



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Jamie M. Mensching	Project Number J1922
Project Title Dyeing to be Pretty: A Study of Natural Dyes	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals I am experimenting with natural dyes. I want to find out how well natural dyes color different types of natural fabrics. I used a series of different natural dyes with different mordants that helped to set the dyes. These were applied to different natural fabrics.</p> <p>Methods/Materials I took 3 natural fiber fabrics (linen, silk & cotton), prepared sample pieces with 4 different mordants and I left 1 sample of each fabric untreated. I prepared 3 different natural dye bathes and treated each sample. All fabric samples were looked at visually and microscopically. A pH test was also run on each fabric sample. Next the fabrics were compared within each category. (Ex. all silk fabrics were compared by fabric type, mordant type, and dye.)</p> <p>Results Because of the number of variables and the resulting combinations (3x3x5) there were many resulting fabric samples. In some cases, certain combinations of mordant and dye worked very well. In others, they didn't permeate the fabric as well.</p> <p>Conclusions/Discussion In my series of tests, I found that in the fabric category, silk accepted the dye best. In the mordant category, alum prepared the fabric the best to receive the dye. In the dye category, cranberry had the darkest color saturation. The pH make up of the mordants and dyes greatly effected the resulting color of the fabrics.</p>	
Summary Statement Studying natural dyes and natural fabrics with various mordants.	
Help Received My mom helped me finish my board, my science teacher allowed me to use equipment, and my dad helped me with the mordants and the dyes.	