Colorado Science and Engineering Fair

2024 Individual Project Abstract Form

Please print 2 copies of the completed form. Sign both copies, keep 1 for your notebook and submit 1 copy to your Regional Fair Director with your other paperwork.

Title of Project: Water Organisms: What Environment Do They Best Thrive In?

Finalist's Name: Stuti Katrodiya

School and City: Challenge School K-8, Aurora

Sponsor's Name: John Wiley

Category: Environmental Engineering (ENEV)

Division: Junior (6th - 8th grades)

Abstract (250 words or less):

Over the past few weeks of testing, I gained additional information about what bacteria's thrive in certain water qualities in different bodies of water. Before I began to test, I had to find out how I would get the samples, and how I would be able to test water quality. Through slight research, I was able to find a water testing kit which included nitrogen pills, phosphorus pills, pH pills, dissolved oxygen pills, and biochemical oxygen demand pills. Now that I had my water testing kit, I gained the ability to find water qualities. However, I had to find a method to find how I would be able to test different bodies of water. The answer to that question was quite simple as I had to get samples from two different reservoirs. Through my results, I was able to find that one of the main factors in water that determine whether or not there is aerobic or anaerobic bacteria depends on the dissolved oxygen and biochemical oxygen demand. I was able to find that for aerobic bacteria to thrive, the DO has to range from 1-4, and the BOD has to range from 1-4 as well. This is important to note as anaerobic bacteria can be harmful as they are prone to causing diseases like E. Coli. These diseases can be very harmful to a society as well. Through my research I was able to conclude that the water quality does affect the microorganisms that thrive in bodies of water.

I hereby certify that the above statements are correct and the information provided in the Abstract is the result of one year's research. I also attest that the above properly reflects my own work.

Finalist's Signature: Date:

In addition, all students must complete the ISEF Student Checklist (1A), Research Plan, Approval Form (1B), and Checklist for Adult Sponsor (1), and any other ISEF forms required for this type of project. See the International Rules and Guidelines for form requirements. Return COPIES o all of these forms to your Regional Fair Director with you Finalist Verification/Permission Form. A signed copy of this form must be included in your notebook.