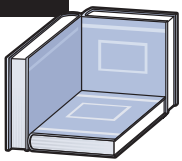
Try This

Strange reflector

In this experiment, you will make a "corner reflector," which does some surprising things.

You'll need

- Several encyclopedias or other heavy books
- Paperback books
- Small rubber ball
- Two small, flat mirrors
- Flashlight
- Masking tape
- Adult helper

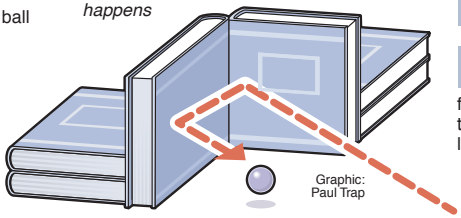


1 Lay an encyclopedia on a smooth floor and stand up two more books touching it

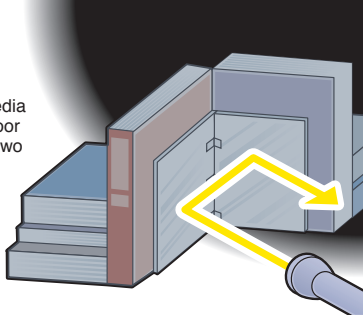
2 Stack some books behind the ones standing up, then remove the book lying flat

3 Roll the ball gently into the corner formed by the books and watch how it bounces

Roll it again from a different place and watch what happens



Graphic: Paul Trap



A Lay a paperback on a table

Tape the mirror edges together and stand them up against the paperback

B Stack paperbacks behind the mirrors to support them, then remove the book lying flat

C Darken the room, shine the flashlight into the corner formed by the mirrors and watch how the light reflects

Shine it from a different place and watch what happens

What happened?

The ball bounces twice in the corner and returns to you

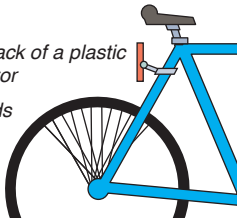
If you move, the angles change and it still comes back to you

The light reflects twice in the corner and returns to the flashlight

If you move, the light still comes back to the flashlight

Look at the back of a plastic bicycle reflector

It has hundreds of tiny corner reflectors



Graphic: TNS