How To Use Your Telescope To Bring The Unseen Into View

Telescopes can help you to see far off objects. The distance is determined by the type and quality of your telescope. Of course, a toy store telescope will not be able to put into view the same objects as the Hubble Telescope can. Somewhere in the middle is a modest, but good-working telescope for the amateur astronomer. To see how this viewing tool works, you must understand something about the eye, particularly about the retina. There will always be things you cannot see from far away. You must ask yourself why you cannot see them. There are two main reasons. One reason you have trouble seeing objects that are far from you is that not enough light from the object reaches your eye. When the item is shrouded in darkness, it is hard to make out. The other reason is that the object takes up so little space on your retina that it is impossible to get a clear picture of it. Therefore, the goals of the telescope are to focus more light on the retina, and to make a larger image of the object strike the retina. That way, it will stand out in a way that will let you examine the item clearly. Two main types of telescopes have been made to accomplish these purposes. The refractor telescope is one type, and it uses an objective lens. The other type is a reflector telescope, which uses a primary mirror. In either case, the lens or mirror brings together plenty of light from the faraway object you are trying to study. It further focuses that light and the image it creates into a sharp point. That is just one part of the process. If that was all that the telescope did, you would not be able to see anything more than a piercing stream of light. However, an eyepiece lens will solve this problem by magnifying this point of light. It will then be spread out over a much larger portion of the retina than it originally had been. This is how the image goes from being difficult to spot to seeming big enough to study easily. There are a couple of properties that a telescope has that can help you see into the distance. The aperture is one. This is the diameter of the lens or mirror. A lens or mirror with a larger aperture is likely to gather more light and give you a brighter, clearer image. Magnification allows the telescope to take the focused image and enlarge it. You can use different eyepieces on any telescope to get more or less powerful magnification. This gives you the freedom to change your telescope to suit your needs. At the same time, it does not affect the basic usefulness of your telescope. By knowing how a telescope works, you can be aware of what parts might need to be replaced on your telescope if the time comes. You can also make it a part of your study to learn the wonders of man's explorations of the night sky.

About the Author

Gregg Hall is an author living with his 18 year old son in Jensen Beach, Florida. Find more astronomy as well as telescopes at http://www.nsearch.com