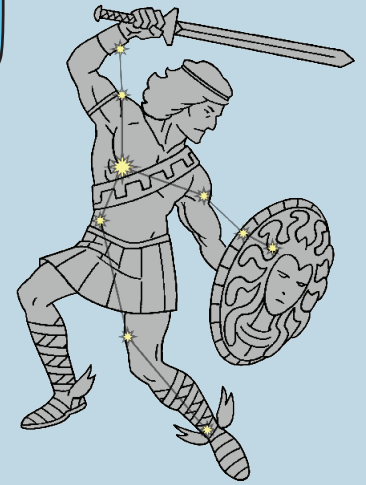


Go Stargazing

What You'll Need:

- Adult helper
- Lawn chair or picnic blanket (optional)
- Binoculars or telescope (optional)
- Bug spray (optional)
- Constellations book or field guide (optional)
- Flashlight (optional)
- Red cellophane (optional)



What to Do:

Stargazing is a free, rewarding activity that you can start tonight—assuming the clouds cooperate. It always helps to do a little prep work first. Check the weather to make sure the sky is clear. Then choose a good spot outside. It should provide a nice view of the sky, without obstacles like trees or houses in the way. It should also be as far from any light sources as possible. Lights make it harder to see the stars; this is called “light pollution.” You might want to set up a lawn chair or lay a picnic blanket on the ground for comfort.

If you have binoculars or a telescope, get it ready. Practice; make sure everyone knows how to use it. If you expect bugs to be a problem, consider having bug spray on hand, as well. For added enjoyment, bring along a book about constellations. Of course, you’ll need a flashlight to read it, but you can avoid creating light pollution by using a red bulb or a red filter—which you can create by covering the light with red cellophane. (Red light won’t noticeably affect your night vision.)

When it’s dark outside, find your spot and get started. Make sure everyone is dressed comfortably, so there’s no need to rush.

1. The Moon

Begin by observing the moon. It is especially rewarding when viewed with binoculars or a telescope. For the best view, observe when the moon is in its first-quarter or third-quarter phase, and look at the “terminator” (the area where the moon goes from bright to dark). There, you can see the most detail.

NOTE: It’s fun to look at a map of the moon ahead of time to get an idea of where astronauts have been. Google Moon (google.com/moon) is great for this.



The moon through a small telescope

2. The Planets

Next, look for the brightest stars in the sky. Sometimes, those “stars” may not be stars at all; you might be seeing other planets. (Learn more at stardate.org/nightsky/planets.) Venus, Mars, Jupiter, and Saturn look like bright, unblinking stars. Through binoculars, you can see each planet’s color more clearly, and you might see other objects, like Jupiter’s moons. Through a telescope, you can see Jupiter’s bands, Saturn’s rings, Mars’ famous red color, and Venus’s phases. If you’ve never seen the planets with your own eyes, it’s amazing once they come into focus for the first time.

The other planets are trickier to spot and might require more advanced gear and/or perfect viewing conditions.

Continued on the next page.



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3. Constellations

When you're ready, look for a few constellations. The easiest ones to locate vary by time of year. A few suggestions and simple instructions are provided for you on the next page.

Bonus Activities

See the International Space Station: NASA runs a website called Spot the Station (spotthestation.nasa.gov). There, you can plug in your zip code to find sighting opportunities for the space station, including when to look, how high up in the sky, and in what general direction. The station looks like a very bright star that moves quickly across the sky.

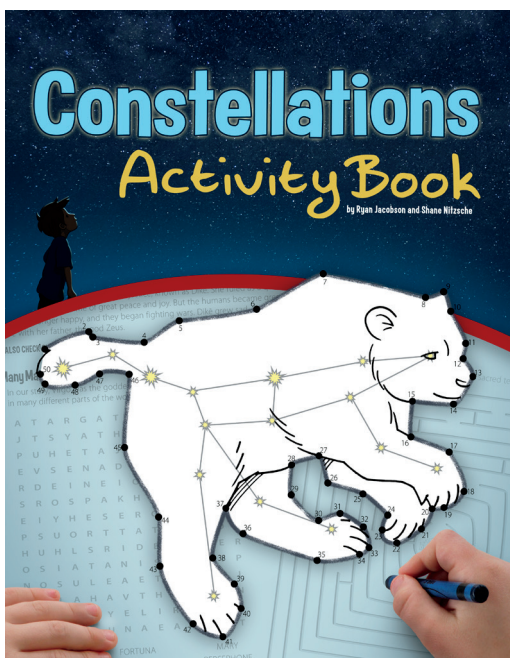
Take Photographs: You can snap some pretty great photos by holding a phone's camera lens over an eye-piece of a telescope or binoculars. If you really get into it, there are smartphone adapters intended to make it easier to get better shots.

Use Stellarium: This virtual planetarium is free and can be downloaded at stellarium.org. Enter your location to find when—and in which direction—the moon, planets, and constellations will be visible.



The International Space Station overhead

Fun and Learning Are in the Stars!



Stargazing is a fascinating hobby that parents and children can share. Introduce kids to 26 of the most interesting and well-known constellations through dot-to-dots and other creative activities. Then head outside to find those interesting characters in the night sky. Can you spot Orion's belt and Scorpius's tail?

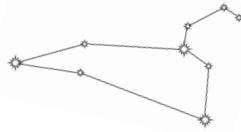
BOOK FEATURES

- 26 constellation dot-to-dots
- Mazes, word finds, and many more great activities
- Easy-to-follow instructions for finding the constellations
- The mythology behind each constellation
- Flash cards to help learn the constellations by sight

Spring Constellations (at 10 p.m.)



Ursa Minor (the Little Bear)
Face north.
Look high in the sky.
Any month of the year.



Leo (the Lion)
Face south.
Look almost straight up.
March–April.



Ursa Major (the Great Bear)
Face north.
Look almost straight up.
March–May.

Summer Constellations (at 10 p.m.)



Hercules (the Hero)
Face south.
Look almost straight up.
June–July.



Sagittarius (the Archer)
Face south.
Look low in the sky.
June–September.



Cygnus (the Swan)
Face north.
Look almost straight up.
August–September.

Fall Constellations (at 10 p.m.)



Pegasus (the Winged Horse)
Face south.
Look almost straight up.
September–October.

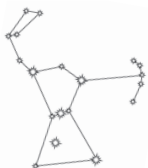


Andromeda (the Princess)
Face north.
Look almost straight up.
October–November.



Cassiopeia (the Queen)
Face north.
Look high in the sky.
October–December.

Winter Constellations (at 10 p.m.)



Orion (the Hunter)
Face south.
Look high in the sky.
December–February.



Canis Major (the Big Dog)
Face south.
Look low in the sky.
January–February.



Gemini (the Twins)
Face south.
Look almost straight up.
January–February.