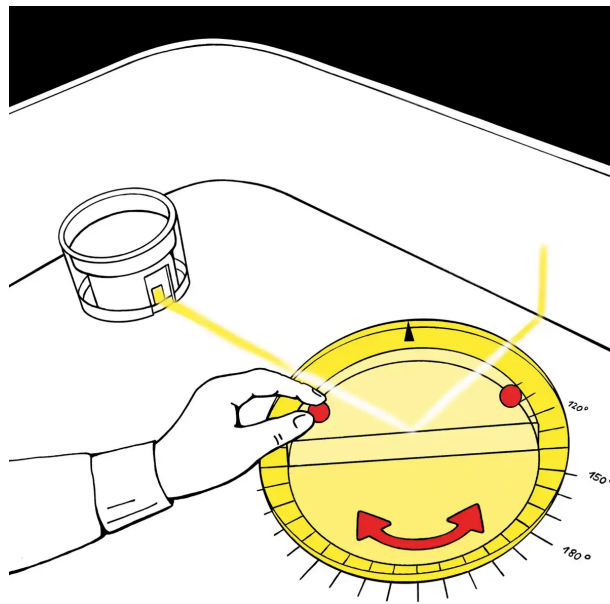


Critical Angle

Can you make light rays disappear?



Slowly turn the semi-circular glass block so the arrow goes from 0° to 90° .

Watch the path of the ray of light.

How does the path of the ray of light change?

At what angle do you see only one ray of light?

When the light ray meets the straight side of the semicircle, it generally splits into two rays: one travels through and is refracted, i.e. it changes direction. The other part of the light is reflected back as though in a mirror. Beyond a certain critical angle of incidence there is only one ray to be seen – all of the light is reflected.

By means of this total internal reflection, information may be transmitted in the form of laser light over long distances without loss of energy. For example, glass fiber cables use this principle to create lightning internet connections.