



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

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Project Title Color, Fragrance, and Flavor: Measuring Their Influence on the Behavior of Worker Bees	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals Our objective was to isolate which element of a flower a worker bee is most attracted to: color, fragrance or flavor.</p> <p>Methods/Materials Twenty-two 5-inch rounds of paper were placed on skewers in order to resemble flowers. They were placed in a semicircle approximately 6 feet from the bee hive. Nine of the #flowers# were of various colors but had neither taste nor fragrance. Nine of the #flowers# were white but had various essential oils applied. The remaining four were white with the four basic flavors applied. We observed and documented the bee activity directed at our experiment. Each experiment was conducted for one hour. The experiment was repeated three times.</p> <p>Results On average, of the bees that were drawn to our experiment, 10 percent went to color, 52 percent went to fragrance, and 38 percent to flavor.</p> <p>Conclusions/Discussion The data from our experiment indicated that worker bees are most attracted to fragrance. However, due to variable weather there was little activity from the hive in two out of three experiments. Because of this, we feel more experiments are needed to verify our conclusion.</p>	
Summary Statement Our project studied the relative influence of color, fragrance and flavor on the behavior of worker bees.	
Help Received Jan Hoyman (mother) helped transport materials. Ross Lake (neighbor) allowed use of his hive. Jack Booth (professional bee keeper) showed his hive and provided useful information on bees.	