



CALIFORNIA STATE SCIENCE FAIR 2015 PROJECT SUMMARY

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Project Title Exploring and Comparing the Effects of Reward and Punishment	
Abstract Objectives/Goals The purpose of this experiment is to understand the level of motivation to cheat in students when offered extra credit and to determine whether extra credit is the ideal form of motivation for students. We hypothesized that students who are presented with a test that counts against their grade would be more motivated to cheat than those who are presented with a test that counts for extra credit. Methods/Materials We asked randomly selected teachers to provide exams for their students under certain circumstances. Some students took the test believing that the test could potentially lower their grade; other students took the test believing that the test was only being offered for extra credit and could only improve their grade. We created the exams, which were comprised of approximately four to five questions, with assistance from the teachers. Results About 55% of the students who believed they were taking a real test admitted to thinking about or trying to cheat, whereas about 76% of students who were offered extra credit admitted to thinking about or trying to cheat. In both circumstances, a majority of the students admitted to thinking about or trying to cheat. Conclusions/Discussion The results did not support our hypothesis. The results suggest that students who are offered extra credit are more prone to cheating and have higher motivation to perform better. Through our research, we learned that extra credit definitely has its short-term benefits, one of which is that they tend to become more motivated in their studies, which is supported by our experiment. However, we also learned that extra credit has its long-term drawbacks; for instance, we have seen first-hand that students can become too reliant on extra credit to pass their classes. Weighing both options, we decided that the ideal situation is for teachers to offer extra credit sparingly, enough to keep students motivated but not enough to make them dependent.	
Summary Statement Our project was designed to explore the effects of extra credit on students' levels of motivation.	
Help Received Teachers who consented to allow us to conduct our experiment in their classrooms.	