
Weekly Progress Report: #7

09 March, 2023

Project: C.E.L.P. Gardens

Team: Cole Moore, Eric Messer, Luke Barber, Philip Entrekin

Work Completed

The team has completed the Project Proposal Report and Presentation. These proved to show that some more research and testing is needed for our systems requirements. Testing specifications are being recorded for the upcoming design review. All of our hardware except for the enclosure has been delivered.

Current Completed Deliverables:

- Team Bio's - 1/15/23
- Project Summary - 1/24/23
- Weekly Progress Report #6 - 3/01/23
- Proposal Presentation - 2/10/23
- Proposal Written Report - 2/10/23

Work in Progress

The team is almost finished with the design review. A few details on the CAD models and testing specifications are all we lack on finishing the presentation and other deliverables.

Milestones We are Working Towards

- CAD designs for pump adapters are almost finished.
- Testing entire system to meet power expectations
- Finishing the design review report and presentation

Challenges and Changes

The solenoid valve proved to be ineffective for this project due to the amount of pressure required to pass water through the valve. The amount of pressure with our water supply would not be enough so we decided to go with a 5V water pump. These will allow us to have less power draw and a more versatile option for the water supply. We have also decided to change the power supply from a 9V battery to a 6V battery bank with (4) AA batteries. This requires more space for our box, however, we have a longer duration of power since AA's are more efficient than a 9V for this project.

Project Cost

Bill of Materials

C.E.L.P. Gardens	Part Number	Part Description	Retail Price	Vendor
Hardware	ESP32-S3-DevKitC-1-N8R8	Microcontroller	$15.00	mouser.com
	DHT11	Temp./Humidity Sensor	$3.15	amazon.com
	B07SYBSHGX	Moisture Sensor	$2.00	amazon.com
	ALAMSCN	Pump	$2.85	amazon.com
	COM-08589	Diode	$0.25	mouser.com
	Zulkit Waterproof	Device Case	$4.86	amazon.com
	SCYarn	Breathable Fabric	$0.20	amazon.com
	Alkaline	4x AA Batteries	$1.81	amazon.com
	B0858Y4JPL	Battery Holder	$3.75	amazon.com
	LAMPVPATH	Micro USB Stopper	$0.23	amazon.com
Total			**$34.10**	

These components are mostly the final choice for this project. Any small and inexpensive components of the circuit design are not included. Any software used for the project will be free.

Team Member Hours

As of 3/09/23, the team has worked 43 hours on this project this week. This is a cumulative of 239.5 total hours invested in the C.E.L.P. Gardens project.

		Mon, Mar 06	Tue, Mar 07	Wed, Mar 08	Thu, Mar 09	Fri, Mar 10	Sat, Mar 11	Sun, Mar 12	Total	Year Total
Week 9	Cole Moore	3	2.5	3	3				11.5	53.5
	Eric Messer	3	1	3	3				10	59
	Luke Barber	3	2.5	3	3				11.5	71.5
	Philip Entrekin	3	1	3	3				10	55.5

Group Yearly Total	239.5