



**CALIFORNIA STATE SCIENCE FAIR  
2005 PROJECT SUMMARY**

<b>Name(s)</b> <b>Katherine Clifford; Shahd El-Khatib</b>	<b>Project Number</b> <b>J1407</b>
<b>Project Title</b> <b>What Prolongs the Lives of Cut Roses the Longest?</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The objective of our project is to determine what prolongs the lives of cut roses the longest. In experiment(Exp.) one; we wanted to see whether sugar or sugar and alcohol would prolong the lives of the roses the longest. In Exp. two, we wanted to see what acidity level the roses liked, so we tested aspirin as an acid, distilled water as neutral, and baking soda as a base. In Exp. three, we tested whether commercial plant food, or our version of commercial plant food: sugar, alcohol, and aspirin would work the best.</p> <p><b>Methods/Materials</b> We labeled all seven vases and filled them with their different solutions. In Exp. one; we put sugar in the first vase, and sugar and alcohol in the other vase. In Exp. two, we put aspirin, distilled water, and baking soda in separate vases. In Exp. three, we put commercial plant food in one vase and in the other vase; we put sugar, alcohol, and aspirin. Five roses were put in each vase. Every other day we recorded the roses conditions in our data log using the scale we created, trimmed the stems of the roses, changed the solutions, took pictures of the roses, and measured the pH levels of the roses in Exp.two. We kept this cycle going for thirteen days.</p> <p><b>Results</b> In Exp. one, the roses in the vase with sugar lived the longest. In Exp. two, the roses in the vase with distilled water lived the longest. In Exp. three the roses in commercial plant food were the healthiest. Throughout all three Exp., the roses in commercial plant food lived the longest and were the healthiest on the last day.</p> <p><b>Conclusions/Discussion</b> In our hypothesis, we thought that in Exp. one, the roses in sugar and alcohol would live longer than the roses in sugar. Our hypothesis was proved incorrect. In Exp. two, we thought that the roses in aspirin would live the longest. Our hypothesis was incorrect and distilled water turned out to keep the roses the healthiest. In Exp. three, commercial plant food kept the roses alive longer than the roses in sugar, alcohol, and aspirin. This result proved our hypothesis right. Throughout all three Exps., the roses in commercial plant food lived the longest and were the healthiest, just like we believed in our hypothesis. Our project is important because when you buy cut roses, they wilt and brown and you can only admire their beauty for a few days. We have discovered that commercial plant food helps to preserve roses' health and beauty.</p>	
<b>Summary Statement</b> Throughout three different experiments, we determined what prolongs the lives of cut roses the longest.	
<b>Help Received</b> My mother typed 11 out of 24 pages of our data log ; Half Moon Bay Pastorino Farms helped us by telling us what is in commercial plant food and by giving us background information on what they grow their roses with.	