

DIGITAL SKETCHBOOK

MerPod
Tailoring

AD318

BY AIMEE CAMERON



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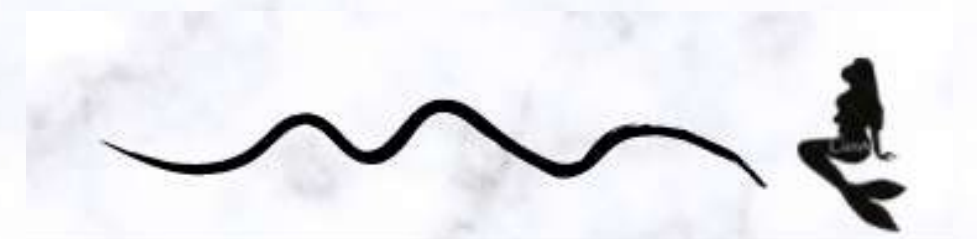
1. Introduction

The goal of my current project is to research and produce a fully functional, highly accessible mono fin that resembles a mermaid tail, with a theoretical secondary function as a working prosthetic for use by an amputee or disabled user. The project will maintain a genderless approach throughout development. The piece I have been playing developing most recently has seen some experimentation in shape and colour, specifically in the tail. I've been using dye sublimation techniques to play around with patterns and visual textures. I am still planning to implement a prosthetic functionality, which is my next focus. My foremost thought at the moment is to create a sock-like structure on the interior that can be tightened or loosened depending on the wearer's fit. Or perhaps utilise the use of secure straps and fastenings on the inside. I have also been exploring visual options with the fin, which I consider to be an essential factor given the aesthetic significance of mermaids in pop culture.

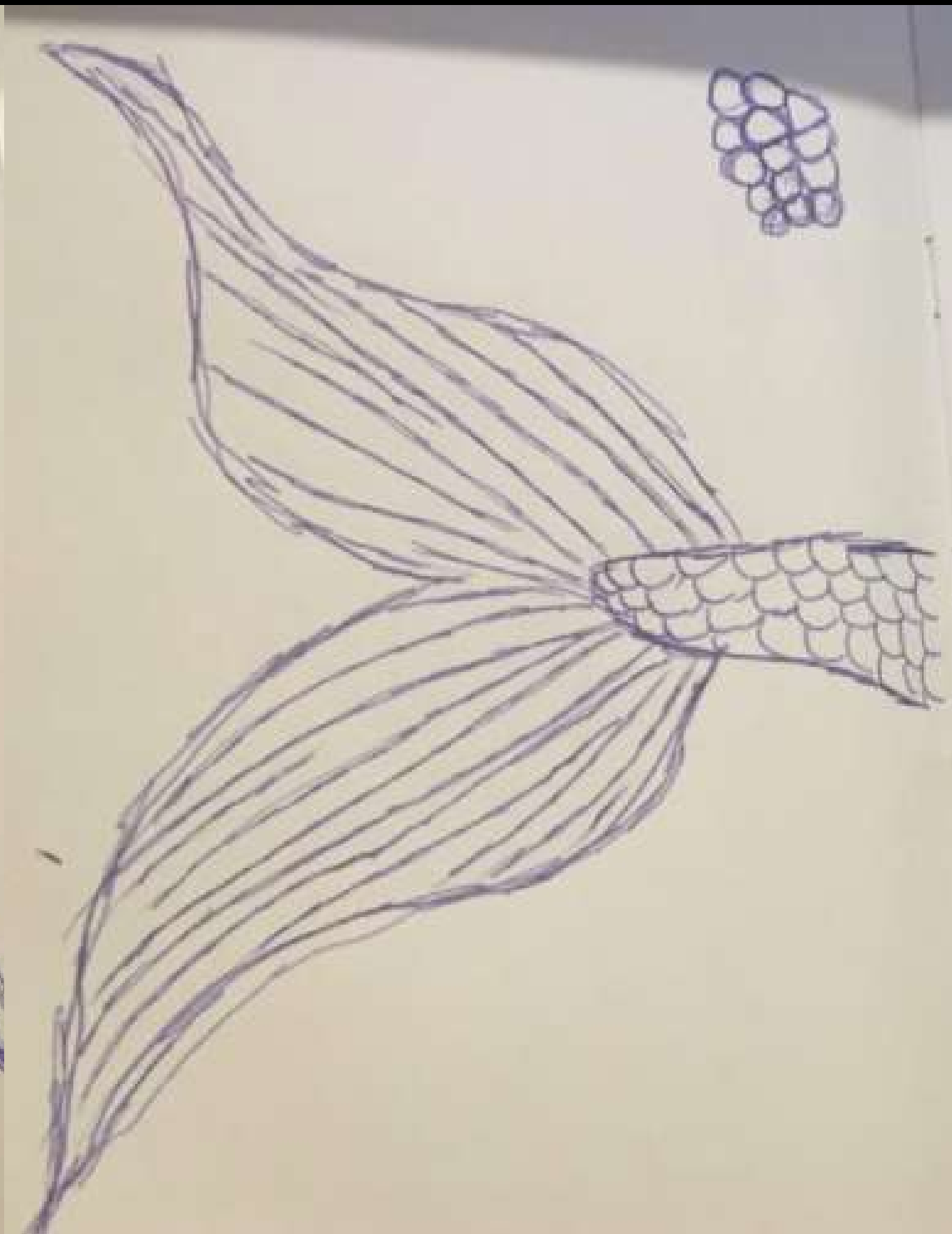


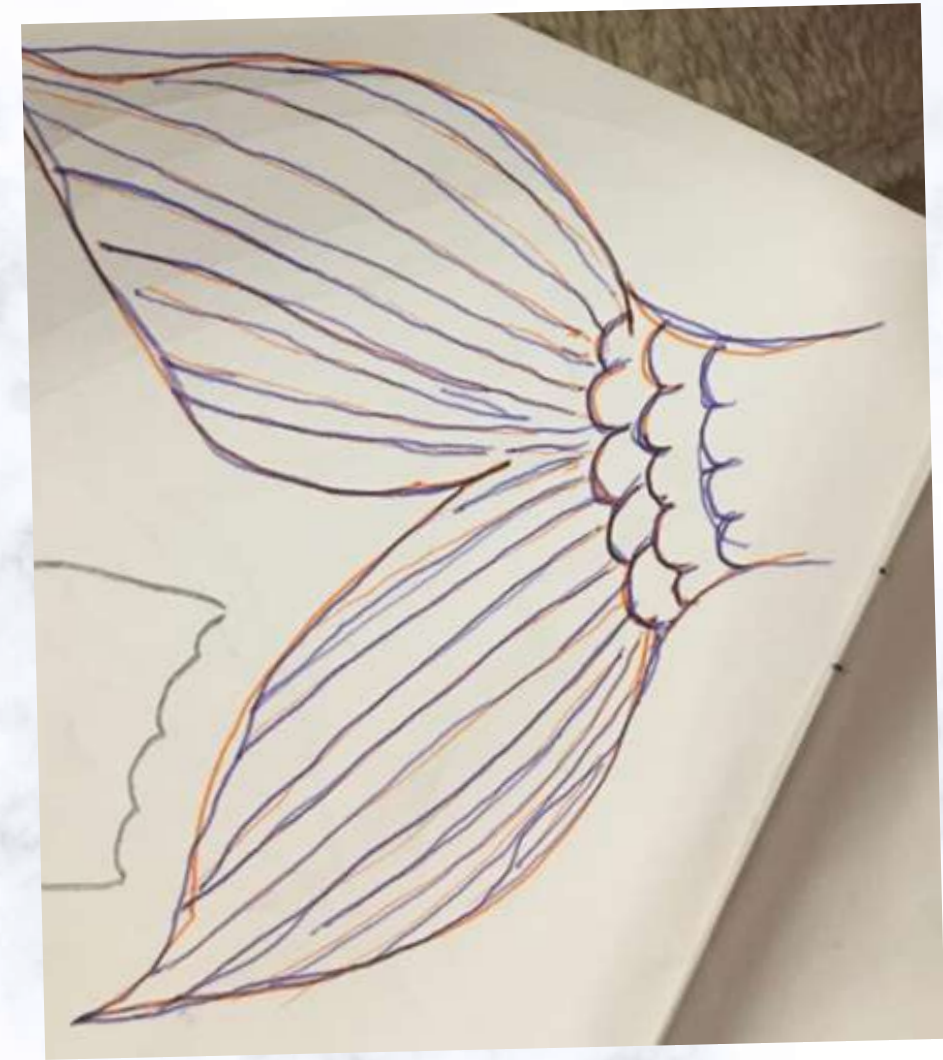
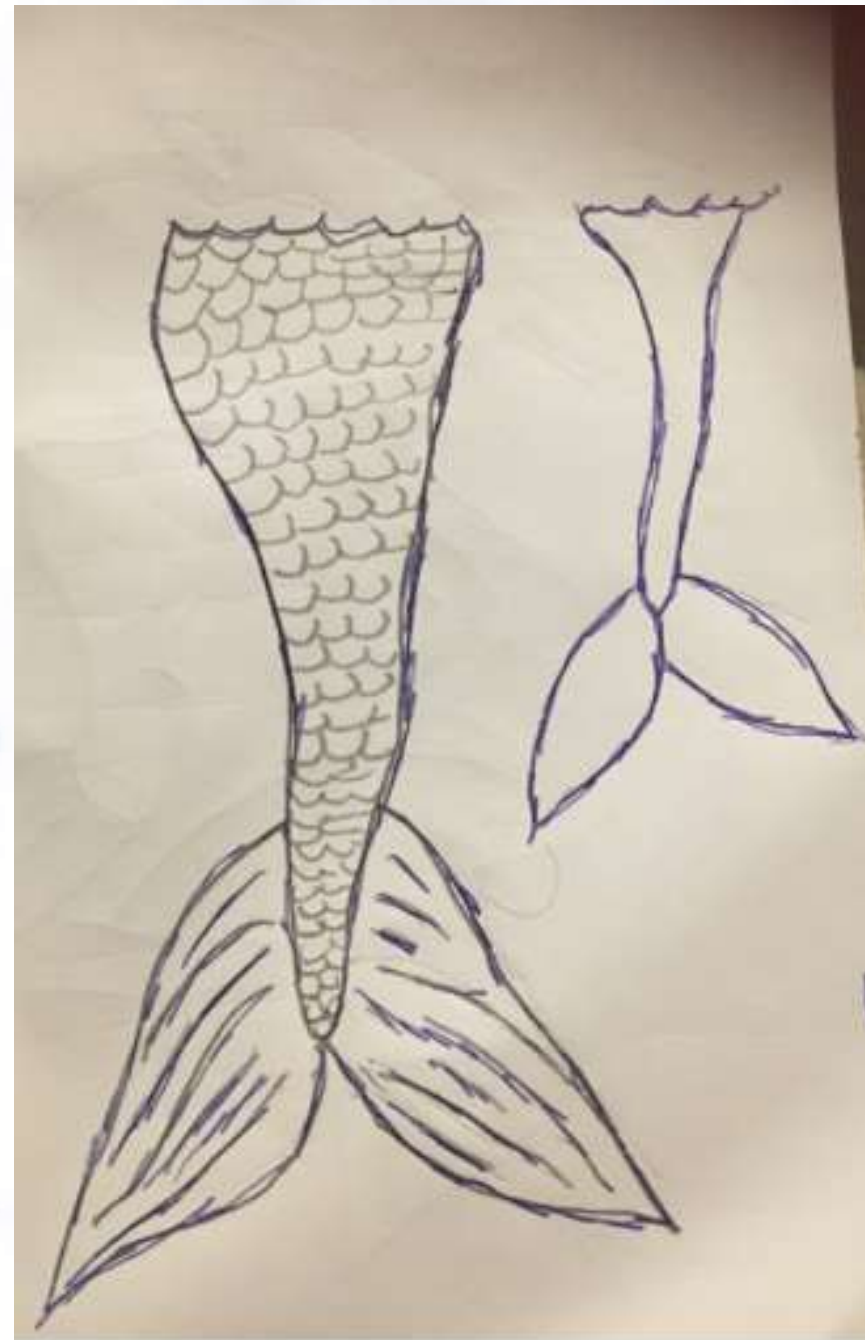
2. Production

A. Pre-production

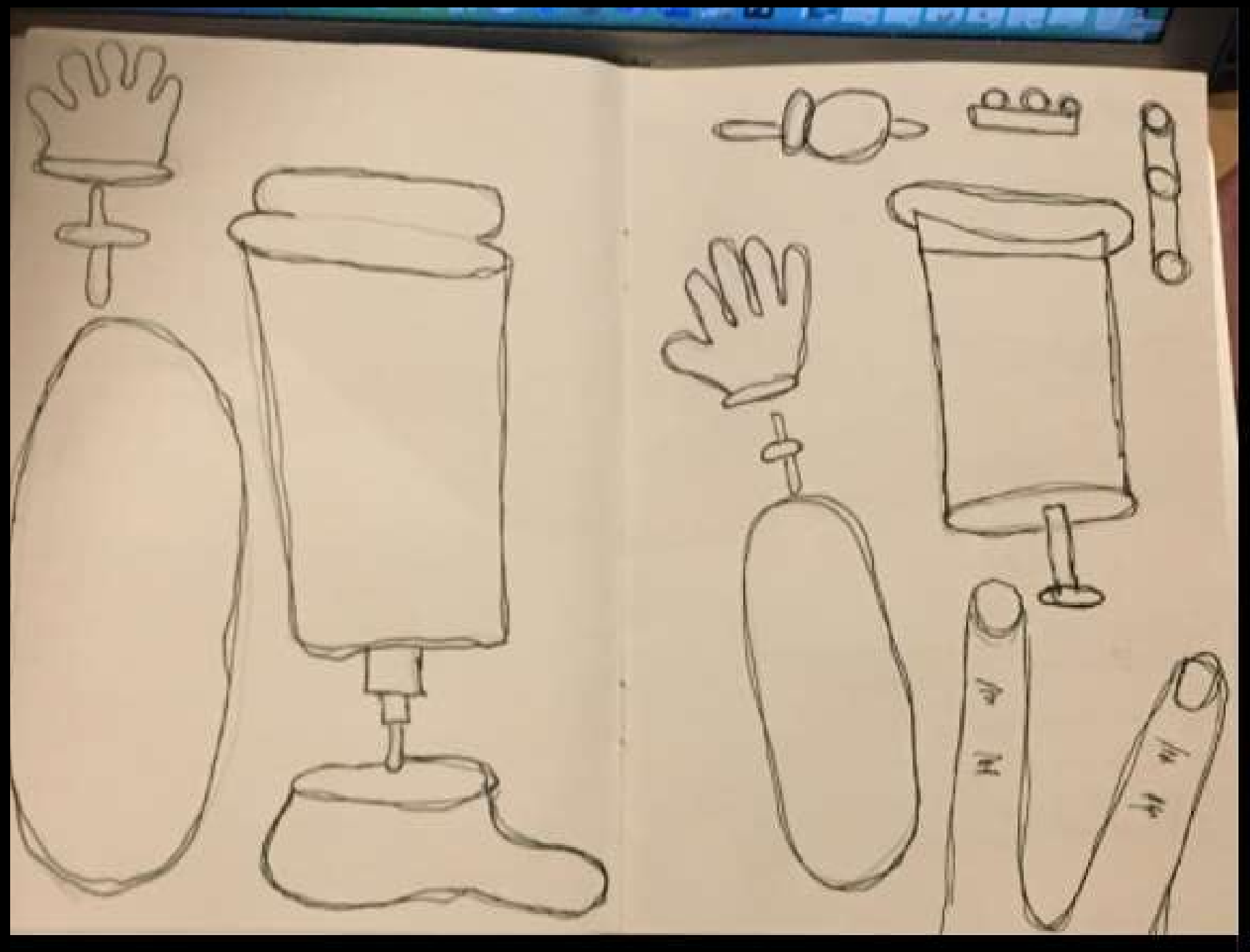
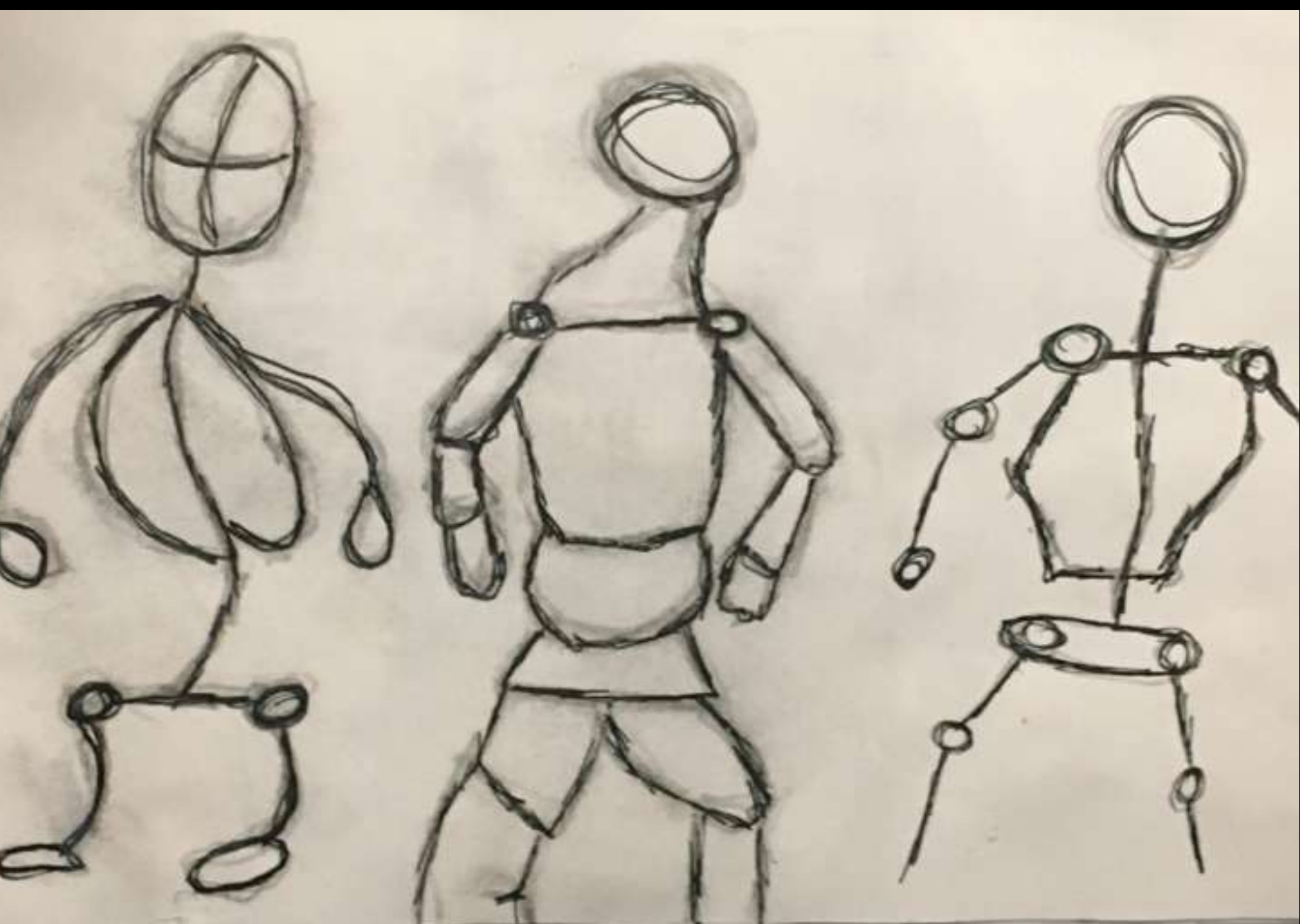


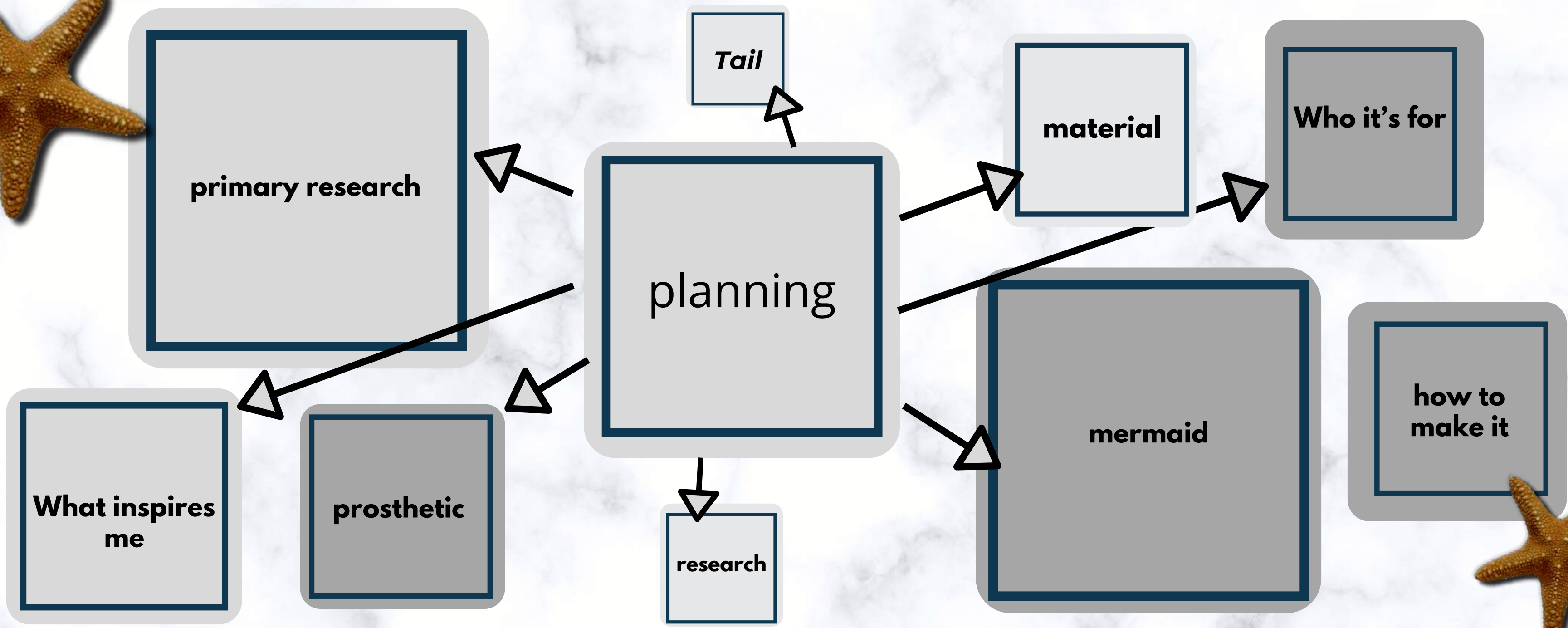
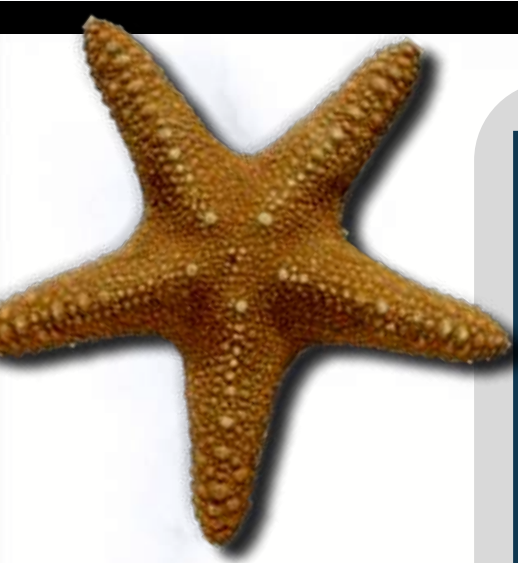






drawing out the shape of the tail







there are
many different
ways to
create a tail

This was another one of my experimental tails. I used clingfilm, duct tape and cardboard, and it was quite fun to create something with such an interesting collection of materials. It was a completely alien way of making a tail when compared to anything I'd done before.

