



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Wendy Mak	Project Number S0315
Project Title Can Children Taste without the Credibility of Sight?	
Abstract Objectives/Goals The objective of this experiment is to determine the role color plays in children's ability to identify the flavors of beverages. I hypothesize that when children are presented with drinks with color-flavor conflicts, their level of accuracy in flavor identification decreases. Methods/Materials The Certification of Compliance for Research Involving Human Subjects was completed to test a total of 18 children and four adults. Five drinks were prepared using Kool-Aid mixes: Charming Cherry, Grape Illusion, orange, strawberry, and Arctic Green Apple. The first taste test I conducted only consisted of the two drinks with color-flavor conflict and the orange drink to verify the tester's tasting abilities. For a second test I conducted, I added the two regular strawberry and green apple drinks. In both cases, testers were given the drinks one at a time with original crackers in between to clear the mouth of any remnants of the previous flavor. The four adults were tested the first time to ensure that the flavors are actually distinguishable. Results For both of the children's tests, out of the 36 drinks with color-flavor conflicts, only 2 were correctly identified (~5.6 %). However, when blindfolded, the children recognized 5 of the 16 drinks (31.25%). Although the children's number of identified drinks with color-flavor conflicts seems minimal, the adults 37.5% of identified drinks verify that they could be recognized. Conclusions/Discussion With the data collected, I can conclude that this experiment does verify my hypothesis. Children ages 8-11 do have a deficiency in accurately identifying the flavor of a beverage when its associated color is not compatible with its flavor. Researchers have hypothesized that color may produce a stronger neural response than flavor in the eating process or color is just perceived first. Oram suggests that there is a color biased identification error where testers are either unaware of the conflict or they just cannot ignore what is visually perceived.	
Summary Statement This project demonstrates the fact that children's level of accuracy decreases when drinks contain color-flavor conflicts.	
Help Received Sister helped cut pieces for the display board.	