



**CALIFORNIA STATE SCIENCE FAIR
2013 PROJECT SUMMARY**

Name(s) Sabrina Belen; Brandon Snyder	Project Number S1904
Project Title Volcanic Ash: The Beginning or the End? The Study of Volcanic Ash and Its Effects on Plant Germination	
Abstract Objectives/Goals The purpose of this project was to determine what effects differing amounts of ash mixed with soil would have on the germination and growth of radishes, green beans, and pea seeds. Methods/Materials 25 green bean, 25 radish, and 25 pea seeds were individually grown in 75 red solo cups with a drainage hole in each. They were grown in 100% soil 0% ash - 100% ash 0% soil. They were watered every other day and when done growing for a certain time period were measured on # of leaves, stem and root length, # of root branches, # of sprouting seedlings, color(radishes only), and root weight. Results The data supports the hypothesis. The growth of the seedlings was greatest in the 75%soil/25% ash and the 100%soil/0% ash. Conclusions/Discussion This project concludes that not only is it possible to grow plants with ash, but that volcanic ash can actually enhance a plants' growing environment.	
Summary Statement The study of volcanic ash and its effects on plant germination	
Help Received Mr. Grubb analyzed the ash and Albertsons provided a weight scale.	