



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Cindy Adrian; Jimmy Goode	Project Number S1401
Project Title The Amazing Spider Web	
Objectives/Goals To figure out what stresses on spiders changed web strength and web production.	
Abstract Methods/Materials We took twenty-four spiders and split them them up into four groups of six for three weeks. We put one group in the dark, one in the light, one group had an altered diet, and the last group was the control. Then we tested the web strength with paper clips (placing clips on a thread of web till it broke). Each group was fed six crickets. The Dark Group: The spiders were left in the dark for the duration of the project. They were fed crickets. The Light Group: They had a 10 watt aquarium light on them for the duration of the project. They were fed crickets. The Diet Group: We took 0.5 grams of a Centrum vitamin and mixed it with 15.8 grams of water, we then dipped live crickets in them for the spiders to eat. The had a normal day and night light cycle. The Control Group: This group was left alone, they had a normal cricket diet and day and night light cycles. After the three weeks we used a pair of tweezers, swirled it in a single web, took a thread and tested its strength by placing paper clips (each 0.4 grams) on them till it broke. We repeated this three times for each group. Materials used: Twenty-four spiders, several dozen crickets, 10 watt light, Centrum vitamin, water, four cages, paper clips (0.4 g each), toilet paper rolls, straws, tweezers, and electronic weight scale.	
Results Light Group was weakest and held an average of 4 paper clips. The Dark Group was strongest and held an average of 13.3 paper clips. The Diet Group was second weakest andheld and average of 4.3 paper clips. The Control Group was the second strongest with an average of 6.6 paper clips.	
Conclusions/Discussion	
Summary Statement Using different stresses on spiders to see the outcome of their web producing and web strength.	
Help Received Dr. Sigrid Reinsch; helped take photos with her equipment at her lab	