

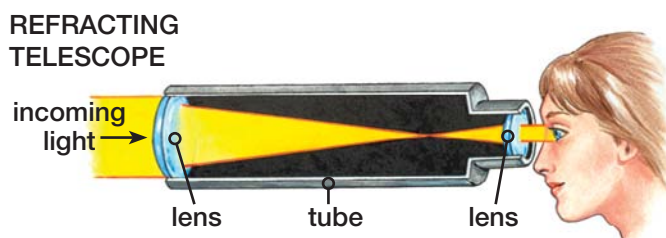
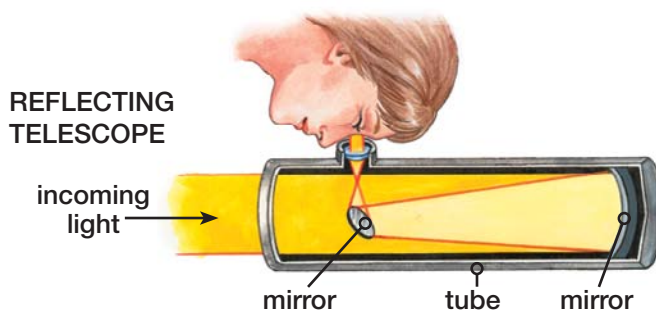


An astronomer is a scientist who studies stars and other things in the sky. When we use just our eyes to see stars and planets, they look like small dots of light. They are too far away for us to see any details, such as mountains, seas, or craters.

Astronomers see details on distant objects in space by using a telescope. Telescopes use special lenses and mirrors to gather light from an object and magnify its image.

There are two main kinds of light telescopes. Refracting telescopes use lenses of solid glass. These lenses bend (refract) and focus light. Many refracting telescopes use both concave and convex lenses. Concave lenses curve inward, while convex lenses curve outward.

A refracting telescope is usually made of a long tube. It has a big lens at the front and a smaller lens at the back. The lenses



Both kinds of telescopes focus light to our eyes so we can see more details on distant objects.



It takes many scientists to build a large telescope mirror.

work together to magnify the image and focus the light to your eye. The tube holds the lenses the right distance apart, and it keeps out dust that might blur the image. Both lenses are fairly small.

Reflecting telescopes use mirrors instead of lenses. Mirrors can be made much bigger than lenses. For this reason, these telescopes are more powerful than refracting telescopes. They can gather more light than a smaller lens can.

Scientists keep working on designs for new, bigger telescopes. The bigger the telescope, the more details they will be able to see on objects in space.

✓ Brain Check

- How does a refracting telescope work?
- How does a reflecting telescope work?
- Which kind of telescope can see more-distant objects, and why?