



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Taylor N. Swantek	Project Number J1631
Project Title Tea: It Does a Plant Good. The Effect of Watering and Misting with Tea Solutions on Plant Growth	
Objectives/Goals My objective was to find out if tea is beneficial to plant growth and health. Would the type of tea used for watering the plant effect plant growth? Additionally, would using tea to mist the leaves of the plants further enhance plant growth? I believe that plants hydrated with white tea will grow better than plants watered and/or misted with the other two types of tea because white tea has the highest levels of polyphenols (antioxidants).	
Abstract Methods/Materials Three tea types (non-oxidized, semi-oxidized, and fully oxidized) were tested against each other, along with a control group of water, to measure their effect on plant growth. I had four plants to test each tea type on (two would be watered with the solution, two watered and misted with the solution). My test consisted of watering and misting the designated plants regularly, and recording plant growth (height and number of leaves) for each plant every three days for 36 days.	
Results Each category of measurement (height, number of leaves, health) differed in the final results. Water had the most consistent results of all the plants, with each of its four examples having a final height within two inches of each other. Oolong tea had very differing final heights and the lowest overall heights of all the plants. The White tea plants that were not misted were shorter than the average for regular water plants, but those that were misted were the second tallest pair of plants, gaining 8-12 inches over the non-misted two. Black tea had one plant that did not sprout, and one that looked unhealthy from the beginning, but the other two achieved the tallest heights out of all the plants.	
Conclusions/Discussion While the results were mixed, they seemed to indicate that some teas had a positive impact on both plant size and leaf production. The data is strong enough that I believe that some combination of teas used for watering and misting will definitely improve plant growth.	
Summary Statement This project compares the effects of water and tea solutions on plant growth.	
Help Received Father and Mother helped buy materials for project and board.	