Depth Perception

Try It Out

Choose one of the picture cards and slide it in the holder on the end of the looking device. Line it up so one picture is on each side of the divider running down the middle. Take a look through the lenses. Relax and let your eyes adjust. What do you notice about the picture?

Two copies of the same picture? Take a look at how close the line of statues in the distance is compared to the statue in the foreground.

What's Going On?

Depth perception is the ability to see things in three dimensions (3D), and to judge how far away an object is. For accurate depth perception, you generally need to have binocular (two-eyed) vision. Our two eyes see an object from slightly different angles and our brain compares and processes the two sets of information to form a single image. The looking device uses two pictures of the same thing taken from slightly different angles to produce this 3D effect.

Why Does It Matter?

Predators (including humans) evolved to track prey, especially at night, while looking through leaves and grass. This is easier with good depth perception and binocular vision. Binocular image processing in our brains also allows us to benefit from 3D videos and virtual reality technology, which is fun and has many practical uses. One example is to help people with autism learn social skills in a non-threatening environment.

Wonder While You Walk...

People who are blind in one eye still have the ability to perceive depth. How?