CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY

Name(s)

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Project Number

22327

Project Title

Variation of Microorganism Population in Lakes

Abstract

Objectives/Goals

The purpose of my experiment was to determine whether the population of microorganisms in lakes varies depending on how close the lakes are to urbanized areas.

Methods/Materials

For this experiment I collected water from three lakes. One lake was urban, was suburban, and the third was rural. From each lake I collected one sample from five different locations. I then took the samples home and examined them under a microscope, recording and identifying what I saw. Materials list:t broomstick, 1 bungee cord, 5 12 oz. water bottles, 1 microscope, 20 microscope slides, 20 cover slips, 1 glass pipette, and 1 bound notebook.

Results

From looking at the different samples I can tell that there isn#t very much microscopic life in these lakes that I could see. Most of what I saw was just clumps of debris. I didn#t see many flagellates or ciliates, and no rotifers or amoebas.

Conclusions/Discussion

I wasn#t able to draw firm conclusions from my results, since I didn#t see very much in any of the lakes. I can think of a few reasons why this happened. One of these reasons is that the days I sampled the lakes were in December after recent heavy rain storms, which could have washed some microorganisms out and brought other sediments in. Another factor is that there wasn#t as much sunlight at that time of year, which probably negatively affected algae growth, and therefore would have caused a lack of food for all the organisms that eat the algae, and so on. From this project I can tell that winter is not a good time of year to do an experiment like this, since the microorganism population is lower than in the rest of the year.

Summary Statement

I was trying to find out how the population of microorganisms in lakes varies depending on how close the lakes are to cities.

Help Received

My dad drove me to the three lakes and provided the microscope and other materials from his work. My mom drove me to the art supply store to get the board and paper for my project, and advised me on putting it together.

Preliminary