

Name	Mariam Badawy & Mayar Hamid
Grade	Grade 8
Project Title	Auto H ₂ O

Date	Information / Data / Accomplishments
November 25, 2023	We decided on my CYSF project titled: Auto H ₂ O which demonstrates the use of soil moisture sensor and the efficiency, innovation, and time saving benefits that come with this project. We also began to visit a few websites, articles, and videos in order to understand our project a bit better.
November 27, 2023	We commenced filling out our basic project info as well as our science fair Part 1. This information contained our project title, grade, topics, and a short description about it. Our description told people about why this is important and also about the technology used with this innovation.
November 30, 2024	We began to conduct research on the topic and collect video and article links to put on our docs so we can later visit to do more in-depth research. This research lasted for about 20 days in order to make sure that we had proper information on the topic. The articles and videos taught us how to build the system, what materials are needed, and over all just basic info.
December 16th, 2024	We concluded our research and began to write our problem which consisted of why this is important and needed while also highlighting the features and efficiencies it contains. We used some of our research to back up and solidify the information in our problem.
December 21st, 2024	We re-visited some of our links and wrote down our materials list in order to know what to buy. We also began shopping on various sites in order to gather and find the required material we need to form our model/system.
December 25th, 2024	Following our materials list, we began to buy the parts needed to build our model/system and wrote down our method which contains the steps required for building and use.
January 2nd, 2024	Our materials for the system/model arrived so we put the parts together and started the programming process to code it. We used several resources combined with our own knowledge about coding.

January 7th, 2024	We finished programming/coding our model/system and tested the effectiveness of the soil moisture sensor in order to analyze it. This includes checking if the signal to the water pump when moisture levels are low is working.
January 10th, 2024	We continued to write and finalize our analysis consisting of the advantages and disadvantages of this project, the hardware (arduino, jumper wires, relay module, soil moisture sensor, etc.) Our basic/brief research on irrigation and types of irrigation was also written and concluded with the add-on of types of irrigation systems.
January 14th, 2024	Mariam and I (Mayar) furthermore wrote our conclusion that also consisted of what improvements can be made to the project. Our application consisted of what industries our project could make it to, some data, as well as how and when this project is needed. Moreover it talked about how this project can be used in the real world.
January 25th, 2024	We began to plan how everything will be organized on the trifold and what content needs to be printed. We also found pictures that could furthermore be added.
January 30th, 2024	We printed all the content that was to be put on the trifold and prepared it (cut, glue, etc.) for the trifold. We also drew on the title ("Auto H2O"). Our spelling and grammar was also double checked before gluing.
February 7th, 2024	We glued on everything and completed the trifold. Furthermore we also practiced our parts that we were to present.
February 10th, 2024	We filmed our presentation video for the CYSF platform and attached it. Moreover, we put in all our info into the platform.