



**CALIFORNIA STATE SCIENCE FAIR  
2010 PROJECT SUMMARY**

<b>Name(s)</b> <b>Matthew P. Perez</b>	<b>Project Number</b> <b>J2417</b>
<b>Project Title</b> <b>How Does Electromagnetic Radiation Affect A Colony of Harvester Ants?</b>	
<b>Abstract</b>	
<b>Objectives/Goals</b> Hypothesis Based on my research and experiment "How Does Electromagnetic Radiation (EMR) Affect a Colony of Harvester Ants?" I theorize that the exposure to low level EMR will have detrimental effects on the two ant farms that are exposed to them.	
<b>Methods/Materials</b> Procedures: I will set up three individual ant farms with around sixty harvester ants each. There will be a Control Group, which will receive no EMRs, a TV Group that will be exposed to EMRs from a TV for eight hours a day, and a Phone Group that will receive EMRs from a wireless phone and basestation 24/7. I will monitor the ants for three weeks. On the last day of the experiment I will take the ant farms apart and count the dead. Lastly I will compare the data that I collect between each of the three ant farms.	
<b>Results</b> Results: About the same amount of ants died in all of the three ant farms. I found out that the EMR#s could have evoked the ants to become cannibalistic because there were very few body parts found in the TV and Phone Group. The EMR#s emitted from the TV and wireless phone did seem to negatively affect the ants. The wireless phone seemed to evoke confusion in the Phone Group and they tried to stay away from them. The TV Group seemed to initially thrive on the EMR#s but as the experiment continued they lacked energy. The Control Group seemed natural, and worked well together during the entire experiment.	
<b>Conclusions/Discussion</b> Conclusion: The EMR#s did seem to have negative affects on the ants in my experiment. With our growing exposure to manmade EMR#s in our society today, we might want to take a closer look at these negative effects and decide if we should limit our exposure to them.	
<b>Summary Statement</b> How does electromagnetic radiation affect a colony of harvester?	
<b>Help Received</b> Mother helped type information; Friend helped with Excel document; Parents helped with display boards; Mom helped take photos of art farms..	