



Technology Scholarship : Materials : 2013 : AS 93601

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# Project Overview

This year I was offered the opportunity to design and construct a wearable arts solution to be displayed in the window of the Te Papa Store in Brandon Street. As part of a collaboration between Wellington High School and Te Papa, I was among a few other fashion students given the task of decorating the shop windows during the World of Wearable Arts festival. The World of Wearable Arts is a long and highly regarded awards festival which shows the work of many designers every year, and attracts tourists and international creatives to Wellington. As part of the festival there is a window display competition that stores throughout the city enter by creating a piece of Wearable Art to be shown in their shop window. Being involved in the awards in a prominent manner is important to Te Papa as it represents one of the most internationally and nationally recognised and regarded Arts Festivals.

Many stores design and construct these entries to the competition in-store or employ local artists. However Te Papa values community involvement in a different manner and has supported working with students for the last eight years on producing WOW displays. Offering me the responsibility of producing an outcome for the Store was Manager, Alexis Hawke (*evidence from practice : Client page 2*). As her first year in the position, Alexis had many ideas for the purpose and aim of the display, and encouraged strong creative input and collaboration from me. As there are four windows at the Cable Street location, and one at the Brandon Street location an overriding theme was key in connecting them all into a cohesive public display of artistic creativity. As a core specification I was given a range of photos focussing on Texture from the Te Papa collection and surrounding environment that were taken by the Te Papa photographers to choose from as the inspiration image for my work (*evidence from practice : refined brief page 3*). This was to influence my conceptual outcome heavily and create a link between creation and inspiration.

I selected an image of a Longhorn Beetle to interpret in my piece of wearable art. Another student Jess selected a similar image, and from this Alexis choose that we would share a window space at Brandon Street Te Papa inner city store. Alexis provided two 180cm x 120cm sheets of vinyl; one to be incorporated as a backdrop, and the other to be integrated in the physical conceptual outcome on display. I had the opportunity to have my image of the beetle printed onto these in the same way Te Papa prints their window backdrops throughout the year onto billboard

weight PVC. I had the chance to manipulate this unconventional material to connect my garment clearly to the inspiration image. Unconventional materials and techniques are a core aspect of wearable art as a concept, distinguishing it as a artistic practice and discipline that is getting more and more attention. The defining feature of this project was utilising my Fashion Technology skills in the context of an unfamiliar medium. Individuality through expressive concepts and aesthetics, and innovation of construction, all cohesively span wearable art garments, and is therefore a defining feature of Wearable Art itself. I was given the opportunity to take part in this cultural movement and go beyond clothing as a fashion technology pathway, and be able to incorporate and use skills from other technology areas.



Hannah and I with Alexis Hawke outside one of the window displays.

# CLIENT PROFILE



Alexis Hawke  
Te Papa Store Manager

**HER JOB** As Store Manager, Alexis manages the stock, marketing and staffing of the shop. She is responsible for a consistent stream of sales, because one of the main monetary sources is from the two Te Papa stores.

**WINDOW DISPLAYS** This is the first year Alexis will be in charge of the WOW window displays. Because of this she wants to re-assess and re-define the window display idea. She designs the majority of the Te Papa Store window displays, and has lots of experience in what works and what doesn't. This project is the only time in the year when the Te Papa window display is showing something that isn't advertising a product for from the store.

**IMPORTANT FACTORS** Because the window display is not directly advertising for the store's products, there are different important things about our wearable artworks. It still should attract the attention of Alexis' potential customers. She needs to gain sales and our displays should attract the customer in through its aesthetic impact and interest.

**TEPAPA + WOW** It is important to Alexis and Te Papa to be a part of the World of Wearable arts culture and community. As a big part of Wellington culture, Te Papa has a strong priority to participate in it and also for that participation to be very visible to the Wellington community. Because of this Alexis believes it is vital that our product and display is cohesive with the values of and philosophy of both Te Papa and WOW.

**HER STAKEHOLDERS** Alexis' stakeholders are mainly the people of higher authority in Te Papa, such as her boss, and the overall Chief Executive. She needs to make sure our project is in line with Te Papa's financial and cultural goals.

**THE PHOTOGRAPHERS** The photographers need to have acknowledgement for their photos.

**LIKES** \* MOVEMENT \* BRIGHT COLOURS \* COHESIVE STORYLINES \* TEXTURE \* BOLD SHAPES \* BOLD FROM FAR AWAY AND DETAILED CLOSE-UP \*

**DISLIKES** \* DULL/MONOTONE COLOURS \* THE MANNEQUIN'S FACES/HEADS \* BLACK / TOO MUCH BLACK \*

## EXPLANATION OF MEETING NOTES

1. We asked if we could edit the photo, she said maybe not in colour, but cropping etc could be fine.

2. These are the things that are important aesthetically.

3. There is a very wide area around it, won't just be viewed from the front, back & sides must attract too.

4. Space and access are the only real conditions for the shape/size of the piece.

5. We need to try intercept any details that could go wrong on the day of moving it in.

6. Though it isn't selling something physical, the relationship of between Te Papa & WOW is being 'sold' on advertised to the public.

7. Should draw designs from a distance too.

## NOTES FROM MEETING

- Mess around on photoshop - more into a textile cutting out a third etc
- 2. Movement is good - work from a distance then draw you in
- 3. All different perspectives & distances - wide impact
- 4. fit into the window
- 5. go thing it in and out
- 6. windows - only time the window doesn't make money
- Windows
- 5. things that can go wrong
- 6. come look & make assoc w/ te papa & wow
- bold colour or shape
- 7. distance
- 8. Canvas - accent rather than key fabric
- 9. Can hang thing
- 7. fan potential - light - has power input
- over-reaching theme
- important to acknowledge photographers
- one window-story
- Use screen - scrolling image
- Onto Te Papa blog
- 11. Plants

Stakeholder

Situation

PURPOSE

## MORE BPE EXPLANATION OF MEETING NOTES

- 8. We asked how much we should use the vinyl in the garment (would it camouflage into the backdrop?) and Alexis said it was more intended as an accent, though it has to be noticeable.
- 9. Some ideas we came up with, and asked if they would be viable.
- 10. Different, alternative ways to display our bookwork and photos of progress (other than just putting it on a board)
- 11. We wondered what the scientific/biological rules were around having sealed/stor sterilised plant-life as part of the garment, she said she would have to check with the botany department.

PROJECT OVERVIEW  
KEY MILESTONES

# REFINED BRIEF

I have been given the opportunity by the Te Papa Store manager, Alexis, to design and produce a wearable art garment and visual display to be shown in the window of the Te Papa Store on Brandon Street. As my client, Alexis' role as store manager means she is responsible for the maintenance and consistency of sales, as this is one of the core ways the museum funds its yearly costs. She predominantly designs or supervises the design of window displays, as this is a key tool for her to improve sales and advertise products.

As it is her first year of being store manager Alexis wants to redefine the WOW-Te Papa-WHS collaboration that has been going on for over 6 years, and really push the boundaries of what is possible in a window display. I have the opportunity to produce a creative outcome which helps to evolve and develop the current idea of what is expected from Te Papa and from high school students. As the only time in the year when the windows are not advertising a particular product or purchase, my opportunity is not giving them sales however the outcome should still benefit profit by attracting customers into the store, or just to take a closer look.

My client needs a visually enticing and attractive window display to show Te Papa's contribution to the community and high school education. The purpose of this wearable art piece is to decorate the windows of the Brandon St shop and be entered on behalf of Te Papa into the annual WOW window competition that runs throughout the city. It is to improve the visual environment and share art and work from a high school student with the community and tourists.

The inner city location is in full view of the business district and will be seen by a wide range of people, the piece must effectively communicate with all people and provide a visual enhancement to their everyday surroundings. I have been offered the opportunity to share this prominent window space with a QMC student, Jess Bunnell. She too will be producing wearable art piece and we will display our garments in the window together. This specification means my design must fit into the window space ( ) with another mannequin. I must work alongside Jess to produce an overall display which is cohesive, complimentary and have variety. The colours should create an attractive palette, and the shapes should balance the space. Small, plain white plinths will be available to us to use in the display, and overall it should be simple and dramatic.

My wearable art is to be displayed on a full sized mannequin, measuring:

Bust-  
Waist-  
Hips-

The garment must fit this mannequin without any potential damage to itself or the mannequin, like tearing or excessive weight. The mannequin should be manipulated through the garment, and should not be used as a coathanger. The materials used must not damage the mannequin's surface and the white shade of it should be taken into consideration when deciding on colours to use in the window. Using all limbs of the mannequin is not compulsory however the key idea of it being wearable should inform decisions.

As one of the specifications I have been given two sheets of 1200cmx1800cm vinyl, the type used for backdrops and billboards. One will be used as the backdrop in the window and the other as a material to manipulate (though not beyond recognition) as part of the garment. It's use should be innovative and improve the cohesion of the window display. Both Jess and I will share one backdrop and inspiration.

Another key specification is that the wearable art piece will be inspired and visually and conceptually influenced by an image of the Longhorn Beetle taken by a Te Papa photographer. I have the task of translating my personal perceptions of this image into a materials technology outfit. The influence of texture is a high priority for Alexis, and bright impacting colours is important to attract the eyes of customers. Working with Jess I must balance creating my own creative expression with creating a cohesive set of garments. They should be different and unique in their interpretations of the image but still work well together.

I have the chance to construct a pair of fitted, tailored pants with a high waist. In terms of materials I will need to effectively utilise the given vinyl, and also incorporate other unconventional materials such as snaplock bags, paper, makeup remover pads, and plastic bottles. The World of Wearable arts' philosophy centres around innovation and expression. I am strongly encouraged to use recycled materials; firstly to create something unique and differentiated as a WOW garment, and also to reduce waste and benefit the environment. I will manipulate these materials specified to construct the fitted pants, a shell top, an armour piece and articulated sleeves.

Due to the final outcome being required to fit with the WOW culture of garments having a conceptual idea, story or meaning imbued in them, my design should express an idea of an alien warrior woman inspired by the beetle. This will be done through the use of silhouette and construction. The silhouette should defy the regular expectations and constructs of femininity and clothing itself, and also be striking from a distance to attract a closer look from passersby. The construction should reflect and remix traditional armour techniques such as roman leather tabs and chainmail. This along with high quality construction should ensure the garment has an equal balance of visual and conceptual impact. The aesthetic should be attractive to passersby, thought-provoking, and should express something from me specifically. The intent and design of the piece should reflect my human experience; giving it emotional integrity and greater authentic impact.

My design and construction process will include constant consultation with my key client, Alexis, as well as gathering ongoing feedback and knowledge from outside stakeholders. I must take all feedback and work with it to the best of my ability from Alexis, and be sensible and open to the opinions and influences of outside viewers and people of importance. The Wellington community is

an important stakeholder in my project, as the window will be viewed constantly by a wide range of people I need to be conscious of what is courteous, respectful and beneficial to these people. The garment will be on display from the 16th of September until the 8th of October. The piece needs to be stable, strong and resilient enough to last this time without changing or deteriorating.

The light and heat exposure needs to be considered when making decisions on materials and procedures. The garment must not be dangerous or harmful to people in the shop, it's immediate environment and the wider environment. This can be ensured through use of materials, safety and procedures.

The urban environment in which this garment will be placed in is a key factor. An important and busy space, my piece's presence and influence on its surroundings and atmosphere should be positive and enhancing. It should not be obtrusive or offensive. It should enhance the visual environment and not create aesthetic pollution, through colour, shape and design.

I will utilise professional procedures that will improve the quality and impact of the garment. Trialing and toiles will be used to ensure high finished fits and construction. Formal pattern-making techniques will be used and the final product will be well considered beforehand.

I will expand the horizons of this opportunity by seeking outside expertise in areas I am interested in but do not have high enough quality of knowledge/skill in. I will collaborate with outside sources to enhance the finish of my garment, by using modern equipment such as 3D printers I will improve the individuality and impact of the display and will embrace the WOW ethos of going beyond fabric.

One of the key attractions of WOW is the creative and visionary use of unusual materials. Incorporating, manipulating and embracing materials in an innovative way is high priority and should be used in a way that supports the visual and conceptual design, rather than dilute or drown it.

I must adhere to deadline and timeframes and have my design fully completed and ready to be displayed by the 15th of September. I must be able to install my display promptly in the hour given before the store opens. It should be achievable for me to do this independently without a helper. The garment must also be taken down efficiently at the end of the period.

The piece should be economical and efficient in it's use of materials and costs, and should reflect the ingenuity unique to New Zealand and WOW, not letting money define the garment nor hinder it.

The end performance of the piece is the most crucial part of the project. By using high level quality control and not sacrificing any clean finish the construction result should be exemplary. The outcome should attract customers to the shop, meet and exceed the expectations of my client, and should represent my perspective as a designer, as well as the philosophies and values of WOW, Te Papa, and WHS. The design should work with the mannequin's body as a piece of art, moving beyond clothing and anything predictable. The final product and all the procedures involved must adhere to all the rule and regulations of Te Papa, WOW and WHS, and also the city council.

Colours should be bright, complimentary and attractive. Materials should be unique, textured and functional. Shapes should be bold, different and balanced. Overall the outcome should be a product of conceptual and constructional quality.

PROJECT OVERVIEW  
SOCIAL/ENVIRONMENTAL

# Key Milestones

Meeting with Alexis was the vital first step in establishing the entire project (*evidence from practice : client : page 2*). We discussed the WOW window display tradition at Te Papa, which helped me understand the significance and prestige of this opportunity, and it was not a money making venture for them and was about community and supporting young designers like myself. This aided me in placing high priority in respecting and exceeding the requirements of my client, and motivated me to create a conceptual outfit of Wearable Arts with high quality. I have been to see the World of Wearable Arts show once before and this experience gave me knowledge of the whole culture and extravagance of the festival. As an integral feature of Wellington's creative community and tourism attraction, the opportunity to be a part of that was inspiring and even slightly daunting. I had a high quality of construction and conceptual work to live up to so researching this and developing my brief was a key step.

Researching what others had done in the past WOW displays and looking critically at their use of materials, themes, techniques and the impacts their designs had in the window was vital to broaden my own base knowledge of what worked and what was less successful. Looking at international window display composition from stores that have professional display artists employed to create the look, allowed to see a variety of unique interpretations to display designs and use of mannequins that are not the normal practice in New Zealand. Choosing my inspiration photo and developing a viewpoint and design perception was incredibly important and directed the rest of my creative process (*evidence from practice : image choice : page 5*). My work in ideation and exploration of the Beetle's anatomy in visual design work expressed my unique personal reaction to the imagery and helped me distinguish my design from other WOW pieces. I was drawn to the tiny yet beautifully functional limbs and joints. Working through this visual reinvention of the subject supported all my later work in translating the essence of the beetle into the garment. The 'essence' of the beetle also synthesized with my further design intent – reflecting the beetle's effortless coexistence of functional strength and natural beauty.

A more personal milestone was realising what the underlying themes were that had been coming through my concept and development stage (*evidence from practice : story development : page 6*). This organic development of my statement regarding media portrayal of female warriors was tribute to my comprehensive research and ideation. Upon

construction using the 3D printer was an influential part of my process, it extended my skills greatly and was an extremely good decision in terms aesthetic, time efficiency and public recognition. I pushed the boundaries of WOW window displays and integrated a modern technology not previously associated with fashion or wearable art. The resultant interest throughout my school, the Ministry of Education Technology Hui, newspaper and technology resources extended the purpose of my garment and elevated it to being a significant piece of technological development.

Varied and unconventional thinking came in many forms and at different stages. Modelling was an important point at every stage to test, inform, and help determine steps forward that gave the best finish and a look of elegance. Constructing the sleeves of my solution was a step I am particularly proud of, as it gave a non-human structure and truly WOW feature of extremity and stimulation (*evidence from practice : bottle sleeves : page 7*). The decision to not use the mannequin in a way that is the norm, came with the arm formation, and complimented the blurring boundaries between fashion window display v's wearable art and conceptual thinking. Working with a bold silhouette and challenging proportions was a key aim, and the articulated constructions of the narrowing plastic bottles encapsulated this. I was innovative in material use, and optimised the iridescent sheen of the beetle through layering spray paint and sheer stockings. This creative texture technique also formed a transparent webbing at the joints of the arms which was visually very elegant and reflected the contrast of soft and hard in the longhorn beetles physical makeup.

Installation day was immensely exciting and rewarding. Working with Jess put in her display and Fiona, Te Papa Store assistant, to lay out the garments and plinths for the board displays was an extension of my process. This was the moment I was achieving the key purpose of building a window display which was the overall end product. Seeing my final outcome in the space made the hard hours of work worth it and because it was being acknowledged and praised in the public space of the downtown shopping district of the city.

I believe throughout the project I strengthened my 'big-picture' vision as now reflecting back upon the product as a whole, I feel extremely satisfied that all the smaller components; testing, patternmaking, construction techniques, materials, colours, textures, and ideas have morphed in a cohesive way to work together to produce a high quality conceptual whole.

# IMAGE CHOICE

When I started looking through the image options I kept being drawn towards the insect photos. I've always liked small things, so the incredible close-up detail of this photo caught my interest. I think insects like this longhorn beetle are the closest things we have to aliens. I love the symmetry, horizontally, I like how the bug sort of starts from the central line out. Also with this up close photo I can really appreciate the worn out shell. It looks tough and hard, but also has these tiny delicate scratches. It gives this effect of time and adventure. I am really interested in the hard exterior shell, how it protects soft insides, lets it fly, and defends it from predators. Its body is sort of pieced together, which all in all makes me think a lot about armour. I like the idea of having a natural armour as part of your body, made of many pieces. This way that it is made up of many parts creates a really cool idea of self built protection. I think I would like to make my garment up of lots of pieces. The other thing I like and noticed about this was the what is connected these parts into a full body that could move and function. For movement the parts need to be flexible, so it is these joints that interest me - the knees, antennae, head-body-divide. This idea is also in human armour for example leather layers that you can move in.



I also like the bright colour with the black. This would be used as a camouflage for the beetle in its natural habitat, but when it is in the human environment like a museum it really stands out. I like the focus of movement and physicality in a usually aesthetic realm. I am keen to incorporate this value in my garment, taking the warrior, armour story and giving the garment conceptual depth through that. The one interceptable issue I foresee is how to make the bug into a backdrop. There is a lot of white space in the image. It would be quite hard to tessellate this image, so I may end up just keeping the original image as is for the backdrop, which would mean it would more be an inspiration the thing.

