CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY

Name(s)
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Project Number
J1318

Project Title
The Life and Times of Red Algae

Abstract

Objectives/Goals
The goal of my project was to find out whether red algae would grow more quickly in warm or in cool temperatures. The purpose of this project is to help biologists find large populations of red algae. I thought that dinoflagellate red algae at a warmer temperature would grow more quickly than it would at a cooler temperature. I thought this because heat gives organisms energy and red algae need a lot of energy during the time they are growing and maturing.

Methods/Materials
I placed red algae in three flasks and put them in 50 ºF, 60º F and 70º F environments. I used a heating pad to warm the 70º flask. I tested for 39 days to determine which temperature the red algae would grow quickest. For testing I used a thermometer, a microscope, 3 flasks of red algael, a dropper, and a heating pad.

Results
After testing, I found that the dinoflagellate red algae in the cooler temperature grew more quickly than the red algae at the warmer temperature. The red algae at the cooler temperature took 35 Days to complete its growth cycle and the red algae at the cooler temperature took 39 days to fully mature. One interesting thing that I found when testing my experiment was that between 15 and 17 days, the individual algae cells attached themselves to each other and formed long chains that consist of many different cells.

Conclusions/Discussion
My hypothesis was incorrect. It turned out that the red algae in the cooler temperature grew more quickly than the red algae at the warm temperature. I found that between 15 and 17 days, the individual red algae cells came together and formed chains. Under a microscope these algae chains look like long hair-like structures.

Summary Statement
Finding out whether red algae grows more quickly in warm or cold water.

Help Received
Teacher helped edit report, UCSC lab gave red algae