



**CALIFORNIA STATE SCIENCE FAIR  
2005 PROJECT SUMMARY**

<b>Name(s)</b> <b>Christy L. Ahlbach</b>	<b>Project Number</b> <b>J0601</b>
<b>Project Title</b> <b>Liquefaction</b>	
<b>Abstract</b> <b>Objectives/Goals</b> I wanted to find out which soil is the safest to build a structure on in the earthquake-prone area of San Francisco Bay. <b>Methods/Materials</b> I took two clear plastic cups and cut off the bottoms. I placed them upside down in the middle of a pie plate. I then filled one cup with sand and one with clay soil, with a one ounce sinker on top of each. I filled the plate with 40 mls. of water and waited 90 seconds. I then tapped the cup six times within three seconds. <b>Results</b> With the cup of sand, the water saturated it within 90 seconds and the sinker had completely disappeared before I tapped the cup. With the clay, the sinker did not move and the clay did not liquefy. <b>Conclusions/Discussion</b> I concluded that clay is MUCH safer to build on than sand in an earthquake area.	
<b>Summary Statement</b> i wanted to find out which of two types of soil in the S.F. Bay Area was safer in an earthquake.	
<b>Help Received</b> My mom helped me type the report and a geologist friend helped select the soil samples and with the dig.	