



Physics Lab Instructions

Read and follow the steps to complete the investigation.

Light Reflection Online Investigation

Click the “Intro” mode to begin this investigation. Before you begin, set up a data table with places to record the angle of incidence and the angle of reflection for three trials.

1. The screen that first appears in this mode has a light source with a red button on it. In the upper left corner, there is area to choose how the light will be modeled. Select “Ray.”
2. On the lower left are two tools. You will use the protractor in this investigation. Below the tools is a section to select “Normal.” When this is selected, the normal line is shown. This is the dashed line that is perpendicular to the surface. Leave this as the default (checked).
3. On the right are two areas to select the material the light is traveling through and the material the light is hitting. To simulate a mirror, keep the top material as “Air” and change the bottom material to “Glass.”
4. To produce a light wave, click on the red button on the light source.
5. The angle of incidence is the angle between the ray produced by the light source and the normal (the dashed line). Measure this angle by dragging the protractor so that the tick mark in the center of the protractor and the 0° marks on the protractor all line up with the normal. Record this angle on a data table.
6. The angle between the ray that is reflected and the normal is the angle of reflection. Measure this angle as you did the angle of incidence. Record this angle on your data table.
7. Click on the light source and drag it to a new angle. Measure the angle of incidence and the angle of reflection and record them on your data table.
8. Measure the angles of incidence and reflection for two more angles and record them in your data table.

