



**CALIFORNIA STATE SCIENCE FAIR  
2015 PROJECT SUMMARY**

<b>Name(s)</b> Joshua A. Lewis	<b>Project Number</b>  35654
<b>Project Title</b> Daphnia: Under the Influence	
<b>Objectives/Goals</b> To find whether certain substances affect the heart rate of Cladocera Daphnia. <b>Methods/Materials</b> Water fleas, caffeine, alcohol, microscope.  I added small amounts of alcohol to the container of Daphnia and then extracted them from the container after a minute with a pipet. I then put them under the microscope and counted their heartbeats for 15 minutes, then removed the Daphnia. I repeated this process multiple times to get a more accurate sample size. I repeated the process again multiple times, but with caffeine instead of alcohol. <b>Results</b> When the Daphnia were introduced to caffeine, the more I gave them, the more their heart rate went down. The more alcohol I gave the Daphnia, the more their heart rate went down.	
<b>Summary Statement</b> Testing whether caffeine and alcohol affect Cladocera Daphnia's heart rate.	
<b>Help Received</b> My mother helped time the experiments, and my dad bought the supplies. My math tutor helped me keep track of data.	