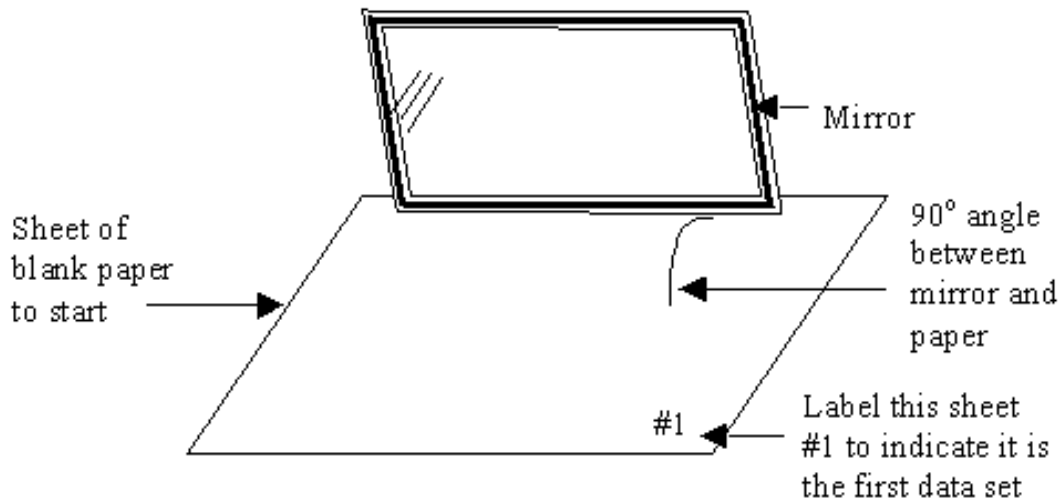


Reflection Lab

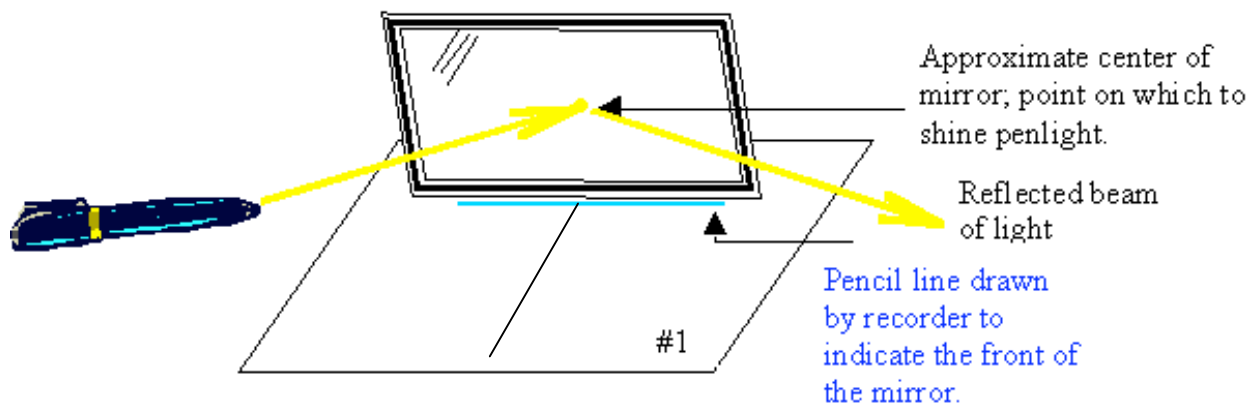
Materials: plane mirror, Maglight flashlight, 4 sheets of plain white paper, protractor, pencils

