LOGBOOK: Water Contamination

February 9th 2025:

Today I worked on my outline for my project, explaining what will be on my trifold. I also worked on my “Basic project info” and “Ethics Due Care 2A” on the CYSF Platform.

February 14th 2025:

Today I worked on my research for my science fair project. I was focusing on the unclean water section. I looked at one article, which was the World Health Organization (WHO) article. I learned very interesting facts, which I didn’t know about. For example I learned that, at least 1.7 billion people had water sources that were contaminated with faeces. I was also surprised with different types of diseases that get transmitted from the contaminated water (Cholera, diarrhoea, dysentery, typhoid, polio, and other diseases. But specifically these diseases). That is what I did today.

February 15th 2025:

Today I worked on more of my research. I found my research from “Infinity Learn” and “UMass Extension”. I learned how contaminated water affected the growth of the plant, and the quality of the plant's life. I also learned about animals' reaction to contaminated water, and how they become deficient in the ability to regenerate and reproduce, when talking about fish or aquatic life. Animals also fall into a variety of types of diseases due to drinking contaminated water. I also added some of my citations on the CYSF platform. I looked for certain graphs that would describe my project. I found one from (A Review of the Status, Effects, Prevention, and Remediation of Groundwater Contamination for), which talks about the conditions in India, China, United States, and the whole world. I also was planning out a graph that I will make, using my own research. This will show what research I did and understood from my research. That is what I did for my project today.

February 16th 2025:

Today I worked on more of my research, I looked at the World Bank, European Union, and United Nations articles. I feel like people started to notice the impact of unclean water around the early two thousand years. I think people really want to make a difference now, and that's why we are leading into so many solutions. This is amazing for reducing our water footprint.

February 17th 2025:

Today I worked on trying to finish my research, which wasn't as successful. I still have to do 3 more articles. But today I looked at John Hopkins and finished my research for the World Bank. So not really productive for my research side today. However I was working on making a chart. I'm using excel but I might change it to word docs or even google docs. It's going to have the continents with selected countries, and see the problem with the water, the economic impact, and their solution to solve this water problem. That's all I did for today.

February 23rd 2025:

Today I worked on designing my graph, and situating how my information will look like on my trifold. I used canva to help me to design the background of my information. I started to add more information to my canva slides. That's all I did for today.

February 28th 2025:

I worked on my science fair project a lot today, because I want to get all of my digital work out of the way and work on fixing up my trifold and conduct my experiment. I don't have much time left, however I got quite a bit of work done today. I worked on my canva and got the hypothesis for my experiment, the procedure steps and the methodology.

March 1st 2025:

I worked on my canva today and continued transferring my research onto my canva platform. I ended up working on impact on animals and plants. I read one article to help me understand more. Before transferring all of my information onto my canva. I also started to work on the impact of children.

March 2nd:

Today I did my practice experiment on the agar plates, just so I understand how the agar plates actually work. I made 2 agar plates. I followed my procedure on how to use the agar plates. I first disinfected my work station, then I took my q-tip and dipped it into my water samples, rubbing it across the agar plate in a zigzag motion. I put the lid on my agar plate and flipped it upside down. That is what I did for my practice experiment. I also finished transferring my information for the impact of adults to canva. That's all I did today.

March 3rd:

Today I worked on my conclusion and recommendation for my science fair project. I used my research to help me write the recommendation. I put solutions the world is doing to improve the decrease of water contamination.

