

50 Hour 3D Modeling log

Hour 1:

For this first hour I want to re-familiarize myself with 3D modeling and some of its vocab, because it's been a while since I've done stuff with it.

I started by watching a few videos on terminology stuff. Generally speaking I watch videos for challenges like this at 2x speed so I can get more info faster.
[video 1](#) [video 2](#)

Next up I wanted to learn about hard surface modeling because that's a bit part of 3D and I'm not very good at it. It will likely be the majority of the stuff I learn in this 50 hour challenge. Hard surface modeling is essentially just modeling things with defined edges or more geometric curves. Anything that is organic is not really hard surface because it is easier to do with sculpting. Hard surface covers a bunch of modeling workflows like box modeling (where you just model things from simple shapes called primitives), booleans (where you have shapes that cut into other shapes), and polygon modeling (where you move around individual vertices). I watched the following video to help me better understand hard surface.

[Video](#)

Now a lot of this challenge is going to be me making stuff and practicing. I'm planning on starting off following some tutorials and then more or less making stuff myself.

For picking out a tutorial I saw that the guy in the last video had a free beginner hard surface modeling course that's supposed to be 5 hours long so I think that will be a good starting point. Here's a link to the course:

<https://www.blenderbros.com/jumpstart>

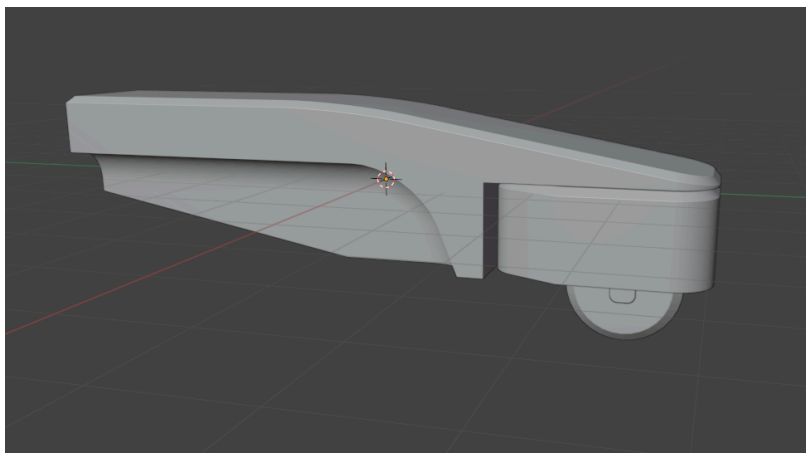
Hour 2:

So I watched the first section of videos in the course which was designed to be an intro to blender and getting set up, and I thought the guy went super fast and didn't explain anything that he was doing. I already knew the basics and was kinda just watching for a refresher and there was not a lot of value with this. They also wanted you to get an addon for blender which used to be free but now isn't, so if completely free is what you're looking for, you won't quite get it here. I am not planning on getting it do it the "free way".

I then worked on the next section about modeling a crane (I think). There was no intro to the section and it literally started with the guy going wicked fast and just making seemingly random modifications to the cube. I watched at 2x speed but still, nothing was explained. Oh and the video was like 50 minutes long, so not the best first impression of the course for the second hour. I was planning on pausing and following along, but I genuinely couldn't find good spots to pause and follow along. Next hour I am going to start with just making what he has.

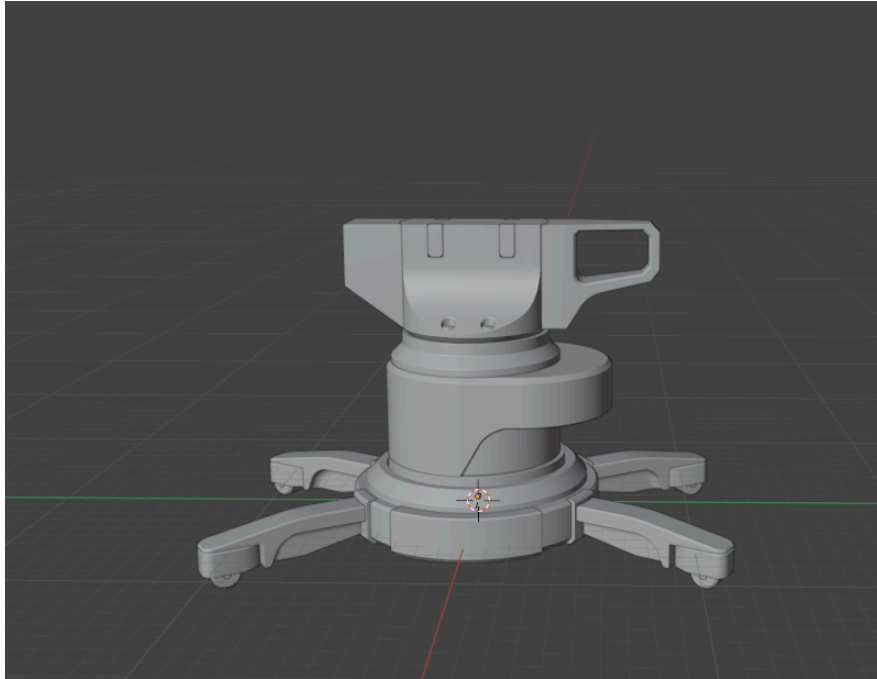
Hour 3:

For this hour I followed along with the first video in the crane section and kinda just skipped around and did what he did. I don't like just copying (which is what I felt like I was doing) but I think it turned out decent. Here's what it looks like so far.



Hour 4 & 5:

I did some more work on the crane. After spending 2 more hours on the course I wasn't liking it and didn't feel like spending more time on it. Again it was free so it's not like I am wasting any money.



Hour 6:

I saw this youtube video about making a coffee mug robot and thought it would be cool to follow along with.

[Video](#)

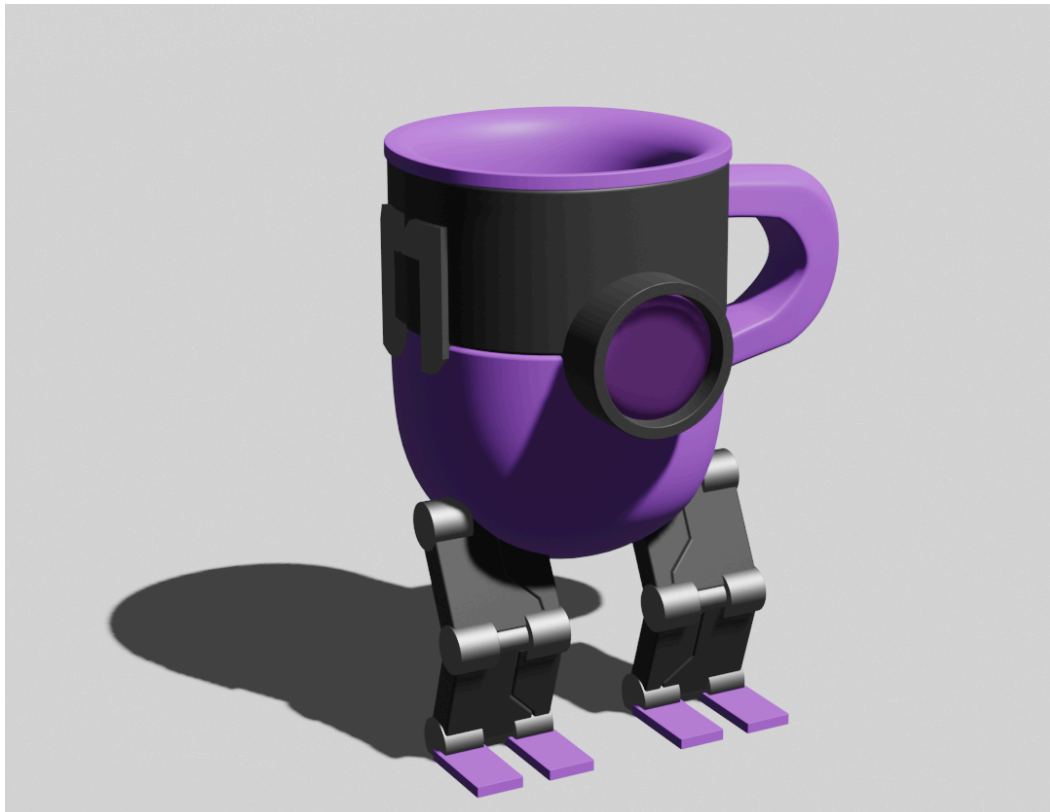
I got through the first 15 minutes of the video (because I was pausing and following along) and the guy moves a little bit fast but he does for the most part explain what he is doing and why he is doing it. Here's where I got to:



I also tried not to copy 1 for 1, like my coffee cup robot is going to be a bit more clunky than tall and thin. I like the way the base shape is but the handle is kinda wack.

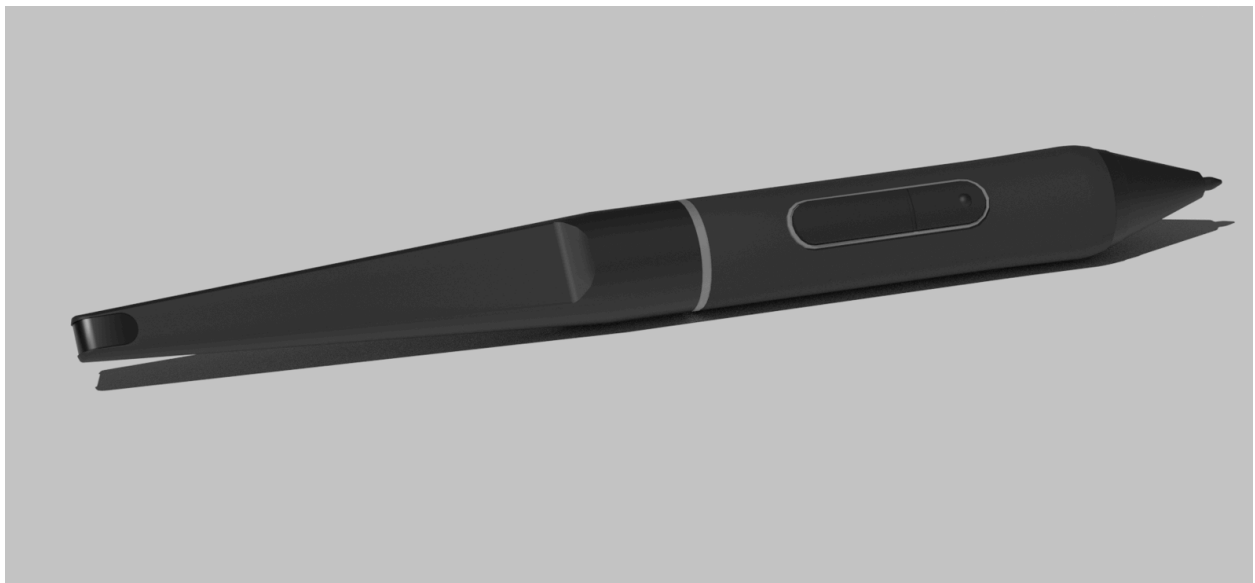
Hour 7:

I finished up the coffee robot and I'm pretty happy with the result. Now I think I'm pretty good with the basics and I'm ready to start actually modeling stuff myself to practice.



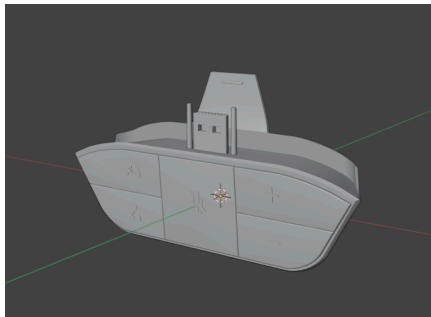
Hour 8 & 9:

The first solo project I want to do is modeling a little stylus pen I have for my graphics tablet. I picked it because it is small, real, and physically in front of me to hold and manipulate. I ended up finishing pretty much right as hour 9 finished up. I like the way it came out for the most part, but there were a few small shading errors that I wasn't entirely sure how to fix. Here's the final render.