Organising-Timetable

Monday	Tuesday	Wednesday	Thursday	Friday
photo shop designing	—	library day	—	—
Working on creative enquiry	library day	working on pp	Layering up sheets	Layering up sheets
Monday	Tuesday	Wednesday	Thursday	Friday
Working on creative enquiry	photo shop designing	photo shop designing	Sketchbook/ research	Layering up sheets
working on pp	Sketchbook /research	—	—	t-shirt pressing
Monday	Tuesday	Wednesday	Thursday	Friday
Layering up sheets	Layering up sheets	Working on creative enquiry	L6 Group Reviews	t-shirt pressing
Layering up sheets	t-shirt pressing	t-shirt pressing	live mermaid show	—



Hi Aimee

Thanks for getting in touch. Please let me know what you would like to know...it was a tricky mermaid tale but sure I can help

Thanks

Paula

Sent from my iPhone

 Aimee Marie Cameron (student)

Fri 24/05/2019 16:05

To: Paula@helloflamingo.co.uk



Hello Paula,

A little while ago you came to my university in Brighton to give a talk about your company which was a very intriguing, especially in regards to your mermaid tail. I'm going to be starting my own mermaid tail project soon, and I was wondering if it be possible if I could pick your brains about it; any advice you could offer me would be fantastic and immensely appreciated.

Please let me know your thoughts at your convenience.

Many thanks,

Aimee

Hi Aimee,

Paula has passed your email on to me as I worked on the mermaid tail.

We do not have the mermaid tails here at Hello Flamingo as they were made for Missguided so they have them. I don't think they're on display anymore but they were in the Bluewater store, you might be able to see them there.

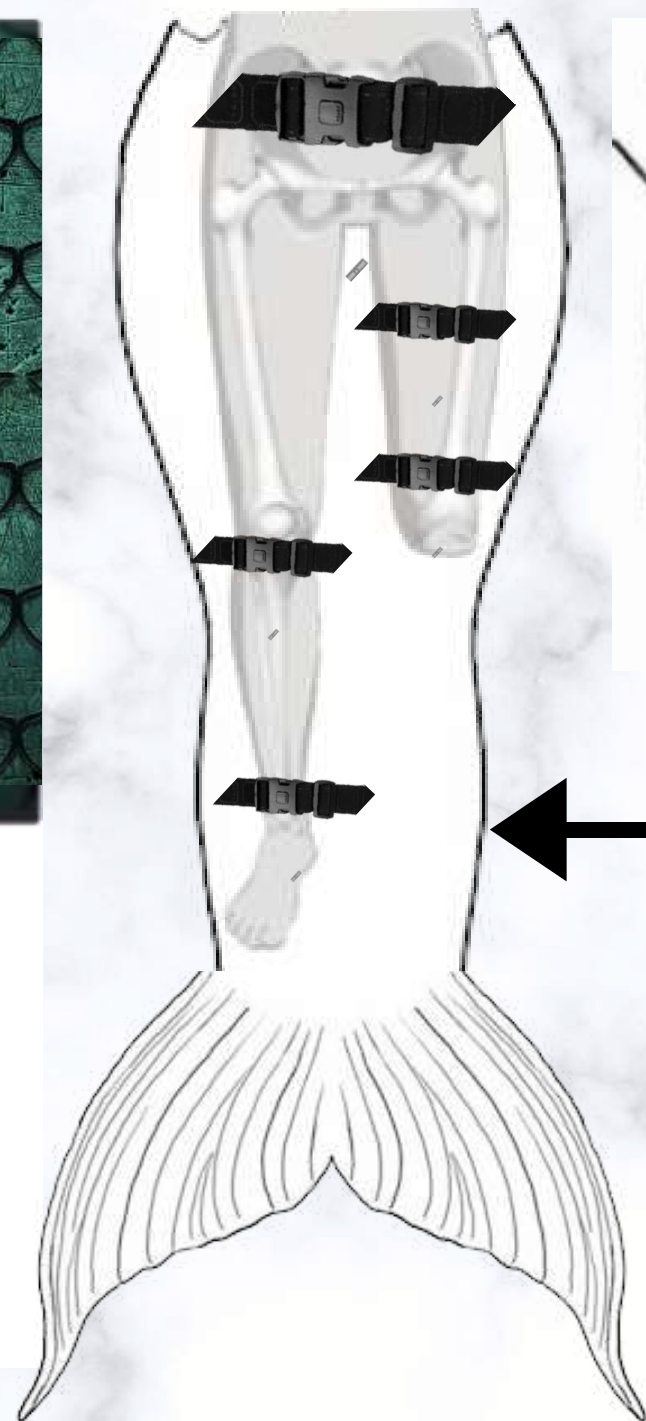
As Paula said, the tails were quite tricky to make! The main body of the tail was created separately to the fins. The body was made by using a sewing pattern I created- three sizes of shell moulds were made and then then pressed out in clay individually to create the tail mould. The whole tail was made of silicone including the fins- this made it very heavy (you will need two people to move it around without damaging it!).

The lining was a lightweight calico, this was so the silicone didn't cling to the plastic of the mannequin. I'm not sure how you will be displaying yours, whether it will be on a mannequin or something else so you might need to play around with some aspects of the tail to suit you.

Let me know if you need more in depth information, I'm happy to help! I really enjoyed making the mermaid tails, I hope your project goes well! 🧜‍♀️

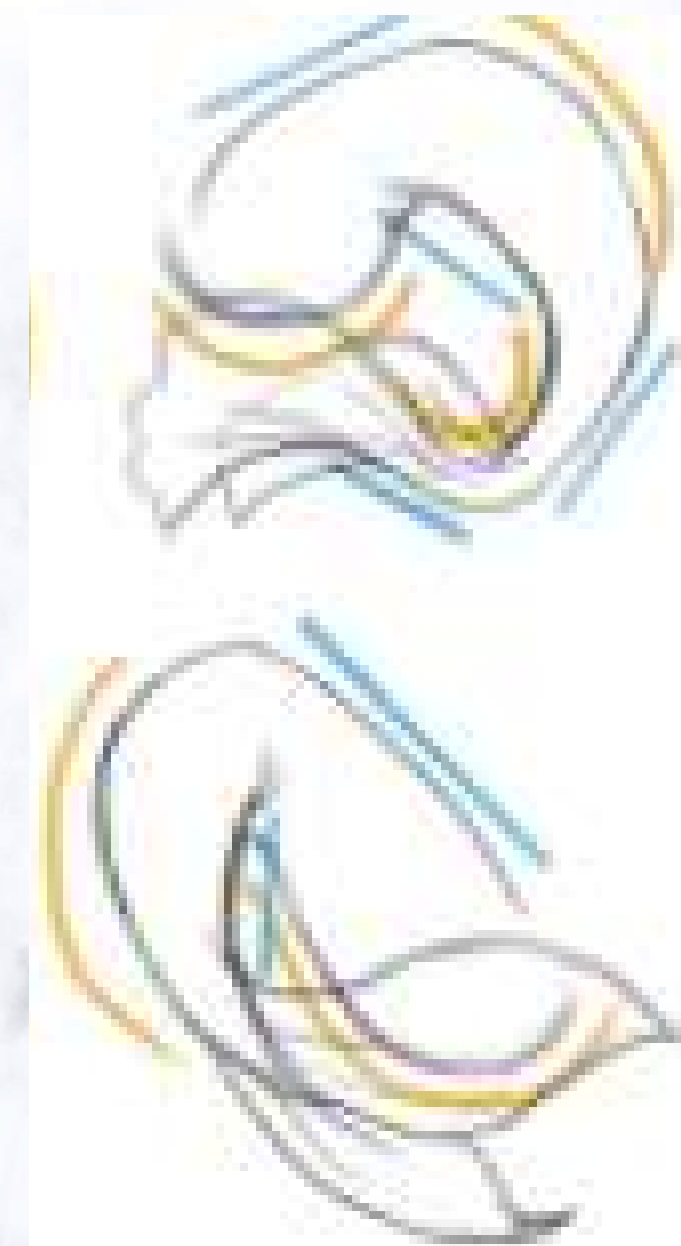
Kind Regards,
Elizabeth.





← the inside of the tail

These sketches are theoretical projections of what the inside of my tail will look like. The interior will be fitted with fully adjustable, even detachable straps that fasten around the wearer's body and secure them tightly into the tail. The accessibility of the straps will be what allows anyone to fit into the piece securely regardless of the number of lower appendages.



Organising-Timetable

Monday	Tuesday	Wednesday	Thursday	Friday
photo shop designing	—	—	L6 year Meeting	—
Working on creative enquiry	—	working on pp	Working on creative enquiry	Sketchbook/ research
Monday	Tuesday	Wednesday	Thursday	Friday
workshop today	working on tail	photo shop designing	Sketchbook/ research	—
working on pp	working on tail	—	—	Sketchbook /research
Monday	Tuesday	Wednesday	Thursday	Friday
Interview with local mermaid	Layering up sheets	Layering up sheets	working on tail	t-shirt pressing
working on tail	t-shirt pressing	—	live mermaid show	Working on creative enquiry

October 2019 to November 2019:

For most of October to November, I was focusing my research towards prosthetics and mermaid tails; I spent time visiting the local library and aquarium for some hands-on data. I've also begun approaching the production of a fibreglass resin mould. I spent most my time lately building a frame around a mannequin body and covering it in plaster. With the ideal shape in hand, I started focusing on building a texture onto it with plasticine, creating a plasticine wall around it so as to begin applying my layers on top.

December 2019 to January 2020:

Unfortunately, there was a large period of time I spent away from my mould and the resin had shifted, so I had to look at alternatives. I referred to my research accumulated from online tutorials. After a few consultations with my tutors, I eventually decided to make a fabric tail made from plastic bin bags. The process involved pressing the plastic bags on a T-shirt press and repeating the process until I had a thick sheet. I was also looking at creating a sock-like body shape using neoprene fabric - I practised this procedure quite a few times until I achieved the perfect outcome I was looking for.

February 2020 to March 2020:

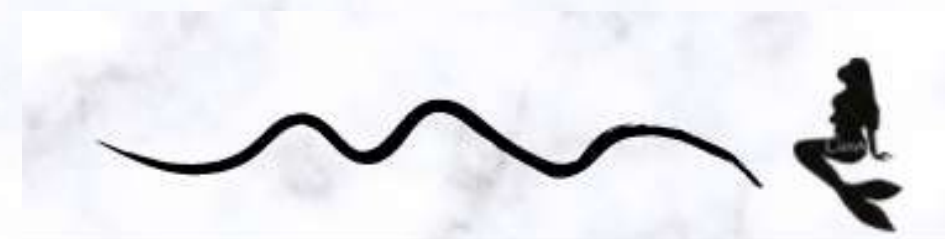
I started focusing more on creating a design for my scales, and what I would want my tail to look like on the outside. Playing around with Photoshop, I was able to create a brand for my project. Immersing myself into a large digital side of my project at the same time was beyond my comfort zone, and I still continued creating more sheets to focus on the mono fin so as not to overwhelm myself. I have also been experimenting with my flotation devices, trying to determine a buoyant, comfortable material that's less likely to cause incident.

April 2020 to May:

I have been producing a lot more of my digital work, focusing on my remaining projects and tidying up loose ends using photo shop; I'm trying to imagine what a finished piece will look like, and reach my planned milestones as efficiently as possible with as little setback as I can.



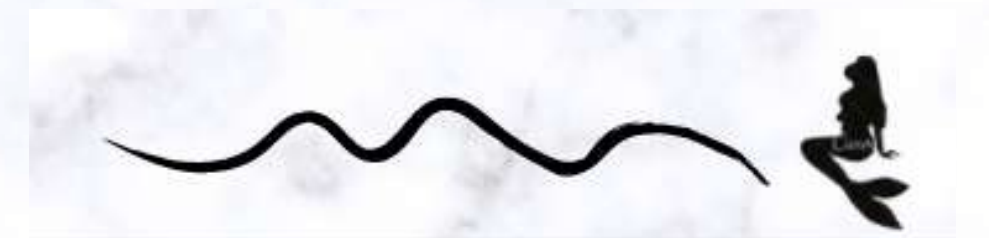
B. Experimentation



2. Experimentation



My project is an exploration of the production of a wearable mermaid tail. I've been working on making silicone moulds and shells, experimenting with various methods of producing textured scales to form the body piece, as well as shells to contribute to the bra that mermaids are often portrayed with. I've predominantly been experimenting with silicone and wet suit jersey, creating different scales and patterns to see which one has the best effect. I've also been playing around with creating a hybrid of the two materials by sewing them together and testing the result in terms of weight, waterproofing, durability and wearability

