Final Project Pt. 2

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Form 3100 - Spring 2024

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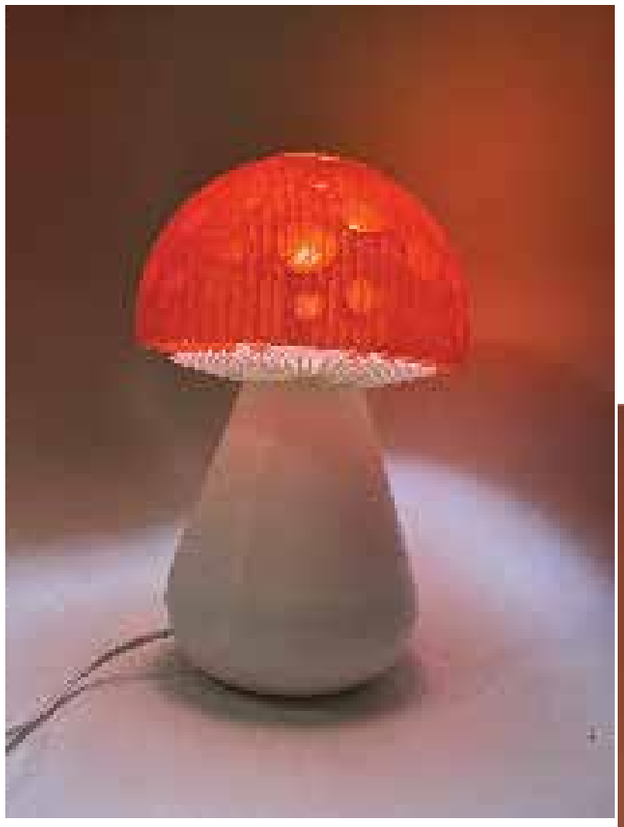
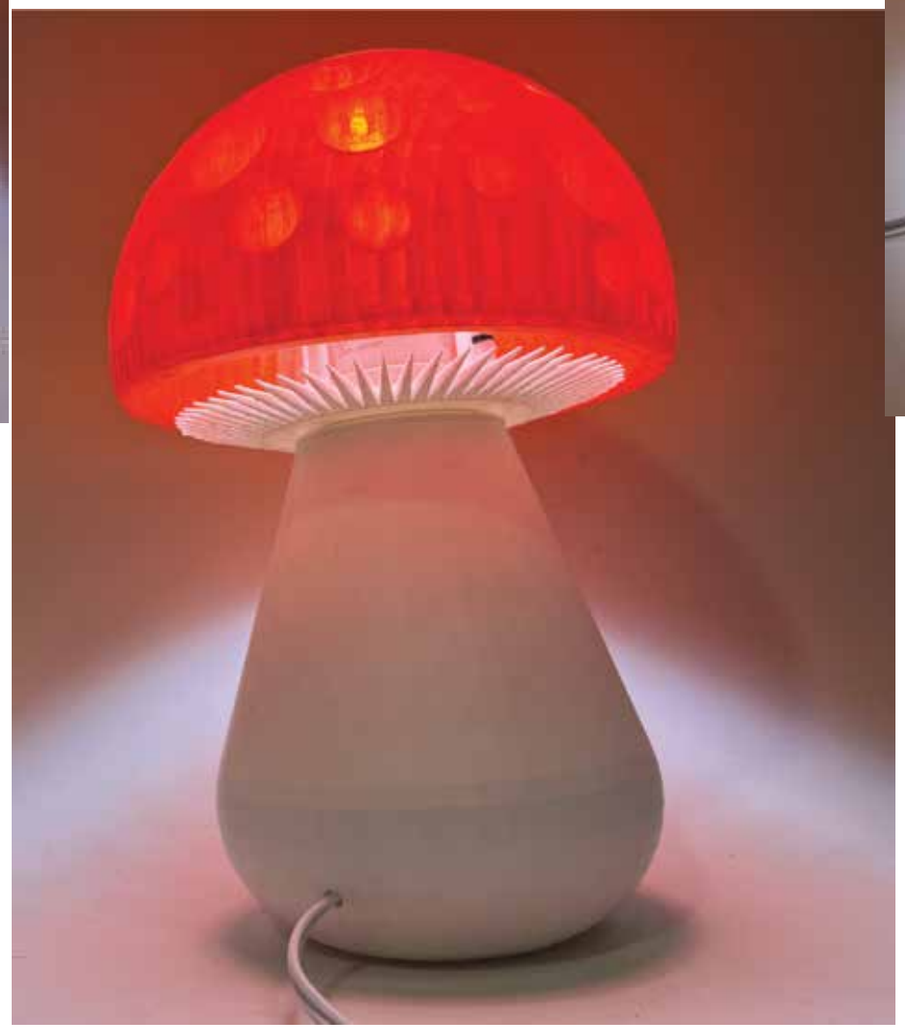
Hanging Lamp Documentation

