



**CALIFORNIA STATE SCIENCE FAIR  
2009 PROJECT SUMMARY**

<b>Name(s)</b> <b>Morgan N. Johnson</b>	<b>Project Number</b> <b>J2309</b>
<b>Project Title</b> <b>Safe or Sorry?</b>	
<b>Objectives/Goals</b> My project was to determine which substance of toxic and non-toxic weed killers would work the fastest, be the cheapest, and stop regrowth on a flat 10# x 40# rectangle of weeds and grasses. I thought out of vinegar, bleach, rock salt and Roundup that the vinegar was going to work the fastest and stop regrowth, while the Roundup would be the cheapest.	
<b>Abstract</b> Eight consecutive 10#x 40# rectangle patches of weeds and grasses were measured and marked. One with two cups of rock salt, then skipping a patch, the second with two cups of vinegar, then skipping another patch, the third with two cups of bleach, skipping the final patch, the fourth with a quarter of an ounce of Roundup mixed with two cups of water. I used a different sprayer for each liquid and a measuring cup for the rock salt. I watched and observed the patches over a two week time span.	
<b>Methods/Materials</b> The vinegar was the fastest to kill the weeds and grasses, with the entire patch brown in three days. The vinegar was shortly followed by the bleach, with six days. After those the rock salt was brown within seven days. Lastly the Roundup was brown on the final day of my experiment, the fourteenth. Roundup still does not have any regrowth. The rock salt was by far the cheapest at \$0.12 for the patch.	
<b>Results</b> My conclusion is that each substance worked in my two week time span. Overall I think the best choice for someone who is looking for a non-toxic, very cheap weed killer was the rock salt. I am currently conducting the same experiment a second time to verify my results; I am making sure my results were not affected by precipitation, temperature and wind.	
<b>Conclusions/Discussion</b> My conclusion is that each substance worked in my two week time span. Overall I think the best choice for someone who is looking for a non-toxic, very cheap weed killer was the rock salt. I am currently conducting the same experiment a second time to verify my results; I am making sure my results were not affected by precipitation, temperature and wind.	
<b>Summary Statement</b> My project is about which non-toxic weed and grass killer is effective and safe for pets.	
<b>Help Received</b> My mom supervised the spraying of each substance.	