



**CALIFORNIA STATE SCIENCE FAIR  
2014 PROJECT SUMMARY**

<b>Name(s)</b> Morrigin K.A. Fedinick-Emmons	<b>Project Number</b>  34291
<b>Project Title</b> Fire Resistant Flora: Fact or Fiction?	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> California is in the midst of a drought. My project's objective was to determine natural fire-resistance of locally available plants.</p> <p><b>Methods/Materials</b> Propane torch and burn pans were used to burn 6 species of plants: 24 samples each of both dried and fresh plants. Each specimen was burned until self-extinguished. Plant masses were obtained pre and post burn. Fire resistance was determined by percentage of mass lost and burn time.</p> <p><b>Results</b> Overall, the Cryptomeria was found to have the highest degree of fire-resistance. The Leylandii Cypress had the lowest degree of fire-resistance. Both findings, along with all other samples tested, supported the hypothesis that highly fire-resistive plants had greater flexibility and moisture content, while less fire-resistive plants tended to be more dry and brittle.</p> <p><b>Conclusions/Discussion</b> Based on experimental results, one can conclude that there are naturally fire-resistive plants. A homeowner's knowledge of this could potentially protect property from the effects of vegetation fires. Current drought conditions in our region make this study worthy of attention.</p>	
<b>Summary Statement</b> This project explored the fire-resistance level of a variety of plants.	
<b>Help Received</b> Neighbor provided plant samples; Mother helped with backboard; local fire department assisted with safety of experiment.	