

Scenic Construction and Drawing

Process Workbook – Felix Roberts

AI Statement

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Tools - Drill



- You use the drill attachment to create a pilot hole for the screw to sit in making it easier
- When drilling a hole you want to go far enough for there to be a divot for the screw head to sit in
- I'm going TWO drill a hole, so use the 2 setting on top of the drill
- Drill bit goes in this attachment
- Put the dial on drill (get picture)



- You use the screw attachment to bring together pieces of wood and attach them
- The screw will sit in the hole made by the drill hole
- Use the 1 setting to screw the screw in
- Using the dial put it on a number that suits the depth you wish to put the screw in – higher = deeper



Tools - Saws

Jigsaw

- The jigsaw saw is used for cutting out detailed and more intricate designs of sets
- It's a handheld device making it portable and easy to use and be precise with
- Need to keep it parallel to the wood and you would cut it over the edge of a table as the blade is long and usually longer than the wood moving in a fast up and down motion

Track Saw

- The track saw is used to cut typically a large piece of plywood
- It runs on the track making it portable compared to the table saw
- It creates a precise straight cut line making it useful for building flats and bigger pieces of set
- You can adjust how far the saw goes down so it doesn't cut into the surface below the plywood



Tools - Saws

Miter Saw

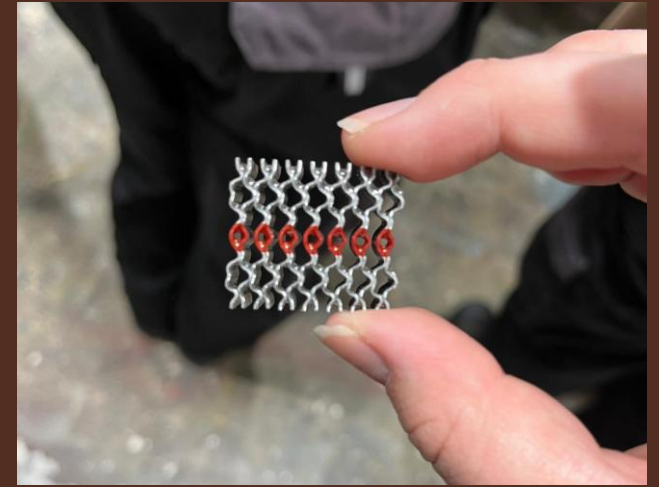
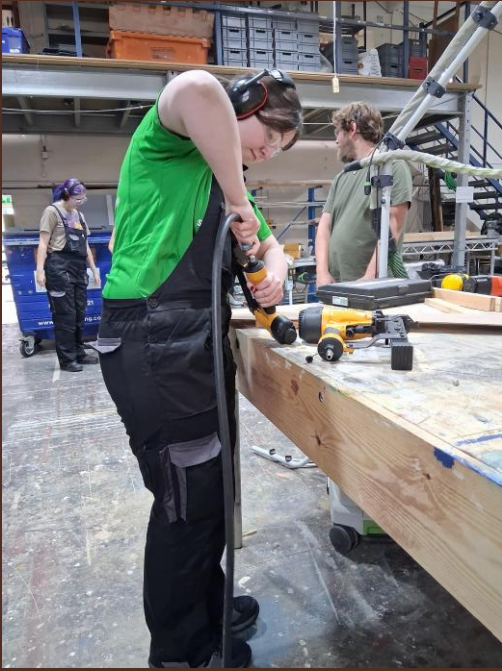
- The miter saw is used to create cuts in wood at certain angles
- Makes it perfect for framing, and in a theatre construction point of view good for frames of flats
- Angles on the saws base so can cut without measuring it



Table Saw

- The table saw is used makes uniform pieces for faster assembly
- good for making rip cuts - cutting along the length of wood and crosscuts - across the grain
- Increases accuracy without losing time or material

Tools – Staple Guns



- Use pressurised air to put staples/wiggle pins into material
- Used to combine two pieces of material along with glue
- Creates a strong bond
- Good for thinner material attaching as it holds better
- Quite powerful so need to keep pressure downwards so it doesn't jump up and send out more staples
- Wiggle pin good for connecting wider pieces of wood together that you are unable to use screws for
- Staples are good for cladding scenery with plywood



Tools – other bits needed



Extractor

- The extractor is attached to all of the saws used in the workshop to extract the dust created by cutting the wood

Air pressure

- Used for the staple gun
- Creates the air pressure to send the staples out of the gun
- To turn it on you need to turn the dial to red on the wall
- Then turn the dial on the air pressuriser to the right and it will turn on



Gravestones – first build

- For our first build we made a basic shape of a gravestone
- We planned out a shape and started by cutting plywood panels into the rough size of the shape we wanted
- We then drew out shape of the gravestone (second image)
- Then jigsaw-ed out the shape
- Then made a second one of it as the back of the grave
- To make it 3 dimensional we created a frame between the two pieces of plywood
- Cladded the frame with the plywood using staples
- Then for the curved part of the gravestone we used expanding foam and later carved it into the shape

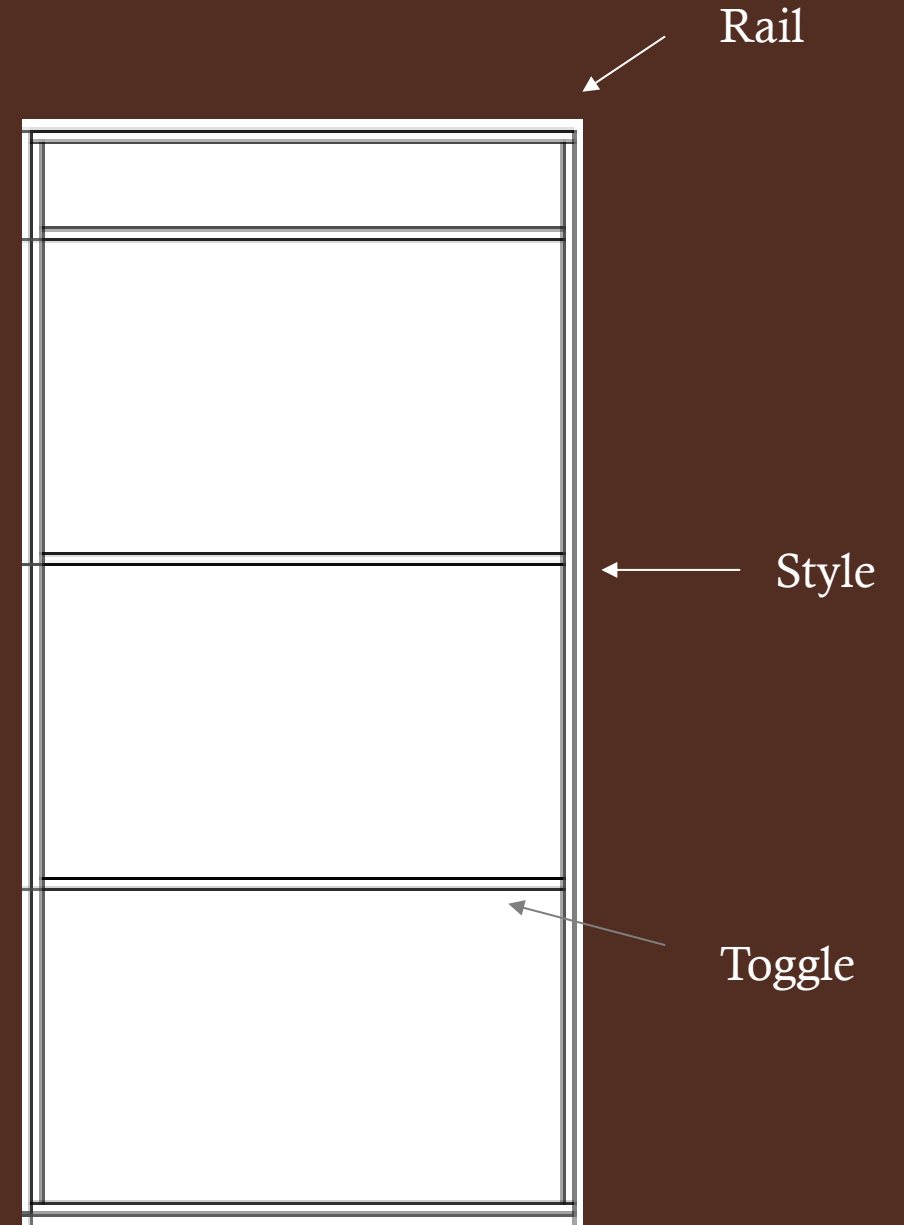


Flats

- Consist of 3 by 1 plywood batons for the frame
- How they lay depends on which it is
- Rail is best sat on top of the style where they join so the flats can be dragged along the floor/they're less likely to come apart

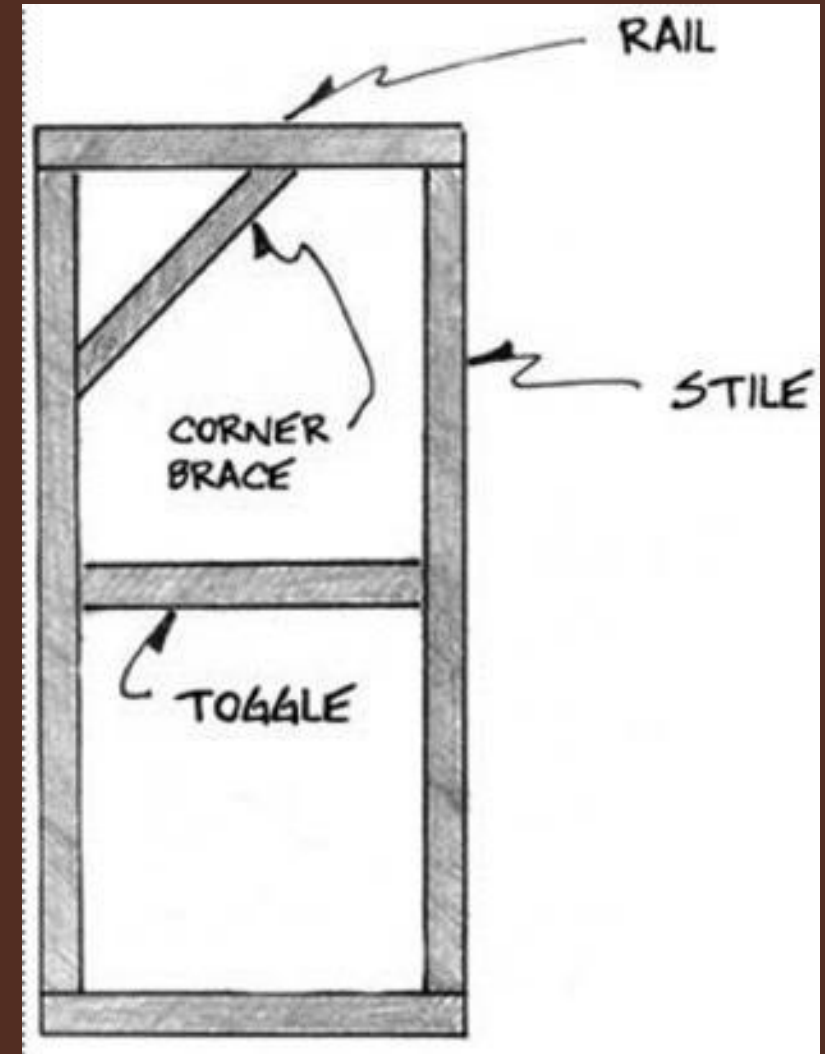
Hollywood flat (diagram on the right)

