

# Corner Reflector

*This reflector has you cornered: it always sends light back in the direction from which it came.*

## Try this:

- Shut one eye. Stare at the corner where the three mirrors join. Move your head and notice that the pupil of your open eye always falls at the corner, no matter where you move.
- Open both eyes. The corner will appear closer to the stronger, or more dominant, of your two eyes.
- Notice that your image is upside down. It's also reversed from the normal mirror image. That's because you are seeing the reflection of a reflection of a reflection.

## What's going on?

This reflector bounces light from mirror to mirror until the light reflects back parallel to the direction from which it came. If you were to shine a thin beam of laser light at the outside edge of one of the mirrors, it would bounce around until it reflected away parallel to the original beam, but moved over a bit. The closer you shine the light to the corner where the mirrors meet, the closer the reflected beam will be to the original beam.

For you to see your own eye in the mirror, your eye must intercept the reflected beam. But the only beams that your eye is in position to intercept are the ones that bounce off the mirror right near the corner—those are the only beams returning close to their original path. Since those are the only beams you can see, your eye always appears to be in the corner, no matter where you move.

## So what?

Corner reflectors come in handy whenever you want to reflect light directly back to its source. Reflectors on cars, bicycles, and highway markers are often made of many little corner reflectors. When a car's headlights hit these reflectors, the light reflects back to the driver.