Hanging Lamp Documentation

Table Lamp Documentation





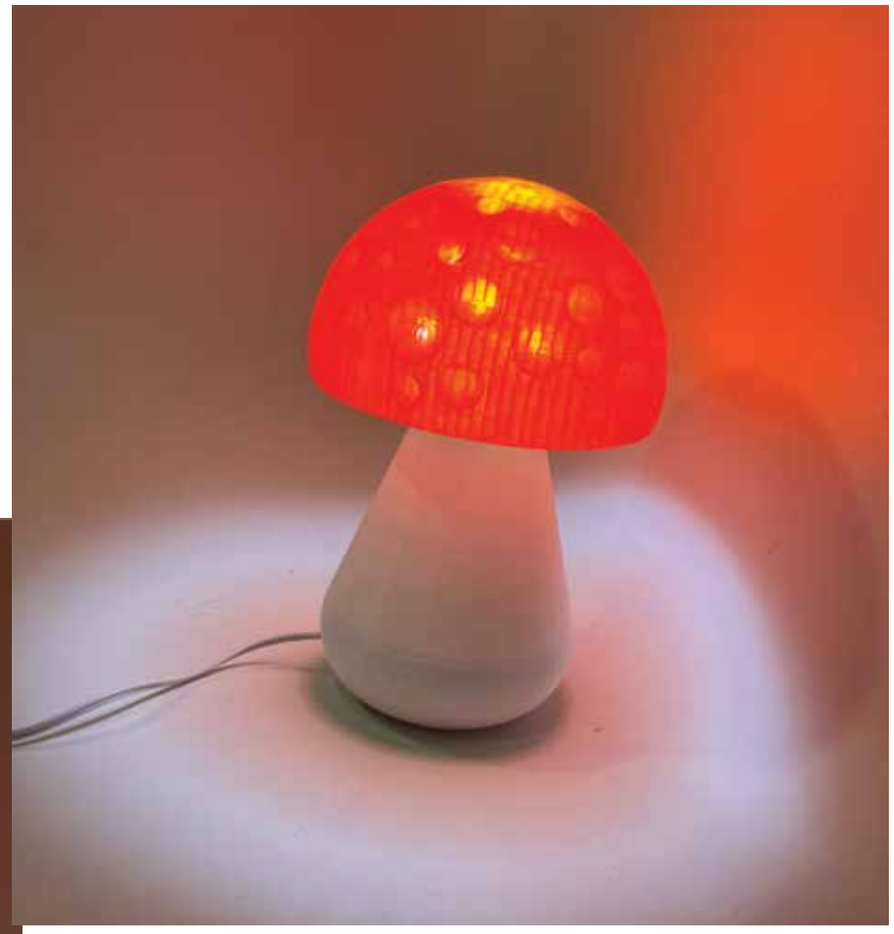
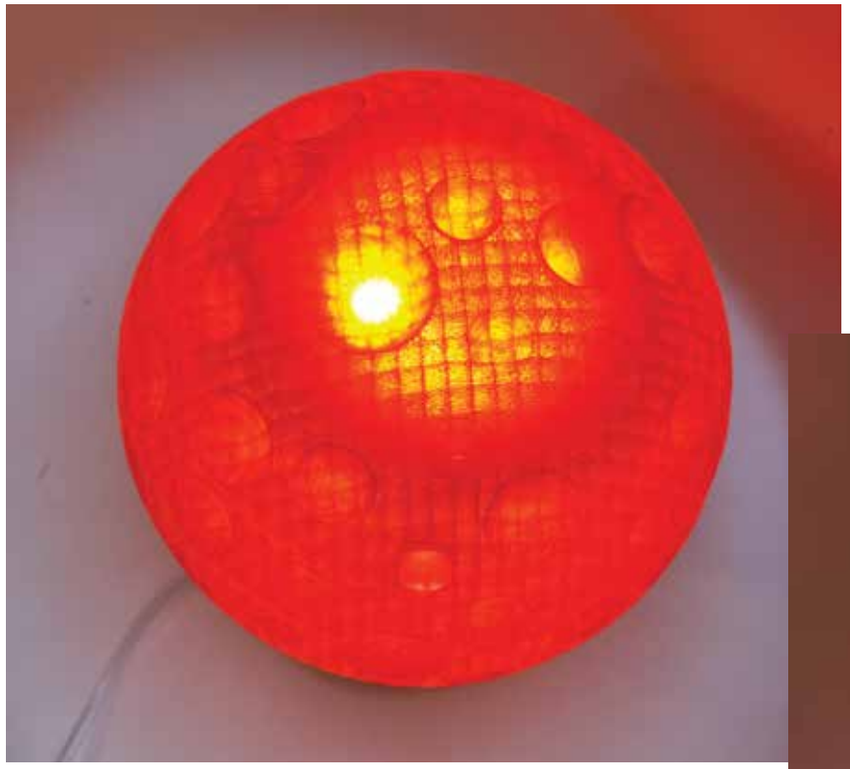