- Also known as a hard or studio flats
- Sturdy
- Constructed with the wood thin ways –width of the wood facing inwards
- Good for sets that are moved a lot as they are sturdier than Broadway
- ‘On edge’
- Created with a butt joint, making design simple and easy to carry out
- Less sturdy on a large scale



Broadway

- Also known as soft covered flats
- Usually have a soft covering/ canvas stretched over the frame
- Constructed with the width of the wood parallel to the canvas making it thinner
- Used in theatre rather than studio



Flats

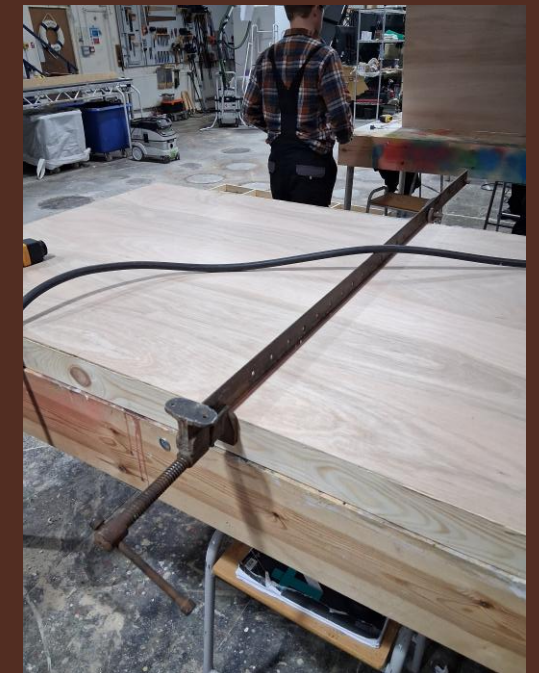
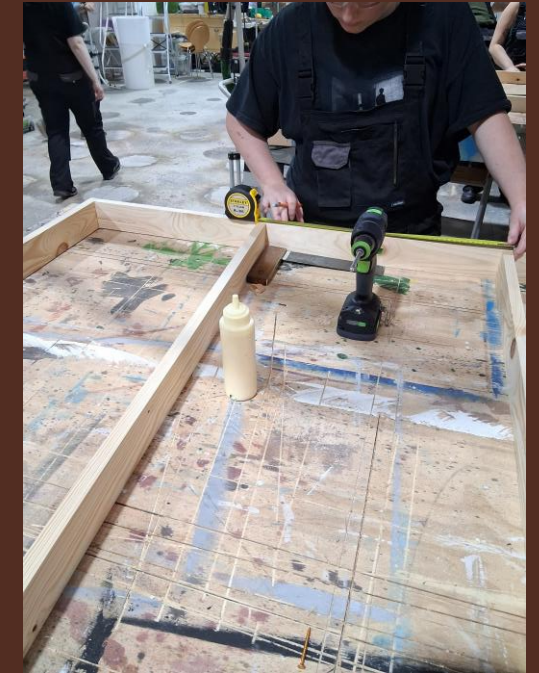
- Started by making a cutting list which is used to know how much wood needs cutting to make what you are constructing
- Measured out the lengths of wood then used the miter saw to cut them to size
- Laid out the wood and drilled pilot holes into the wood where the butt joint was going
- Screwed them into place
- Made the outside frame first (Rail and Styles)
- Added the toggled in, 610 mm apart from each other
- Cut the plywood to size using a rail saw

Cutting list

Rail – 1000mm (x2)

Style – 1960mm (x2)

Toggle – 960mm (x3)

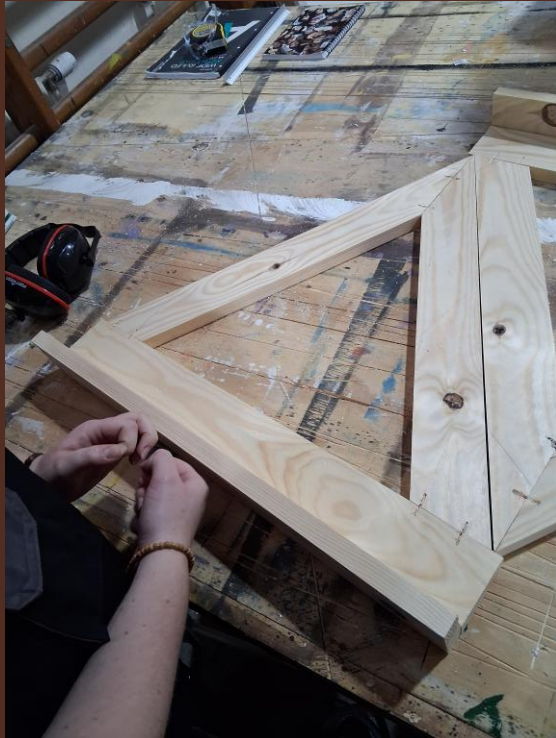


Flats

- To make the flats stand up and move we needed to add trucks to them
- We made these braces to be attached onto the side

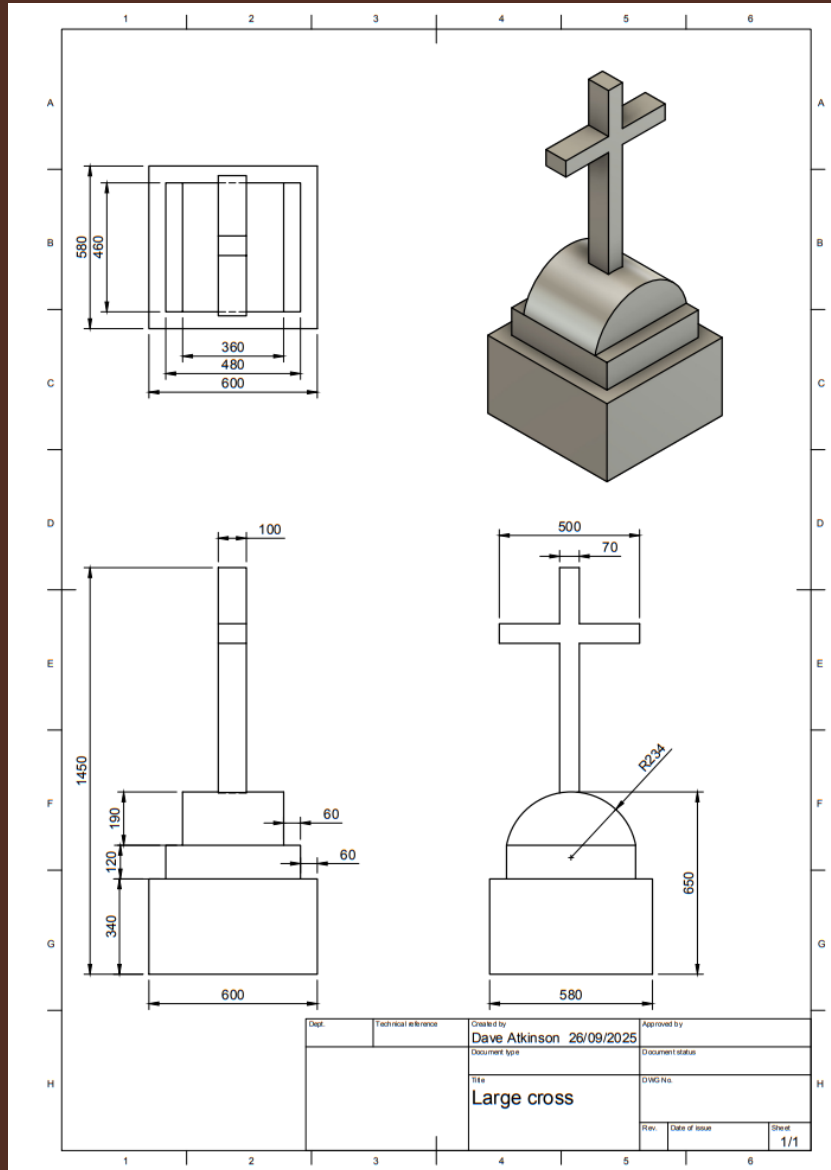


- We lined the castors up to the brace on the flat and marked where the holes were going to go
- Then drilled pilot holes into them and screwed the castors onto the brace



Gravestone

For this project in construction, we worked from a 1:25 scale model of a gravestone, we were given no instructions on how to approach the build, so we first had to plan how we were going to attack the build