Jessica Bunnell from Queen Margaret's College also chose the longhorn beetle, so Alexis decided to have her and I share the Brandon St window display. We will share one extra large backdrop, and have to work together to make a cohesive window display. I will be having a meeting with her and Alexis very soon. We will probably have to coordinate on colours or themes.



Jessica Bunnell  
jessicabunnell@gmail.com  
0273463042



Lia Penny  
lia.penny@xtra.co.nz  
0278590634



Otan-NH-02.jpg

The other two QMC girls have chosen these images and will be making a garment for a Te Papa window.



Rosie Reid  
Rosie.Reid@student.qmc.school.nz  
0277674395



Bumble-Bee\_01.jpg

Teacher:  
Barbara Knight  
Barbara.Knight@qmc.school.nz

KEY MILESTONES



KWWaterfront-09.jpg

MY CLASMATES  
Frankie's choice  
Hannah's choice



JG\_K8A2939.tif

# MEANING/STORY DEVELOPMENT

I started this design process being inspired by the ergonomics of the longhorn beetle. I loved the joints and concentric limbs and the tough outer shell. I'm fascinated by the fact that such a small creature could be so well designed and so adapted to its environment. Its defence mechanisms were strong and well worn as I could see from the scratches and marks on its shell, but it was also beautiful with bright green splotches on its shell, and a symmetrical body. I have taken these functions and natural designs and incorporated them into my concepts, development and final design. But after all this, my core concept and thoughts about my designs and what I want as their message, has sort of transformed into a theme I am very passionate about. Basically when I looked at this beetle, the first thing that struck me was its function, what it could do and the wonders of its body and shell. The beauty of its colours came after; I saw a type of beauty in its ergonomics. Its abilities came above its aesthetic. This idea of looking at something and appreciating it for what it can do instead of what it looks like is a core part of the modern feminist movement.

I was heavily inspired by the idea of the beetle's shell being its armour, natural armour it has developed through hundreds/thousands of years of evolution. And so these two aspects of my concept sort of coincided through an issue that is very prevalent in modern media and video games. This is the over-sexualisation of female armour. It's one of the worst examples of patriarchal oppression in our society in that characters in movies, TV shows and videogames who are male, are designed with practical, strong and defensive armour. Whereas female characters get stuck with a metal bra, tiny shorts and thigh high metal boots. This complete destruction of the purpose of armour (to defend oneself) is something I would like to combat with my wearable art piece.

In my design I have used large pieces on the shoulders and the bust which are pieced together with flexible chainmail joints. The outfit has knee pads and roman-armour-like scales/petals on the hips, with long thick sleeves that descend to a point. Under all the different pieces I have designed a full body jumpsuit, which has reinforcement and is flexible. This fitted form is visible on some of the legs and around the waist and stomach. I wanted to create this character with an awesome set of armour that would be effective and practical, and that didn't sexualise her. But this didn't mean I had to cover the female figure and try and avoid the whole idea of femininity. So by keeping these parts of the body visible (but still protected) I was trying to reclaim the female body and not label it as a weakness that needs to be covered up. The stomach and lower torso area represents fertility and creation, so I thought it would be cool to keep this part natural, as it is one of the strongest features in humankind.

The outfit is made up of multiple pieces, which reflects the way the beetle is made up of many parts. Like the beetle has adapted to its surrounding, threats and changes, the warrior woman is adapting to oncoming challenges by building up her defence system piece by piece. Based on the aesthetic and this armour idea, I think the character I am dressing is a alien woman warrior from some sort of futuristic location. She has had to defend herself (I don't want to focus on a violent sort of use of armour) and has collected things along the way. I was thinking it would be interesting to fill the little snaplock bags that I am using for the petals/scales with things this woman have collected on her journeys: herbs, photos, matches (and other simple vital tools), and things to represent beauty like flowers or beads or buttons. Like a sort of set of pockets. If I put the scales on the shoulder it would be a cool reference to military status, how you would wear different colour/badges/ stripes there to show your position of authority, so I could use these petals as a symbol for a self made authority.

I am sort of reconsidering the choice of the mosaic makeup remover technique, because I feel like it looks too much like the cells on a bug's eye, and doesn't really relate to the beetle. I am feeling more inclined towards the quilted makeup removers, because it is thicker and looks stronger and more insulating, which relates to the concept I am developing. Also I could flip the quilting everyso often to show the flower pattern side, showing the beauty amongst and inside strength. The scratches on the beetle jumped out at me aswell, they tell a story, and I think it may be cool to look into having some sort of record of the alien woman's journey, it could e thee things in the snaplock bags, or could be in decorative pleats to represent scars etc.

I am feeling really happy about how my initial thoughts have developed into a fuller concept which has a purpose and story and gives some passion to the message of the wearable art piece. Because through art you can express opinions and feelings, and that is what I am doing, making a statement about the sexualising of female armour, and about the strength and potential in women. That abilities should be more important than looks.

combat the ~~sexualisation~~ sexualisation of women's armour  
futuristic alien woman warrior  
not sexualising but not hiding feminine features  
fitted around stomach etc - fertility  
practical  
pieced together armour like bug  
flexy limbs  
built up like collection  
layers and protecting not attacking  
natural armour - strength in bodies but also  
adapting, learning and building  
future - this woman has had to adapt to her  
challenges etc - building up  
survival  
bags holding herbs or photos etc  
flip quilting to show beauty in strength  
adapt defence systems  
Colours as disguise  
scratches and  
function over looks  
scars tell story and development.

INITIAL CONCEPTS  
KEY MILESTONES



# BOTTLE SLEEVES



After deciding on the flat round based bottles for the sleeves, I layed out the ones I had and played with an order to glue them together in. I brought a bleach bottle in as well, because it also had a round flat base and was much bigger so I could use it for the upper arm areas. This looked good so I brought two in, one for each sleeve. I thought I would need more, but looking at the chest plate on the mannequin, a person on the street (and up close) would only see from about the elbow down. Because of this I decided to start the sleeves from this point. I also came to another seemingly obvious understanding, that actually you wouldn't see any of the mannequin's arm at all with the sleeves covering the arms and hands. So to make the building of the sleeves simpler and more effective I have decided to not use the arms on the mannequin. This means the spindly insect arms of my garment can be skinnier and thus more insect-like.

As I said earlier while trialling the bottles, the bases of most are too hard to cut into by hand with a Stanley knife or scissors, or else it is difficult to cut a smooth and accurate curve. So I decided to look outside the fashion classroom and seek some external expertise. I organised to meet with the mechanical engineering teacher from my school, to see if he had any tools that I could use to cut or melt out an even circle from the bases of a few different plastic bottles. He was very helpful. The class had a circular drill with a large range of sized drill bits that were appropriate for cutting plastic. Terry, the teacher, said that for the tool to work and not simply bend the bottle it had to be cutting on the inside of the thick sturdy ring area of the base. So I found the drill bits that had the circumference that would match the inside line for the water bottles, bleach bottles and chi bottles. Then he got me to use an electric drill and drill a small hole into the centre of each bottle's base. I made sure I wore safety goggles and knew how to use the equipment properly. The circular drill was a more skilled tool so Terry, with the help of a senior mechanical engineering student, did this part of the process for me. This made it far safer, more accurate and higher quality. The student held the bottle against the side of the worktable (the vice couldn't hold it steady enough because of the plastic's flexibility) and the teacher lined up the central drill bit with the hole I had drilled before, then cut the circle out with the circular drill piece. Looking to outside experts and people with higher knowledge and tools for a construction technique was a really important and professional part of my WOW process. It is about extending beyond what is conventionally 'fashion' meaning I need to go beyond the classroom too, and work collaboratively with others.



- I laid out the bottles in order: bleach, water, water, chi. Then cut, using the Stanley knife and a board, along the highest point of each bottle that would fit comfortably into the hole above it. Because I wasn't using the arms of the mannequin, and a sleeve would hide it, I didn't need to cut the tops of the bleach bottles.

- I then used the hot glue gun on the inside edge of each hole before holding the lower bottle in the hole until the glue set. I had each bottle at a slight angle so that it would give the curved effect. For the chi bottles I needed to add a band of newspaper to the join to make it fit more snugly.

- I trialled shaping toilet paper rolls for the last spindly end of the, but it came out too bumpy and not as smoothly peaked as I wanted. I then looked for something of an appropriate shape, and found some empty glue sticks, which were about the right shape, and though didn't have a peaked point, I actually decided to use this as it would look bolder and more clean.

- For some of the joints I taped some newspaper around the inside edge to make it fit better.



**FIX**

For cotton, linen, silk and viscose only.

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## SEWING SLEEVE TOP

The sleeve top was for attaching the bottle sleeves to, so I decided to make

an ultra cropped top that could sit under the vinyl shell top and be easily put on. I have

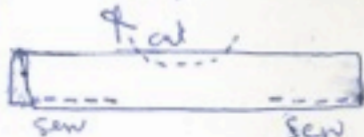
decided not to have the mannequin covered anyway. So in the photos above you can see how I used the leftover ribbing and folded it in half length ways to see if it would be long enough to have the bottles at the right height. Luckily I had just enough. I needed to

have a neck hole so I cut out a slit then shaped it while on the mannequin. To hem the edge, I trialled a hong kong binding, as you can see in the sample above left.



This worked really well so I used it on the neck. The stretch of the fabric made it very smooth and clean. The last thing I did was sew the under arm seams. I again put it on the mannequin and pinned where I would need to sew to then I did a basic seam right to right sides

I was very happy with final products fit and subtlety.



# Initial Concept & Development

My initial design and conceptualisation process was very organic, and was key to establishing my vision which guided all my subsequent decision-making. I explored my inspiration and communicated my creative process through extensive design drawings and sketches. My first ideation process involved taking the photo of the Longhorn Beetle, and extrapolating the specific forms, colours, lines and concepts which had caught my initial attention and interest (*evidence from practice : ideation : page 9*). I examined the anatomy and function of the beetle through sketches which provided a great base for abstracting and translating those inspiring aspects. Though I followed a professional creative process, beginning with ideation, concepts, development, then a final design, I made sure the documenting of this process did not hold back the quantum leaps in ideas that occurred.

It was very important to balance being disciplined in documenting and communicating my process and going with the natural creative thinking that goes on in action. This was for both the benefit to reflect, and for communication and development with my client. Ongoing thinking in the back of my mind occurred even when I was not working directly on the project. An example of this was when I was in town one afternoon and had a sudden burst of creativity and began sketching bold and unusual silhouettes that challenged the traditional notion of proportions in clothing. This ideation process was very instinctive for me as in that it continued and extended beyond the classroom. From here I moved on to concepts and in this I brought more detail and form to the shapes and silhouettes I had been exploring. (*evidence from practice : ideation : pages 9*).

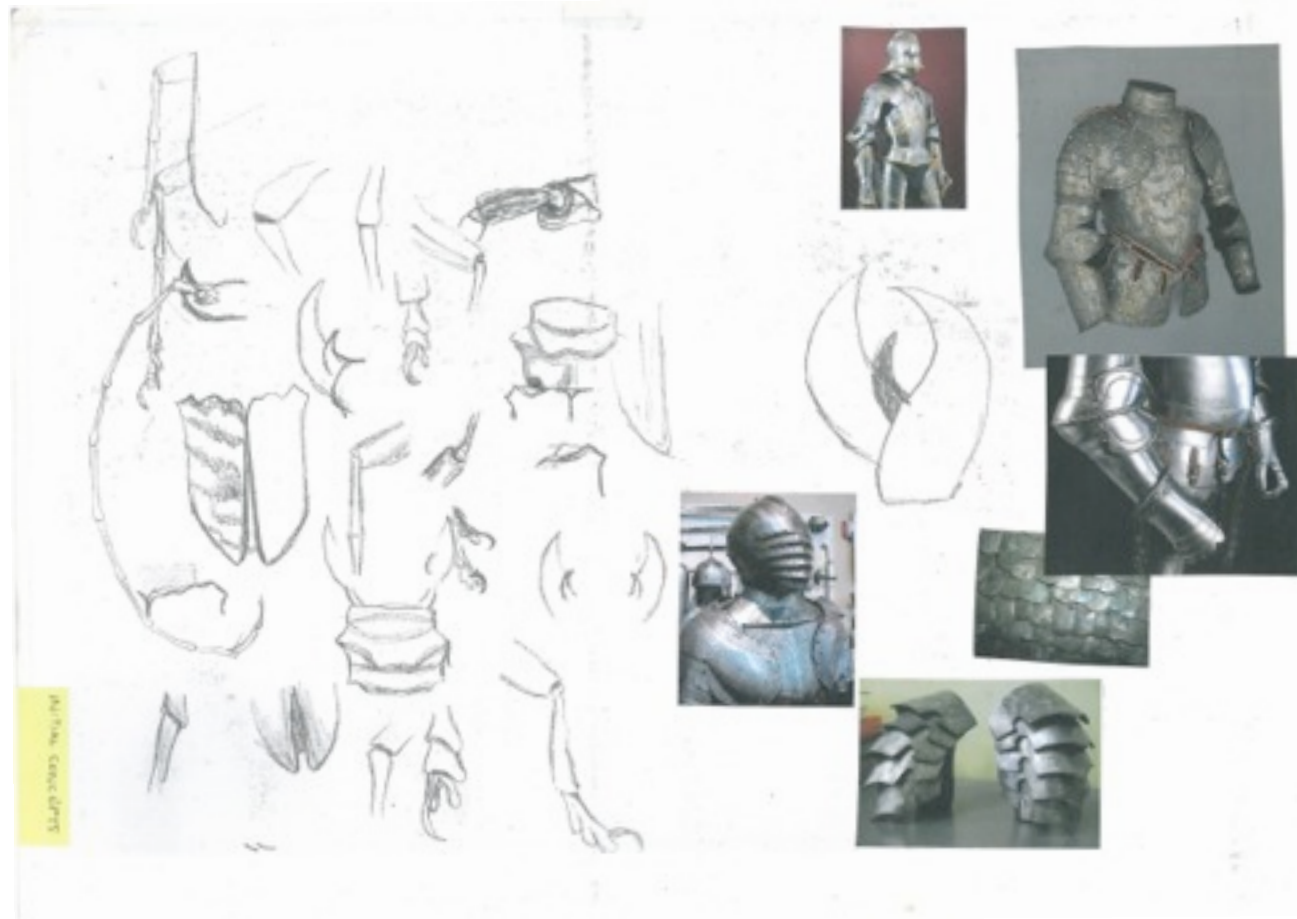
I was really driven to produce something that pushed the boundaries of WOW. As part of my design process I researched examples of Wearable Art, other students' WOW window displays and window displays (*evidence from practice : wow window research : page 10*). This helped me understand the current ideology of Wearable art window displays, which meant I could be more successful in pushing the boundaries as Alexis had been enthusiastic about. This was one of the deeper complexities of my project, as being the new store manager Alexis really wanted to redefine what the window displays of Wearable Art meant for and to the Te Papa Store. I felt that what had been in past years was mostly following a formula of a fitted bodice with a ballgown skirt. I found myself determined to break from of what had become the previous norms and create something that embodied the idea of World of Wearable Art, in it being an artwork on the body. My concepts and development began to merge and flow as I began to establish an aesthetic feel for the outcome (*evidence from practice : ideation development : page 11*). In particular I concentrated on the limbs, sockets and joints of the beetle. This

mix of function and a defined aesthetic developed into me analysing different types of armour. This linking of my design work to a bigger context gave depth to my conceptual side of the design.

In early analysis and research I saw that a key value for Wearable Art was an expression of human experience and personal opinion. I took this and made it a part of my garment's purpose as I developed to deepen the visual interpretation. My research into women's armour in history, video games, and film impassioned me and gave me a train of thought towards a garment that was political in reclaiming the function, strength and consequent beauty. The video game industry most often sexualises female armour to the point of disempowerment (*evidence from practice : story development : page 6*). Through consultation with my client I came to a working final conceptual design which embodied all the key features that I liked in my development. This was a process of scrutiny and consideration and helped to make the garment to capture the concentrated essence of my idea.

During the drawing process I was in working in parallel with testing different materials, construction and application techniques. Doing this alongside designing helped to make these two aspects evolve in a more cohesive way. I trialed makeup pads, newspaper, keyrings and snaplock bags, doing this helped me get a clearer idea of how I could use techniques and materials to portray ideas in a 3-dimensional manner (*evidence from practice : modelling for ideation : page 12*). In my initial research of existing wearable art garments, I noted that sometimes unconventional materials were used as the sole feature of the overall design. I wanted instead to use the unconventional materials to express design in a unique way, rather than define it in a literal manner.

Innovation and individuality was high priority. These aspects helped me to produce a deeper design, as my investigation and abstraction of traditional armour techniques of roman leather tabs and chainmail, contributed both to the overall aesthetic, and to the strong-female portrayal of protection within the image. Testing techniques enabled me to know what was achievable, what was efficient and economical with time and materials, and what would have the most impact and capture attention. I presented and discussed my ideas with Alexis throughout the entire process at various meeting points where she was very encouraging to have something uniquely 'me'. This additional gave me useful opinions from someone who has seen many wearable art Te Papa window displays. Alexis particularly like the elongated arms, the bold green colour and the different use of fitted pants in contrast to the previously seen silhouettes.



# WHS WOW ANALYSIS



(LEFT) The main thing I like about this the wearable art piece is the motion and movement. I think the thing that creates this movement is the structure of the skirt pieces and the train. The multiple pieces that make up the skirt are structured with wire around the edges. This both holds the tapered shape of each piece, but also can be bent into a 3D form. The designer has curved each piece to look like the wind is swirling the fabric. With this structure it captures a moment in motion which really makes it more attractive to look at. The train also looks wind swept, the way it has been layed out. With the range of colours in the skirt, I like that the bodice has been kept simple. And the hat piece reflects the Asymmetrical look of the garment.

(BELOW) I like this garment because it is a change from the usual ball dress look. This seems like an actual wow piece to me, because it is an adornment of the body rather than a piece of clothing. I think there is a cool theme/concept with this piece, the designer is juxtaposing a child's safety, comfort and feeling of being nurtured (soft toys, diaper & bib) with childlike representation of danger, the bear head. I think the fact it's a cape and the bullet belt is made of keys also is saying something about security. This suits the location (save the children) and makes you look a bit longer. I think there is a lot of mannequin showing and you don't get a very good view of the cape, but it is colourful and definitely intriguing.



looks really clean and thoughtfully designed. The colours definitely look like fire, which with the sun ray shapes gives the curling movement of flame. I don't think the spiral wires coming from the collar are very necessary (on a short mannequin I don't think you can afford to have that lot of different details. The sequins are especially cool, this reflects the light and gives it shine to an otherwise plastic look.



