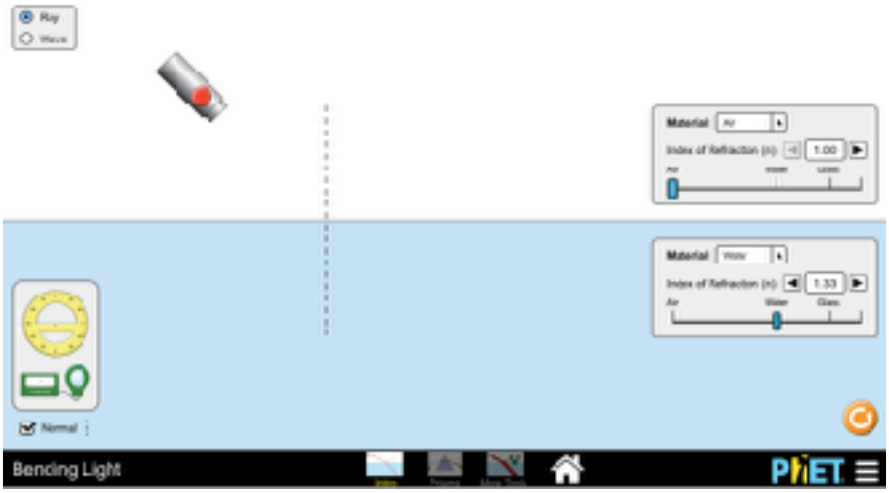
Reflection of Light

In this activity students will be exploring reflection of light in a plane mirror using the “Bending Light” PhET simulation.

Open the simulation by clicking on the link:

https://phet.colorado.edu/en/simulation/bending-light

Take a look at the explanatory video via YouTube:
https://youtu.be/v_Y4O73XdQc



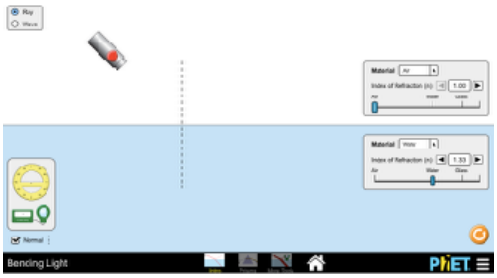
Learning Objectives

By the end of these activities it is hoped that students will have an acquired the following skills:

- Following explicit instructions to gain acquired knowledge
- Understand what happens to light when it hits a reflective surface
- Take accurate measurements from the simulation and formulate a conclusion.

Activity: Reflection in a plane mirror

- Make sure you have pressed the intro button on the bottom of the page so the screen looks like the image opposite.
- Note the "**Normal**" is the hatched vertical line at 90^{o} to the boundary.
- Drag the protractor so that the zero lines up with the normal line. See image opposite.
- Rotate the light source so it is pointing at the 10^{o} angle, note **TO** the normal. Measure the light bouncing **OFF** the surface only and write it in table 1.



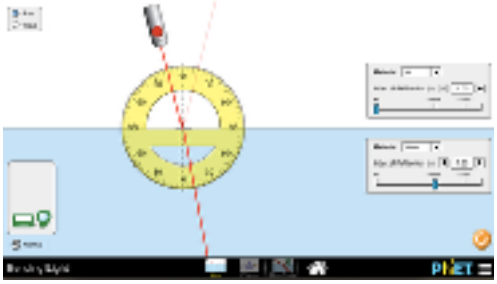
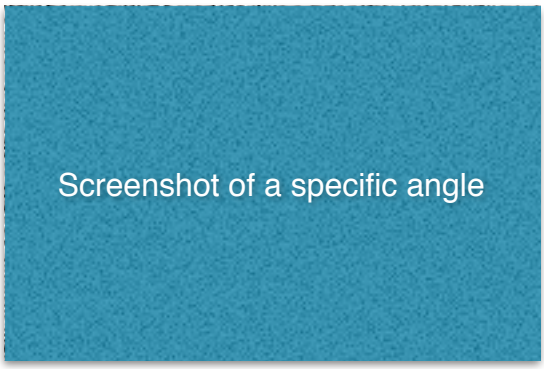


Table 1

Angle of incidence	Angle of reflection
10^{o}	
20^{o}	
30^{o}	
40^{o}	
50^{o}	
60^{o}	
70^{o}	
80^{o}	

- Take a screenshot of one of the angles and place it in the space provided below:



- **Using your screenshot and the data you have collected to justify what happens to the angle of reflection with respect to the angle of incidence?**

SUMMARY:

- **When measuring angles of reflection or incidence how must the angles be measured??**

- **What happens to the angle of reflection as the angle of incidence increases?**

- **What is the Law of Reflection?**