SEPTEMBER 2026

10:00 pm on September 1
9:00 pm on September 15
8:00 pm on October 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-13: Globular star cluster

M-22: Globular star cluster

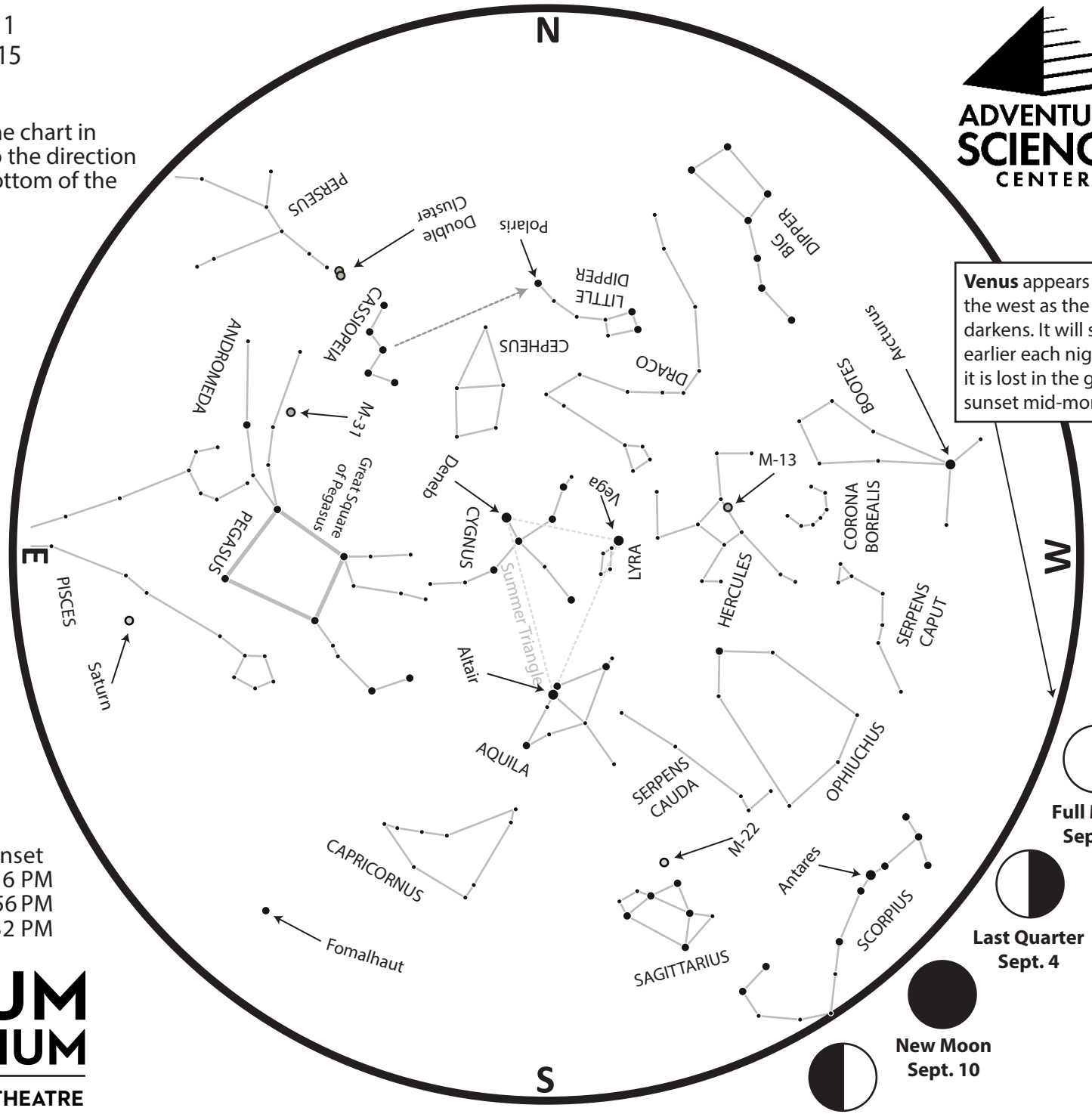
M-31: The Andromeda Galaxy

Double Cluster in Perseus

Autumn is coming! The days are getting shorter and the nights longer. The autumn equinox is on September 23. On this date, the Sun rises due east and sets due west.

From Nashville:

	Sunrise	Sunset
Sept 1	6:18 AM	7:16 PM
Sept 15	6:29 AM	6:56 PM
Oct 1	6:42 AM	6:32 PM



Venus appears low in the west as the sky darkens. It will set earlier each night until it is lost in the glow of sunset mid-month.

Full Moon
Sept 26

Last Quarter
Sept. 4

New Moon
Sept. 10

First Quarter
Sept. 18

ADVENTURE SCIENCE CENTER

SUDEKUM PLANETARIUM

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September 2026

After Sunset

This month is your last chance to see **Venus** in the early evening for a while, but it may be a challenge. Find an area with a clear, low horizon to the west. Venus will appear out of the glow of sunset briefly before setting. Through the month, Venus will set earlier and earlier, making the task of spotting it harder.

Towards the end of the month, wait until the Sun has completely set and try to spot Venus with a small telescope. It will look like a crescent as it begins to pass between us and the Sun. We will next see Venus emerge in the morning skies of November.

Look for a thin crescent Moon near Venus on September 14.

