

Work Journal for - Entrepreneurship Club 2013-2014:

At least once per week (normally Thursday) since our start of the project was devoted to time for the planning, construction, and development of the business. At least this is how often we came in during the early planning phases. In reality we have been coming in several times a week as well as over the weekends to work on the project. This document will briefly outline our work on this project throughout the various phases.

Planning Phase:

During the month of November our group carried out the planning phase. This consisted of many stages, including; choice of what sort of business project we wished to pursue. Living in such an isolated and small community, we had to think not only of what kind of projects that we would be able to complete; within our community but also what sort of business that the members of our community would be interested in. We also needed to figure out who would be in charge of what section, deciding what to grow with our hydroponics system, how we would deal with the produce, etc. Once the basis of our business was established we moved the next step, planning, designing and building our hydroponics growing station. After much research, debate, and prototype drawing we finally came up with a solution. Although our idea was accepted by the schools governing board, they were not so fond on our decided location. Later when they gave us a storage room in the school, in exchange for our primary growing location, we discovered that all of our designs would need to be reworked in order to accommodate our new locations design. With this new area we chose to make a vertical growing area that would be able to fit in a compact area, and would be able to handle a lot of vegetables and herbs.

Construction Phase:

Near the end of November we began to gather our supplies. We purchased many of the supplies online, direct from Chinese manufacturers: fluorescent light bulbs, sockets, seeds (cilantro, chives, lettuce, and basil), fertilizer, air pumps, vermiculite, net cups, outlet switch timers, ph meter, and a ppm tester. These internet purchases were

followed by local purchases from the only two stores Realm and Seaside Supplies for: Aspenite, wire, vapour barrier, styrofoam, 2x4x8's, 2x6x8's, 2x6x12's, screws, nails, joist hangers, nuts, and carriage bolts. The supplies were collected in -40°C (with the windchill) temperatures with enormous wind gusts and major snowfall. After making multiple trips using a small pickup, we had all of our materials transported to our building location and the next step was to construct our station.

With all of our materials collected we started cutting the wood. This began by cutting the 2x6x8's into segments that were a mix of 4 foot and 45 inch increments. At the same time we cut our 2x4x8's into 4 foot and 45 inch sizes. This was followed by the splitting of the aspenite into two segments which were each 4 feet by 4 feet. Once all of our wood was cut, we began to nail the 45 inch segments on the end of the 4 foot pieces to make squares. These wood squares were then fitted with the piece of aspenite onto the bottom. Once the boxes were made, plastic sheeting was fitted as a barrier for the water.

After the initial structure was completed and installed, the wiring for the light fixtures began. In order to keep it as safe as possible, we kept the setup with one continuous wire for each section. This allowed us to bypass the need to cut and then join the cables, with this adjustment, the possibility for an accident or mistake was near zero. In order to this, we were required to strip off the outermost layer of the wire in order to access the two other sections and the copper ground wire. We then measured a distance of approximately six inches between parts and then stripped a section of each wire that was close to two inches that we then pressed tightly together in order to fit it inside of holes of the light socket. We continued this process until the coil of wire expired. We ended up using 3 continuous wires going to three different 15 amp breakers.

Once these lights were set up we would then screw the sockets into the structure and then provide power to the system. After this was done we then installed the lights into their sockets to complete the installation of the lights on the structure.

We then began drilling holes in the styrofoam (each six inches apart and two inches in diameter), in which we planned to put net cups. We would then lay the sheets of styrofoam with the net cups over the wooden boxes (to be filled with water), so that the plants' roots would have plenty of water at all times without drowning the rest of the plant in the water.

Once these housings were drilled and good to go, we began to fit the cups with a thin cotton layer to hold the vermiculite and the seed. Each net cup was fitted with approximately two square inches of cotton for the holding purpose, and filled each cup about half way with vermiculite. Once this was filled we placed seeds in the vermiculite and then proceeded to drop the completed net cups into their holdings. The entire setup would then simply be fitted on top of the boxes (or as we would later do it, float the styrofoam directly in the water) to start its growing cycle.