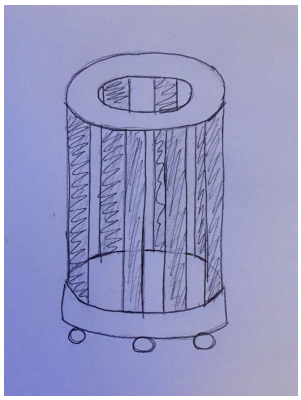
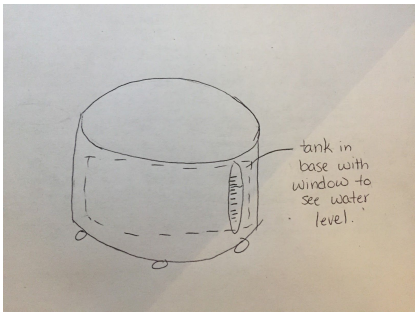
Deliverable D - Conceptual Design
Team: C02
Members: Thomas Sinclair, Brandon Ip, & Kaylish Henry

Individual Concepts:



(Kaylish)
Portability and Size:

- Height of approximately 1.5 m to allow the structure to reachable for the children.
- Instead of placing the modules in a row place them in a circular fashion. Allow the structure to have a circumference of at least 2.4 m.
- Columns (Modules) made of PVC, to reduce the weight of each module making them easier to carry and move, also have wheels attached to the bottom base of the structure.



Water Reservoir

- Leave place for the water reservoir in the center of the structure or have it hidden in its base with a window to show the water level. However, let this be a smaller reservoir that can be used when the structure is being moved.
- Have a place to attach to a larger reservoir, which will act as the main source of water for the plants in the structure.
- Use a clear tank with gradients to indicate the level of water, and also have a pH indicator for the reservoir.

Branding:

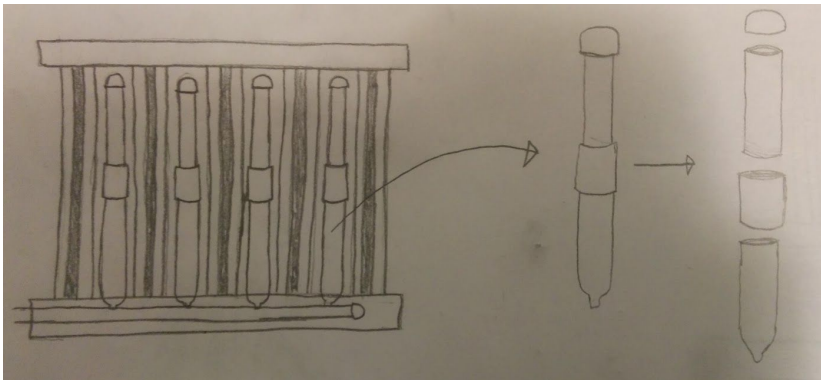
- Have a sign placed on the top of the structure.
- Have their name placed along one of the sides of each module.
- Make a place to attach a sign in the area between the modules containing the plants.

(Thomas)
Portability and Size:

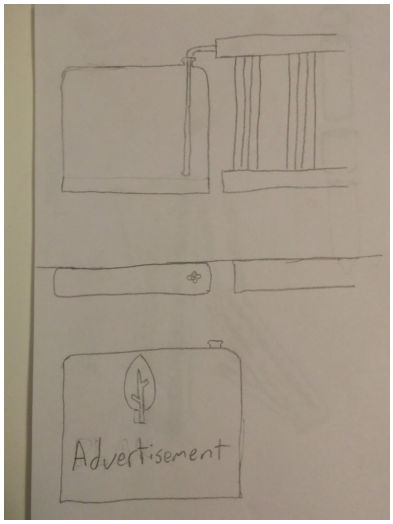
- Add sliding joints on the side of each module to be able to lower plants without sacrificing growing space.
- Change material of modules to something lighter (PVC, aluminum, etc.)
- Make modules smaller so all kids can reach them.

Water Reservoir:

- The client's current set up involves modules that are spread apart from one another. Placing water reservoirs in between the modules with a pipe at the bottom connecting them can increase the water capacity without increasing the space the growing wall takes up



- A water reservoir that is the same width as the growing wall (so they are flush) would allow extra water to be stored without making it look bad.



- Add pressure valve at bottom of reservoir to easily see how full it is.

Branding:

- If using the water fountain that is flush with the grow wall, a sign could be placed on it advertising the brand and hiding the reservoir
- Adding branding to the bottom and sides of the growall can be a good place to advertise without the branding being covered by plants.
- Add branding to packaging for the products the wall grows.

Conceptual Design:

Portability and Size:

- Height of approximately 1.5 m to allow the structure to reachable for the children.
- Columns (Modules) made of PVC, to reduce the weight of each module making them easier to carry and move, also have wheels attached to the bottom base of the structure.

There is not much we can do to create a smaller wall without sacrificing a few plants. However, We feel that the decrease in production is outweighed by the children being able to harvest the vegetables. The current material (steel) used in the modules is unnecessarily heavy and does not serve much purpose besides being cheap. Changing the modules to another material (PVC, aluminum) would not be very expensive and would be a cheap way of making it more portable.

Water Reservoir:

- Use a clear tank with gradients to indicate the level of water, and also have a pH indicator for the reservoir.
- The client's current set up involves modules that are spread apart from one another. Placing water reservoirs in between the modules with a pipe at the bottom connecting them can increase the water capacity without increasing the space the growing wall takes up
- Add pressure valve at bottom of reservoir to easily see how full it is.

The water reservoir modules therocised are a design that would not require any extra space. Space is an important factor in adding a new reservoir, since as you add more volume, the reservoir will obviously take up more room. Aslo, the reservoirs act as modules themselves so they can be easily transported. They can also be disassembled for easy cleaning. The clear tanks and/or the pressure valves are both to increase the ease of use.

Branding:

- If using the water fountain that is flush with the grow wall, a sign could be placed on it advertising the brand and hiding the reservoir
- Have their name placed along one of the sides of each module.
- Adding branding to the bottom and sides of the growall can be a good place to advertise without the branding being covered by plants.

In terms of the branding, having their organization on the wall is the main goal. Finding a place where there are no plants to hide it, is the best place, but also in a place where it will be noticable. Therefore, by placing the branding on the bottom and sides it will allow the wall to stand out.