

little bugs club



Studying the Night Sky

Stars and Constellations

One of the best things to do on a clear night is to go outside and take a look at the stars. With so many billions of stars to view, there is always something new to learn about the night sky.



Stars

Stars are large, dense balls of gas and dust reacting together and releasing intense amounts of light and heat. From Earth, we can see groupings of stars called constellations. These constellations often have ancient stories attached about how they got their names.



Planet Facts

- Jupiter has 63 moons making it the planet with the most moons!
- Mars is the planet with the tallest mountain. Its Olympus Mons is 3 times taller than Mt Everest and is roughly the size of Arizona!



The Milky Way

Our solar system is a part of the Milky Way. The Milky Way is a large, spiral galaxy. Just as we orbit the sun, our solar system orbits the center of the Milky Way - it takes 250 million years for our solar system to travel all the way around the Milky Way.



Sighting Stars

Stars in the northern sky do not rise or set – instead, from our point of view, they seem to slowly turn counterclockwise around Polaris, the North Star, which seems to stay in the same place in the sky no matter what time of night or season of the year.

View upcoming events!

<https://rockledgegardens.com/little-bugs-club/>

Take a look below to see how you can make your own star finder!



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Studying the Stars

The Study of Astronomy

Astronomy is the study of celestial objects (planets and stars), and phenomena (northern lights and meteor showers). People have been studying the skies for hundreds of years - naming constellations, discovering new stars, and learning more about the origin of the universe. One way you can enjoy studying the night sky is by making your own Star finder!



Star finder Instructions

- Print and cut out both sheets. For the sky map (Part 1), trim away the gray corners so that you're left with a circle 8 inches across. For the outer sleeve (Part 2), make sure you keep the large white rectangle at the bottom; also, cut out the white oval in the middle.
- To make a Star Wheel, fold back the white rectangle at the bottom of the outer sleeve so it's underneath the front. Then staple the rectangle to the front at the locations marked by short white lines to either side of the oval. Now slip in the circular sky map so it shows through the oval.



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Studying the Stars

Figuring out how to properly use your Star finder may seem tricky, but is actually pretty easy. Take a look below to learn how to read and use your newly-made Star finder!



Using your Star finder

- Pick the date and hour you want to observe, and set the Star Wheel so this date (on the rim of the circular disk) matches the time indicated along the edge of the outer sleeve. Use white hours when standard time is in effect and orange hours when clocks are set for daylight-saving (summer) time.
- The Star Wheel's large oval shows the whole sky, and the oval's curved edge represents the horizon you're facing. Once outside, hold the Star Wheel out in front of you and look at the yellow "Facing" labels around the oval. Turn the entire Star finder so that the yellow label for the direction you're facing is on the bottom, with the lettering right-side up. If you're unsure of your directions, just remember where the Sun sets; that's west!
- Now the stars above the map's horizon should match the real stars in front of you. Remember that star patterns will look much larger in the sky than they do on the map. The farther up from the edge of the oval the stars appear, the higher up they'll be shining in your sky. Stars in the center of the oval will appear directly overhead.
- To find the North Star: Begin by locating the Big Dipper. This giant spoon is actually part of a larger constellation called Ursa Major, the Great Bear. Find the two end stars in the Dipper's bowl – look opposite the handle. They're known as the "pointers." Why? Because a line drawn between them and extended away from the bottom of the bowl leads you to Polaris, the North Star. Now that you know how to find Polaris, you also know how to find due north no matter where you are in the Northern Hemisphere!

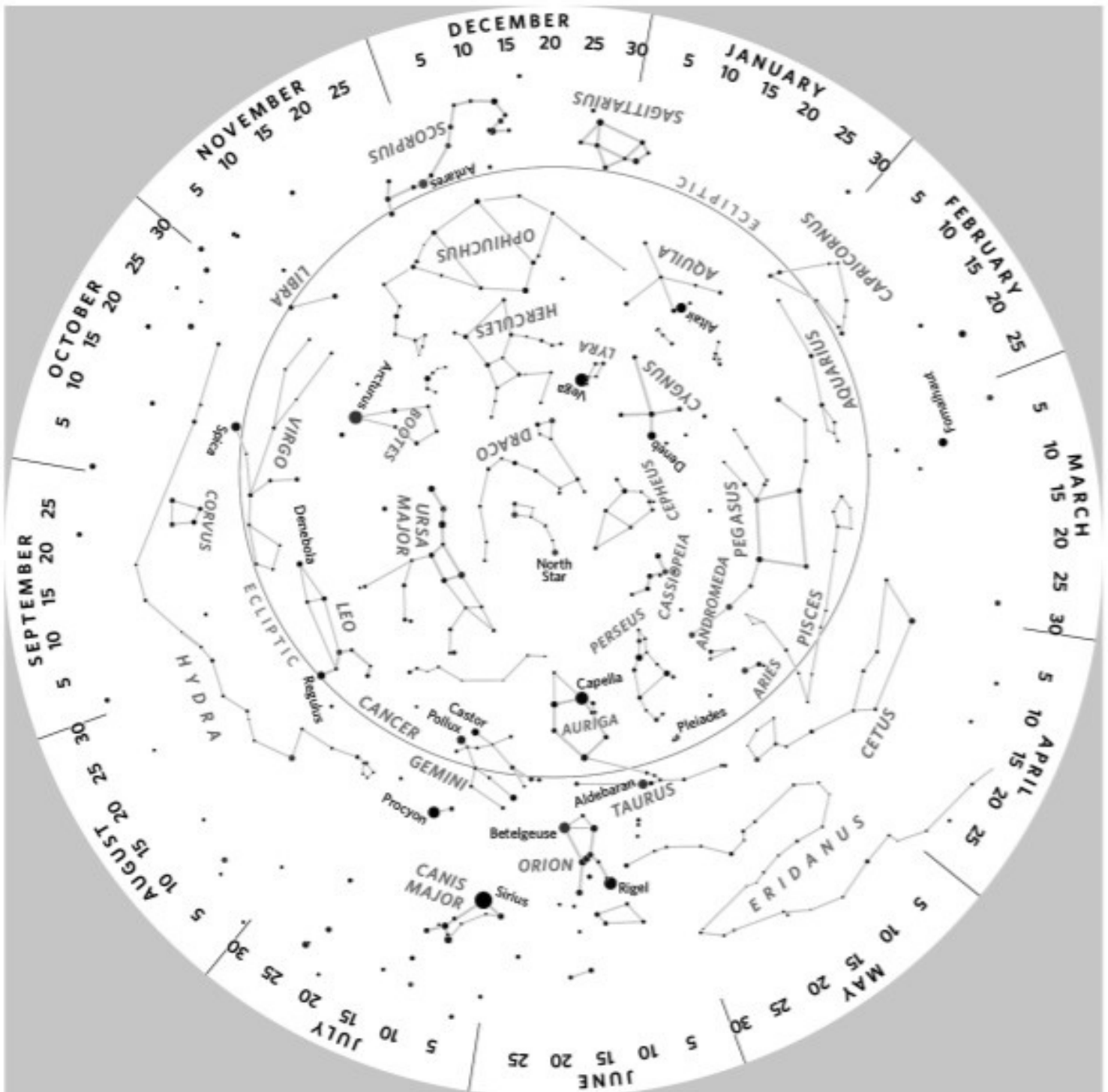


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