RECOMMENDATION

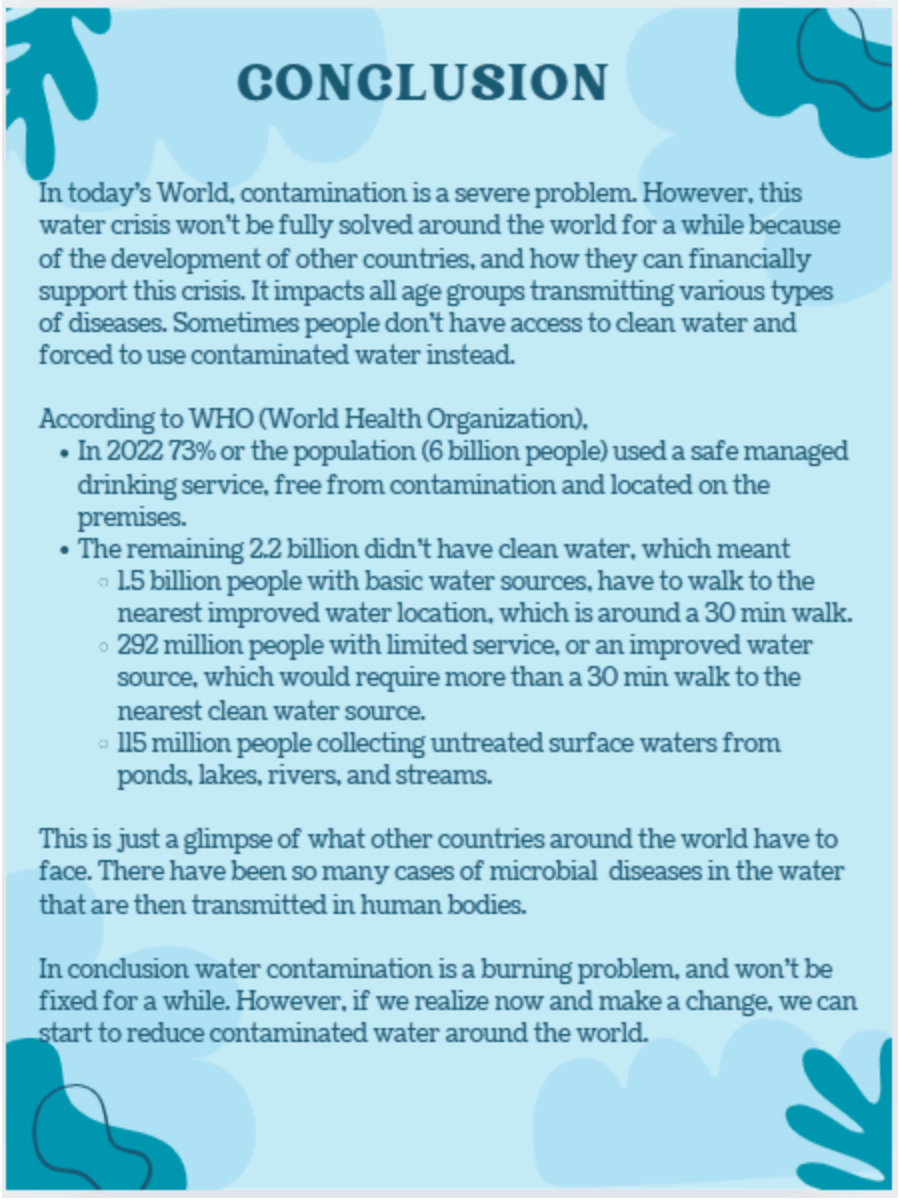
1) We can prevent water contamination and its impact on our environment/society. Otherwise we can practice being more cautious and staying safe, helping our society and communities. We already have organizations which are working to improve the water situation in various countries. Here are some examples:

- WHO (World Health Organization):
  - In July 2010, they recognized the importance of clean water and sanitation. They believe that every human should have the right to have access to about 50-100 litres of water per person, per day. The water should be safe, and the cost shouldn't exceed over 3% of their household income. The water source must be within 1000 meters of the home, and the collection of the water shouldn't exceed 30 minutes.

  - "Water of Life" International Decade for Action 2005-2015, helped around 1.3 billion people in developing countries, gain access to clean drinking water. They grew the progress of sanitation as part of the effort to meet the Millennium Development Goals.

2. We can use various method to solve this water contamination issue. Europe has made solutions for their water problems - such as - (Ref: European Union)

- For agriculture, improve irrigation techniques through smart meters, and reuse treated water.
- Use practices like crop rotation, select water efficient crops, and enhance soil health.
- Agro-ecological methods such as agroforestry and permanent pastures.
- For Energy, move away from water intensive energy generation and focus on alternatives like wind, solar, and geothermal power.
- Conserve energy to save power.



That's what I did today.

March 4th 2025:

Today was editing day, my dad helped me edit, by checking my grammar mistakes. He looked at my first slide show on canva, he fixed some grammar mistakes and gave me comments to fix the problem. I still have to do results/ analysis and observations for my experiment.

March 5th 2025:

It was another editing day, my dad looked at my second slide show, which had some errors. He helped me fix my errors and left comments for me to fix the issue. Other than that, today was an average editing day.
March 6th 2025: Today I went to buy a plant for my science fair project. I had to buy a flower, because there aren't any plants or flowers in Calgary, due to the cold weather and that we're also in winter. However, other than that I didn't do a whole lot.

March 7th 2025:

I went outside, and found dirty melted snow water on the side of the sidewalks. It was to be used as my sample in my experiment.

March 8th 2025:

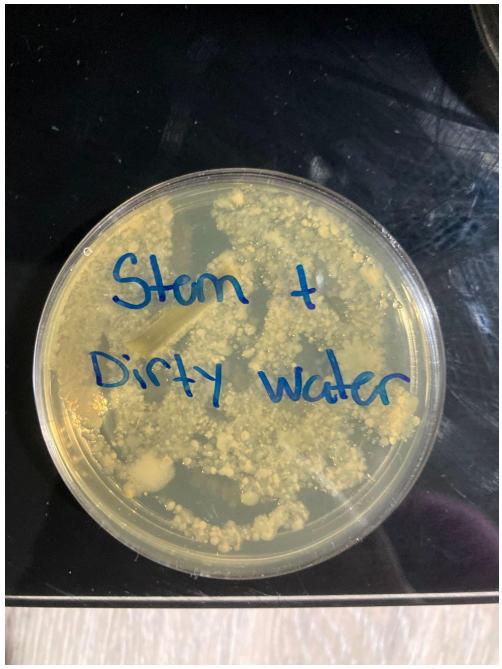
EXPERIMENT DAY!!!!! I worked on my experiment today. I followed my procedure step by step to ensure my experiment is successful. I dipped my Q-tip into the water sample and rubbed it across my agar plate in a zigzag motion. Then I added my plant piece into the agar plate, pressed it lightly but made sure it's firm to the agar plate. I repeated this step for a couple of my agar plates. I also made tests for just the water sample. I also tested my boiling water. My plant variable was stem and petal. That's all I did for today

