

# Parts of a Telescope



There are several parts of a basic optical telescope. In general, the parts of a telescope consist of an optical tube assembly, the objective and secondary lenses, and the eyepiece. In more advanced telescopes a focuser, finder, Barlow lens, mount, and tripod can be added.

The **objective lens** is the optical element that gathers light from the object being observed and focuses the rays to produce an image. Objectives can be single lenses, mirrors, or a combination of several optical elements.

The **secondary lens** is designed to be used in conjunction with another lens. It can be used in front of the primary lens, between it and the subject, or behind the primary lens, between it and the film.

The **eyepiece** is a lens attached closest to the human eye and is placed at the focal point of the objective to magnify the image for ease of viewing.

The **focuser** is meant to allow the viewer to bring the image in to its sharpest focus for each user. The finder enables the user to track down objects in space. Without the finder it would make it almost impossible to find objects that are long distances away. It is attached to the side of the main telescope.

The **Barlow lens** is an extra lens that can be placed between the focuser and the eyepiece. It increases the focal length of the telescope and increasing the magnification of a telescope by 2-5 times. The mount is the part of a telescope that holds the telescope in place.

**There are two types of mount** the alt-azimuth and the equatorial. A tripod is pretty self explanatory. Its main functions are to hold the telescope steady during observation and to raise the telescope to a comfortable viewing height.

The basic parts of the telescope have not changed since the invention of the spyglass. The complexity has increased over the centuries, but all telescopes contain the same parts in varying degrees of technological advancement. Jerry Coffey