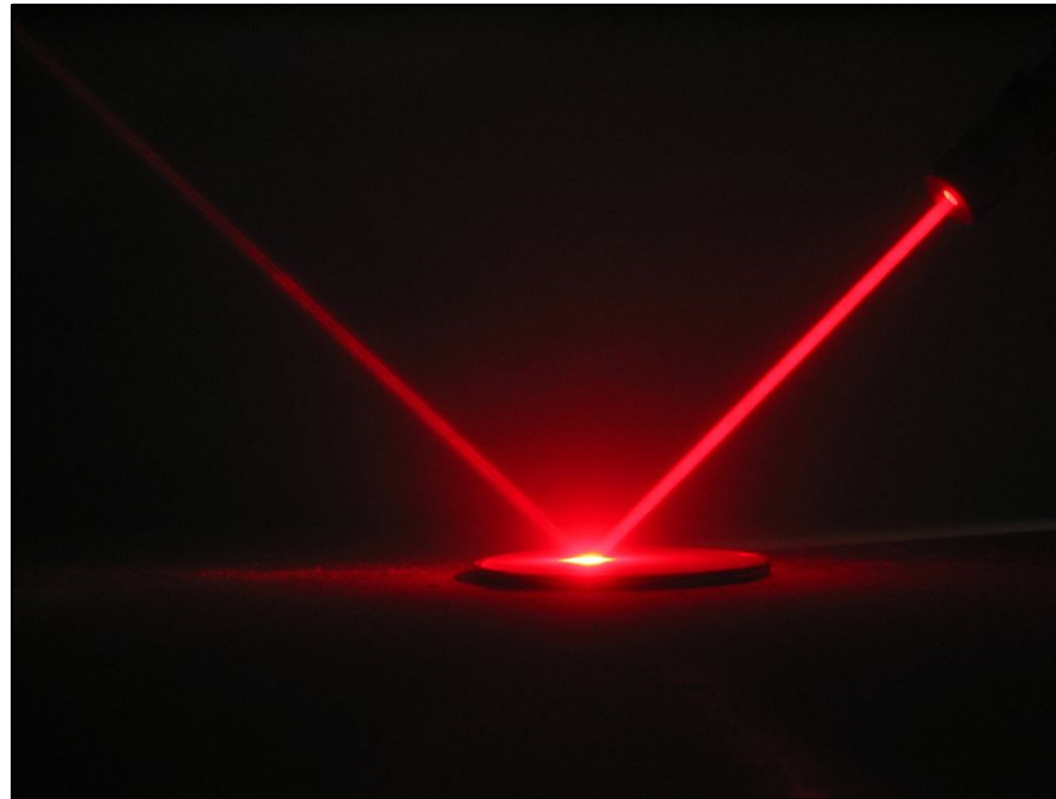


Optics Challenge

Laser Maze Security System



Laser Security System: Challenge

Science North is interested in hiring a new security team to develop a protective laser system for their rare gem collection. This collection has eight rare gems and the extremely valuable “Oppenheimer Blue” Diamond, the world’s largest blue diamond.

Your goal is to build the best laser security system possible to be hired by Science North!



Laser Security System: Requirements

- There cannot be more than two gems per section. Otherwise you can put the gems wherever you'd like.
- To protect a gem, the laser must block a burglar's path to it from any of the doors or windows. Use the walls and lasers to adequately surround each diamond exhibit.
- The start of the laser can be placed on any of the walls.
- The laser must end at a sensor which can be placed on any of the walls
- You can use as many mirrors as you need however you will get one point for using 9 or fewer mirrors
- Using a concave mirror will increase your score by 2 points

Laser Security System: Procedure

- 1) Create a company
- 2) Plan your exhibit
- 3) Build a scale model
- 4) Finalize your design
- 5) Present your security system

Laser Security System: Supplies

- Plane mirrors
- Small clothespins/binder clips
- Concave Mirror
- Light box or laser pointer
- Large sheet of paper
- Cardboard
- 8 precious stones
- 1 blue diamond

