

Getting to Know the Night Sky

“The beauty of the [sky] at night ... becomes all the more arresting when we awaken to its vast depths and the wealth of things it holds.”

Timothy Ferris, in the book *Seeing in the Dark* (2002, Simon & Schuster)

Getting Started

Few city-dwellers get to see the splendor of the night sky, owing to light pollution, so it helps to find a safe, comfortable spot away from city lights—such as a park or campsite. Organized "star parties" also provide excellent opportunities for stargazing: [find astronomy clubs in your area, or check in Astronomy or Sky & Telescope magazines](#) for lists of annual star parties held nationwide. Bring warm clothing, a star chart, and a red-light flashlight. Folding chairs can help you stay comfortable while scanning the sky.

Once at an observing site, turn off all lights and give your eyes 20 minutes to become adapted to the dark. Use your star chart to get oriented, starting with the brightest stars, and as your eyes adjust you'll find you can see many more stars. Trace a few constellations: Most people do this by "star hopping"—finding one bright pattern, such as the Big Dipper, then branching out from it to other bright stars and constellations in short hops. Few astronomers know all the constellations: Your aim is just to make a few friends among the stars, and to soak in the beauty of the night sky. If you care to learn more, the [web links](#) and [books](#) in our resources section can lead you to guides that will further familiarize you with the sky.

In addition to the stars, you may see the brief flash of light given off by a meteor or the slow progress across the sky of an artificial earth satellite. (Satellites are seen mostly just after dark or before dawn, when the landscape is in shadow but the sun still illuminates objects in orbit.) Also there may be a bright planet or two, along the ecliptic. Unlike stars, planets change their position in the sky from night to night (the word "planet" means "wanderer"), so the star charts found in books don't show them—but the computer-generated [star chart](#) on this website does.

If you're using binoculars, print out a couple of constellations using the binocular-view feature of our star chart. You might also like to watch the [video on using binoculars](#) on this site. Many beautiful sights in the sky, in particular the spectacular starfields found along the Milky Way, can be seen to best advantage through binoculars. Generally speaking, large binoculars are better for stargazing than small ones, since they gather more light, but they should be light enough so your arms don't get tired as you scan the sky.

If you get serious about astronomy, you may eventually want to buy a telescope. Our advice is to attend a star party held by your local amateur astronomers if you can: That way you can try out several different sorts of telescopes and get a sense of what might work best for you. Often the best way to start is with a small, portable telescope that you

can take with you on trips and use close to home without having to lug a lot of gear around. For more, see our ["how to" videos on choosing and using a telescope](#).

In buying a telescope, the key factor is the aperture (the diameter of the light-collecting lens or mirror). The magnification (or power) is secondary, and can be changed by using different eyepieces. Don't expect to see the kinds of images in your telescope that we have in our [photo gallery](#) or on the show. Those pictures were taken with a camera and by collecting light for a much longer time than a glimpse through a telescope. Still, there is nothing like seeing the rings of Saturn or a jewel box of stars glittering through a telescope.

Astronomy is the oldest science and stargazing perhaps the oldest human hobby. No matter how you stargaze and with what equipment, you will be struck by the grandeur and beauty of the sky—just as our ancestors were.