

Magnification vs. Resolution

There is a common belief that if you have more magnification, you can see more. This common misconception is held among many people that are purchasing a variety of optical instruments, including binoculars, telescopes, and microscopes. Higher quality optical instruments will have higher resolution, and therefore allow you to “see” more. Below is an illustration of this idea.

High magnification, low resolution



Lower magnification, higher resolution



When you purchase higher quality optics, you can see more detail, much of which comes from resolution, not magnification. Better optics are the result of better/purer glass and better coatings of the lenses. As your father probably told you, you get what you pay for.