



**CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY**

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| Name(s) Nicole T. Vanegas | Project Number J2315 |
| Project Title Myrmecology: The Effect of Temperature on Ants' Ability to Locate Food | |
| <p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of this experiment was to determine the effect of temperature on the speed at which ants locate food.</p> <p>Methods/Materials Three ant colonies, one 30 degree Celsius room and one 19 degree Celsius room, and a timer. Three ant colonies rotated between the different temperature rooms were tested for the time it took to locate food.</p> <p>Results Two ant colonies were placed in a 30 degree Celsius room and one was placed in a 19 degree Celsius room. The colonies were rotated. Food was placed in a specific location and the colonies were observed for the time it took to locate the food. After fifteen trials in each temperature room, the 30 degree Celsius room had a faster average time than the 19 degree Celsius room.</p> <p>Conclusions/Discussion After fifteen trials, the results showed that the ants found the food much faster in the 30 degree Celsius room than in the 19 degree Celsius room. On average, when the colonies were in the 30 degree Celsius room they found the food in two hours, thirty-six minutes, and nineteen seconds. However, when the colonies were in the 19 degree Celsius room they found the food in three hours, forty-nine minutes, and twenty-three seconds.</p> | |
| Summary Statement As observed through multiple timed trials, the ants, on average, located the food faster in the 30 degree Celsius room than the 19 degree Celsius room. | |
| Help Received I designed the experiment by myself, however my sister assisted me in placing the food in the two different rooms at the same time. | |