



**CALIFORNIA STATE SCIENCE FAIR  
2016 PROJECT SUMMARY**

<b>Name(s)</b> <b>Morrigin K.A. Fedinick-Emmons</b>	<b>Project Number</b> <b>J2007</b>
<b>Project Title</b> <b>Liar, Liar, Fabric on Fire!</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The objective was to determine whether natural or synthetic fabrics were more fire resistive. <b>Methods/Materials</b> Propane torch, burn pan and controlled lab environment. Fifty samples of fabric: twenty five natural and twenty five synthetic. Each sample was burned for one minute and thirty seconds or until self extinguished. Fabric masses were obtained pre and post burn. Fire resistiveness determined by burn percentage. <b>Results</b> Natural fabric, hemp was the most fire resistive. With synthetic fabric, polyester was the most fire resistive. Both findings, along with all other findings, confirm my hypothesis that natural fabrics are more fire resistive than synthetic fabrics. <b>Conclusions/Discussion</b> Based on experimental results, one can conclude that natural fabrics tested are more fire resistive than synthetic fabrics. A persons removal of synthetic fabrics could potentially lower the risk of injury, property damage, or death in the event of a house fire.	
<b>Summary Statement</b> This project explored the fire resistance of natural and synthetic fabrics.	
<b>Help Received</b> Local Battalion Chief helped me better understand topic, Family friend helped edit, Humboldt State University and Dr. Kane	