



**CALIFORNIA STATE SCIENCE FAIR  
2014 PROJECT SUMMARY**

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<b>Project Title</b> Where's My WiFi?	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> My objective is to learn how different materials block WiFi signals, and which building material obstructs radio signals the most.</p> <p><b>Methods/Materials</b> 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.</p> <p><b>Results</b> 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.</p> <p><b>Conclusions/Discussion</b> 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.</p>	
<b>Summary Statement</b> In my project I was trying to determine which building materials obstruct WiFi signals the most.	
<b>Help Received</b> Father helped build house models & set up WiFi router, Mother helped with board design.	