#### PRODUCT #1: Passion Project

The creative arts process comprises four interrelated elements common to all creative arts programs. Use these as the foundation of your work towards creating your production.

- investigation
- development
- production
- reflection

Using the SACE Performance Standards (listed below) your production task is assessed on the following:

- [1] Product (Art work/s)
- [2] Folio of Evidence: 10 pages, 1000 words or multimodal equivalent (6 minutes video)

#### TASK: Passion Project

In your chosen Art stream, negotiate with your teacher to Design, Develop, Test and Produce an art work in a field that you feel passionate about.

#### TIME ALLOCATION

8 weeks

#### **FOLIO OF EVIDENCE**

Your folio should contain evidence of the key stages in the development of your creative production. Experimentation and proto-typing is encouraged. Note from PA4 in Performance Standards; 'development and application of a variety of practical skills, techniques, and processes.'

#### COLLABORATION

Collaboration is encouraged. Role allocation needs to be identified and noted in your Folio of Evidence.

Note: Each student will be individually assessed on his or her role in the production process.

Good collaboration means that team members need to undertake different roles that come together in the final realization of a combined product. In a positive collaborative environment 1+1=3!

Collaboration is NOT two people doing the same thing.

#### Performance Standards for Stage 2 Creative Arts PRODUCTION #1 (25%)

Knowledge and Understanding	Practical Application	Investigation and Analysis	Evaluation
Imdepth knowledge and indepth specific to relivate to concepts specific to relivate creative links delephno(6)	Creative and clear expression and communication of ideas and opinions relevant to the program focus.	Purposeful investigation, selection, celled analysis, and full acknowledgment of a variety of appropriate sources	troughtful and knowledgable nymbotion of receive arti- proclastic, with reference to proclassics information.
In-depth knowledge of a variety of creative arts media, materials, techniques, processes, and technologies, and understanding of their possible applications.	Discerning use of the creative arts process in the development and presentation of well-refined creative arts product(s).  Highly productive and proactive approaches to the creative arts process.  Refined and integrated development and application of a variety of practical skills, techniques, and processes.	Astute and detailed exploration and analysis of appropriate creative arts media, materials, techniques, processes, and technologies within and/or across creative arts forms.	(Insightful critical reflection on personal creative arts ideas, processes, and products.)  Comments of others to entire and the comments of others to entire and the comments of the comments

Word Count: 1048

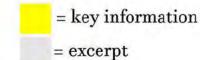


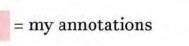












\* = my work/image

## **Evaluation of initial idea**

Opened by on 24 July (1.04 pm)

I plan to produce a detailed scale model of the cafe interior I produced for my first production. It will include models of all furniture, lighting etc. and the actual building. I have worked with the laser cutter and 3D printer in Product Design, however I would like to develop my hand modelling skills, as these are skills I will need as I aim to study architectural design in university.

#### OR

I plan to design a small scale art gallery space that would be situated on the river torrens. This area is currently being redeveloped as a new cultural precinct for the city, however an art gallery has not been included in the design. I will aim to create an interesting space that would be utilised by up and coming artists, enabling them to develop their careers in a landmark area, as most small-scale art galleries in Adelaide are hidden away in laneways. This product would enable me to develop the skills needed for "exterior" architectural design, as my last product was an interior, however, the design process would be using much the same skills developed in my first production, and the product would be the same, a poster.

replied on 25 July (10:25 am)

As discussed, both would be suitable. At this stage I would go with the first option to consolidate the great work you did on your first production. If you are really keen on developing hand modelling skills here is a great motivational resource on local miniature artist, Joshua Smith:

https://www.youtube.com/watch?v=KyvTrVo2a9M

#### Also:

http://www.brickandmortarcreative.com.au/joshua-smith - with this one, take note of the website as it may provide you with extra connections.

This is a very broad pitch, you now need to break it down into individual elements so that you are clear on the unique features of your production, and further, how will you investigate them and then expand with your own artistry.

\*

## **Detailed Renders of Design**





#### Task

To plan and build a scale model of the cafe, FIKA Eatery, I produced for Production 1. This will include furniture, lighting and finishes.

#### **Intentions**

I intend to create a highly detailed presentation model which will include all elements of the final interior, except the ceiling and hanging lights. Throughout the build process I aim to develop my hand modelling skills, and also work with new technologies such as the laser cutter and 3D printer.

