



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Joanna S. Koo	Project Number J0614
Project Title Which Type of Soil Can Hold the Most Water? Soil Textures/ Water Holding Capacity	
Objectives/Goals To examine which soil textures can hold the most water (water holding capacity). To check that different soil textures have different water holding capacities.	
Abstract	
Methods/Materials Materials: three different types of soils, oven, distilled water, plastic bags, a cooler, a balance, beakers, stockings, containers, and a graduate cylinder. Methods: air-dried soils, weighed the weight of each dried and crystal soil, set an apparatus to pour water into each soil texture, add water, let the soil drain for 1 hour, dry wet soil at 110'C formula wet soil-dry soil/dry soil times 100.	
Results Water holding capacity varied depending on the soil textures. The clay soil had the highest water holding capacity and the sand soil had the least; clay>silt>sand.	
Conclusions/Discussion Clay particles are so tiny and have many small pore spaces that make water move slower (the highest water holding capacity). Sandy soils have good drainage but low water and nutrient holding capacities. Soil texture and water holding capacity affect plant growth.	
Summary Statement The water holding capacity was varied depending on the soil textures and the clay soil had the highest water holding capacity followed by silt and then sand.	
Help Received Father helped me with report and used lab equipment at California Baptist University.	