



**CALIFORNIA STATE SCIENCE FAIR
2013 PROJECT SUMMARY**

Name(s) Ryan D. Kmet	Project Number S0412
Project Title Altruism, Cognitive Function, and Self-Esteem	
Objectives/Goals The purpose of this experiment was to determine if the performance of an altruistic act would positively affect cognitive function and self-esteem.	
Abstract Methods/Materials Consent forms were distributed to the entire high school student body, of which 93 were returned. Consenting subjects were subsequently divided into three groups of 31. Thirty-three (33) tests were labeled 1 to represent the control. The adviser checked in the first group of 11 students. The designated helper walked by the classroom and dropped pencils in front of the remaining students. The subjects who aided the helper in retrieving the pencils were recorded by the student aid, and their tests were labeled 2, while the remainder were labeled 3. Tests were distributed, completed, and collected, and the experiment was repeated with the two remaining groups of 31. The tests were then checked, scored, initialed, and double verified.	
Results Upon analysis, the data partially confirmed the hypothesis. Group 2 (Helpers), representing (0.14) of the subjects, outperformed Group 1 (Control), representing (0.51) of the subjects, and Group 3 (Non-Helpers), representing (0.35) of the subjects, in both cognitive function (at 75 for males and 55 for females for Helpers, 70 for males and 50 for females for Control, and 39 for males and 49 for females for Non-Helpers) and self-esteem (at 25 for males and 22 for females for Helpers, 22 for males and 16 for females for Control, and 17 for males and 18 for females for Non-Helpers). Control unspecified gender subject scores were the only aberration, with cognitive function (50) and self-esteem (24) scores significantly higher than both unspecified gender Helpers and Non-Helpers. The significance of this aberration is unknown, however, as the unknown gender subjects were limited to a total representation of only (0.08) of the subjects.	
Conclusions/Discussion The importance of the data collected is that it demonstrates the execution of an altruistic act may contribute to an increase in cognitive function and self-esteem. The results of this experiment can contribute to a better understanding of the sociological versus biological inheritance of altruism, relative in the recent debate regarding the validity of the Price equation. Demonstration of the positive effects of altruism may also help further social cooperation by illustrating both group and individual benefits.	
Summary Statement The effects of altruism on cognitive function and self-esteem.	
Help Received Biology teacher, Mr. Hartsock, supervised experiment and double-verified data; Mother bought supplies for board; student aids, janitor, and monitors assisted in recording data and dropping pencils	