Look low in the northwest for the **Big Dipper**. As famous as the Dipper is, it's not always easily visible from our latitude in Tennessee. In the spring and summer, the Dipper is easy to find shortly after sunset. As we approach autumn, it gradually appears lower to the northern horizon.

The Big Dipper is not officially a constellation; it's what astronomers sometimes call an **asterism**. It's a familiar name for this pattern of stars, especially used by observers in the United States, but it's not one of the 88 constellations recognized by astronomers worldwide. **Ursa Major the Great Bear** is the official constellation here, but you'll need dark skies to see its fainter stars.

Use the two stars at the end of the Dipper's bowl to lead you to **Polaris**, also known as the **North Star**. 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 also officially known as **Ursa Minor the Little Bear**.

Next, turn your gaze high overhead for the three bright stars that make up the **Summer Triangle**. These may be the first stars you see as the sky begins to darken. Each of these stars is part of its own constellation. **Cygnus the Swan**, **Aquila the Eagle**, and **Lyra the Harp** are more easily seen under dark skies.

Low in the southwest is the hook-shaped constellation **Scorpius the Scorpion**. The red star **Antares** marks the heart of the scorpion. This star's name means 'rival of Mars', as its red color nearly matches that of the 'red planet.'

Just to the east of Scorpius is **Sagittarius the Archer**. To ancient civilizations it may have looked like a mythical centaur holding a bow and arrow, but to modern stargazers it looks a lot more like a teapot.

Look low in the east for **Saturn**. Saturn's rings are visible with a small telescope. Saturn will rise earlier every night and will be easily visible at 8pm by the end of the month. Look for a bright full Moon near Saturn on the evening of September 26.

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.

Late summer evenings are great for spotting the **Milky Way** coursing from Sagittarius and Scorpius, through the Summer Triangle and on towards **Cassiopeia the Queen** in the northeast. This hazy band of light is the bulk of our disc-shaped galaxy, as we see it from within.

As you look towards Scorpius and Sagittarius, you are looking in the direction of the dense center of the Milky Way Galaxy. Scan with binoculars or a telescope in this area to find many faint star clusters and nebulae throughout this part of the sky.

Look for the fainter stars of this season's constellations. **Pegasus the Flying Horse**, **Andromeda the Princess**, and the three constellations of the Summer Triangle all become easier to explore.

Near Andromeda, look for **M-31**, the **Andromeda Galaxy.** This massive spiral galaxy is the most distant object visible to the unaided eye, but to find it it requires crisp, dark skies and a little patience. Binoculars or a small telescope can improve the view, but don't expect to see more than a faint, fuzzy, oval blob. If you don't feel impressed, just remind yourself you're looking at the collected light of possibly one trillion stars, all at a distance of 2 million light years away. Now that's impressive!

Early Morning

As the 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 early winter night sky.

In the hours before dawn, Scorpius and most of the Summer Triangle have already set. Meanwhile, autumn constellations such as Pegasus and Andromeda are high in the west. Winter constellations **Gemini the Twins, Orion the Hunter,** and **Taurus the Bull** are high in the east.

Saturn will appear high in the southwest. Meanwhile, high in the east is brilliant **Jupiter**, and just above it is the red planet **Mars**. Look for a thin crescent Moon above Mars on September 6 and above Jupiter on September 8.

Be careful when looking for Mars! There are two red stars up in the morning sky as well. Don't confuse Mars with **Betelgeuse** in Orion, or **Aldebaran** in Taurus.

If you're ever unsure if a point of light in the sky is a star or a planet, look to see if it's twinkling. Stars twinkle; planets usually don't. Planets also look round in telescopes, while stars will remain tiny points in even the best backyard telescopes.

Trying to find Polaris in the morning? You'll have a challenge on your hands if you look first for the Big Dipper: it and the rest of Ursa Major are now hiding low along the northern horizon. Instead, locate W-shaped **Cassiopeia the Queen** high in the sky. The central peak of the W forms an arrow that points you in the direction of Polaris.

How to Use a Star Chart

Newcomers to star charts like this one may quickly notice what looks like a serious error: east and west are labelled backwards! But it's no mistake: remember that this is a map of the sky, not of the ground. Flip it up over your head and look at it from below. The cardinal directions are correct!

If you'd rather not observe while holding a piece of paper over your head, that's understandable. Hold the chart in front of you and face south. The bottom area of the chart features stars that are in front of you. The top of the chart are stars that are behind you, and the center of the chart is straight overhead. Want to look to the west instead? Just rotate the chart in your hands until west is at the bottom.

Our charts are made to show you the early evening night sky. What if you want to get out late at night or in the morning instead? Consider purchasing a planisphere, sometimes called a star wheel. Planispheres are a simple and inexpensive kind of star chart that consists of two disks that rotate on a common pivot. Rotate the disks to set the date and time you want to observe, and you'll see the right set of stars. Different planispheres are made for different latitudes of the Earth. In Tennessee, make sure to find one made for approximately 40° north latitude. You can even print out and make a planisphere at home by visiting:

skyandtelescope.org/astronomy-resources/make-a-star-wheel

You can also buy more durable planispheres online.

One tiny drawback to planispheres: they can't show you where the planets or the Moon are. These objects constantly move through the constellations over days, months and years.

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, from any location on Earth. It's a great way to learn about the night sky before you go out for a look at the real thing!

This month in the Sudekum Planetarium
Judith Payne Turner Theatre

NIGHTWATCH

EXPLORE

TO WORLDS BEYOND
JOURNEY THROUGH THE SOLAR SYSTEM

THE STELLARS
MISSION: GREEN