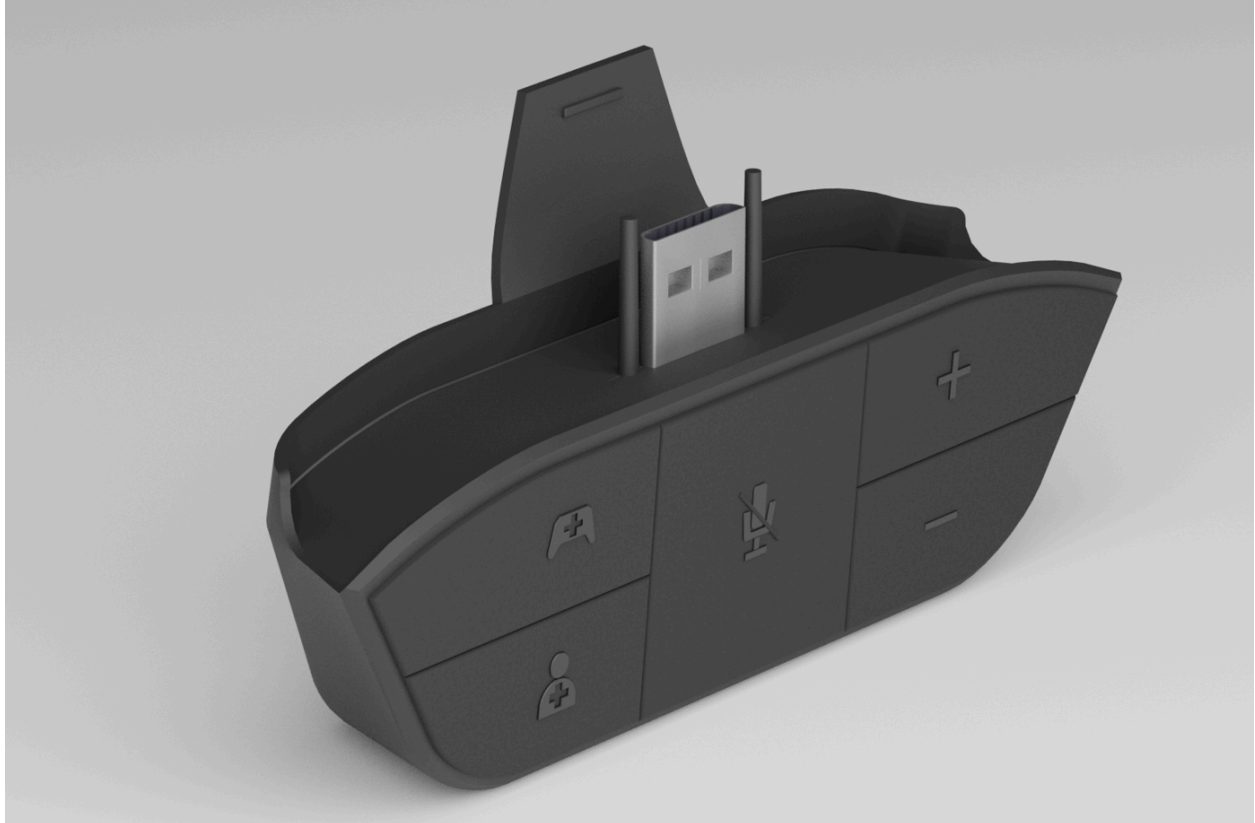
Hour 10 & 11:

I decided to model a little accessory I have for my xbox controller next. It was significantly more challenging than the stylus but I think it came out ok. I ran out of time in hour 11 before I could do the materials so for now it's just the model. Here's where I got to:



Hour 12:

I started off the hour by adding materials to the accessory and then doing a final render. I think it looks nice but there is a little shading glitch with the back lip thing on the right.



Afterwards I watched a few youtube videos on shading errors.

[Video 1](#) [Video 2](#)

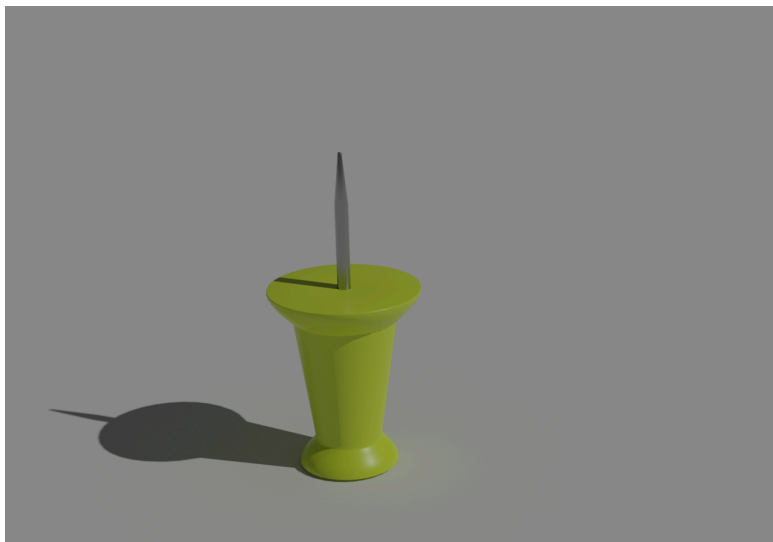
So bad shading usually results from n-gons on not flat surfaces so I guess I will go about trying to use less curved n-gons in the future.

Lastly I posted my render to instagram to see what people think.

Hour 13:

For hour 13 I want to get faster at modeling stuff. I have picked out three things, a thumb tack, a portable phone battery, and an electric pencil sharpener. The goal is to get through all three, but I'm not exactly sure if I'll be able to. Oh and the reason I'm trying to get faster is because spending a lot of time on modeling is time not spent on something else, so if I can quickly model then I'll have more time for other stuff.

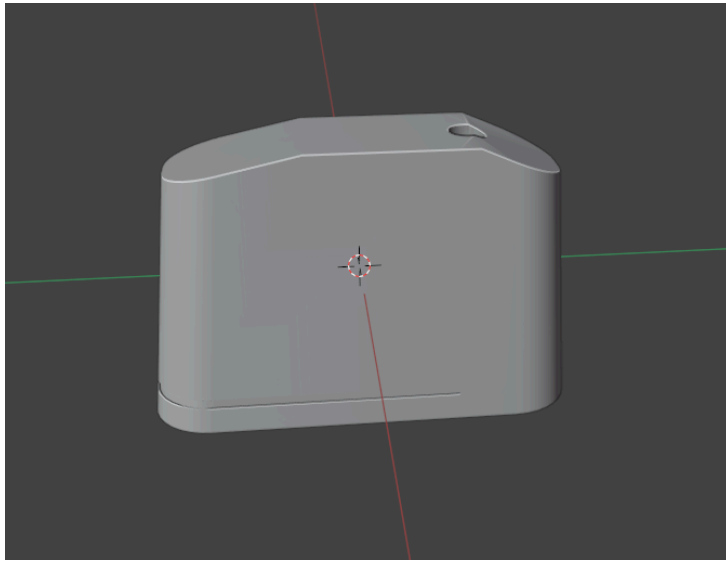
40 min left and I just made the thumb tack.



I finished up the power bank with only 14 minutes left, leaving not a lot of time at all for the most complex out of the three objects.



I ended up getting nowhere close to finishing the pencil sharpener but heres a picture of where I got to.



Hour 14:

I want to spend this hour trying to learn a bit more about bevels and more specifically the bevel modifier.

[Video 1](#) This one was a very basic overview of bevels, and frankly nothing I already knew. Still a good beginner video though.

[Video 2](#) This one talked about custom profiles which is like making bevels not just a smooth curve, but customizing the curve if that makes sense.

[Video 3](#) This one is the longest and it is very similar to the first video, just being a bit more comprehensive but more focused on bevels with add ons instead of normal vanilla blender.

[Video 4](#) This one goes more in depth on one aspect of bevels called miter shape which lets bevels be smoother around corners.

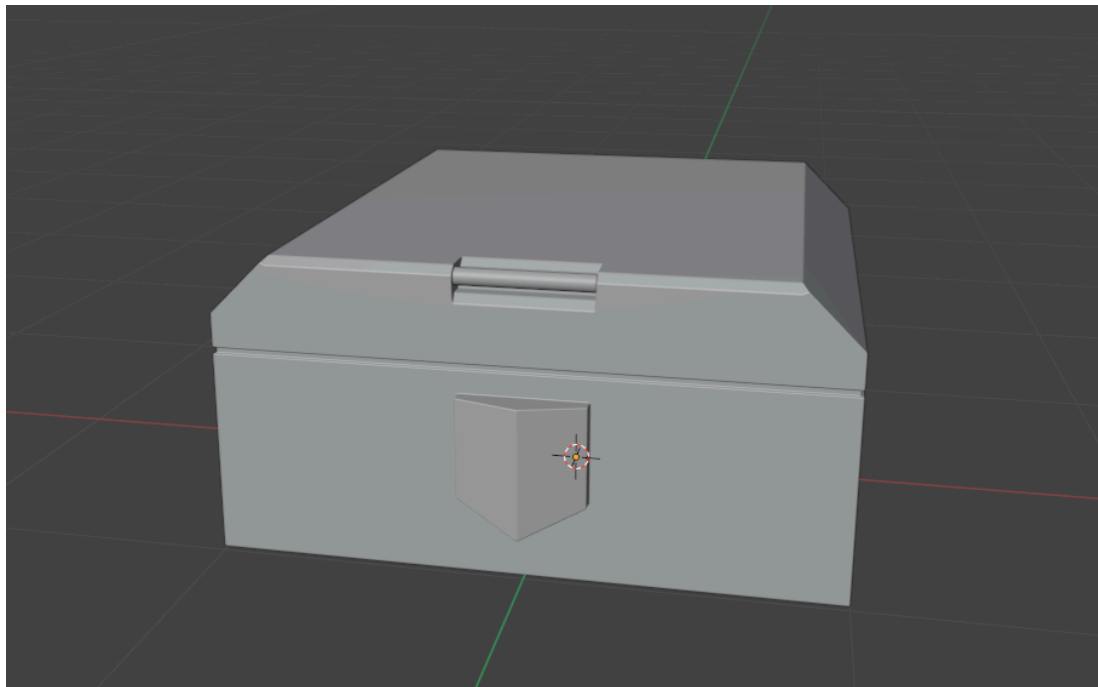
I have about 15 minutes left in the hour so I'm just going to hop into a blender file and just mess around and try to understand bevels a bit more.

Hour 15:

So far, everything I've made has been something real and tangible that I physically have in front of me to reference. When I'm going about making something for a game, that usually won't be the case. What I want to do now is make a few little models that fit under the same theme. My first theme is going to be a sci-fi high tech alien ship. I want to make an alien gun, a main console for the ship, a helmet, and a seat. After all that I can hopefully make a nice looking render.

I'm going to start with the gun. I'm thinking of making a more pistol-like blaster but we'll see what happens. I don't have any sort of reference images, and I'm kinda just doing what seems cool.

So change of plans. After about 40 minutes of trying to just model from my brain, I realized things weren't looking too good, so I'm going to partially scrap this idea. I still want to do some modeling from my brain, but I think I should start somewhere a little easier. For the rest of the hour at least I am just going to make a box. It's not the best in the world but I was also trying to get more comfortable with the bevel modifier at the same time.



Hour 16:

I genuinely have no clue what to do for this hour. I started by trying to do research on how to model without references, and pretty much every video I watched talked about needing reference. Soooo I guess if I want to make something like a sci fi gun that doesn't actually exist, I should draw it first and then model while referencing my drawing. The only problem is that I suck at drawing so I am now at the point where I am very confused and don't know what to do...

I think I want to watch some videos on lighting, because my current lighting is just throwing in a sun light and setting it to a random direction.

[Video 1](#) This one is kinda just how to add in area lights. Some theory was mentioned but not comprehensively explained.

[Video 2](#) This one is a bit longer and more beginner friendly.

[Video 3](#) This one was actually an official blender tutorial about 3 point lighting. So basically 3 point lighting works by having one light be the main light called the key light. It will usually shine above and at a diagonal. The key light will inevitably cast shadows on the subject so you also need a fill light which is a less intense light shined at the shadows to lighten them up. Finally there's the rim light which is the most powerful and shines from the back of the subject to illuminate the sides showing off the form a bit more.

Hour 17:

So I'm at a weird point in this challenge where I took a month long break and I'm coming back to it now. Hour 16 was on April 12th and it's May 14th today.

I was working on ludum dare, I went to canada, I had a week where I had to work a lot, I was working on a top secret project that I might make a video on when it becomes not top secret, and I was also just being a bit lazy. For the top secret project I was using blender but I wasn't really learning new things and making a lot of stuff, so I didn't want to count those hours for the challenge (I also wouldn't be able to share what I did in this video due to the top secret nature of the project).

Before the break I worked on learning vanilla blender, meaning it's free and what you get when you install blender. Now I want to start woking with some addons. The two main ones I'm going to start learning are hard ops and box cutter. I actually bought these two a while ago when working on my 3D puzzle game before I decided to make the game low poly, but I believe it was like \$30 to buy. I never really learned how they work so during the next couple hours I want to understand how to use them.

I have found a 2 part tutorial video explaining how boxcutter works. I watched them and the links are below:

[Video 1](#)

[Video 2](#)

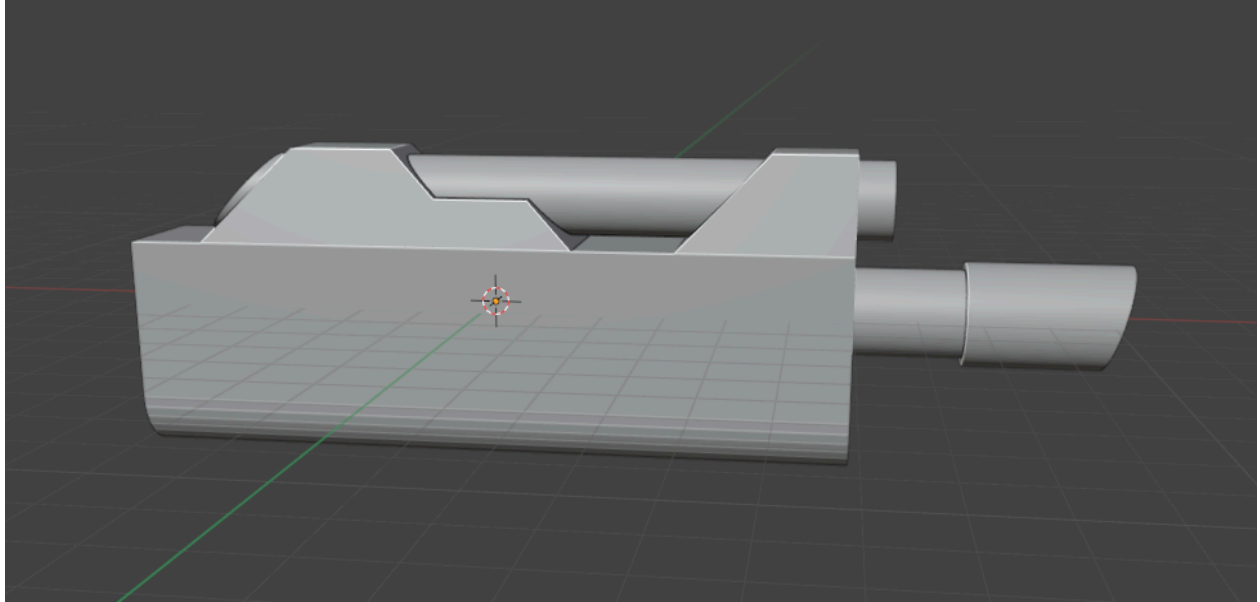
The same guy also has a little tutorial of using boxcutter to make a sci fi gun.