(LEFT) I don't like this garment very much. I think there is too much of the mannequin showing, and the outfit is too simple to be a wow piece, it looks like something you could buy from a clothes store. The one art aspect of this garment is that it is made out of shredded money. As it was displayed in the bank, I think this was a relevant material choice and it suits the location. I think this is important in my garment it needs to reflect the environment. The wrapped look is interesting but it would need far more to look avant garde.

(RIGHT) I really like the silhouette of this piece. This and the colour palette is what draws my eye to it. The blue and green work really well together and I think having a mix of tones for the blue separates it from pure matchy-matchiness! It's good to have these ocean-like colours because it isn't the usual colours, you immediately think of butterflies with, so it isn't obvious from far off.



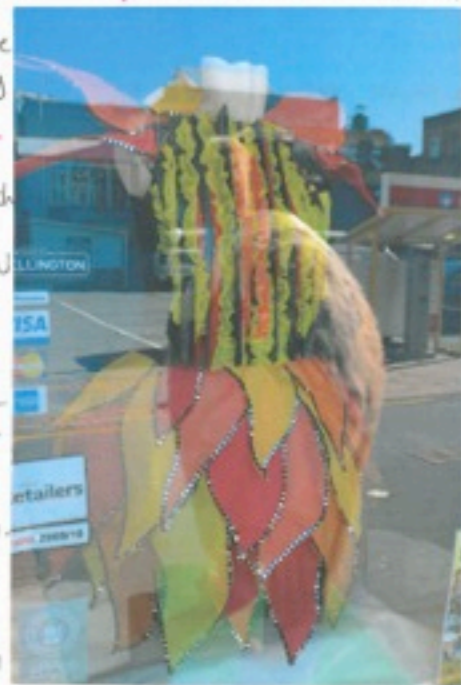
I really like the Asymmetry, especially the single wing and the wing coming from the bodice. This gives a really interesting silhouette, and I like that it isn't a big puffy skirt and the wing pieces that make the skirt merge in to the leggings. The little dot and details of gold are really pretty, and glam it up a bit. I think the mask is a cool idea for a head piece, overall this garment is a cool interpretation of a wing.



(ABOVE) This dress has a lot of work and detail in it. I think in that way it's very effective in being aesthetically pleasing far off (because of the bright red and shining bodice) and glass close-up. The bodice is made of broken CDs which is a very innovative use of a recycled material. I also like the double straps. The skirt is made of lots of paint-painted tulip-like pieces. Together they create depth, and I quite like the A-line silhouette of the skirt. I'm not so keen on the open split at the bottom of the skirt, the material looks a bit rough and doesn't suit the glamorous look of the rest of the outfit. In terms of the display I think the bag on the plinth is a very cool idea, and pulls together the layout. I think it would have been nice to have a head piece, because the head isn't pretty.



(BELOW RIGHT) I really like design features and use of materials in this garment. The designer has made really good use of the small mannequin, I love the high neck boat-neckline and the ruffles pleated into the front. It is pretty up close and pops colour against the black from a distance. The colour-collor tying in with the skirt





(LEFT) I think the material choice is quite cool, the colours aren't very attention grabbing though, and the stamps only make a big impact if you are up close. However, to still ~~make~~ look interesting from further away, I think the large stamps behind the garment really works. The bold black profile silhouettes contrast the delicate texture of the rest of the garment and black on white really pops in front of the black background. I think it's a good idea with the cord wrapped around the mannequin's legs, because there is already quite a lot of white mannequin showing, which doesn't look that great. I think when I make my design if I want the arms showing I will get over the legs.



(ABOVE RIGHT) This wow garment has really nice colour and movement (especially in the skirt, with the wind-rippled look that seems to defy gravity) And makes much more of an impact than the garment on the left. The best thing for me & my project about this design is the way the legs/feet have been tackled. I really like the use of coloured sheer stockings, as it doesn't detract from the colour of the dress, but it also prevents the majority of the look being that not so great white colour. And, the solution to the foot wear is really effective. I like the wrapping of the feet to make it look like shoes, and it also ties goes well with the fascinator.

(RIGHT) I think this garment has really good design decisions in terms of materials. I love the juxtaposition of army symbols - the helmet, bullet belt, doc mortars, war-paint, and the beauty symbols: make up, lipstick, plaited hair, hair dryer. It's good because I can find a deeper meaning in the garment (differentiating fashion from wearable art) perhaps it's saying something about the dangerous territory of the beauty industry, or the glamourisation of war. This thoughtful design makes a statement which is important, and I love the rope/hair plaited bodice, however I don't think it has big impact, colour and shape wise, the silhouette of the dress isn't very unique and the whole design is quite simple.



(BELOW) I quite like this garment and also the display design. I like the simple backdrop which accents the white flowers, as does the peacock ornament. It's all very cohesive and simple enough to make you focus on the dress, it's a smart idea to have the backdrop black because it makes the white pop. In terms of the dress, it's very light and voluminous, with very pretty detail. I think from a distance the dress wouldn't attract much attention, because of the one-colour-palette, and small detail. But up close it definitely works. She has had a different type of mannequin to work with, and if it had been a full body model, the amount of skin showing (arms and the open legs) would have been too much, but this is just enough, and the choker was a smart choice because it creates an almost tiered shape with the skirt & bodice, and makes me

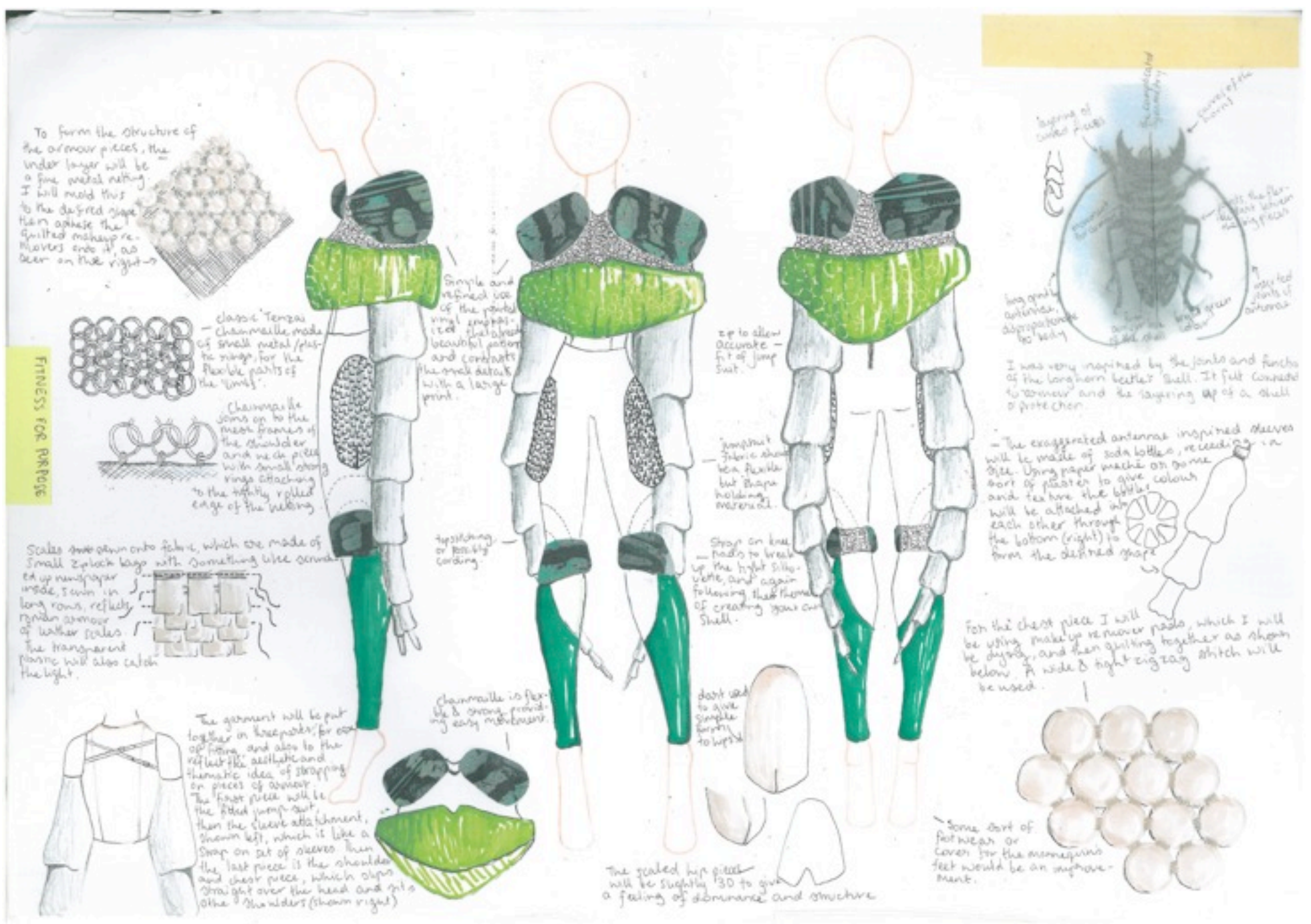
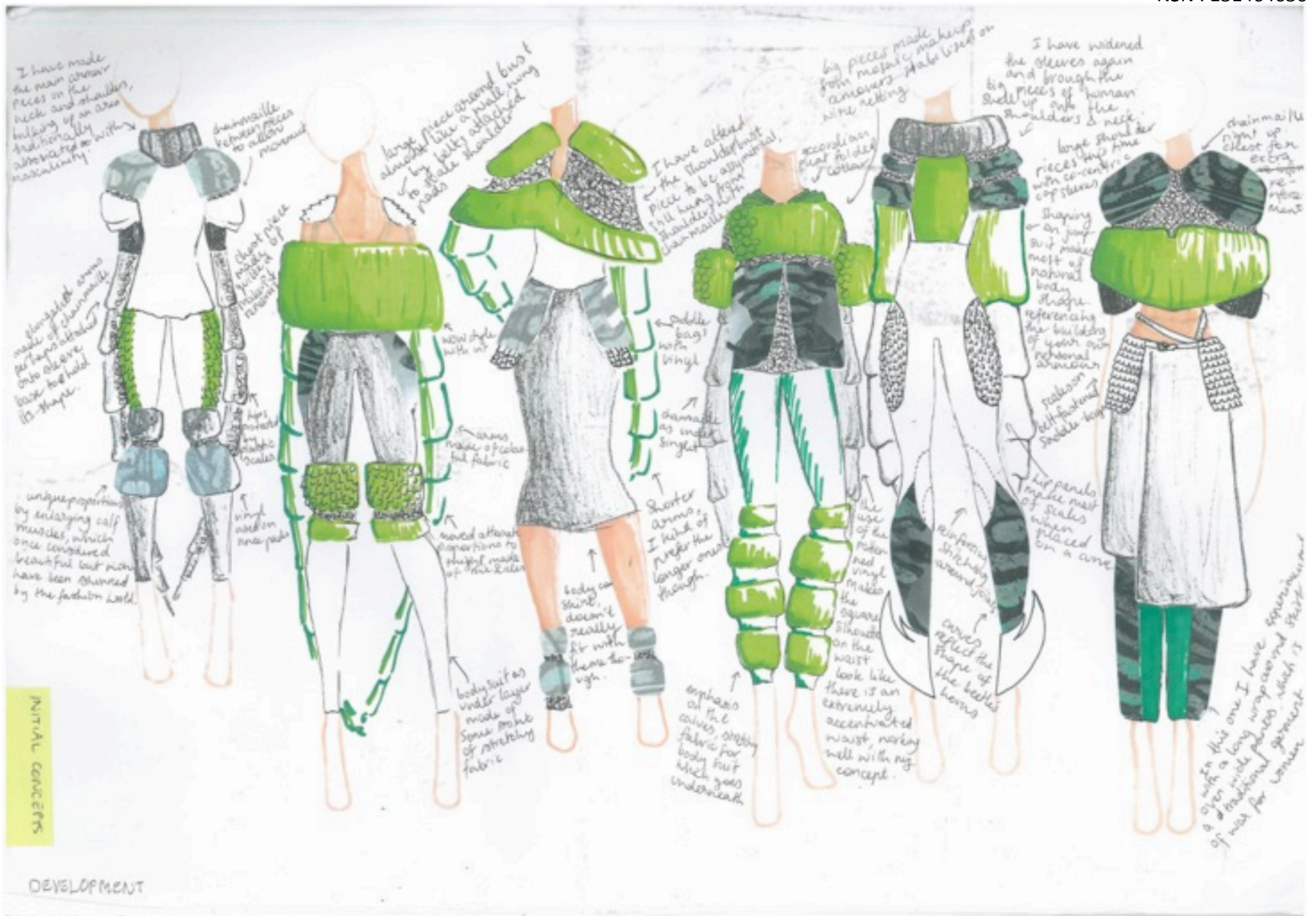
(ABOVE) The most important part of this garment that I want to learn from is the use of reflective material. With a very reflective window it's quite risky to use a metallic material, but in this piece it has really worked. I think that this is because of the red flower pattern on each piece. The designer has layered the red fabric underneath each silver piece, which has an intricate cut-out design on it. This shows the red and brings variety to the silver reflective surface. I think this is good because it achieves the reflective shine but also shows the shape & structure. I think the amount of mannequin showing is good, just the arms & chest, but I think something on the head would improve it.



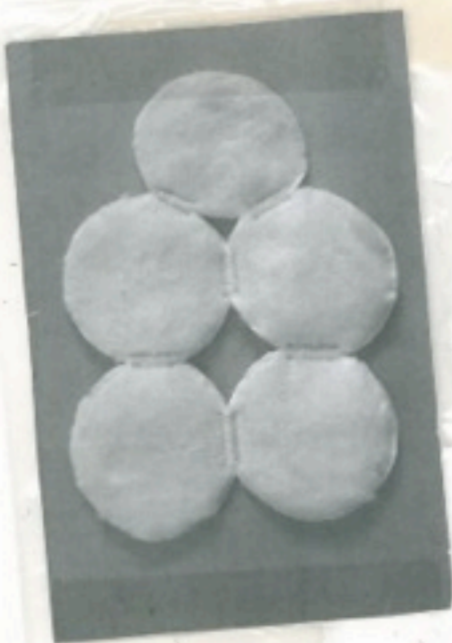
(ABOVE, BOTH) I like that these two designers definitely link together in terms of palette. And the use of metallic fabrics is quite effective, especially the skirt on the one on the right. With the 3D structure of each small piece of the skirt it gives depth and texture to an otherwise flat and shiny material. I don't think the top is quite as effective, it's made out of head phone wires, and up close it is very lovely detail but from even a slight distance it has a strange reflective quality and almost looks like synthetic satin. This plus the simplicity of the top design makes it a bit unstimulating, also, I don't like the feet showing. The design on the left is cool in the skirt design with the skirt chicken wire frame, it reminds me of bustles and hoop skirts from the 1800s. The video-tape coming off the frame is also very cool, but I would have liked it if it went all the way round. I'm not a fan of the bodice, I don't think the frayed edge looks polished or concious, but I do

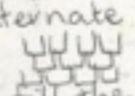


SOCIAL OR NATURAL



take out this page



BELOW  
 This is one of my favorite samples. I filled lots of tiny ziplock bags with crumpled up newspaper, closed them, then sewed them in overlapping rows onto fabric. The result was this awesome fish scale effect. I found it quite hard to sew very straight lines with the bulk of the paper, so I think next time I will use a zipper foot. I really like the reflective quality of the bags, how the sort of shine and the irregularity of the paper pattern. There are so many possibilities: I could alternate the rows of bags so it looked more like this  which would look very effective. I could fill the bag with different things, pictures, beads, feathers, shells, straw. I could make an image using the contents colour in the bags like pixels. I really love how the bags turn outward when on a curve, it looks awesome on the hip, and has a cool texture on the shoulder. This sample is a really great reference to my concept, it reflects the leather scales roman armour was made of, similar to chain-maille being very flexible (as you can see on the mannequin) but also protecting the skin.



ABOVE This was one of my first samples, and it was very successful. The narrow zigzag worked well to join them together without changing the round shape. I tried to options, the square formation and the triangular formation, both work but I prefer the triangular one as it has.



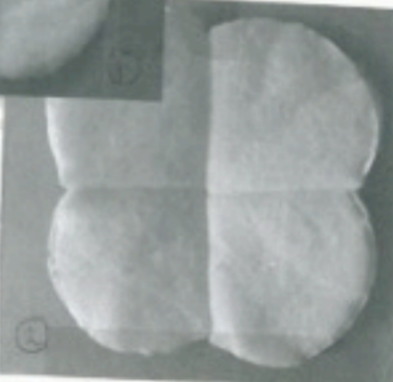
I think taking inspiration from these different types of armour; roman, medieval, beetle, is a perfect way to add depth and content to my armour concept. As the bags shell is pieced together, I will piece mine together from different eras.



nicer gaps, and looks more consistent. It curves really nicely on the mannequin. I really like it because it makes a mosaic look. I could use it on any part of my garment.



FLOWER QUILTING



LEFT For this sample I had originally intended to do the quilting (image 2) but when I looked at the underside, the seams had created a really cool pattern. It looks like one of the traditional Island flower motifs. I really like the definition that comes out when I sewed the make up removed together, you can see in the photo it creates different shadows on the material. Its I also really like the flower side. The design looks complex but it was actually so simple. Its very flexible and as you can see in the image here, it fits curves really nicely. I could continue quilting around it, it would be interesting to see what pattern that would create. I could use it on leggings or even shoulders.



INITIAL CONCEPTS





# Social & Environmental Implications

In forming the brief, the social and environmental implications of my work and the opportunity were major key factors (*evidence from practice : refined brief : page 3*). This project moved beyond the NCEA classroom space in being thoroughly involved with the wider community of Wellington City and that of all the WOW visitors to the city. The opportunity I was given was a real-life job, which emphasized and improved my skills in working with and for immediate and diverse stakeholders. Looking at both the scope and the constraints of the project was primarily done through analysing the social and physical environment, and secondly the effects the display would have on viewers.

