



**CALIFORNIA STATE SCIENCE FAIR  
2005 PROJECT SUMMARY**

<b>Name(s)</b> <b>Bryce R. Persichetti</b>	<b>Project Number</b> <b>J0215</b>
<b>Project Title</b> <b>Heads Up: A Study on Soccer Head Protection</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> This project is testing how useful head protection is and which type is the most effective. If the head protection is Full90 then the force will be reduced by 50% compared to the unprotected head.</p> <p><b>Methods/Materials</b> One model used for testing made out of plywood which has a 20 oz. hammer attached from it's handle at the top. When hammer is dropped it hits a cylinder block of wood (representing a head) that is nailed to the bottom. A cardboard box partially filled with sand was used to measure the flight of the marble after impact. 1 Full90 headband, 1 Addidas headband, and 1 Addidas beanie cap were items used for testing.</p> <p><b>Results</b> The Full90 headband reduced the force by 52%, the Addidas headband reduced the force by 40%, and the Addidas beanie reduced the force by 43%. 10 trials were counted.</p> <p><b>Conclusions/Discussion</b> The Full90 headband is the best because it is made out of an absorbant material. Thickness is irrelevant because the Addidas beanie is twice as thick as the Addidas headband, yet it only reduced the force by 3% more.</p>	
<b>Summary Statement</b> I tested soccer head protection products to see if they effectively reduced the force compared to the unprotected head.	
<b>Help Received</b> Grandpa helped me build the test model; Mom helped me buy some products and drove me around the city; Dad helped with the testing and his knowledge of Physics; My Computer teacher, Mrs. Utschig taught be how to use Microsoft Excel; My Science teacher, Mrs. McKinney helped throughout the whole	