[Video 3](#)

I really didn't make a lot of progress with the gun due to not a lot of time left in the hour.

Hour 18:

For this hour I want to try and finish up that sci-fi gun from last hour. I didn't get very far at all but I am starting to understand how boxcutter is working a bit more.



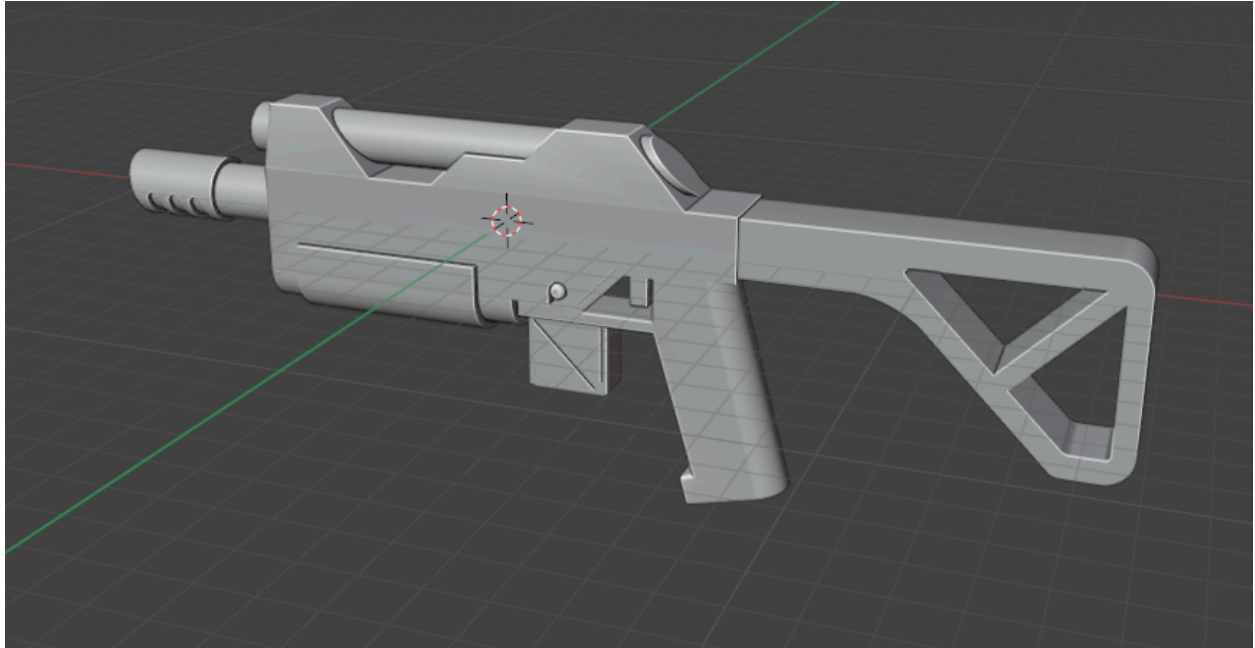
Hour 19:

Progress is still a bit slow but here's what I was able to get done in this hour. I imagine I'll be done with this on hour 20.



Hour 20:

I finished up the gun tutorial. I finished up the modeling and then gave it some color and finally did a little bit of compositing to denoise the image a bit. Heres what the model looks like and the render.



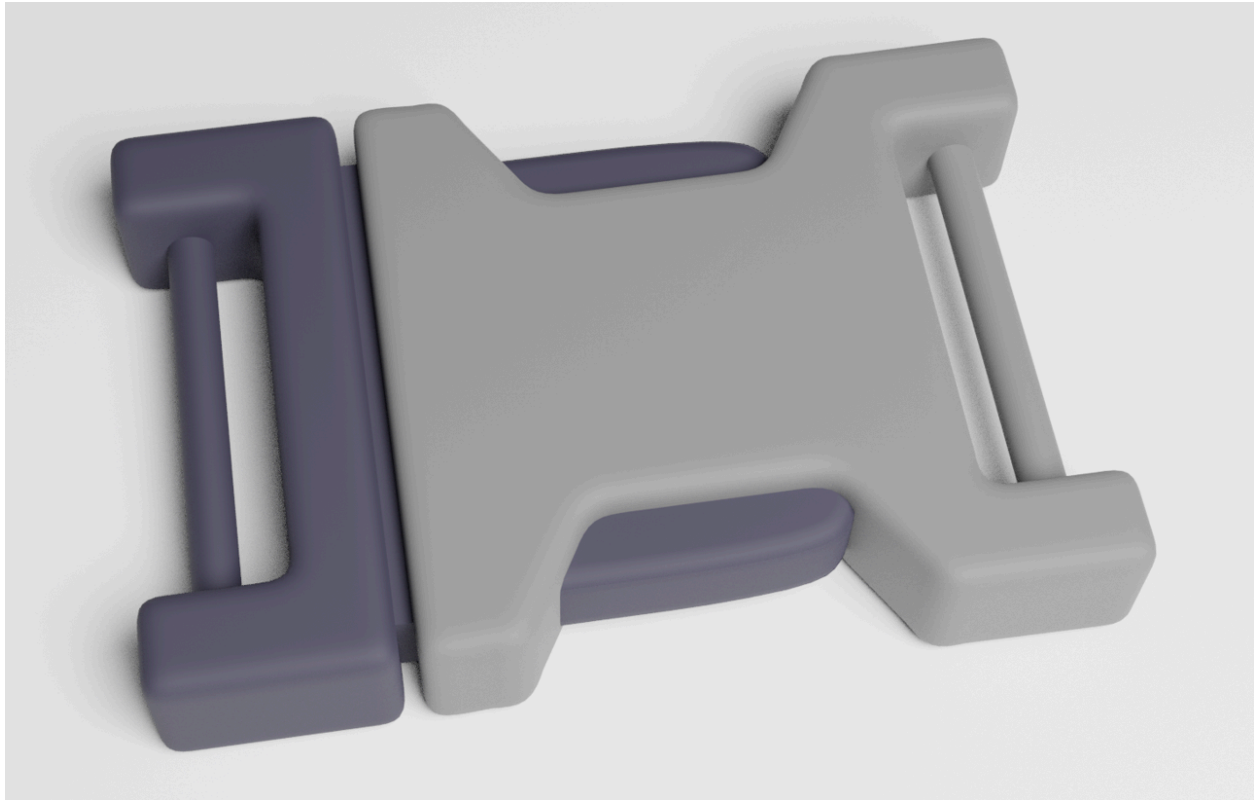
I'm pretty happy with how it turned out. The tutorial was very good but it still doesn't mean it was super easy to do. I think boxcutter is really good for boolean workflow but it is definitely going to need some getting used to.

Hour 21:

The guy who made the gun tutorial also has a tutorial on modeling a belt buckle that I think I am going to follow along with for this hour.

[Video](#)

This one was a lot easier than the gun video. So if you are following along at home, definitely do this one first. Here is my final render:



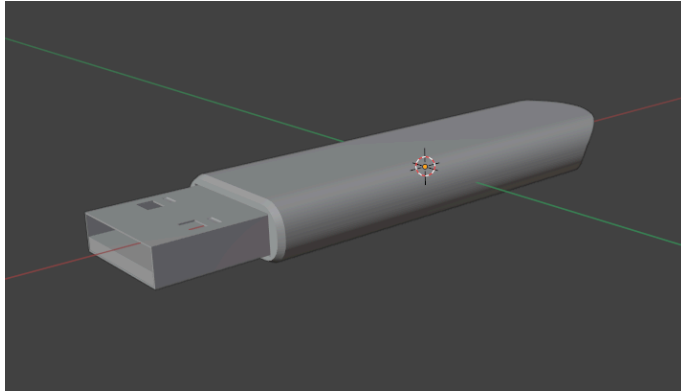
Hour 22:

Today (hours 17-now) I have been working pretty much solely with boxcutter not a lot with hard ops, so now I want to start switching focus to learning that.

I spent this hour pretty much just watching this video explaining pretty much all of hard ops. [Video](#). It is not as sexy as boxcutter where there is nothing you can't really do in vanilla, but it's just a lot more convenient.

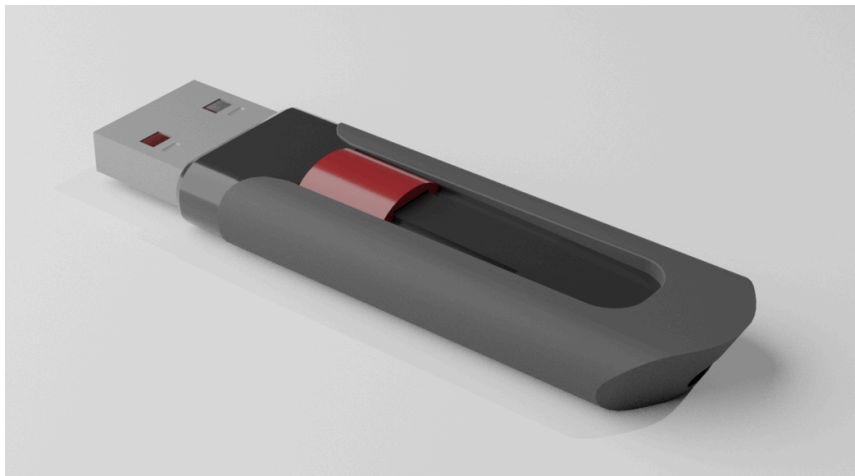
Hour 22:

I have a usb flash drive that I want to attempt to model using hard ops and boxcutter, so that is what I am going to be working on for the next little while. Here's where I got to after the end of the hour. It is a lot harder than I thought it was going to be mainly because I couldn't figure out how to get the back side like it should be. I ended up using dice from hard ops and using proportional editing set to inverse square after sheering to get the angle.



Hour 23:

I finished up the flash drive and this was probably the hardest object I've modeled for this challenge so far just because of the intricate curves on the surface. Towards the back of the drive, it sticks up a little bit, but I didn't realize this until too late so I had the middle section cut in at an angle to make it look like the back was higher. It really doesn't matter but other than that I think I did a very good job with it. Here is the final render:



Hour 24:

I have noticed so far with my work with hard ops and boxcutter that everything ends up being fairly high poly and very messy topology. I want to try and spend the hour learning about how to use the boolean workflow to make game assets.

[Video](#)

So I watched the video above and learned that it's pretty much just going through all the edges and removing ones that aren't needed. It's a very manual and tedious thing but that's how it has to be I guess.

For the rest of the hour I worked on making the flash drive from earlier low poly. I didn't get very far with it and I felt like I had to keep a lot of geo anyways due to the amount of curved surfaces that would end up getting ruined by not doing that so I don't think I'm going to continue with that for the next hour.

Hour 25:

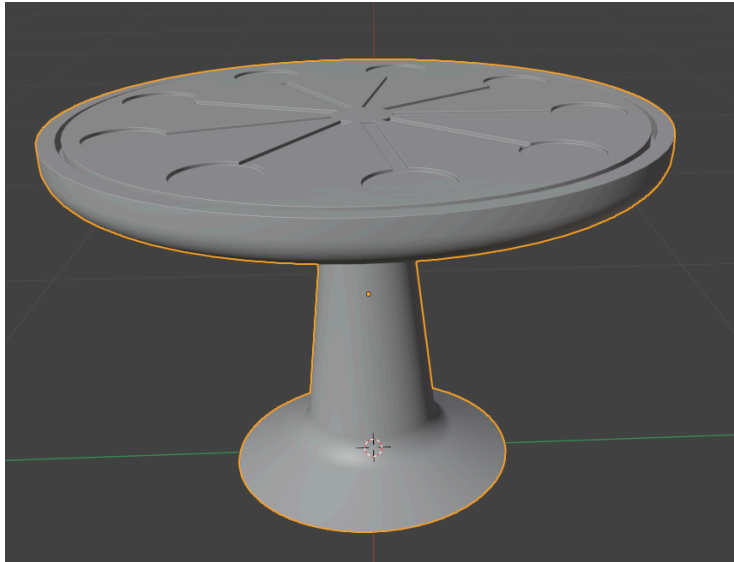
I don't remember when I saw it, but I saw this video on the suggested section when I was working with hard ops and boxcutter for the previous two days and I went back and watched it today.

[Video](#)

It is all about making good materials for meshes and I want to start incorporating some of those ideas when I start making materials for models.

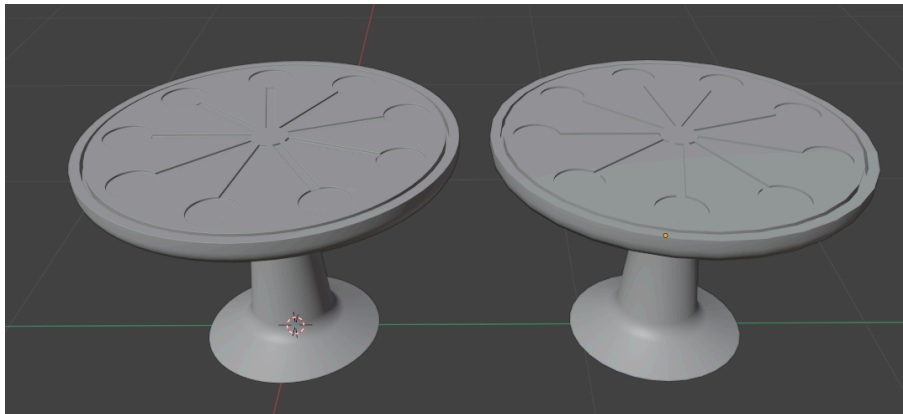
But anyways for this hour and today in general, I want to try and make models that will fit together and kinda be like set dressing in a game. So I want all the stuff to be optimized for games. I want the theme to be a space colony ship so a bit sci-fi-y.