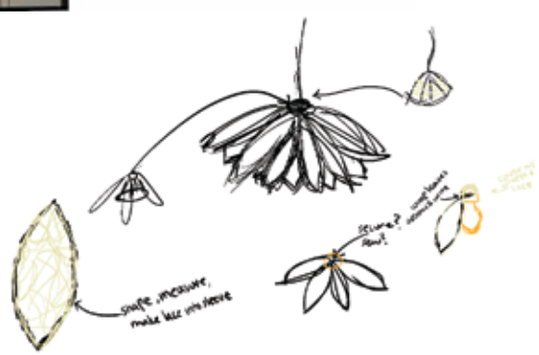
Table Lamp Documentation



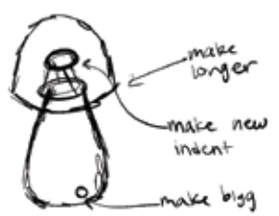
Process Journal: Brainstorming

Brainstorm:
I want to make a hanging lamp for one and probably table lamp. I have no overhead lighting in my room and I think it would be cool to make something I could keep in my room after this. I want to go with a nature theme. I love mushrooms. The vibes are wonderful so maybe a traditional red cap that all drawings and mushroom images are of. Maybe get some transclucent filament. I really want to do some sewing in the project. I do so much sewing in my personal projects but have never had the chance to add this aspect to a class project. I have a vision in my head of leaves around a hanging bulb. I just thrifted a big swatch of lace that I think would shine/block the light so perfectly.

Iteration after printing



First
Sketches / Ideas:



After talking to Aidan

Process Journal: Hanging Lamp Modeling

- I have no idea how to make a curved leaf in sketchup. I don't even know where to start this model. In all honesty I have a prototype of my lamp before the 3D model, so I am modeling it off of what I have in front of me. It is curved around like a leaf bud and I have no idea at all how to do that so I think it will be flat for now.
- I found a hanging light bulb in the extension warehouse so that is amazing and going to make designing the leaves around it so much easier. I am making the leaf shape and then duplicating and rotating it around the lightbulb. It looks pretty good but of course off since they are just flat.
- I did some googling and I am going to try the extension "True Bend". Update I have no fucking idea how that works. It keeps bending that leaf in a weird non-helpful way. yay.
- Ok moving on I am going to make the wire support. Should be pretty easy to make two circles and 4 lines connecting them. Ok overall it was pretty easy but sketchup tends to hate me sometimes when I try to connect two things with a line, but eventually figured it out.
- So after showing it and talking to Aidan I can make somewhat curved leaves. It still isn't quite the vision I had in my head but as far as curving it in sketchup it works wonderfully. Looks like I am going to be making arcs and connecting them all across the leaf to make it a surface.
- Tedious but it works. Took forever but now I just need to get it around the light. Something I always struggle with in sketchup is placing things. Jeez it is hard to make an object where you want it and then find out ohh it looks right but is actually at a completely different height. Telling myself that once I have one leaf, the rest are easy.
- I take that statement back. I am fully doing something wrong. I try and rotate one around the center and again it moved it a random fucking location. This is taking forever but I finally got it to look like I want it.
- I have decided I am not going to model the wire connections from the leaves to the support. It is so tiny I don't even know how I would model it except for positioning tiny circles and to be frank I do not have the patience for that sorry. So that means my model is done once I make the edges black and the surfaces an opaque cream color to look like the lamp!!
- Also looking back it may have been helpful to 3D model this before making but I wasn't sure how to figure out the wire details with this and when sewing I do a lot of my best work/brainstorming by just going hands-on and iterating, so overall I am happy with my process.

Process Journal: Hanging Lamp Production

- I am starting on my hanging lamp first since I have all the materials at home funnily enough. My plan is to shape leaves out of wire and then use it as a pattern and cut the lace out around it. I have no idea and am worried about how to attach all the leaves together at the top. I am stuck. It will be some type of wire wrapping but I don't know how ahhhhh.
- I have made a few leaves and so far my on the go plan for attaching them all together is just leaving excess wire at the top of the leaf and figuring it out later. I am making one singular protype leaf, lace and all, then brainstorm attachment.
- Ok one leaf sewn and it is so hard to get the wire leaf inside the glove. I am sewing up the sides and leaving at the opening at the top and so I can easily squish the wire through the hole but then once inside the leaf it is so difficult to widen it and get it back to its original shape. I can widen it but it just doesn't look as good, dealing with this later. Ok so the current plan is I'm going to make a wire circle that will rest on top of the light fixture. I have made it about the wide radius where the bulb is and it looks awful, the leaves wouldn't be high enough. My vision had it resting on top of the wide area and part of the light sticking out of the stop but I really really hate how it looks. Plus just realized if I did that wider radius I would have to make so many fucking leaves ahhhhh. Maybe I add a tiny circle above so the leaves are high and more condensed, but the wider circle is the support with more wire working like support beams. I am liking this. I kinda imagine it looking like one of those wide cages on top of champagne bottles.
- Oh I fucked myself over. I have to make this tiny wire circle around the wire so I can't slide it on. This is so fucking hard I cannot wrap this wire around such a small wire fuck! I have never cursed in one of these process journals but goddamn I went hard here. I finally managed to make the circle but it was hard and I have so fucking idea how I am going to attach the wire supports. Well I did it and it was fucking difficult because I also had to make sure all the wires were the same length so the bulb falls straight, but with all of the wrapping it changes the length. Ok base is finished and I already want it to be done. I am going to finish all the leaves but when sewing
- I am wondering how to finish the ends at the top without it looking unsewn but also leaving the wire to be worked with. Again, I'm gonna deal with that later.
- Ok all leaves are sewing and put together time to finally fucking figure out how to finish the edges and attach them. After some investigation I have discovered I can hand sew the ends via ladder-stitch and poke the wire through the lace to still be usable. Hand-sewing is always tedious but will look better. All hand sewing done now gotta attach them all to the lamp.
- fuck. So it looks like I am gonna wrap the wire that sticks out around the mini circle but I am running into the same issue of the circle being so small, plus parts of it are now taken by the supports. After a really long time I got them all attached ahhhhh! The new issue arising is how do I make it look good because they are attached and falling flat. I am curving the wire but it will not stay up without some support. Time to do more hand sewing.
- I was just a fucking idiot. I started aimlessly sewing the leaves together and I should've used fucking safety pins and planned before. I spent a couple hours on this and I'm gonna have to seam rip it all out because the leaves are attached unevenly and I should've planned ahhhhhhhhhh. Ok all seam ripped and the safety pins are out. I have eight leaves so the plan is every other one on top.
- I got it to look even with the safety pins yayyyyyy.
- I forgot about this/put off the hand sewing again so it is quite a few days later oops. I feel finally done and I am so excited. I sewed the top and bottom wire an inch on the bottom and an inch on the top to still give the overlapping vibe. Luckily this also helped the tops of the leaves look less bulky. Doneeeeeee yay.

