



**CALIFORNIA STATE SCIENCE FAIR  
2007 PROJECT SUMMARY**

<b>Name(s)</b> Alden J. Moir	<b>Project Number</b> <b>J1520</b>
<b>Project Title</b> <b>The Effect of Different CO<sub>2</sub> Concentrations and High Nutrient Levels on Cyanobacteria Growth</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The objective of my project is to see if different concentrations of CO<sub>2</sub> will help or kill the bacteria. This is important when seeing if the cyanobacteria will help absorb CO<sub>2</sub> from our atmosphere so that we live in a healthy environment.</p> <p><b>Methods/Materials</b> I used 9 containers hold the cyanobacteria. I put an alga grow growth medium for productive growth in each container. 3 containers held room air with no added co<sub>2</sub> while I entered 30% and 60% of the capacity of the containers into the containers using a canister of CO<sub>2</sub> to refill the containers every other day.</p> <p><b>Results</b> The results i got after three weeks of testing was that the 30% containers grew the best with the room air in second and the 60 % last. To find this I used a sensitive eletronic scale that measures to the thousandth of a gram.</p> <p><b>Conclusions/Discussion</b> After seeing the results I came up with a few conclusions to why they grew a certian way. The 60% grew bad for the fact that the amount of CO<sub>2</sub> made it to acidic there fore killing some of itself also it grew not as well because the amount of CO<sub>2</sub> I entered pushed out an important nutrient in nitrogen. The room air did not have enough CO<sub>2</sub> to carry out photosyenthsis so it grew porely as well. Where the 30% was a balance between the two. My hypothesis was partially correct because i had said the 30% would grow the best but i mixed up my theryory when I said the 60% would grow better than the room air like previous experiments.</p>	
<b>Summary Statement</b> My project is about how we can use cyanobacteria to help get rid of greenhouse gasses like CO <sub>2</sub> . I tested different CO <sub>2</sub> levels on cyanobacteria to see how much it can absorb	
<b>Help Received</b> Mother helped glue paper; Father supplied equipment and helped with experimental setup	