



**CALIFORNIA STATE SCIENCE FAIR  
2009 PROJECT SUMMARY**

<b>Name(s)</b> A. Keoni Aricayos	<b>Project Number</b> <b>S0202</b>
<b>Project Title</b> <b>Optimal Foundation Design for Model Houses Undergoing an Earthquake</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The purpose of my project is to test which foundation(cement, rubber, coilspring, ball bearings, magnet, and layers of recycled scap tires and steel) is best suited for high intensity earthquakes.</p> <p><b>Methods/Materials</b> I made the #104 2 bedroom house with the truss roof design. I also made the cement, rubber, ball bearings, recycled scrap tire W/ steel layer, magnet, and coilspring founations and tested them with the Pisco Epicenter Earthquake simulator at the 8.5 and 9.0 setting for 30 sec. each. I used a rolling movement measuring device, water displacement test, accelerameter, and siesmograph device to test which foundation proved to be best.</p>	
<b>Summary Statement</b> My project is to test for the most seismic safe foundation design.	
<b>Help Received</b> worked in the school's science lab	