Cutting list

Cross

70 x 1450 mm (x4) – height
70 x 215 mm (x8) – width

Bottom box

600 x 340 mm (x2) – Length
580 x 340 mm (x2) – width

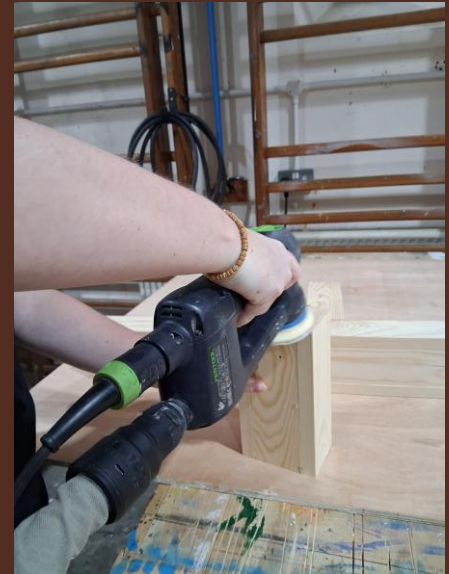
Second base

120 x 480 mm (x2) – length
120 x 460 mm (x2) width



- Started on the cross
- Our plan for it was to cut it to the height of the overall built and just slot it into the boxes/base of the gravestone
- Cut the height of the cross, using 3 by 1 planed timber
- Used the 3 by 1 timber for all four sides of the cross and created a long rectangular tunnel for the vertical bar of the cross.
- For the horizontal bar we used the same 3 by 1 timber to create smaller rectangular boxes to attach to the

- To attach everything we used different methods
- For the height of the cross we glued and then screwed the timber together
- For the width of the cross we came across the problem of if they would be stable enough and what could hold them up since there wasn't a way to screw them in
- We then decided wiggle pins would be the best option and they held up fine

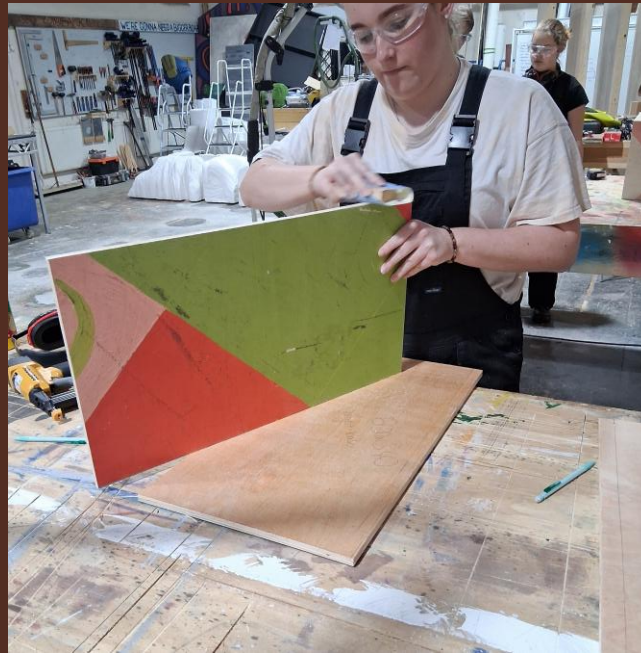


Finished cross

Once we stood it up we realised we had measured the distance wrong from the model so we would have to cut the top of the cross off and put the excess on the bottom of the cross to keep its height



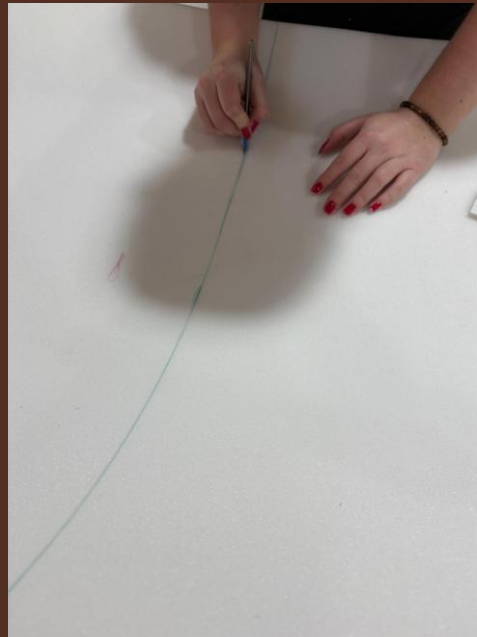
- For the box we used a track saw to cut out the plywood pieces
- To attach the pieces of plywood together to create the box shape we needed to add an extra bit of 3 by 1 timber to the corners to give us a bigger and thicker area to screw into
- Looking back at this we should have created a frame for the box instead of doing it this way as it would have helped us later on as well as just making this part easier





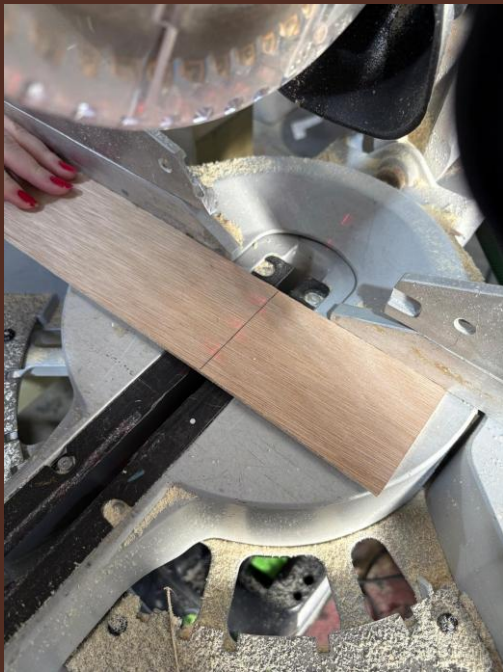
- For the second base box we ran into similar issues as the first one however due to its size we just used staples to bring it together
- On the model there is a small overlap before where the curve goes so we added that on
- Which we promptly did on the wrong side so ended up doing a full perimeter of wood
- To attach the second box to the first bottom one we put small offcuts of wood in the bottom corner and then screwed at a diagonal to secure it on

- To create the curved section of the cross we marked out the circular shape on the same plywood we had been using for the box and cut the curve out with a jigsaw
- To add stability between the two sides and have something for the foam to lie on to create the curve, I added six toggles, sitting flush to the curve across
- I also allowed space in the middle for the cross to go through when we put it in
- Then secured the curve part to the rest of the build with screws
- For the curve over the edge, we used a bendy foam and cut out the shape using a knife as it was easier
- To secure it we used a tacky glue that wouldn't burn the foam and then once it had been put in place, nailed it to the wood frame of the curve
- To make the hole for the cross to sit in we marked out where it would sit best and cut it out with a knife





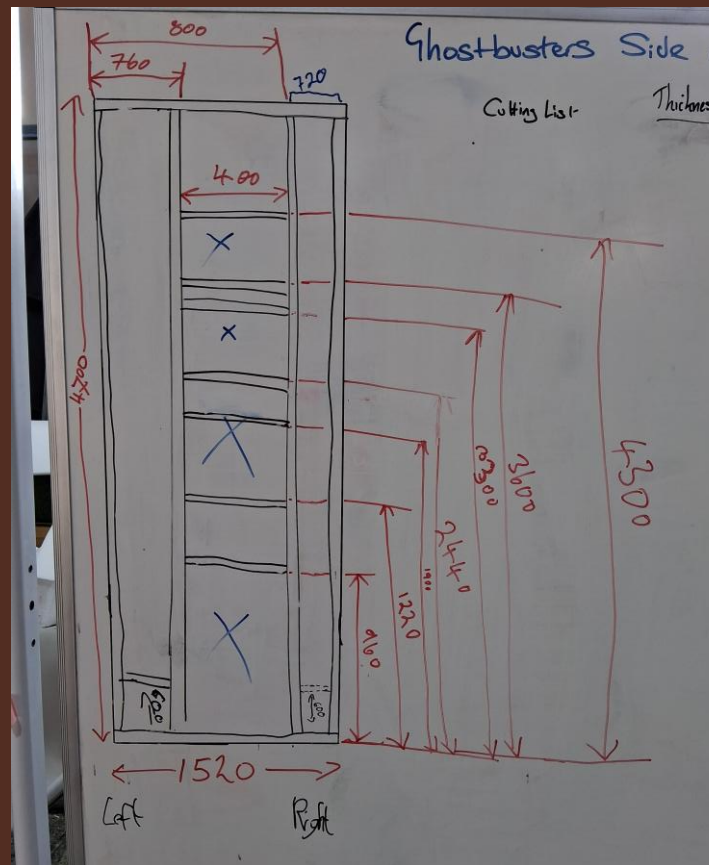
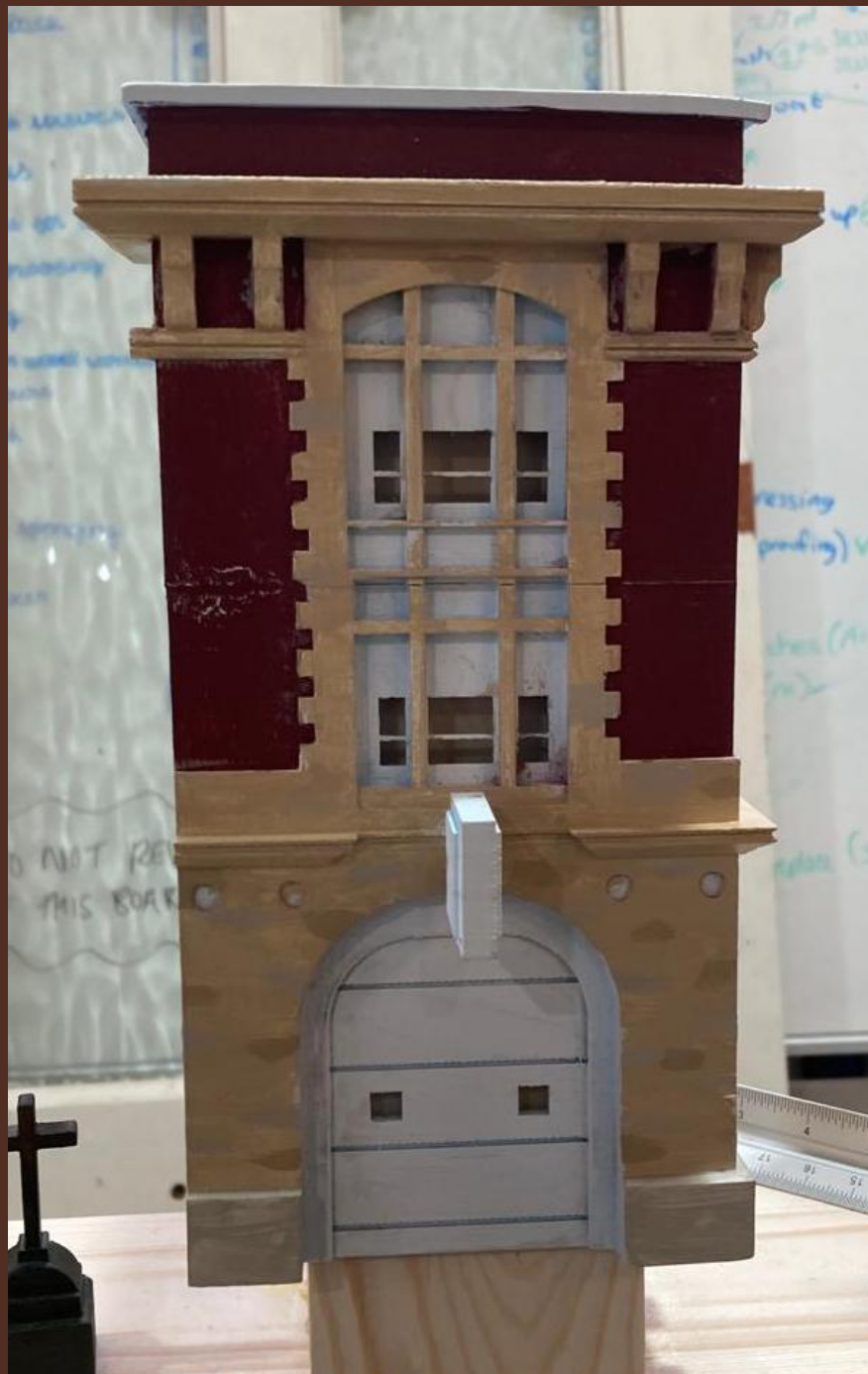
- To finish off the gravestone we needed to secure to cross into the base and fix our previous problem
- To fix our previous problem of measuring wrong and the top of the cross being too long, we cut off the extra length and secured it with wigggle pins into the bottom of the cross
- To secure the cross in place we turned the whole thing on its side and fashioned a support block, using a leveller to make sure it was straight
- We then added two toggles at the bottom of the cross which held it in place, and we screwed the cross to these toggle to stop it from coming out of the block when we picked it up.