Process Journal: Table Lamp Modeling

- Mushroom! I am so excited for this. My plan is to make a mushroom shape and go from there to figure out how to attach it all. Luckily I ordered lamp parts so I can measure them to figure out the basic measurements. I don't want to order even more parts so it looks like we are using a hanging lamp cord for the table lamp.
- I have made the inner circle part the radius of the lamp base. I don't know how it is going to stay yet because for now it is just going to sit snugly but then it is above the top. Glue? Ohhh I have to make another border/ adjust the follow me surface to have a lip tha the light sits snugly in again. but the base seems scarily easy. All I have left to do is subtract a circle for the cord and it looks done.
- So I have the base and I have a vision in my mind and sketched about how it will fit but on the model it makes no fucking sense. So I drew a very similar support to my hanging lamp. Two circles connected by column-like supports. FUCKKKKKKKK. This is so fucking difficult for no reason. I am making the bottom the radius of the bottom of the light and the top semi randomly bigger. ok that sucked but i had to make two circles the same size and connect those by straight lines then scale the inside one in. Why can't I just connect two circles no matter the size!!!!!!!!!!!!!!!!!!!!
- So how do I attach this to the cap?
- OKokok I think I am going to subtract the shape of the top of the supports from the cap so that it fits together like puzzle pieces.
- Making the cap at the same time as the supports. So far I have a dome and the plan is to subtract tons of spheres from it and make it mushroomy. I want to fucking murder sketchup. The subtract tool is the bane of my existence. I am using a sphere from the warehouse and I place it where I want it, a whole issue in and of itself (never goes where I want), and I swear 1/10 times it actually works. Other than that it subtracts with a tiny hole making it not solid when I know for a fact none of the sphere was poking through, or it results in only the sphere or only the dome (not subtracting). Also everytime I subtract a sphere the subtract tool takes forever every single time. So now since it only works 1/20 of the time and then takes forever to actually complete the task (never know if that results in what I know) this is taking a eon.
- So that was awful and it ended up being too big and I had to shrink it down and the supports don't fit so I have to figure out the scale when I can't get the calipers in the dome. Yay!
- I just went through so many fucking iterations of the support. I had to re-scale a bunch of stuff like the height and many radii. I had to resize the top and it did not want to do that and remain solid. so many fucking issues.
- Gills! no idea how to do this after speaking with aidan so sketching we go again and i'll be back. Plan: make another circle a tiny bit higher up and connect it to the circle of the current supports at all the sections to make triangles. It is working so far. it looks so good so far just tons of goddamn lines.
- Fuckkkkkkkkk. it is not a solid and i don't know why. solid inspector says there are over 1000 issues and i don't know. i made that fix as many as possible but i did not have any of these issues before i added the gills so it has to be them. basically redid the whole thing and i says it is solid now so hopefully done.