Early on I analysed the location of my display. The Te Papa store being in the centre of the central business district alongside a well known department store. There were many people passing it every day walking by, driving by and waiting for the bus opposite (*evidence from practice : Te Papa Store : page 14*). This helped me know who my audience was, and how I could then most effectively design an outcome which attracted those customers into the store. I looked at the distances and positions from which people would view the window, which influenced how I chose bright colours and exaggerated silhouettes to catch their gaze from afar, and intricate detailing to hold their interest up close. The conventions of clothing and art collided as I was conscious of the necessity to have the garment be inoffensive and respectful. I covered the mannequin, but not in the way normal clothing would. This was a decision I had to make, because though art very often challenges and shocks, I needed to do so without disturbing the visual or emotional atmosphere.

This context of WOW in a window display differs slightly to the supreme WOW awards and show that is on at the same time, as in the competition the art does not risk intruding on someone's daily space. When thinking about the impact of my display, I wanted to take away a positive moment from it. I was successful in this from the stakeholder feedback I received, the responses I got said the outcome was interesting and pretty to look at, and it was emotive and thought-provoking. These two factors show that it had a benefit to the aesthetic environment of the street, and to the passersby also in adding creativity and interest to their daily sights. Integrating the principle from Dieter Rams ( industrial designer), I valued my design additional having an element that made it understandable and yet in some ways unobtrusive to the daily passers by.

I was conscious of the environmental effects of my material use and technique use. The World of Wearable Art highly values ingenuity and innovation particularly in material manipulation. I took this value on board and embraced using some unwanted waste items. I put effort into being sustainable both in the obvious way of using recycled materials like plastic

coke bottles and chicken wire, but further through using disposable materials in a way that extends their life of use. I used makeup pads and disposable snaplock bags ( evidence from practice : modelling for ideation : page 12) and produced something which will be on display, meaning it will be 'used' by far more people than it would normally. I also utilised additive manufacturing techniques when producing the chainmail with the 3-d printer (*evidence from practice: chainmail : page 16 and 26*), which was more economical than subtractive manufacturing, minimising waste.

While designing and making the entire window display I was aware and conscientious of the values and goals of a few different groups; Te Papa, WOW, and Wellington High School. I had to fit the needs and requests and also restrictions of all three of these, in order to have a successful end product. I was strongly representing my school in a very open and public domain. I did this by incorporating values such as sustainability, creative expression, visual attraction, high quality aesthetic, and pride in my work into my practices. By choosing a message that was personal and important to me, and being free and creative in my design work I could express my point of view, which is really important in Wearable Art. I sought feedback from our acting principal, and he expressed the quality of both my work and the way I was representing Wellington High School. At the beginning of the project I did not know I would be displaying my work in the Brandon Street location specifically and just initially knew it was one of the Te Papa Stores.

The two locations are very different in size, types of public the visit, physical window space and lightening, but have the same values and purpose. The Brandon Street store being more confined with the lower height and flood lighting instead of dramatic spotlights was factors that I took under consideration. I managed this change by researching the key factors of both Te Papa's social environment broadly. The key elements of the public display spaces were very similar, in their presence to people in the city, and the people and spaces they directly impacted. The Te Papa museum store was in a much larger space and did not force people to walk past on a footpath, which was to my advantage in Brandon Street as the road plan meant passersby were walking closer to my display more regularly. Changing location to the Brandon Street store was not a complexity. I got to focus more on the close-up detail work that I appreciate. This change introduced my working with Jess who was also sharing the space. This added another important stakeholder, and I worked to create communication between us so that we could make a cohesive and complimentary installation. I was able to maintain independence while working alongside another designer which was a positive experience as I got to see a different interpretation of the same beetle image.

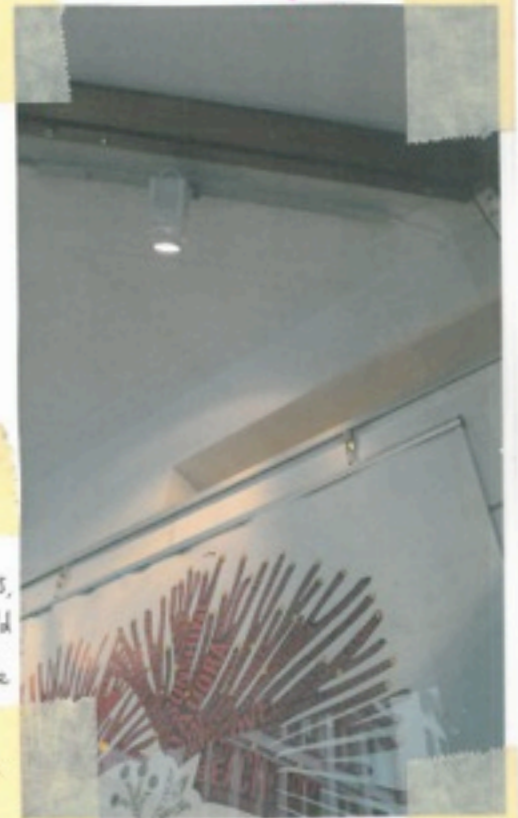


The image on the left is the view of the window display space from inside the shop. From here I can see how deep the space is, how far out the shelves come and how the plinths can be arranged. From this view you can see the angle at which the mannequin can be placed. There has been some interesting use of lighting, as first and foremost as advertisement for products, the use of the lampshade is very smart. It lights the area while also displaying the aesthetics and function of a product. The I ~~so~~ could perhaps utilize lighting in my display/garment to do these things. The other ~~to~~ other lighting I see here are small (but bright) spotlights embedded in some of the plinths. These are really effective because they are subtle and blend in to the setup, and provide lighting from the bottom, which I think is just as important as top lighting. Because even though the view of the floor (because of the raised concrete sills) is slightly blocked, it will be important to illuminate all the details of the garment. I think our display will be as crowded as this one (mostly because we need to fit two garments in) but also because we want the space to be very focused and easy to understand.

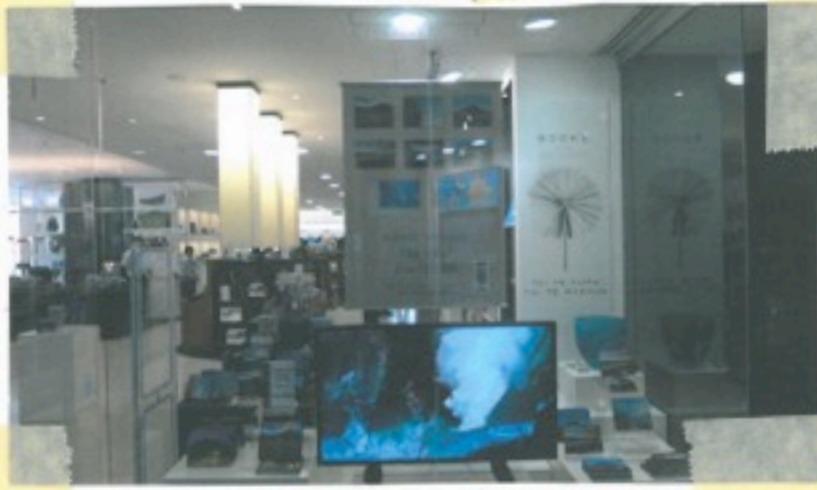
The photo below is a view looking in at night angles to the front ~~win~~ along the front windowpane through the diagonal window (described at the bottom right of the previous page) It shows the view of the mannequin, this is an important photo because I can see here that back and side details will all be very visible to the passerby. As you can see on the diagram here - There are three prime angles people will see it at, showing the front, side, and part of the back. As you can see, this model is on an angle, so potentially I could have the main design feature on the back or side, which would be different!



On the left you can see the lighting that is installed in the window. The small spotlights can be moved and directed at different spots, and have a really nice warm light. These would be good for reflective materials as they aren't too bright, and it's good that they are lit from above because along with the other lighting I talked about it will be very evenly lit. The photo on the right shows how the backdrop will be hung. This is stable, however with no overhead rack I won't be able to hang anything.



(ABOVE) I quite like this display. It's simple and clean. I like the layering up of the lines which creates just enough chaos to seem fun. And I like the bright primary colours and how they are reflected in the colours of the pegs. The retro prints on the tea towels are enhanced by the simple old-fashioned washing line idea, and also they create a contrast; the usually plain, white, boring scene of laundry on the line to dry is juxtaposed with the bright, colour-blocked prints and overall give a flavour of New Zealand history and pop art style.



(ABOVE) I'm not such a big fan of this window display because of its location (in the indoors window of the Te Papa shop) it looks really crowded. The view of the shop intrudes on the window and it's hard to focus on. Fitting two models in my window space will be very tight and I expect we might have some of one of ~~one~~ the mannequins is not fully in front of the wall (some of the shop is its backdrop) so some sort of solution should be found because like above, too much to look at is distracting. However, I do like the tv display idea, we could do some very ~~interesting~~ interesting, unique and innovative things with that medium - like the ~~shoes~~ shoes, Kim etc.

SOCIAL/ENVIRONMENTAL FITNESS FOR PURPOSE

After talking to Mr Britton and learning about the 3D printing process, I am feeling very sure in the fact that this construction technique works perfectly in line with the values of Te Papa & WOW. The uniqueness, forward-thinking, and economical nature of the production of chainmail, is very important to the brief for the project. Te Papa recently held an open interactive exhibition featuring new and creative technology, one of the showcases being a 3D printer. I read in the Dominion Post about a man in New Zealand building a car using a 3D printer. It's the buzz-word at the moment and is considered to be the cutting edge in possibilities for creativity and function. For this reason it's very exciting for me to have the opportunity to use this piece of equipment. Displaying innovative and futuristic creative products is an important value for Te Papa, so this enhances the overall fitness for purpose of my outcome. This also is very suitable for the WOW theme as a context, as unusual techniques and materials is a core specification. The visual outcome of the garment will be aesthetically effective through the use of the 3D printer to make the chainmail, but actually the process is one of the most important things in this case. Seeing as I will have a small blurb about my Te Papa WOW experience both in the window alongside my garment and on the Te Papa blog, my creative & constructive process will be visible and important for my displayed final outcome as a whole. Visually the chainmail is of high quality - the consistency of all ergonomic & aesthetic aspects of it make the product professional look and not hand-made. This visual consistency also simplifies the detailed area-encouraging attention on the effect of the chainmail as a whole. This makes the structure & texture more elegant through the refined, simple design, there is no clutter or distraction. Now, a machine made material certainly detracts from a creative/expressive ~~good~~ outcome - in terms of looking at the garment in a sort of abstract expressionist way - however I think by using it in this ~~small~~ refined quantity (connecting the armour pieces) it will actually ~~contrast~~ juxtapose the hand crafted aspects of my design and emphasize the vibrant expression of the garment. It will portray modernity in design in its collaboration of time consuming, loving craftsmanship and efficient futuristic machine work. In my conceptual design there was an exploration & extrapolation of traditional & old features & concepts (for example the armour techniques that I curated from different eras & areas) and futuristic ones (the alternative shapes, proportions & silhouettes, and almost dystopian context concept of

the alien like woman-warrior forced to evolve and grow defensive systems) So this adjacent fusion of new & old, fast & slow, hand & machine actually really reflects some of the key factors & values in my visual & conceptual design.

As eco-friendly sustainability in construction & materials is a very important aspect of WOW and this fashion design project, I am going to carefully examine, evaluate & ~~develop~~ develop the economy & efficiency ~~of~~ of the process.



ECONOMY  
+  
EFFICIENCY

## THE RAFT

In the designs I have been looking at, the only waste in production is the raft. The raft is the cross-crossed base on which the object is printed. All things made using a 3D printer must be printed onto a fresh raft, so this part of the printing process is unavoidable. I do not believe this use of the filament is a damage to the economic efficiency & viability of the chainmail, because of a few reasons. Firstly, and most importantly it's extremely light and thus doesn't use much filament as I watched the printer make the raft for the test substrate, I observed how in reality it is only a few layers thick and also is produced in lots of crisscrossing lines providing stability without a solid base. Secondly, I actually have the ability to edit the features of the raft using the UP program meaning if intelligent & necessary I can reduce the plastic used on the raft, saving material, money and time. Other things you can play around with on the UP program are crutches. Crutches are similar to rafts in that they are temporary sources of stability for while the object is being printed. The crutch ~~holds~~ (or scaffolding) holds up floating pieces in a printed object, it is then broken off after printing. This can be experimented with in which is useful for when it needs to be stronger, or could be more efficient.

# Construction Development

Constantly testing and tweaking and testing again was crucial to find the most effective technique or material, and thus produce the most effective outcome which had the highest integrity and sophisticated that I was looking for. Working with the mannequin was a learning curve as I cultivated my ability to work with a very inflexible canvas. I further explored manufacturing techniques, looking to articles on experienced WOW designers such as Rodney Leong to how they dealt with repetitive constructions steps and ways to manage this mundane and slow progression aspect of construction (*evidence from practice : construction subcontracting : page 17*). I analysed his use of subcontracting and decided to integrate that into my construction by enlisting the help of some year 10 fashion students with repetitive tasks. I managed quality control and observed the time efficiency improvements that occurred when they filled the tiny snaplock bags with the shredded paper, and broke the rafts off the chainmail. I am confident in my choice to do this because it is a method used in the real fashion and technology world and acknowledges the realities of production.

Testing and sampling had a big impact on what went into construction with having informed decisions and a clear start point for the larger scale needed further on in the process (*evidence from practice : sampling : page 18*). Testing is an important part of conceptual and prototype design. It can come in forms of modelling in 3-dimension which I did with the snaplock plastic bags, chainmail and makeup pads. I also tested ideas through ideation with drawing and flat patternmaking to later form toiles, and using the computer to simulate a print and test out timeframes of how long it would take to print different types of chainmail on the 3-D printer.

I continued to develop and use the same process and philosophy I used with design and development consistently throughout the construction process. I felt really confident and familiar with the way I worked by this point which was beneficial for when I faced difficulties and unforeseen problems that needed to be solved. Learning professional skills in pattern-making and drafting a block was valuable base steps before the main construction section. I spent five weeks learning these industry techniques which I used to create my fitted pants' pattern. This was a big challenge as I started with drafting a pencil skirt block and used fittings on the mannequin and altered my pattern accordingly to the static mannequins specific and unrelenting pose. I researched how I could change my skirt into pants, so ended up doing stages with changing the skirt block pattern to a

culotte's pattern, then fitting them to be more tailored (*evidence from practice : pages 19-23*). This was a complex task that extended my knowledge and skills. Altering the panels on the top was easy after pattern-making the pants. I had to blend professionalism with ingenuity in my pattern making, I was exact and particular in my measurements and getting the right fit to optimise the elegance and sleekness of the final fit.

I utilised my ingenuity and flexibility when I faced a hurdle in my construction. The waist of the pants not fitting felt like a disaster at the time. I know now how important it is to sew toiles in like fabric to simulate the weight, weave, stretch and texture of what will be used in order to accurately estimate the final performance of the fabric. This problem-solving situation built on my creative process and explorative critical thinking, I used the same ideation development and trialling process to re design the top to integrate a cover for the crotch (*evidence from practice : pages 19-20*). I am pleased with how it transpired in the end with the apron idea both enhancing the narrative and how it works to balance the hip pads and bulky top half.

I discovered that development is a part of conceptual design which continues throughout the 3-dimensional modelling process. I had to constantly tweak my construction plan and refine the techniques I was using when I realised things wouldn't work exactly like they had in my small scale trials due to difference in calibration and mass, to get the refined finish that I wanted. I changed the quilting technique I used on the makeup pads, and I had to reevaluate my bottle sleeves for a higher quality finish. This I don't think was due to not testing things enough in the initial ideation stage, but more due to the complexities of working with materials one is not familiar with in such a scale.

I had more time and drive to seek outside sources of knowledge and skills, and by doing this I moved from the key ring chainmail idea to the use of the 3d printer. This abstraction of the armour techniques occurred was unique to the WOW opportunity as I actually got to play around with the status quo and reinvent old ideas by using technology that allowed for a visual look but with difference in characteristics of time, weight, colour. This freedom kept my ideas growing right up until the installation day. Though there are parts of the garment I would like to spend more time on, this confirms the personal success of the process for me as it has fostered my enthusiasm to create and innovate further.

# SUB-CONTRACTING

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HOME Teaching Notes About the World of WearableArt™ Touring Exhibition

## The Love of Icarus 1 2 3

Rodney Leong, Auckland, NZ

World of WearableArt™ 2006; Open Section; 1st HP Planet; 1st Open; 1st Supreme

When you look up at the moon, do you see the shape of a face? If so, you're not the only one. Why it looks like that is another story, however; the one we're interested in is about Icarus. In Greek mythology, Icarus escaped from Crete by making wings from feathers and wax. But he flew so close to the sun that the wax melted, and he fell into the sea and drowned. His grief-stricken lover flew to the moon to avoid the pain of loss, and his silhouette can still be seen in the moon.

In 2006, Aucklander Rodney Leong was reading the story of Icarus in a book of Greek myths. Rodney says that he finds themes for his work in what's going on around him at the time, and his World of WearableArt™ entry *The Love of Icarus* was inspired by a quote in the book "On certain nights, when there is a full moon and the stars lay cast out, a shadowy figure can be seen floating within the moon".

Rodney has diplomas in Textile Design, and Fashion Design and Technology and works as a pattern maker. He creates WOW pieces as an escape from the daily demands of his full-time job in the fashion industry and has entered every year since 1989. Fashion designer Trelise Cooper, on the WOW judging panel in 2003, was so impressed with Rodney's entry that she invited him to work for her, and his 2005 entry *Pecten Shedding her Skin* won the World of WearableArt™ Avant Garde section and was runner-up for the Montana Supreme Award.

Some designers find it helpful to show their work to other people and get feedback at certain stages. Rodney takes the opposite approach and **doesn't show his work to anyone else before it is completed because, he says, too many opinions can confuse and dilute an idea.** He was conscious that the concept for *The Love of Icarus* sounded too simple, despite all the detailing in the art work, and that people seeing it in daylight **wouldn't consider how effective it would look under stage lights.**

Rodney usually works on the kitchen table at home and says there are major advantages in being home-based. "I end up living amongst it for maybe six months, which is kind of cool as well because that goes with the organic process of making a garment. It may not be working, so you put it down and do the washing or whatever then come back to it, and that little break may spur you on or on help solve a problem". However, with *Icarus* he was able to use a room, after hours and during weekends, at his workplace. He would store his materials under his desk and haul everything out once his colleagues had gone home.

When developing an art work, Rodney first considers ideas from the music, books, movies, internet, magazines and conversations around him. He brainstorms ideas before selecting the best one to research, at which point he also looks at materials and cost. Rodney notes all his ideas in a visual diary which, at the conclusion of a project, he recycles for his next piece of art by pasting over the pages with new images and ideas. After confirming that he would base his work on the story of Icarus, Rodney did more research and lots of drawings, including thumbnail sketches at each stage of the development.

