



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Matthew G. Austin	Project Number J2001
Project Title Which Characteristic Is Most Influential in Attracting Bees to a Flower: Fragrance, Color or Flavor?	
Abstract Objectives/Goals The objective is to determine the color, fragrance, and flavor that are most attractive to bees. Then to determine which of these three characteristics plays the most important role in attracting bees. Methods/Materials The color, fragrance, and flavor variables will be isolated to identify the ones that bees tend to go to first. For the fragrance test, several flowers that the bees are known to pollinate will be pulverized individually in a food processor and strained through cheesecloth to collect the residue. The residue will then be streaked into separate circles on a piece of poster board. For the color test, 5-inch diameter circles will be cut out of nine different shades of paper and taped onto another piece of posterboard. For the flavor test, various flavors will smeared into separate circles on another posterboard surface. Then, combinations of the three variables will be made. The bees reactions and selections will be recorded. Results When characteristics were tested individually bees were not attracted to color and flavor posterboards. Only the fragrance boards attracted bees. The most popular flower fragrances were Vyron Pom Pons, Waxflower and Freesia. Since no taste preference was established, Bee Syrup was used for all combination boards. When testing combined flavor, color and taste boards, bees favored Stock(fragrance) with purple(color), Freesia(fragrance) with red(color), and Vyron Pom Pons(fragrance) with yellow(color). Combination boards to evaluate color preference showed bees favored yellow, green and light pink. Conclusions/Discussion Bees were only attracted to test boards with fragrance. Therefore fragrance is the most influential characteristic in attracting bees to a flower.	
Summary Statement To determine which characteristic is most influential in attracting bees to a flower: fragrance, color or taste.	
Help Received Mike Mulligan, the beekeeper, who advised me throughout my science project and let me use his beehives. My parents for driving me to the test site. Mr. Keller, my science teacher, for encouraging and guiding me throughout my science project.	