#### **Functional Outcomes**

- ~ Use a variety of materials, medias and modelling techniques
- ~ Highlight all details of the interior
- ~ Be easy to understand and navigate
- ~ Mimic a real-life iteration of the cafe
- ~ Emulate the warm and comfortable, yet light and airy design

#### **Aesthetic Considerations**

- ~ Refined, clean, sophisticated, detailed
- ~ Closely match the original materials used in the cafe design
- ~ Fit with the 'Scandi' theme that informed the cafe's design

#### Constraints

- ~ 8 weeks to plan and build
- ~ Must use readily available materials and tools
- ~ Must develop my ability to creatively produce an architectural model

# Scale Floor Plan - 1:10 Dimensions in millimeters 1250 350 1213 507 507 507 507 1600

scale has been chosen so the furniture, lighting and interior details can be simply constructed with my lack of experience, and

can be identified easily.

International Scale	Model Content Interior spaces/furniture				
1:10					
1:20	Interior spaces/furniture				
1:50	Interior spaces/detailed floor plans/different floor levels Building plans/layouts				
1:100					
1:500	Building layouts/site plans				
1:1000	Urban scale for site or location plans				
1:1250	Site plans arch20.com, 20				

# 2 Research

# Little Architecture - Emily Boutard

There is this moment when people see a well constructed miniature; a surprised drawing-in of breath, a disbelief that something so small could look so real. This is

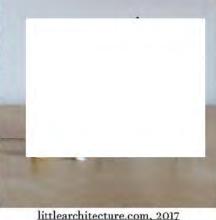
I use a variety of materials and methods, depending on what the particular miniature requires. This includes building from scratch, repurposing kits, or just acquiring beautiful small objects. littlearchitecture.com, 2017



littlearchitecture.com, 2017



instagram.com, 2017





littlearchitecture.com, 2017





littlearchitecture.com, 2017

instagram.com, 2017

~ achieves a seamless, detailed textural quality due to the logical process taken

~ constructs walls flat so details and textures can be added

- ~ then assembles the model
- ~ I can employ this process

Boutard's technique differs form miniature "purists" in that her pieces are not made from the same materials as the original, but instead use materials that look the most realistic.

"For me, the important thing is the illusion of reality. As long it looks real, I don't really care what material it's made out of," she says.

"Some things don't translate into miniature - marble is the perfect example. When you look at the miniature thing, it doesn't look like marble; it looks like soap. Because marble doesn't scale, the grain is Barnes, A., 2016 incorrect."

"I have a range of surgical grade scalpels and Stanley knifes, really fine sandpaper and tiny files ... basic PVA wood glue. It's nothing you can't just get at your local art shop - it's not anything specialised," Boutard

Boutard works to 1:24 scale, meaning each piece is 24 times smaller than Barnes, A., 2016

~ clean, refined, realistic ~ uses balsawood, finishes, wire and pre-made miniatures to achieve the desired 'look' rather than using the exact material



#### **Joshua Smith**

Joshua Smith is a miniaturist and former stencil artist based in Norwood, South Australia. With a career spanning 17 years he has showcased his work in London, Paris, Berlin, New York, Japan and all over Australia in over 100 exhibitions.

In 2015 after the closure of Espionage Gallery Josh refocused back onto his own career this time as a self taught miniaturist. His miniature works primarily focus on the often overlooked aspects of the urban environment such as arime, rust, decay to discarded cigarettes and graffiti perfectly recreated in 1:20 scale miniatures.

Despite his relatively short career in this new direction his work has already been showcased in galleries and art fairs in London, Paris, Berlin, New York, Sydney and Melbourne. He is currently showcasing work with Muriel Guepin Gallery in New York and at the VOLTA Art Fair in New York City. iknowjoshuasmith.com, 2017

- ~ high level of simulated texture is achieved through an acute attention to detail
- vevery crack, sticker and stain is modelled, leading to illusion



unique style - focuses on

and techniques Smith uses ~ I admire the detailed and robust

nature of his work

grimy dilapidated environments, rather than the pristine models that architectural practises build ~ can still utilise some of the processes

iknowjoshuasmith.com, 2017 iknowjoshuasmith.com, 2017

iknowjoshuasmith.com, 2017

iknowjoshuasmith.com, 2017





instagram.com, 2017

#### **Interview with Joshua Smith**

#### Q: What are the main materials and tools you like to work with?

A: My main materials consist of 3mm MDF, 1 and 2mm cardboard, black 170gsm card, ak interactive weathering pigments, ak interactive concrete and asphalt diorama paste, vallejo paints, mtn 94 spray paint, cutting knife, and brushes.

