



# USE A SKY & TELESCOPE SKY CHART TO FIND OBJECTS IN THE NIGHT SKY

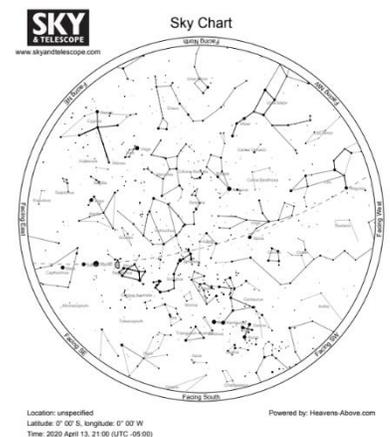
## Overview (Activity Level of Difficulty: Easy)

A “sky chart” is a useful tool to identify stars and constellations in the night sky where you live. Sky charts are used by even the most experienced astronomers.

In this activity, download this FREE sky chart from Sky & Telescope. The Sky Chart can set to your specific viewing location and viewing time. Use the sky chart to identify and find stars and constellations in your night sky.

## What You Need

- A “Sky Chart” from Sky & Telescope’s website for the location, date and time that you plan to view the stars:
  - Visit <https://skyandtelescope.org/interactive-sky-chart/>
  - Enter information for your location and the date and time you expect to use the chart
  - Print the chart so that you can take it outside with you
- A flashlight to read the sky chart (a red light is preferable)
- Optional: A compass to help you find North



## What to Do

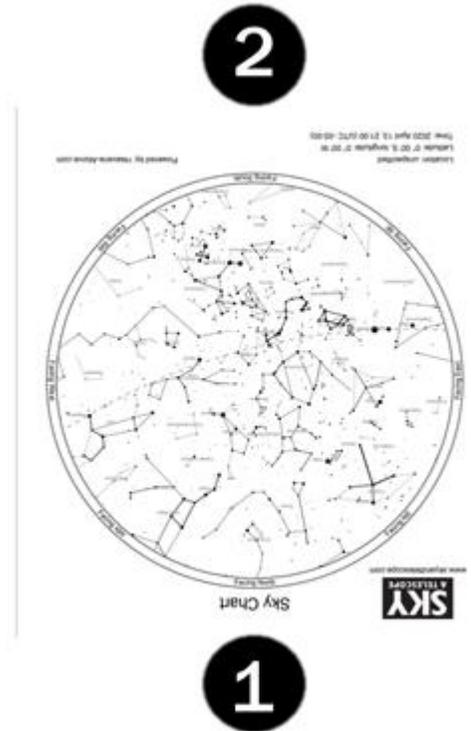
1. Check outside to make sure the skies are relatively clear (few, if any clouds)
2. Confirm that you have the correct sky chart:
  - a. The “date and time” on your sky chart matches your expected viewing date and time (Don’t worry if your actual viewing date is a few days different but make sure the viewing time is a close match)
  - b. The “location” for the sky chart is accurate for where you plan to view stars
3. Go outside with your charts and tools for the location, date and time entered on the sky chart
4. Find your darkest location for viewing the night sky. The best location will have:
  - a. No buildings or trees blocking your view of the horizon
  - b. No porch lights or streetlights that you can see
5. Find North:
  - a. If you have a compass, use your compass to find North
  - b. If you do not have a compass, face the direction of where the Sun set. Once facing the direction of sunset, turn a quarter turn to your right and you will be facing an approximate North.



INTERNATIONAL DARK-SKY ASSOCIATION

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6. Orientate your sky chart by doing the following:
  - a. Find the Sky & Telescope logo on the chart
  - b. Holding the sky chart in front of you, rotate the chart so that the Sky & Telescope logo is nearest the ground (see #1 in illustration to right)
7. Hold your chart in front of you with both hands:
  - a. With the Sky & Telescope logo nearest the ground as shown in illustration to the right as #1, use your thumb to cover the words "Facing North"
  - b. With your other hand, grasp the side of the chart opposite of the Sky & Telescope Logo (see #2 in illustration to the right). Use your thumb from that hand to hold the side with the words "Facing South".
  - c. By holding the chart with both hands, your chart will straighten out and be easier to read.
8. Continuing to hold the chart in front of you with both hands as noted above:
  - a. Face the direction of North
  - b. Look above you at the night sky
  - c. Continuing to face North and holding the chart with both hands, raise the chart directly above you so that you are looking up at the sky while also looking at the chart.
9. Your chart is now ready to use:
  - a. The stars and constellations above you will match what you see on the chart.
  - b. The dashed line called the "ecliptic" that traces across the chart is the Sun's path during the day. This is where the planets and Moon will be at night, if they are available



## Did You Know

As the Earth travels around the Sun and rotates as part of our day/night cycle, the stars rise four minutes earlier each night. This slight shift in the night sky each evening may not seem like much but will cause the sky above us to completely change with every change season.

Learn more: <https://www.space.com/10821-night-sky-changing-seasons.html>

## More Resources

- Visit <https://skyandtelescope.org/> to learn more about viewing the night sky.
- Download another popular sky chart from [www.skymaps.com](http://www.skymaps.com)