I started with making this little table. Bevels were giving me a bit of trouble but I'm happy with the little pattern on top.

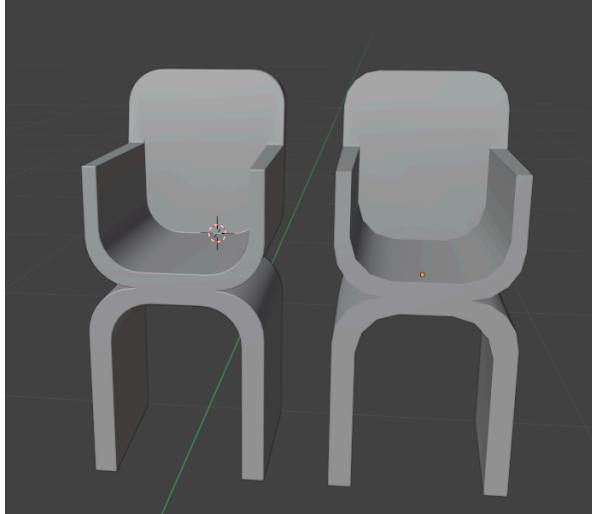


Hour 26:

I started this hour by making the table much lower poly. Left is high poly and the right is low poly. The high poly mesh is 14.4k tris and the low poly is 2.4k tris so quite the improvement.

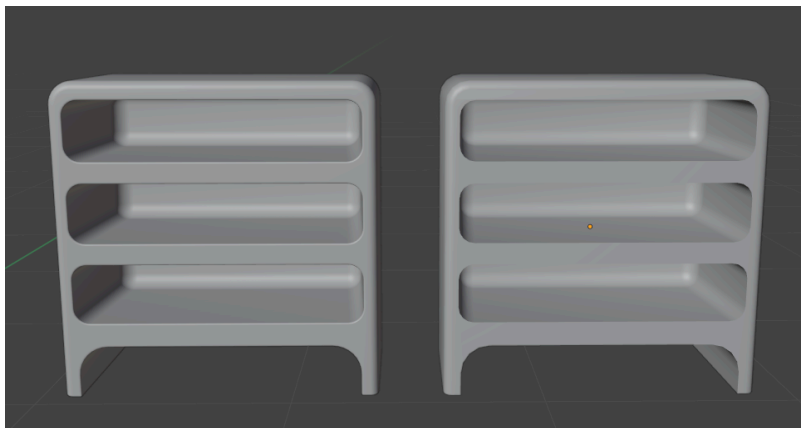


After that I went to start making a chair model. I made the high poly and then retopologized to get the low poly. The high poly is 1.9k tris, and the low poly is only 212 tris, so incredibly low poly.

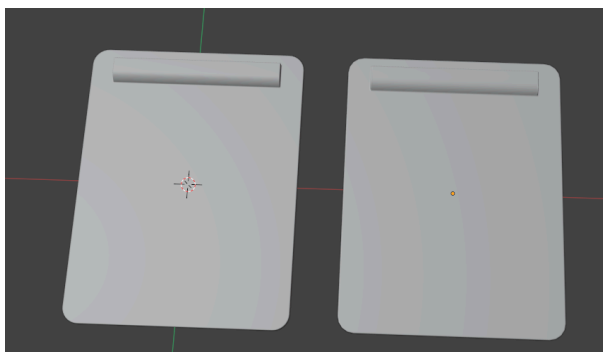


Hour 27:

I started with making this shelf thing and I was able to get it done fairly quickly (sub 30 min). The high poly (left) is 5k tris and the low poly is 800. I think I'm getting better at the whole retopology thing, but to be fair these objects are fairly easy especially when compared to the flash drive.



Then I made a clipboard as something that could go on the shelf.

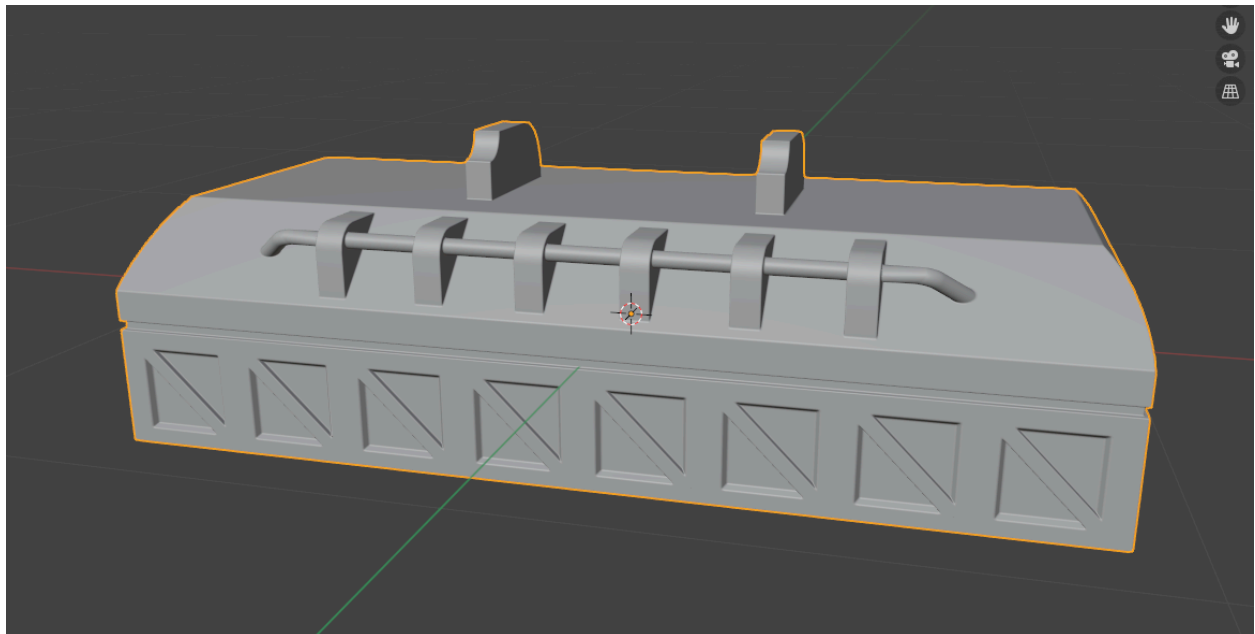


and that just about concluded the hour.

Hour 28:

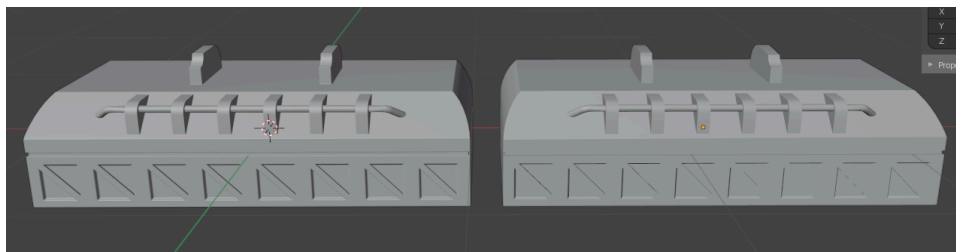
It's the next day but I still want to model a few more stuff for the space ship set thing that I did yesterday. I want to spend the whole hour trying to make a nice box to make up for the one in hour 15.

So one hour later I have a box. I think it looks better than the hour 15 box but I still don't think it looks amazing. I've noticed while working on this and, well everything so far with box cutter that it gets very slow when you have a lot of booleans, which is very frustrating. I feel like I could've done all this without boxcutter anyways so idk how useful it actually is.



Hour 29:

I started the hour by retopologizing the box from last hour.



I went from 15k to 1.5k tris so a pretty good retopo. Afterwards I started making a kinda wall mounted sci-fi device that will make clean water. I started the retopo for that but I didn't finish it in time.



Hour 30:

So I wanted to start the hour out by finishing the retopology from last hour with the sci-fi water maker thing. I cut it down from 6k tris to 1k so not awful.



Now I've made a lot of models for the past 5 hours and retopologized them, now the next thing in the game asset process is to uv unwrap them. Now

whenever I usually do UV unwrapping I just do the smart uv project but I want to learn how to actually UV unwrap.

The video below was a very basic overview of UV unwrapping and I kinda already knew all the stuff in it, but it was still a nice refresher. The second video didn't talk too much as to how UV unwrapping is done but focused more on some advanced techniques like putting more seams than you think to minimize distortion, keep uv islands small, and make them as parallel as possible with either the U or V axis to avoid aliasing.

[Video 1](#)

[Video 2](#)

Hour 31:

During this hour I UV unwrapped all the objects I previously made for the space ship set. I got up to the box from hour 29 before time ran up for the hour.

Hour 32:

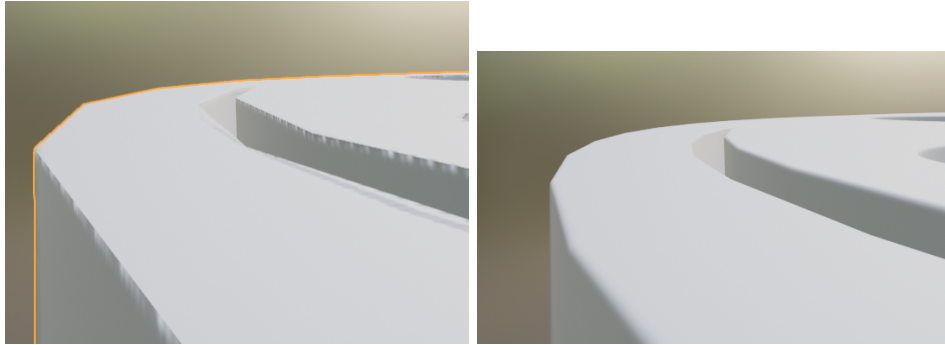
I started the hour by finishing up all the UV unwraps and then went on to trying to make some materials. I first rewatched the materials video from hour 25 and then watched another similar video below. Both talk about making smart materials like the ones in substance painter which surprisingly don't need any baking. However I went through all the effort of making the high poly and having a bevel so I'm at least going to bake out a normal map. And after the smart materials have been made I will probably bake the smart materials to get actual textures.

[Video 1](#)

I watched another video on baking normals from high to low poly image which is below.

[Video 2](#)

So with the table the bake doesn't look very good, at least for the bevel. (left is the low poly bake, and right is the high poly). I think there are some better ways of baking a bevel like with the bevel node, which is what I am going to try and mess around with in the next hour.

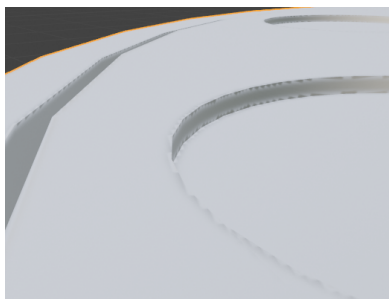


Hour 33:

So I started by watching this video where the guy bakes a bevel from a bevel shader node. It did take a bit of messing around in the settings to get a nice looking bevel, with me not realizing it only works in rendered mode with cycles and not material preview.

[Video](#)

After rebaking with the bevel I still saw some strange stuff going on with the normal map. I believe this is occurring because the UVs is a circle and the bake makes square pixels go on the curved edge which makes it look bad.



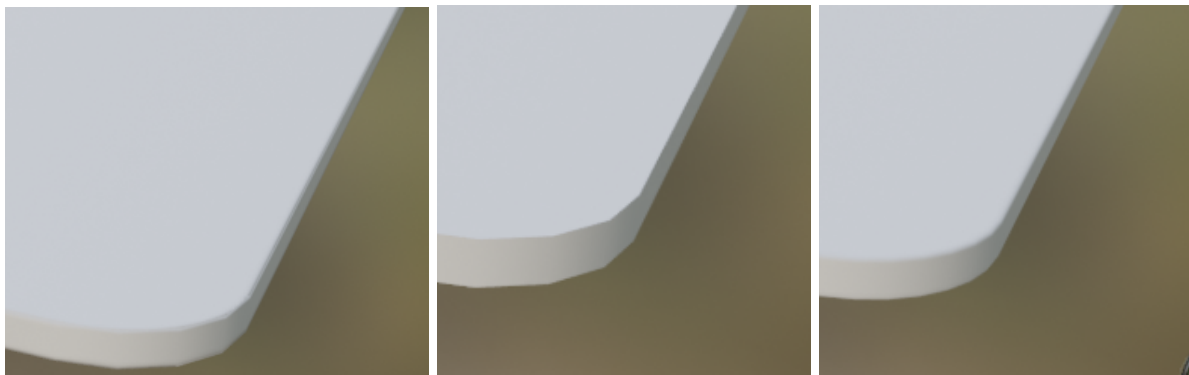
After watching a bunch of videos on baking (none of which solved the problem I was finding), I thought about seeing what increasing the resolution of the normal map. I chose to test this with an 8k texture which took at least 5 minutes and the results weren't perfect but it looked better. This solution is not very feasible due to 8k textures being very very large. I believe a better UV unwrap could make this less bad.



Hour 34:

After going back to try and uv unwrap the table I realized just how poorly I did last time. I might come back to it but for now I am going to move on to something a bit easier, like the little clipboard.