#### Q: Is there a specific process you follow when modelling each piece or is it very spontaneous?

A: I do initial research first. I usually find the building using google maps streetview and then if I have any instagram followers in that location I send them to take more detailed photos for me. Once I have all the photos I work out how I am going to build the artwork in a series of layers i.e. the footpath, doors, walls, windows, shopfront and if I will have working lights or not. I then cut out all the different components out of different materials. 3mm mdf for walls and the footpath, plastic for windows, 1mm cardboard for window frames etc. I then paint all these pieces individually and then glue it all together. Once it is all glued I then use the weathering pigments to add all the rust, grime and general wear on the buildings. The whole process can take a day for small builds like dumpsters to 3 months for a large building consisting of interior detail.

Q: How do you find the right technique or media to use for an element of a model, do you do lots of research or do you experiment until you achieve the desired result?

A: I usually experiment. I like the problem solving aspect of it all. I learn from my mistakes. I often do a test piece first before painting onto the final model to see if it works beforehand. I have only been doing this for just under 3 years and I am self taught with it all.

# **3** Research

## Tools

Cutting is the actual first step of the model making, and it is not an exaggeration when we say it can make it or break it. Neatly cut pieces give an overall aesthetically pleasing understandable model. If the edges are all messy, the model might not be perceived well. To ensure clear cut edges you need to use

- · Fresh blades: Stainless steel wheel-locked utility knives with replaceable blades are best for neat cuts. The changeable blade size, also, makes the cutting easier and better.
- · Precision knife: They are very sharp, durable, and easy to maintain. They are best used for the small details. They can easily cut through paper, foam, fabric, thin metal, and plastic.
- · Scissors: Small titanium scissors are needed for the fine details. Be careful to buy ones with a comfortable grip, so they will not hurt with long use.
- · L-Square: Stainless still L-squares help you draw perpendicular lines easily and accurately. Attaching masking tape to its back make it hold better to the material below and avoid sliding.
- · Metal Ruler: 6", 12", and 18" metal rulers can all be handy depending on the size of the model. These are best for the cutting.
- · Self-healing Cutting Mat: They will protect the cutting blades from dulling fast, and after all, you don't want to ruin your desk.

Tip 1: Be careful not to cut yourself, especially with the precision knife, and keep the first-aid kit by your

Tip 2: Make prototypes for all the different pieces and then use them as templates. It makes the cutting much easier and faster. arch20.com, 2017

Experimentation as to which material and tool works best together is needed, to ensure my work is refined, clean, geometric and intentional details are highlighted.

#### Adhesives

Strong bonds are needed to ensure my model is durable. Also need to ensure I clean-up excess glue so my model doesn't appear messy.

White glue like Elmer's or Sobo is commonly used in architecture studios and offices. Elmer's is better for joining porous materials such as basswood, paper, and cardboard and Sobo is better for joining porous to non-porous materials like plexi to basswood or metal to cardboard. It is best to use a minimal amount of glue so that clean-up at the glue joint and drying times are reduced. Place a dollop of glue on a scrap piece of chipboard and allow it to achieve a tacky quality. This provides a shorter gluing time when it is applied to materials. A small wooden dowel or your finger can be used to apply glue onto an edge surface. Drag the applicator across the edge of the material in a steady pattern. Do not apply too much glue along the edge; only a minimal amount is needed. Hold the glued materials together to allow the joint to dry. Use pressure to seal the joint. Temporary fasteners or drafting tape can be used to hold elements in place, especially when gluing complicated structures. Zell, M., 2008

- . Glue Sticks: They are cheap and easy to use but not very strong. They only work with paper and they might not give you a permanent result.
- White Glue: There are non-toxic white glue products which stick materials strongly and neatly. However, it takes a while to dry.
- . Tacky Glue: It is like white glue but thicker, so it's stronger than the normal white glue, and it, also, dries faster.
- . Hot Glue: It dries the fastest and gives a strong bond, however, you need to be cautious while using it, since the hot glue can burn you. Also, since it dries fast and strong, you can't afford to make mistakes. Finally, the glue guns tend to have a short life span. They break easily and need to be replaced.
- . Wood Glue: Obviously, you will need that if your model will make of wood. You need to clean the excess glue immediately because it stains.
- · Double-sided Tape: This tape sticks on both sides. It is strong, neat, and adjustable, but be careful when placing it because if you try to remove it after, it will tear away the paper or the foam board surface.
- · Glue Syringe: When using glue, these could be very handy. You can fill them with white or tacky glue, and use it right on spot. The model will come out neat and stable.

