



**CALIFORNIA STATE SCIENCE FAIR
2015 PROJECT SUMMARY**

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| Name(s) Matthew L. Lanum | Project Number J2016 |
| Project Title Bicycle Helmet Bust | |
| Objectives/Goals The purpose of my experiment was to find out if the brand or price of childrens bicycle helmets affect the integrity of the helmet in a crash. | |
| Abstract | |
| Methods/Materials I tested various types and brands of helmets, from different manufacturers and price ranges by dropping a series of weights on the top of each helmet at a fixed height of 1.2192 meters (4 feet). I then recorded the weight at which the helmet first cracked, and the weight at which the helmet's integrity was considered completely compromised. I repeated the procedure once more with identical helmets and averaged the results. | |
| Results The results were that more expensive helmets did not provide any greater structural integrity in comparison to the less expensive helmets. | |
| Conclusions/Discussion The results were that more expensive helmets did not provide any greater structural integrity in comparison to the less expensive helmets. There was an outlier, the C-Preme Crash. This helmet was a mid-priced helmet with a rubber mohawk. The mohawk seemed to help protect the helmet, and it performed substantially better than the other helmets. | |
| Summary Statement Does the brand or price of a childrens bicycle helmet affect the integrity of the helmet in a crash? | |
| Help Received Father payed for the helmets. | |