



**CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY**

Name(s) Mary E. Jolly	Project Number J0908
Project Title Where's My WiFi?	
Abstract Objectives/Goals My objective is to learn how different materials block WiFi signals, and which building material obstructs radio signals the most. Methods/Materials In my experiment I used foam insulation, dry wall, and concrete to build three separate small house models to do my testing. To test, I placed the house model over the WiFi router and used the WiFi analyzer phone app to measure the strength of the radio signal. I repeated this process six times at different distances using three different phones, recording the results after each reading. Results The results of my project are that foam insulation blocked the radio signal the least and had better signal strength than the results from the trials I did without any covering. In my experiment the cement blocked the radio signals the most followed closely by drywall. Conclusions/Discussion After completing my experiment my hypothesis that the concrete would obstruct the WiFi signals the most, turned out to be correct. Using this information I would say that it would help you understand where to place your WiFi router. Also, As radio becomes more a part of our lives, construction companies can apply this information to decide which materials to use to make our lives easier by having the best signal strength possible.	
Summary Statement In my project I was trying to determine which building materials obstruct WiFi signals the most.	
Help Received Father helped build house models & set up WiFi router, Mother helped with board design.	