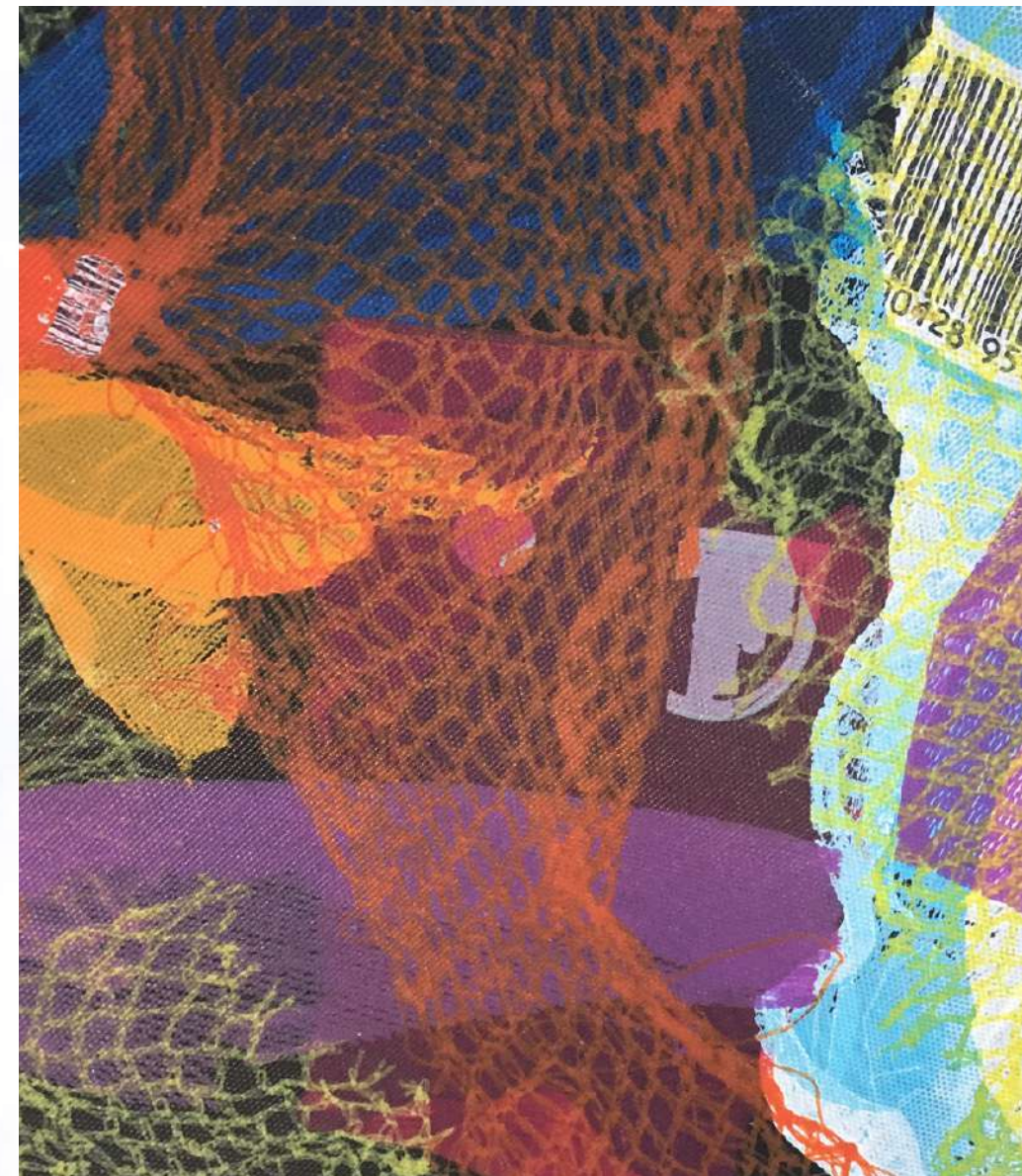


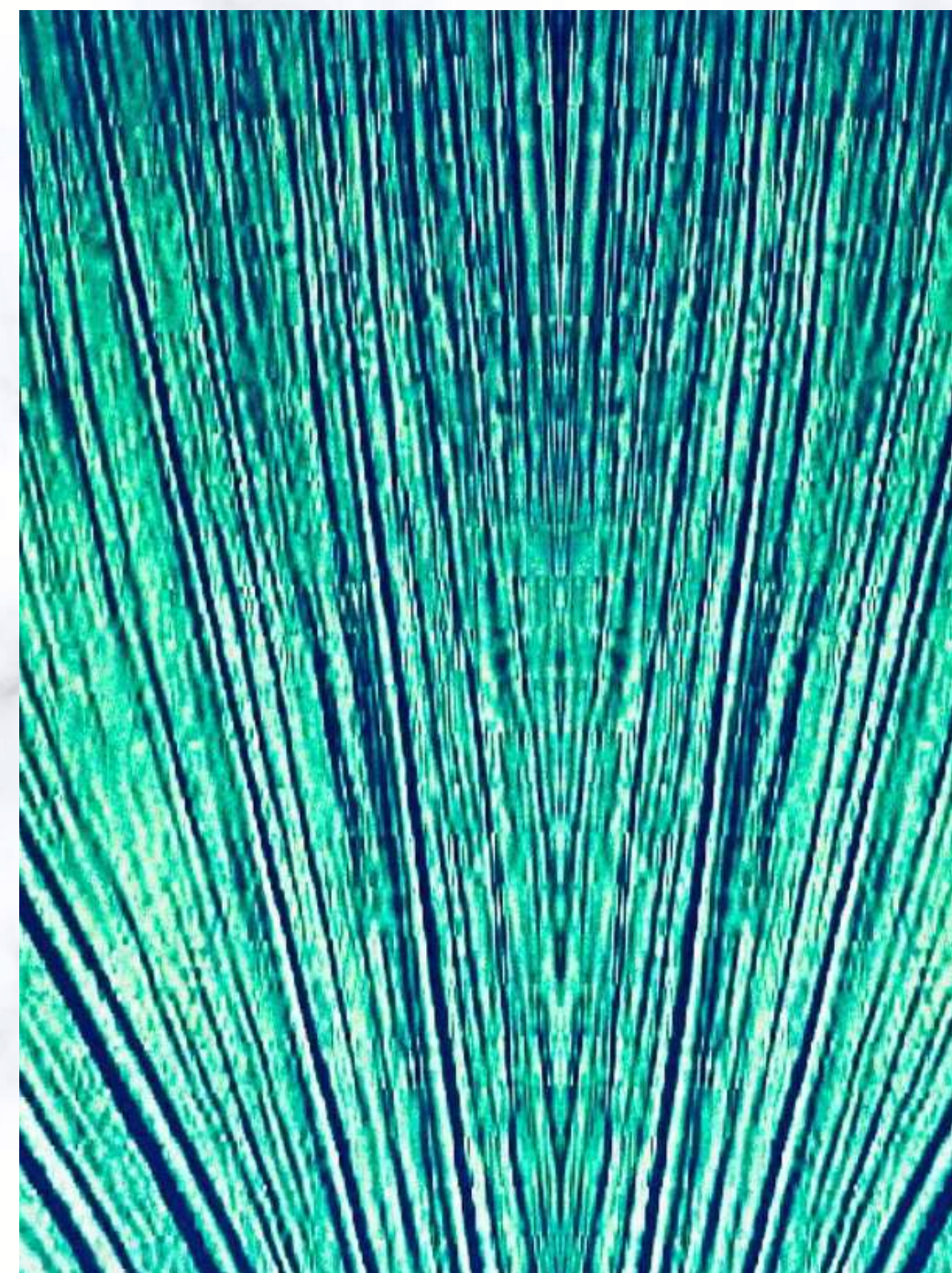
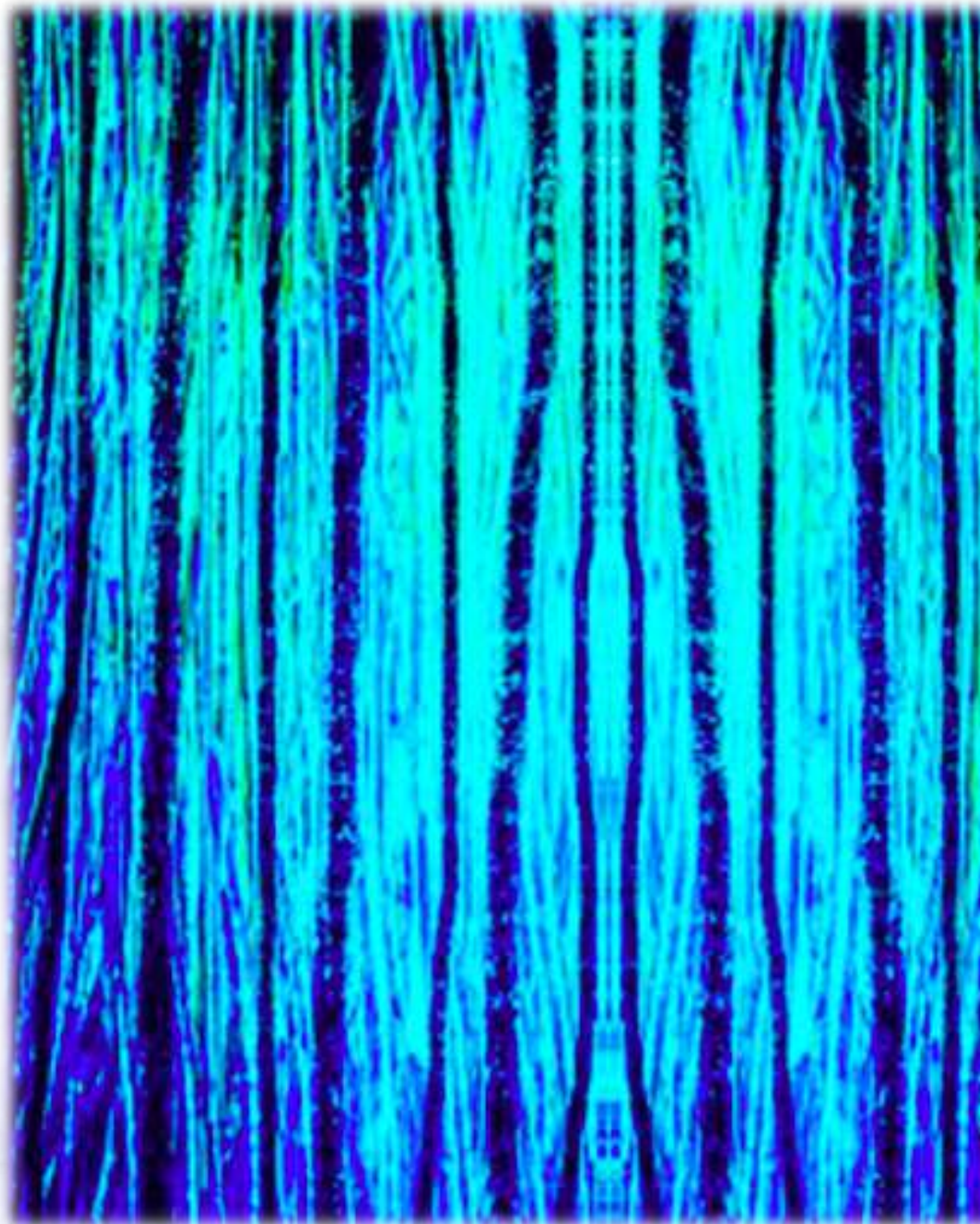


These images were my plastic bag sheets that I'd pressed on the t-shirt press. I laid up loads of black bin bags and repeatedly pressed them on to the T-shirt press. Once I had a stiff sheet, I started laying up brighter colours on top. I was really happy with the effect and I consider it a success. I then started to overlap the images on a word document.



Even though I used these sheets to create my fin, I also might press these images onto fabric so as to match the fin. I love the colours that were produced, and I love how eye catching the whole look feels to me; for an experiment, it was very successful, and to top it off it all came from using plastic bin bags. I also particularly like the netting that I put into it, which I think goes quite well with the nautical mermaid theme.





This was another experimental piece I was playing around with. I created this one by painting a piece of cardboard, mixing blue and greens together and dragging my nails through it to create streaks. Then I photographed it and started playing around with effects, mirroring the image to see what kinds of styles and creations I could come up with.

Then I ran a black pen over the top of it to highlight the lines in the piece. I don't think this was my most successful one because it wasn't quite the effect I was looking for. I feel like it's a little bit too abstract but I still might be able to use this one possibly for one of my fins. I think the effect on it might be appropriate to use for that sort of style.



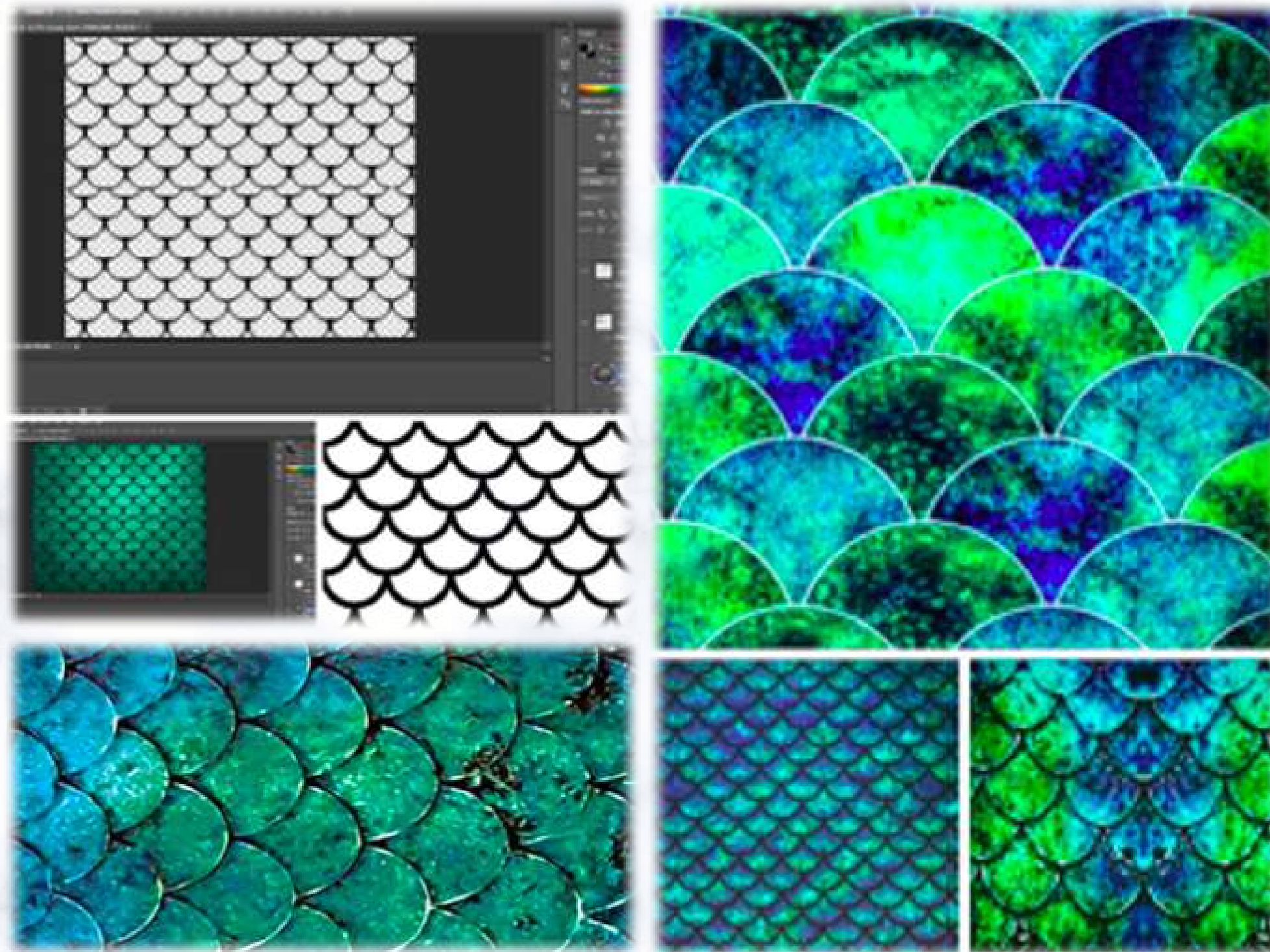


in designing a company logo for my theoretical tailor, I wanted to be clear in my theme. Mermaids are most commonly associated with the ocean, and various other sea-based objects like fish, rocks, pebbles, boats and bubbles. These designs were several variants of my decided company name. The images were created using photoshop, and were largely produced by layering a large scale background of underwater ocean photos that featured large quantities of bubbles.

I also created a silhouette of a mermaid and fell in love with the idea of using it as a letter within the title. At first, I wanted to literally replace a letter, in this case the 'e'. However once I'd finished I thought it was too obscure as people kept reading it as 'Mr. Pod'.

I went back to my preliminary designs and instead used either the mermaid itself or just the mermaid's tail to accent the 'o'. I did produce an additional design that featured the entire silhouette sitting on top of the 'o', but ultimately decided to use the tail as a flick for the letter instead because I felt it was more pleasing to look at.



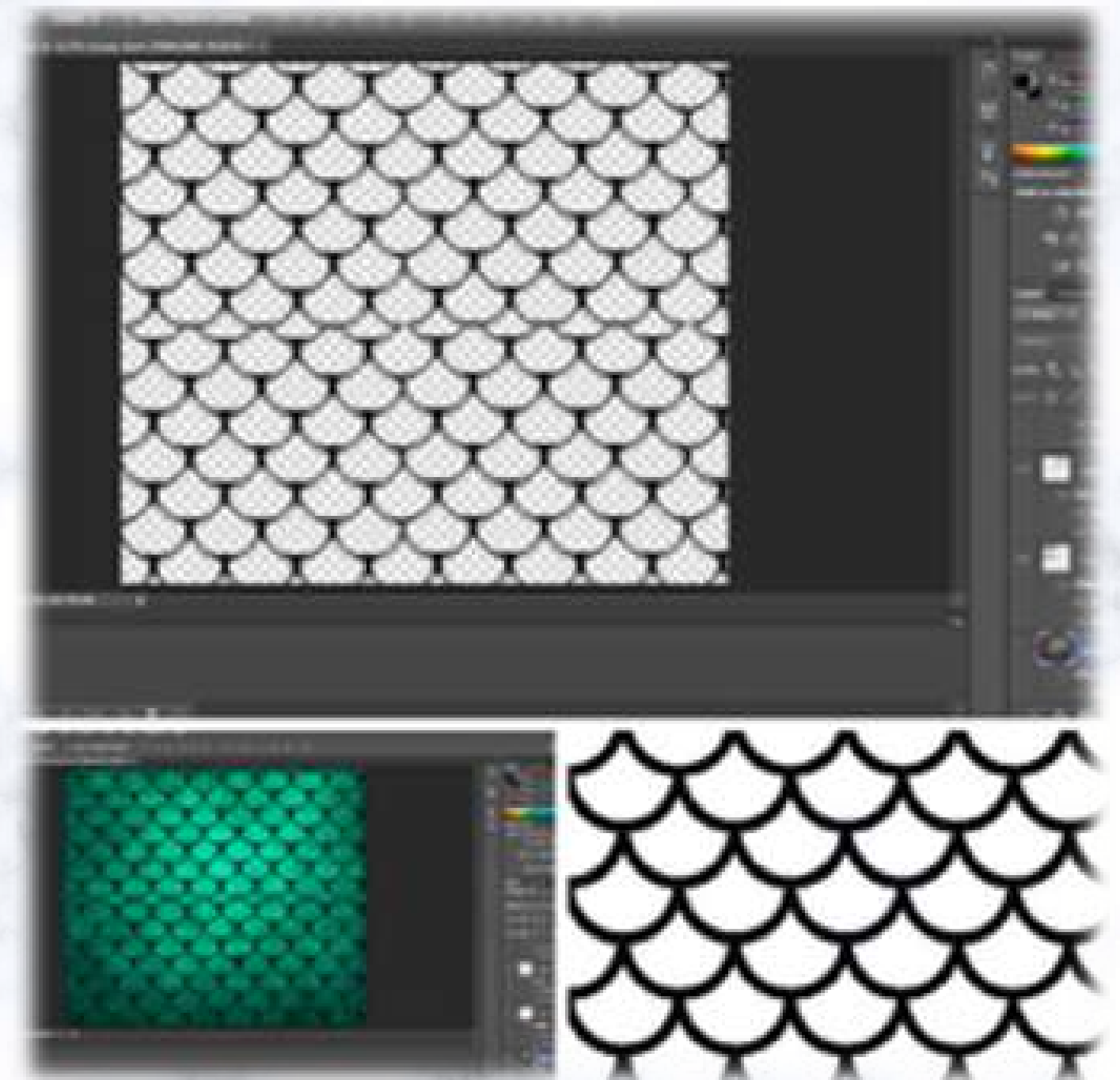


These were some of resulting experiments when playing around with my designs. I trying to create my own scales using different effects within photoshop. Some of them were failures due to low resolution in my base images, though others I'm actually very happy with. I feel like the blue and green colour scheme is very gender neutral as was my intention.



I worked from some basic designs from online sources for some of my patterns, but I wanted to have a design which was entirely my own. Using a generic scale background image, I isolated the outlines in the scales by removing the texture and colour, then I thinned them out to create a basic template for a sheet of scales.

Reducing them to an appropriate size, I experimented with a number of different textures to fill in the blank spaces before giving each one a drop shadow and beveling to make them seem 3D with a realistic aesthetic. I wanted to finalise the image by adding damage and weathering to some of the scales to make them look less symmetrical and artificial.











I've been experimenting with the creation of a mono fin mould using plaster. I plan on painting silicon inside it to create a skin. Unfortunately, the mono fin had undercut and made it difficult to remove the mono fin from the plaster without breaking it.

I also completed my plasticine scales on the a big mould applying a thin layer of PVA to it to keep them in place once this is dried I can start building my plasticine wall around the tail so I can start creating the resin mould







This is my fibreglass mould of my tail. Once I'd finally covered the majority of it in plastercine scales, I started creating the fibreglass mould on top. My plan was to create a four piece fibreglass mould of my tail. This is going to be quite a long and time-consuming process, but I'm excited to see how it'll turn out.

When I was applying the resin to the scales, I started off with gel-coat resin and applied a couple of layers onto the tail, then started applying the layer of resin with the fibreglass. I created three layers of this to my tail, ultimately deciding to make it a vibrant green to make sure I could keep track of how many layers I'd applied.



I feel like I employed these materials and resources quite successfully, and I was quite happy with the outcome. I also cut off some old bra hooks to make sure it was wearable, but unfortunately it doesn't quite fit when using myself as a subject, but applying it to another it was more successful without any struggle. I plan on developing this idea further as my project moves forwards, possibly adding a silicone scale fabric on the top.

The goal of my current project is to research and produce a fully functional, highly accessible mono fin that resembles a mermaid tail, with a theoretical secondary focus on it's potential as working prosthetic for use on amputee and disabled users. The project will maintain a genderless approach throughout development.



For my last tutorial and speaking with my tutors, I decided to add something more to my project so that it wouldn't simply be the tail by itself. I started looking at flotation devices so I could incorporate that into my project and ideas.

I thought it'd be a good idea if I could create a floatation bra which matched the tail in design. I was able to acquire an inflatable bra from a fancy dress shop, then I started creating a fabric to place over the top of it to ensure it was waterproof.





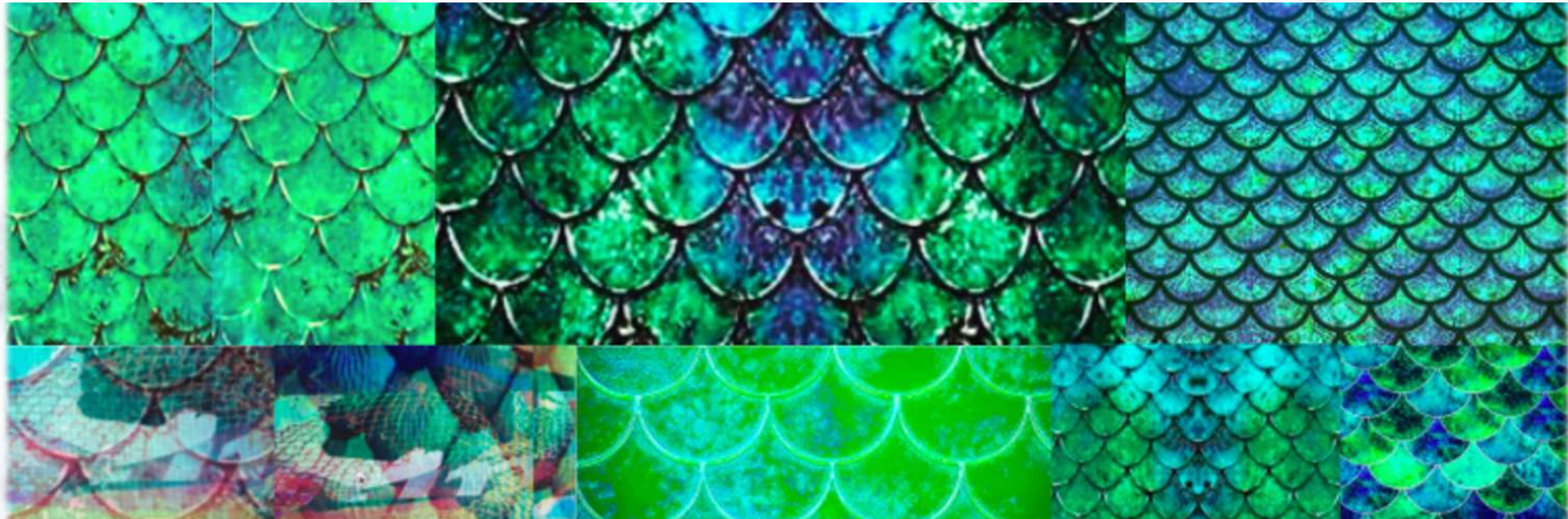
experiments floatation device

These were my other attempts at making life preservers in the form of small accessories. I used a waterproof styrofoam material, layered it up with some of my fabric and then applied clips to connect and hold them.