Process Journal: Table Lamp Production

- i am probably doing a really fucking stupid thing here and i am going to print the base and support when I am not done with modeling the rest of the lamp, only have the cap to go but the subreacting takes forever. It looks done and i don't think anything needs to be changed to work. Printed! i am testing fitting in the lamp parts and the sizing is a little too snug and it won't "click" in like i wanted so looks like sanding here I come. so i got it in but now all the cordage is just sitting in the base and it looks funny. The cords did not fit through the hole even though I thought I measured it to fit the widest part of the plug. So I did another probably stupid thing but I trimmed the edges of the plug down and it fit but turns out I forgot about the switch on the cord and that does not fit through the hole. so no idea how to get that though but a problem for later. The supports fit with the lighting fixture well!
- dome is done!! I never want to do that again. It is done but turns out it is too big for the print bed so we are going to shrink it and deal with the consequences later.
- consequences have arrived! the supports that fit perfectly no longer fit perfectly. I put it all together and it looks good but it just doesn't fit together. went to aidan and i am going to add gills so that it covers the bottom and make the cord hole smaller and rewire the cord.
- I honestly forgot to journal here but the overall thing that happened was I could not measure the inside of the mushroom so I tried to figure out how to scale my sketchup model down to what I scaled the cap down via prusa. well if you didn't guess that did not fucking work. I no joke printed maybe 4 supports before someone told me play-doh to get the right measurements and that was a godsend. then the circle fit in the dome's indent but it was too small of an inner radius and the lightbulb didn't fit, so i sanded for maybe 3 hours, only to find it was too short and the lightbulb stuck out the top so it didn't fit snugly bc the lightbulb doesn't let it fall flat. Ok new taller one and it fits so now just have to make the gills and print that.
- ummm i made a big fucking mistake with this cord. So I cut it and rewired each side. then realized i should have heat shrink, so i cut off what i just soldered and re-did it with the heat shrink. I put the heat shrink on the whole wire, not each individual one. one can guess what happened. when i heat shrunk it a little bit of the solder connected and when i plugged it in sparks flew. i thought i burnt out the btu plug for a sec. luckily i didn't. my plug was also a bit charred bit both that and the bulb still work. So this time I am going to be smart and put the heat shrink on each individual wire instead of both.
- Gills are printed. fuck me it was not a solid and the hole i need is not in the middle and i am an idiot and did not even realize until i tediously took off all of the supports. all the tiny gill supports. i hate it here. i have no idea how to make it a solid everything is broken and zack had no answers. ok its a solid and here we go again with printing. ok it works and there's a hole but for some reason these supports are so much harder to get off than the first one and i broke it. three of the legs broke so e-600 it is. well the btu only has black e-600 so it stands out against the white but i can't find a fuck to give at this point. i have sanded and pliered these gills so much i do not think they are getting any smoother.

Process Journal: Hanging Lamp Takeaways

If I were to redo this I would probably figure out an easier less “fuck” inducing way of attaching everything, especially the leaves and the support. It was the source of most of my worries in regards to this project. I wonder if it would have been easier to make a lace covering of one of the wires then hand sew the leaves to the support instead of wire wrapping. I don’t know if it would be as secure but it would probably be easier to hand sew it instead of wire wrapping. it seems like a possibility but unknown if it would have helped me. Overall I am generally extremely happy with the result. My advice for future students is that if you have a vision in your mind, do your best to make it come to life. It is so satisfying to see the final result of something that was solely in your head. Also I would tell them that if they run into a problem to keep working on your project and a solution presents itself. I was worried most of the time about how to attach the leaves but as I continued through my process the solution presented itself to me in a fairly natural way.

Process Journal: Table Lamp Takeaways

I know this project was a first prototype but damn i learned it takes a while to get things even close to perfect. There is so much iterating involved. In general I am very happy with how it turned out. I am mainly happy I got started earlier than later because that meant I had access to the btu printers and I had time to iterate. I really loved this idea so I wanted to get it as perfected as I could. One big thing that stuck with me after so many issues is that play-doh needs to be more popularized. if i knew about that at the start it would have saved me so much stress. Also I literally got a new computer in the middle of this project because my computer could not handle everything being done. so it was a lesson in telling me that for the rest of my college career i need more computer power. Overall, due to the amount of iterating it I learned that it is still never going to be perfect there are always things I want to change. If I had more time and knowledge I think the main thing I would change is how I printed the gills. I would have chosen a different support to make it come off smoother instead of insanely bumpy like it is now. Additionally, I would want the support (to not be broken and glues) and the cap to have a better connection. I think it would be nice to have a screw type situation where you can screw the cap onto the support so that when it is knocked over it doesn’t fall off so easily. I do not know how to add something like that in so it would be a fun future endeavor. I would advise future students to not go down the rabbit hole I did trying to get it so insanely perfect. I would have been so wonderful with one of the supports from previous iterations but I had a mission and it went a little crazy.

Process Journal: Overall Takeaways

I have never cursed so much in a process journal than in this project. oops.