

## SECTION OVERVIEW

### 11.10: Geometric Optics and Image Formation

This chapter introduces the major ideas of geometric optics, which describe the formation of images due to reflection and refraction. It is called “geometric” optics because the images can be characterized using geometric constructions, such as ray diagrams. We have seen that visible light is an electromagnetic wave; however, its wave nature becomes evident only when light interacts with objects with dimensions comparable to the wavelength (about 500 nm for visible light). Therefore, the laws of geometric optics only apply to light interacting with objects much larger than the wavelength of the light.

#### 11.10.1: Prelude to Geometric Optics and Image Formation

#### 11.10.2: Images Formed by Plane Mirrors

#### 11.10.3: Spherical Mirrors

#### 11.10.4: Images Formed by Refraction

#### 11.10.5: Thin Lenses

#### 11.10.6: The Eye

#### 11.10.7: The Camera

#### 11.10.8: The Simple Magnifier

#### 11.10.9: Microscopes and Telescopes

#### 11.10.E: Geometric Optics and Image Formation (Exercises)

---

This page titled [11.10: Geometric Optics and Image Formation](#) is shared under a [CC BY 4.0](#) license and was authored, remixed, and/or curated by [OpenStax](#) via [source content](#) that was edited to the style and standards of the LibreTexts platform.