



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Jennifer Housel; Margrita Maiz	Project Number 22649
Project Title Is a Mouse Able to Associate a Positive Reinforcement with a Specific Sound?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective is to determine whether a mus musculus is able to associate a positive reinforcement with a specific sound. Our hypothesis states that because of Pavlov's successful experiment with animal conditioning and the possibility of training rodents, the mus musculus will learn to associate the food with a sound.</p> <p>Methods/Materials Two mus musculus were put into separate cages with a tube leading to a food distributor. The test subject was conditioned twice a day for two weeks by using food as a positive reinforcement. When the mouse reached the food, the clicker was used. For the control, the clicker was clicked three times a day unrelated to food. After, the mice were put together, the clicker was used, and they were timed until they reached the food.</p> <p>Results The results showed that the mouse was able to associate the positive reinforcement with the sound. After the week of testing, the clicker was used and the mouse found the food in 1 minute and 52 seconds. Tx time started to decrease until after 168 hours, the mouse found the food in 6 seconds.</p> <p>Conclusions/Discussion We conclude that a mus musculus is able to associate the positive reinforcement with a specific sound. Because the result showed that the mus musculus' time to get to the food gradually decrease, it shows that its conditioned reflexes got stronger. For further experimentation, we could observe if the mus musculus would respond to a specific pitch or a specific tool faster.</p>	
Summary Statement This project is about a mus musculus's conditioned reflexes.	
Help Received Mother helped cut out some of the pictures and graphs.	