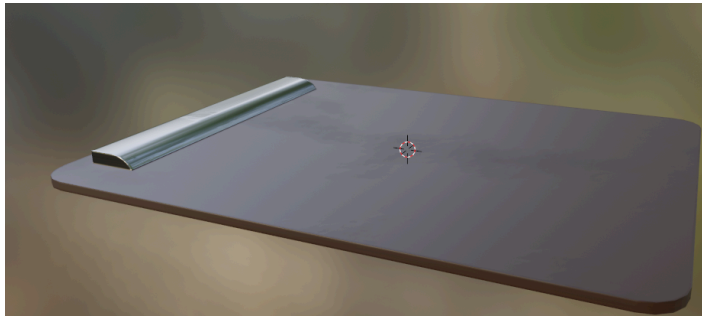
The following images are the baked bevel, no bevel, and real bevel:



The bevel obviously looks the best, especially from this close up, but we aren't getting any bad jagged edges like we were with the table. This is with baking from the high poly not the bevel shader node. I still don't really know

for certain why this bake worked and the table didn't, but my guess is that there just wasn't enough resolution to make the small bevels capture on the curved surfaces, if that makes sense.

So now I want to start actually making a material for this clipboard. It wasn't too bad and I didn't really stumble into any big issues. I used a lot of the techniques from those two videos from earlier and I think it came out pretty nice.



Now if I were to bring this into unity or unreal I'm like 99% sure that it wouldn't work because these are blender specific nodes and unity or unreal wouldn't just convert to their stuff. So I believe I need to bake these textures to export them and then assign them to their appropriate spot in the game engine. The hour is pretty much over though so I'll be working on that next hour. Also as I was working on this, I finally realized how bizarre having a clipboard on a spaceship is.

Hour 35:

So like I mentioned above I started the hour baking the clipboard material into textures. I watched the following video on the topic and it was very well put together and worth watching if you are confused about texture baking.

[Video](#)

Ok, so when I was baking the color I noticed that there is something strange going on with the corners. There are these little dark brown splotches, and I

spent a very long time trying to figure out what was causing them. I thought it was because the bake was giving a margin that was bleeding onto the other UV island but after making the islands super far apart nothing changed. I also tried to see if it was just a bad unwrap, so I did smart uv project and same thing. I believe what is happening is that the dark spots from the material are completely overpowering the lighter spots on the mesh so I'll try to fix that next hour because time is up.



Hour 36:

Well it wasn't that because I did some fancy math to only have the darker spots coming through on the top of the mesh, which when baked yielded the same result as the other bake.

About 20 minutes of scratching my head later and I decided to just close blender and open it again to see if it was just having a moment. After reopening it, everything was fine. I don't know if I'm happy its working or mad that I was doing everything right this whole time, or idk. I still don't actually

know what the real issue was so that's fun too, but whatever it was it's fixed now!

I then brought the mesh and textures into unreal to set up as a material. As I predicted earlier, the blender shader didn't work. I also think I messed up the final bake of the normal map because I had the bevel baked nicely but the bumps seemed to have disappeared.

I then brought them into unity and put it in the same file I learned the engine in, after that the hour was just about done.

Hour 37:

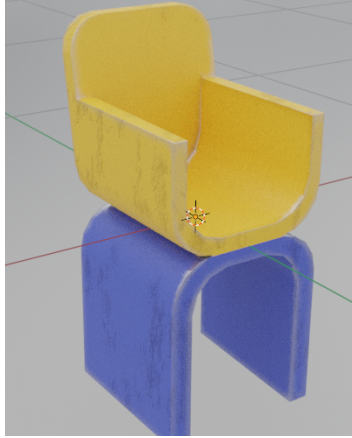
I want to do the same thing as yesterday (making the clipboard material, baking textures and exporting to a game engine), but this time with the chair model. It will most likely take longer than the hour but that's the plan I guess for the next couple hours.

This time I also experimented with baking from a bevel node instead of the high poly and I think it looks nicer.

I didn't end up finishing the material but I am very close.

Hour 38:

I started off the hour by finishing up the material. Most of the stuff I did was from that video, with having metal exposed edges, but there was some other stuff I kinda had to improvise myself. Like for the bevel normal map texture and bump node to show up together I had to lerp with the edge mask to show the bevel on the edges and show the bumps on the surfaces. Blender doesn't have a vector lerp node either so I had to do it the old fashion way with the $x_i + t(x_f - x_i)$ formula. (EDIT post 50 hrs: mix rgb node ) The edge mask was used for the parameter t.



The next step is to bake out these textures. After I did that I brought it into unreal and hooked everything up properly. Something was a bit weird overall with the metallic map but everything else was fine.

Hour 38:

So for this hour I am going to do the same thing I've been doing but with the shelf. This time I'm not going to bake the bevel but rather bevel with the material and then bake it on at the end with the normal map, so I hopped straight into making the material.

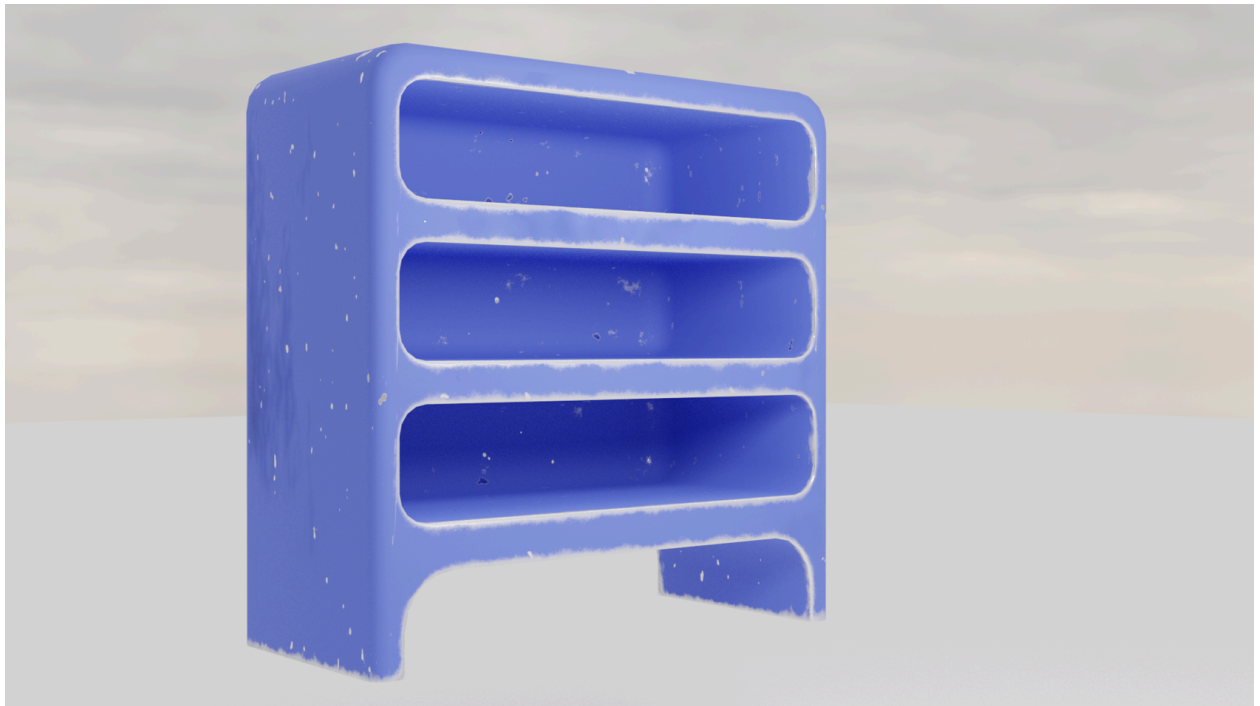
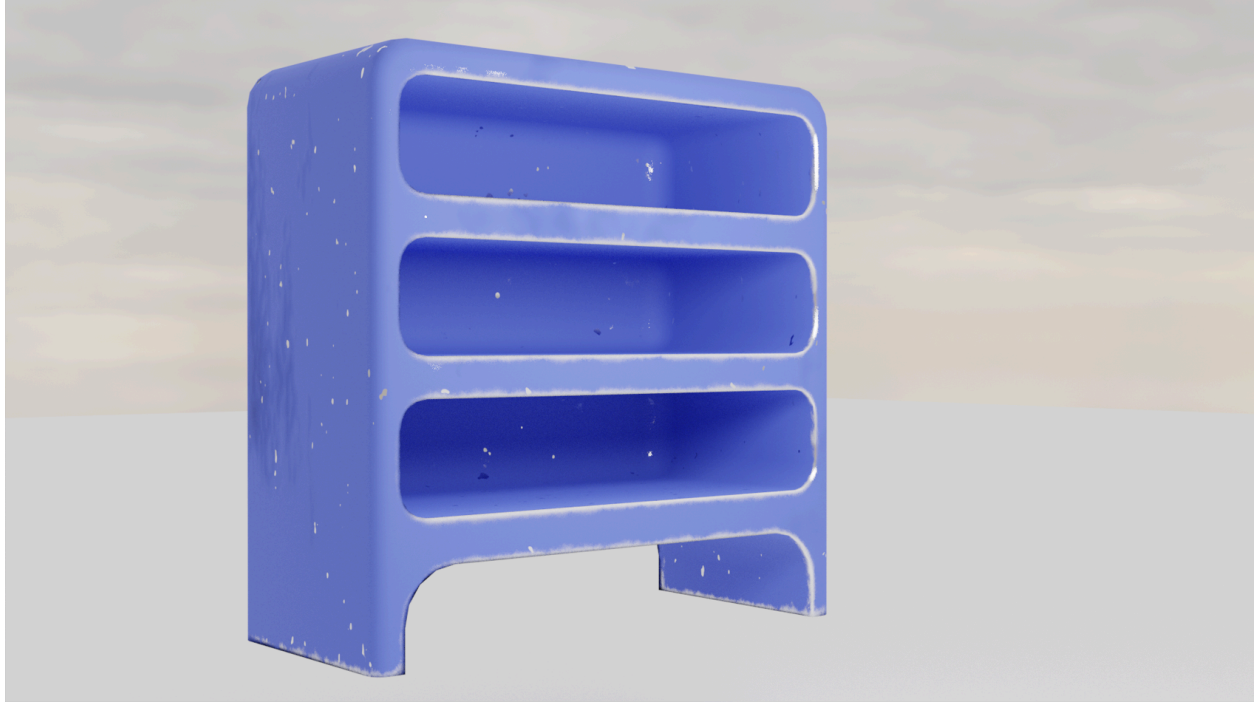
I finished the material and was just able to finish the bake for the diffuse. It took a very long time tho.

Hour 39:

I started off by baking all the other texture maps and again idk why they all took a while.

After that I brought it into unreal and set up the material, and then I brought it into unity. Now the thing with unity is that it doesn't do roughness, it does smoothness which is just $1 - \text{roughness}$, so before setting everything up, I needed to go into gimp and invert the roughness to be smoothness. And also there isn't an actual spot for smoothness so you have to make it the alpha channel of the metallic map.

After all that I rendered out the shelf with the good material and the baked material. They look pretty similar but you'll probably be able to tell the difference. The baked one took significantly less time to render though, granted the bakes took probably 10x the render time. Take a guess as to which one is which:



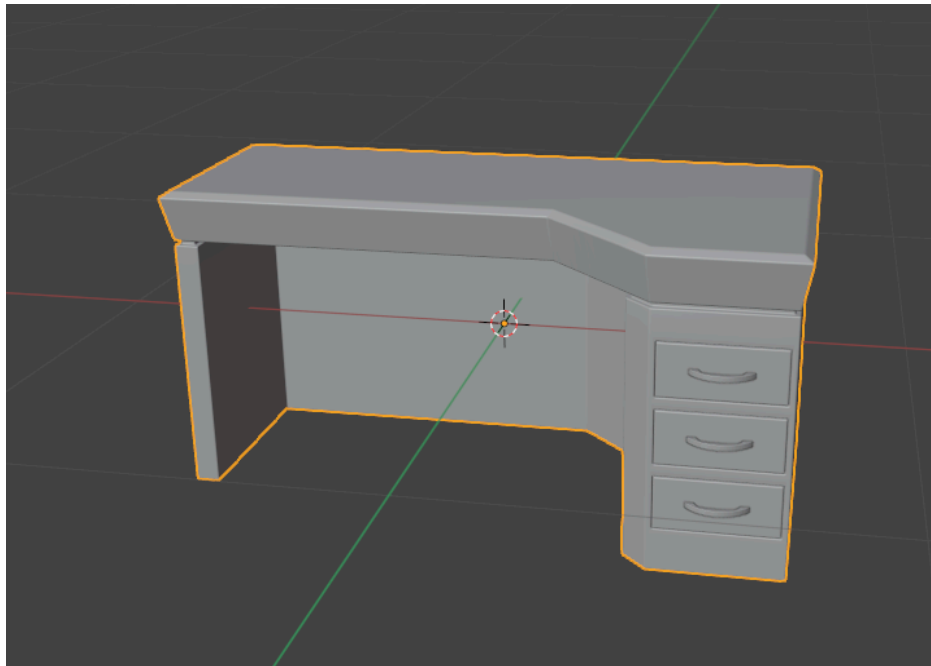
So the first one is the actual material and the second one is the baked texture material.

Hour 40:

As I am approaching the end of the challenge I started thinking about stuff I didn't get a chance to do. I thought concept art would be a big thing, but not really. After spending a bit watching some videos on the topic, it seems like most of the time you just make stuff from your head and concept art isn't super important.

I think I'm at the stage where the only thing I really need to work on is just practicing. So I used a pictiary word generator to give me ideas on what to model. The first thing I got was a desk, and now even though I'm at my desk right now, I don't want to model based off that, and want to model from my brain instead.

Here's where I got to. I still have to give it some materials but I think it turned out nice. I did end up looking at my desk a little for the drawer handles and also the drawer placements.



