	5:41 PM CDT
Mar 15	6:59 AM CST	6:54 PM CST
Apr 1	6:34 AM CST	7:09 PM CST



Full Moon
Mar. 20

Last Quarter
Mar. 27

New Moon
Mar. 6

First Quarter
Mar. 14

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March 2019

After Sunset

During the autumn and winter, the **Big Dipper** was buried low to the northern horizon until the wee hours of the morning. As we head towards springtime, it's getting easier to find in the early evening. We can use the stars of the Big Dipper to help us find **Polaris**, the **North Star**. The Big Dipper starts the evening low in the northwest, but will be high enough to easily see by 8 or 9 pm. Use the two stars at the end of the bowl of the Dipper to point you to Polaris. When you face Polaris, you're facing due north.

Polaris is not a particularly bright star, but it does remain fixed in the sky throughout the night and throughout the year. When you face the North Star, you're facing due north. Polaris is at the end of the handle of the **Little Dipper**. This group of stars is officially known as **Ursa Minor the Little Bear**. The Big Dipper is just a part of the constellation **Ursa Major the Great Bear**.

Imagine poking a hole in the bottom of the Dipper's bowl. Where does the water fall? Onto the back of **Leo the Lion**. Look for a backwards question-mark shape representing the head of the lion. The point at the bottom of the question mark is **Regulus**, the regal heart of the lion.

Follow the curved handle of the Big Dipper to trace the 'arc' to **Arcturus**, the orange colored star in **Boötes the Herdsman**. Then speed on to **Spica**, the single bright star in **Virgo the Maiden** low in the southeast. Neither of these constellations has any other bright stars. Even under dark skies away from city lights, it's hard to imagine these mythological figures just by connecting the dots.

High in the southwest you can find the bright stars of the winter evening sky. The most famous and easily found constellation is **Orion the Hunter**. Look for the three stars in a straight line that mark his belt, the two stars that mark his shoulders, and the two stars of his feet. **Betelgeuse**, one of his shoulder stars, is distinctly red in color. Learn to find Orion, and he can direct you to many other sights of the winter sky.

Draw a line from Orion's blue-colored foot **Rigel** up through Betelgeuse, and keep on going until you run into **Gemini the Twins**. The bright stars **Castor** and **Pollux** mark the heads of the twins. Under dark skies you may just be able to pick out two stick-figure bodies leading back towards Orion.

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Follow Orion's belt down and to the left for the brightest star in the night sky, **Sirius**, in **Canis Major the Big Dog**. Follow the belt stars up and to the right to find orange star **Aldebaran**, the eye of **Taurus the Bull**. The face of the bull is a cluster of stars called the Hyades. Along with Aldebaran, the Hyades form a V-shape of stars.

Look just past Aldebaran and you may see a grouping of stars called **M-45**, or the **Pleiades Star Cluster**. With your own eyes, you might just see six stars in the Pleiades. Those with excellent eyesight and dark skies might see seven. Binoculars reveal dozens of stars, while there may be more than a thousand stars in this **open cluster**.

Watch nearby for another orange-red dot in the sky, the planet **Mars**. Mars starts the month directly below the Pleiades as you face west. As the month continues, the red planet moves closer and closer to the Pleiades, making its closest approach around April 1. Compare its appearance to Aldebaran. Mars is fainter, and does not twinkle like Aldebaran and the other stars do.

A Look Ahead

As Earth orbits the Sun throughout the year, the constellations rise and set just a little bit earlier every day. You won't see much difference from night to night, but you will over the course of weeks or months. What we see in today's pre-dawn sky is a preview of the early evening sky in later months. Go out before dawn this month for a look ahead at the summer evening sky.

By morning, our winter constellations have set in the west, and even Leo the Lion is setting along the western horizon. High in the east are the three bright stars that make up the **Summer Triangle**.

Just before dawn, look high in the south for **Jupiter.** To the left and slightly lower is fainter **Saturn**. Brilliant **Venus** is still further left and closer to the horizon.

Venus will stay close to the horizon every morning through the spring, while Jupiter and Saturn will rise earlier and earlier, on their way to becoming a great evening sight during the summer.

Desktop planetarium software like the free, open-source Stellarium (stellarium.org) can show you more precisely where night sky objects will be on any date and time, and help you plan your observing.

From Dark Skies

Bright outdoor lighting can make it hard to see all but the brightest stars. On a clear night, find a dark spot far away from city lights, give your eyes time to adjust to the dark, and look for even more celestial sights.

Just beneath the belt of Orion is a faint patch of light that marks the hunter's sword. This is **M-42**, the **Great Orion Nebula**. A small telescope can reveal the overall shape of the nebula. A quartet of young stars near the center are called the **Trapezium**. These stars formed out of the gas and dust of the nebula.

Look between the constellations Leo and Gemini to find... nothing? Even under dark skies you'll have to look closely to spot the famous but faint constellation **Cancer the Crab,** shaped like an upside-down letter Y. Near the center of the Y is **M-44**, the **Beehive Cluster**. Like the Pleiades in Taurus, this open star cluster is a great target for binoculars.

On late winter evenings the **Milky Way** courses from the south, high overhead through **Cassiopeia the Queen**, and on towards the northwest horizon.

Don't have a telescope? Don't know where to find dark skies? The next free public star party hosted by the Barnard-Seyfert Astronomical Society is scheduled for Saturday, March 16 from 8:00 to 10:00 at **Shelby Bottoms Nature Center.** Come observe the Moon, Mars, the Orion Nebula, the Pleiades, and more through telescopes provided by BSAS members. Dress warmly, in layers!

Visit the BSAS web site at bsasnashville.com for details. If the weather is bad, the star party will be canceled. Make sure to check their web site for updates before making the trip to a star party, especially if the weather is iffy. On the BSAS web site you'll also find driving directions and a list of future events.

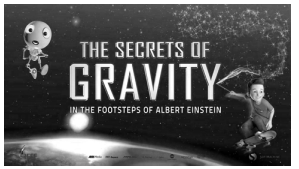
Watch the Clock

For most of the United States, Daylight Saving Time begins at 2:00 am the morning of Sunday, March 10, 2019. Be sure to set your clocks forward one hour before going to bed. Another date to watch for is the first day of spring! The Spring Equinox is on Wednesday, March 20, 2019.

This Month in the Sudekum Planetarium

March 9: Second Saturday

5:30pm Kacey Musgraves: Golden Hour
6:30pm Samskara
7:30pm Michael Jackson
8:30pm Queen
9:30pm Laser '90s



Full schedule at
adventuresci.org/sudekum-planetarium