

Project Deliverable F: **Prototype I and Customer Feedback**

GNG 1103 – Engineering Design

The prototype was useful in showing possibilities of how we will be able to incorporate hydroponics into our greenhouse construction. Assembling the pieces showed us where we would have trusses and walls, and where hydroponics would be able to attach wires or pipes. The prototype will also allow us to easier communicate our ideas to hydroponics and allow us to describe and offer solutions easier.

During the creation of our first prototype, it was discovered that when building the 4 walls, two walls must be built smaller than 4 feet to accompany for the thickness of the wood used on the other 2 sides. It was also discovered that when building the roof it will be much easier to build the roof as a subsystem then attach the roof to the 4 walls after, as opposed to attaching each side of the roof to the wall beneath it. As well, the prototype offered us more information on our subsystems, and how they will be incorporated into our greenhouse. For example, it was noticed that the door and windows would need to be scaled down to fit inside the frames, as well as that it could be more difficult to implement them into our design.

This information that will help us to design our greenhouse better and more efficient and could only be determined when building a physical prototype.