Procedure

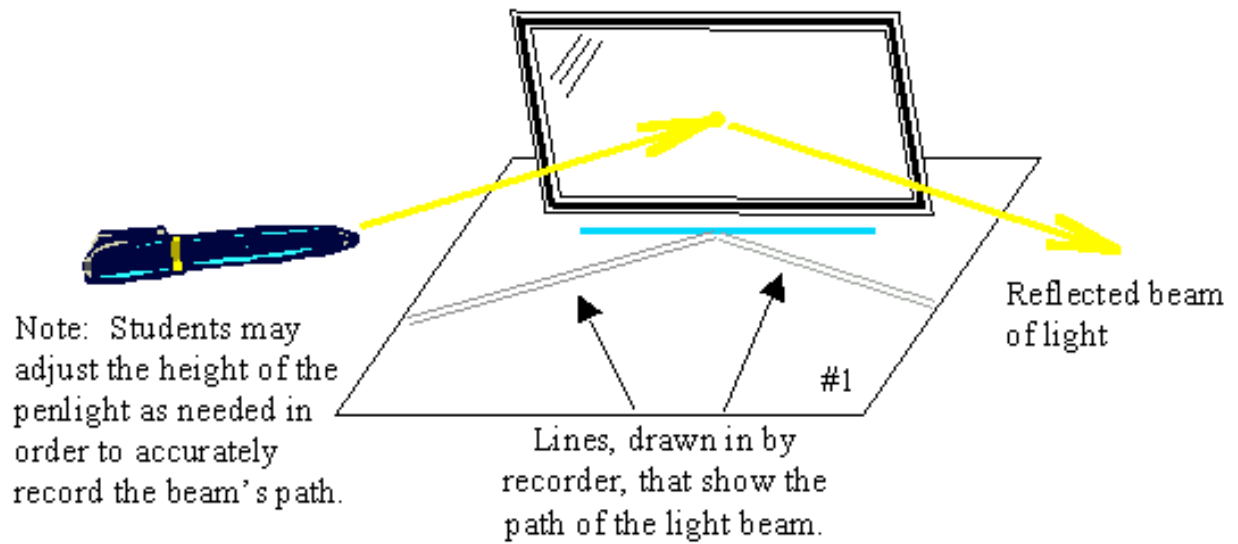
- 1 Assign these rolls to people in your group:
 - Mirror Holder - holds the mirror, maintaining the 90° angle; also reads lab instructions.
 - Recorder - writes for the group during the actual performance of the lab.
 - Penlight Operator - operates the penlight flashlight, maintains it at safe distances and angles away from eyes of group members; also is responsible for asking the teacher any questions that the group cannot figure out.
- 2 Neatly arrange materials at your lab stations and know object locations as this lab will be performed in a darkened room.
- 3 Turn on Maglights.
- 4 One blank sheet of paper should be laid down on the table first and labeled #1 to indicate it is the first set of data.
- 6 The Mirror Holder will rest one edge of the mirror on the sheet of paper, holding it perpendicular to the table at all times. (Use the protractor to measure and maintain the angle if necessary.)



- 7 The Recorder will draw a line on the paper indicating the location of the front edge of the mirror, as indicated in the diagram below. Also draw in the *normal* on the diagram as shown.
- 8 The Maglight Operator will then hold the light as shown and shine the beam onto the center of the mirror at an angle. You may need to aim the light toward the paper to actually see the beam.



- 9 Looking down over the top of the experimental set up, the Recorder will quickly trace the path the beam takes onto the paper beneath it.



- 11 Turn the paper over to the clean side and perform another trial by repeating steps 5-10. This time, label the data with a number 2, for the second set of data.
- 12 Using the second sheet, repeat steps 5-9 two more times to obtain data sets 3 and 4.
- 13 After all four sets of data have been collected, clean up your lab station and return to your group for analysis of the data.

Data:

1. Using the protractor, measure the angle of incidence and the angle of reflection for all four data sets. Record your measurements.

Angle of incidence = _____

Angle of reflection = _____

Angle of incidence = _____

Angle of reflection = _____

Angle of incidence = _____

Angle of reflection = _____

Angle of incidence = _____

Angle of reflection = _____

2. Manipulated variable: _____ Responding variable: _____

3. Look up the "Law of Reflection" in your book or notes and summarize it in your own words here:

4. Write a complete conclusion for this lab.