



**CALIFORNIA STATE SCIENCE FAIR  
2006 PROJECT SUMMARY**

<b>Name(s)</b> <b>Olivia R. Kuljian</b>	<b>Project Number</b> <b>J1118</b>
<b>Project Title</b> <b>Gum Hair</b>	
<b>Abstract</b> <b>Objectives/Goals</b> My objective was to learn what would remove gum from hair the best; peanut butter, vinegar or rubbing alcohol. <b>Methods/Materials</b> I rubbed 3 sticks of chewed Wrigley's Doublemint gum into 3 identical bundles of hair given to me by my hairdresser, Olimpia Avelar*. (*Olimpia had given me a number of bundles; all washed and all from the same person.) I then placed one bundle in a cup of vinegar, one in a cup of rubbing alcohol and rubbed peanut butter into the third bundle. I attempted to comb the hair out of the gum in each bundle and used my observation skills to determine the results. I repeated the experiment using gum from the same pack and hair from the same source. <b>Results</b> I was unable to comb out much of the hair in the peanut butter sample; approximately 1/2 of the hair remained matted to the piece of gum. I was able to comb out more of the hair in the vinegar sample but still approximately 1/5 of the hair remained. In the alcohol sample all but a few strands slipped off of the gum with very little combing. Rubbing alcohol loosens hair from gum the best. <b>Conclusions/Discussion</b> The rubbing alcohol acted as a solvent in removing the hair from the gum. It decreased the stickiness of the gum much in the same way it decreases the stickiness of adhesive labels.	
<b>Summary Statement</b> The goal of my project was to learn what got gum out of hair the best; peanut butter, vinegar or rubbing alcohol.	
<b>Help Received</b> My teacher helped me with my hypothesis and resources. My brother, Geddie, and a neighbor, Kasper, chewed the gum; my hairdresser, Olimpia Avelar, gave me the hair samples; my mom proofread and took pictures; my dad helped me glue my pictures on the backboard.	