## MY RESPONSE

Sub-contracting is a construction tool and technique utilised by almost all fashion houses and also, as I have found in this article, by independent designers and wearable arts contestants. Small jobs that don't require lots of skill are probably the best parts of the construction that you can employ other people to do. Quality control is extremely important and a key component of the final success of my garment, and that's just for when I am sewing something, so when other people are doing it, you would need to be even more aware and observant on quality control.

Rodney employed his young nieces to clean all the collar tips, as this was a monotonous job that required mostly time rather than skill or decision making. This is why it was smart to sub contract it as it would have taken him a very long time, which in a project with time constraints to meet, would be better to be spent on difficult jobs, the major parts of the garment or sewing/constructing that requires concentration and skill.

I think this is a good idea to maybe subcontract out some of my more repetitive construction steps. I am thinking that the filling of the tiny snaplock bags would be something that would actually take a lot of time to do on my own, time I do not have with the looming due date for installation. It would be quite simple to quality to control as well, because there is quite a lot of flexibility in the final look of each bag. Each is going to look slightly different because of the individuality of each scrunched up bit of shredded paper, so it is not crucial to pay a huge amount of attention to the consistency of the product. This would minimise the time I would need supervising, meaning I could be more efficient with the rest of my work.

The "aesthetic element" is important to Rodney, meaning that regardless of what other people think his creation has to look good to him. He decided to develop his concept of a figure in the moon by creating a round silhouette, with a model in the middle and light shining through it. Rodney investigated materials that would allow him to achieve this look and liked clear plastic, because it would **let him feature the lighting as an important part of the work.**

The final design depended on what sort of plastic would be used, and finding something that would suit the concept was difficult. The solution turned up in a **manufacturer's catalogue.** Rodney was looking at the range of embellishments and trimmings available for the clothing industry and found **plastic collar stays** (also called stiffeners). These are put into the ends of men's shirt collars to keep the edges straight and are made of a lightweight plastic which **can be washed, ironed and sewed.** Rodney decided that the stays could be made into an interesting shape, and that if he used the transparent ones it could add another dimension to the light shining on his creation.

There was just one problem with the chosen material, it **required lots of cleaning.** The stays were **old stock, destined for the rubbish dump** because their glue had become tacky and they didn't peel off the paper roll. This meant over 20,664 pieces of plastic **had to be scraped and then cleaned—a job Rodney outsourced to his nieces in Sydney.**

With the clean collar stays back in Auckland, Rodney "played around" pinning the stays together to try out different arrangements. He needed to form the stays into a simple shape, but the shapes would have to be able to be joined together to create the overall spherical outline he wanted. Rodney says he used lots of ideas, from origami to mathematical theories, as he worked out different configurations. One idea was to join the stays so that the resulting shape increased or decreased in size, but he realised that as the stays were pointed at one end and rounded at the other, he couldn't sew them into this shape.

Rodney decided that the best idea was to keep his pattern **as simple as possible,** because, in using lots of the shapes, he didn't want the art work to look too "busy". Eventually, after trailing lots of shapes, he found that 29 stays, lying with the rounded ends slightly on top of each other and the pointy ends just touching, created a flower shape. The middle section of the "flower", where the pieces were joined, gave a 3D look and this helped Rodney see how differing layers of the clear plastic then started to change colour. After deciding to continue with the flowers, Rodney had to work out how many he would need and how long each one would take to make - he estimated approximately 15 minutes per flower. In order to make the flower as clear as possible, he used a clear, nylon thread which isn't always easy to work with although it added to the dimension of the flower by creating a ridge in each petal. The flower shape could be made bigger by adding on more stays and Rodney considered trialing a smaller version of the flower by trimming the stays but **due to time constraints chose to use them as they were.**

Having worked out how the plastic stays would be joined, Rodney had to work out how he could construct the whole garment to achieve the effect he wanted. The original design had an orb shape, to represent the sun and moon, made from thin metal rods and covered by the flowers. But getting the metal welded was going to be too expensive, and there wasn't enough time to look at alternatives. At this stage Rodney **changed his design from 3D to 2D;** the plastic would be stitched together then lowered over the model like an envelope. To stop the top of his creation flopping over, the model would hold an acrylic rod which would brace the plastic. Rodney then developed the head covering for the rod to sit on, to minimise the strain on the model's arms. The model would be dressed in a Lycra bodysuit, made in black to emphasise the body as an integral part of the concept.

As part of his process, Rodney uses the construction stage to work out which accessories might add to the look of his garment, although in this case he didn't need many. As his work nears completion he looks at how he might refine it or how the stage lighting might affect the look. He describes the development process as very organic, **in that it grows and changes so the first idea has often changed a lot by the time he finishes.**

*The Love of Icarus* won the 2006 World of WearableArt™ Planet Award, the Open Section and the Supreme Award. And Rodney hasn't slowed down! He has continued entering WOW, and in 2009 was Runner-up to the Montana Supreme Award with his art piece *AM I, I AM.* The reward for all the hard work involved in creating a WOW entry, says Rodney, is seeing it appear on stage and realising that this is the next step, when it's seen from other people's perspective.

And why does he keep on doing this? - "It's the freedom to try new things with fabric and design and the ability to ignore the constraints of a commercial fashion career that I am drawn to. There are no expectations of what you should create when entering WOW, only the aim of personal growth and the abilities of your own imagination."

Materials: 20,664 plastic collar stays, lycra

### Other interesting points

- ✳ How Rodney doesn't rely completely on outside opinions to help make decisions, this is interesting because stakeholder feedback is really important but I can see how maybe it's good to not have too much advice from others as it can cloud your design vision
- ✳ His design is most effective in the specific lighting he designed it for.
- ✳ He used second hand materials which are unconventional in how he used them, rendering the unrecognisable as the material they were.
- ✳ He outsourced the repetitive job to his nieces - somebody he trusted.
- ✳ He wanted the design to be as simple as possible to be elegant.
- ✳ How he developed his concepts & construction techniques as he went

SKILLS DEVELOPMENT  
CONSTRUCTION

# SNAPLOCK SAMPLING

In my design work I was influenced by Roman leather tab armour for the hip pads. In my initial tests and trials I thought of using the tiny snaplock bags, as seen here. They are a regular shape, light, easy to sew through when using the vinyl foot on the machine, and had the potential to be filled with something to add thickness and colour.

Before sewing the base for the hip pads, I want to trial some different options for manipulation of the bags.



My first sample seen here was by testing what effect was created just by leaving the bags empty, and layering them up. I quite like the shiny, luminous quality they have when used in mass, but the petal effect I was after definitely doesn't show through here. I think that because the bags are very flat without anything in them, they aren't as aesthetically captivating or attractive because there isn't enough texture or depth. The armour aesthetic of my design is supposed to evoke strength and stability, yet also flexibility, and the flat, transparent look of the bags on their own does not achieve this.

I wanted to contrast the bold and tough aspects of my construction with femininity and graceful strength, but I think it is a better idea to communicate this through the sleek shapes of the garment and fitted tailoring of the bodysuit rather than have fragile appearing material use.

I printed off some paper with a repeated rectangle of the main part of the beetle shell, so that the green and black pattern covered the entire page. I thought this would be a versatile material to trial different filling-ideas with. It would be nice to tie the hips pads subtly into the rest of the design by reusing the beetle design but in a different size, and manipulated differently.

I kind of liked the idea of the bags being both protection, visually pleasing and also useful for the imaginary warrior woman character. I built a concept around it that maybe she could be storing herbs and medicines in the little bags, like an insect knowing and storing the nutrition it needs. So my first sample reflected this. I used a generic office hole punch and punched lots of small dots out of the printed paper.

- I had decided to only print on one side of the paper. It was more resource efficient as printer ink is expensive and not entirely eco friendly when wastage occurs. Also, the white on the back of the dots would balance the intense colour and reference the white in the rest of the garment.



This sample is the bag with some of the small dots in it. I quite quickly decided that this was not the best option. The hole punching was really time consuming and actually quite wasteful as circles do not tessellate. I think it would only look effective if the bag was full of the dots, and it was not workable time-wise to do this. However I did like the mix of white and green/black, and how it was a new pattern created out of the old one.



The next photo shows how I tried filling the bags with single rounded-edge rectangles of the paper. This meant they were all regular in shape (but not in beetle pattern) and clearly showed the shape of the bags. I used an image of the whole beetle to cut from in this case, to give the same dark and light balance that the dots had by incorporating the white parts of the photo too. Layered up I quite like it, but it doesn't really make full use of the plastic bags' qualities; I could get a similar effect simply by layering the pieces of printed paper and sewing them without the bags. Even though I'm not a fan of that sample, I also tried the same idea but with hard edged rectangles, again, it was interesting how a sort of collage was created but the overlapping prints, but again there wasn't enough depth or texture. The way the newspaper-filled bags juttred out at an angle and made little scales is what I wanted to emulate, so I know I need to try something more voluminous.



I phoned the school office and organised to use their document shredder. I knew this would be a very time-efficient way to cut up the paper into regular pieces, giving a really similar effect to the hole punched dots except way faster and with the ability to scrunch up. I printed off 15 pages of the condensed beetle pattern and went up and shredded it.

Basically my method I tried was to get a small bit of the shredded paper, scrunch it up so it vaguely fitted the shape of the bag, then put it in and snap the lid shut. The photos here show me doing this, and the sample below shows the final effect. I really like this technique. Its got regularity and cohesion in the colours and pattern repetition, but it also has a cool element of randomness in how it looks different whenever you scrunch it up. From far away it gives a really effective collage aesthetic, and really reflects the herb/medicine idea I was thinking about. The leafy look the shredding makes also adds a very interesting element of being like a disguise, the manipulation of the beetle pattern makes it separate aesthetically to my use of vinyl, but also works in, like a camouflage of an insect in it's natural habitat.



FITNESS FOR PURPOSE CONSTRUCTION



# PANTS FITTING...

So I was about to put the ~~last~~ pants onto the mannequin for a check up, and realised I had made a big mistake. I had accidentally sewn the centre back seam instead of the front. This means I can't have the zip on the back now. I could work with this, I was thinking maybe I could put a hidden zip in the front. But then things got even worse. Upon trying the pants (without central leg seams) on to the mannequin, the centre front edges didn't meet. The ~~new~~ waist was too tight to fit the mannequin. In the same way, the ~~to~~ inside leg seams were not fitting together easily either.

This was a really bad roadblock for me. I can't unpick the seams to get the zip on the centre back, but even if I could, I would have to recut out all the pieces in order to extend the waist. The gap was about ~~2~~ 3 or 4 cm, too big to stretch-fit.

**DISCUSSION** After the excellent fit of my pants toile, this ill-fit came as a real shock. I ~~know~~ believe this extreme variation on the fit comes mostly from the difference in physical qualities of the vinyl compared to the calico I used for the toile. I knew this while I was patternmaking, that the vinyl was thicker, and less flexible than the calico, so in response to this I made the pants pattern bigger than the slim fit I had designed. I ~~thought~~ thought this was enough allowance for the vinyl, but I think I underestimated how stiff and thick the vinyl would be. This lack of the slight stretch & give ~~to~~ that the calico had I think is why the waist is nowhere near fitting. I could loosen the darts, but this would make the holes from the previous seam visible, and that ~~was~~ would lessen the overall quality of the sewing, and still wouldn't fix the tightness around the upper thighs that was preventing the inside seams meeting.

This has been a learning experience around how vinyl works in tailoring, in the importance of your toiles material matching your final material, and is now in problem solving development.



← Here you can see how I held the pants on the mannequin, I used masking tape because it would leave a mark. You can see how the inside seams don't meet by about 1 or 2 cm. You can also see how due to the shape of the crotch edge of the front pants pieces the fabric curves around the outside of the crotch, not even meeting the back crotch seam.



← The gap between the back and front inside edge of the shin area is not as bad as the thigh area. They meet no easily though so that might be a bit difficult to get over the feet.

Here is a sketch of what the crotch gap looked like, it created a sort of U shaped curve. Because of the pants being high waisted, it is quite a significant gap, so it will definitely need to be covered.

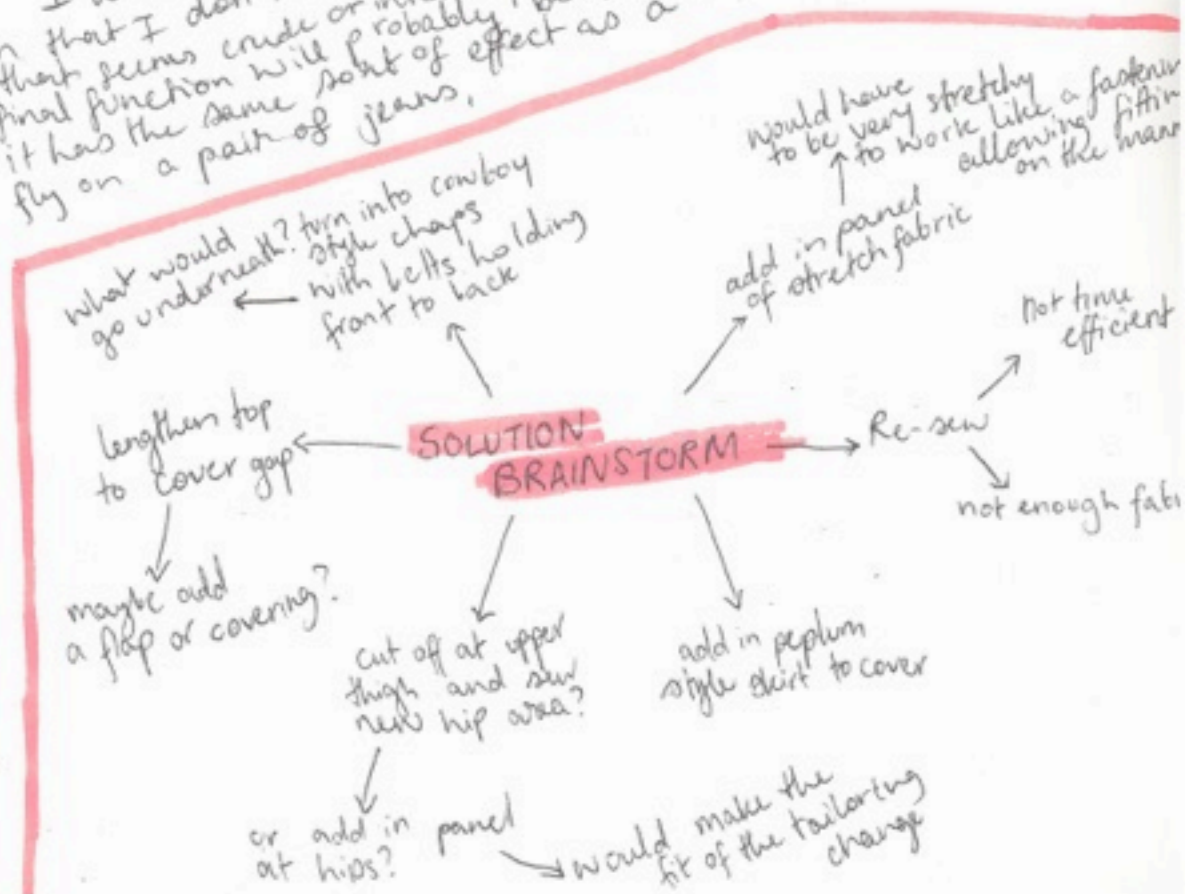


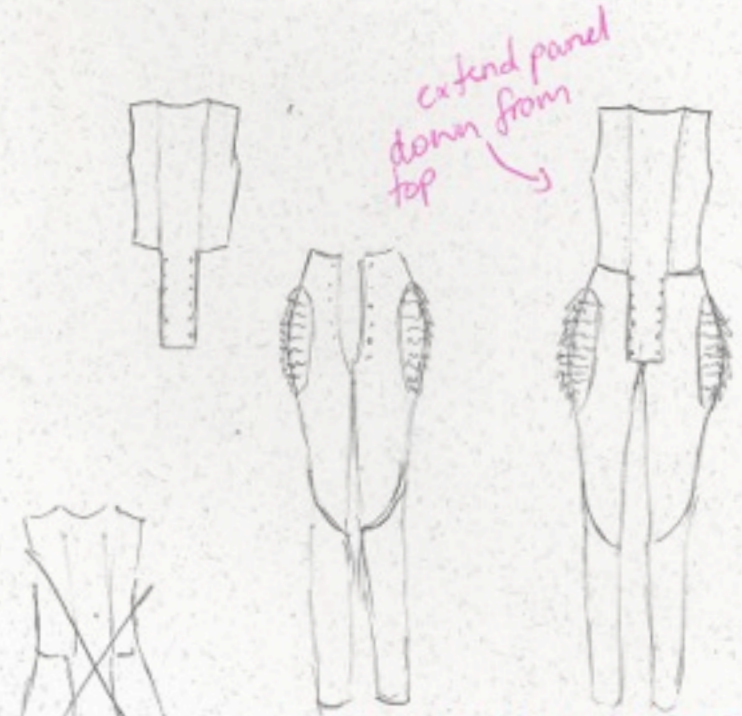
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mac

Obviously, ~~too~~ leaving the front like this would be inappropriate to show in a window display, as doesn't function as clothing in its most basic level - to cover the body.

SKILLS DEVELOPMENT  
CONSTRUCTION

I have to be cautious here, in a way that I don't cover this gap, it has the same sort of effect as a fly on a pair of jeans. It's probably be best if it has the same sort of effect as a fly on a pair of jeans.



