



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) Atticus J. Humphrey	Project Number J2209
Project Title Effects of Inherited and Non-inherited Calcium Feed on the Shell Strength of Egg Laying Chickens	
Abstract Objectives/Goals Objective: The purpose of my science project is to compare which calcium feed produces the strongest egg shell in egg laying chickens. Hypothesis: The inherited egg shell calcium feed will produce the strongest egg shells in egg laying chickens. Methods/Materials The procedures for my investigation of inherited and non-inherited calcium feed and how they affect egg shell strength are to first separate the six hens chosen for my experiment. First I will measure the feed and the calcium feed for each individual hen. Second I will collect eggs daily and place them in an airtight container, one container for each individual hen. Third I will select five eggs randomly from each hen. The fourth step will be breaking the eggs. The fifth step will be to measure the grams that it took to break the egg. This will test the strength of each egg shell. The sixth step will be to compile my data by averaging each hen's egg strength. The first test will be the effects of no calcium feed on egg strength. The second test will be of oyster shell calcium feed on egg strength. The third test will be inherited egg shell calcium feed on egg strength. The fourth test will be store bought egg shells as calcium feed on egg strength. 6 chicken cages; 6 chickens; PVC pipe; PVC pipe end cover; One tube of silicone; Gram scale; Rain gutter; Caps for the ends of the rain gutter; Oyster shell; Collected chicken eggs; Store bought eggs; Chicken feed; Water float; Lead weights; Sand; 1 1/2 measuring cup; 1 1/4 measuring cup; 16 18" boards; Rabbit wire; Hose; 6 plastic containers; Pie pan; 3 plastic bowls. Results The results of my investigation on egg shell strength indicated that the inherited egg shell calcium feed produced the strongest egg shells. No calcium feed results Average egg strength =4336.00 Oyster shell feed results Average egg strength =4515.93 Inherited egg shell calcium feed results Average egg strength =5623.97 Store bought egg shell feed results Average egg strength =4941.33 Conclusions/Discussion	
Summary Statement The purpose of my project is to compare which calcium feed produces the strongest egg shell in egg laying chickens.	
Help Received	