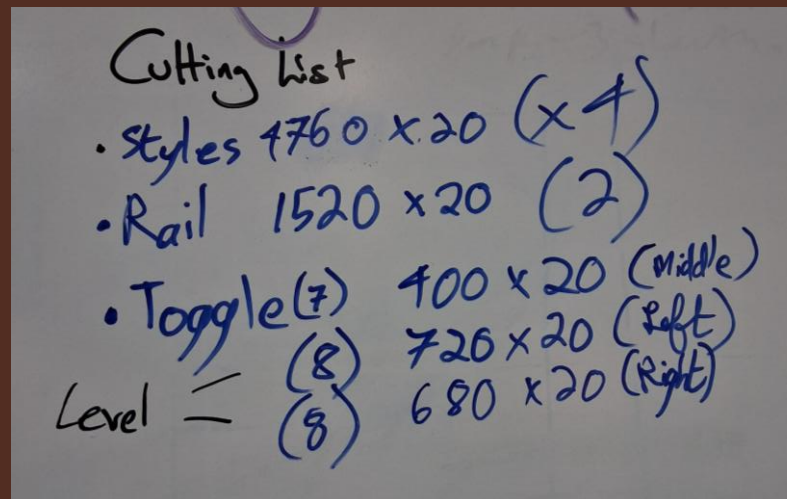


Finished Cross

Ghostbusters - Project



- We were given the model on the left to work from as it was in 1:25 scale
- We also had this technical drawing to work from which we as a class then produced a cutting list for what was needed to make it

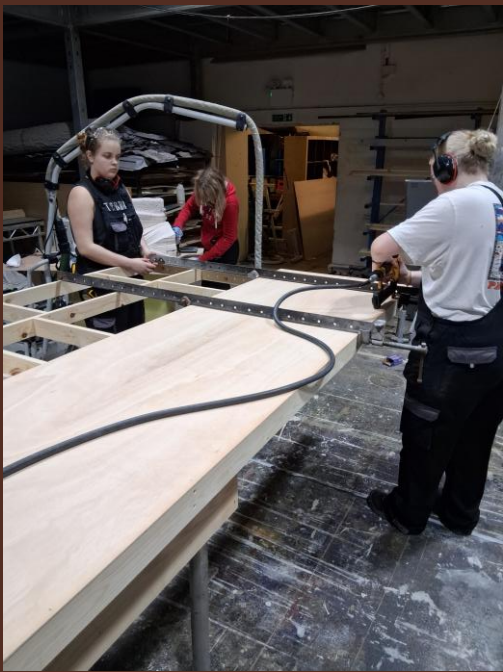




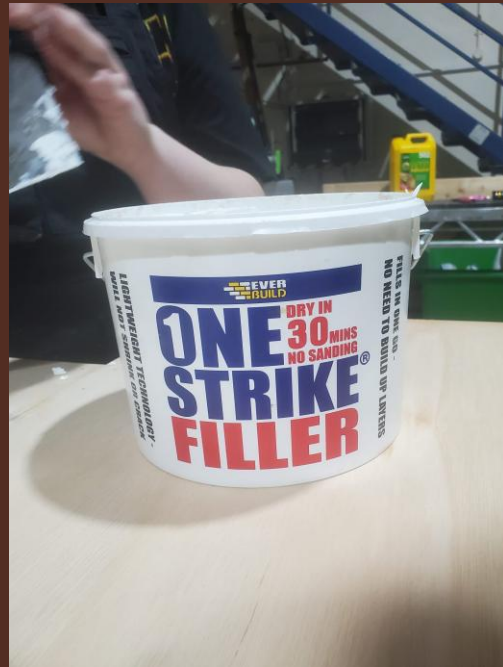
- Once we had cut out the first side of the building we laid out all of the pieces are started to put them together to create the flat
- We started with the rails and stiles and then measured out where each toggle needed to fit
- Due to its size, we found problems with the wood warping so had to combat that with clamps and having people hold things in place while others screwed them in
- Every four foot, the toggles needed to be put sideways to one side of the flat so that when we cladded the flat, the edges of the plywood had enough surface area to be stapled to
- Once we all had the jst of what we were doing for the sides, we split into two groups, one finishing the first flat and another starting the second which made the whole process more time effective

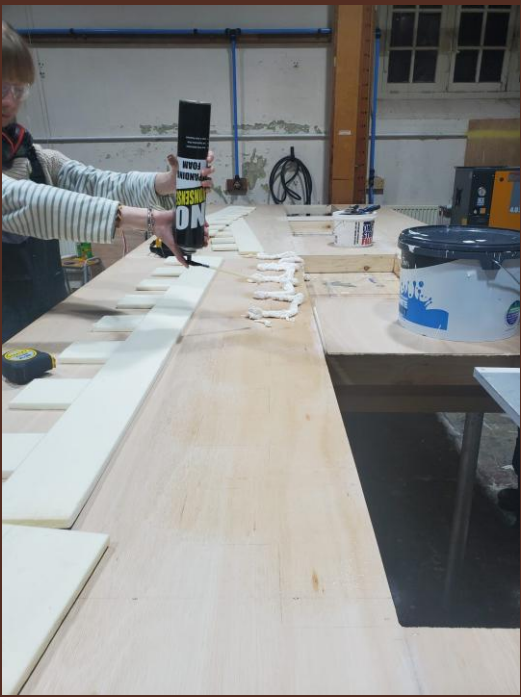
- Once everything was secure, we stood the frame of the flat up and put it to one side so we could use the work benches to cut the plywood for cladding
- This also gave us an opportunity to learn how to properly move a tall unstable flat
- To do this two people hold onto a side each, mirroring each other they pick up the flat with one hand and with the other reach up with a straight arm to steady it
- We can also just scoot the flat along the floor as due to the way we built the flat with the rails on top of the stiles they wouldn't come apart





- Once we had cut the plywood to size, we went on and cladded the flats, in the same method as we did for the Hollywood flats earlier in the module
- We had to use clamps again to keep the plywood straight and flush against the frame we had built
- Once that was stapled on, we went in with a sander and some filler to fill in any gaps or imperfections there were in the wood.
- As well as this we used a router to clean up the edges of the flat where there was overhang of plywood





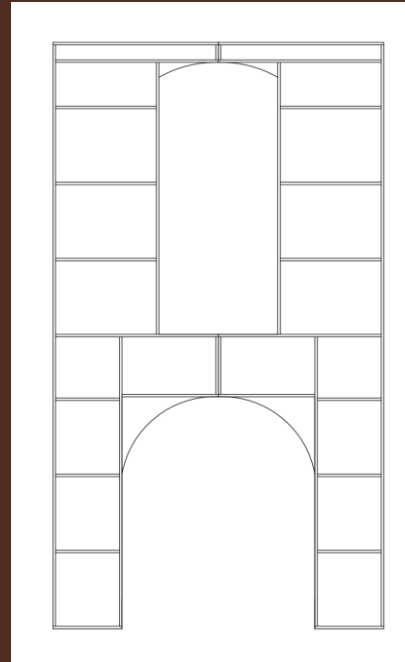
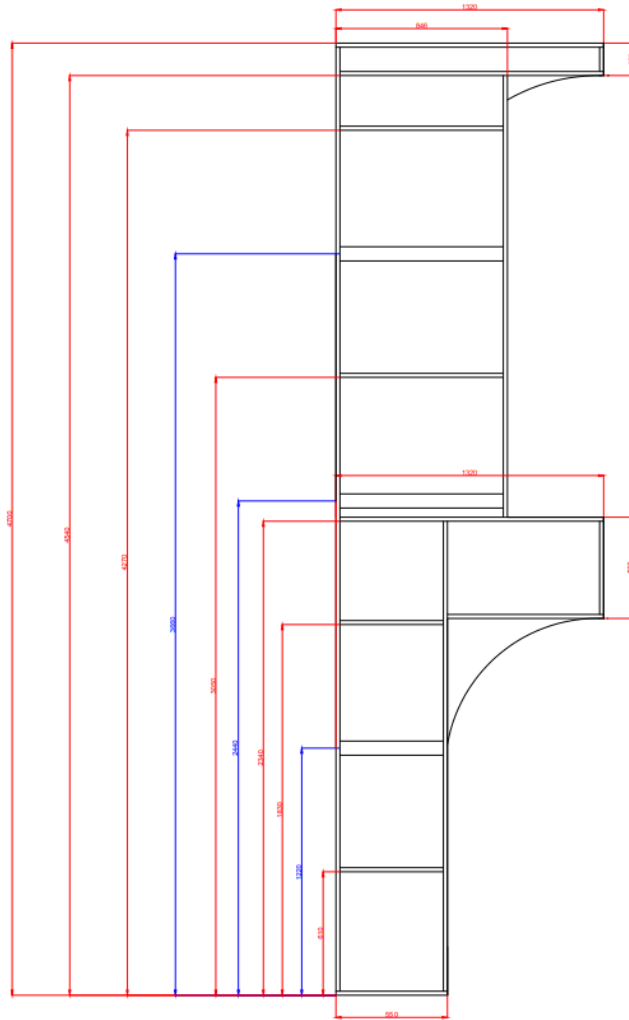
- We added different types of detailing to the flat once they had been filled and sanded
- We used insulation foam to cut out the brick detailing, then attaching it with expanding foam
- We used off cuts of decorative skirting board to add the outside detailing above the brick detailing