Hour 41:

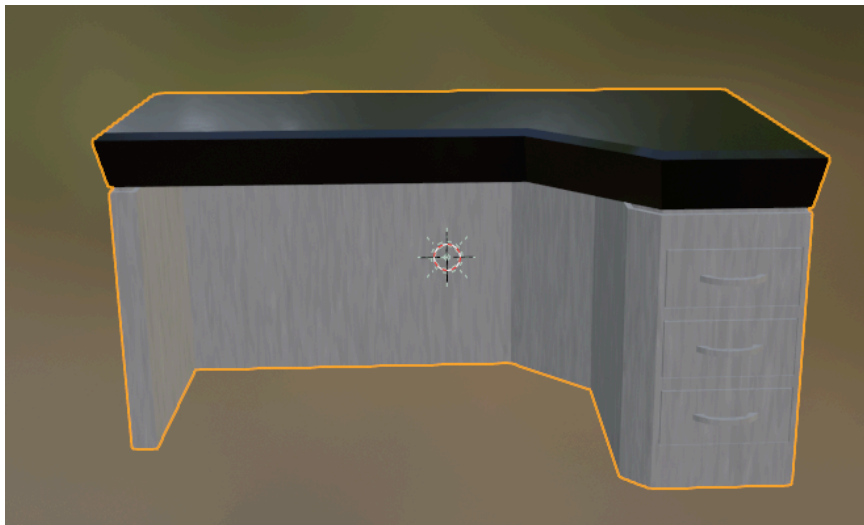
For this hour I want to finish up the desk, so retopologize, UV unwrap, make the material and also bake the textures.

One thing I noticed with my models from the space ship set was that I think they were a bit too low poly because I could blatantly see the faces on surfaces that were supposed to be smooth bevels. If this was for a mobile game where every ounce of performance matters things would be different, but normally the number of faces doesn't have to be super low.

I wanted to try and make a wood material, so following along with some of the ideas presented in the following video I was able to get a nice material.

[Video](#)

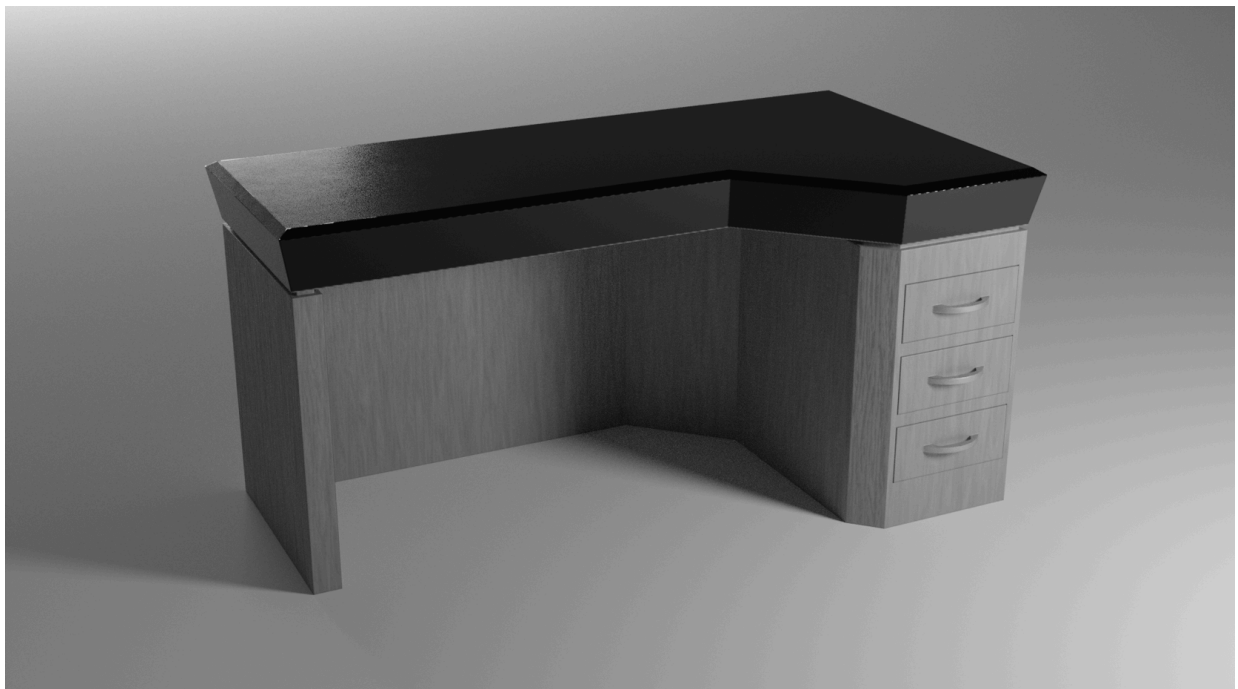
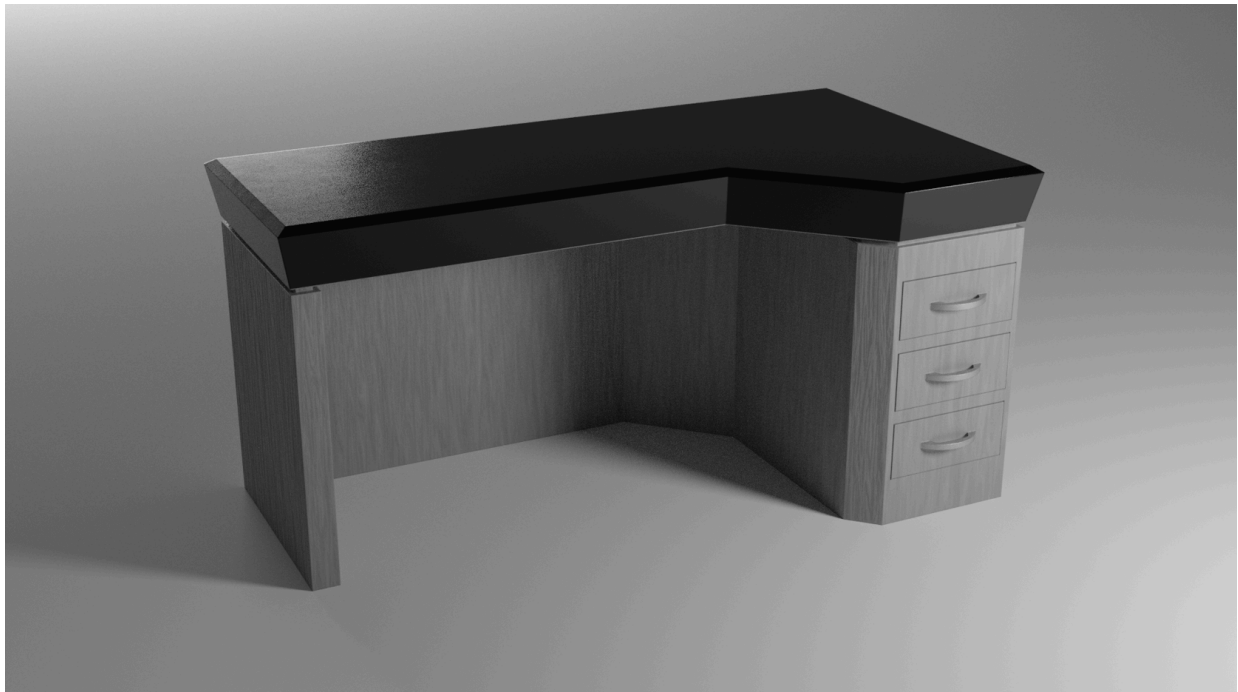
I didn't finish the material, because I still have the normal bevel combination to get but I'm almost done. I also want the handles to be metal as well.



Hour 42:

For this hour I finished the materials, baked out the textures and then rendered out the images. I'll show both renderings (good material & baked

textures) and you can try to see which is which. This one I feel like is a bit more obvious than the shelf from hour 39, but I think the result is really good regardless. I did have to rebake all the textures because the UVs were too close together and the margin caused some bleed. I also had to bake the handles and desk on the same textures instead of 2 separate materials.



So the first one is actual material and the second is the baked textures. I think this one is a bit more obvious because around the chamfer on the top of the desk, you can see some white jagged parts which kinda looks like light just reflecting but upon further inspection is some bleed from the bake.

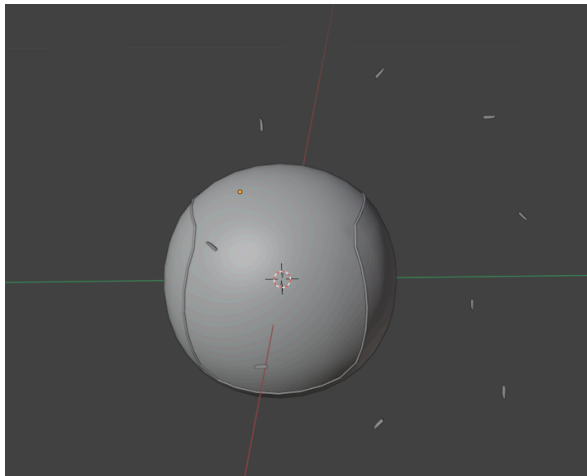
Hour 43:

To start the hour off, I had to poop so I watched the following videos on the toilet. I have to go to work pretty much right after the hour ends, so I wanted to stay productive for the whole hour. Now these videos were just random videos that I didn't take too much out of for a plan for the hour but they are pretty good.

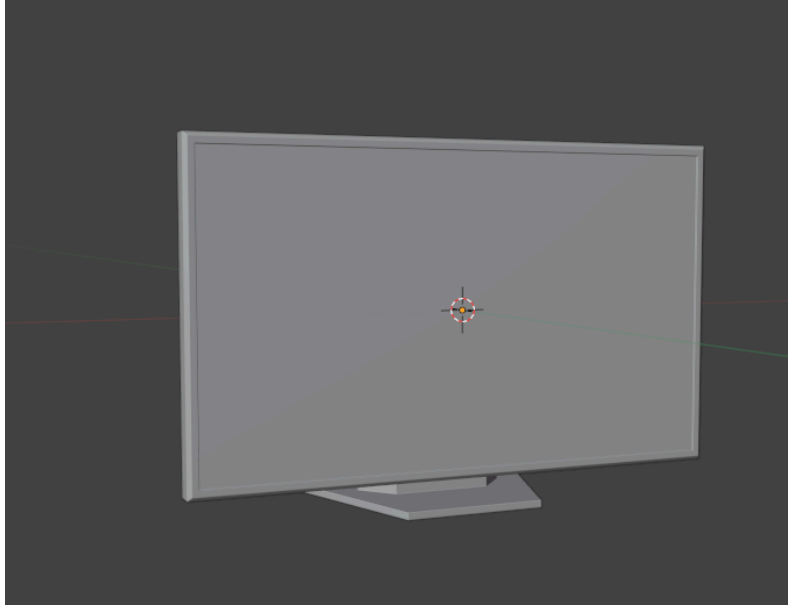
[Video 1](#) [Video 2](#)

So I went back to the pictionary generator and got baseball, so I will for the next little while try to make a baseball.

Or so I thought... after spending 30 min on the baseball, I realized it's a bit harder than I initially thought. I couldn't seem to find a way of getting the threads to follow the weird curves on the ball.



I got computer which I think will be pretty doable. I finished up the modeling just as the hour ended. Here's what it looks like so far.

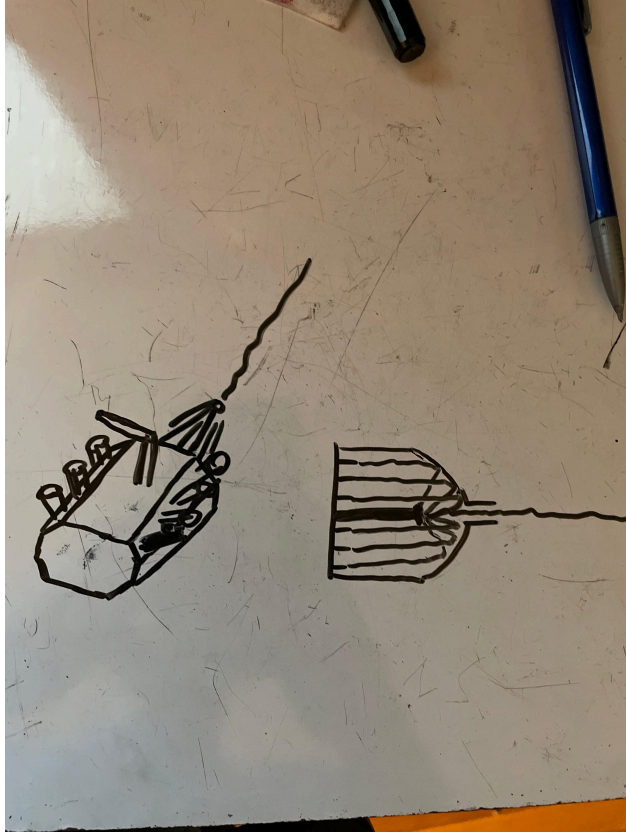


Hour 44:

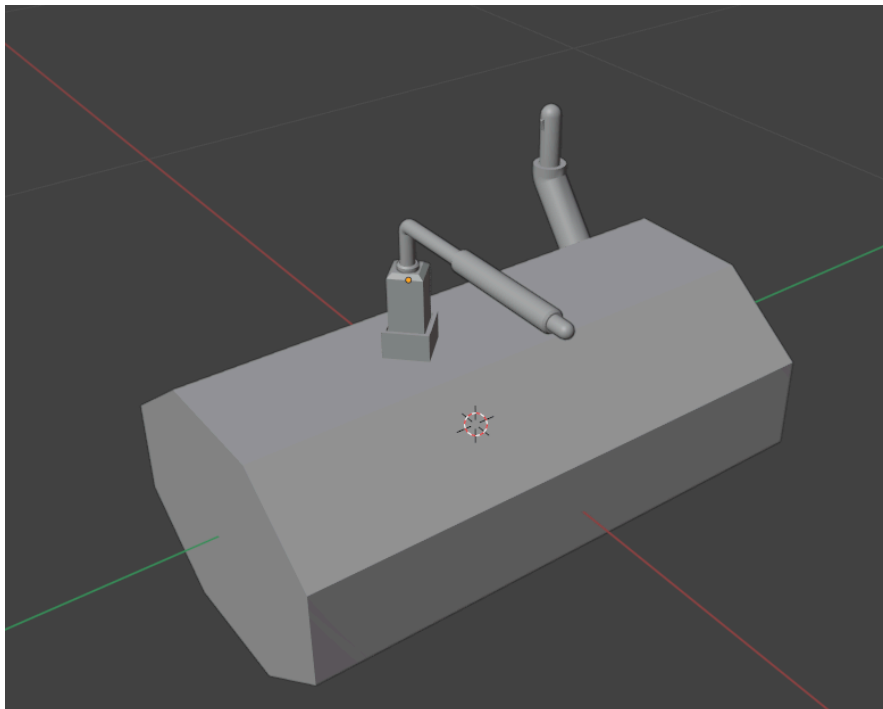
So it's a new day and I don't really want to work on the computer anymore and instead want to make a sci fi gun. I remember a while ago I tried to do this for my 3D puzzle game, perplexing perspectives, but it didn't turn out too well. So I want to try it again to end off the 50 hours. The goal is to get something like the portal gun.

