



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Kelsey L. Capron	Project Number 23148
Project Title The Dead Seed Scrolls	
Objectives/Goals To find the effect of the salinity of water on seed germination. Abstract Methods/Materials 1 packet of lettuce seeds, 1 packet of radish seeds, 1 packet of paper coffee filters, ten 5" x 5" plastic square containers, distilled water, salt with no iodine, 4 jars, spoon, tray, tweezers, metric ruler, and lab book. I mixed the solutions by mixing a constant amount of water with varying amounts of salt. The amounts were distilled water, 2.5 grams of salt per liter of distilled water (g/l), 5 g/l, 10 g/l, and 15 g/l. I had 5 containers for each kind of seed (radish and lettuce), and each container had one of the solutions. There were 20 seeds in each container. I waited 2 days until I recorded my observations. I measured the lengths of each seed that had sprouted and counted how many seeds had germinated in each container. Results My results were that pure distilled water and 2.5 g/l resulted in high rates of germination and sprout lengths. As the g/l went up, the rates of germination and lengths of sprouts dropped. The 10 g/l and 15 g/l containers had no germination. Conclusions/Discussion There was a definite effect on the germination of the seeds. The average lengths of sprouts for lettuce and radish seeds had a consistent drop as the level of salinity went up. The solution that had 2.5 grams of salt per liter of distilled water (g/l) had more germinated seeds than the distilled water sample did, although this may be a statistically insignificant difference. In conclusion, the salinity of water does have an effect on the germination of seeds. As the level of salinity increases, the sprout lengths and germination rates go down.	
Summary Statement I wanted to discover the effect of different levels of salinity on the germination of seeds.	
Help Received Father helped occasionally in procedure; Mother helped prepare board.	