

# Abstract

**Project Title: Which Plane Is Stealthiest?**

**Project ID: 96**

## Abstract

A brief explanation of your project. Enables judges to receive a base understanding of your project and work.

If you ask anyone what superpower they would like to have; most of us would say invisibility. Many popular books and movies highlight invisibility such as Harry Potter, The Incredibles and of course several DC and Marvel Comic Superheroes. But is this all just make believe? Scientists are constantly working on new technology to make invisibility a reality for military aircrafts.

It would be fascinating to test the invisibility of an aircraft and how to scatter the radio waves. I hope to research what geometrical shapes affect the scattering of visible light. I also hope to test what textures will affect the scattering of visible light too. Visible light is a type of electromagnetic radiation, just as radio waves are.

In order to do this, I will build a black box and attach a lux meter and flashlight to it. Then I will test different shapes by putting it inside the box and reading how much light is scattered. Which shape will scatter the most light? The hypothesis tested in this experiment was if the cylinder shape was tested in a dark box, then it will scatter the most light because of its smooth surface. The results revealed the opposite. The results proved that the W-Shape is the most stealthy reflecting an average of only 270 lux. This is significant because modern-day stealth technology in planes rely on being discreet and not being detected in the air.

## Items to Include:

**Introduction:** Why did you do this project and why is it important? How will this effect people and why is it needed. Inspire the reader to continue learning more about your research and read your report.

**Problem Statement and Engineering Goal / Hypothesis:** What is the problem you were solving and what was your engineering goal or hypothesis.

**Procedures:** How did you solve the problem and or test your hypothesis. Don't go into details, provide a broad, conceptual view of what you did. For engineering, what was your design criteria.

**Results:** What was the outcome? Use your data and numbers to describe your result.

**Conclusion:** Was your hypothesis supported or the engineering goal met?