



California Science Center  
**CALIFORNIA STATE SCIENCE FAIR**  
**2001 PROJECT SUMMARY**

<b>Your Name</b> (List all student names if multiple authors.) <b>Emily B. Jaffe</b>	<b>Science Fair Use Only</b>  <h1 style="margin: 0;">J0216</h1>
<b>Project Title</b> (Limit: 120 characters. Those beyond 120 will be ignored. See pg. 9) <b>Positive Reinforcement in the Classroom -- Is it Effective?</b>	<b>Division</b> <b>J Junior (6-8) J Senior (9-12)</b>
<b>Preferred Category</b> (See page 5 for descriptions.) <b>2 - Behavioral Sciences</b>	
<b>Abstract</b> (Include Objective, Methods, Results, Conclusion. See samples on page 14.) Use no attachments. Only text inside these boxes will be used for category assignment or given to your judges.	
<p><b>Objective:</b> The objective is to determine whether third graders will retain more information with positive reinforcement than without.</p> <p><b>Materials and Methods:</b> Classes will be given a pre-test on Roman numerals and will be told to do their best. The pre-tests will be collected and the students will be shown a video about Roman numerals. After the video they will take the same test again as a post-test. For half (five) of the classrooms, after the pre-test is taken, the class will be told that if they pay attention to the video and do well on the post-test, they will receive a reward (mini M&amp;M's). For the other half of the classes, nothing will be said about a treat. The collected tests will be graded. The improvement of each set of classes (with and without reinforcement) will be averaged together. The results will be compared, and a conclusion will be made.</p> <p><b>Results:</b> Classes tested without positive reinforcement had, on average, a 57.9% improvement, while the classes with positive reinforcement improved by 64.5%. The average test score of children who had positive reinforcement was 6.6% higher than the children tested without it.</p> <p><b>Conclusions:</b> Positive reinforcement is effective in improving test scores.</p>	
<b>Summary Statement</b> (In one sentence, state what your project is about.) This experiment tests the effectiveness of positive reinforcement on third-grade students in a classroom situation	
<b>Help Received in Doing Project</b> (e.g. Mother helped type report; Neighbor helped wire board; Used lab equipment at university X under the supervision of Dr. Y; Participant in NSF Young Scholars Program) See Display Regulation #8 on page 4. Parents helped make contact with the schools and provided transportation; classroom teachers allowed me to come into their classrooms to perform the testing.	