- We also created corbels out of foam by making a template piece of wood form
- We used a hot wire cutter to cut out the shape out of polystyrene which then was cut in half to make the right size for the flat

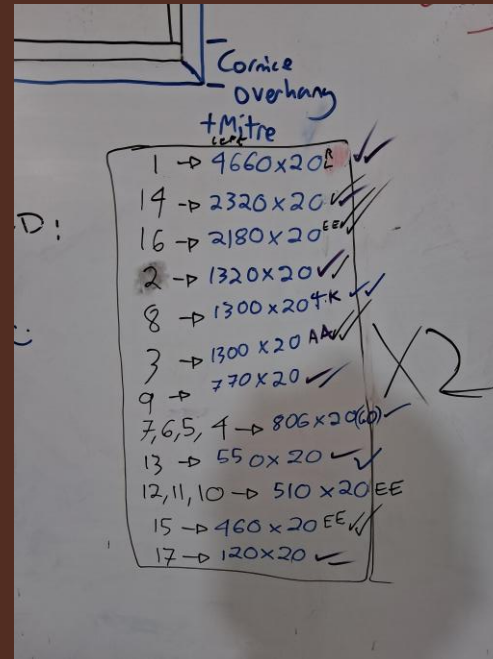


Finished side flats



Front Flat of the ghostbusters fire house

- This was split up into two sides as it wouldn't fit through our workshop doors, meaning we'll have to bolt them together
- We produced a cutting list as a group then split off into two groups – left and right- to complete the whole front flat





- For the front flats we did the same process as the side ones
- Start by laying out the rails and stiles and attached them together
- Then adding the toggles in
- For this flat it wasn't a typical rectangular shaped one which did bring some difficult and the need to restart sections because a drill couldn't fit in the small gap we had left
- As the same for the other flat, every 4 foot we had to turn one of the toggles on its side to allow us to clad the flat with the plywood and them have something to attach the edge to

- We then clad the flats with the plywood
- Cut it to size on certain places and left an overhang where the curve in the design goes



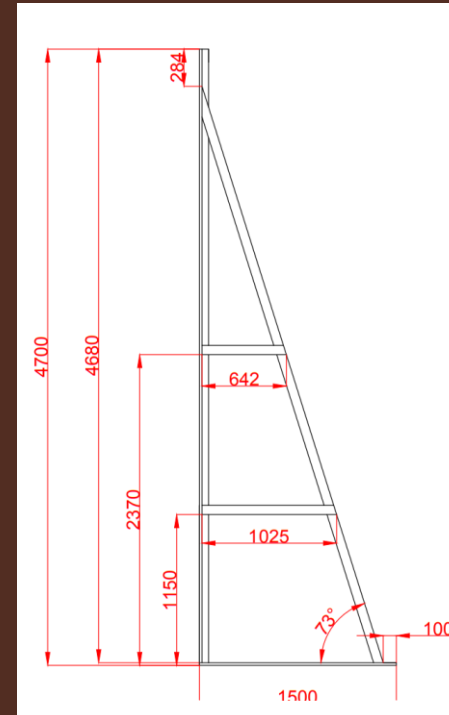


- Since the front had to be done in two different pieces, we had to bolt them together where they joined
- This allows us to take it apart to bring it out of the workshop and then put it back together wherever it may go





- Once it was bolted together, we then stood the flat up so we could draw the curved line onto the overhanging plywood
- We drew that on and then brought it back down to then jigsaw the curve out and router the excess off
- We also made the braces from these technical drawing which will support the build



2 - Research four different types of rostra used in theatre.

Modular steel rostra

- Fitted with corner sockets that can take any length leg, makes them versatile
- They last long making them very economical
- However, they are expensive
- Easy to hire them instead of make due to cost of materials to make

Gateleg Rostra

- Used over and over again
- Built similarly to a standard flat
- Made using the flat layout that hinge together to create the structure
- Use toggles and rails, like a flat
- Able to fold away, just need to be correctly mounted for it to do so

Block

- Sturdy and simple block as said on the tin
- Any shape or size
- To remove weight, you can cut out the sides of the panels
- Add some support in the block to reduce it bending or having a spring

Trucking gate-leg rostra

- Same as gate leg rostra
- Built using flat's structure
- Put truck onto it
- See next slide for information about trucks and them in relation to rostra's



Steel desk
rostra

(“Grumpy Joe’s Staging”)

3 - Trucks

Theatre trucks, also called scenery wagons, are a platform that can be used to move scenery around on stage. In most cases the scenery is constructed upon a rostra of sort and then the trucks are added onto the bottom of it. There are different Components that make up trucks. Castors are the typical main part of the truck (wheels). When deciding what castors to use you need to factor in the use of them as well as how many you need to properly support the scenery. Swivel castors are commonly used for smaller wagons as they are more flexible with their movement and mobility. Due to this though, there is the problem of aligning them which is more difficult, so having more swivel castors aren't used on larger wagons. Instead, rigid castors are preferred for larger wagons as they are easier to align (Gillette). An example I have seen myself is from the musical, Kathy & Stella Solve a Murder! (2023) which the whole set is put on trucks and is moved around the stage by the actors to change the scene while performing. There was different scenery that moved more than others, so I assume there was a use of both, depending on which was moving where.



For the safety of trucks, there needs to be an anchoring system in place, so when the trucks are not in movement its safe for everyone around, whether that be actors, or stage crew. Wedges are one way of anchoring the scenery in place. These are forced between the stage and bottom of the castor's wheels, which are usually driven under the truck so that the weight of the scenery is supported by the wedge rather than the castors. These are usually placed on opposite sides of the scenery, so they can't slip off (Gillette). Another way of securing the scenery safely is with slip bolts, which are holes in the stage that slip the bolt into, so it's got some stability. There is also the typical brakes. A wagons brake is a handle that is pushed down to extend a rod down onto the stage. It lifts a section of the scenery truck off the stage floor so the castor wheels aren't in contact and could move. This is a fast way of locking the scenery in place however it can be damaged very easily if whoever is moving the scenery does not pick up the brake

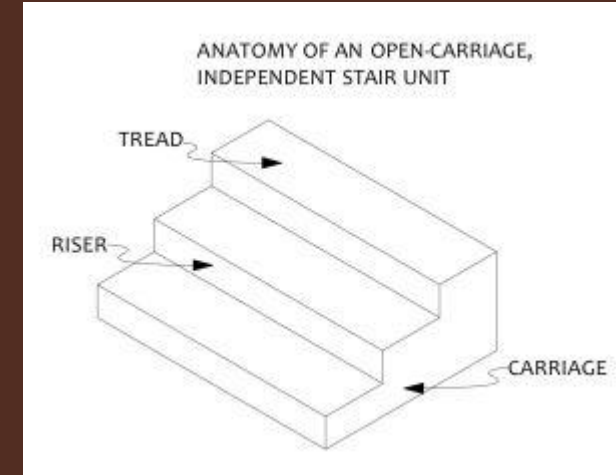


Kathy & Stella Solve a Murder! (2023)

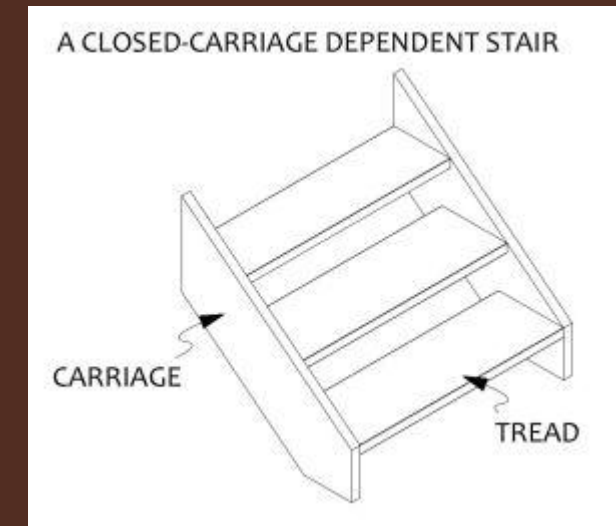
4 - Treads

Tread refer to stairs in theatre, but the actual anatomy of stairs have treads be the horizontal surface of the stairs where people stand. As seen in the diagram on the right-handed corner, the tread is the horizontal flat part which is typically parallel to the ground. The riser is the part that brings the height of each step and fills the space between treads; this can also be for aesthetic purposes and is usually an afterthought in the construction, it can also be not used to reduce weight. The carriage is what holds the stairs' structure together and supports it. There are usually two or more of these to support the stair's structure, depending on how wide the structure is. If the width of the tread requires it there is internal carriages that sit under the horizontal tread to act as extra support. The carriages of a stair's anatomy can be one of two, open or closed. Open being, similar to the diagram on the right, the carriage goes flush to the shape of the stairs and forms it, whereas closed has the carriage going outside the form of the treads and appears in a sloped fashion instead. Another variation of treads you need to think about is whether its independent or dependent. An independent stair is one that is self-supporting and doesn't require anything else to not topple over, whereas a dependent set of stairs needs the structure of another level to support the weight of whoever is climbing the stairs ("Construction of Stairs for the Stage: 1"). These decisions on which combination of types of treads construction can be decided depending on what its being used for. For cladding the tread's, it is necessary to use plywood thicker than 18mm for safety as anything less than that is not thick enough to support someone's weight.

