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| **Project title:**  **Climate in a Box** | |
| **Group Name:**  **Team 100% Funded - Malcolm, Scott, Jarome** | **Year/Term:**  2019/Term1 |
| **Project Team:**  Name: Student ID:   1. Scott Banducci 000433847 2. Malcolm Wanless 000396812 3. Jarome Reyes 000428754 | |
| **Project Proposal** | |
| **Introduction:**  **Caloric production is generally increasing across the world. However, currently the best solutions to energy efficient mass-production require large scale facilities and logistics. With “Climate in a Box” we will enable hyper-local food production at the household level. This doesn’t require any additional energy to transport or sell. With this prototype we will demonstrate energy, cost and environmental savings vs. mass production.** | |
| **Description** | |
| **A climate controlled, automated growing environment. A box contains fertile soil and a seed/plant. Moisture, temperature, and light are monitored and controlled by a central computer. Sensors for moisture and temperature regulate optimal growing conditions. Programmability allows growth of a specific plant with desired characteristics (ex. sweet, tart, etc.). Bluetooth controls and/or wifi connectivity may be added to allow an app to assist with configuration, monitoring and user experience/education.** | |
| **Project Goals:**  **We will create a simple, modular unit that can grow plants in your home. Our stretch goal is to demonstrate the feasibility of doing so with energy consumption comparable to buying the same item in a grocery store. Our ‘moonshot’ would be adding on an app, creating a compelling user experience that is realistically marketable.** | |
| **Project Timeline:**  **Oct 1: Prototype Designs**  **Oct 15: Materials Obtained**  **Nov 1: Software outline created**  **Nov 15: Basic Construction of Box and rigging (min 50% complete)**  **Nov 30: Final assembly + Software implementation + Poster design complete**  **Dec 5: Testing completed + Poster complete** | |
| **Project Support** | |
| Please describe anticipated technology needed to complete the project:   * moisture and temperature sensors * led lighting * arduino * automatic watering device (electric water pump) | |
| **Other remarks:** | |