

Notes for Homework 1

I first went to college in the late 70s. I was on my own - no one in my family had gone before me. I was a biology major then and it was all about memorizing facts. I never finished and could not imagine myself being a biologist based on how things were taught. However, in one of my last classes, a professor had demonstrated on a computer the model Stewart described using foxes and rabbits rather than fish. I was impressed with that. When I decided to return to college to finish my degree, I remembered that model. But I focused on the computer. THAT was the answer -- I wanted to be a computer scientist. So I took courses and learned about programming and data structures and about code analysis. When I got to logic gates, I hit the breaks. No! I did not want to study the computer itself. I did not want to write an operating system. I realized that the computer was a tool I wish to use. But, for what? When I became a data analyst at NASA I found the answer. I wanted to play with the data. I wanted to use mathematics to help me understand how things work, how well they are working, how internal and external events affect their operations.

When I think of mathematics I think of sets of equations and functions that characterize everything.

It is difficult to call myself a mathematician. Everyone around me seems to "get it" faster and better than I do. But I can call myself curious -- curious about how things work. And I use mathematics to help me understand how things work. So, if the shoe fits....

When I think of biology I think of living systems. They could be systems of cells that form an organ, or systems of organs that form an individual. Or they could be systems of individuals that form an ecosystem.

I am a biologist in that I want to understand how these systems work.