**Saturday, October 5, 2024:** The science fair coordinator at our school, Mr. Buhler, sent out an email which introduced me to CYSF 2025. He talked about the benefits of participating, what prizes are available, and the date for the first meeting. I was able to get this email because I had signed up for the STEM club.

**Friday, October 11, 2024:** Today was the first meeting for the science fair. The club leaders went over what the Calgary Youth Science Fair is, why I should join, the types of projects, highlights of last year’s fair, and the new 2025 timeline through a slides presentation. After the meeting, I started to brainstorm about what I wanted my project to be about.

**Tuesday, October 22, 2024:** I decided to go to my school’s library today in the morning before school started to get ideas for CYSF. I emailed Mr. Buhler and asked him if he could share the CYSF slide presentation so I could look over it and take note of important dates. I was browsing through websites and started to make a list of subjects I was interested in. Some of the topics ranged from astronomy and gravity to maglev trains, mechanical claws, and bottle rockets. Additionally, I explored some projects which could encompass aerodynamics, airplanes, drones, and engineering.

**Wednesday, October 30, 2024:** An email was sent out today regarding the second science fair meeting. It mentioned that the meeting would be focused on tips for the fair, how to do a logbook, and some helpful brainstorming ideas.

**Thursday, November 14, 2024:** Today I went back through the science fair document that had my ideas and I added a few links for biology, chemistry, hydrogels, antimatter, and AI.

**Friday, November 15, 2024:** Today was the second meeting for the science fair. The heads of the meeting asked us about our topics (and how we can use a website called ‘Science Buddies’ if we’re feeling stuck), told us how to keep an organized log book, talked about groups for projects, and I confirmed my email address with Mr. Buhler. Later that day, I was sent another email which had some action items and notes of the meeting. We had to start thinking about our project and had to do some background research and invites to the CYSF platform were to be sent out soon. Later that night, I went to the CYSF website and browsed through last year’s winning projects and topics and awards which interested me.

**Monday, November 18, 2024:** Today I accepted the invitation to the CYSF platform.

**Saturday, November 30, 2024:** In the same document where I made a list of the winner topics and awards, I came up with a project idea: ‘Can AI Be Used to Detect Non-Human Threats in an Ecosystem?’ I decided not to move forward with this project, because I didn’t feel that interested.

**Sunday, December 1, 2024:** I asked ChatGPT for some project idea inspiration because I was really stumped. The list included: ‘Bioluminescent Bacteria for Environmental Monitoring,’ ‘Natural Antibacterial Agents from Plant Leaves,’ ‘Sun Exposure and Heat Absorption in Reptiles,’ ‘Carbon Sequestration,’ and many more.

**Friday, December 6, 2024:** Today was the third meeting for the science fair. We were asked to discuss to the whole group about what our project was going to be about. I mentioned that I was interested in a topic called carbon sequestration.

**Monday, December 9, 2024:** Mr. Buhler sent out an email today. The notes were that we had to accept the CYSF invitation and had to look at the ethics form. There were also questions about if I was interested in buying a trifold from the school and if I would like to be in a one-on-one mentorship program with a group from the University of Calgary. Attached was the tally sheet, helpful questions, and the mentorship document.

**Tuesday, December 10, 2024:** I removed some project ideas from my list and created a ranked list on which ones I would be interested in.

**Friday, December 20, 2024:** Today was the fourth meeting for the science fair. It was held to give next steps, but unfortunately I could not join.

**Saturday, December 21, 2024:** On that previous Friday, I had emailed Mr. Buhler to give me a run down of what was covered in the meeting and he replied on this day covering topics like the platform invitation (which I had already done), project titles, and form submissions.

**Wednesday, January 8, 2025:** Mr. Buhler sent out an email regarding important deadlines like the form submissions, the last day to make changes on the online platform, and when the science fair will be taking place.

**Wednesday, January 29, 2025:** Today was a regurgitation of the previous email where Mr. Buhler sent out another message talking about the form submission deadline. And he also gave us a date for the next meeting. In the past few weeks, I have been thinking about my project and settled on carbon sequestration.

