



**CALIFORNIA STATE SCIENCE FAIR
2017 PROJECT SUMMARY**

Name(s) Emilio A. Arroyo	Project Number J2301
Project Title Ant Talk	
Abstract Objectives/Goals By conducting an experiment using natural sugar and artificial sugar substitutes, determine whether ants have the ability to communicate the quality of a food source through the use of trail pheromones. Methods/Materials Conduct tests using natural sugar solutions and artificial sweetener solutions, whereby ants are provided with several foraging choices. The ants are counted in 15-minute intervals, in each plastic cup containing the solutions, to determine the ants' preference of sweeteners. Results The data from Tests 1A and 1B showed that ants preferred the natural sugars the most, and Test 2 showed that ants preferred the mid-level sugar concentration solution. Conclusions/Discussion The data supported the hypothesis where it was predicted that ants would prefer the natural sugars over the artificial sugar substitutes.	
Summary Statement Research and experimentation to determine whether trail pheromones can communicate the quality of a food source.	
Help Received My father taught me how to obtain scientific research papers, and reviewed my report and display board.	