



**CALIFORNIA STATE SCIENCE FAIR  
2004 PROJECT SUMMARY**

<b>Name(s)</b> <b>Fritz Foo</b>	<b>Project Number</b> <b>J1115</b>
<b>Project Title</b> <b>Project S.T.A.T: Scotch Tape, Adhesion, and Temperature</b>	
<b>Abstract</b> <b>Objectives/Goals</b> My goal from this project is to determine if there are differences between 3M tapes and to understand the affect of temperature on adhesives. The purpose for undertaking this study is to prove a tip from my mother for removing adhesives using heat and for pure curiosity. <b>Methods/Materials</b> To execute my objectives and goals, I made two procedures. One tested difference of tape types, by letting 3cm x 2cm tape strips from each sort hang from a certain height with a 300 gram weight attached and timing the duration held. A second set of directions uses a blowdryer and icepacks to influence heat on adhesives. Materials, specifically, are as follows: a 300 gram weight; Satin, Magic, and Transparent Tape; a thermometer; a watch; icepacks; and a blowdryer. <b>Results</b> Satin tape held longer than both Magic and Transparent tape. Magic tape was considerably stronger than Transparent, placing it second in length time and Transparent third. Furthermore, heat shortens the time an adhesive can hold dramatically, cold slightly, but room temperature leaves things hanging the longest. <b>Conclusions/Discussion</b> After completing my project and analyzing the results, I have concluded that heat concentration decreases the time held; the more heat the less time. Also, cold has the same affect; the colder from room temperature, the lower the duration. Finally, there is inequality among tapes; Satin holds best, then Magic Tape, and the weakest tape is the Transparent type.	
<b>Summary Statement</b> My project is about temperature and its effect on adhesives, in addition to the discovery of the differences between varying tapes.	
<b>Help Received</b> My brother helped me with the display of my project and my dad assisted me with making the line graph.	