CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY

Name(s)

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Project Number

J0913

Project Title

My Creek's Trout

Abstract

Objectives/Goals

I know that there used to be trout running all through Pescadero Creek and since Pescader does mean "place of fish", where did all the trout go? I hypothesize that the plants which live and grow around the creek may be significant reasons for the pH changes in the water.

Methods/Materials

I tested the pH levels in and around Pescadero Creek. I chose ten sites along this path with each site being 100 feet away from the last. I collected samples from each site, testing the pH of the creek water, the bank soil, the creek bottom soil, and the dominant plant or tree. The pH was tested on site, the samples saved and labelled, and the results of the pH tests recorded on a data sheet. (Materials: Distilled water and AccuGrow pH Soil Test Strips).

Results

The research Data Sheet records the pH levels found at all ten sites. The average pH of the soil bottom was 7.45. The average pH for the soil bank was 7.2. The pH of the water was consistently 8. The average pH of the dominant plant or tree was 7.435.

Conclusions/Discussion

I found that my hypothesis was incorrect. The creek bottom soil, the bank soil, and the alder or raspberry bush do not seem to affect the pH of the creek water significantly. While the pH of the plants and the soil prove to be more acidic that the creek water itself, it is not significant enough to change the pH level of the water and, therefore, affect the trout habitat.

The extreme ends of the pH scale are 2 and 13, either can bring damage to the gills, exoskeleton, and fins of fish. In the Pescadero Creek, however, I found that the pH levels of the varialbes tested fell within normal ranges for fish survival.

As disappointing as it is to have my hypothesis be incorrect, now I can move on to other projects of research. I discovered in my reading that there are many things that can keep fish from surviving and in the future I would like to test other hypotheses. These would include the temperature of the water, the levels of ammonia, nitrates, and oxygen in the creek water as well as other chemicals and obstructions. Although my hypothesis was incorrect, there are still no trout left in the Pescadero Creek and I intend to find out why!

Summary Statement

Has the pH level in Pescadero Creek driven the trout away?

Help Received

Dad and siblings helped to carry samples.