



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Kaelene Jensen	Project Number J1718
Project Title How Do Changes in Light and Dark Affect the Bioluminescence of Pyrocystis noctiluca?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals I wanted to learn if the bioluminescence of plankton could be increased by giving it more light.</p> <p>Methods/Materials I obtained living samples of plankton that I subjected to various amounts of lamp light over a three week period and measured their bioluminescence five times a day. One test group received no light, a second group received 12 hrs of light and 12 hrs of darkness, and the third group received continuous light. I measured each group over a three week testing period.</p> <p>Results When the data was averaged over the three week period the plankton receiving 12 hrs light and 12 hrs darkness recorded the brightest bioluminescence. Surprisingly, the plankton receiving light continuously had the lowest brightness scores.</p> <p>Conclusions/Discussion I was surprised that the plankton receiving the maximum amount of light produced the lowest brightness. This made me think, "why?" I did some more research after my experiment and found out that bioluminescence is actually a chemical reaction that is only partly dependent on sunlight. I would like to do an experiment on what this chemical is and how it works.</p>	
Summary Statement How does darkness and sunlight affect bioluminescence in plankton?	
Help Received Parents helped get materials and with grammar, punctuation, and spelling.	