



California Science Center  
**CALIFORNIA STATE SCIENCE FAIR**  
**2001 PROJECT SUMMARY**

<b>Your Name</b> (List all student names if multiple authors.) <b>Ranae Neill; Katherine Thomas</b>	<b>Science Fair Use Only</b>  <h1 style="margin: 0;">J0424</h1>
<b>Project Title</b> (Limit: 120 characters. Those beyond 120 will be ignored. See pg. 9) <b>Vitamin C Content: How Nutritious are Your Oranges?</b>	<b>Division</b> <input checked="" type="checkbox"/> <b>Junior (6-8)</b> <input type="checkbox"/> <b>Senior (9-12)</b>
<b>Preferred Category</b> (See page 5 for descriptions.) <b>4 - Chemistry</b>	
<b>Abstract</b> (Include Objective, Methods, Results, Conclusion. See samples on page 14.) Use no attachments. Only text inside these boxes will be used for category assignment or given to your judges. The problem is, "Do oranges lose vitamin C as they become older?"  It is hypothesized that oranges will gradually lose their vitamin C content as time passes.  A brief procedure of the experiment is as follows. Eight oranges will be picked on the same day. One orange will be used in each experiment for testing. To make an indicator solution that reacts with vitamin C, a starch solution (consisting of boiled cornstarch and water) was mixed into a graduated cylinder filled with 75 mL of water. Five drops of iodine was added, turning the starch solution and water a dark purple- blue color. One teaspoon of this indicator solution was poured into a test tube. 10 drops of juice from the orange will be added as well. Repeat this procedure 2 additional times for each day. The vitamin C in the juice will cause the indicator solution's color to change. The lighter the indicator solution is, the higher the vitamin C content. Therefore, the darker the indicator solution is, the less vitamin C content.  The results do support the hypothesis. The newer oranges were a light purple, almost clear color, showing that there was high vitamin C content present. As the oranges got older, their content became darker, showing that there was less vitamin C content present.	
<b>Summary Statement</b> (In one sentence, state what your project is about.) Oranges were tested over a period of time to see if they lost their vitamin C content over time.	
<b>Help Received in Doing Project</b> (e.g. Mother helped type report; Neighbor helped wire board; Used lab equipment at university X under the supervision of Dr. Y; Participant in NSF Young Scholars Program) See Display Regulation #8 on page 4. Grandmother provided oranges.	