Trevor’s research

Possible microcontrollers

* Raspberry Pi <https://www.amazon.com/Raspberry-Pi-Pico-RP2040-microcontroller/dp/B092S2KCV2/ref=sr_1_3?crid=20T8FIV5LRN4Z&keywords=microcontroller&qid=1686339470&sprefix=microcontroller%2Caps%2C145&sr=8-3>
* Really small <https://www.amazon.com/DFRobot-DFR0282-Beetle-Arduino-Compatible-Microcontroller/dp/B01B0IQFU4/ref=sr_1_6?crid=20T8FIV5LRN4Z&keywords=microcontroller&qid=1686339470&sprefix=microcontroller%2Caps%2C145&sr=8-6>

Languages

* Raspberry Pi uses Python as far as I know: <https://learn.sparkfun.com/tutorials/python-programming-tutorial-getting-started-with-the-raspberry-pi/all#:~:text=Open%20IDLE%20by%20selecting%20the,Enter%20in%20your%20code>., <https://realpython.com/python-raspberry-pi/#:~:text=The%20Raspberry%20Pi%20Foundation%20specifically,start%20from%20the%20get%2Dgo>.

Other hardware

* As far as I understand, the microcontroller jumper cables we are familiar with would work for these smaller microcontrollers, but we would need to use a soldering tool to permanently connect them to the board, and to make a strong and sure connection.
* Display: <https://www.amazon.com/GeeekPi-Character-Backlight-Raspberry-Electrical/dp/B07S7PJYM6/ref=sr_1_7?crid=1GX5W7POUILT9&keywords=led+microcontroller+display&qid=1686339926&sprefix=led+microntroller+displa%2Caps%2C154&sr=8-7>
* Battery options: <https://www.amazon.com/WWZMDiB-Battery-Charging-Raspberry-Arduino/dp/B0C3VP66RN/ref=sr_1_15?crid=393CY5FPVLVRB&keywords=ESP32+battery&qid=1688672648&sprefix=esp32+battery%2Caps%2C160&sr=8-15>
* Sound alarm device: <https://www.amazon.com/s?k=raspberry+pi+alarm&crid=20OPT3D01DKWU&sprefix=raspberry+pi+alar%2Caps%2C173&ref=nb_sb_noss_2>
* We can 3D print some kind of container to put the device and all of its parts in

Device requirements

* How much power will it consume?

Other questions/concerns

* How do we load an executable program onto a microcontroller? I think we just have to run it on the device in an IDE, and all the code will be loaded into memory. I think this because I’ve noticed that even after I will code the IDE for the microcontrollers which I have used, when I boot up the IDE again later, the same program will automatically start running on the device right when I plug it in again.
* How do we