Tip: While the glue is setting, you can temporarily use straight pins to hold the pieces together. arch20.com, 2017

# **My Tools and Adhesives**



Chosen to achieve the functional outcomes I initially outlined. Hot glue will also be used.

Adelaide Uni Architecture Course

## **Laser Cutting**

#### High-precision and attention to detail

Using laser technology you can produce your own very detailed geometric shapes to a high level of precision. This allows you absolute freedom when designing your own models. The quality of engraving of surface textures and facades also enables you to produce presentation or competition models of high quality and great detail.

#### Unlimited choice of materials

A range of materials are used in the construction of architectural models: textiles, wood, veneers, MDF, cardboard, paper, foam, polystyrene, films and many more. Laser technology handles all of these materials with ease. This allows you absolute freedom when designing your own models.

#### The finest details

The fine laser beam lets you work to a high level of precision. All parts are therefore reliably precise. Filigree designs and the most detailed geometric shapes can be created to the nearest tenth of a millimetre without needing to consider the type of tool used. troteclaser.com, 2017



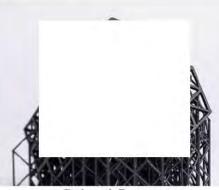
Gilbert, T., 2010

~ fast, provides extremely precise components and a high level of detail ~ due to the volume of identical components I need, I will laser-cut the majority of them ~ needs to be assembled though

# **3D Printing**



3Dprintingforbeginners.com, 2017



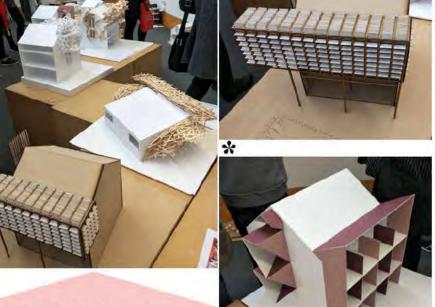
Redwood, B., 2017

3D printing creates solid parts by building up objects one layer at a time. Producing parts via this method offers many advantages over traditional manufacturing techniques.

One of the main advantages of additive manufacture is the speed at which parts can be produced compared to traditional manufacturing methods. Complex designs can be uploaded from a CAD model and printed in a few hours. The advantage of this is the rapid verification and Redwood, B., 2017 development of design ideas.

~ saves time as complex shapes that would be difficult to hand-model, can be conceptualised quickly ~ I will 3D print the pendants as they include many curved elements

Visited Adelaide Uni to gain inspiration and learn about where this production could take me next.



# 4 Development

## **Model Components**

This list will aid me when producing files for laser-cutting and 3D printing.

#### ~ 14 Yellow and 13 Blue Chairs

- ~ 27 Seats Painted Blue or Yellow
- ~ 54 Frames Birch Plywood
- ~ 54 Arms Birch Plywood

#### 4 Yellow and 4 Blue Benches

- ~ 8 Seats Painted Blue or Yellow
- ~ 16 Frames Birch Plywood
- ~ 16 Arms Birch Plywood

#### 

- ~ 5 Small and 1 Large Tabletop White Melamine Coated Plywood
- ~ 12 Frames Birch Plywood
- ~ 5 Short and 1 Long Beam Birch Plywood

#### - II Small and I Large Round Table

- ~ 11 Small and 1 Large Tabletop White Melamine Coated Plywood
- ~ 12 Stands Birch Plywood
- ~ 12 Bases Birch Plywood

#### ~ I Square Table

- ~ 1 Tabletop White Melamine Coated Plywood
- ~ 1 Stand Birch Plywood
- ~ 1 Base Birch Plywood

#### 4 Built-in Benches

- ~ 10 Cushions Marimekko Fabric
- ~ 4 Seats Birch Plywood
- ~ 6 Backboards Birch Plywood

#### 3 Kitchen Counters

- ~ 3 Countertops Pink/White Cement Tile
- ~ 3 Cabinets Glass with Stainless Steel or Birch Plywood Framing
- ~ 2 Shelves White Melamine Coated Plywood
- ~ 5 Sets of Built-in Shelves White Melamine Coated Plywood
- ~ 1 Oven Stainless Steel
- ~ 1 Exhaust Fan Stainless Steel
- ~ 2 Sinks Stainless Steel
- ~ 1 Tap Stainless Steel
- ~ 1 Dishwasher Stainless Steel

