Questions to Mike:

You told me that we will have 7 sensors, but I only see six in the BOM. The seventh is the microcontroller. Is there something we are missing?

To do:

* Email grad students for sensors (cross fingers and wish they care)
* Identify the ranges and accuracy necessary for our sensors. I think we need to get reliable data. That will be a challenge.
* Find sensors
* Find Datasheets for sensors
* Get familiar with esp32
* Power calculations for sensors and microcontroller
* Make an esp32 that does everything but keeps data on sd card
* Try to get the data remotely
* Try to control the esp32 remotely (to reboot in case of error or to adjust the conditions of the incubator)
* Calibrate sensors

To consider:

* Accuracy of sensors and their range
* Power options battery (rechargeable or not) and whether to use solar panel or not.
* Whether to set up a server on the esp or make the esp upload the data to a server
* How are we going to connect the esp to the internet? Satellite? How?

Expected Challenges:

* Power in a remote environment
* Internet access in a remote environment
* Reliable data with accurate sensors that are used correctly
* Calibrating the sensors so we don’t get rubbish data
* Fancy user interface
* What to do in case of system failure and how to detect system failure
* The ability to control esp32 remotely if necessary, to reboot or acuate something.

Ideas:

Measure water level using weir and fancy equation

Measure water level by having an infrared or ultrasonic proximit sensor in a tube.

Measure Water level by a floatation device