

Enjoying Your New Telescope

1. First determine your targeted object. Any bright object in the night sky is a good starting point. One of the favorite starting points in astronomy is the moon. This is an object sure to please any budding astronomer or experienced veteran. When you have developed proficiency at this level, other objects become good targets. Saturn, Mars, Jupiter, and Venus are good second steps to take. **As a reminder, the moon is best viewed with the 20mm lens due to the closeness to the earth.**
2. The first thing you need to do after assembling the telescope as planned is center the desired object in the Finderscope's crosshairs. Provided you did a reasonable job aligning the Finderscope, a quick look through the main telescope tube with the low power (20mm) lens should reveal the same image. With the lowest power eyepiece (the one with the largest number printed on it) you should be able to focus the same image that you saw through the Finderscope. Avoid the temptation to move directly to the highest power. The low power eyepiece will give you a wider field of view, and brighter image—thus making it very easy to find your target object. At this point with a focused image in both scopes, you've passed the first obstacle. If you don't see an image after attempting to focus it in, you might consider aligning your Finderscope again. Once you pass this step, you will enjoy the time spent ensuring a good alignment. Every object you center in the Finderscope will be easily found in the main telescope tube, which is important for continuing your exploration of the night sky.

3. The low power eyepieces are perfect for viewing the full moon, planets, star clusters, nebulae, and even constellations. These should build your foundation. However, for more detail, try bumping up in magnification to higher power eyepieces on some of these objects. During calm and crisp nights, the light/dark separation line on the moon (called the "Terminator") is best viewed at **high power**. Similarly, you can move up to higher magnifications when viewing the planets and nebulae. Due to their distance and limited brightness, star clusters and individual stars are best viewed through the low power lens.

4. The recurring astronomical theater we call the night sky is an ever-changing billboard. In other words, the same movie doesn't play all the time. Rather, the positions of the stars change not only hourly as they seem to rise and set, but also throughout the year. As the earth orbits the sun our perspective on the stars changes on a yearly cycle. The reason the sky seems to move daily just as the sun and the moon "move" across our sky is that the earth is rotating about its axis. As a result you may notice that after a few minutes or a few seconds depending on what power lens you are using, the objects in your telescope will move. At higher magnifications you will notice that the **planets** and **stars** will "race" right out of the field of view. To compensate, just move your telescope to "track" it in the necessary path.