Critical angle is a big aspect to think about when designing and constructing stairs, as its important for safety and functionality. Critical angle refers to the angle in which a staircase is measured for the steepness and what is the limit of that. Common angles are from 30 to 50 degrees with the most common and accepted standard being around 37 degrees (Mikulec). The use of handrails is necessary for treads over a few steps (3 or more) or height over 30 inches, on stage they can be made out of technical materials but must meet safety standards.



("Construction of Stairs for the Stage: 1")



("Construction of Stairs for the Stage: 1")

5 - Revolves

Revolves are a turntable put into the floor, which spins around a centre point. They are controlled by an operator and driven by a motor. A revolve is made up by a number a steel wedges that have timber on top with wheels on the bottom, which then fit together. They are constructed with a metal frame and then the castors are set into the frame. This is then topped with plywood. The revolve is operated by electronically powered motors, using a friction drive system on wheels, an example of something similar is a microwave plate, which is usually run on a circular track (“How Does a Revolve Work?”). Revolves are a great part of a production as they can change sets easily during performance. When building the revolve its built over the existing stage floor usually a few inches higher due to the mechanician in them, then the stage is further built up around the revolve to make the surface level. Sometimes the revolve is built higher up on purpose to create a step up onto it like in *Much Ado About Nothing* (2011) where the scenes are set on a revolve with a step up which rotates to orientate the pillars of the set depending on the scene, while also being used moving as part of a scene to show circular storytelling. One famous example of a revolve is in *Hamilton* (2015) where there is two parts to the revolve adding an extra motor to the stage. The revolve is used more physically into the performance, to show the relationships between characters.

A way to elevate a revolve on stage is to put it on a raked stage (a stage that slopes upwards away from upstage). To do this safely you would need to make sure the revolve is built at the same angle as the raked stage, so the surrounding floor is level, making sure its seamless and safe so none of the mechanism is showing or dangerous. It would also need to be powerful enough to move whatever is positioned on the revolve on an incline.



(*Much Ado About Nothing*, 2011)



(*Hamilton*, 2015)

6 - I would like you to find 2 references to theatrical or screen design that you find interesting in a scenic construction sense.

Good Omens – Aziraphale's Bookshop

Good omens is a big inspiration for me when it comes to set design. S bookshop inspired me to start with especially when I was looking into doing a set design course as I was watching it at the time. His bookshop is fill to the Brim with stuff and includes loads of little Easter eggs to into his character and references for other works. In season 1 only the bottom floor of his bookshop is shown on the screen as there is no top in the actual set of season 1. The room is very large with four pillars in the middle which give a solid foundation to work from and frame scenes. At the end of season 1 the set is actually burnt for a scene where Aziraphale's bookshop is part of an attack which means that for season 2 they had to rebuild the whole set exactly the same or similar as in the plot there's a mention of the character Crowley having gotten some things about the bookshop wrong when rebuilding it. They also decided to add a physical upstairs to the bookshop rather than using CGI which added an extra level into the construction. In season 2 there is a scene where the bookshelves move to transform the room into a dance room while the cameras are rolling. This interest me in the scenic construction sense as there is seems to be no visible trucks or machinery, so I'm interested to know how it was constructed. These bookshelves are moved by the use of the character Crowley moving them with his miracle magic so I can only assume they are on some tracks or are being moved by crew out of sight. Either way it adds to the fantasy aspect of the show.

(Radio Times)



(Radio Times)



Bridgerton – Featherington Ball

(Vanity Fair)



Bridgerton is another big inspiration for me when it comes to set design. Being produced by Netflix and being incredibly successful means Bridgerton has a huge budget so they can go big and bold with their scenery. One scene in particular that struck me is from season 3 episode 8 where the character Penelope is at her family's ball and is revealing her secret to the whole Society. The ball has the dance floor be on a raised rostra with pillars coming up to the roof in bright colors. I watched a video on this scene in particular by Vanity Fair (Vanity Fair) which explored the idea and concept behind this set. It didn't go into detail about the scenic construction side of it however it touched upon how they wanted the raised platform in a circular shape to act like a stage for Penelope who is revealing a huge secret. While watching the show I was also taken aback by the visual of the whole set and I was curious to know what part of it was CGI and what part of it was real as due to the technology of the modern day it's hard to tell. This video revealed that majority of it was physically scenery and only the roofing was CGI. The detailing of the pillars is also something I am interested in to looking into as they look incredibly detailed and come across as being heavy. However, after knowing what I do now from this module they are probably a lighter material than they appear to be, maybe made from foam and carved to have that stone pillar look.



(Vanity Fair)



(Vanity Fair)

7 - Research into welding and metal working, what are the different types of welders, why are they different? We know wood comes in a variety of sections (3x1, 3x2 etc) but in what forms can you buy lengths of metal?

Mig Welding

- Easier types of welding
- Good for beginners
- Actually, two types of welding – bare wire and flux core
- Bare wire is used to join thin pieces of metal
- Flux core is used outside as it doesn't require flow meter or gas supply
- MIG is good for DIY or hobbies as its inexpensive

Tig Welding

- Very versatile
- More difficult technique to learn
- Need two hands to do it
- One holds the torch and the other holds the rod of metal
- Done to weld steel, stainless steel, aluminium and many other metals
- Typical type of industrial welding for everyday metal objects

Stick welding

- Known as arc welding
- Old fashioned type of welding
- Harder to get the hang of
- Can get into it quite easily though as its not super expensive
- Uses an electrode welding rod

Electron beam and laser

- Precise, high energy welding technique
- Focused and done with accuracy
- Used for smaller medical devices but also weld large spacecraft parts
- Incredibly versatile and powerful;
- Neat and can be done as an aesthetic purpose as well
- Cost effective

Types of metal materials

Standard material sizes

Sheet and plate sizes

- 48" x 96"
- 48" x 120"
- 60" x 120"

Commonly available commercially

Structural shapes available

- Flat bars
- L-angles
- C-channels
- I-beams
- T-bars
- Hex and round bars

(Baillie Fabricating)



8 - Different types of plywood

Birch

- High quality
- Fine grain texture
- Made out of birch veneers, layered in different directions to create desired thickness
- Popularly 18 mm hardwood
- Plain hardwood panel – smooth and neat
- Strong due to its process of being made
- Doesn't splinter or crack on the edges making it safer
- Used for smoother finishes of cladding

Marine wood

- Water resistant
- Used in projects that require this
- Good for touring sets that might be stored in wet or damp environments
- Made with waterproof glue so it doesn't split
- Can also be chemically treated to make it even more water-resistant finish
- Graded A-A, A-B, B-B, MDO, HDO and the better the grading the stronger and lightweight the plywood is
- Will need to treat the sides that have been cut with a sealant to keep the water resistance

Hardwood

- Made from thin layers of timber which are glued and trimmed together
- Structural tests, above 9mm is classed as structural
- To meet the structural standard, they have to be produced from phenol formaldehyde resin that creates a glue bond which won't weaken in change of conditions.
- This makes it good for touring sets or outside film sets

Softwood

- Made of out pine
- Spruce can be used too depending on where its coming from
- Suitable for projects like walls, roofs, flooring
- Use to clad things?
- Easy to apply with power tools
- Good for decorative purposes – skirting boards
- Affordable

Shuttering

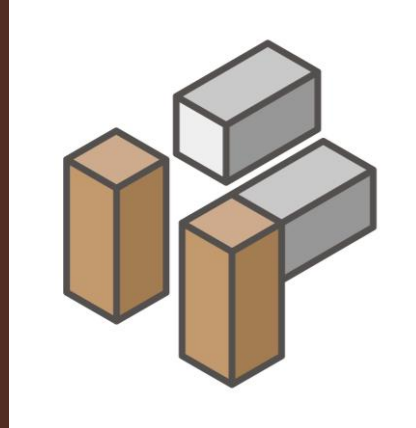
- Expensive plywood so not ideal for low budget projects
- Made by combining multiple layers of wood
- Uses strong adhesive glue, like phenol formaldehyde resin
- Very durable so good for touring sets or scenery that needs to withstand a lot of use
- Machine pressed together at high temperatures

(“Builder Depot LTD”) –
for all parts

9 - Four ways that flats or sets can be joined together

Butt Joints

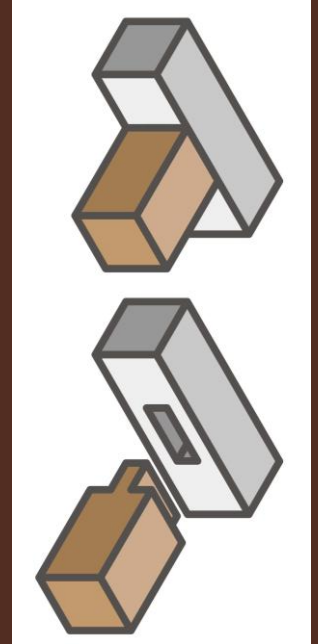
- These are what we use in our own workshop to create most of our joins
- Quick and easy
- Only need a drill and screwdriver
- Drill pilot holes to avoid splitting
- Shouldn't be used on high stress things
- End of grain on show



(Kreg)

Mortise and tenon join

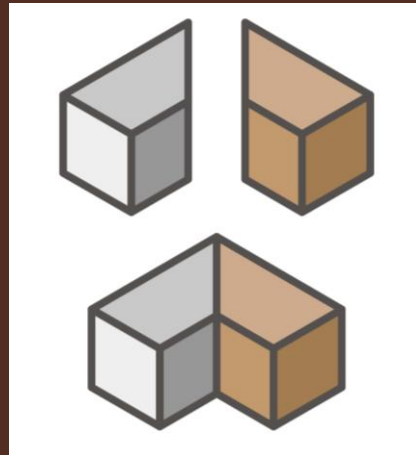
- Mortise is a rectangular hole cut into a piece of wood
- The tenon is similar but has the shape of the hole cut into the wood sticking out
- These fit together to create the join
- Very strong and reliable
- Needs to be accurate to make it snug



(Kreg)

Miter join

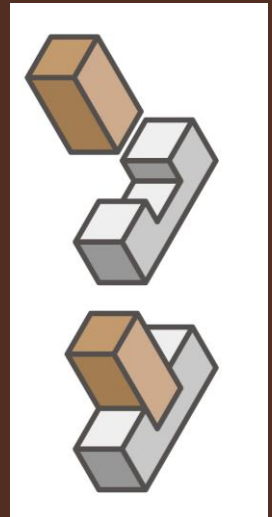
- Create a corner join
- Cut the ends at a 45-degree angle
- Put together with glue or nails
- Creates a seamless join
- Good for decorative purposes
- Needs to be accurate for a tight fit
- Quite weak as not very strong way of keeping together e.g. only using glue



(Kreg)

Dado Join

- Made by routing a groove into one piece of wood to put the other into
- Solid connection of wood
- Hides the grain end of the timber
- Larger area for gluing
- Difficult to get a perfect and accurate fit
- Need a router to do this join



(Kreg)

10 - What are the benefits of using metal to build scenery?

