



**CALIFORNIA STATE SCIENCE FAIR  
2016 PROJECT SUMMARY**

<b>Name(s)</b> <b>Julia Jeck</b>	<b>Project Number</b>  36312
<b>Project Title</b> <b>Is Grey Water Green?</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The objective of this experiment was to determine whether or not biodegradable and non-biodegradable grey water affect how herbs grow. <b>Methods/Materials</b> The method included growing three sets of 12 herb plants from seed. Each of the three sets was watered every other day for 22 days with either grey water made in a washing machine with biodegradable soap; grey water made in a washing machine with non-biodegradable soap; or freshwater (control group). Plant growth and pH was measured to determine the impact, if any, the two types of grey water had on plant growth and soil alkalinity. <b>Results</b> The herbs that grew the best were watered with non-biodegradable grey water and the herbs that grew the worst were watered with biodegradable grey water. The non-biodegradable grey water lowered the pH of the soil, creating a hospitable environment for the plants to grow, while the biodegradable grey water increased the pH of the soil and created a less hospitable environment for the plants to grow. <b>Conclusions/Discussion</b> The results of the experiment did not support my hypothesis. I expected that both biodegradable and non-biodegradable grey water would harm plant growth, with biodegradable grey water being less harmful than non-biodegradable grey water.	
<b>Summary Statement</b> I learned that herb plants grow better with non-biodegradable grey water than with biodegradable grey water or plain tap water.	
<b>Help Received</b> My father, Eric Jeck, helped me research how to measure pH and organize my results.	