
Weekly Progress Report: #1**26 January, 2023**

Project: C.E.L.P. Gardens**Team:** Cole Moore, Eric Messer, Luke Barber, Philip Entrekin

Work Completed

The team has discussed design and hardware specifications for the C.E.L.P. Gardens module. We have decided to go for a “backpack” style module to sit on the lip of the plant pot to use for support. Also, the hardware team has researched possible components/software to use for the module.

Current Completed Deliverables:

- Team Bio's, 1/15/23
- Project Summary 1/24/23

Work in Progress

The team is working on the Project Proposal presentation to be completed by 2/10/23. We will have decided by then how the self-watering system of the module will work. Along with this, other features of the system are being researched as possible candidates to be added to the system, such as a pH sensor or LED screen. The choice of power is also up for discussion, with the addition of new components, more power may be necessary. The initial choice was 4 AA batteries, but a 9V battery may be the final choice. All parts of the project need to be ordered soon to begin assembly.

Milestones We are Working Towards

- Having a complete component list for the project
- Ordering the necessary components so that software development may begin
- Project Proposal Presentation

Challenges and Changes

One challenge the group is still facing is how the watering system will operate. There comes sacrifices with either choice of using gravity with a valve or using a pump for watering. The choice of using gravity will provide a low-power, simple solution but come with a larger water tank to sit on the pot. This could cause the pot to tip over if it is not capable of supporting the entire C.E.L.P. Gardens module with a small water tank, about the size of an 8oz bottle. The

other choice for watering is using a pump. The pump will allow for an easier tank location but will have more power draw than the gravity watering option.

Project Cost

Bill of Materials

C.E.L.P. Gardens	Part Number	Part Description	Retail Price	Vendor
Hardware	356-ESP32-DEV KITC32E	ESP32-DevKitC-32E	\$10.00	Mouser
	713-101020008	Moisture Sensor	\$3.30	Mouser
	SHT40-AD1B	Humidity and Temp Sensor	\$2.90	Mouser
	B4252PLVP-G1 B0001X3U1930	Light Sensor	\$0.60	Mouser
Total			\$16.80	

These components are mostly the final choice for this project. The Development board may be swapped out for an Arduino. Any other features added to the project will have new parts added to the budget list. Any software used for testing and/or development will be free.

Team Member Hours

As of 1/26/23, the team has worked 12 hours on this project this week. This is a cumulative of 34.5 total hours invested in the C.E.L.P. Gardens project.

Week 3		Mon, Jan 23	Tue, Jan 24	Wed, Jan 25	Thu, Jan 26	Fri, Jan 27	Sat, Jan 28	Sun, Jan 29	Total	Year Total
	Cole Moore	0.5			1				1.5	6.5
	Eric Messer	2							2	9
	Luke Barber	1	0.5	1.5	3.5	0.5			7	10.5

	Philip Entrekin	2								2	9
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Group Yearly Total	35
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