#### 25 Pendant Lights

- ~ 25 Cords and Bases Birch Plywood
- ~ 25 Pendants Painted Blue or Yellow

#### 7 Wall Lights

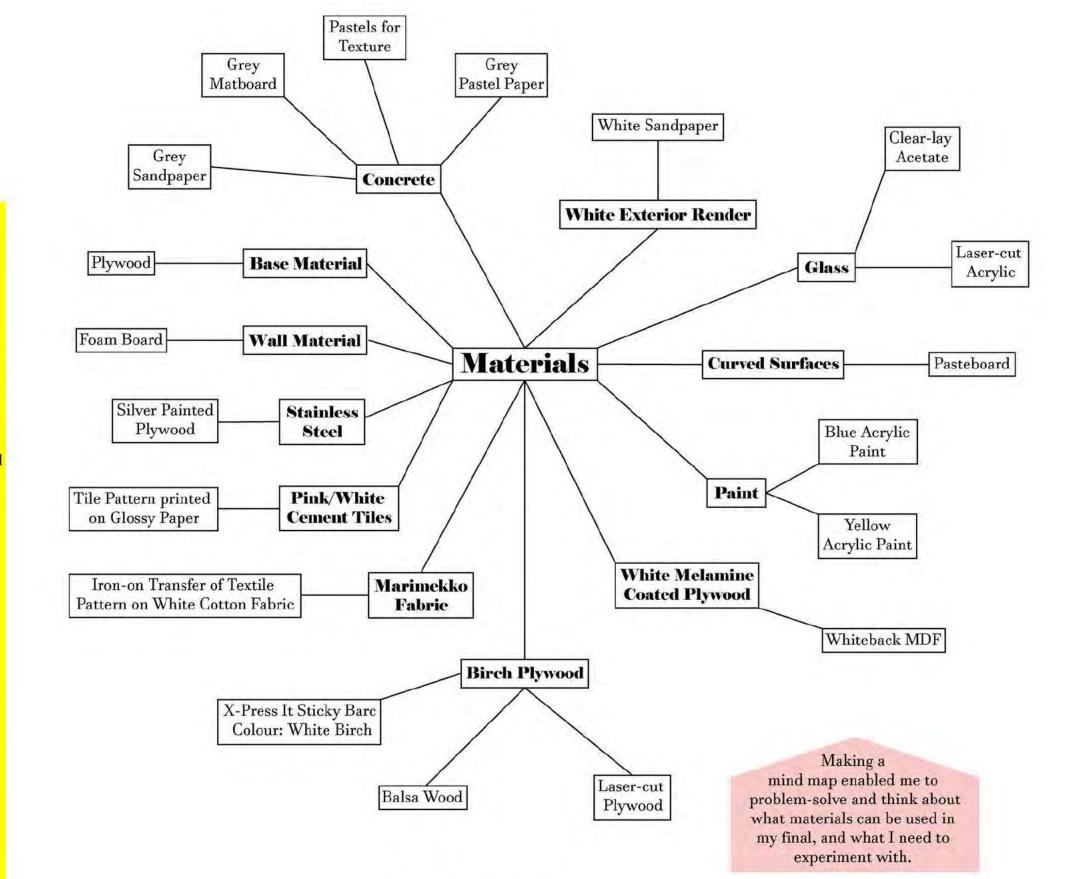
- ~ 7 Wall Brackets Birch Plywood
- ~ 7 Pendants Painted Blue or Yellow
- 18 Windows and Frames
- ~ 19 Walls

#### ~ 7 Doors

- ~ 8 Semi-Circle Handles Birch Plywood
- ~ 6 Rounded Rectangle Handles Birch Plywood

#### ~ Ceiling

- ~ 8 Beams Birch Plywood
- ~ Approx. 170 Slats Birch Plywood



### Materials required for Building and Fit out

- ~ 10 White Exterior Rendered Surfaces
- ~ 11 Plywood Clad Surfaces
- ~ Including Flooring in Cafe Plywood Boards
- 14 Tiled Surfaces
- ~ Including Flooring in Bathrooms
- ~ 4 White Painted Surfaces
- ~ 2 Yellow Painted Surfaces
- ~ 2 Blue Painted Surfaces ~ 1 Concrete Surface

## **Base Material**

appearance of your model

#### Model bases

The base is an important component of the model and should be highly considered. It establishes the site of the model and has the potential to reinforce design ideas. You should think about whether you want to minimize the base, accentuate it, or exaggerate it

