

# CALIFORNIA STATE SCIENCE FAIR 2007 PROJECT SUMMARY

Name(s)

Maddie C. McMorrow

**Project Number** 

J1215

**Project Title** 

Wireless or Wire More?

### **Abstract**

# **Objectives/Goals**

To determine whether wireless signals will be affected as they pass through different materials. Another goal to determine was if the signal went through the materials, or tried to go around the materials.

#### Methods/Materials

Materials were used to construct barriers between a wireless router and a computer. Six different materials built of 2 feet by 4 feet walls were placed as barriers in front of the computer to measure any impact on the signal. The materials consist of metal, plywood, pressboard, glass, drywall, and cardboard. Then each of the materials were used to construct boxes, which were placed over the router to see if the signal strength was impacted when the barrier blocked the router instead of the blocking the computer.

Both the Internet speed and the distance between the router and computer were constant throughout the entire procedures.

# **Conclusions/Discussion**

All materials tested had an impact on the signal. The results indicated that metal affected the reception more than the other materials did, as the hypothesis stated. The prediction was right and wrong in different matters. The surprising conclusion was it did not matter whether the materials were placed on top of the router, or 66 feet away from the router and in front of the computer, because the results were about the same. Therefore, the signal went through the different materials.

## **Summary Statement**

My project is about how different materials affected the wireless router signal.

## Help Received

Teacher helped get organized; Dad cut supplies; Mom checked spelling and grammar.