



# CALIFORNIA STATE SCIENCE FAIR 2010 PROJECT SUMMARY

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| <b>Name(s)</b><br><b>Melissa Fineman</b>  | <b>Project Number</b><br><b>S0306</b> |
| <b>Project Title</b><br><b>Extracurricular Activities vs. Academic Performance</b>  |                                       |
| <b>Abstract</b><br><b>Objectives/Goals</b><br>Several studies demonstrate a positive association between school performance and participation in sports. In fact human and animal studies demonstrate that physical fitness and activity have positive effects of cognition. However, several lessons associated with sports participation, such as work ethic, time management, organizational skills, and goal achievement, may also be taught during non-sport extracurricular activities. Therefore, the objective of this study was to determine if there is a positive correlation between time spent on extracurricular activities and academic performance, and to determine if this correlation is dependent upon the type of activity.<br><b>Methods/Materials</b><br>A 3 page survey was distributed to non-freshman students of 3 Marin County public high schools. The survey determined the types of extracurricular activities performed, hours per week spent on these activities, seasonal variation of these time commitments, and academic performance as determined by weighted GPA. A password protected database was developed (MS Access) that includes all the variables in the survey. The independent variable was the amount of hours each student did extracurricular activities, and the dependent variable was their grades. Statistical analysis included the unpaired t-test, uni-variant and multi-variant analysis.<br><b>Results</b><br>Over 900 surveys were distributed and 200 were completed and analyzed. I found that participation in extracurricular activities was associated with better academic performance, independent as to whether the activity was physical or non-physical. In fact, a linear regression model demonstrated a significant correlation between GPA and average hours of activities per week, with a coefficient of 0.034 per hour of activity per week.<br><b>Conclusions/Discussion</b><br>Participation in extracurricular activities is associated with better academic performance, independent as to whether the activity is physical or non-physical. In fact, there is a strong association between increasing hours spent on extracurricular activities and increasing GPA. Limitations of this study include reporter bias and self-reporting with no validation method. |                                       |
| <b>Summary Statement</b><br>I tested the hypothesis that time spent doing extracurricular activities, independent of the type of activity, taught students skills, such as time management and organizational skills, that would result in improved academic performance.   |                                       |
| <b>Help Received</b><br>Father's friend helped me with the set up of the database and the data analysis.  |                                       |