Often it is easier to construct the base first, but it may also be built in conjunction with the entire model



~ sturdy and can be used to represent the flooring ~ compatible with most glues

Always present your model on a good, solid base with a clean edge finish - this acts almost like a picture frame and enhances the general

Wynne-Owen, S., 2017

Zell, M., 2008 alsfordtimber.com, 2017

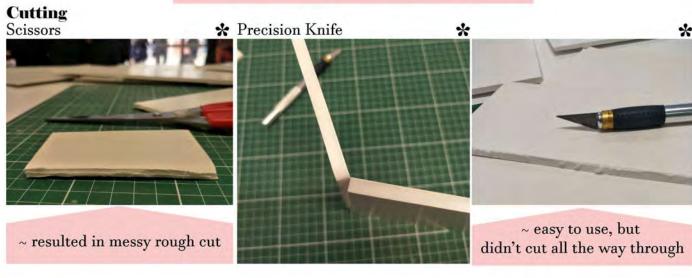
# 6 Development

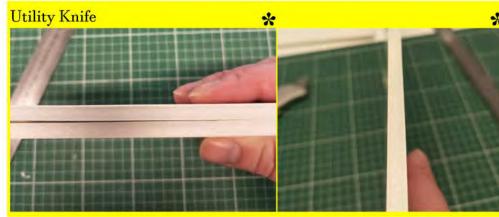
#### Wall Material Foam Board

• White Foam boards come in multiple thicknesses, but most commonly 3mm and 5mm. These solid boards can be used as a base for models created from foam and other light materials. You can, also, use them to construct walls, and choose the thickness based on the scale. If the interior wall will not be visible, then the thickness doesn't matter.

arch20.com, 2017

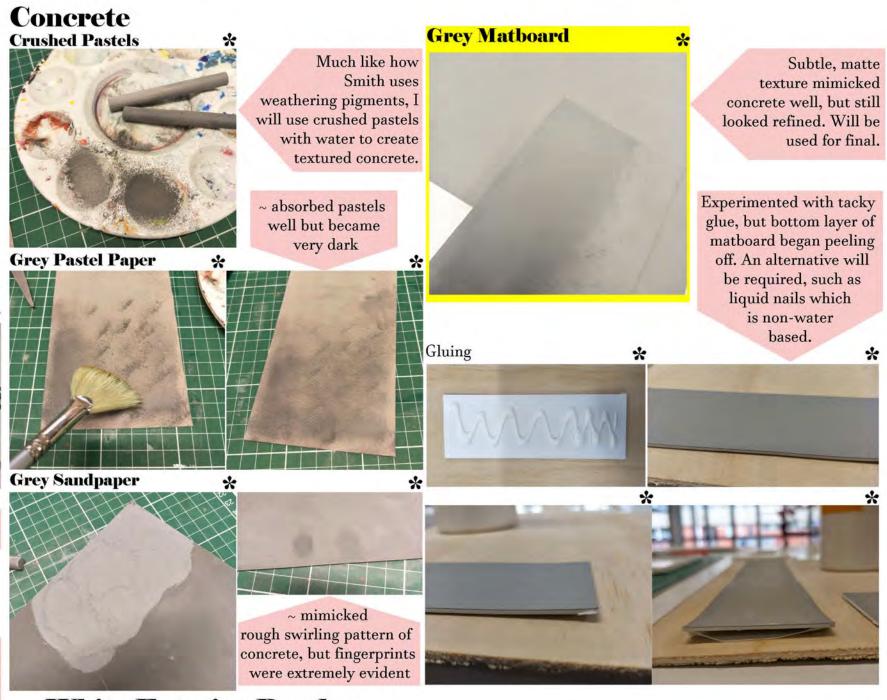
~ lightweight, easy to cut and glue ~ provides clean, even surface to finish or retain





~ will be used for final ~ results in precise, quick cut





## **White Exterior Render**





~ will be used for final ~time-consuming to apply, but clean and holds well

# B Development White Melamine Coated Plywood Whiteback MDF Durable - scratch & shatter resistant, waterproof

**Laser-cut Plywood** 

## **Birch Plywood**

X-Press It Sticky Bare



X-Press It Sticky Barc are self adhesive wood sheets cut ultra thin from real wood. xpressgraphx.com, 2017

Will be used for plywood-clad walls and curved surfaces which cannot be made from real wood.

Will be used for furniture, window frames and doors.