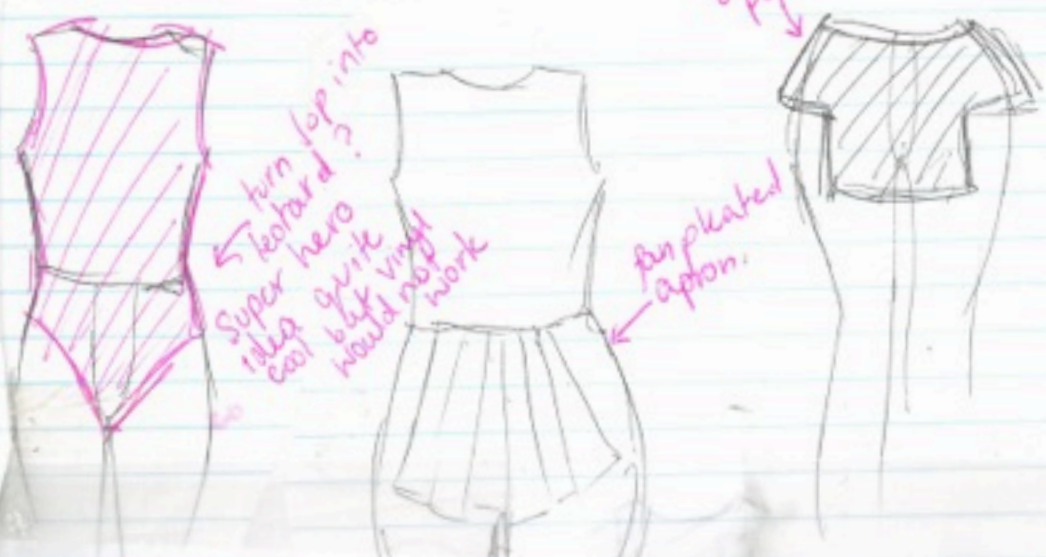


Buttons?  
Square shape  
not right

form of  
attachment  
to pants

Buckles?

I decided that the flap or top extension would be the most subtle and cohesive design solution. These sketches show my development of the top to find a way to cover and enclose the gap in the crotch and how to incorporate with the most elegance so that it wouldn't look like an add on in the final look.



turn top into  
Super hero  
idea quick  
but vinyl  
would not  
work

apron

From the structure of trousers pants, the top layer will be a solid material that holds the desired shape while the rest of the pants are made of a more flexible material.

Classic Trench - chambray made of small grid pattern for the possible color of the fabric.

Chambray - this is the main fabric of the apron. It is a sturdy fabric that is used for work clothes. It is made of a mix of cotton and linen. It is a good choice for the apron because it is durable and easy to clean.

Simple and refined use of the paneling (the apron) and contrast the small detail with a large print.

Stitching - a really strong

Chambray to provide a strong, providing easy movement.

**FINAL CHOICE**

**APRON**

Through my research and function development I have decided to emulate the idea of an apron in my design. I had been discussing the idea and the whole concept of an apron actually really inspires and deepens my theme of female empowerment and acknowledgement of strength. Aprons instantly draw connections with cooking when seen on a woman, and in that way it is definitely a garment made for protection. It covers the lower front of the woman's torso and the shape is a key symbol of female imagery. Aprons are also used in welding, building, all these examples of creating something. I think this is a really valuable addition to my overall design because it gives the theme of a non-violent strength and also it works to cover my fitting issue.

I was very inspired by the shape and form of the apron. I felt that it was a good idea to have a panel that would cover the crotch and the waist area. I was very inspired by the shape and form of the apron. I felt that it was a good idea to have a panel that would cover the crotch and the waist area.

The chambray fabric is a good choice for the apron because it is durable and easy to clean. It is a good choice for the apron because it is durable and easy to clean.

Skills Development Construction



# Skill & Knowledge Development

A real focus for me this year was to utilise my design and construction skillset, while extending my knowledge and abilities to produce something unique to WOW. The unconventional materials complexity distinguishes this project from other previous construction experiences I have been involved in. My understanding of the design process, pattern-making, project-managing, working with a client and sewing skills that I formed in my home and school fashion education gave me the platform to innovate and be creative in this unusual project (*evidence from practice : pre construction ; page 22*). The addition of a difficult material , the billboard banner weight PVC, pushed my construction to the next level. I had to learn to manipulate it to replicate the fit and appearance of a conventional fabric on a static mannequin which showcases tailored and pressed items for display.

Using specialised feet for the machine and employing appropriate techniques like zig zag top stitching to flatten seams, and using masking tape instead of pins were all little details I had to consider so that the traditional outcome of the tailored pants could be created by an untraditional and rather hard to handle fabric. The stiffness posed a challenge with the fit (*evidence from practice : pages 24, 25*), but believe my skills were greatly heightened in conceptualising a solution to this, and learning for the next vinyl pieces (the shoulders and top) how to most effectively work with it. I think the top and pants are of extremely high quality, I managed to create the slim fit with the stiff vinyl by being scrupulous in my pattern-making. Learning to alter the skirt block to a fitted pant was a great challenge (*evidence from practice : page 23*). This was done in this manner as the mannequin does not have an ordinary balanced pose and it helped to break down the fitting of the waist and crutch. My skills have been enormously improved by having to foresee steps to take me from skirt to pants, and having to order my alterations while interpreting the 3D shape into a 2d shape.

I extrapolated different skills from experiences I have had, and from others' experience. After attending a short workshop to make chainmail at the Weta Workshop I was inspired and brought that learning into my initial trials. Using plastic rings that could close, and the process they Weta used to mass produce these sheets for extras in films had a positive effect as I channelled those higher end processes into mass producing the chainmail efficiently on the 3D printer (*evidence from practice : pages 15, 24*). Using modern digital machinery like this was a huge learning opportunity and being able to run the machine confidently was a valuable and exciting new skill for me. I worked to collaborate with others and utilise the knowledge and expertise people in my wider community had. This is a defining feature of this more advanced technical work present in my project, as I went beyond my own skills, and the skills one expects from a student to aim to make something creditable as a piece of wearable art. Using the 3D printer was innovative and new in WOW, and I could not have done this without learning from and communicating with the digital media teacher at my school. I sought help with the cutting of the plastic

bottles, and got to work with the mechanical engineering teacher to use tools he had available. Limiting myself to what equipment and expertise was in the fashion classroom would have prevented me from optimising the material use which differentiates a Wearable Art piece from ready to wear clothing.

Working with others in this context developed my ability to gain skills and knowledge and how to incorporate advanced skills into my work. I learnt considerable amount about how I work and how I act in the face of success and challenges. Becoming comfortable with my design process was very important and communicating my thought visually was a skill that was really harnessed in this stage of developing the outcome. In pattern-making, learning to fit and tailor to a mannequin helped me gain experience in grasping how the 2D to 3D transition works. I became confident in working with and sewing a range of plastic materials, especially while crafting the petal hip pads. Sub-contracting the task of filling the bags was a step I took to incorporate professional techniques in managing a large project. I was conscious and proactive in quality control and tolerances in this stage, and also in all my technical work like finishings and symmetry (*evidence from practice : pre construction : page 22*).

As I was constructing an outcome entirely different from those around me, I worked independently and developed skills in being self directed and confident in the vision of my process and choices. Working with a client of a high esteem was a unique experience which improved my proposal, discussion and problem-solving skills. As a very conceptual creative opportunity, I looked into my subject matter and thematic context to help the narrative and meaning of my garment come across authentically and thoroughly. I used imagery research of a variety of types of armour to inspire my design and construction, referencing my learning in the roman-tab inspired use of the snaplock bags and the modern take on chainmail using the 3D printer. This helped inform my new experimentations with materials, and give my solution a greater conceptual depth with the reflection of armour and feminine strength. Looking into gaming and film in my own time ignited my concern about the disempowering representation of women through use of non-functional armour, and increasing my political standpoint through expression in a fashion design context. This was a skill I got to bring out uniquely in this project.

Constant realization of ongoing reflection in all areas of my practice and awareness of quality helped to maintain high standards throughout. Careful time management and juggling different aspects of the overall project were needed and reviewed not only at key stages. All these skills I utilised in various ways and at different degrees of depth, they are what happens in real life business and within different areas of technology practice in the real world. Managing the co-existing needs of Te Papa, WOW and WHS was a job I met successfully by using these skills.

# HOW I WILL TEST...

**MEASURING** For as many situations as possible I will use a pattern making ruler or a metre ruler/plastic ruler. This is very precise and doesn't allow for much error. In cases necessary I will use a tape measure carefully by measuring along one of the edges. I will employ professional measurement techniques, correctly aligning the equipment with the correct point (i.e. the technical waistline). I will be aware of inconsistencies due to material qualities (stretch etc) and the aspect of chance.

**TRIALING** Trialing is an effort to find the most suitable solution to a problem. I will do this efficiently & effectively by testing multiple options for any decision, but not being exhaustive or not being sensible with prioritisation. Though 3 or more options should be thoroughly investigated at least 2 is appropriate. I will focus on trialing only the aspects of a technique that are relevant to its final use, for example assessing durability to weight if it will have a weight attached. I will use the results of these assessments to heavily aid my decision making in construction.

**FITTING** Due to it being a mannequin that I am constructing the garment for, a successful fit has some differences in definition. It must look good on the mannequin but also be easily put on and taken off. The process of installation is an equal part of the success of the project as this is an aspect of the client's brief. Therefore I will assess both aspects when testing fit. Visually I will be assessing fit, and physically by too approximating any pulling, stress on the garment/mannequin, or any difficulties in dressing the mannequin.

**VISUAL CHECKS** Throughout the construction process I will be visually assessing the fit, design choices, colours, aesthetic, communication of concepts/ideas and the overall impact. I will look at any feature or problem from a variety of angles, both physically, and by looking through the eyes of my different stakeholders. This will help me make choices design-wise, which will be the most effective in meeting the requirements of the client. I will constantly be looking at my work and judging if it matches my design or if it is an improvement on it, also by seeking outside opinions.

**TOLERANCES** I know that I won't be able to produce a perfect garment that is identical to my design, however in terms of design, I will stick closely to the qualities of my design and only make significant allowances or changes upon consultation with my client. For quality control the tolerances (e.g. accuracy of seams, alignment of details) will be very small, slightly bigger for aspects that aren't visible on display ~~or~~ and which don't adversely affect the function of the garment. I am aiming for the highest quality I can achieve within my abilities and resources and will prioritise techniques I can utilise to a high quality finish over advance techniques that I can't do justice to.

## HEALTH AND SAFETY

I will be aware and conscious of any harm possible to me and others through:

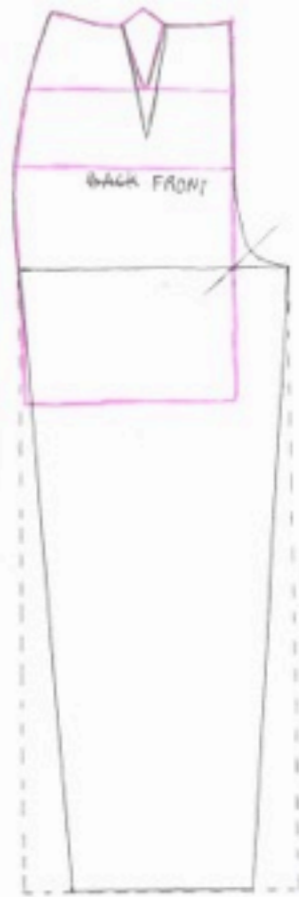
- ☆ Fumes, gases and dust/allergens
- ☆ careless use of equipment
- ☆ blocking of exits or dangerous positioning
- ☆ over exposure to loud noise, light, dangerous substances
- ☆ lack of protective gear

SKILLS DEVELOPMENT

# MAKING CULOTTES

Faced with the challenge of turning a shirt into fitted pants, I had a look through some pattern-making books and found a very helpful page on making culottes. Culottes are a very ~~pro~~ wide pant that usually looks like a skirt due to its full, loose nature. A shirt can be transformed into culottes by adding a crotch curve, which keeps the fullness of the shirt while having a pants-feature crotch seam.

MEASURE MANNEQUIN  
~~to~~ crotch  $\frac{68}{2} = 34\text{cm}$   
 crotch to ankle 78cm



In the instructions below I needed to add width at the crotch line, so for this I needed to measure the crotch from my mannequin. I decided to measure from the front waist all the way under to the back waist, then divide it by two to get a more accurate measurement. The other measurement I would also need was the crotch to ankle length, so that I would know how far to extend this line. These two measurements are at the top right of this page.

So for step one, I drew into my improved skirt block (opposite page) the crotch line, which was 84cm down from the waist. I made sure this line was parallel to the hipline. I then extended the crotch line of the front pattern piece, out from the centre fold, by 5.9cm, which is the total width of the crotch line divided by 2. For the back pattern piece I extended the crotch line, out from the centre back, by 7.6cm, which was the total width at the crotch line of the back piece, divided by 2.

I then used the pattern making ruler to draw a 45° angle line from the corner of the centre back and/or front, and the line I had just extended. The fact that the pattern making ruler was see-through and had angles marked in was very useful.

I then drew curves starting at the hipline, passing through the specific measured length of the 45° line (front - 2.3cm, back 2.5cm) and ending at the end of the extended crotch line. This created the crotch curve. Lastly, I extended the ~~side~~ line from the end of the crotch line, down 78cm, the crotch to ankle measurement. I made sure this was perpendicular to the crotch line. Then, I drew a parallel line from the side seam, starting at the crotch line, down 78cm. This is marked in the diagram above by the dotted lines. I joint these two lines with a straight horizontal line at the bottom.

These were going to be very wide pants, my final design was a well fitted pant, so I decided to take the pattern in before I made the first toile, to get more easily to a point where I could do a fitting. I took the bottom edges in by 5cm each, then draw a straight line, up to the crotch line, outside edges using a metre ruler. This is shown in the diagrams on this page you will see the improved skirt pattern #2 (pink) and the culottes pattern (black).

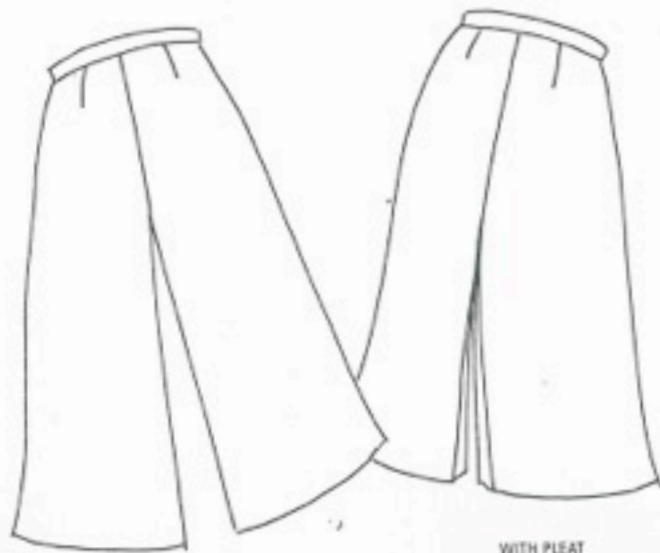


## Culottes

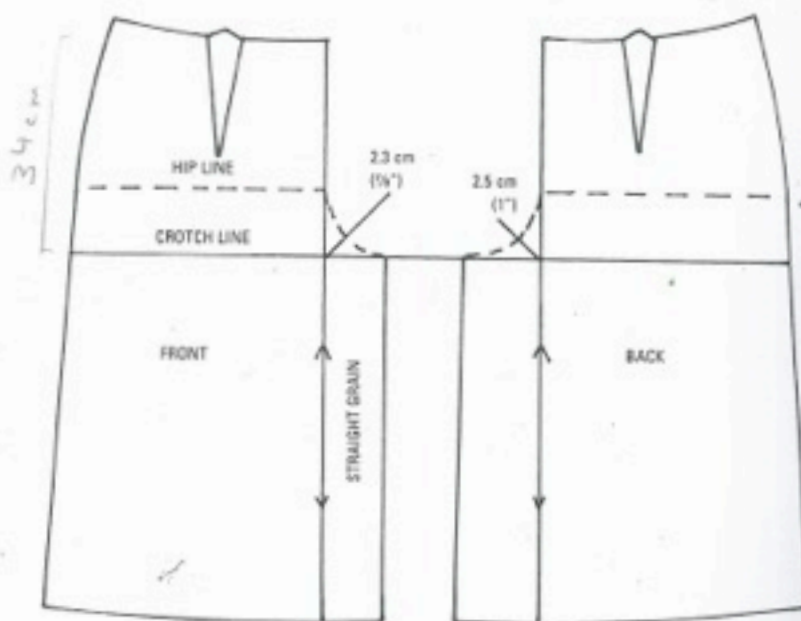
First popular in the late 1920s, this comfortable garment has come back into fashion in the last few years and shows no signs of losing its appeal.

- 1 Outline front and back skirt blocks. Mark in the hip line and crotch depth, fig 1.
- 2 Front: Extend the crotch line at the centre front by a quarter of the width of the block, fig 1. Square down parallel with the centre front line.
- 3 Draw in the crotch curve 2.3 cm (1") from angle.
- 4 Back: Extend the crotch line at the centre back by a third of the block width and square down parallel to the centre back line, fig 2.
- 5 Draw in the crotch curve 2.5 cm (1") from angle.

For a pleated style, add the pleats to the centre front and/or the centre back and follow the above instructions, adding the crotch to the pleat.



$$\frac{23}{3} = 7.66$$



to ankle - 79cm

# FIRST FITTING



↑ This is me taking in the right leg of the initial culottes toile. I tried to keep the grain line vertical and the pins running straight up.

For my first fitting I wanted to look at the basic features of the pants, because I already knew the fit would be rough due to the looseness of culottes. As I said before the pants went on very easily, just a little tightly over the hips, however, I really like the fit across the waist and the stomach so I would prefer to keep it that way. I could however make it easier to put on and take off by lowering the fastening so it was more than 20cm long. My observations of the pants were that the crotch seemed to be low and too loose, this contrasting with the slim fit around the stomach looks weird and isn't very flattering. The pant legs seemed to be a good length, but with a better fit around the crotch and legs may end up needing to be lengthened. As you can see in the photos, other than that the pants have actually come out rather well for a first pattern. The culotte technique worked very effectively and taking 5cm in on each side of each leg seemed to transform the shape from loose and baggy to verging on tailored. The front darts looked clean and worked well to create the slim fitting shape on the stomach, but I'm thinking the back darts may need altering soon because they won't sit the same when the legs are taken in and the crotch taken up.

I decided to take in the leg while it was still on the mannequin (like they do in professional fittings) but only fit one leg, see if it can still be taken off, and then do any alterations to the other leg. This would save calico and time from sewing a whole other toile. So I started pinning the right leg. I tried to keep the grain of the calico running down the leg as I took pinches in from the sides of the legs with pins. I aimed for them to be a little loose, but still define the shape of the leg. The photo here shows what it looked like on the mannequin after I had pinned it. I then took it off the mannequin and realised I had made a mistake. I hadn't pinched the side seams in while keeping the seam at the fold, so if I sewed it like that it would have ended up really warped and the seam wouldn't sit straight. So while keeping the same measurements to pull in, I redid the pins so that the seam was on the fold. I then drew in the line of pins with a pencil, because I would need to turn the pant leg inside out to sew it tighter. I could have saved a lot of time by putting the pants onto the mannequin already inside out, however I will know this for next time.