- They can be used as a structural frame which makes them durable and sometimes lighter than wood for flats, desking, and revolves
- Ideal for scenery that moves as its more durable and can deal with wear and tear easier
- Its versatile, making good for achieving certain looks
- It has a longer longevity than wood alternative as its more resilient



An example of the metal having a good longevity is in our workshop, our tables and work spaces are made out of old steel rostra's which are metal and they have held up for this long proving they are durable

11 – How I would construct a tree which has cast members climbing on it

- Need a base to stand up on its own and support the weight of the actors
- Create a base with plywood – rostra block for the actors to stand on/climb up to
- Either do a cut out of a tree shape as a front to the tree or create a foam outside to it
- Use galvanised steel pipe going from top to bottom as a sturdy thing to keep it up right
- Use thicker 2x4 timber boards
- If budget is low, do the cut out method – cutout a tree with a jigsaw and put it in front of the rostra block
- Put the tree further down stage rather than upstage so its not overwhelming the stage space
- Maybe add stairs or a ladder if the tree is too big to just step up onto
- Will need to bold it into the stage so it doesn't fall over – adds to the safety aspect of it



12 - Materials you can use to clad scenic elements that need to be three-dimensional.

Expanding foam

- Versatile and quick for sealing gaps and making unusual shapes
- Fills gaps you may have in the set
- Once its dried you can carve it into shape and then sand it or paint over it to finish it off

Canvas

- Durable woven fabric
- Can be stretched over things to make it more taught
- Same as a canvas you'd paint on
- Usually needs to be primed before use with gesso depending on the paint going over the canvas

(Wikipedia Contributors)

Vacuum forming plastic

- Versatile as it forms to whatever you are working on
- Affordable
- Very quick so its more time effective on a smaller time frame project
- Non toxic as its usually the same as food grade containers

(Formlabs)

Resin

- Can come in a organic form or synthetic
- Harden into a durable solid
- Hardened through UV/ heat
- Water resistant and strong making it good for touring sets or one that's going to be used outside
- Needs to be mixed properly to be used
- Good as an adhesive too

13 - What happens when something goes wrong – individual scenarios

You have placed a delivery for plastic sheeting, but it has not arrived, the company you ordered from is ignoring you and you need to deliver the set tomorrow, what are your next actions?

- Communicate this issue with the client that needs the set – they might have a solution to this issue or give you an idea of what the best course of action would be from their end
- Try and contact the company you ordered from again
- If they don't respond, then do one of these

Either

- If the client can postpone needing the material, then I would reorder the plastic sheeting from another company and try to get it in time for the postponed time frame

Or

- Find scraps of the plastic/source recycled material to use instead so the client can have the plastic sheeting for the agreed time

If I reordered from a different company, I would communicate this with the client and let them know that it will cost more due to the original company not delivering the order and ignoring them. We would then go down the route of trying to get the money back once it's been sorted.

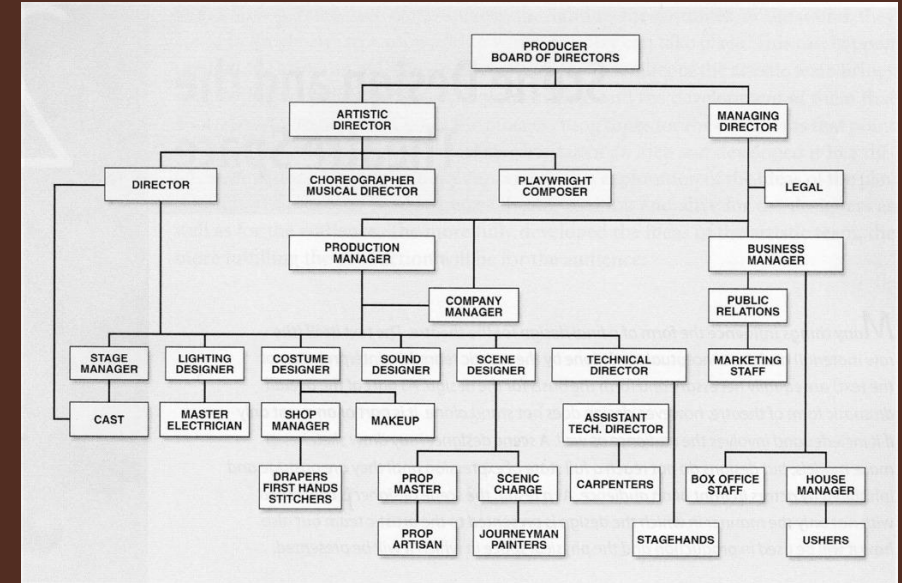
14 - What is the role of a Production Manager and art director to do with scenic construction

Production manager

- Responsible for looking after the practical side of scenic construction
- Keep the artistic vision within the budget and time frame along with other factors like labour and resources
- They keep to schedules and manage the construction within this schedule, so it stays on track
- They help with logistical issues and make sure the safety protocols are followed

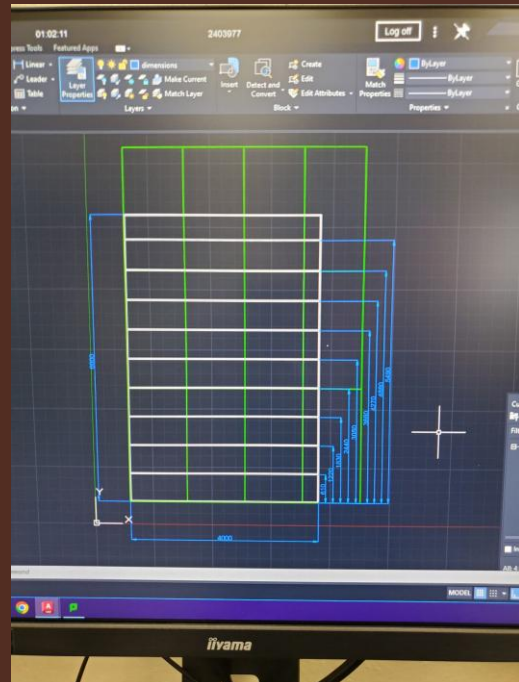
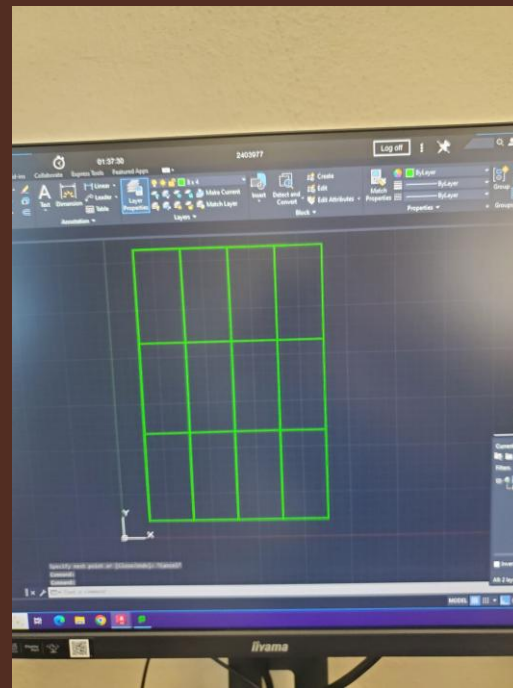
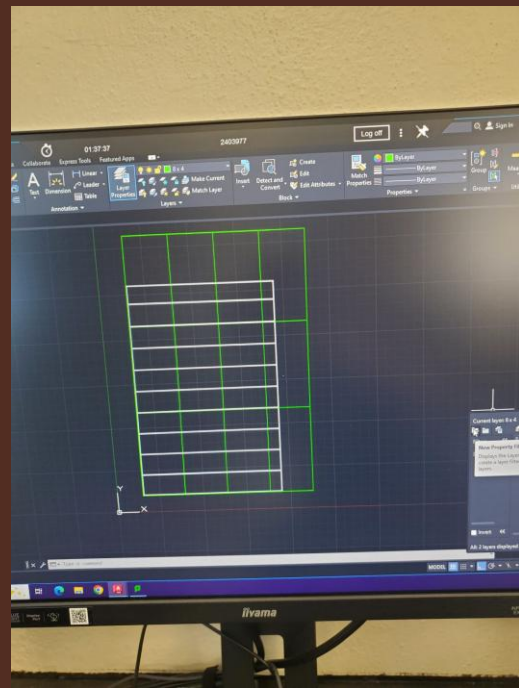
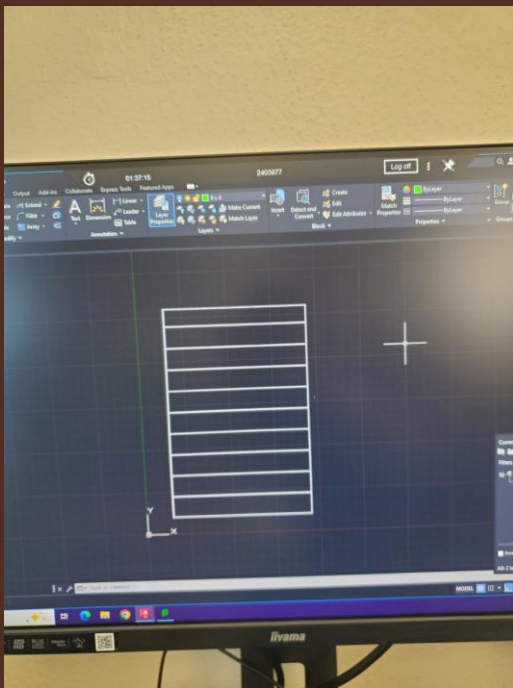
Art director