#### **Balsa Wood**



balsafactory.com, 2017

diagma-usa.com, 2017

Balsa Wood is the most versatile model making medium! A must for any hobbyist, model maker and student. Easy to cut, stick and construct. Available in flat panels, round dowels and square eckersleys.com.au, 2017

- ~ easy to cut and inexpensive ~ will be used for table stands
- **Stainless Steel Silver Painted Plywood**



Easily gives appearance of steel, as metal is difficult to cut.



Inexpensive - covers inexpensive substrates like MDF or plywood Choice - can be produced in a wide variety of colors & finishes displays2go.com, 2016

> ~ cheap ~ can be laser-cut

Acrylic

#### Glass Clear-lay Acetate



amazon.com, 2017

Grafix Clear-Lay® is a rigid vinyl (PVC) film that is an economical solution to many plastic film

- · Easy to cut, but won't tear
- Good clarity, high gloss

grafixarts.com, 2017

#### Acrylic sheet is easy to fabricate, bonds well with adhesives and solvents, and is easy to thermoform. curbellplastics.com, 2017

amazon.co.uk, 2017 Acrylic is a transparent thermoplastic material with

outstanding strength, stiffness, and optical clarity.

Will be used for glass cabinets as easier to use at a small scale.

Will be used for windows to provide structural integrity.

## Marimekko Fabric

Iron-on Transfer of Textile Pattern on White Cotton Fabric



- ~ fabric from Marimekko is quite expensive
- ~ was going to paint textile pattern
- ~ instead will use iron-on transfers on fabric
  - ~ minimises cost and time

**Curved Surfaces** 



~ curves easily ~ secured with tabs and glue

# Pink/White Cement Tiles Tile Pattern printed on Self-Adhesive Glossy Paper





~ creates realism and desired glossy texture ~ easy to apply

#### **Paint Blue Acrylic Paint**





Mixed paints to achieve same blue as design.

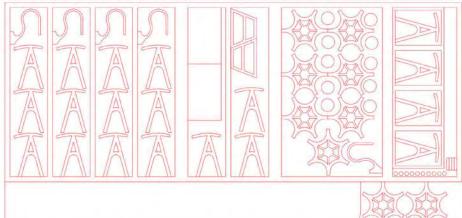
Painted 3D Printed Plastic



Smooth, even texture on 3D printed plastic.



# **6** Production Laser Cutting Files



# **Material Costing**

Material		Sizes Width - m	Thick - mm	No of Items	Total	Cost per Unit		Item Cost	
Туре					Size				
	Length m				Area in m2			-	
Pine Plywood	1.600	1.100	12	1	1.760	\$	8.02	\$	14.12
Clear Acrylic	0.725	0.431	3	1	0.312	\$	21.16	\$	6.61
Clear Acrylic	0.495	0.268	3	1	0.133	\$	21.16	\$	2.81
Whiteback MDF	0.725	0.431	3	1	0.312	\$	3.30	\$	1.03
Pine Plywood	0.200	0.225	3	1	0.045	\$	5.70	\$	0.26
Pine Plywood	0.725	0.431	3	3	0.937	\$	5.70	\$	5.34
					0.000			\$	-
					0.000			\$	-
						Tot	al:	5	30.17

~ exported vector faces from SketchUp to Illustrator ~ layout aims to minimise time and material, i.e. placed furniture components inside window templates

~ costed all materials required before cutting

**Laser Cutting Plywood** 



~ no issues encountered ~ achieved desired shapes quickly





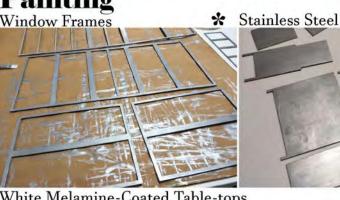
~ required to remove burn marks from laser-cutter ~ decided not to sand all edges, to save time

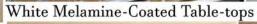




~ didn't cut through all material

~ decided to paint laser-cut plywood white instead





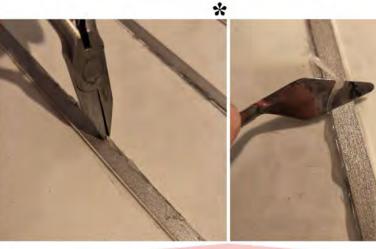


~ painted laser-cut plywood to achieve correct finishes

\* Doors







~ used hot glue to attach windows ~ excess glue needed peeling off with pliers and a palette knife