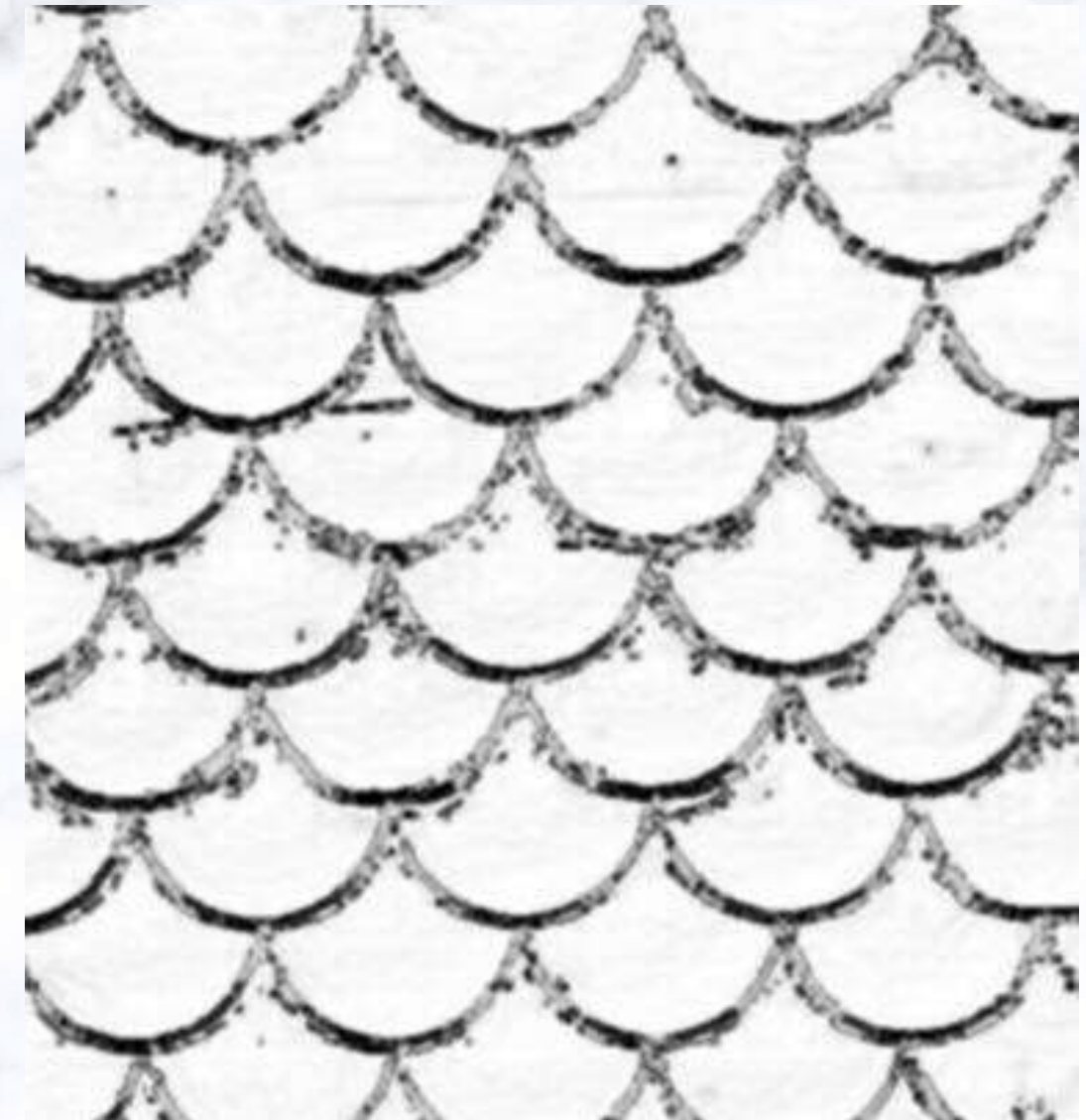
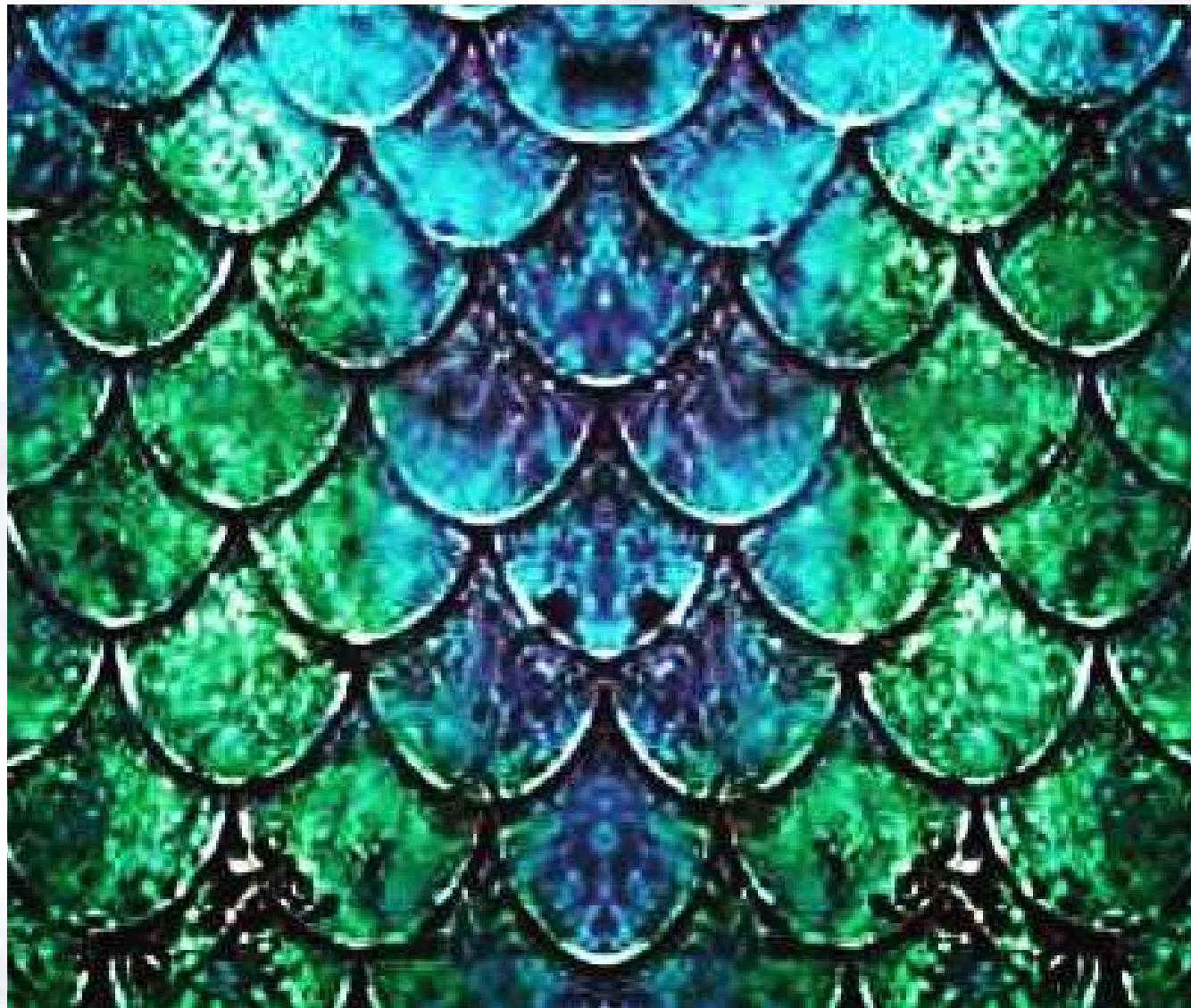
They still need a little tidying up around the edges - they're a little bit messy where the seams are. Overall, they're quite effective and successfully waterproof.



experiments with Patterns and design



experiments with Patterns and design



experiments life preservers

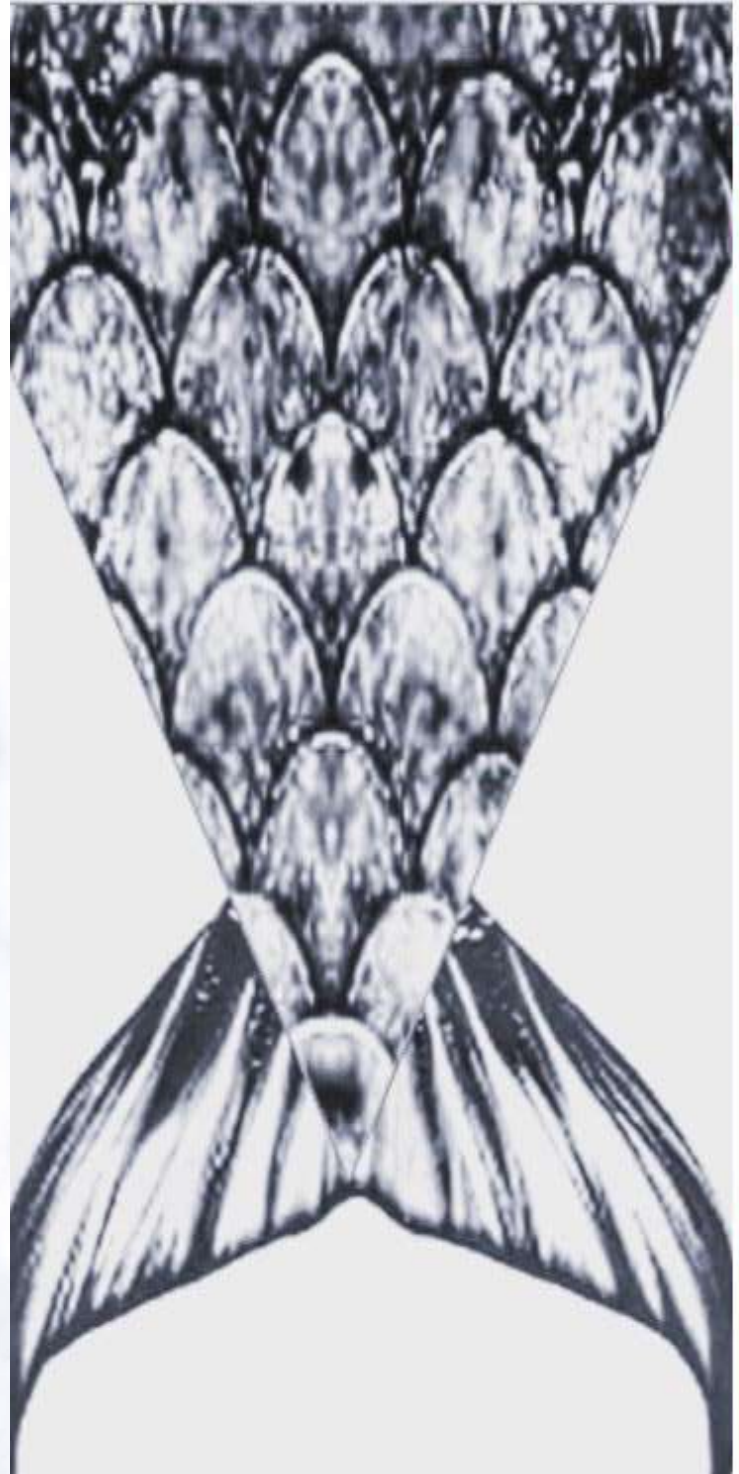




Unfortunately my tail mould was unsuccessful. I'd left it a long period of time which resulted in a cracked product. So I started to replan moving forwards instead of reusing this mould.

Luckily, only the sides had fractionally broken - the rest of the piece I managed to save. I was quite happy with the detail on the inside of the mould; it had picked up quite nicely.

I've also been creating resin shells, but with a little bit of a twist. I've been crushing up real shells and mixing it into the resin. This has been quite successful, but I think next time I will make the shells finer in the hopes they'll come not quite so chunky

