



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

Name(s) Leslie S. Gray	Project Number J1908
Project Title Comparing Various Natural Substances in Attracting and Repelling Drosophila	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of my project was to compare various natural substances to see if they attract or repel Drosophila. My goal was to determine which category of natural substance that I have chosen will attract the greatest amount of Drosophila and what substance may work as a natural repellent.</p> <p>Methods/Materials I tested two categories of fresh substances: fruit and spices. I had four substances of each. The fruits I tested were bananas, grapes, tangerines and apples. The spices I tested were anise, garlic, rosemary and jalapeno pepper. I had 3 test vials for each of the 8 substances and 3 test vials for the control of distilled water. There was a total of 27 test vials. There were 10 Drosophila in each test vial. With the fruits and spices, I made a solution by pureeing 3 ounces of the substance with 1/3 cup of distilled water. I then dipped the sponge into the pureed substance to let it absorb but not totally saturate. Then I would cork the test vial of Drosophila with the sponge. At intervals of 15, 30, 45 and 60 minutes I would record the number of Drosophila that were on the sponge. With 3 test vials per substance and 4 tests per vial, each substance had a total of 12 tests.</p> <p>Results The results of my tests did not exhibit strong tendencies by either substance test group. The results on an individual substance basis demonstrated that garlic was a strong repellent and jalapeno peppers had a fairly strong attraction rate. The control had a very low attraction rate.</p> <p>Conclusions/Discussion My hypothesis was that the Drosophila would be most attracted to the bananas and would be repelled by the garlic. My hypothesis was incorrect. Fruit as a group had a higher attraction rate than spices. Although individually they were most attracted to jalapeno peppers and repelled by garlic. As some of my research suggested, fruit flies (Drosophila) are inaccurately named, as they are attracted to a variety of substances with different tastes and odors.</p>	
Summary Statement Which natural substances will attract or repel Drosophila, fruit flies.	
Help Received High school science teacher provided Drosophila and supplies and my mom typed the report.	