

Observation Tools

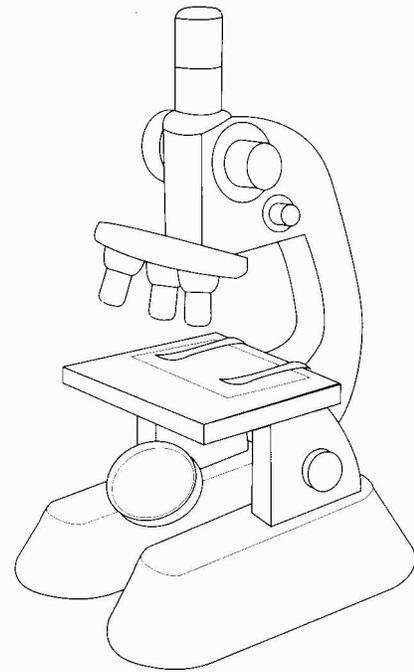
A **hand lens** is useful for looking at details on small objects like rocks, leaves, and insects. Most hand lenses magnify objects from two to ten times.

A **compound microscope** is used to view objects that are too small to be seen with a hand lens. A compound microscope uses two lenses to magnify objects. One lens, called the eyepiece, is the lens you look through. The eyepiece magnifies objects 10 times. A second lens, called the objective lens, magnifies the object even more.

Total magnification equals eyepiece magnification \times objective lens magnification. Let's say you use the 10X objective lens. In this case, total magnification would be $10X \times 10X$, or 100X. So together, these lenses make an object appear 100 times larger than it does without the microscope.

Telescopes are used to view distant objects. Some telescopes use only lenses to magnify distant objects. Others use a combination of mirrors and lenses.

Cameras can be used to collect moving or still images of objects. **Sound recorders** can be used to record sounds made by objects, like the songs of a whale. The images and sounds can be kept for later study.



Identify the tool you would use to make each observation.

- _____ crater on the moon
- _____ roar of a lion
- _____ an insect's wings
- _____ microbes in pond water
- _____ stages of an insect's life cycle