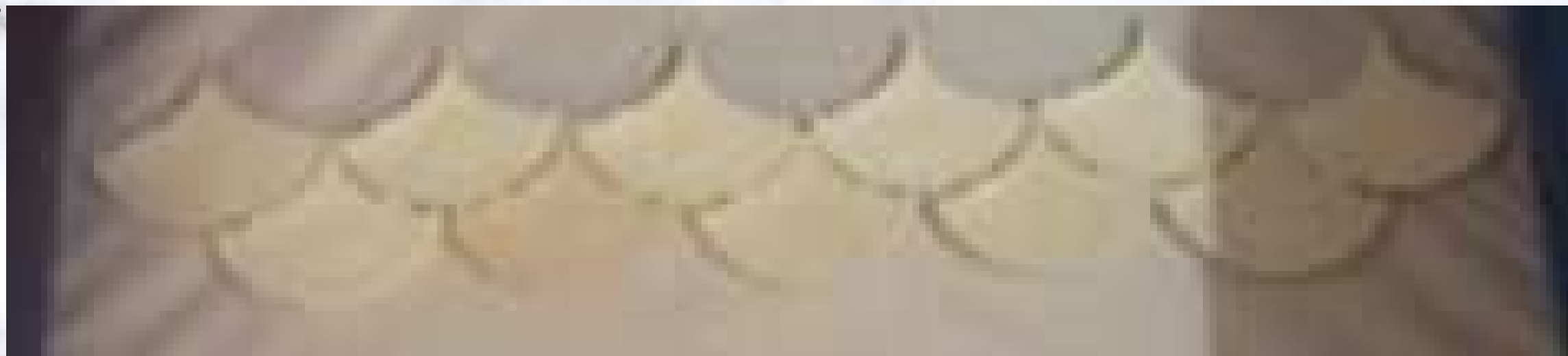


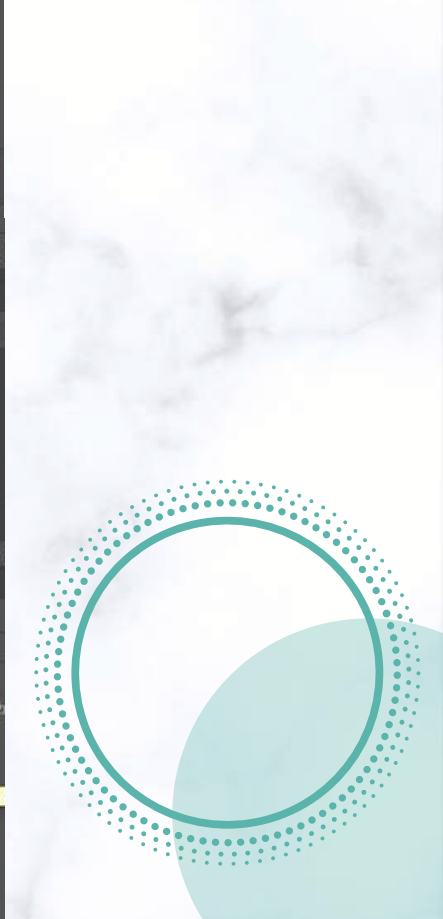
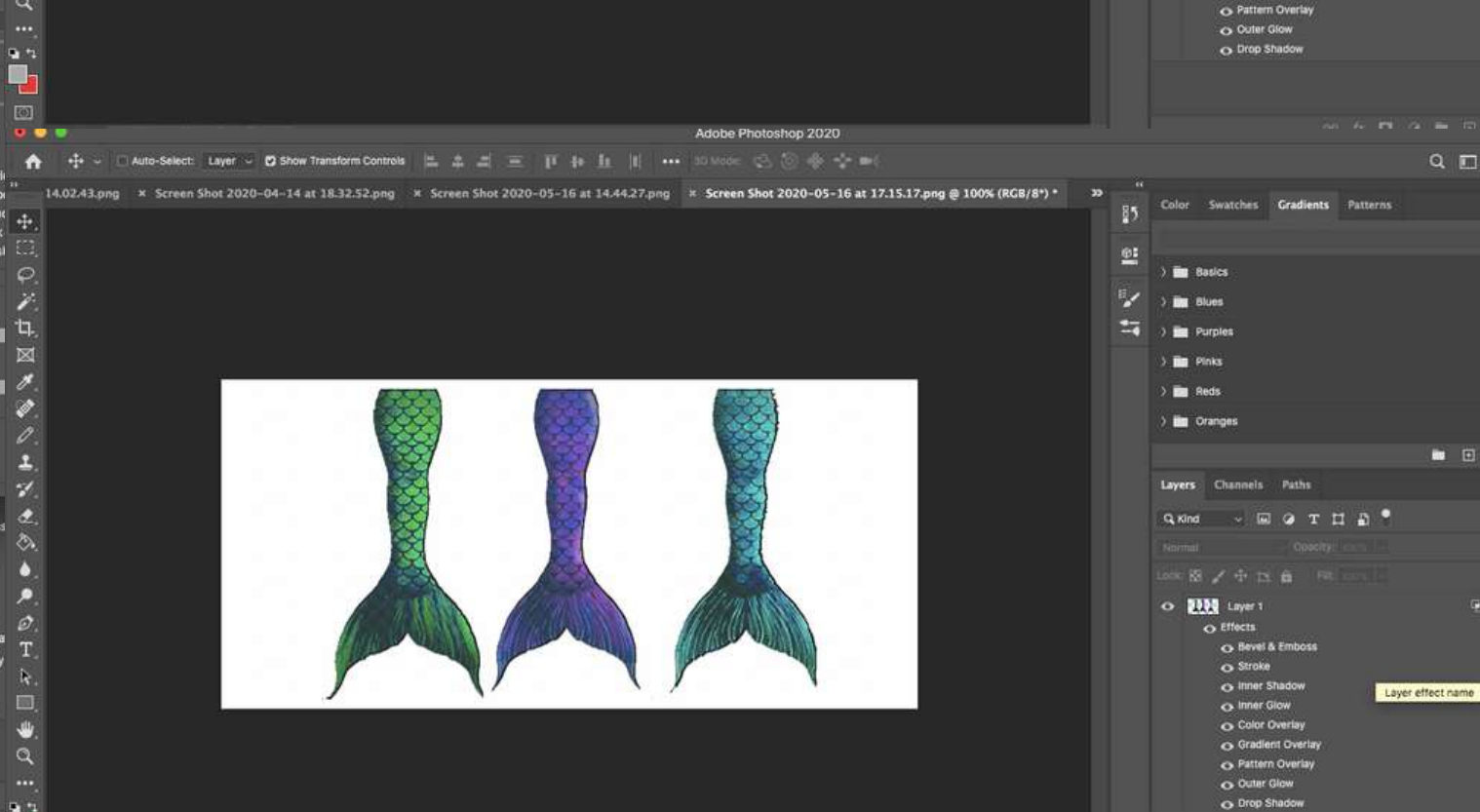
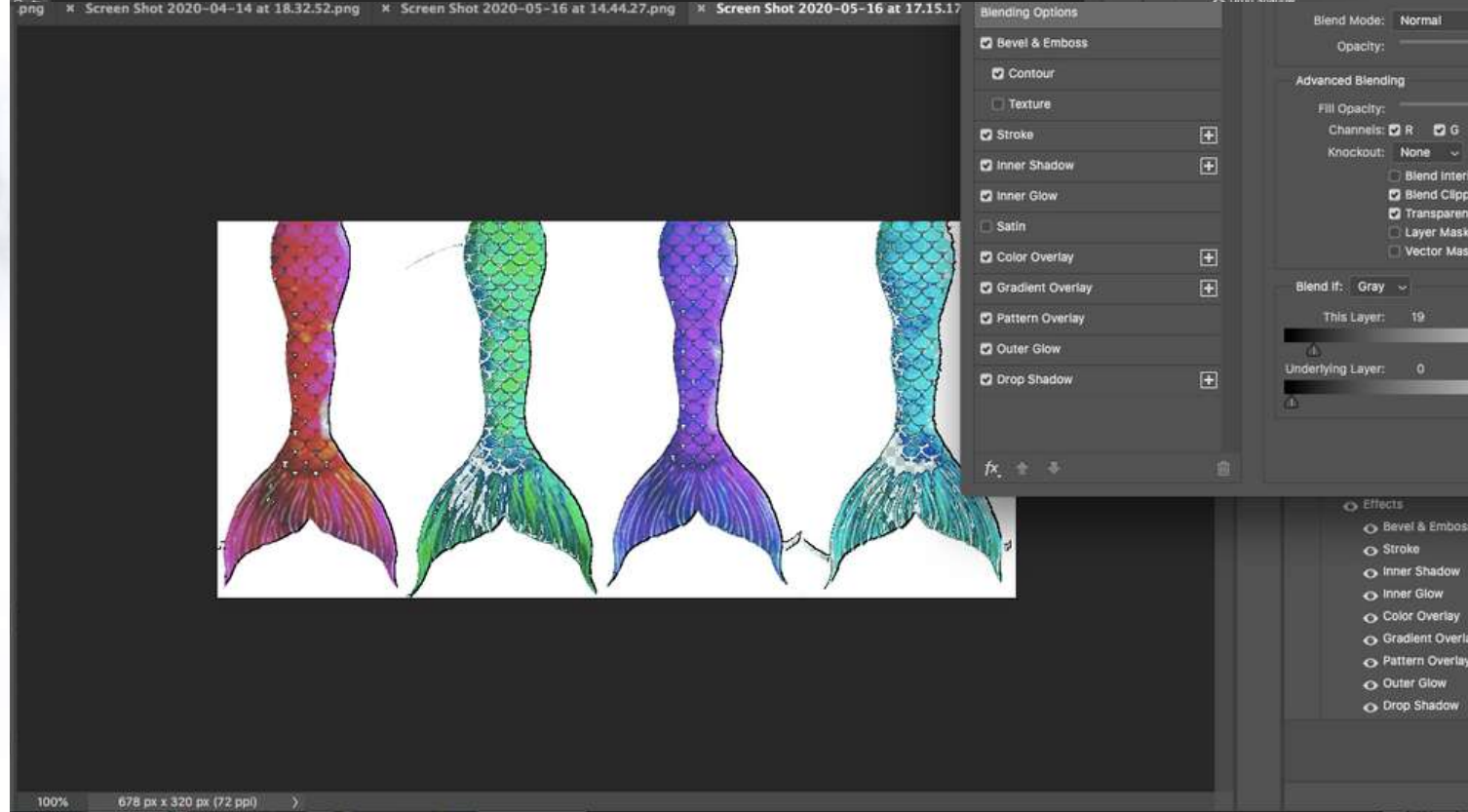
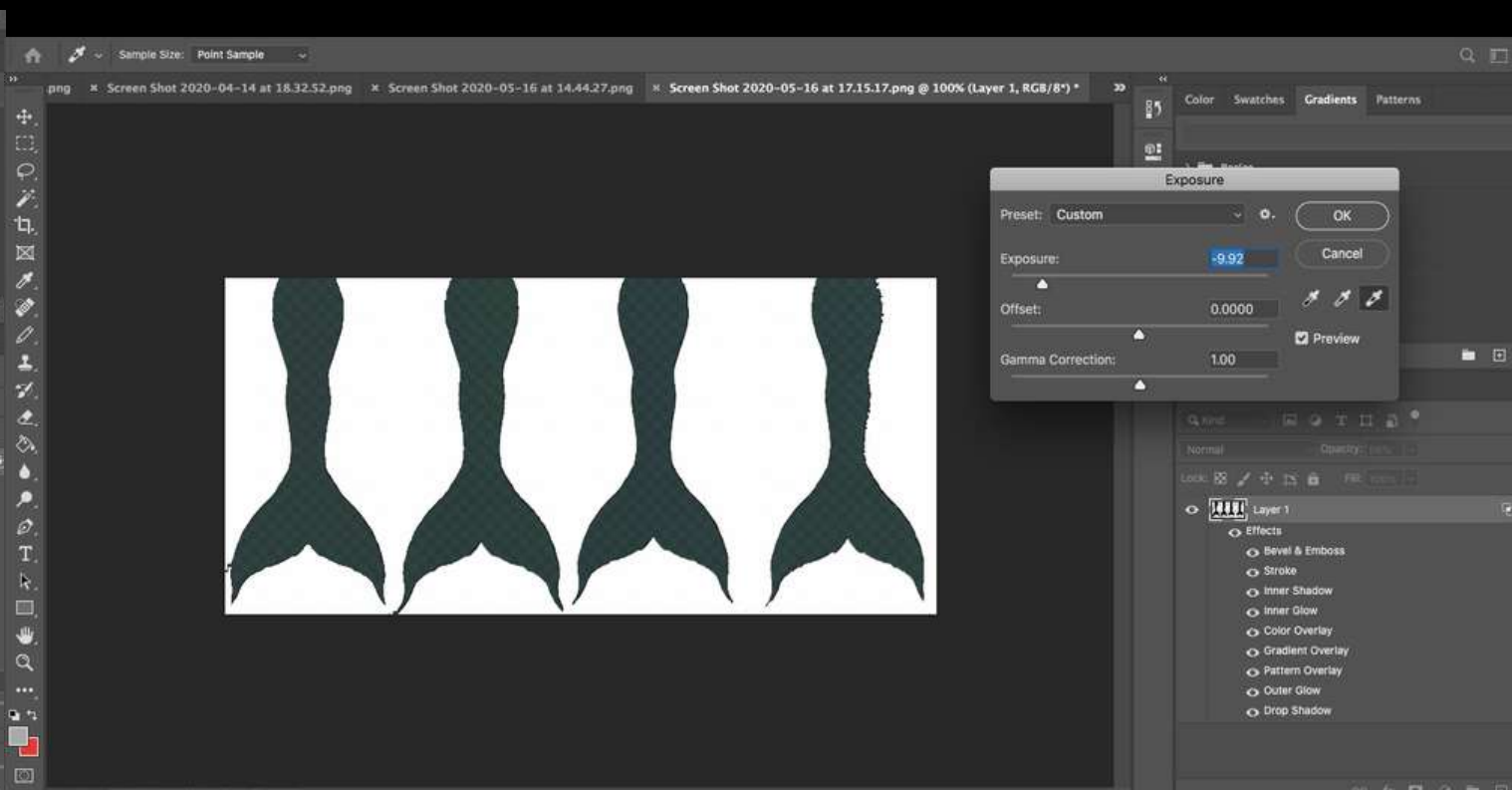
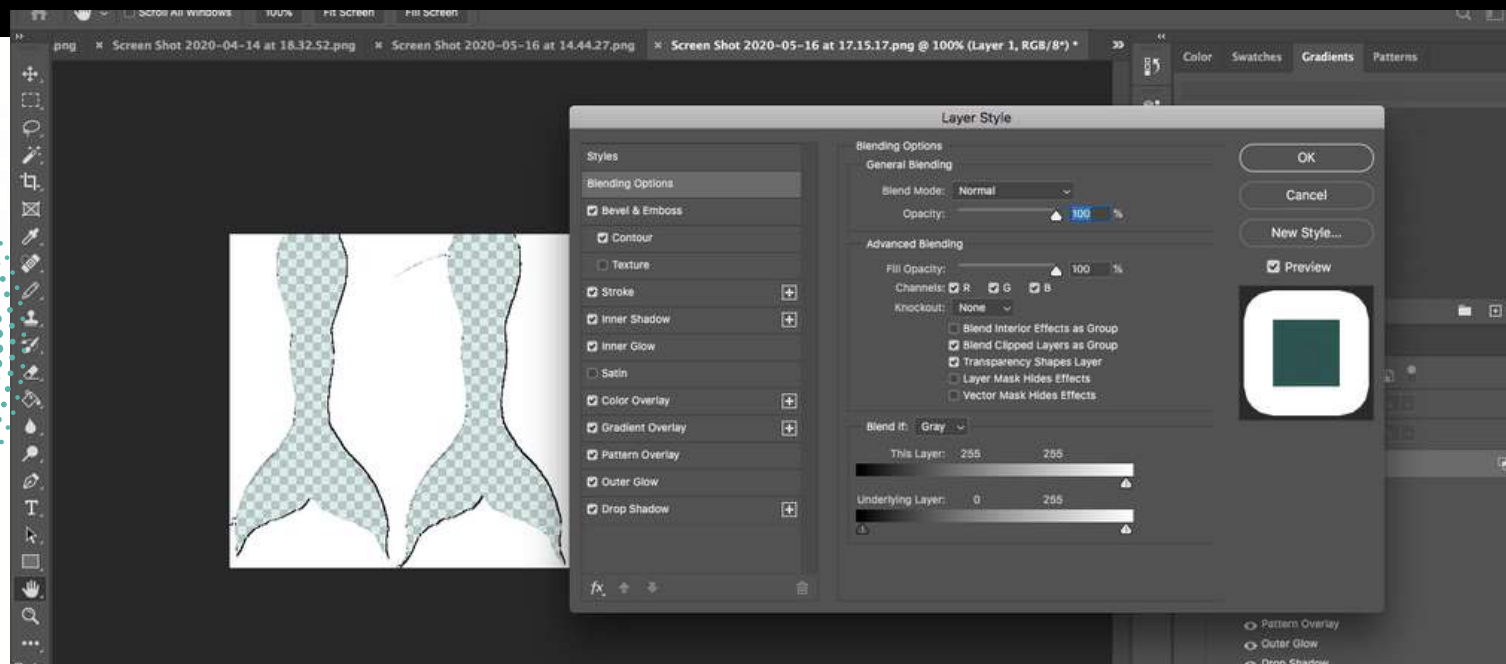
experiments



I also was creating some plaster scales so I create a base for a silicone skin to go on the top of one of my fabric tails The bottom right photo is a template outline of what the Tail would look like on the inside this would also have a plastic thing the only difference with this one would be it would have a silicone top layer to add more Textra

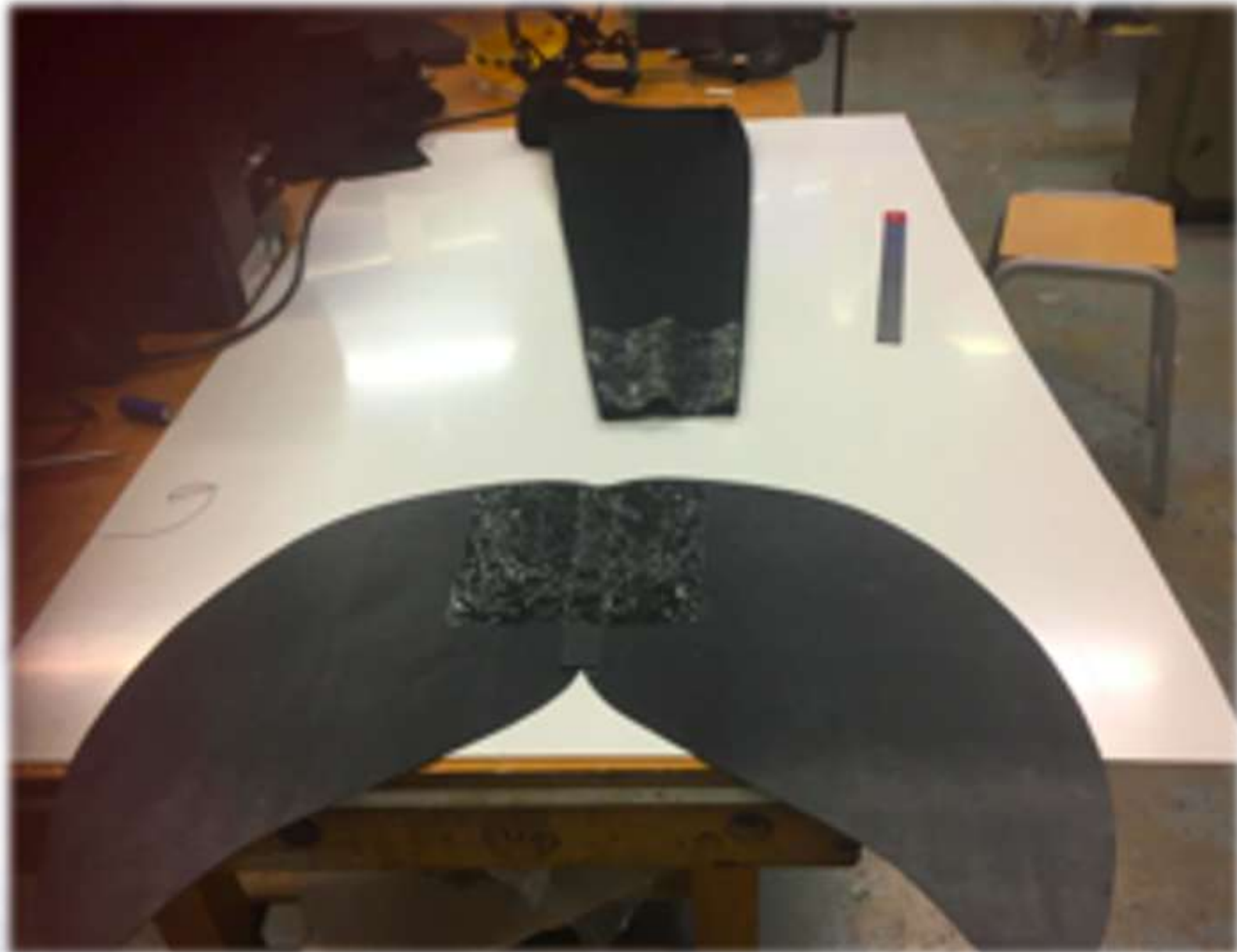
I created the plaster scale original from clay and then created a silicone mode on top I repeated this process many times and started coming up with a pattern of my scales it's not yet completed I have placed each one individually in to a inflatable swimming pool I thought by doing this would be easier for when I applied the silicone on top of it





C. Making the Final Piece





I started creating a silhouette of my second attempt of my tail using neoprene fabric to create the body and my plastic sheet. This was to create the fence connecting the tube with a flexible glue to enable accessibility and fluid movement.

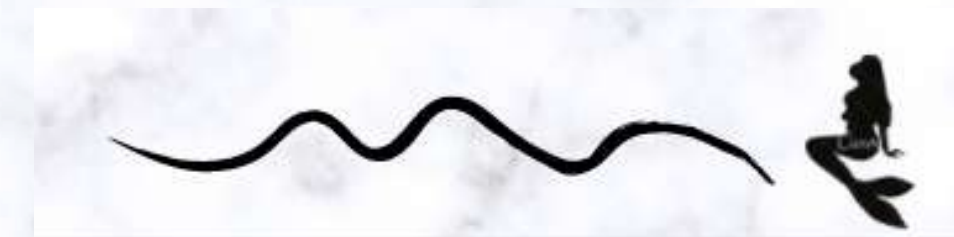
I'm really happy with the outcome of this one. I'd love to see the body and fin match for aesthetic consistency, but regardless it's still a big improvement from my failed attempt previously.





Practising my sewing is not going so well. I've been trying to create my own body without help from my tutor and using the sewing machine it is not an easy learning curve for me, surely exacerbated by my dyspraxia; I struggle to keep a movement in a straight line, but I eventually tackled the challenge and was able to create a second tail.

Fortunately, this one wasn't as even and symmetrical as the first attempt, but I think next time I'll employ some help with lining up the fin just to be certain each edge is as even and straight as possible.



one of my designs for my
sketchbook



mirpood
Tailoring





**AIMEE
CAMERON**

artist / body caster

www.instagram.com/messy_crazy_art/

I've spent a long time deliberating designs and brands to decorate my merchandise with. Merchandising options themselves could be post cards or sketch books to feature in my degree show at the end of the year. I've come up with a number of designs, but I've decided to stick with a minimalist and straightforward design that doesn't complicate the overall look.





life preservers

So these are my different unisex life preservers and they would be stuffed with Polyethylene Waterproof Sponge This material keeps them buoyant

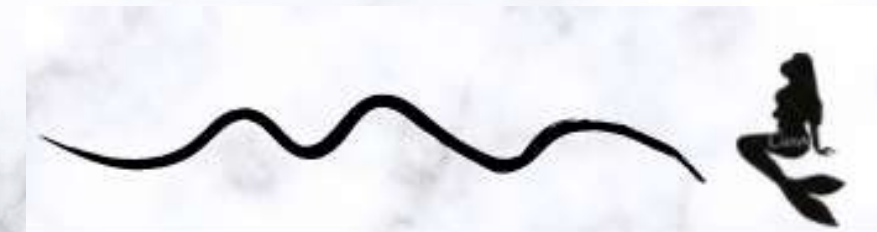
My tutor and I came to conclusion that pressing bin bags onto a t-shirt press would create sheets when layered out, with the expectation that it would help to create the mono fin. Then for the body, I plan on sub dyeing fabric with my design to create a sleeping bag shape before connecting the two sections together. Hopefully, this should result in a successful mermaid tail.





These are my prints that I had created to be the body of my tail. I'd been playing around with patterns and designs to produce them developmentally. They're quite blurry due to a low resolution in the source material, and the scales themselves are quite a bit too large. Next time, I need to be a bit more aware of file size when using a base image to ensure the quality and viability is sufficient.

I'd also been experimenting with printing onto one of my fins, which also a bit of a failed attempt. It was blurry also, but I plan on making subsequent attempts with these designs; I can see a lot of potential here.



