



**CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY**

Name(s) Jacob A. Haselden	Project Number 31308
Project Title Determine Your Detergent	
Objectives/Goals My objective was to determine which laundry detergent, Tide, Dreft baby detergent, Planet Organic detergent, provides less pH after washing. Abstract Methods/Materials Materials: Washing Machine, Tide Laundry Detergent, Dreft Laundry Detergent, Planet Organic Laundry Detergent, Electronic Metric Weight calculator, pH Meter, 42 L Water, 2kg clothes, Cups for recording water samples. Method: <ol style="list-style-type: none">1. Measure the recommended amount of detergent for 2kg load of clothes2. Placed the designated amount of clothing for recommended sample into the washing machine and set the washing machine to cold water3. Dissolve recommended amount of Tide detergent into washing machine4. Take a sample of the dissolved water and measure its pH. Record data.5. Wait until the clean cycle ended. Once rinse cycle began, obtained another sample and measure the pH. Record data6. Wait until the water goes down. Restart the cycle and let water gather with the clothes still in the machine. Obtain a sample and measure pH. Record data.7. Wait until the Rinse cycle begins. Once the water collected again, obtain a sample and measure the pH. Record data.8. Repeat steps 2-7 with half the recommended amount of detergent9. Repeat steps 1-8 with a Dreft laundry detergent10. Repeat steps 1-9 with a Planet Organic Laundry detergent Results The Dreft baby laundry detergent provided the lowest pH and less excess laundry detergent after the wash cycle. Conclusions/Discussion The results were not as I had predicted. I believed that the Planet Organic laundry detergent would have less pH after washing because the detergent was supposedly chemical free and organic. However, it was the Dreft baby detergent that showed less pH in all of the testing. This makes sense as the detergent is made for babies and therefore is focused on providing less chemicals to harm the baby's skin and cause skin rashes and other skin diseases.	
Summary Statement My project is about determining which type of laundry detergent, Tide, Dreft or Planet Organic, provides the lowest pH after washing clothes.	
Help Received Mother gave me materials to use for my board	