



**CALIFORNIA STATE SCIENCE FAIR  
2012 PROJECT SUMMARY**

<b>Name(s)</b> <b>Martha I. Rangel</b>	<b>Project Number</b> <b>J1221</b>
<b>Project Title</b> <b>Band vs. Guitar</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> My objective was to determine who has a better lung capacity before and after running band students or guitar students.</p> <p><b>Methods/Materials</b> the material i used were: a hot plate to warm the water, an air flow meter which was used to check the students lung capacity, latex gloves to protect the the mouthpiece from getting germs.</p> <p><b>Results</b> my results stated that the band students had an average lung capacity than the guitar students. the guitar students were three times increasing and decreasing their lung capacity. the band students were increasing their lung capacity by the third time they inhaled. the guitar students were increasing their lung capacity by the fourth times the students inhaled.</p> <p><b>Conclusions/Discussion</b> thee band students had the right amount needed to have an average lung capacity. the guitar students were either too low or too high. some students were trying too much, but on the other side some students didn't even try enough where they gave me accurate numbers.</p>	
<b>Summary Statement</b> What is the right amount of lung capacity needed to have an average good lung capacity.	
<b>Help Received</b> father helped glue, teacher surpervised, mother cut papers	