



**CALIFORNIA STATE SCIENCE FAIR  
2003 PROJECT SUMMARY**

<b>Name(s)</b> <b>Geoffrey H. Woo</b>	<b>Project Number</b> <b>J1628</b>
<b>Project Title</b> <b>Hybrid Apple Trees: Creating the Ideal Tree</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The objective of this experiment was to determine if a hybrid tree, consisting of the fast-maturing Golden Dorsett's stock with popular Granny Smith scions grafted onto it, would take the best qualities of both trees, creating a fast-growing, yet popular fruit tree. I hypothesize that the hybrid would grow faster than a regular Granny Smith, but still produce Granny Smith leaves and fruit. <b>Methods/Materials</b> I used two Golden Dorsetts and one Granny Smith to form the control and manipulated variables. Clippers, sharp cutting knife, and tape were needed to facilitate grafting the scions on to the stock. Soil, fertilizer, and water were needed to keep the plants alive. The sun was also needed to allow photosynthesis, however any strong source of light could also fill this purpose. I used the Ti-83 Plus Silver Edition to plot the lines of regression of the leaves and height of the trees. I grafted six Granny Smith scions to one Golden Dorsett, creating the hybrid. Letting the three trees grow, I counted the leaves and measured the height determining which plant grew the fastest. <b>Results</b> The hybrid had the highest rate of growth, growing almost 1300% in leaves and in height, grew 5.8% comparing from initial count to final count. The Granny Smith grew 386% more leaves and 5.2% in height. The Golden Dorsett grew 539% more leaves and 8.7% in height. <b>Conclusions/Discussion</b> These results show that the hybrid has grown faster than the Granny Smith, supporting my hypothesis. The hybrid has grown Granny Smith leaves at a much faster pace. This concept could apply to other plants, so people could create other quickly grown, but tasty fruit tree.	
<b>Summary Statement</b> By using grafts, I created a hybrid apple tree that takes on the best quality of both the Granny Smith and the Golden Dorsett, creating a fast-growing, yet popular fruit.	
<b>Help Received</b> Friend taught me grafting, grandfather helped take care of plants, brother helped count leaves	