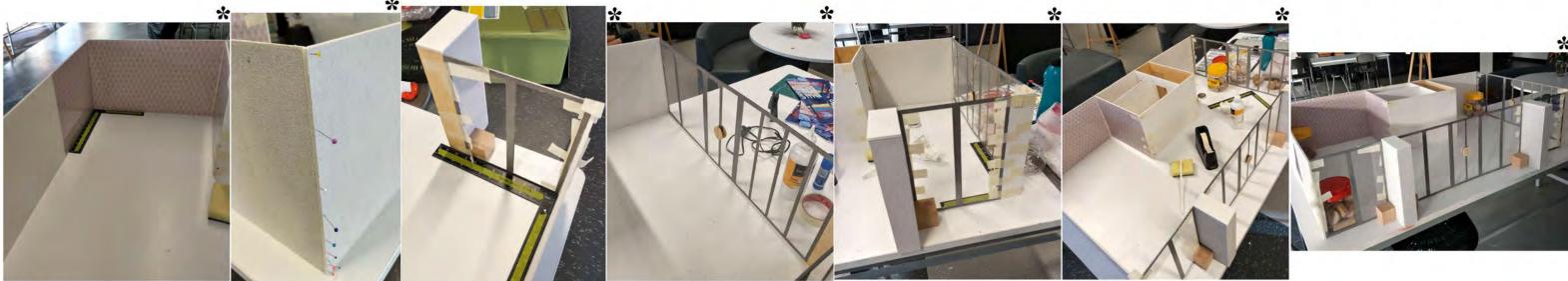


~ applied finishes flat before assembling model

# **Model Assembly**

- ~ simple, but time-consuming
- ~ achieved anticipated sophisticated look
- ~ attached door frames to create realism
- ~ L-square used to ensure model was square
- ~ masking tape or pins used to hold model together while tacky glue dried







~ scored lines to
mimic floorboard look
~ when placing model on base, realised
back wall was too long
~ model was warped
~ cut wall back and re-glued, ensuring

~ cut wall back and re-glued, ensuring the walls lined up with the base





~ created templates to save
time and ensure models were correct size
~ applied fabric and sticky barc to create same appearance
as the original design

~ important as model needs to represent the design to allow the audience to experience the warm, cosy atmosphere of the café, and to sell the concept









~ assembled laser-cut components using hot glue ~ outcome matched the original design, and achieved a unified look as laser-cutter guaranteed all pieces were identical





~ original idea was to 3D print seats, however each would take 1.5 hours to print ~ due to the amount required, I instead laser-cut the desired flat shape out of acrylic, and then heated it so each could be bent to the correct angle



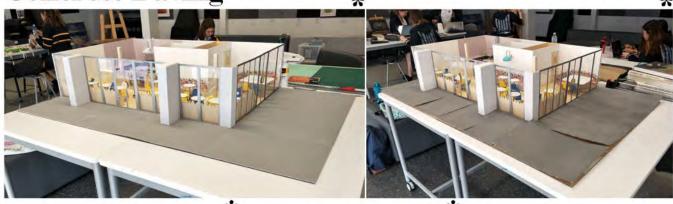






~ hand-modelling skills vastly improved when producing kitchen ~ templates meant I could create polished models to the correct scale ~ pre-made miniature food provides context and visual interest

**Concrete Paving** 





~ successfully created smooth, matte, concrete texture, however pieces warped when drying ~ decided to use 'liquid nails' to secure pieces, combatting the warping

## **Final Touches**



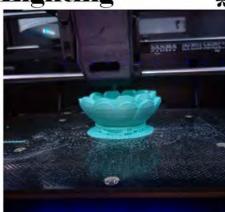


~ plants add freshness and vitality ~ menu gives context

## **Evaluation**

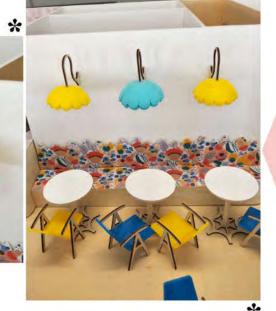
I believe I met all the requirements of the task. The scale model vastly improved my ability to use technology, such as the laser-cutter and 3D printer, and provided me with valuable hand-modelling skills which I can utilise in university. The model accurately mimics a real-life iteration of the café and is refined, detailed, clean and visually interesting with the 8 weeks given to plan and build fully taken advantage of.



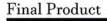








~ 3D printing lights
was effective as the
complex flower shape
was produced quickly
and simply
~ lights were painted
to match original design
~ laser-cut brackets
used to secure to wall











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