



**CALIFORNIA STATE SCIENCE FAIR
2017 PROJECT SUMMARY**

Name(s) Rayhan Y. Razzak	Project Number J2216
Project Title A Caffeine Kick	
Abstract Objectives/Goals My objective was to learn if and how caffeine affects Daphnia's heart rate. Methods/Materials Pipette, Daphnia Magna Culture, Caffeine, Petri Dish, Tripod and Camera, and Graduated Cylinder Results Several Daphnia Magna were placed in various solutions of caffeine and spring water. Repeated trials were run to determine the effects of each solution on Daphnia Magna's heart rate. The difference between each solution's results were that as more caffeine is added to the solution, the heart rate is increased. Conclusions/Discussion Repeated trials with multiple Daphnia Magna in different solutions revealed that the more caffeine added to the solution, the higher the beats per minute. It is concluded the caffeine has a significant effect on the heart rate of Daphnia.	
Summary Statement As discovered by the change of heart rate of the Daphnia Magna by the different solutions, I found that as more caffeine is added to the solution, the heart rate is increased.	
Help Received With the help of online research and my science teacher, I was able to design the way to collect and test my data. However, I performed the experiment myself.	