

Full Slide Deck

Problem Definition: Plant/vinyl record holder multi tier shelf

Inspiration:



Problem Definition: Plant/vinyl record holder multi tier shelf

Primary Functionality:

- Organization for my plants
- Decoration
- Great environment for my plants to grow
- Will be in direct sunlight

Thoughts:

- Will be able to design how I want
- Will allow me to buy more plants
- Will make my room look cleaner and less cluttered

Secondary Functionality:

- Will add extra shelves for extra things such as record player and incense holder
- Bring in fresh air from plants
- Give room an aesthetic

Research of existing solutions

Plant Stand with hanging plant rod

Primary Functionality:

- Holds multiple plants as well as hanging plants

Pros:

- Can stain and chose metal for accent piece

Cons:

- Might be too big for my room



Take away:

I really like the Idea of having a rod like that to have hanging plants in my room.

Record player holder with vinyl organization

Primary Functionality:

- Holds record player and vinyls

Pros:

- Simple design but looks modern

Cons:

- How can I mash this with the plant shelf



Take away:

I like the simple design but I do not know how I am going to incorporate into plant shelf because of shape.

Record Player Shelf

Primary Functionality:

- Holds misce. Items and record player+Vinyls

Pros:

- Spacing between shelves will be enough for plants

Cons:

- How can I add a rod for hanging plants



Take away:

This inspo is going to be the foundation for the mash up because it is perfect spacing between shelves and a good reference to look back on.

Take away summary:

- There is no shelf that is specifically to hold plants and a record player
- The hanging plant rod would be nice to have, it is not out of scope but might be a bit of a hassle. Maybe can be my challenge for this project.
- The shelves must be staggered in size, I noticed in a lot of plant shelves it goes larger to smaller like a pyramid.
- Can use metals for accent than just wood, similar to the last slide
- Maybe can build wall shelves for more plants as side project

Plant Shelf/Misc. Self

Nevaeh Vorachack
Engineering

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Plant Shelf: $\frac{1}{4}$ scale model



*Materials Used:
Cardboard, Tape, Wood Sticks*

Plant Shelf: What did I like? What did I not like?

Liked:

Great reference

"A" Skeleton is a good look
and will be sturdy

Figured out that each shelf
has to be a little longer
than each other



Not Like:

Kept falling because I used
tape, next time I will be
using hot glue

One of the wood sticks was
shorter than the other so
the "shelf" wasn't balanced

Plant Shelf

By Nevaeh Vorachack



Iteration One

Needed to use stronger materials



Use Different Materials

I chose to focus on this area because tape is not strong enough to hold the shelf together

I then used duct tape which helped immensely

Findings: The duct tape helped however, because of the "A Line" structure it was still hard to build the shelves



Iteration Two

Re-design support on the sides (the "A line" structure)



Re-design A Line structure

I chose to focus on this area because when visiting the wood store, it was not possible that they could cut pieces in an “A Line”

I then had to create a new shelf out of rectangular pieces

Findings: The new structure of the shelf gave it a minimalistic look



Iteration 3

Going the extra mile



Sprucing the project

I chose to focus on this area because I wanted to go beyond the minimum

I chose to stain the wood a dark chocolate color, as well as using wood glue instead of nails to give the seamless look

It was very time consuming but I am satisfied with the result



Project Functionalities



Functionalities

Primary Functionalities

- Organization for my plants
 - Yes
- Decoration
 - Yes
- Great environment for my plants to grow
 - Yes is in direct sunlight

Secondary Functionalities

- Will add extra shelves for extra things such as record player and incense holder
 - Yes Fits both record player and incense holder
- Bring in fresh air from plants
 - Yes
- Give room an aesthetic
 - Yes looks very nice with my room decor

Concluding Thought



Concluding Thought

Things I liked about my project

- The wood stain color
- I ended up making a project that was in my skill level
- I can place plants of all sizes on this shelf

Aspects of my project that were difficult

- Two of the wood pieces were shorter than the others, resulting in an uneven level

What I would do differently next time

- Not put my full trust into the woodcutter guy and measure each piece after

