# Solutions optics model 1 – Diffuse reflection

## Example solution for construction task

## Build a protractor with slot aperture

*Use parts from the class set to build the “Protractor” model - hold a white piece of cardboard or paper in front of the mirror.*

## Topic task solution: Diffuse reflection

## Observe:

The beam of light is not reflected at a certain angle, but rather evenly in all directions. The point at which it hits the projection screen is bright, and the brightness quickly decreases as the distance from the point of impact increases.

The reason for this is the surface properties of the projection screen. The surface of paper consists of many small reflective surfaces that decompose the light beam into countless small beams travelling in no specific direction. The light is unfocused and distributed evenly in the surrounding area, with the reflection having no specific direction. This effect can be utilised in different applications: in anti-reflection coating for monitors, in projection screens or photographic proofs, for instance.