

Name _____

Unveiling the Secrets of Telescopes: How They Work

Short Answer Key

1. The focal length of a telescope determines its magnification, with longer focal lengths resulting in higher magnification and vice versa.
2. An advantage of refracting telescopes is their suitability for observing planets and the Moon due to their design. An advantage of reflecting telescopes is their ability to gather more light, making them suitable for deep-sky observations like galaxies and nebulae.
3. Telescopes are vital tools in astronomy because they enable the exploration of the cosmos, the discovery of celestial objects, the study of space phenomena, scientific research, and educational outreach.
4. The basic steps in the operation of a telescope include light collection, focusing, magnification, and observation.
5. An example of a significant astronomical discovery made possible by telescopes is the identification of exoplanets, planets orbiting stars outside our solar system, which has expanded our understanding of the diversity of planetary systems.