**Friday, January 31, 2025:** I was thinking about how I would approach this project on carbon sequestration. I created a to-do list on what I wanted the project to have. This included a professor interview, a video, and how to perform the scientific method. I also came up with the topics that the project was about. This consisted of the history, types of sequestration, its impact, and how we can fix its major issues. I sent an email to a University of Calgary professor, Mr. Cey, on if he would be interested in participating in an interview for my project. Lastly, I sent an email to Mr. Buhler expressing my interest in the mentorship program and asked a few questions.

**Saturday, February 1, 2025:** Today was a highly productive day for my project. I looked at and was interested in the mentorship program, looked at the judging rubric, and the questions that are asked at the fair. I asked ChatGPT to give me some project title ideas because I was really confused on what the name of my project should be. I also asked the AI if it could give me a schedule to follow because I was nervous on how I would be able to finish this project. I also gave it an idea of my project and it gave me suggestions to inform the things I could include for my project. Additionally, I created an important links page so I could get everything organized. I started my history section of the project and came up with a title for my project, ‘The Significance of Carbon Sequestration in our Society Today.’

**Sunday, February 2, 2025:** Today I started my polished summary of my research on carbon sequestration. Additionally, Mr. Cey replied to my email and said that he unfortunately couldn’t do the interview but he redirected me to other professors who were experts in carbon sequestration.

**Monday, February 3, 2025:** Mr. Buhler sent out an email for dates to have the mentorship session that I was interested in, I picked Thursday. In the evening, I sent out an email to the professors Mr. Cey redirected me to, explaining the project and interview.

**Tuesday, February 4, 2025:** I got responses from the professors and they all agreed to do the interview. Later that night, I scheduled a date and asked if they would be able to do the interview on that date - February 14, so I could start preparing my questions.

**Wednesday, February 5, 2025:** I came up with ideas for the title of my project. Also, I got replies from the professors on the scheduled date for the interview to which some said they would be available.

**Thursday, February 6, 2025:** I asked the professors who were available if they could have the interview in the afternoon at 3:30 PM. At lunch at school, I had a mentorship meeting from people at the University of Calgary. They answered my questions, and gave me suggestions on my project which guided me. I also chose the title for my project which wasn’t the previous one and submitted the ethics form. The title was: “Exploring Carbon Sequestration: The Good, the Drawbacks, and the Path Forward.”

**Friday, February 7, 2025:** The professors said the time worked for them. Today was also a science fair meeting. We had a check-in basically and discussed our projects.

**Monday, February 10, 2025:** My project was approved and the date for the interview was settled.

**Tuesday, February 11, 2025:** I started working on my questions for the interview. I had an idea of what I wanted to ask, but hadn’t written them down until this point. Mr. Buhler sent out an email which covered the trifolds, deadlines, sections, and the next meeting.

**Wednesday, February 12, 2025:** I added more depth to my questions and refined a bit.

**Friday, February 14, 2025: Interview day.**  I sent a link for the google meet. Additionally, I did a final revision of my questions in preparation for the interview. I recorded the key points/answers of each question on paper then on a google doc after the interview.

**Monday, February 17, 2025:** I added to the important links page of a judging handbook link. Additionally, I started looking at my problem section which was the cost. I transferred the mentorship meeting notes from my notes app to a google doc. I asked ChatGPT about some other problems about carbon sequestration and how they are being solved so I could go to websites and research further. It was to inform my project. In the evening, I ended with starting my types of processes document and the biological process was the first one I started to research.

**Friday, February 21, 2025:** Today was a science fair meeting where we quickly ran over deadlines and were notified that there would be a presentation in the weeks to come on how to make a scientific poster.

**Monday, February 24, 2025:** I added a link to the biological process on the types of processes document. Additionally, I started looking at graphs and data on carbon sequestration.

**Wednesday, February 26, 2025:** Mr. Buhler sent out an email on the next science fair meeting, which would have the scientific poster presentation.

