



**CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY**

Name(s) Evan C. Lewis	Project Number J2418
Project Title Sight, Smell, or Taste: How Do Ants Find Their Food?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of the project was to discover what senses ants use to find their food. The possibilities that were tested were sight, smell, and taste.</p> <p>Methods/Materials Food (honey or cocktail shrimp) was placed in a 35-mm Petri dish and set by an ant trail. Once a minute for 30 minutes, the dish was photographed with a digital camera to count the number of ants. In that test, the ants could use, sight, smell, or taste to find the food. This test was repeated after covering the Petri dish with a scrap of nylon attached with a rubber band. In this case, the ants could use sight and smell only. Finally, the test with the covered dish was repeated in the dark by turning off the lights and covering the Petri dish with a small box. In this test, the ants could only use smell to find food. As a control, tests were done with empty Petri dishes with or without nylon covering.</p> <p>Results At 30 min., the greatest number of ants (32-113) was found on the uncovered dishes, an intermediate number (6-12) was found on the nylon-covered dishes, and the least number (4) was found on the nylon-covered dish in the dark. All of these numbers were greater than the number of ants on the control dishes (0-1).</p> <p>Conclusions/Discussion It was concluded that odorous house ants could find food using multiple senses: smell, sight, and taste. When the ants could use smell and sight, they found the food only slightly better than when they could only use smell. This indicates that smell was more useful than sight. But when they could use taste as well, many more ants discovered the food. This suggests that taste is the most important sense for finding food.</p>	
Summary Statement The focus of this project was to discover what sense(s) ants use to find their food.	
Help Received Father taught me how to use Igor to plot out data, helped with revising the writing; Mother brought home Petri dishes, helped lay out poster	