

# Logbook

**Please include all Fridays even if not included inside the list, because of weekly science fair meetings.**

**Nov 3, 2024** - Focused on research and began filling out the Science Fair Description sheet and began writing the Problem and Method.

**Nov 7, 2024** - Began researching in depth how OI is made and developed.

**Nov 12, 2024** - Did more research on how we can grow OI to become adaptive and specialized to do tasks.

**Nov 19, 2024** - Began filling out the basic information on the Cysf website.

**Nov 26, 2024** - Filled out and submitted Ethics Due Care Form 2A.

**Nov 29, 2024** - Filling out Significant Risk Form 2B as well as researching and writing.

**Dec 3, 2024** - Researched about the possible functions of Organoid intelligence.

**Dec 10, 2024** - Jan 11, 2025 : Researched on the development of OI and all possible uses.

**Jan 12, 2025** - Researched Input and Output that can be used in OI to create machine learning.

**Jan 13, 2025** - Researched about the application of OI to the immune system and the individual cells.

**Jan 14, Jan 15, Jan 16, 2025** - Wrote down research and findings and began researching multiple ways to develop OI.

**Jan 15 - Jan 26** : Researched and took notes on figures one through 4 and began filling out Research.

**Jan 29, 2025** - I have started researching and brainstorming on how to actually apply OI to the immune system and long term homeostasis.

**Jan 31, 2025** - I have started looking at the ethics of this type of medicine and its application in vivo (an experiment inside a living organism) and in vitro (tested outside a living organism).

**Feb 1, 2025** - I've looked at different ways that I could be able to apply Organoid Intelligence to the immune system, possibly attaching organs to stimulate and produce the immune cells.

**Feb 3, 2025** - I've looked at some more diagrams of microfluidic systems and started to design my own model of what the MEA would look like on the organoid.

**Feb 5, 2025** - I have completely designed the organoid, I only now need to begin 3D printing it and assembling the design.

**Feb 9, 2025** - I am beginning to look at neuroimmune connections and have started to read an article on it. Teaching me how the immune system and the endocrine system communicate with each other.

**Feb 12, 2025** - I have looked at smoking articles which are the leading cause of respiratory cancer.

**Feb 15, 2025** - I have looked more into the current treatments of cancer today as well as some cancer detection methods.

**Feb 20, 2025** - I have looked into transferring information onto the google slides to make the trifold easier to read and more approachable.

**Feb 25, 2025** - I looked and compared different Respiratory cancers and pinpointed the common weaknesses that had occurred.

**Mar 2, 2025** - I identified the top enemies of all cancers in general and have found out that most of the enemies of cancer were:

- Killer T Cells
- Natural Killer Cells
- Hyper tumors

**Mar 3, 2025** - Began printing sheets of paper for the trifold but found errors in the transfer of the pdf into the printer.

**Mar 6, 2025** - I have started to transfer the information to a powerpoint that will make it easier to print it out onto a trifold.

**Mar 7, 2025 — Mar 12, 2025** - I have been filling the trifold with the powerpoint.