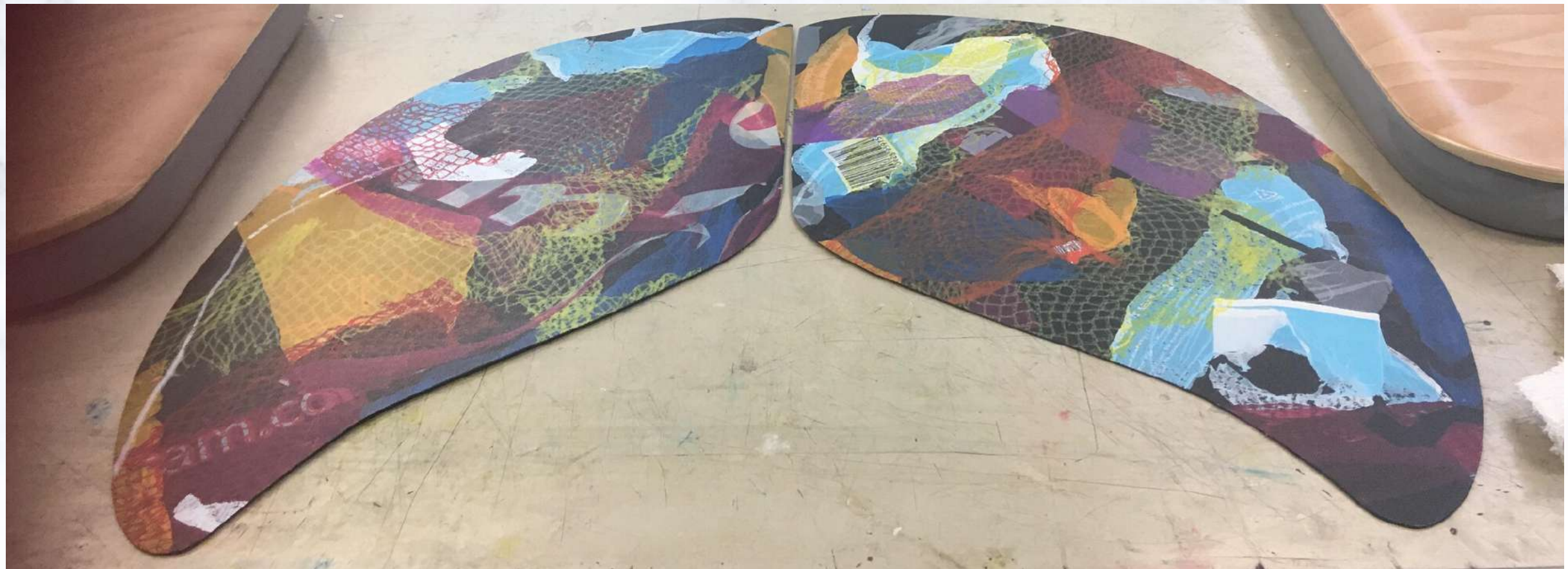


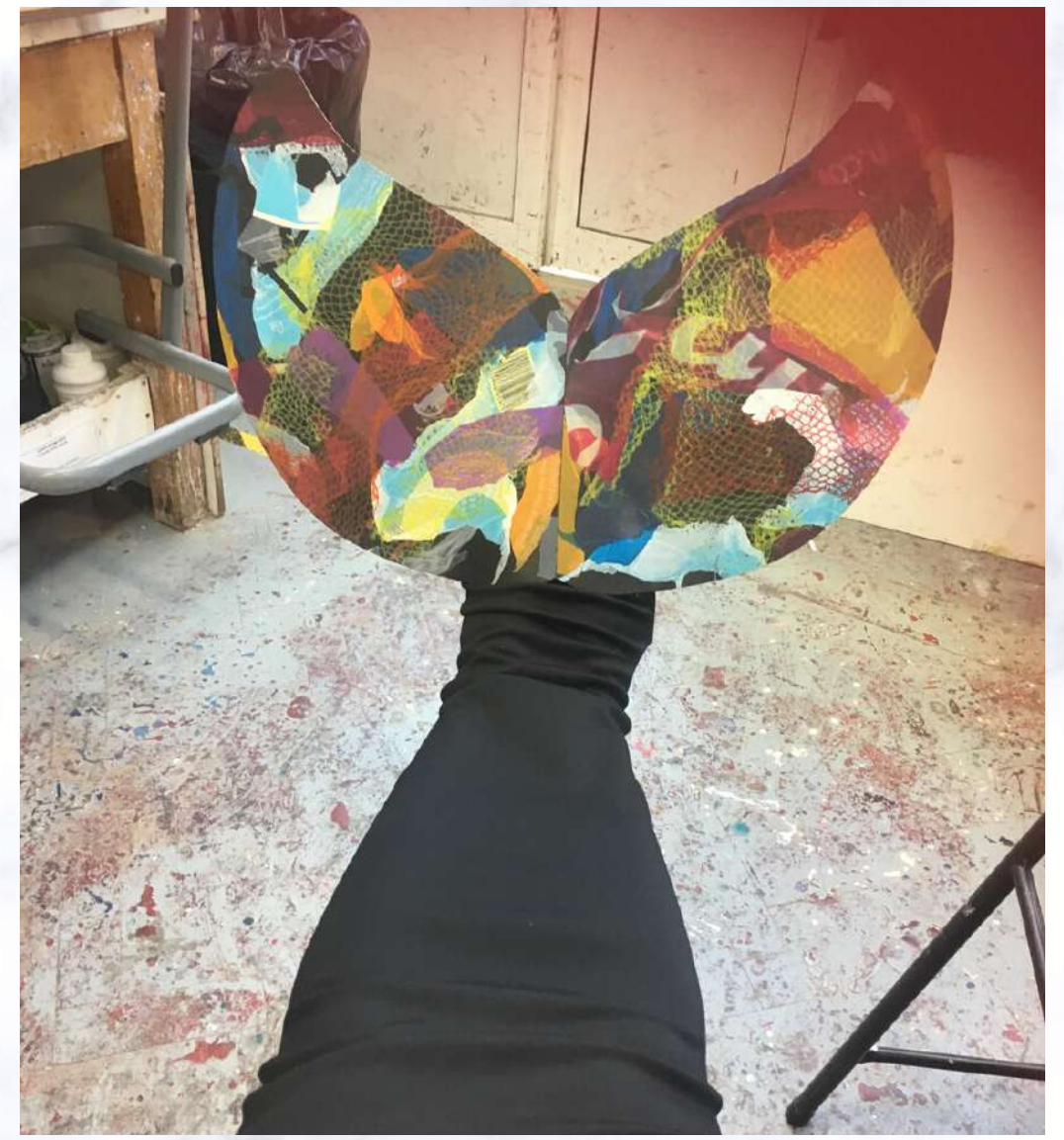
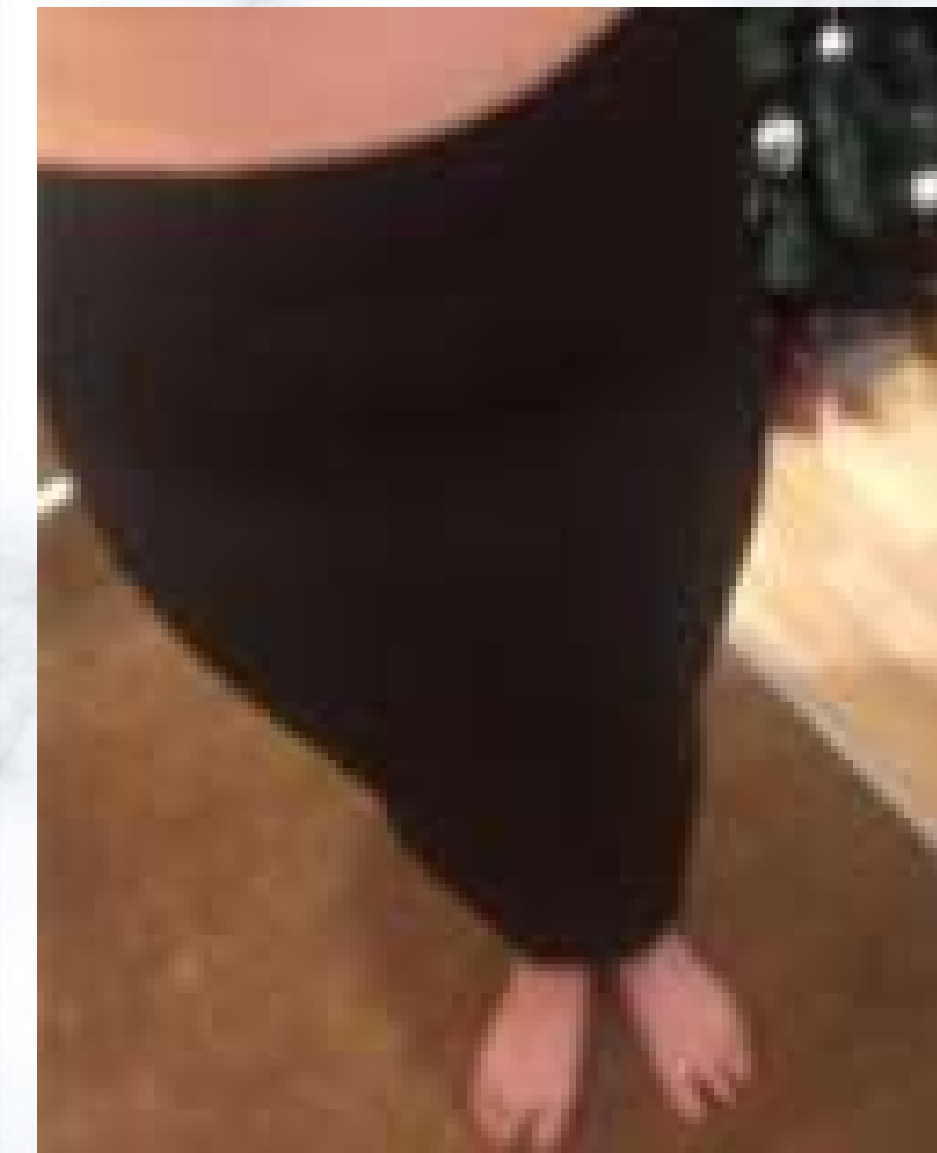
For the mono fin, I started by creating a plastic shaped to fit inside a neoprene fin-shaped cutout. The plastic on the inside gives it shape and helps to support the wearer's feet, if they have any. It also helps maintain the shape of the fin itself. I started off by sewing two sections of neoprene together.

This was quite difficult because neoprene is a thick material, and I needed a curved needle to pull it all together. I did this by hand, and it took a long time; some of the edges aren't quite perfect, so in the event of a second attempt, I would use a sewing machine.



I was able to model one of my tails myself. I was happy with this result because my previous one wasn't so much of a success due to the fact I'd got my measurements wrong for the body. The previous one didn't fit, but this one did. I was even able to get my feet inside the fin as well, so as to move the fin itself.







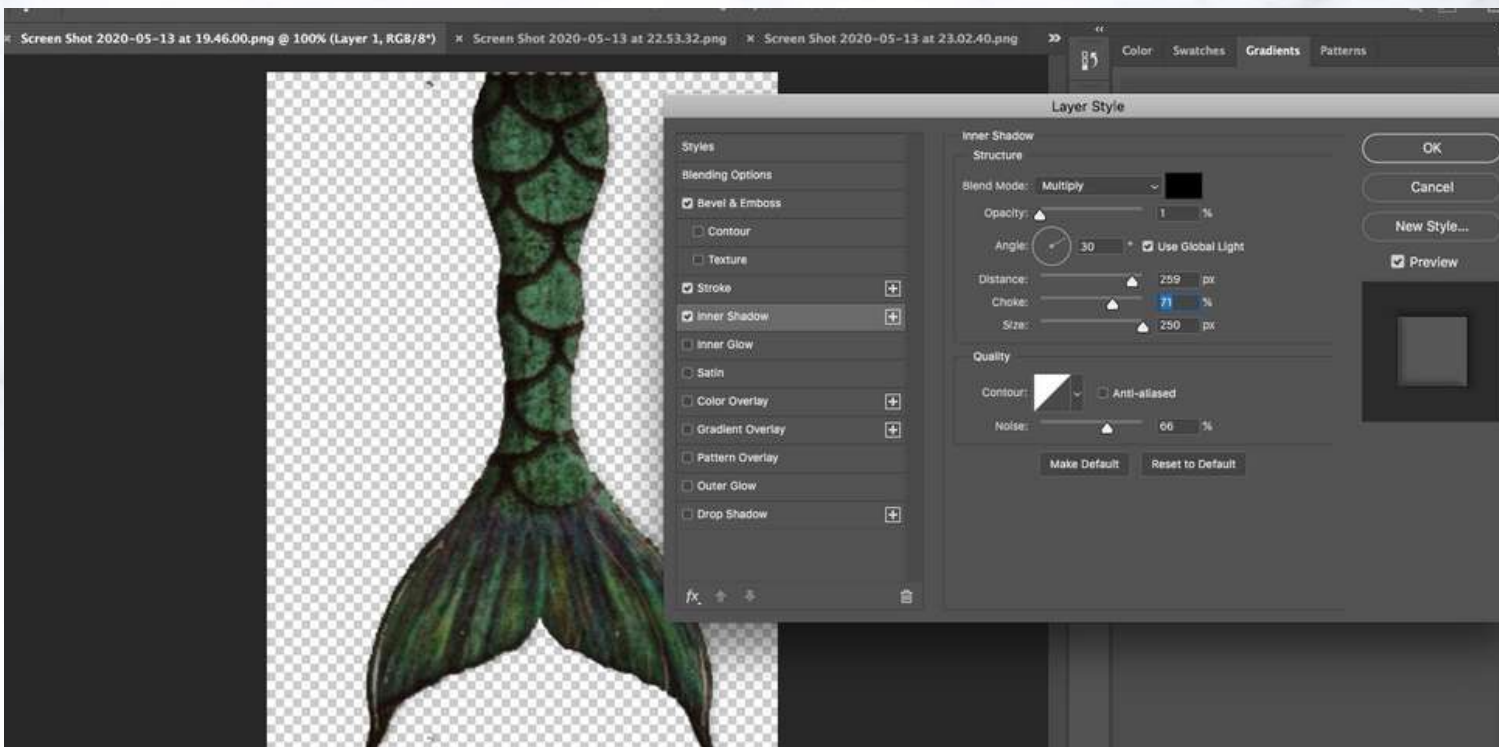
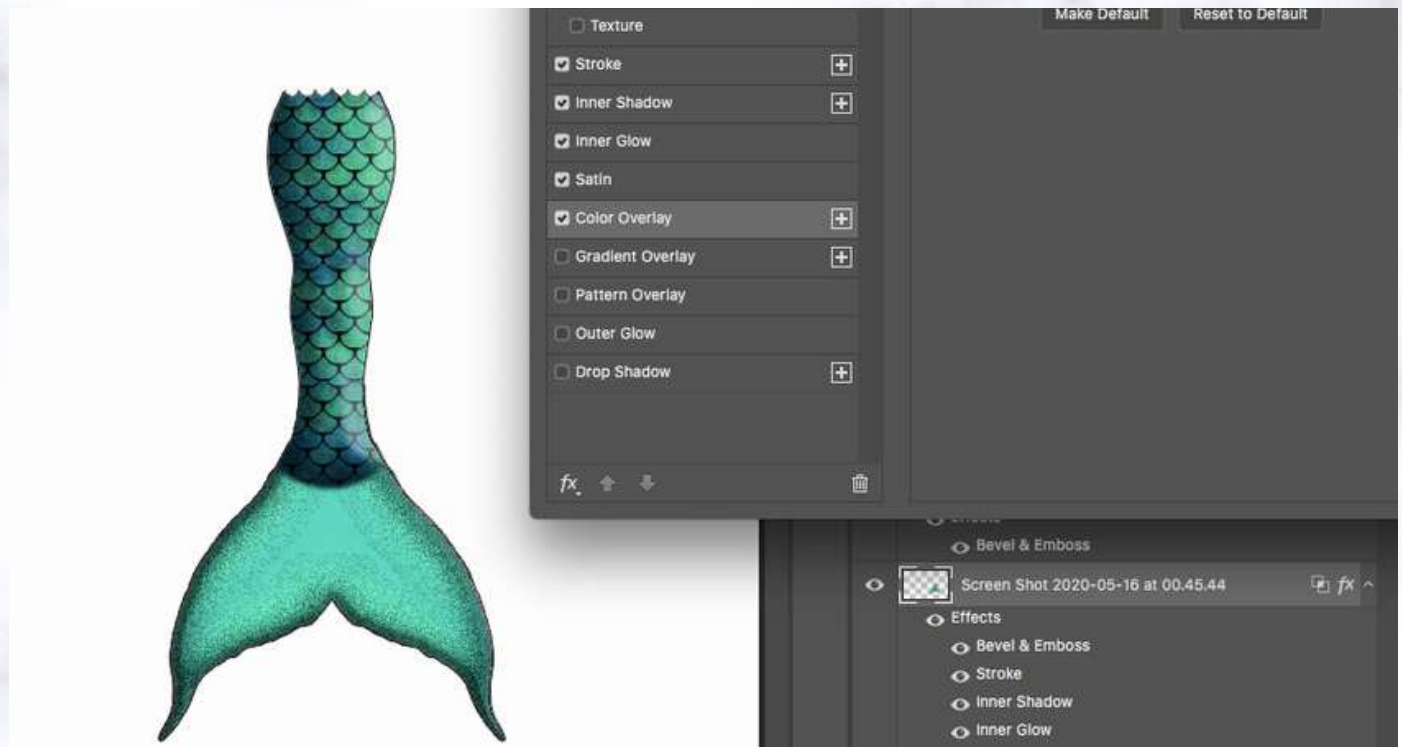
I found a number of methods of applying scales as an aesthetic to the body, particularly those that might accent the parts of the body not covered by the tail itself. In these images, I've included examples of acrylic body art in the style of scales. Not so much of an accessory as the rest of my project, these designs may look quite good when coupled with the tail and matching accessories.

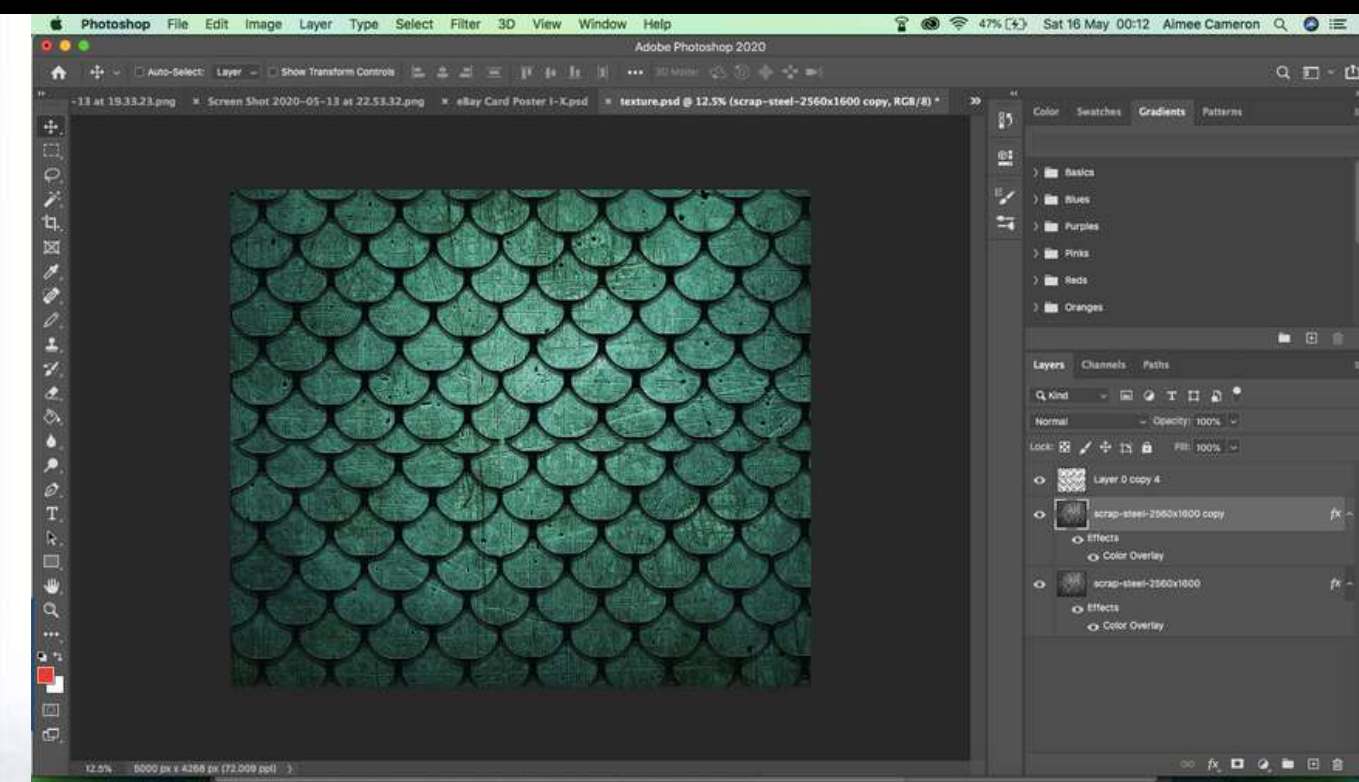
If I can't find a more sophisticated way of applying scales to exposed skin, this might serve as a efficient contingency. Moving forward I would like to try using silicone or similar materials to apply more three-dimensional scales and textures to the skin for a more realistic and immersive effect.



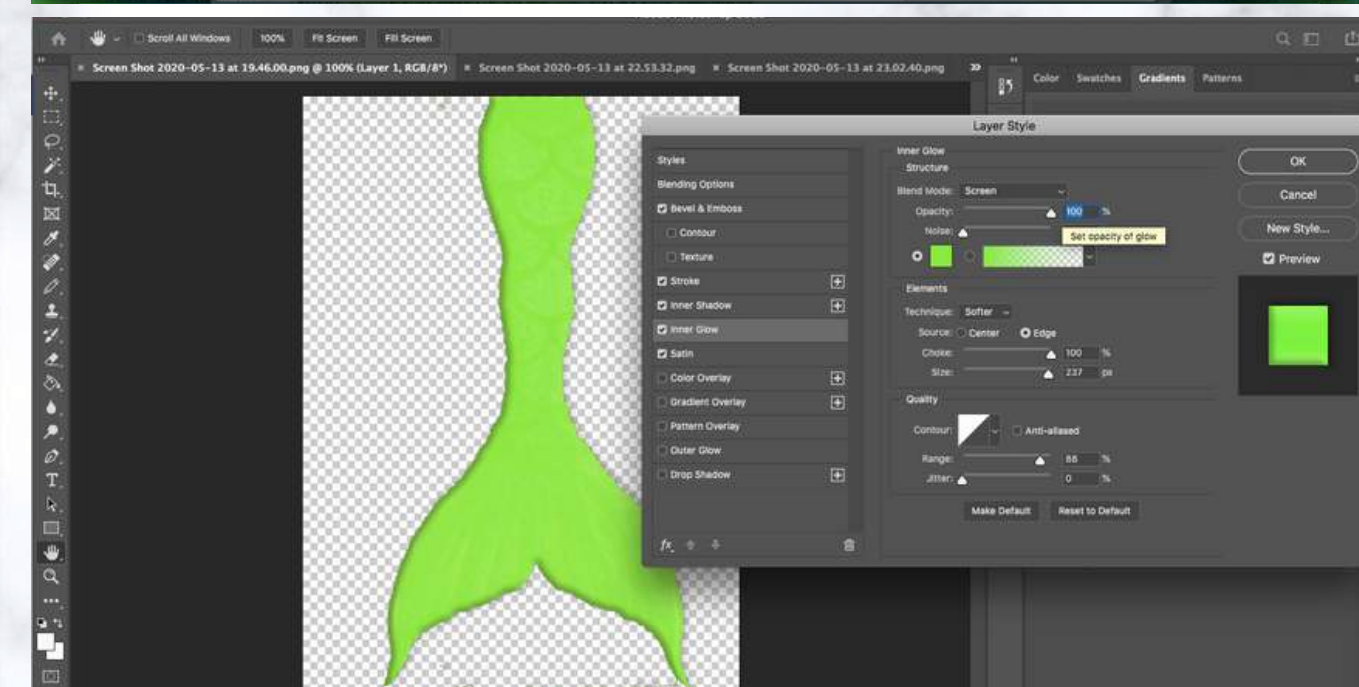


Using this template, I fitted my own designs into the shape and removed any excess by inverting the selected area, refining it so as to including a fraction of the underlying outline and cutting the outside space. Having played around with the transform settings to give it a bit more of a rounded perspective, I added a stroke and emboss to the top layer before removing the background to leave a perfectly shaped mermaid tail with my own design as a fitted texture. I needed to layer the body and the fin separately as they used different placed images, and some precise blending and feathering was required to make sure they didn't collide with each other at the intersection.