**Friday, February 28, 2025:** I worked on the bulk of my geologic sequestration section on the types of processes document.

**Monday, March 3, 2025:** I started and completed the technological sequestration section on my types of processes document.

**Tuesday, March 4, 2025:** I started the document which was on the drawbacks and the potential solutions to carbon sequestration by looking at the interview. This was the first step in the creation of my model. I also assessed my main idea and research question.

**Wednesday, March 5, 2025:** I looked at my method and process for this project. By taking into consideration my hypothesis, variables, and question.

**Sunday, March 9, 2025:** I finished my polished summary of the history section, and added my problem and method section as well as some of the history to the CYSF platform. Mr. Buhler also sent out an email on the deadlines approaching.

**Monday, March 10, 2025:** I added a little bit of context to my biological process section and added a link. Additionally, I added graphs to the platform.

**Tuesday, March 11, 2025:** I added a few more links in my history document. Additionally, I added an image of the scientific method and some links in the drawbacks and solutions document.

**Thursday, March 13, 2025:** I added an important link to the types of processes document and added research to the CYSF platform.

**Friday, March 14, 2025:** I worked on my citations and looked at how to produce a scientific model which started the conceptualization of my Carbon Home Model.

**Sunday, March 16, 2025:** I worked on my problem, method, the graphs, research, and started creating components of my carbon model.

**Monday, March 17, 2025:** I worked on my Carbon Home Model. Finishing the first two components. Mr. Buhler sent out an email on an in-school science fair as preparation, trifold information, and deadlines. I had emailed Mr. Buhler if a hypothesis and variables were really necessary after thinking about it since it is a research project and he said I can still implement them and asked if I would be interested in him listing the variables of my project to which I replied with a yes.

**Tuesday, March 18, 2025:** I worked on my third component of the model and started my slides presentation. Additionally, I took a photo of myself for the project. Mr. Buhler gave me a list of what he thought my variables are and a short description of my project since I asked for it.

**Wednesday, March 19, 2025:** I finished my Carbon Home Model, and worked on my graphs and conclusion.

**Thursday, March 20, 2025:** I wrapped up all of my sections and finished my presentation.

**Friday, March 21, 2025:** Filmed my presentation video and looked over my project.

**INTERVIEW QUESTIONS PLANNING NOTES:**

1. **What is your stance on carbon sequestration? Do you believe that the process is efficient in mitigating carbon sequestration, or not, explain.**
2. **In your opinion, (if they have a negative viewpoint) what are the faults in the processes of carbon sequestration?**
3. **In your opinion, how can we fix those problems such as cost or energy use to efficiently use the sequestration to mitigate climate change, or how can we refurbish the process?**

Remember topics:

* Types of processes (Which process of carbon sequestration do you think is the most effective, why?)
* Impact/Drawbacks (Do you think sequestration has effectively been able to mitigate climate change? What are the faults? What is your stance?)
* Path forward (So, I’m focusing more on the cost but how do you think we can fix those problems like cost or energy use or those problems so it can be used effectively in the future?)

Intro:

Hello My name is Evaan. Nice to meet you Mr. Tutolo and Mr. Ezekiel.

Get into the questions

I appreciate your time for answering my questions, have a good day!

How to record a google meet.

**MENTORSHIP MEETING POST-NOTES:**

* Focus on one clear problem
* Don’t try to get too vague
* Be specific
* Scientific method
* Identify independent, dependent, and controlled variables
* Identify hypothesis/purpose/problem
* How it can be applied for federal and provincial measures
* The types of carbon sequestration and which one fits best to address the major problems
* Ask professors the problem and how to solve it
* Identify what are other ways to tackle the carbon sequestration problem
* Connect petroleum with carbon sequestration and how it affects that
* We need this because it will help us mitigate the effects of climate change

If we address the costs associated with the process of carbon sequestration through implementing innovative techniques and cost-effective solutions then carbon sequestration can be used more efficiently at a bigger scale because it will help in our journey to mitigate the effects of climate change.