



**CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY**

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Project Title IM Free: Do the Fastest Freestyle Swimmers Have the Fastest Individual Medley Time?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective was to see if the fastest freestyle swimmer in an IM race would have the fastest time. The experimenter hypothesized that 85% of the fastest freestyle swimmers in an IM race would have the fastest IM time.</p> <p>Methods/Materials Swimmers ages 11-12 and 13-14 both girls and boys were used. The swimmers were recorded doing a 200 IM race with a video camera and the times were recorded with a stopwatch. The raw data was entered into a table. The raw data was then sorted from fastest to slowest IM times and fastest freestyle time fastest to the slowest time. The data from these tables were analyzed statistically.</p> <p>Results The first four experiments had 87.5% of the fastest IM swimmers be the fastest freestyle swimmers. In the next four experiments, 47% of the fastest IM swimmers were freestyle swimmers. For all eight experiments 68% of the fastest IM swimmers were the fastest freestyle swimmers.</p> <p>Conclusions/Discussion In the Individual Medley race, 68% of the fastest IM swimmers were the fastest freestyle swimmers. This shows that the three other stroke also have a big impact on the race. Most people have a specialty of the three other strokes. This means, they have better than average times in their specialty stroke. This proves that to be good at IM all the strokes need to be good not just one. Freestyle does have an impact on IM, though if you are good at freestyle and all the other strokes, you have a high probability of getting the fastest time.</p>	
Summary Statement To determine the correlation between the freestyle split time and the overall Individual Medley time, to see the effect of freestyle on Individual Medley and to check if the fastest freestyle swimmers truly are the fastest IM swimmers.	
Help Received Parents helped by reading papers, giving advice and supporting the project. Mentoring was by Shaun Whitaker, the Quantum Flash swim team coach. Mrs. Gillum, science teacher, helped, gave advice and showed us how to work on the project.	