This photo shows the culottes after I had taken the right leg in with pins. You can see the fit (as I described left) of the initial pattern in the left leg, which at this point was unchanged. It is pretty good in terms of fit comfort wise, but it definitely needed to be taken in to match my design goals.



↑ The fitted right leg (not yet sewn)

So after I had sewed along the drawn-in lines, I put the pants back onto the mannequin. The newly fitted leg was a bit difficult to get on, particularly around the calf. Now looking at the photos of it, and while I was analysing it, I definitely think it was too tight around the calves and thighs, and maybe also around the ankles. I would definitely need to loosen it for the other leg. However I did like the fit around the knee, so it would be great to achieve that fit for the whole garment. So now I took them off the mannequin and traced the lines onto the other leg symmetrically. I then altered the lines, bringing a curve out that increase the calf area by 2cm total (so 5mm on each side edge) and the thigh area (I had marked the top and bottoms of the areas that were pulling and too tight on the mannequin) by 4cm total (1cm on each side edge) I tried to smooth out the lines as much as possible so that there wouldn't be any artificial looking curves. I now sewed along these increased lines and did another fitting. This time the calf and ankle were a bit better but the thigh was still too tight! I think this has something to do with the fact that the left leg that I was fitting is in a different position to the right leg, as it is bent at the hip and knee, the shape of the thigh muscle is different, and seems to make the leg tighter. So, since the two legs can't be different sizes in the patterns (this would make the garment not functional for out of the window display and less professional) I decided I would increase the size of the pattern. I actually like the proportions and fit at this point, so I think I will just increase all the edges by an even amount. I have also been thinking a lot about my fabric. The vinyl is very stiff and not stretchy at all, really not very flexible actually. This will make it harder to put on and fit to the mannequin. So I think, firstly, that when I start investigating sewing

techniques to use with the seams of vinyl, I may find that I need a seam allowance bigger than 1cm. Secondly, because the fabric is thicker, it will be tighter when sewn than calico. So I decided to increase the whole width of each leg by a total of 4cm. So, I would add 1cm to each side and centre seam. I also have observed that the crotch seems far too low. This, if exaggerated could be a design feature, as lowered crotches are quite in fashion, however I think this does not match my design intentions and may add another feature to an outfit that is already quite complicated. So I am also going to take the crotch up. I measured the distance from the pants crotch up to the mannequins actual



## CONTINUED ON NEXT PAGE



FRONT



BACK

These photos on the left and right are of the calico culottes toile after I had sewn the right leg (following the lines of pins) and also after I had traced that fitting, adjusted it, and sewn the left leg in. You can see the new fitting problems, especially the tightness in the calves, thighs and definitely the awkward fit of the crotch. In the photo on the left you can also see where I have pinned the back darts.



RIGHT SIDE

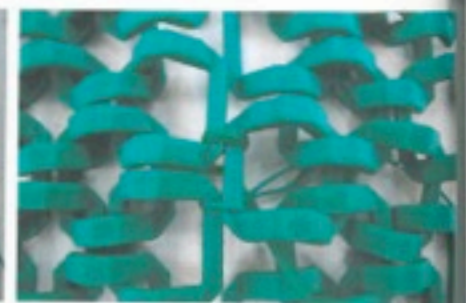


LEFT SIDE

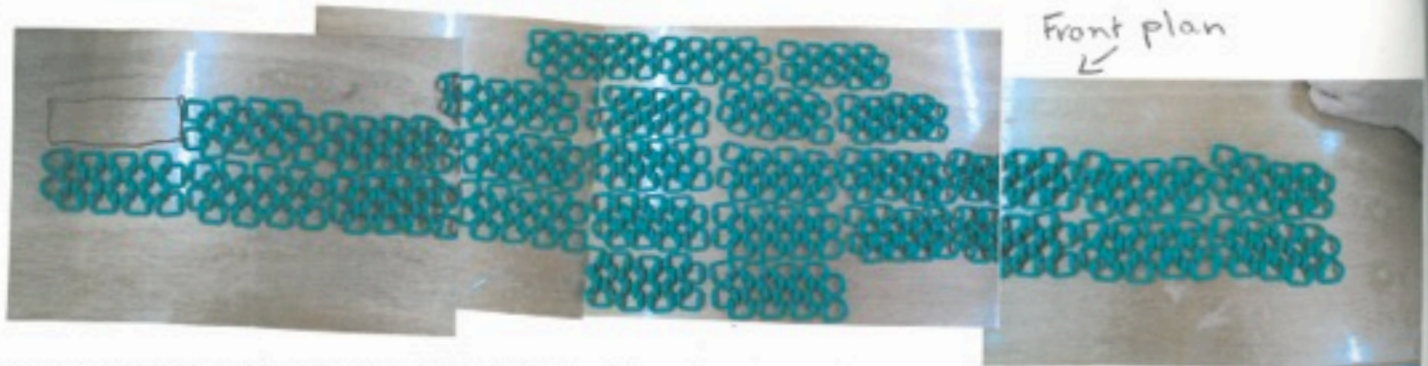
SKILLS DEVELOPMENT

# LINKING CHAINMAIL

After constant production of the chainmail, I now have over 40 pieces made. I decided it would be enough so I am starting to design how to piece them together. From my previous trialling I know how to lay them out and attach them so they form the rectangular structure, however I was not very happy with any of the materials I tried to join them with. I have purchased 2 options to now trial and chose from. The first is some green gardening twisty ties (on right) and the second green garden wire. I tried both connecting two pieces of chainmail, as you can see in the photo on the far right. The lower link is the garden wire, and the upper link is the twisty tie. A bit deceptively, the wire looks like a better colour match than the twisty tie, however I think this is due to the light from the camera, because in real life the twisty tie is an almost perfect match to the green of the plastic, and the wire is a bit too murky green. So I chose to use the twisty ties, also because I found them easier to twist, the wire was quite tough.



The next thing I did was to look at the gap between the shoulders and the chest plate. I had to judge how many pieces I would need to fill in this irregular shape. I judged it in vertical panels, making sure it would be tall enough to be attached on the inside of both frame edges. I then drew out this, just for the front area of the chainmail right to the arms. I then laid the chainmail panels I had been producing into this pattern, as seen below. This gave me an idea of how I would go about piecing them together in an organised fashion. I decided to work first joining them into vertical columns and then joining them horizontally. So in doing this I needed to make 10 vertical columns (then add the 3 offset pieces that are on the central line), six being 2pieces-high, two being 3pieces-high and two being 4pieces-high. This separated the task into achievable steps. I considered getting help from my sub-contracted year 10 students, but in terms of time I didn't have enough lunchtimes left to do this, so I worked on it at home, in the photos below.



The method I developed was twisting the tie round the two links, underneath so that the tight twist would not be visible. I then would cut off the excess (I got about 4 ties out of one length of the twisty tie) and make sure the twist was very secure before flattening it to prevent scratching or pulling of the underneath garments. I connected the four main links, then did the other ties which held it in place. This made the pieces sit flatter when I was doing those secondary ties. I am really happy with how these vertical ties look, they sit flat, merge-in colourwise, and hold the pieces together strongly. I repeated this process to do all the vertical columns.



I tried to use this same technique to start joining the columns horizontally, but I quickly found out this would not work. The tall curves of this end of the links meant I could not tie them flat and matching, I would obviously need something looser. I first tried using a spare link and cutting through the plastic, to see if I could link the pieces by adding some more links. As you can see in the photo, when placed on top it seems to work, but when I tried using a full link it sat very strangely and warped the rectangle shape. So I then tried using the twisty ties to make wider loops, as below, and join the vertical columns. This worked far better and allowed movement and flexibility, while also maintaining a consistent pattern of chainmail. I repeated this same process for the back section of the chainmail, this was a smaller piece but had a wider top area due to the distance between the shoulders from the back.



↑ Didn't work  
← Me piecing the panels together, it was very fiddly but the final result was worth it.



# Ongoing Consultation & Feedback

The definition of a successful display for me was for all my stakeholders' needs to be met. As a real world situation I was given a task to produce something for a client. This guided my whole process as it gave specifications, regulations and outside ideas. To achieve this fully I had to consult regularly with my client to see if I was on track, to keep informed on her needs and to make sure my vision was matching up, or extending her initial ideas. I met with Alexis multiple times throughout the design and construction process. The first meetings really established what she was asking of me in terms of the display. This was helpful to know what she liked in a display such as the bold colours and silhouettes. An important meeting was when I first met Jess and first saw the Brandon Street store location with Alexis (*evidence from practice : client and stakeholder meeting : page 27*). This was a key point in the consultation as I was able to discuss with Jess her ideas for the display, and show Alexis where I was at with my ideas.

I had to be able to explain my ideas clearly and with detail and clearly communicate my concepts. The client meetings I had were a two way experience where I would be asking questions, and proposing solutions (*evidence from practice : client meeting : page 26*). After the design work the consultations were more for keeping Alexis up to date with my physical materials and tests so she could understand the end product ideas that had been drawn. I found this was important to communicate with my client in order to assure them and be a reliable 'c'artist contractor'. At the point of challenge in my project when the pants had come out so differently to plan, it was good for me to contact Alexis and explain my progress, and the challenges I was facing. She was very supportive, and having that trust in my process was very encouraging, and in later feedback appreciated this practice as a client - *"I appreciated that Maia was always prepared when I met with her and on one occasion where she was unavailable she had left samples, clear notes and had fully briefed her fellow students to update me and answer any questions."*

Alexis' feedback was very positive and constructive throughout the process. At the end she expressed her excitement, to have something personal and expressive in the window - *"Maia's work was of an incredibly high standard, both in design and construction. Her use of the vinyl was very impressive, both in using the graphic and as the fabric."* The complexity of communicating and proposing ideas and solutions was a good learning experience.

Other than my main client, Alexis, I sought feedback from a wide range of relevant stakeholders. To get an idea of what the

overall consensus of the public would be I tried to get responses from people of different cultural groups and backgrounds. I talked with office workers from the central business district who worked around and passed the store and in the end who had seen my display - *"Overall it was amazing to see the obvious intense thought processes and artistic work inspired by the opportunities the WoW event produces. the sense of community involvement and encouragement of new talent for years to come helps make Wellington a rewarding and satisfying place to live."* Some of the wider feedback came from people who play videogames and were a relevant critic as I was interested to judge the response to my strong message about videogames and media. Other young people and adults who have been to see WOW, and other fashion students. I listened to opinions and critically thought about their responses and perceptions. These all covered a wide spectrum of who would be seeing my garment.

The overall feedback was predominantly positive, with some constructive responses concerning the dye shade of the makeup pads which I was personally aware of. I was independent in my decision making but getting outside opinions was very beneficial in directing the best outcome of my wearable art. I was lucky to receive feedback from Rodney Leong, a previous winner of the WOW supreme award at various stages in the practice.- *"A sophisticated vision, and judging by the photos a very well thought out design."* Receiving his praise and advice for creative opportunities supported my work and helped to sustain motivation and keep true to my ideas. These responses helped me decide on a range of different aspects and final presentation and installation.

The key decisions were predominantly influenced by my final design and my own personal design sense, but it was critical that I maintained communication with my garment's audience throughout the process, I did this especially with Jess - *"The overall garment looks very effective in the window display and works well with my garment"* - as it was important for our garments to work together and be unique but complementary of each other as sharing the store space. Communication in an ongoing manner with test audiences and clients is part of how businesses work with prototype testing and prior to launching new products and is an important aspect of any technology practice.

## CLIENT MEETING #3

In this meeting I had the chance to show Alexis my design work and give a proposal as such, as to what I wanted to do with the window and mannequin. This was an opportunity to tell her about my ideas up to this point and to get feedback from my client about what they did and didn't like about my designs.

PREP- the preparation was quite rushed, however my main preparation was to finish most of my development pages, to set out my samples that I liked, and to get ready my concept to explain to her. I wasn't yet up to a final design, so I had my development page out to show her. I actually feel like this was better because it is a much better time to get feedback, and it meant from there I could move on to collate the best parts of my development into one outfit. I wouldn't want to do my whole final design then find out she really didn't like an aspect of it, or all aspects of it.

In these images on the page you can see how I set out my things, I started my presentation by taking my inspiration image and explaining my concept to her.

I showed her my first initial ideation page which I had explored the aspects of the beetle on. I discussed how I was really interested by the limbs and joints of the beetles legs and antennae, how something so small could be so ergonomically sound. I was really keen to explore this aspect of the beetle's body, and yes use the colours of the beetle, but not take my main influence just from the aesthetics of it. I liked how the beetle's body was a shell made up of lots of pieces, and how the in between parts (the flexibly joints) were just as important as the strong hard shells. I told her how I was very very keen to be influenced and inspired by all sorts of armour, as I saw the concept of a pieced together set of armour in the beetle's body. I would love to take the concept of armour and maybe look into it a bit deeper as in how we develop personal armour, thus how it is a pieced together thing, and how nature develops armour too, adapting to new challenges.



I then showed her my design page, I summed up my vibe as a sort of alien warrior. I explained how I really wanted to play with a unique silhouette and do something very unique. I pointed out the parts that linked to the bug, how I would use the printed vinyl in a simple way to show off print, how the outfits were made up of many smaller pieces joined by flexible joints like chainmaille or stretchy fabric, and how the elongated sleeves and their inserted construction was inspired by the long antennae. I then explained how I wanted to incorporate some armour techniques from historic armour such as chainmaille and petals made of leather. This led me on to show her my samples. I told her which ones would be used for what, the makeup removers on wire mesh for the big chest pieces, the vinyl just plain on the leggings or shoulders, the scales on the hips and the chainmaille as the flexy part between the pieces. I also showed her the dyed makeup remover and how I was thinking of dyeing the makeup removers the bright beetle green then quilting them together. I showed her the different options of quilting the removers and also some different types of chainmaille, the one out of keyrings, one I had made out of jewellery rings a while back and one my teacher had printed using the 3d plastic printer at school. I briefly went over some of the other samples but mainly focussed on the ones I had referenced in my design work.

She gave me some feedback on the things she liked: She really liked the bright palette, especially because the bold effect it would have in the window. For that reason she was keen on the dyeing of the makeup removers, and actually really liked the random orange colour that I had dyed it as a sample. She liked the chainmaille, she played with the plastic one and said it was very interesting and cool to move around. She liked the idea of the long sleeves as it would cover the not so nice arms and hands of the mannequin and would look quite quirky. Other than that she didn't really give me much feedback, she basically said I was on the right track and she didn't seem to have any problems with anything. She did tell me to consider the depth and size of the window area when I started planning construction, as it wasn't as deep as it looked, and some parts of my garment were quite large. Also she commented that it was a very handy idea to do my garment in a collection of pieces, as this would make it much easier to dress the mannequin.

Overall the meeting went well, I am keen to get more specific feedback next time however it was nice and reassuring to know I was on the right track and to get the all clear from my client. I also found it very valuable to discuss my concept and my plans out loud, as it helped me to set all my ideas straight.

ONGOING CONSULTATION



## CLIENT AND WORKMATE MEETING

ONGOING CONSULTATION

On Tuesday (March 19th) I met up with Alexis and Jess Bunnell at the Brandon St Te Papa store for a meeting. This was the first time I had met Jess, so it was exciting! We need to have a good team-work ethic because we will be working together to create the window display. In terms of designs we will be separate, but the two designs need to be relatively cohesive and look nice & effective in the window together. In terms of the display layout we will fully be working and making decisions together. So we met up a little before Alexis was due to arrive, introduced ourselves and had a look around the ~~shop~~ store together. We noticed it was very small, but it isn't crowded, and it's easy to see into the window display from inside the shop. The shop is quite warm too, so I will take this into account for the material choices.

Alexis arrived and we continued discussing the shop space. We also further discussed how we are going to work together. We are going to keep in contact with each other via facebook, and update each other on our design and making process. We discussed colour choices, Jess is particularly keen on using a green colour from the beetle, and we decided we don't need to have identical ~~to~~ colour ~~the~~ schemes, however, the last thing we want is to have shades of green that are ~~so~~ almost the same but just slightly off. So, if we both decide say, to use a bright lemony green, we will meet up and make sure we get the same shade. We should have at least one colour both outfits have, (not necessarily the same tone/shade) I'm ~~guessing~~ ~~that~~ this colour that will make the window cohesive is going to be a green, especially as that is a major colour in the vinyl we are getting printed.

Another thing we discussed was the silhouettes of the garments and the heights they are at. For ~~exap~~ example, we wouldn't want two very bottom heavy outfits, or two top heavy ones, as this would make the window not very balanced. Seeing as we have the variety of plinths, we can put the garments at different heights. This will increase the interest in the window, with a use of levels. We had a look at the plinths, and there are plenty of them at different sizes, so we can definitely make good use of them.

We had a chat about the backdrop. Both Alexis and Jess were happy to have a play with the cropping and editing of the image, I myself am not very experienced with photoshop, but I think I will try some editing (I wouldn't need to be super advanced as the image doesn't need to and isn't allowed to be edited beyond recognition.) However, because there will be one backdrop shared for our window display of two garments, having just the one image of the beetle ~~so~~ on the backdrop will still look good as it will be visible ~~through~~ in between the two garments. We discussed the current window display; it is quite busy, and full of lots of different products. Alexis said it wouldn't need to be that full, as the main focus point of the window will be the garments. She said we will be free to move the boxes and plinths around. ~~At~~ Also I suggested/asked whether we would have smaller samples/details on display with the garments, to give a display of the whole process. She said this definitely could happen and it was completely up to us.

We also can adjust the lighting - from the plinths which have lights inset into them, and the swivelling spotlights on the roof. This

- Mala Holder-Monk  
Hey! Was going to email you but this is a bit easier. So yeah, looking forward to collaborating for WOVN I was wondering if you wanted to meet up for coffee this week and discuss ideas for the window display from what my teacher has told me we will be doing independent design work but in terms of the window design we will work together? ☺
- Jess Bunnell  
Hey ☺ yeah that sounds good! I tried to email you but it didn't work for some reason, but yeah this is much easier ☺ that sounds great! yeah that's what I gathered, and we share the backdrop photo I think? looking forward to working with you btw ☺
- Mala Holder-Monk  
You tae! yea its gonna be fun ☺ and yes we share the backdrop, my teacher asked whether we can like edit the image on photoshop (cropping, overlaying etc) and te papa said that's all good, so we could discuss if we wanna do that! sweetest what day suits you? ☺
- Jess Bunnell  
yeah that would be good ☺ well I'm going to te papa on tuesday with a girl from school called rezie, to measure the display etc so we could potentially meet then and go measure brandon street together if you want? ☺
- Mala Holder-Monk  
that sounds good to me! what time? cos I have work at 5.30 ☺
- Jess Bunnell  
Alexis said at 4, and my teacher gave me your number hohehe so ill text you when im there ☺
- Mala Holder-Monk  
ok sounds great ☺
- Mala Holder-Monk  
hey! just wondering, do you have the window measurements?
- Jess Bunnell  
Yes ☺ there not on me atm! But ill give you them tonight
- Mala Holder-Monk  
sweet thank you!