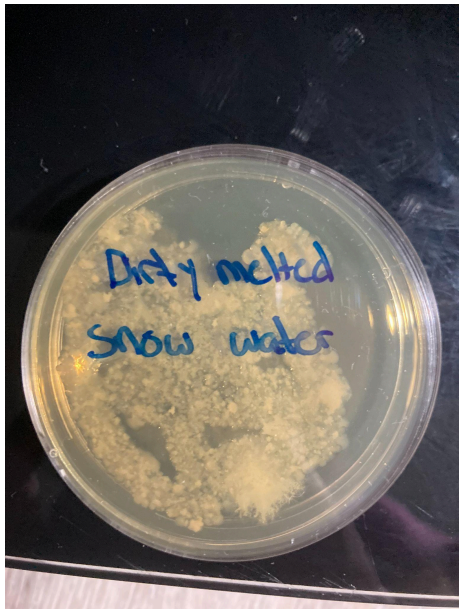
March 9th 2025:

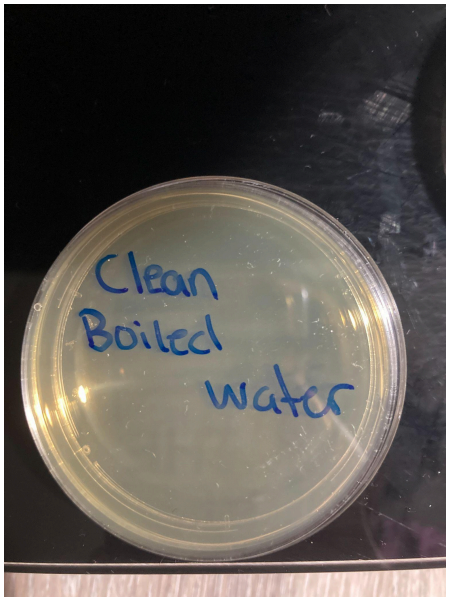
I worked on my observations today, and observed what was happening in my agar plates. It was very interesting because I saw colonies forming and some white spots spreading out and starting to grow on the plant piece. Creating an isolated environment. However in the morning I fell into a dilemma because I didn't see anything grow on my agar plates. I was very worried that my experiment might have failed. I asked ChatGPT for some assistance. I then transferred my agar plates in a warmer environment, which in this instance was the living room. My room became chilly during the night. I also put some of the dirty water sample itself on the plant piece to have better results.
March 10th 2025:

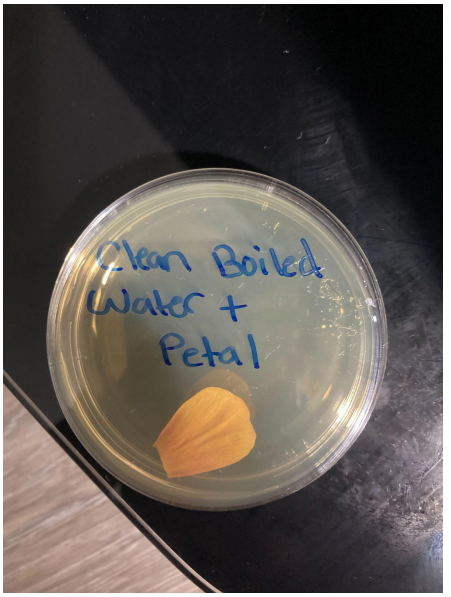
Today I had to go print my work for my trifold. However I still needed to do Analysis and Result. I completed the result before I left to go print my papers. I really just described what I saw in the result. For the analysis I did it when I came home. I talked about what the bacteria on the agar plates mean. I printed my work papers but when I was displaying it on my trifold to see where they go I realized I don't have enough. So I need to print again with more information. I edited my slides, enhanced my information and added extra info. That's all I did for today.


Flower Petal
+ Dirty water


Stem +
Dirty water


Dirty melted
snow water


Clean
Boiled
water


Clean Boiled
Water +
Petal

March 11th 2025:

Today I laid everything out on my trifold, to locate where I should display everything. I made some adjustments on my trifold and I cutted out my letters. That's all I did for today.

March 12th 2025:

Today I worked on my trifold, I glued everything on to my trifold, and I started to work on my script. That's all I did for today. I also finished my script and rehearsed my presentation.

March 13th 2025: School science fair day!!!!!!!!!!