



**CALIFORNIA STATE SCIENCE FAIR  
2007 PROJECT SUMMARY**

<b>Name(s)</b> <b>Luka C. Douridas</b>	<b>Project Number</b> <b>J1807</b>
<b>Project Title</b> <b>Soapy Dilemma</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The question to be answered is, "How will changing the main oil used in creating a bar of soap effect how well the soap will clean a dirty piece of fabric?" It is hypothesized that a bar of soap with the main oil being coconut oil will clean a dirty piece of fabric better than one with olive oil, canola oil, avocado oil or lard. This is hypothesized because most recipes for soap use coconut oil, so it was suggested that the variation would be relatively efficient. <b>Methods/Materials</b> The procedure is as follows. First, five different types of soap, as stated in hypothesis, were formed and each poured into separate molds. Then a large piece of cloth was kneaded evenly with a mixture of vegetable oil, water, orange juice, dirt and ketchup, and left to soak overnight. Afterwards the cloth was equally cut into 25 pieces. Then an equal amount of each soap was shaved into five different containers of equal amounts of water. Five pieces of dirty cloth were dropped into each, and then shaken periodically during a 25 minute time period. The cloth was then rinsed and data was collected according to a color scale. <b>Results</b> The results did not support the hypothesis; canola oil worked the best. The soap that worked the worst was in fact the hypothesized variation: coconut oil soap.	
<b>Summary Statement</b> The project is about making soaps and finding out what oil used in making a bar of soap would clean a dirty piece of fabric the best.	
<b>Help Received</b> Mother helped drive to stores and take pictures	