



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

Name(s) Elan D. Lee	Project Number J1014
Project Title Do Rats Learn Faster with Peer Pressure?	
Abstract Objectives/Goals The question asked was will a rat trained in a dual chamber skinner box learn faster if it is next to a rat that has already been trained? My hypothesis was that a rat trained with a demonstrator rat will learn to press the lever faster than if it learned alone. Methods/Materials To test this hypothesis a dual chamber Skinner box was built providing identical chambers to two rats that were separated with Plexiglas so they can observe each other but are not together. The time a rat learned to press the lever for food was determined for one solo rat. This time was compared with five observer rats that were trained with the demonstrator rat that was already trained. The number of 5-minute training sessions to achieve final learning of task was recorded. Behavior was categorized as NB - rat is reward by approximating lever; SB - rat is rewarded for inadvertently touching lever; B - rat is rewarded for pushing lever but is unsure of cause of reward; and WB - rat is obviously pushing lever in anticipation of reward. Final learning was considered WB 4 times in a row. Results The time to achieve learning the task of pressing the Skinner box for the solo demonstrator rat was 33 sessions. The average training time for the 5 observer rats was 24.7 sessions. Conclusions/Discussion Rats learned faster with peer pressure. Rats exhibit social behavior and are capable of imitation in order to obtain a desired goal. Future experiments can be repeated with different demonstrator rats to insure that the demonstrator rat is not simply smarter than the observer rats. Other types of controls in this experiment could include observer rats being trained by a demonstrator that is getting free food or no food. Many more rats and repetition of the experiment would be required to prove a stronger conclusion.	
Summary Statement Using a dual chamber Skinner box, it was determined that rats learn faster to press a lever on a skinner box when placed near a demonstrator rat that was already trained.	
Help Received My father assisted me solder the wires together on this Skinner Box.	