

# Improving Windsor Creek

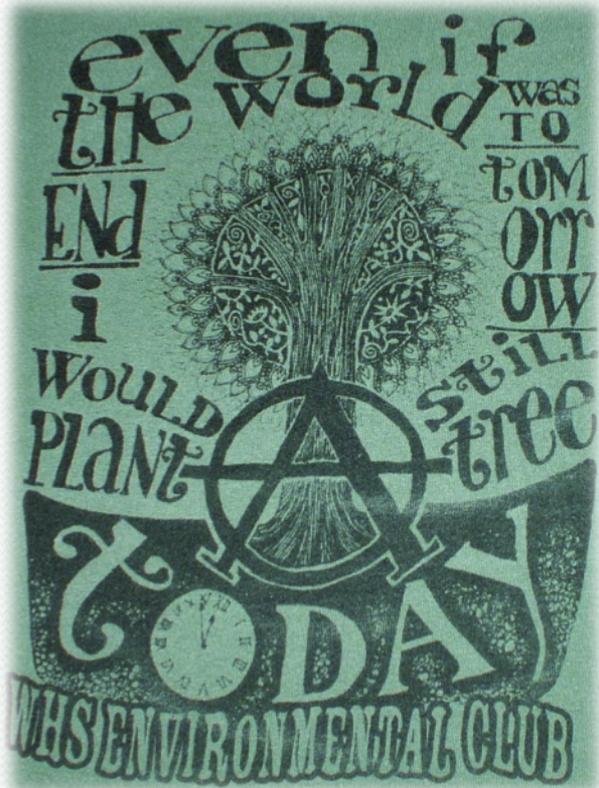
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# Introduction

- Throughout my life, I realize problems are around me, and I work to fix them.
- A long time ago, I realized the issue of environmental abuse.
- Recently at Windsor High School, I started taking action to improve the environment.



# Introduction: My Transition to Environmentalism



- Environmental Club
- Recycling
- Walking Home
- AP Biology
- Politics – Sustainable living
- Green and Democratic Party Values

# Introduction: Choosing a Project



- Broad Subject: Environmentalism
- Idea originated from Ms. Fenton
- Project: Monitoring the water conditions of Windsor Creek
- Organization: Community Clean Water Institute (CCWI)

# My Mentor

- Sarah Shaeffer
- Program Director at CCWI
- Masters Degree in Public Environmental Health
- Taught me :
  - How to test the creek
  - Science of creek habitats
  - Follow my passions



# The Process

## Initial Setup

- Visiting Ms. Fenton
- Contacting CCWI
- Getting Permission to Test

## Learning

- Finding Representative Locations
- How to Use Equipment
- Understanding Creek Environments

## Project Expansion

- Creek Beautification
- Recycling
- Finding Greater Purpose



# Challenges



- Finding the testing site
- Weather, muck, rain
- Working racing the sunset
- Working in the dark

# Testing for E. Coli

- Normal E. Coli level (for swimming, not drinking): **235 MPN/100 mL**
- Windsor Creek E. Coli level: **2,224 MPN/100 mL**
- 9.46 times too much
- How do E. Coli levels get so high?

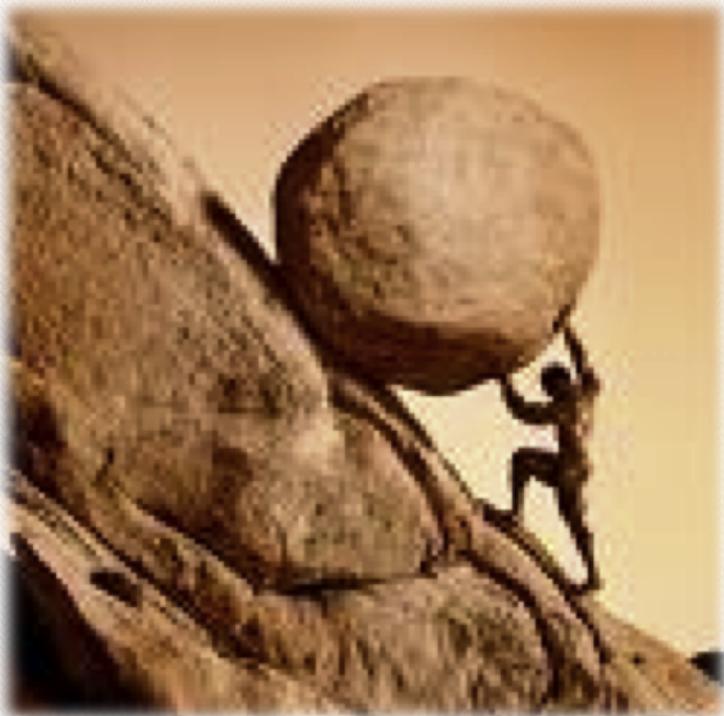


# A Purpose for my Senior Project

- My mission: to find the source of E. Coli contamination, and seek justice for Windsor Creek
- Factors to consider: rain increases E. Coli levels
- My hypothesis – where did the E. Coli come from?
- Narrow down the problem area



# Love Thy Rock



- Did not find the culprit – need more data
- I still learned:
- I don't need to travel or be wealthy to make change
- Change from the grassroots level
- Love thy rock – the process is more important than the outcome

# Skills I Have Learned

- Testing for water quality parameters
  - Electrical conductivity
  - Dissolved oxygen
  - pH
  - Turbidity
  - Nitrogen
  - Phosphates

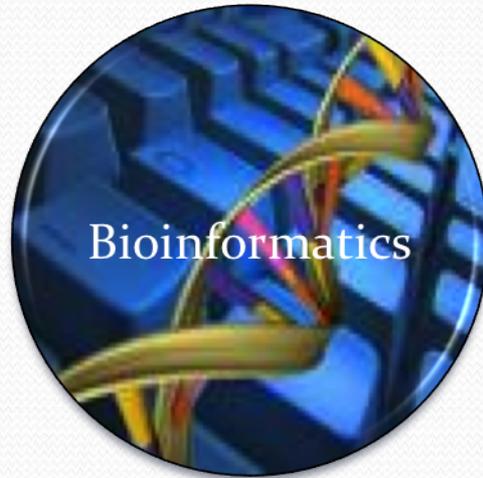


# Lessons I Have Learned



- High school science is real world science
- There are different, non-typical ways to contribute to one's community.
- One individual can make a difference.
- Like Erin Brockovich, anyone can find justice for the environment.

# How I Have Changed



- More likely to be involved with the community.
- One must do what is right not for recognition, but for the greater good of all.
- I will integrate my interest in biology into my career.

# Conclusion

- I still test Windsor Creek Water monthly, and will continue to do so until I go to college.
- My current goal: to integrate my interest in computer science and my love of biology to make the environmental changes I wish to see.
- How I will accomplish the goal: attending UC Berkeley, with a major in Electrical Engineering and Computer Science, with a minor in biology.
- Work in bioinformatics.
- I don't have to wait to fulfill my purpose – I have done so, I am doing so, and I will continue to act environmentally in all ways possible.