

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

**Curved Mirrors Lab Activity - Laws of Reflection**  
**Report Page**

**Prediction:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Observation Tables:**

<b>Concave Mirror</b>	<b>Incident Ray Angle</b>	<b>Reflected Ray Angle</b>
Ray 1		
Ray 2		
Ray 3		
Ray 4		
Ray 5		

<b>Convex Mirror</b>	<b>Incident Ray Angle</b>	<b>Reflected Ray Angle</b>
Ray 1		
Ray 2		
Ray 3		
Ray 4		
Ray 5		

**Conclusion:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Curved Mirrors Lab Activity - Laws of Reflection

In this activity you will use a five ray pattern of light from a ray box to see if the Laws of Reflection for plane mirrors apply to spherical mirrors. Do you think they do?

### Problem:

How do concave and convex mirror reflect parallel incident rays?

### Materials:

- ray box plus accessories kit
- circular protractor ideal for measuring angles from zero!
- concave mirror
- convex mirror
- pencil
- ruler

### Procedure:

1. Do you think the Laws of Reflection for plane mirrors apply to curved mirrors? **Write a prediction at the top of your "report page"**.
2. Set up the ray box, protractor, and **CONCAVE MIRROR** in a manner similar to the method used for reflection from a plane mirror using the five slit option for the ray box.
3. On a blank piece of paper, use the concave surface of a curved mirror to sketch the mirror surface.
4. Without moving the mirror (reposition on your sketch line above if necessary) shine the five rays onto the concave surface of the mirror. Add enough information (dots etc.) to be able to draw all five incident and reflected rays once the mirror is removed.
5. Using a protractor, add a dotted line to each point of incidence/reflection and use this dotted line to measure the angle of incidence and reflection for each ray. Record you angle measurement in the table provided.
6. Repeat 3,4 and 5 but for a convex mirror instead.
7. Your complete report should include: the "Report Page", a Concave Reflection diagram and a Convex Reflection Diagram