



**CALIFORNIA STATE SCIENCE FAIR  
2002 PROJECT SUMMARY**

<b>Name(s)</b> Allison L. Orum	<b>Project Number</b>  22395
<b>Project Title</b> The World of Polymers	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> My objective was to conclude in which direction you can stretch a strip of plastic grocery bag further.</p> <p><b>Methods/Materials</b> I obtained a plastic grocery bag and cut it into strips. I stretched the strips that were cut out of the bag horizontally and vertically. Then with a apparatus that I built I stretched the strips and measured them. I compared the results and came to my conclusion which is backed up by my research.</p> <p><b>Results</b> The horizontal strips stretched further than the vertical strips. My data showed that the averages of horizontal lengths were longer. And my averages of vertical averages of lengths were shorter.</p> <p><b>Conclusions/Discussion</b> My conclusion was that horizontal strips stretch further than vertical strips stretch. This is because of the way the structure of the polymer chains assemble of the machines that manufacture large sheets of plastic grocery bag material.</p>	
<b>Summary Statement</b> My project is about stretching strips of plastic grocery bags orientated in different directions, and then comparing which one stretched further.	
<b>Help Received</b> Mr. Bodily helped me think of project and edit my board; My mom and dad helped me assenble and transport board; Mr. Brown & Mr. Downs that also edited and revised my board; My friends' parents that came to our school's science fair and interviewed us.	