



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Tyler R. Harp	Project Number J1117
Project Title The Effects of Laundry Products on Flame-Retardant Sleepwear	
Abstract Objectives/Goals The purpose of my project was to find out if flame- retardant sleepwear would lose its effectiveness after washing with different laundry products, such as: fabric softeners, liquid bleach, stain removers and powder detergents. Methods/Materials I gathered five one meter pieces of flame- retardant sleepwear and five pieces of flammable sleepwear. I washed all the flame- retardant sleepwear in Gain detergent, Tide detergent, liquid chlorine bleach, Downy liquid fabric softener, Bounce fabric softener sheets, Spray n' Wash stain remover, Borax, Shout stain remover and baking soda. After washings and dryings, I tested each fabric's flammability by lighting it on fire. The fabrics were tested before and after testing. Results After testing each fabric, the only laundry products that affected the flammability were: ten washings with Gain detergent, ten washings with Tide detergent, one rinse of liquid fabric softener, and one rinse of diluted bleach. Conclusions/Discussion My hypothesis was partially supported. I thought that the only two products that would affect the flame-retardant fabrics would be the liquid bleach and stain removers. After ten washings with both detergents, a rinse in diluted liquid bleach and a rinse in fabric softener, I concluded that the fabrics became slightly flammable. General rules of laundering can be applied to prevent and minimize injury to infants, children, and also adults.	
Summary Statement My project is about the effects of laundry products on flame- retardant sleepwear.	
Help Received Mother showed me how to operate the washing machine and helped launder the fabrics	