



**CALIFORNIA STATE SCIENCE FAIR  
2008 PROJECT SUMMARY**

<b>Name(s)</b> <b>Zak Schutzer</b>	<b>Project Number</b> <b>J1430</b>
<b>Project Title</b> <b>Sun Is to Algae as Kryptonite Is to Superman?</b>	
<b>Abstract</b> <b>Objectives/Goals</b> This study tested whether or not a higher percentage of sunshine and more photosynthetically active radiation have an effect on the amount of chlorophyll produced by algae in the ocean. <b>Methods/Materials</b> The data had already been recorded, all that had to be done was the grueling work of entering it into an Excel file using home made computer programs. Once entered into Excel, the two different data sets were compared and graphed. <b>Results</b> No correlations were found in comparing the data sets. A statistical analysis was run on the results. The correlation coefficient for the percentage of sunshine data and the chlorophyll data was found to be .021003, showing no correlation. <b>Conclusions/Discussion</b> In conclusion to the study no correlations were found between the sun data and the chlorophyll data. The chlorophyll data had a few high outliers and then flat lined. None of the outliers could be explained by the sun data. Both sun data results, (photosynthetic active radiation and percent of sunshine) showed an almost identical graphing result. They both have a cyclic pattern most likely corresponding with the seasons. The results disprove the hypothesis. The graphs suggest that the sun data tested has little to no effect on the amount of chlorophyll. The correlation coefficient of the chlorophyll data and the photosynthetically active radiation was .021003. The correlation coefficient of the chlorophyll data and the photosynthetically active radiation was .020988.	
<b>Summary Statement</b> My project deals with the correlation between the reproduction of alga and the sun's rays.	
<b>Help Received</b> My father helped guide me to make the computer programs I used in processing the data sets. Dr. Joel Norris obtained the large sun data set I used from the Scripps Pier.	