

# Grade 6

## Scope It Out!



Many events in nature pass unnoticed because their scale is either too big or too small to be observed with just our eyes. As early scientists investigated the properties of light, they discovered light could be manipulated to “see” objects that were previously invisible to the human eye by changing the direction of light before it reached the observer’s eye. The development of the telescope gave humans the power to explore a new world in the vastness of space. Soon, it was discovered that a miniature world of microorganisms, such as bacteria and protists existed here on Earth just past the resolving power of the human eye. To observe this world, the magnifying power of a microscope was needed.

To make good microscopes, scientists had to understand the properties of light and lenses, and how they worked together as a system. In this learning experience, students will begin their exploration of microscopy in the same way the early explorers began—by studying the properties of light and lenses. Understanding the properties of the parts of optical systems can help students understand how and why tools such as microscopes and cameras function. Students also investigate the eye as a most important optical system, because, without functioning vision, other optical systems cannot be used or appreciated.

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