- Responsible for shaping the visual elements of a production
- They work closely with the scenery team to create the ideas into designs and then into physical scenery
- They give the drawings and majority of the design process to give the scenery team an idea of the materials needed, textures and colours
- They also keep an eye on the actual construction to keep everything close to the concept, making adjustments as necessary

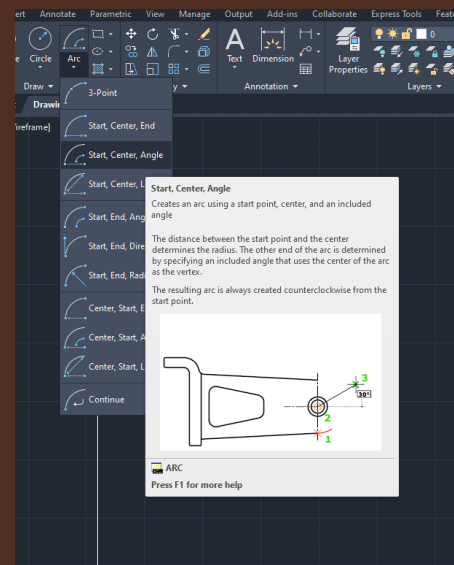
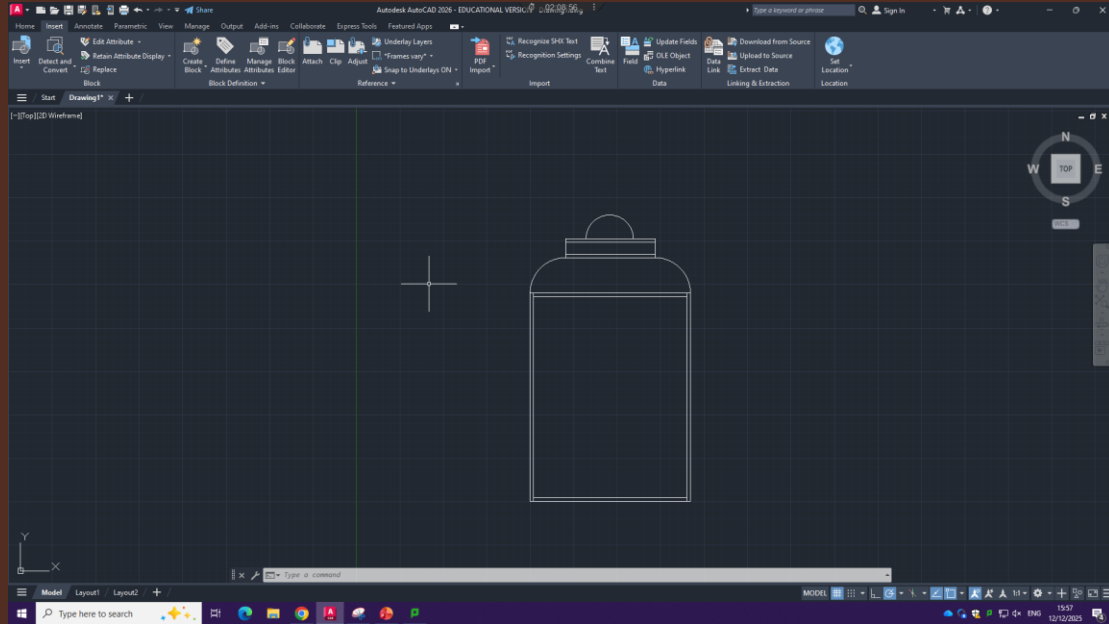


Auto CAD

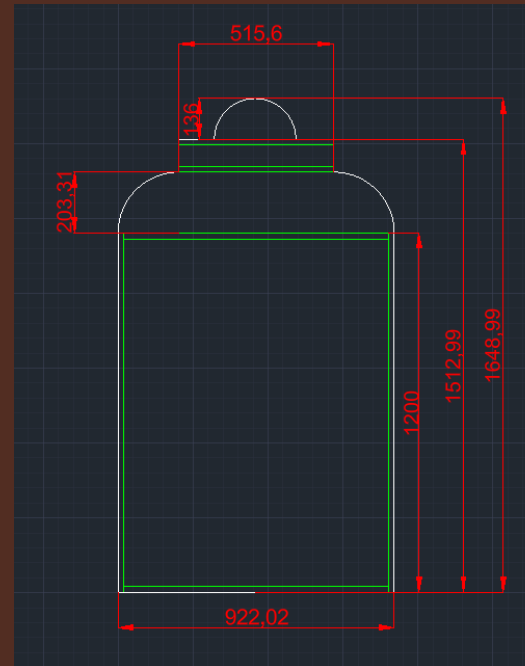
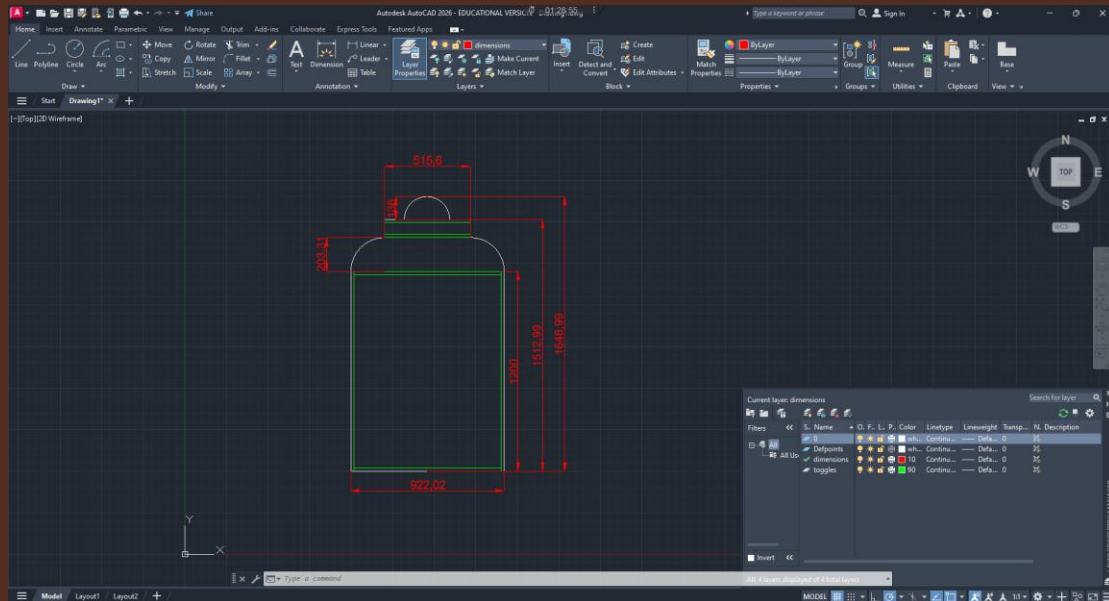
- We had a morning session just working on learning how to make a technical drawing on Auto CAD
- I worked with Gilly on a basic Hollywood flat
- We started by creating the basic rectangular shape frame
- We then used a tool to space the toggles 610 mm apart each time as well as used it to create the size of the timber into the drawing
- We also added where the plywood would fit by making a grid with the rectangles in the grid being the size of a standard 4 by 8 panel of plywood
- Then to finish it off we added the dimensions



16 - Produce a CAD drawing of scenery. This must be a third angle orthographic projection.



- I made the first gravestone we did in construction
- I started by creating a basic rectangle in the rough measurements we did
- Then I played around with the different curve tools and found one that worked the way I wanted it to
- I added the squared off part a bit further up
- Then finished the shape with the top semi circle area
- I then went back and added in the framing that we put to support and make the shape 3 dimensional
- To finish the drawing I put the dimensions of everything that is necessary to build the shape



Evaluation

For this module I found it very fun and a good start to the course. We started this module by going over the basics of how to use power tools which I found very interesting but daunting as I had never used any of them before so I didn't know what to expect. Jumping into using all the tools right off the bat was very intimidating however I found afterwards I felt a lot more confident in my abilities than I thought I would be. Using these tools was also a way to build my confidence anyways as it made me feel more independent with what I can create. This independence also came from being thrown in the deep end to build most of our construction projects. Once we had done our first project my confidence had already grown more from doing so as the accomplishment of finishing it with minimal help gave me an idea of what I am capable of and furthered my ambition, as well as in my career in this industry. Through the module I also realised I need to be more forward with what my abilities are as, despite feeling confident after the first project, I still had that doubt. As we continue through these projects this did develop however, I think I could still develop it further with future modules as there were times where I second guessed myself and then lost that opportunity to do something that I knew I was capable of. For example, was when we were making a cutting list, I could have easily figured out the measurements myself instead I just let others do it as I thought they would be better at it.

Looking back at the module, the things I could have improved on would be time management which is something I struggle with anyways. For example, in class there were times where I would get distracted easily and not get things completed as fast as we should of. This was also a whole class observation as a lot of us would get distracted by each other quite easily and we probably could have finished our final project in the timeframe given rather than having to complete it later on in the year when we have other modules to be doing. Before starting this module I knew I would find the more practical element enjoyable as I think I am more of a doing person which I think shows through this module and my hands on approach however, by doing construction I have discovered that I enjoy it more than I thought and that I would possibly like to specialise in construction as I find it the most enjoyable so far. As well as being able to use big boy tools I have further learnt good team working skills. I would say I was already a good team worker and I'm able to communicate my thoughts and opinions well which I think helped the class in being able to work together. I was able to encourage my classmates to work better together and to come to a joint decision about things rather than having three different ideas.

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