I want to do a bit of note taking here and a few sketches so I know what I want it to look like:

- Fired only from the hip (no scope or stock & handles on the top)
- Wide octagonal prism receiver area with cylinders extruding out by the top slanted faces
- Multiple smaller barrels pointing straight ahead at a parabolic mirror so they will shoot lasers that all hit another smaller mirror at a focus point to bounce them forwards out a hole in the paraboloid

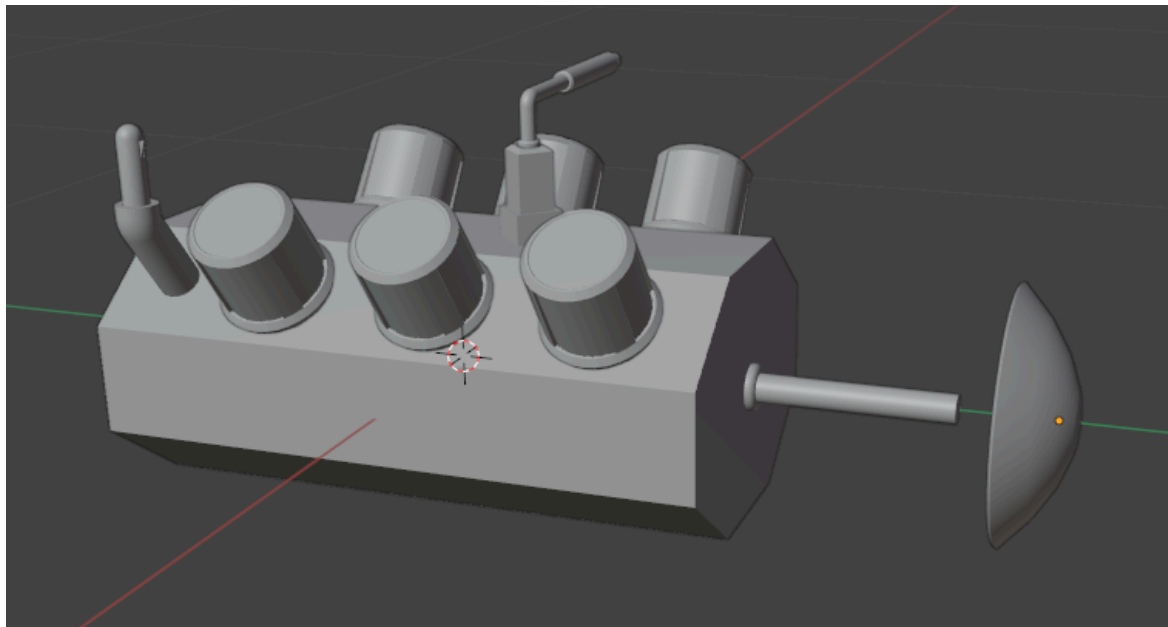


Once I had the sketches I started modeling. After the 30 minutes left in the hour were up here's where I'm at.



Hour 45:

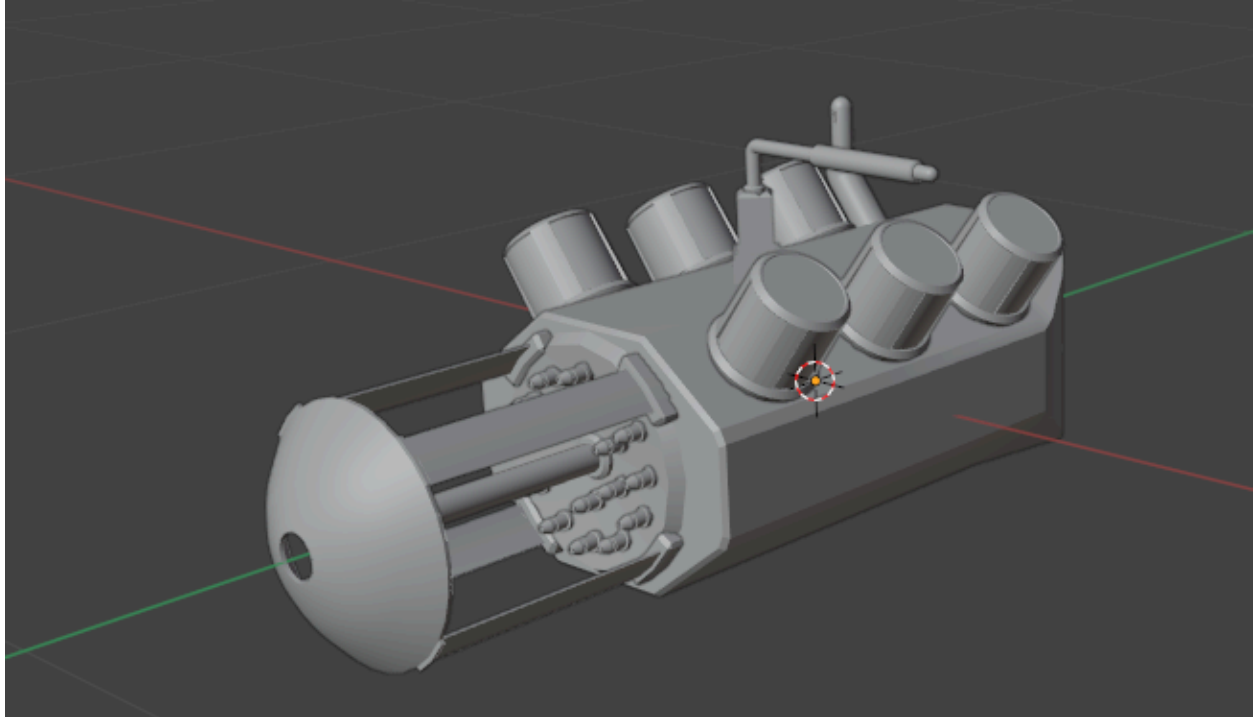
This hour I kept modeling. I had a lot of trouble making the cylinders, not because it was hard, but because blender crashed 3 times setting me back a bit. I also had a lot of trouble making the parabolic mirror. I at first tried making it geometrically work and scale loop cuts on a cylinder to their appropriate radius, but that didn't work because I did the math wrong and couldn't be bothered after that... I then made a parabola for $y = x^2$ using the old one one three one five one seven one trick and then put a solidify modifier on it.



Hour 46:

I started by placing the parabola in the right spot. I did this by ticking on the face normals and seeing where they all cross. It technically isn't a true parabola due to it being made from a bunch of squares, but it was good enough to approximate.

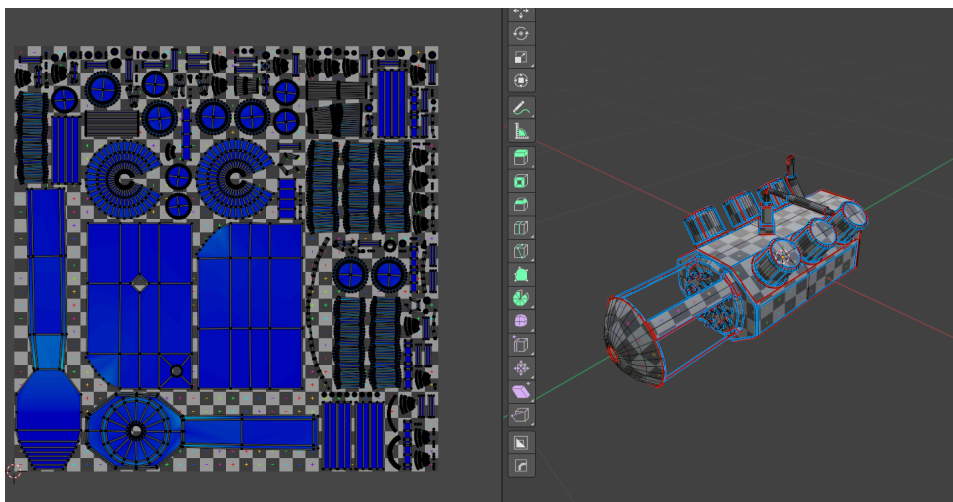
After that I added the little laser and then cleaned it up a bit. Modeling is officially done and I'm pretty happy with it. It's not amazing but it isn't terrible.



Hour 47:

The first thing I am going to do during this hour is retopologizing and uv unwrapping. After spending a little while going around seeing what needs retopologizing I don't think much actually needs it. The laser emitters would probably benefit from it, but I already applied the modifier...

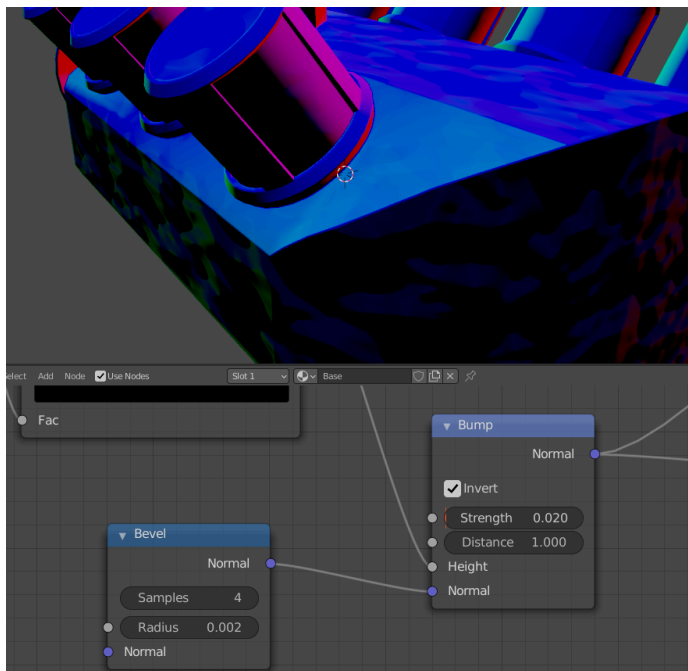
For pretty much the whole hour I was busy uv unwrapping. The object was pretty intricate so it did take a while. I really like UV unwrapping though.



Hour 48:

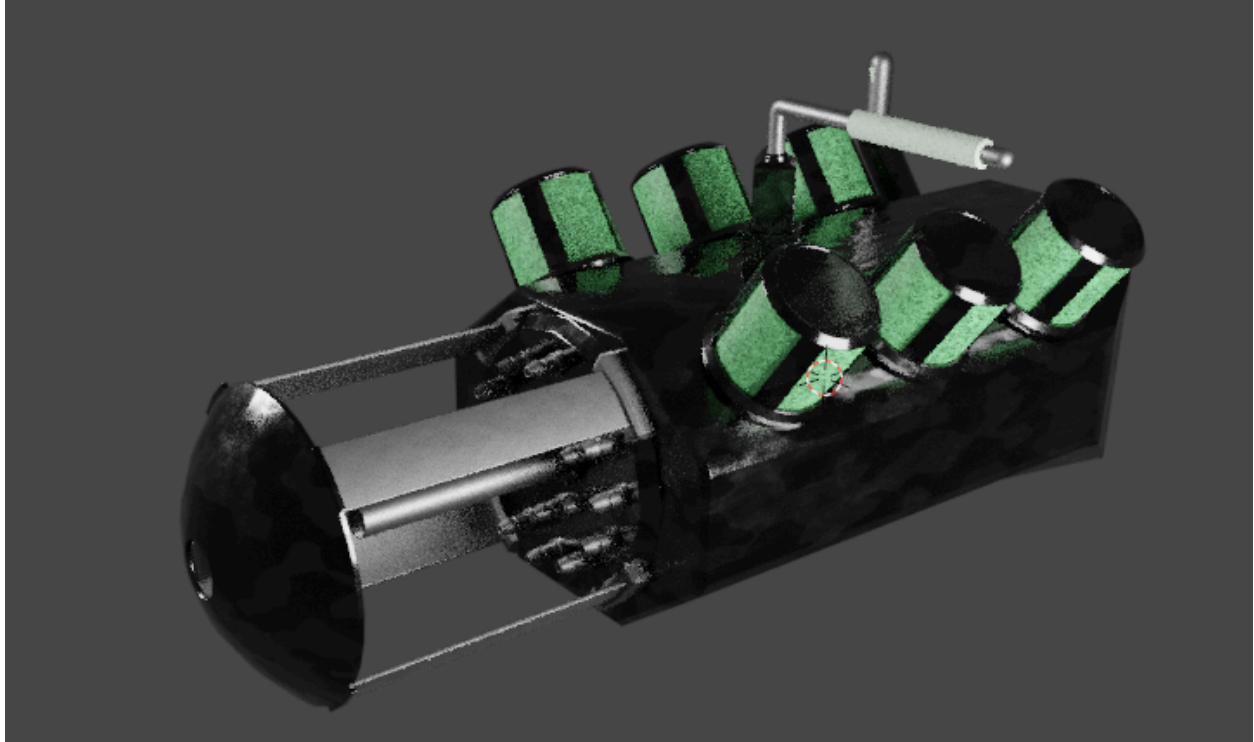
So I now have to make the material for the laser gun. The interesting thing is that I have to make separate materials. Kinda like what I had to do for the desk with the handles, but on a larger scale.

