



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Anam Aslam	Project Number J2002
Project Title Soil Wars	
Abstract Objectives/Goals The purpose of my project was to compare the growth rates of tomato plants and lima bean sprouts in sterilized, fertilized and compost soil. I hypothesized that my bean sprouts would generally grow faster than my tomato plants. I also hypothesized that the compost soil would potentiate the growth of the plants, because it would provide the plant with more nutrients. Methods/Materials 1-Five days ahead of time, I spread fertilized soil (control) on a cookie sheet and sterilized it by baking it for three hours at three hundred and seventy-five degrees. 2- I cut up an apple on the same day I sterilized my soil and I let it sit in the sun, so it would decompose. 3-Five days later, I labeled six flower pots, mixed my compost into the soil, poured my sterilized and fertilized soils into its pots, and planted my tomato seeds and lima beans in its correctly labeled pots. 4- I watered, measured and observed the plants daily for twenty-eight days. Results In both trials, the bean sprouts were growing effectively compared to tomato plants. This proved the first part of my hypothesis correct. The sterilized plants were measured to be +13 centimeters, compared to the fertilized soil and compost soil. The fertilized soil plant growth went from +5 centimeters and the compost plant growth was measured to be less than 4 centimeters. Thus, proving the second part of my hypothesis to be incorrect. Conclusions/Discussion After conducting my experiment, I discovered that my bean sprouts grew faster than my tomato plants overall, because they are originally fast-growing plants. The sterilized plants grew the fastest from the three, whereas the compost plants grew the slowest. I believe that since the sterilized soil had all its bacteria eliminated, it prevented microorganisms from invading it during its growth process. The reason the compost soil grew the least was because it had various nutrients that microorganisms preyed on and inhibited its growth.	
Summary Statement I compared the growth rates of tomato plants and bean sprouts in fertilized, sterilized and compost soil.	
Help Received Mother helped decorate board; Gardener helped set the ideal growing environment for plants; Father supplied me with all materials needed for experiment.	