We have been communicating via facebook as we have more regular and easier access to it. This is a screenshot of our conversation organising our meeting and sharing information. We also have each others emails & cellphone numbers.

CONTINUED 2 PAGES AHEAD



# Fitness for Purpose in Broadest Context

There were many facets to the final purpose of my work. In terms of being a product, the outcome was a technological display of creativity in line with the culture of WOW and representing both my own design identity and the Te Papa Store. It's context was a window display of a static mannequin supported by a visual communication of my whole year project. Because of this I had to take into account many complexities present due to this environment (*evidence from practice : Te Papa Store : page 14*). I created a piece that would fit both size-wise, and aesthetically, into the window and store space. I was conscious of the depth and height of my garment because the window space was quite narrow and I needed to share the space with Jess' garment. The height of the store name on the actual window also influenced how I designed my conceptual work, putting more detail into the mid area. My solution fits comfortably into the window and on the mannequin. The mannequin was an aspect of the situation which created differences in the way I made the outcome. I was equally conscious of the fit and the ease of fitting when sewing the top and pants. The static and inflexible qualities of the mannequin increased my consideration of function and ease of use in my garments (*evidence from practice : mannequin analysis : page 30*). This influenced my choices of shape and fit, maintaining the tailored shape but loosening the fit to accommodate the stiffness of the vinyl and how I got the components on and off.

Each step in my process led to the fitness for purpose: choice of techniques, practices and resources. To achieve the polish and elegance required of a garment in display I utilised quality sewing techniques like bound edges and simple seams, and used critical reflection to continuously refine and concentrate my design (*evidence from practice : sampling : page 18*). To ensure stakeholder interest and aesthetic appreciation of my product I brought innovation and individuality into the silhouettes and materials by playing with the traditional proportion of the human body and manipulating objects like makeup pads beyond recognition. Using a brief aided me in assessing my work at many points to see if it was meeting and exceeding what defined it as 'fit for purpose' for the stakeholder, as a window display, and as a wearable art piece. I believe I met all the criteria and exceeded many aspects. The idea of my display being a product helped me understand its success and acceptability, not just the garment, but the whole display including the communication of my process.

As a visual addition to the display, a sense of developmental time and work can be viewed through the blurb and display card of collaged images of my process sections. This

added to the display and engaged the passersby as it included them in the creation of the display and helped them understand my viewpoint and idea base, which naturally intrigued people and drew them in. This highlighted the smaller details in my Wearable art piece that people may not have noticed otherwise, and gave them a more rapid understanding of the theme and meaning of my display.

Researching the Dieter Rams' ten principles for good design gave me criteria to critique my work on. I considered all principles while designing and analysing my garment. My work is innovative in the material efficiency and creative reinventions of past techniques. It is useful in it meeting the stakeholders' needs as a successful, attractive piece of art, and in improving my skills and knowledge. It is aesthetically in the balance form and silhouettes, and the pleasing use of colour and tonal cohesion. It is understandable as a WOW garment in it taking on the key features of the culture and embracing artistic expression and professionalism. It is unobtrusive of the surrounding environment and atmosphere due to the consciousness of the social and physical environment, and the cohesion between mine and Jess' outfits. It is honest, there are no hidden deceptions or aspects of poor quality and my theme is clearly portrayed in both symbols and text. It is long-lasting, it is built to withstand and endure the specified environment and is fit to be reused as a display in the WHS Fashion technology and Graphis exhibition. It is thorough as all details are given equal attention as the bigger aspects, with clean and thoughtful choice of minor techniques (*evidence from practice : design : page 12*). It is environmentally friendly in my use of recycled and preserved disposable products. It is simple in the lack of constructional clutter and cohesion in colour and line.

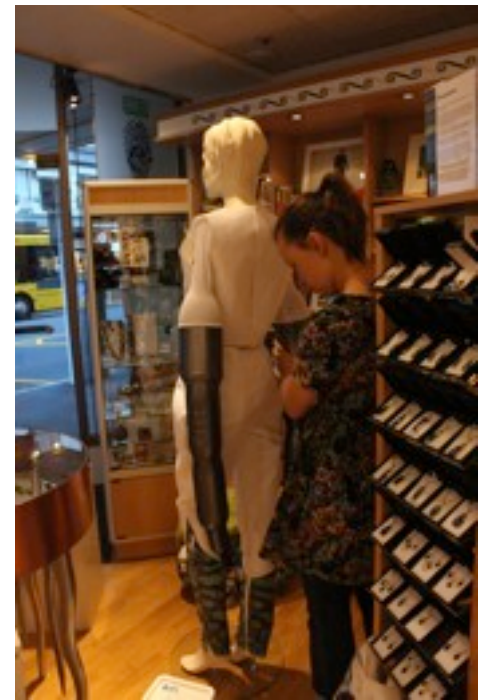
Representing my school and my creative work was an adjacent goal for the project, and the publicity and bold presence of my 'school project' was key in showing Te Papa's involvement with the community. Some positive outcomes from my technological work have helped me achieve both of these things. Soon after the installation, I was interviewed by a journalist from the Cook Strait News and had information about my work including photos. This was very exciting as it meant my piece reached a far larger audience, and it was a very satisfying feeling to have my hard work acknowledged in such a way. This media opportunity represented me, my school, and Te Papa in a very congratulatory light and confirmed the community's appreciation of it to me and my client.

My work with the 3D printer has garnered attention too, because of how I have used it in a unique and different context

than it usually is. I now have been offered a chance to be featured in a TKI Technology Online article. I had the opportunity to discuss technology as a subject and my practice and ways of working this year when I was invited to attend a Ministry of Education Hui to make a presentation as a technology student representative and answer questions about this process. I received a very high level of praise with my WOW work and the Ministry leader endorsed my practice and work to the audience which was a proud moment for me. This was a fantastic opportunity as I again represented my school, and I was able to extend the audience of my work to influential people and leaders of Technology from around the country.

Working with my client and fellow person Jess who I shared the window space with was an aspect that was an integral part of my practice. The communication and ongoing feedback from these people and the wider stakeholders throughout the process was a part of the success and helped make the end conceptual solution fit for purpose in the most broadest sense. Had I not acknowledged the important nature of this, the window and end result of the WOW work would have not been as resolved as it was.

Heather Palmer, the director of World of Wearable Art, gave me feedback after seeing my work on display and felt it was well thought through and highly resolved in all aspects big and small. This was a wonderful final compliment that reinforced the fitness for purpose of the display as she has seen 25 years worth of WOW designs up close and seen designers summaries and presentations through the competition.





# MANNEQUIN ANALYSIS



## Mannequin analysis

The mannequins we have for our window display are typical white mannequins. Mine is a full body model, with hands, feet and a face with a short hairdo. It is fully white.

I need to keep all the features of my mannequin in mind when I go about designing, planning construction and constructing my wearable art garment. Because ultimately the garment needs to fit onto the model, and an ill fitting garment will detract from every good aspect of it.

I need to consider:

- Measurements
- flexibility
- points of attachment
- where it attaches to the base
- balance
- weight restrictions
- face/hands/feet
- fragility/potential to be damaged
- friction/texture
- colour cohesion

The mannequin is attached together at the shoulders, wrists, hip, neck, and ankles. This is how I am going to have to put on the outfit, as the plaster is absolutely solid and cannot withstand stress. I need to make sure anything that has no stretch has some sort of way to be fastened as the waist cannot flex to fit it. I have to be very careful with the arms and hands and feet etc because if you drop them they shatter and are extremely expensive to replace. Whatever is going to be on the legs will have to be stretchy or like button up or something because the legs don't move at the knees.

The base is attached to the mannequin at either the foot or the calf, I can choose either, so I will have to either have some sort of hole on the pants if the outfit has pants, or make sure the shoes have a hole. I would rather do this than just avoid having pants/shoes because I don't want to sacrifice the aesthetic of the garment so the function is easier to create.

The feet are on tiptoes, which makes things difficult in terms of shoes, only a certain type of heel would fit on (it would have to be fastened up the front too) and flat shoes just would not work. So, my options are to either find the perfect heels (though it would be better not to have to buy anything instead of make it) or to make my own shoes which are more like slippers, so they can fit on. The feet are also very human looking and not very pretty, so I am very keen to cover them up.

Along those same lines, the mannequin is extremely detailed in hands, body and face, which I do not particularly like. As a wearable art piece I am trying to avoid having the piece look just like an outfit, so this ultra human look sort of takes away from that. I would like to do something about that for example shoes/feet covering, hats/masks, and gloves. My big concept is sort of developing into an alien feel, so I would like to make the mannequin as sleek and simple as possible.

As it is held up simply on a pole attached to a base, so I need to be thinking about balance when designing and constructing the garment. The weight of the garment should be as evenly dispersed as possible so that it doesn't tip forwards/backwards. In that same way there shouldn't be a huge large percentage of the weight on the head as this would unbalance it. The garment needs to be of a reasonable weight too so it doesn't put stress on the mannequin.

I need to investigate the friction and texture of the model, because I will need to know if things like low sleeves will fall off easily, or if the hips will need to be very fitted.

Also, the colour of the mannequin is a pretty harsh white, I need to be always putting my colours and textures up against this as it could cause the colour to get washed out or appear more bright/dull than it is. Also I should avoid cream colours as this will just look dirty up against the white mannequin. I should also consider things like whether I use red or black, as it will appear to be a red and white combo/black and white combo, which could come across as Christmassy or evening wear.

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ABOUT

Our authors Meet

# WearableArt™ Windows: Maia – Wellington High School

Posted 27 September 2013 by [WearableArt™](#) & filed under [The WOW Factor](#).

Our WearableArt™ themed windows series continues with Maia from Wellington High School and another take on the Longhorn Beetle image from yesterday.



The Longhorn Beetle used for Maia's inspiration. Photographer: Te Papa. © Te Papa

My name is Maia Holder-Monk and I am in Year 13 student studying Fashion Technology at Wellington High School.

The photo of the Longhorn Beetle jumped out at me with its vivid colours and intricate detail. The joints and contrast of flexible and tough parts of the beetle's body and shell had an inspiring mix of beauty and function. My initial design process was experimental with shapes and silhouettes, which led to creating a unique shape which challenged traditional ideas of proportion and conventional clothing. I believe that this is what blurs the accepted boundaries between fashion to become wearable art. The bold colours and the idea of self-built armour can be seen as influences and portray the way nature has evolved to form natural protection and defense systems.



Maia's design sketches. © Maia Holder-Monk

The design of armour for female characters in various forms of media, its sexualisation and disempowering lack of function made me passionate to take a feminist stance on this wearable art piece and explore reclaiming strength, ability and empowerment.

Having the opportunity to use unconventional materials from snaplock bags to 3D printing has expanded my repertoire and enabled innovative takes on traditional techniques.



Maia's finished garment in our Window: Street Te Papa Store. © Te Papa

This has been very exciting developing my techniques, and trialing ways to use my vinyl backdrop. I am looking forward to how the bold pattern and colour comes out. I am now starting to construct the bottom half of my garment, which will hopefully all go to plan!

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One Response

[Julia White](#) September 30th, 2013  
I'm loving seeing what you all come up with, such wonderful talent.

**Cook Strait news** 23 Sep, 2013

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**WOW Factor**

By Nikki Poynton  
Four year 13 fashion students from Wellington High School are hoping to WOW Wellington. With their wearable art designs.

Maia Holder-Monk, Hannah Van Severen and Frankie Berge were all selected to take part in this year's Te Papa WOW project. This is held in conjunction with the annual World of Wearable Arts Festival.

The project, which is run in partnership with Queen Margaret's College, has been running for the last eight years. It gives selected students the ability to display their designs in the Te Papa shop windows.

Follow student Claire Rigg with her art designs on display in the Met Shop window.

For the second time in the project history all four students have also been entered into the Wellington Regional Window Display Competition. Head of Fashion at Wellington High School, Kylie Merrick says this is among the highest quality work she has ever produced, and has a real point of difference.

*Continued on page 2*

Photo: Hannah Van Severen, Maia Holder-Monk, Frankie Berge and Claire Rigg.

**WOW Factor**

*Continued from page 1.*  
By Nikki Poynton  
"This year it has propelled into another whole ball game." She says the process is very hands on and allows the students to meet with clients to discuss their work and design process.

"It's a real life opportunity to work with clients, it's not just a school project."

The girls have been working on their designs for the past six months, and began by selecting different images from Te Papa's collection of photos.

Maia's 'Winged Morphology' design was influenced by a longhorn beetle image, and she used materials including chicken wire, vinyl and make up packs to create her design, which she says reflects a "modern futuristic warrior woman."

She also used a 3D printer to create something that had the texture of chain-mail on the torso, a process which took over 70 hours.

Hannah drew inspiration from an image of seaweed for her 'Illusion Delusion' design, and says the idea of a Bressach ink blot soon became a focus.

"This made it quite unusual, it ended up being a nice expression for me, it was all quite natural and organic."

Frankie Berge's 'Sea Shanties' design looks at the sea and tales from the past. A multi-paneled skirt has been painted by hand with images of the sea.

She says she has focused on how we used to treat the ocean, and how we now treat the ocean, as well as looking at the ideas of global warming and pollution.

Claire Rigg's design 'Solar Shimmer' which is on display in the Met Shop has been influenced by the sheep itself. Her design is made up of paper mache, sequins and oil painting.

"It is based on the Met Shop and their logo of the strag and the Ma of the weather."

All four girls' designs will be on display until October 6.

Claire Rigg's 'Solar Shimmer' design  
Frankie Berge and her 'Sea Shanties' design  
Maia Holder-Monk's 'Winged Morphology' design  
Te Papa store manager Aneis Hawke & Hannah van Severen

# Future Practice Implications & Reflective Summation

This project has been a huge learning curve for me. Taking my fabrics technology knowledge and then translating it into a real life situation, took me from student to designer. The WOW scenario allowed for enormous creative freedom and encouraged breaking boundaries in design. I seized this opportunity and produced something that I am very proud of, something that will go in my portfolio in the future. This contextually significant experience will have many positive influences on my future practice. I have gained practical skills in techniques like 3D printing, dramatic pattern alterations, tailoring, working with vinyl and plastic, and creating texture and colour with unconventional materials. This knowledge will help me in future when faced with using any of these, but also my experience of facing challenges and solving them within these new skills will greatly increase my ability to adapt and be innovative.

In terms of process-skills this project will influence the way I work and how I interact with stakeholders. I am now more experienced in working with a client and being able to propose ideas to them, discuss specifications and incorporate their needs and ideas into my concepts. This is a highly valuable skill that is transferrable throughout many technological industries, and gives me the tools to succeed in any task I am given. I have enjoyed working in collaboration with people and picking up new skills and knowledge from them, I feel more confident now in being able to seek advice and assistance, and being aware of what I can and cannot, or have not yet learnt to do.

This extrapolation and curation of ideas and techniques improved the aesthetic and functional quality of my garment, this ability to amalgamate advanced my creative thinking and took me beyond any mental or environmental confines. In receiving a professional critique and feedback from Heather Palmer, who is the competition director for World of Wearable Arts, I am encouraged to take the skills and experience of producing a piece for Wearable Arts and apply them in the greater scenario of the supreme awards competition. Heather wrote, *"The student's attention to detail and construction demonstrates great promise for a young wearable art designer."* I received similar messages from Rodney Leong - *"I did ask Kylie [my teacher] if you were entering the Awards themselves as this would make an incredible entry."* The idea that I could expand my creative work to be shown on an international scale supports my practices and constructional ability and gives me the confidence to work in such a higher and broader sense.

In conclusion, creating the wearable art window display for Te Papa has been immensely beneficial to developing and harnessing my technology skills and practices. Participating in a year-long project meant I was able to spend more time on the outcome and achieve a more optimal result in both quality and

concept. The grander scale of the task being a full outfit was a good chance to improve my skills of developing and implementing a full design vision. Conceiving the final point of my design, being able to communicate that, and then initiating the course of action to achieve this was unique to this huge project. It aided me in becoming confident with linking ideas to outcomes and the strategies to get between the two. I was able to continuously enhance my conceptual solution until it reached its superlative state, sustained improvement and enhancement became a key feature of my technology practice and aided the solving of constructional and visual challenges.

I have gained a unique experience of a real-life opportunity, I can take the skills I have picked up during this year and integrate them into my future projects and interactions beyond the classroom and in future career pathways. I have demonstrated a high level of independence and critical thinking throughout the process as this reflective consideration of factors and their implications helped me achieve elegance and optimal sophistication in my practice and end result. I have experienced a wider context of stakeholders and refining my Wearable Art to suit a variety of complex specifications such as location, theme and cultural expectations, has extended my skills of producing an outcome. Working with unconventional materials and working within the WOW phenomenon has opened up my inventiveness with materials and issues, and has given me skills not present in a ready to wear conventional clothing project.

I have extended both my practical abilities and management abilities which are two coinciding factors that are key to producing a successful product, in this case a garment for display. Utilising ingenuity and sophistication was crucial for me to produce a product fit for its situation, my skills in refining and synthesizing my concepts became highly developed and were key in the creation of a garment of finesse. I applied the key competencies of technology consistently in my work to support the success of my practices, and to seamlessly incorporate these skills into my 'habits', which will benefit my future work. If I had the opportunity to redo any part of this experience I may reflect on the technique I used for the quilted makeup pads, as this did not live up to the higher level quality of the rest of the construction. I would increase the size of the pattern for when in use of vinyl, however I would still implement the apron aspect of the top as this balanced out the hip length and added conceptual depth by bringing in a symbol of female stereotyping.

The serious opportunity I seized this year integrated me into the design world. I have built relationships with clients and stakeholders, and produced a Wearable Art piece that meets and exceeds the expectations of a professional window display for one of the most important destinations in New Zealand, the Te Papa Museum and Stores.

# Reflective Summation

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