So as I was making the material for the base mesh, I realized on the bump node, there is a section for normal, and just out of curiosity, I plugged in the output of the bevel node into it and they stack perfectly, so everything I did before to get around this problem was not necessary at all...



The rest of the material was pretty standard. I was able to get the camo by doing a noise texture ran straight into a constant color ramp, and I got the cylinders with a noise texture with distortion ran into another color ramp and then a mix rgb.

Here's the gun in rendered view (not full render)

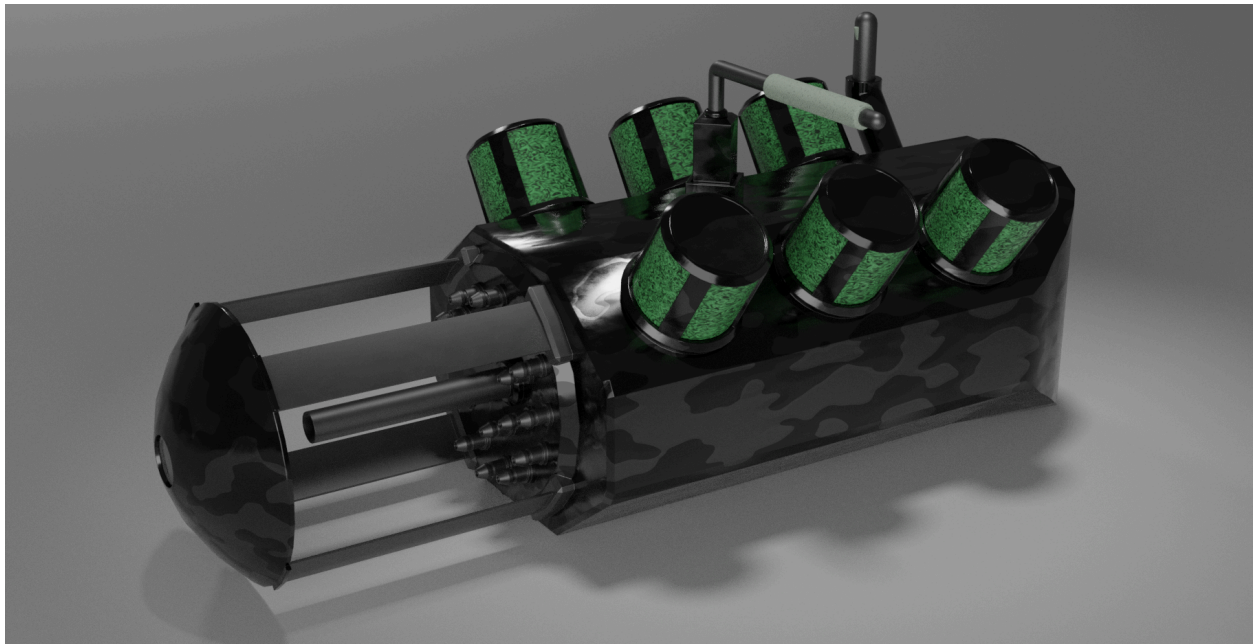
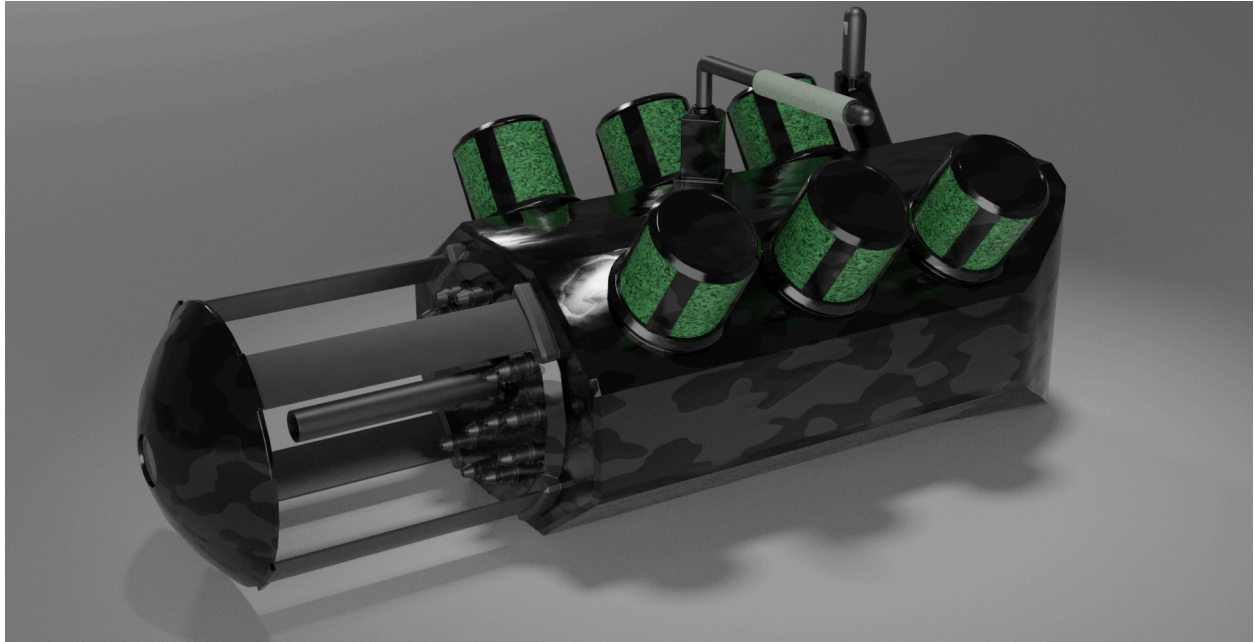


Hour 49:

Now technically we are done with the model and the material but now we have to bake the textures. Just because of the amount of detail on the object I'm going to bake with 4k textures.

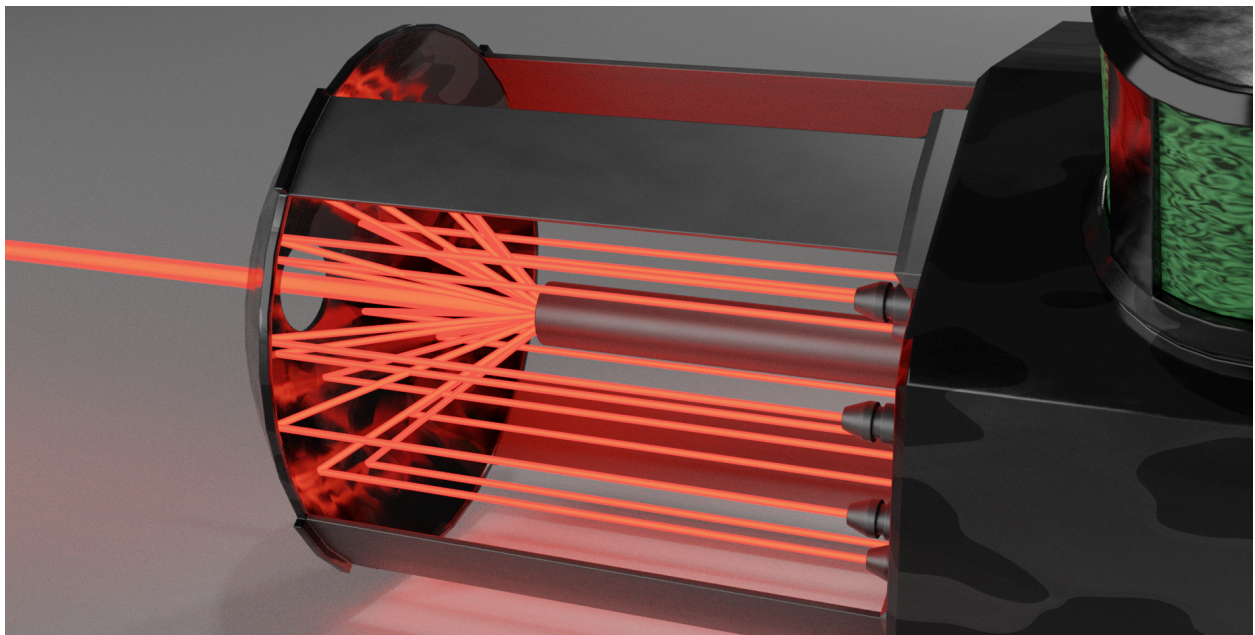
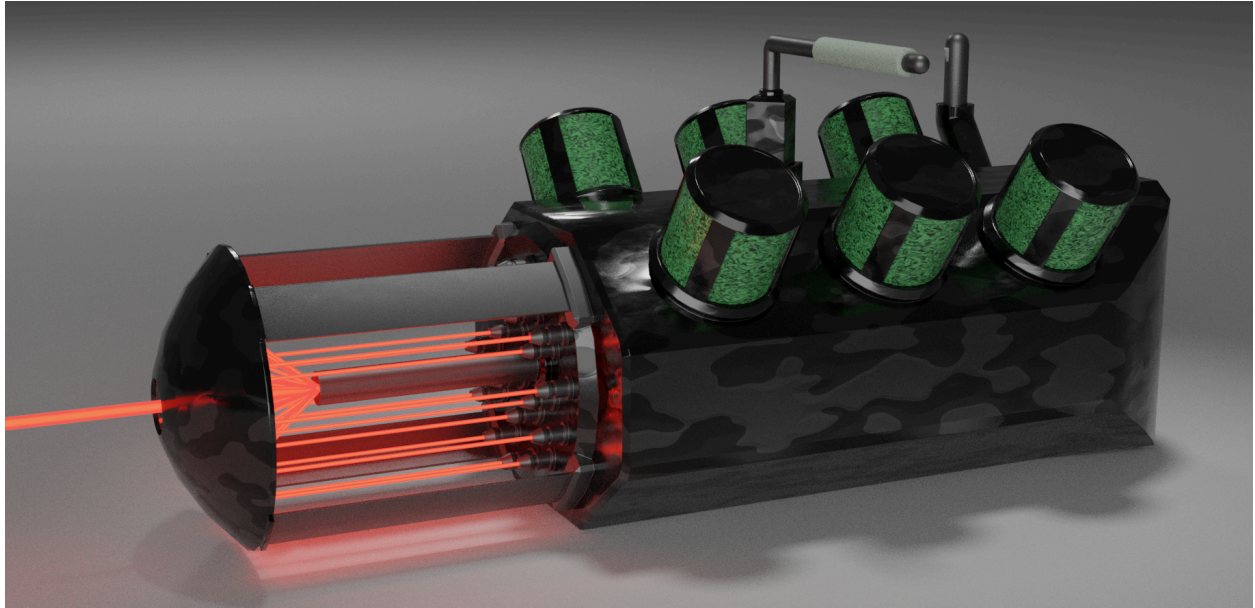
With the baked textures, there was only one small mistake which I think is much better than it could've gone. When UV unwrapping the cylinders I didn't bother unwrapping the center bits as separate islands and instead had the side as one big island, so when I have 2 materials on one island. That's bad because when you bake a material's color for example, there will be a bit of intentional bleed called the margin, and because I had the margin on one island, the green bled over onto the outer support bits. I fixed it by turning the margin down to zero and baking only the base camo material to have that take priority.

Here are the final renders and you can try to guess which one is which again if you want. And 4k textures are really nice because I don't think I could tell unless I really zoomed in. And I'm not telling you either!



Hour 50:

So even though I have the laser gun completely done from a game asset perspective, I really want to spend this last hour making a nice render with it but with actual lasers. If you were wondering how the laser materials worked, it was a fresnel hooked into a color ramp and then a mix rgb, and then a emission. Here's what the final render looks like:



So now that the gun is done and I literally have 1 minute left in the hour, I just want to reflect a bit. This was a lot of fun. I have been neglecting 3D for a while now after finishing the puzzle game, and I'm happy I got back into it. I'm planning on making (timer went off) a 3D game soon (hopefully), so I'm glad I got the chance to do this. I already knew how blender worked but I learned a lot of new things, most notably was making procedural materials with all the nodes and then baking them onto the mesh. I also learned a bit about the boolean workflow (cutters with hard ops and box cutter) and I am not as big of a fan as I thought I'd be. What usually ends up happening is I'll make a cut, apply it, and then spend a while cleaning up the topology when I could've just done an inset and inwards extrusion. I really enjoyed modeling things I had in person and I think all the renders that I actually finished turned out really nice. I think my render is the desk. I really like the gray wood and the shape of it. The laser gun is really cool too and I'm happy I was able to make some sort of sci-fi gun in this challenge. I don't really think I would do anything too differently if I were to go back and do this again, maybe make the spaceship set actually fit together but other than that I'm very happy with the way all this turned out. Thanks for reading and watching. I hope this helped you.

Also I just realized I have 2 hour 22s and 38s 😊