



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

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Project Title Earthquake Resistant Architectural Design	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of our project was to find out what shaped structure resisted earthquakes most successfully.</p> <p>Methods/Materials First we built a shake table using plywood, springs, a small motor, and batteries. Next we built structures in the shapes of L, T, U, and square out of sugar cubes and peanut butter. We then tested the structures on our shake table. We graphed the data and prepared our backboard and report.</p> <p>Results The square-shaped structure withstood the simulated earthquake most successfully. The t-shaped structure performed the worst. The L-shaped collapsed from top to bottom, leaving a pyramid-type ruin standing. The U-shaped building failed at the bend, falling outward. The T-shaped building interestingly was the only structure to collapse inward.</p> <p>The square structure seemed to take the shaking force and distribute it equally throughout the building, making the structure more resilient to the shaking.</p> <p>Conclusions/Discussion Our hypothesis was that the square shaped structure would perform the best in a simulated earthquake. The results indicate that this hypothesis was correct.</p>	
Summary Statement By using a shake table, we determined which shaped structure could withstand an earthquake most successfully.	
Help Received Mother helped type report; Father supervised building of the shake table.	