



**CALIFORNIA STATE SCIENCE FAIR
2015 PROJECT SUMMARY**

Name(s) Tucker Dunbar; Gregory Murphy	Project Number S0305
Project Title Liquid Armour	
Abstract	
Objectives/Goals To make flexible, lightweight, bulletproof armor by implementing shear thickening fluids into para aramid fabric.	
Methods/Materials ballistic Kevlar polyethylene glycol 400 silica dust	
Results Currently retesting...	
Conclusions/Discussion From our initial platform (with cornstarch, water, plastic bags and Kevlar), the results of our project had shown the promising applications of liquid armor with shear thickening fluid. We are currently re-testing our design with more substantial chemicals. It is foreseeable that functional liquid armor is a feasibility. However, at this time, no final statements can be made.	
Summary Statement The future applications of shear thickening, non-newtonian fluids into para aramid fabrics to make a flexible, lightweight, bulletproof material for armour.	
Help Received My father, a firearms instructor, supervised the gun handling and monitored proper gun safety whilst performing the trials.	