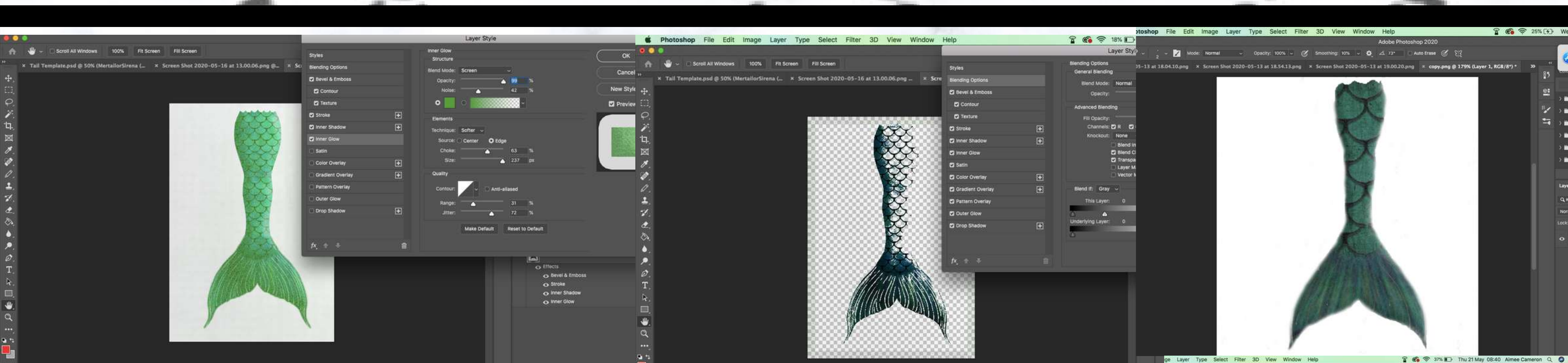


A lot of the design work in my project involved extensive use of image manipulation software, specifically Photoshop and other Adobe suites. Prior to the start of this project, I myself wasn't particularly well practiced in using Photoshop; I'd used it before in previous projects, but never to the extent required by this one.



Fortunately, I was able to enlist the help of a friend who's much more proficient with it, and I managed to pick up some very useful techniques. One of the most important processes was creating the textures for print, which I created by first producing a basic outline to serve as the base of the design. I borrowed a generic sample of fish scales from the internet and isolated the basic shape to create an outline. Having established a basic template, I could change the shape and size of each scale to best suit what the design was going to be printed on.





3. Research & Integration

Chapter 2



1. Framework Document

2. Mermaids

- a. **Summary**
- b. **Site Visit**
- c. **Artist Research**

3. Prosthetics

- a. **Summary**
- b. **History & Development**
- c. **Artist Research**

Framework Document

1. Introduction

The project will aim to produce a functional, wearable mermaid tail based on the mythological creature. The research conducted will contribute to a professional quality final product.

The secondary direction of this project is a focus on prosthetics, and the exploration of how prosthetic devices can be used to do more than simply replace a missing limb. Specifically, I intend to produce artificial lower limb replacements out of my tails, complete with full functionality.

Additional plans for this project include the design and production of floatation devices fashioned as wearable accessories. These will likely take the form of armbands, wristbands, corsets and tops, all with an accompanying aquatic theme that matches that of the tail itself.

I've always wanted to move my work into prosthesis production, and I've always been attracted to the proposition of manufacturing my own custom approach to it; I love the idea of imposing my own style and personality onto a prosthetic device because of how much of a "blank slate" they present to someone with artistic vision. It's to this end that I've decided to utilise this project to satisfy both my desire to manufacture a functional mermaid tail and to create my own personalised range of prosthetic devices.

Sufficient research that might support the project's progress will likely need to be detailed data on the production of prosthetics, as well as standard diving gear like flippers, monofins and breathing apparatus.

2. What?

The most important research to my project will be the construction of the tail itself. I'll also need to focus research on design details like fin sizing, textures, pricing and marketing. Administrative considerations will also need to be assessed, such as production costs, competition and business strategies. Formats of distribution will need to be analysed within the market, observing information from competitor websites and social media forums.

Social understandings are also a focus, largely to do with the general perception and depiction of mermaids and other related mythological creatures.

An underlying focus on producing a mermaid tail with prosthetic applications requires that I look into prosthetics as a whole. I want to understand how prosthetic limbs are made, how they are applied, how they're designed, what they're made of and how they are marketed. I also want to find out what kind of market there is for cosmetic prosthetics, as well as what kind of competition there might be.

The addition of accessories and other details will require the insight into how to produce working floatation devices like life jackets and inflatable armbands. These accessories will provide support for the user when they are either insufficiently confident to use my tails themselves, or require an extra safety precaution when they're not capable of supporting themselves independently in the water.

Prosthetic limbs come in all shapes and sizes, and vary massively in design. I need to thoroughly explore the different kinds and determine the best type of design when implementing a prosthetic function into my tail.

3. Why?

My research will assist in the production process, enlightening me on how to create a quality piece using industry standard techniques, all the while avoiding major setbacks or quality faults. The market for such a piece will also help me determine a target audience, tailoring the product and its presentation accordingly.

Business factors like financial, market and audience research will be vital when making a business strategy. I will need to identify what audiences consume most efficiently, and what kind of competition I will face in the market so as to make contingencies that solidify my strategy going forward.

Cultural factors like how people see mermaids in modern societies will heavily influence how my product is both designed and marketed, particularly in investigating any gender divide people may perceive. I want to devise a way of keeping my project gender-neutral, and understanding what it is the average consumer associates with either a masculine or feminine product will help identify middle-ground designs that avoid that distinction.

4. How?

I will visit a number of local locations including aquariums, museums and natural landmarks that will contribute by way of first-hand primary research. No tools will likely be needed beyond a sketchbook, patience, an eye for detail and a compact camera to record the experience with. I plan to spend a lot of time sketching and analysing the physicalities of fish and other sea animals to familiarise myself with details like shape, movements, textures and behaviour.

5. Who?

Myths and legends that involve fantastic creatures will play a crucial part in my research. Mermaids and sirens in particular have a considerable cult affection around them, and so feature in many pop culture formats including movies, TV, music and print. Popular cultural media like Disney's *The Little Mermaid* and TV show *Sirens* are contrasting examples of how mermaids are portrayed in modern media, both of which already influence my own direction in my designing. I plan to use historic events and stories like Christopher Columbus' famous first sightings right the way up to modern reported sightings to help formulate a cultural relevant product.

6. When?

The majority of my preliminary research - site visits and first-hand observations - will take place over the coming Summer. I don't want to waste any time in reaching the production stage as the exact amount of time needed to produce a finished product is currently unclear.

The first milestone of my research process is to conduct a bulk of online secondary research into mermaids, mythologies and prosthetics. The next step is more administrative research into audiences, competition and finances, followed closely by a start to my primary research at the local aquarium during a live mermaid performance. I also plan to double up my trip to this aquarium with some observations of the animals and sea life they keep there.

Following this stage, I have some questions prepared for Alison Lappa, an Amelia sufferer who will provide some incredibly valuable insight into the life and struggles of living without limbs. I also have an interview lined up at roughly same time with a local mermaid enthusiast called Lauren McQueen who will hopefully provide some practical insight into using mermaid tails recreationally.

Following this, I understand Hello Flamingo are due to come into the uni which will provide me with a chance to speak to a designer of a mermaid tail. Finally, I plan to fill in any gaps in my research with a number of books I have borrowed from the local library which provide some interesting insights and anecdotes about life as an amputee, as well as other more educational books about producing, designing and using prosthetic limbs.

7. If?

There is a curious gender assignment of mermaid tails that makes them inherently feminine, and as such I may need to devise a way to negotiate with the femininity. There are a number of potentially hazardous ethical obstacles in the current social environment, especially in regards to the LGBT community's growing focus on gender identity. The focus of that aspect of my project is to appeal to both men and women and create an all-inclusive community within my audiences.

I am planning to invite a number of people to interview, including someone who's missing a limb. I plan to ask this person questions about the circumstances of an amputation, which obviously will be quite a sensitive discussion. I will have to be particularly cautious about how I word my questions so as to avoid causing offence or discomfort; I plan to provide a quick run-through of what kind of questions I plan to ask before starting the interview so they know exactly what to expect before accepting my invitation.

8. Risk?

There is an unavoidable risk when producing any kind of marine equipment intended for use underwater. The largest risk of my project is that it may result in drowning due to misuse or manufacturing faults. A very significant risk is presented if I choose to make a prosthetic variant of my mermaid tail, largely due to the wearer's potentially diminished ability to swim without assistance.

Production also carries a certain amount of risk too. The materials I plan to work with can be harmful to one's health if misused, either through skin irritation or toxic fumes. There are a number of comprehensive health and safety precautions that I plan to observe when working with materials like plaster, resin, glue and fibreglass, as well as tools and equipment such as a heat press, glue gun or sewing machine.

Manufacturing prosthetics carries its own hazards; a disabled wearer will almost certainly be swimming with even more diminished ability, and so the importance of having suitable contingencies and precautions will be paramount. In response to this fact, I have begun deliberating some preliminary plans to keep clients safe when using my tails.

Mermaids



a. Summary

In various cultural mythologies, mermaids are majestic aquatic creatures with the head of a human and a fish from below the waist. Tales of mermaids first originated from ancient Greece as 'Sirens', initially an eccentric hybrid of birds and humans. At some point, Greek sailors would return from long journeys at sea with stories of beautiful female figures that would entice men into the sea, where they'd trap and drag their prey into the abyss. Sirens, different from mermaids, are monstrous, sinister creatures that temporarily shapeshift to resemble beautiful female humans, luring prey into the ocean with sexual allure.

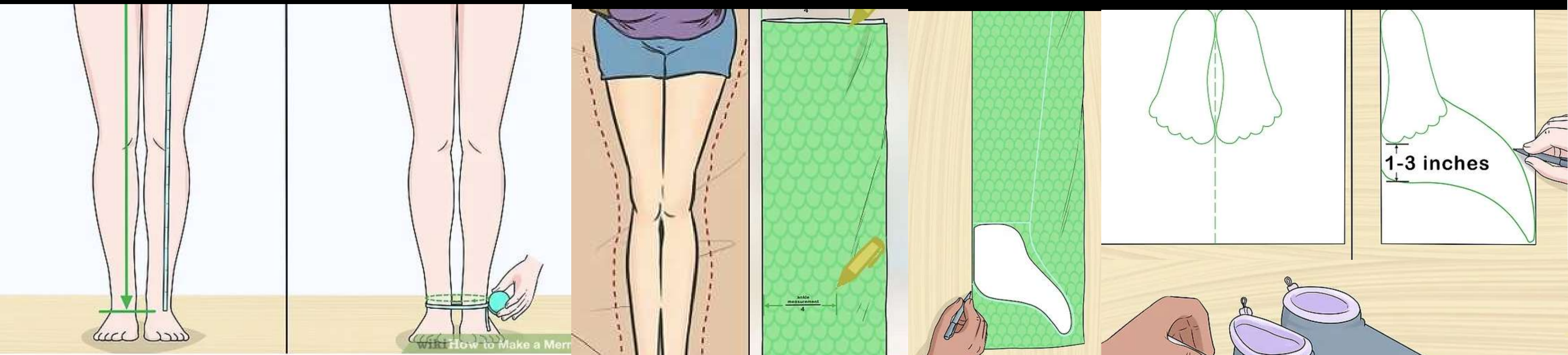
My favourite point of reference for mermaids is the original Hans Cristian Anderson version of the Little Mermaid, originally intended as a twisted fable to keep children from misbehaving. In the Disney interpretation of the story Ariel, a rebellious adolescent mermaid obsessed with exploring the human world, falls in love with a human and trades her voice for human legs. The story ends with a climactic battle with Ursula, who had cursed her to marry a human Prince with a few days or become a slave forever, and ultimately lived happily ever after. The original story, however, was far more harrowing and had a much more tragic end, wherein Ursula had instead cursed Ariel with the task of killing the Prince she'd fallen in love with or die herself. That story ended with Ariel choosing to take her own life in place of the Prince's, and became a ghost.





I've done a fair bit of research on mermaid tails. For some primary research, I was able to attend a mermaid show, where I was able to examine performance-grade mermaid tail pieces in motion. The structure of these tails seemed quite complex in terms of how each section coincided, though the tails themselves were very beautiful, maintaining a majestic flowing motion as they moved through the water. I also hope to visit a professional prosthetics lab to see real, functioning prosthetics, and perhaps even talk to a designer about my ideas and ambitions within in this project.





A measurement of the intended wearer is apparently necessary so as to determine how much material is going to be needed. This isn't an immediate problem since I only need to manufacture one piece, but in the event of mass production, I'm going to need to take this into account. A rough outline of the wearer is also used to help guide the shape and structure of the tailpiece.

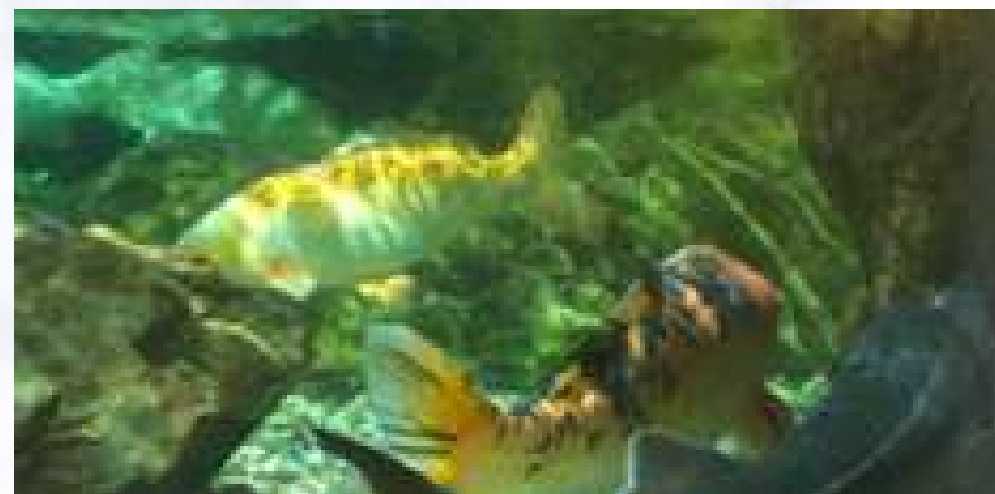
The scales are then sculpted out using clay and a cookie cutter or foil folded into the shape you want. The scale sheet should be completed in a box so silicone or latex can still be poured into the container.





b. Site Visits





I have made several visits to the aquarium and local fish markets for some primary research. I took the opportunity to really get up close and personal with both living and dead fish to observe, and examine the different textures and patterns that show up on the surface of a fish's exterior. I was looking for some visual references that I could use to direct the design of my tails or even incorporate into other design work.

These were just filters I'd place on top of the image, highlighting the texture and increasing the contrast, even reducing or increasing shadows within the image. I feel like the aquarium was highly beneficial to my research, being able to see the different colours, textures and tones was quite helpful overall for my project in trying to create my own textured scales.

I also got to observe behaviour as they move through the water, watching appendages like tentacles, fins and other extremities react to the water as the creatures move through it. Watching this flowing process was important for me to orchestrate how my tail would move through the water when in use.

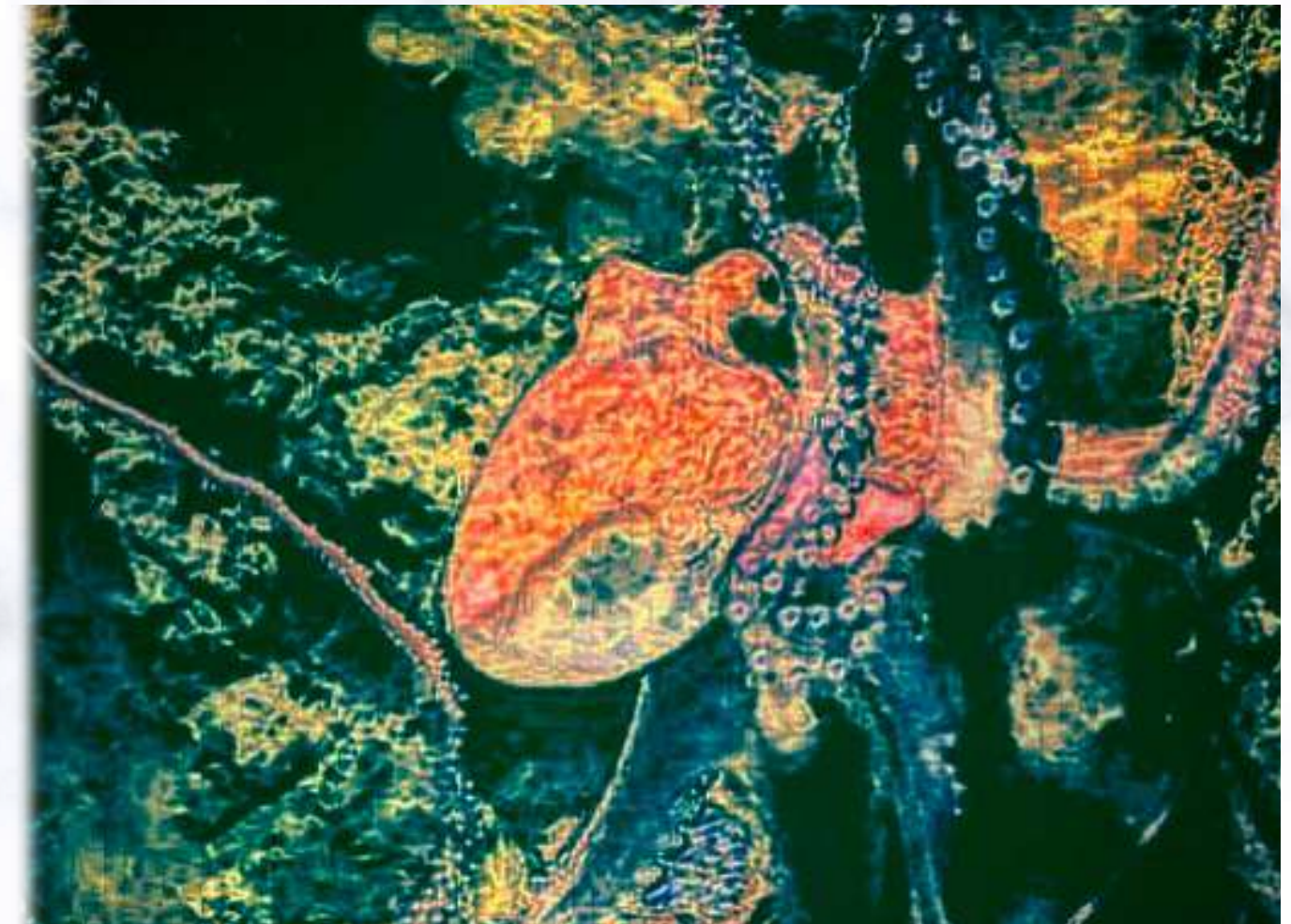
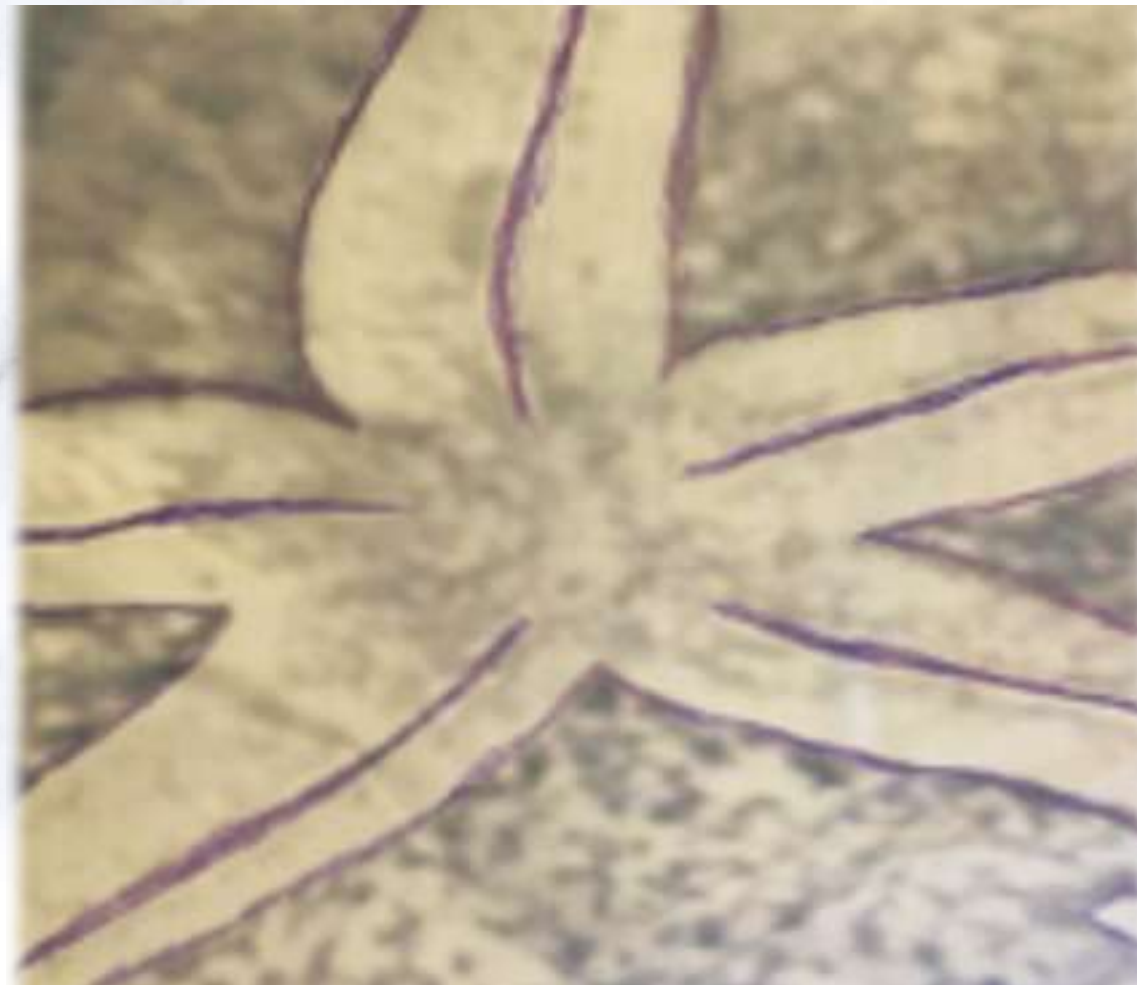


My biggest focus was on colours, and I made an interesting observation about how this factor changes depending on the state of life; when the fish is alive, the effects the water has on the scales is beautiful as it diffuses light and reflects the scales' natural oils and colours, but after death these colours are diminished and the look of the fish becomes infinitely more dull and melancholic.

