

Introduction to Telescopes

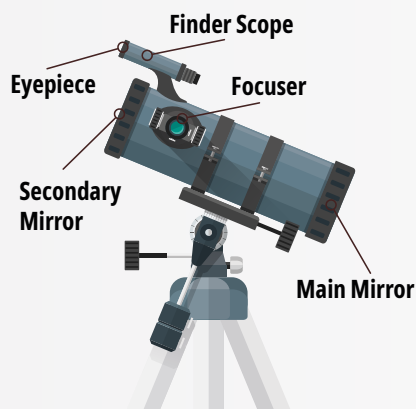


Telescopes come in many different designs, sizes and systems. For the beginner astronomer it is often no easy task choosing the right model. An experienced astronomer once said: „Every telescope has its sky“. Let's learn a little bit about telescopes to find the right one for you!

How does a telescope work and what types of telescopes are there?

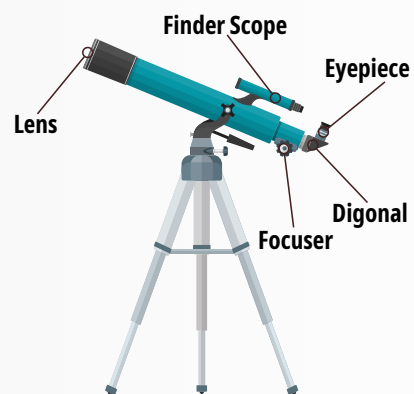
Reflector telescope (reflectors)

- > The eyepiece is on the side, so you look in from the side.



- > The telescope is usually thicker or larger.
- > The image is always upside down and mirror-inverted.
- > The light is reflected by a mirror inside.
- > There are two mirrors: the main mirror and the secondary mirror.
- > The main mirror is located in the rear part of the tube and focuses the light.
- > The secondary mirror directs the focused light to the eyepiece.
- > There are different designs, such as the Newtonian telescope or the Dobsonian telescope.

Refracting telescope (refractors)



- > The telescope usually consists of a single lens, usually made up of two lenses separated by an air gap (achromatic lenses).
- > The eyepiece is located at the rear end of the telescope, so you look into the telescope from behind.
- > The telescope is often longer and narrower.
- > The lens collects the incoming light and focuses it at the focal point.
- > An eyepiece at the focal point magnifies the image.
- > The distance between the lens and the focal point is called the focal length.
- > Most useful for beginners.

Did you know that reflecting telescopes are also called „Newton“? After the inventor's name is Isaac Newton!

Did you know that it is much more difficult to make a large lens? That's why you often find larger reflecting telescopes than lens telescopes.



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