

## REFLECTION OF LIGHT

Name: \_\_\_\_\_

Hour: \_\_\_\_\_

### Image in a Small Mirror

*Question:* How far away from a small mirror must you stand to be able to see your whole image?

*Prediction:* More than 5 ft | More than 10 ft | More than 20 ft | More than 100 ft | Too far to tell

*Procedure:* While looking into the small mirror, walk away until you can see your whole image.

*Observations:*

*Conclusion:*

### Eye Chart

*Question:* How many lines on the eye chart can you read when looking into the mirror compared to reading directly off the chart posted on the mirror?

*Procedure:* Read the chart posted on the mirror and record how many lines you can read. Hold an eye chart next to you and while looking into the mirror record how many lines you can read.

*Prediction:* Twice as many |  $\frac{1}{2}$  as many |  $\frac{1}{4}$  as many | three time as many | the same

*Observations:*

*Conclusion:*

### Infinite Mirror

*Procedure:* Look into one of the mirrors from just outside of the second mirror.

*Prediction:* What do you expect to see when you look into the mirror?

*Observations:* (draw a diagram showing rays of light getting from the object to the mirrors to your eye)

*Conclusion:*

## Mirrors at Right Angles

*Question:* Why is this a truer image of what you actually look like to others?

*Procedure:* Look into the junction between the two mirrors at right angles.

*Observations:* (draw a diagram showing rays of light getting from one eye, to the mirrors, and to the other eye)

*Conclusion:*

## Light Beam Reflection

*Question:* What is the relationship between the angle of incidence and the angle of reflection?

*Procedure:* Place the mirror in the indicated position, align the mirror and paper such that the light beam from the light box follows the indicated path. Measure the angle of incidence (angle between incident beam and line normal to the mirror) and angle of reflection (angle between reflected beam and line normal to the mirror). Move the mirror and paper to change the angle of the incident beam and repeat the measurements.

*Measurements:*

first position:

angle of incidence: \_\_\_\_\_ angle of reflection: \_\_\_\_\_

second position:

angle of incidence: \_\_\_\_\_ angle of reflection: \_\_\_\_\_

*Conclusion:*

