



**CALIFORNIA STATE SCIENCE FAIR  
2008 PROJECT SUMMARY**

<b>Name(s)</b> <b>Alexandra S. Kokka</b>	<b>Project Number</b> <b>J1119</b>
<b>Project Title</b> <b>Determining the Effects of Environmental Conditions on the Feeding and Growth Rate of Mice</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> My project was to determine if mice that are placed in different environmental conditions (light, dark) (regular feeding times) will have an effect on their growth rate.</p> <p><b>Methods/Materials</b> I first placed 5 feeder mice into 5 different cages. (cages had bedding, water). I then placed a cage into different environments. Cage 1 had 24 hour light, and was given food for 24 hours. Cage 2 had 24 hours light, but was given limited food. (regular feeding times) Cage 3 was placed in a 24 hour dark environment with 24 hour food. Cage 4 was placed in a 24 hour dark environment with regular feeding times. Cage 5 was the control group - Normal environment with 24 hour food. My experiment lasted 13 days. I took a beginning weight on each mouse on day one, and weighed again every 4 days. I used a triple beam scale for the measuring. i then compared the growth rates. I obtained a letter from a veterinarian saying it was safe for the mice. After the experiment, the mice were given to Sanger High School biology dept.</p> <p><b>Results</b> Mice that were in the Dark environment with limited food grew the most. A difference of 53.9 grams Light environment with limited food grew the 2nd most. Light with 24 hour food was next, with Dark and 24 hour food following that. The control group had the least amount of growth. 35.9 grams of growth. The Limited food groups grew more than the 24 hour food groups.</p> <p><b>Conclusions/Discussion</b> I think the mice are like humans in that when they are stressed they tend to eat more. The limited food groups had eight hours between feeding times. This could have caused more hunger sensations. People tend to also eat more when they feel very hungry. The same thing probably occurred with the mice.</p>	
<b>Summary Statement</b> I wanted to see if different environmental conditions would effect the growth rate of mice.	
<b>Help Received</b> Parents supervised and helped handle the mice. Teacher taught scientific method. Parent helped put board together.	