



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Nathaniel S. Sekula	Project Number J1820
Project Title Improving Buildings' Resistance to Earthquakes May Be as Simple as Using Reinforced Sheetrock	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My objective was to determine if by reinforcing sheetrock with plywood, a superior usable building product could be produced. I believe that reinforced sheetrock will have greater strength and will help structures withstand natural disasters.</p> <p>Methods/Materials I constructed reinforced sheetrock by laminating sheetrock and plywood in a hydraulic hot press. This I named S-ROK. I then ran a series of tests to compare the horizontal, vertical, and shear strength of the S-ROK vs. conventional sheetrock. Additionally, I compared the weight and cost of the two products as well as tested for impact resistance and soundproofing qualities.</p> <p>Results S-ROK (the reinforced sheetrock) proved to be greatly superior in strength, impact resistance, and soundproofing. It's drawbacks are in higher cost and weight.</p> <p>Conclusions/Discussion My conclusion is that S-ROK would add remendous strength and durability to buildings, particularly those in earthquake prone areas. Decreasing damage would more than offset the higher costs to produce and install reinforced sheetrock.</p>	
Summary Statement My project is comparing conventional sheetrock to a reinforced sheetrock product that I created, testing to see which has superior strenth and durability for earthquake resistance.	
Help Received Father helped with construction of material, supervised cutting of material, assisted with testing and autocad drawings for charts and graphs. My Mother helped with typing and board presentation.	