



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) Jennifer D. Aguirre	Project Number J2102
Project Title Cold Water Detergent vs. Hot Water Detergent	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective was to test whether cold water detergent or hot water detergent cleans better. My assumption was that cold water detergent would clean as well as hot water detergent.</p> <p>Methods/Materials The detergents I used were Tide Coldwater, Tide Original, Wisk Coldwater and Wisk Original. I placed four stains on four white cotton bandanas (wine, marinara sauce, chocolate sauce, grass/mud) and let the stains set for two weeks. I placed wax paper over the stains and recorded the number of sheets used before the stain was no longer visible. I washed each bandana once, in a separate load (with no other laundry), using the cold or hot water button on the washing machine and the appropriate detergent. After washing the bandanas, I dried them separately in the dryer and repeated the procedure with the wax paper to compare results.</p> <p>Results Cold water detergent cleans as well, and in some cases better, than hot water detergent. Tide Coldwater was superior to Tide Original, while both Wisk detergents were fairly similar in their results.</p> <p>Conclusions/Discussion In conclusion, I found out that you can wash your clothes in cold water detergent to save energy and money and have the same laundering results.</p>	
Summary Statement Does cold water detergent clean as well as hot water detergent?	
Help Received My mother took me shopping for supplies and taught me how to use the washing machine/dryer.	