The difference is staggering, but these observations have really helped me paint a mental picture of what kind of colours and effects my tail will need to possess.



I thought it would be a good use of opportunity to do some sketching and capture some photographs. I'm not the best drawer, but I love taking photos and playing around with the image using filters and image manipulation. I though the octopus in particular was quite fascinating. By giving him a different colour or texture, it changes the image quite drastically.

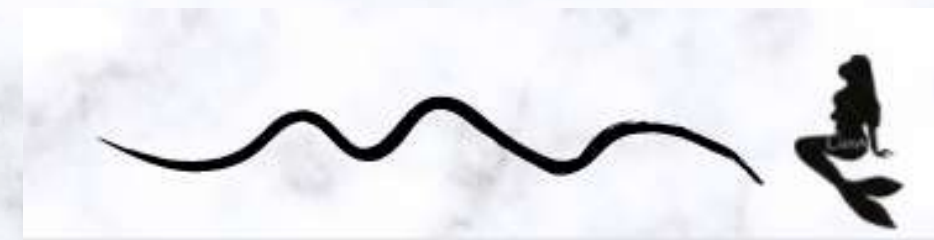


c. Artist Research



Body Cast Sculptures with CelluClay and Activ Wire Mesh

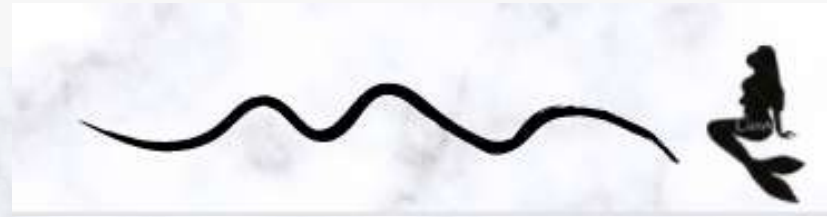
Miami artist, Sierra Rasberry, uses CelluClay and Activ Wire Mesh to create stunning works of art that include impressive body cast sculptures like this mermaid sculpture that was made from the body cast of a live model. Her work is amazing and you can view her entire portfolio of body cast sculptures and more on her website. You can also follow her on Instagram for exciting in-process photos and more. Note that the images are artistic, but viewer discretion is advised due to the nature of the art form.

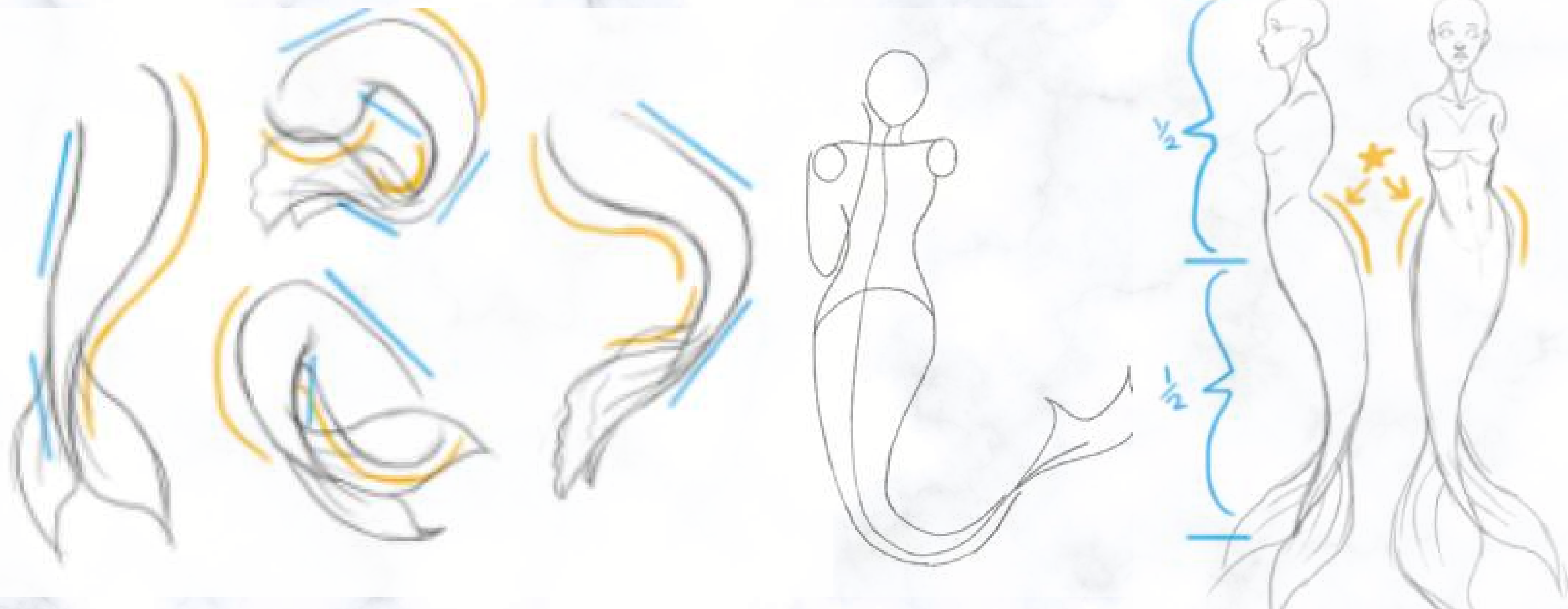




Cameron Stalheim creates mixed-media sculptures that indulge the stuff of nightmares. His most recent work, *and then I saw Colby on the Street and my fantasy died*, is a striking depiction of a collapsed merman taking his last breaths. Several times longer than human height, the sculpture confronts us with an image of death: in this case, the death of our collective childhood fantasies (who didn't want to live among the mermaids when they were young?).

Another recent piece, *Currents*, utilizes an aqua resin to create glimmering, watery reflections of the wooden figure: the body of a woman clawing through the water's surface, desperately gasping for air. With Stalheim's mastery over a variety of materials, from bronze to plastic to wood, one might assume that he has a long career behind him when, in fact, he just completed his MFA at Maryland Institute College of Art this year. It will be interesting to see where this young artist will go next.





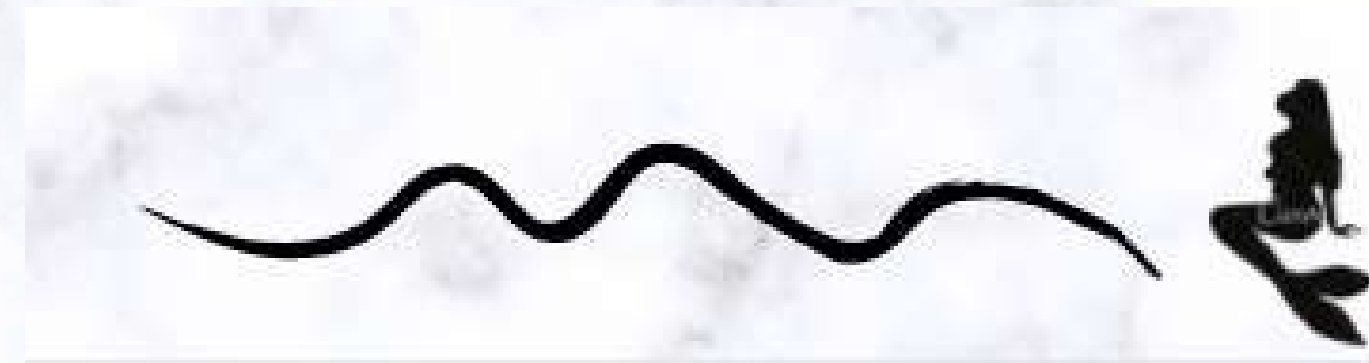


Casting a mermaid tail

Flickr Colin wilson mermaid tail August 15, 2009 <https://www.flickr.com/photos/hayworth1981/3822621555/in/photostream/>



There are many different ways to make a silicone mermaid tail. From the research I've done so far, I've deduced that the process typically starts with texturing the inside of a box container with scales. Once ready, silicone is poured into the box to cover. This is only one way to achieve the texture of a mermaid tail, and there are many alternative routes; some designers use fabric or sequins to create their own different types of tails, but I will have to be particularly selective with my materials to suit my project's intended function.



Research

I was able to go down and visit the storage gallery in the university's basement.



On display was a wooden prosthetic leg that I immediately felt would be relevant to my project. It was interesting to examine it, and study how each section has been connected. I'm fascinated with the detail in the bindings that were used to create the piece - it's amazing, & definitely eye-catching. Perhaps I can think about how I am going to construct the functional part of my pieces with this precursor in mind.

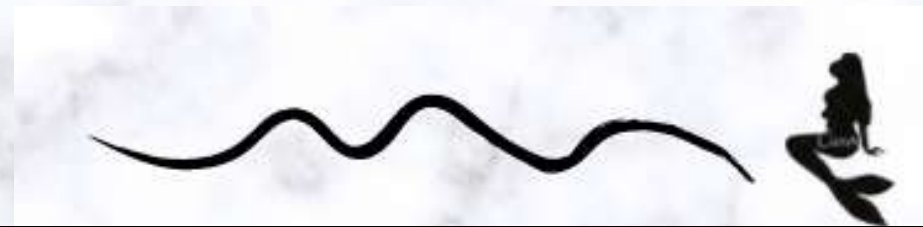


3. PROSTHETICS

a. Summary

The use and application of prosthetic limbs is a widely varied subject. The most common use of prosthetics is practicality, to restore function lost during the amputation of general absence of a limb, however some choose to use their condition to make a statement, either political or social. Some prosthetic devices are custom made with unique artwork, designs and features that reflect the personality of the wearer, whilst others are designed to be discreet and unnoticed when compared to a complete limb. Ever evolving technology has led prosthesis production to some impressive heights in recent years. The pursuit of subtle implementation of replacement limbs has made quite possible to hide the absence of a limb, particularly in terms of functionality. The introduction of biomechanics has even started the development of electronic replacement limbs that detect brainwaves and accurately interpret them as instructions to working joints and functions within the artificial limb.

Humans have pursued the development of artificial prosthesis throughout history. The earliest recorded discovery of a permanent limb replacement was from the remains of an ancient Egyptian, who was found with a wooden toe as a result of an amputation.



The process of manufacturing a prosthetic device is destined to be a complex and precise process, depending on rigorous know how and skill to be done efficiently. The function of a prosthetic is to replace a lost limb and take over its responsibilities. I wanted to conduct a sufficient amount of research into both the design and functionality of a prosthetic and learn about what sort of varieties exist within the industry - I want to be sure my piece will operate properly in its purpose as a prosthetic device. I have found some valuable information from both book and online sources which may prove useful.

I've been learning about mioelectrical prosthetics, which are fascinating pieces of prosthetic technology that utilise the electrical signals sent from the brain to a limb that direct actions, transmitting them into the prosthetic and converting it into movements within the prosthetic's mechanical joints. In other words, the prosthetic listens to the brain and moves itself accordingly. Assuming the process is seamless enough, the brain will theoretically fail to differentiate between the prosthetic device and a real limb. I think this kind of technology is incredible, and even though I'm very unlikely to be able to explore this practically during this project, it's definitely something that I will hope to explore with future pieces.



The use and application of prosthetic limbs is a widely varied subject. The most common use of prosthetics is practically reenabling someone by restoring a function lost during the amputation or general absence of a limb, however some choose to use their condition to make a statement, either political or social.

Some prosthetic devices are custom made with unique artwork, designs and features that reflect the personality of the wearer, whilst others are designed to be discreet and unnoticed when compared to a complete limb.

Ever evolving technology has led prosthesis production to some impressive heights in recent years. The pursuit of subtle implementation of replacement limbs has made quite possible to hide the absence of a limb, particularly in terms of functionality.

This use of prosthetics is directly relevant to my project since my tail will have both cosmetic and practical uses.



Research/notes

• myoelectric limbs from £1000 to £10,000

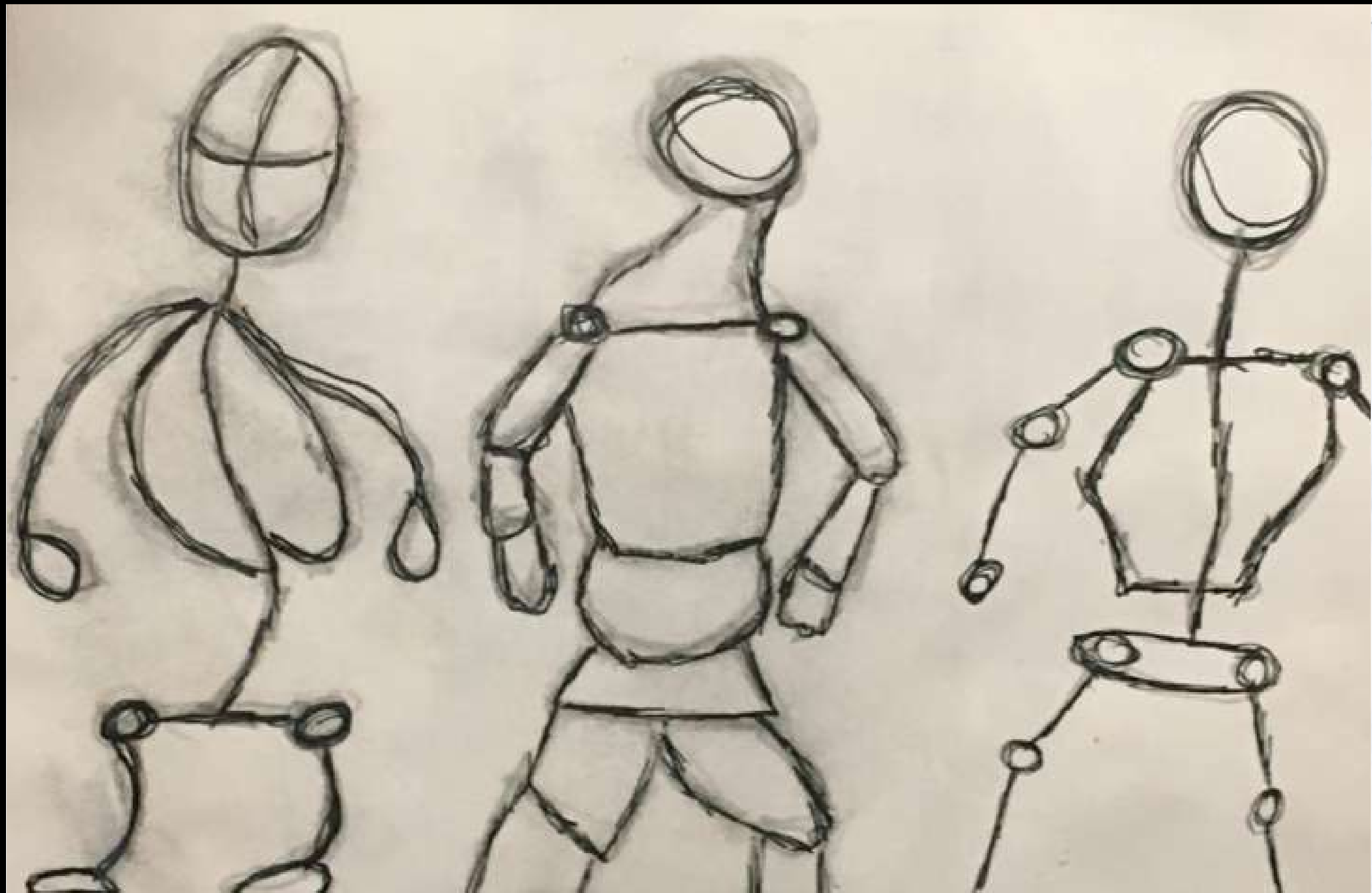
• 'Amelia' - condition of missing one or more limbs from birth
• The brain takes two weeks to begin adapting to prosthesis, and two years to consider it a part of one's body weight.



Following some online research I discovered that the earliest record of prosthetics originated from Egyptian cultures roughly 3000 years ago. Prosthetic toe these variants were constructed of finely carved wood

↑ notes ↑

- Telescoping - the shortening of a phantom limb over time
- Typical prosthetics can range from £50 to £50,000
- Case of people choosing prosthetic limbs over real ones

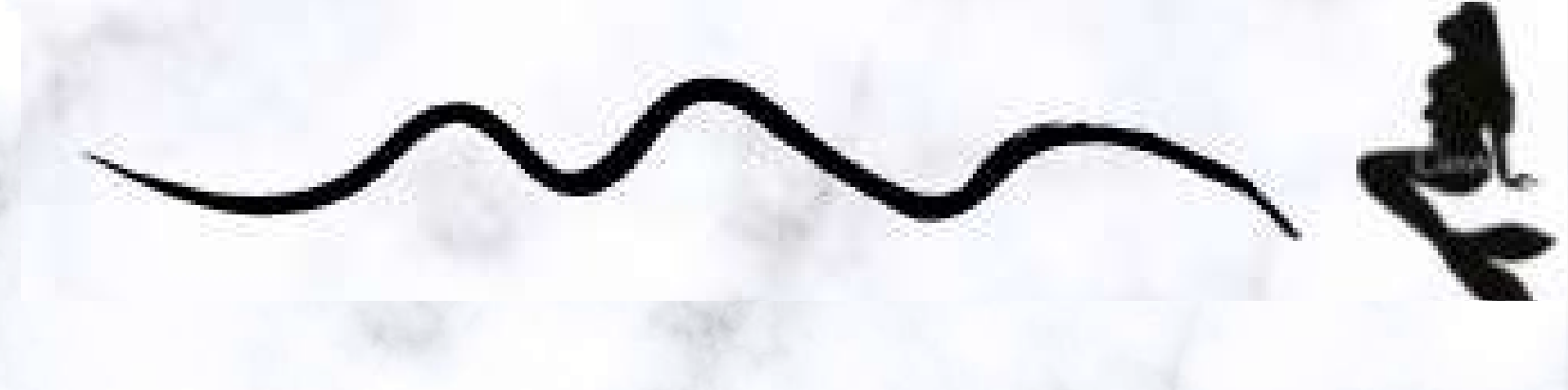


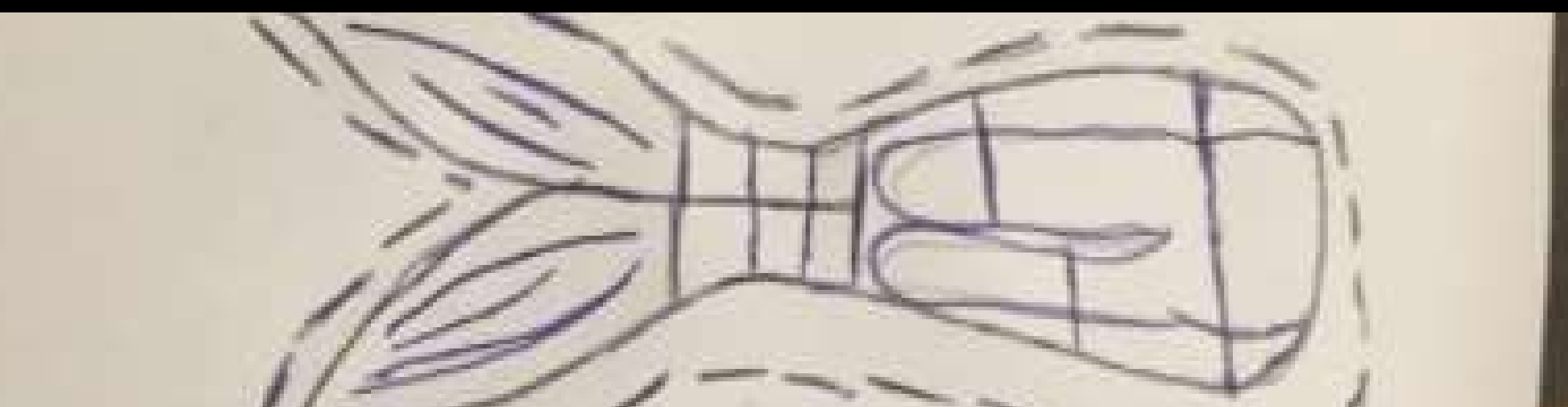
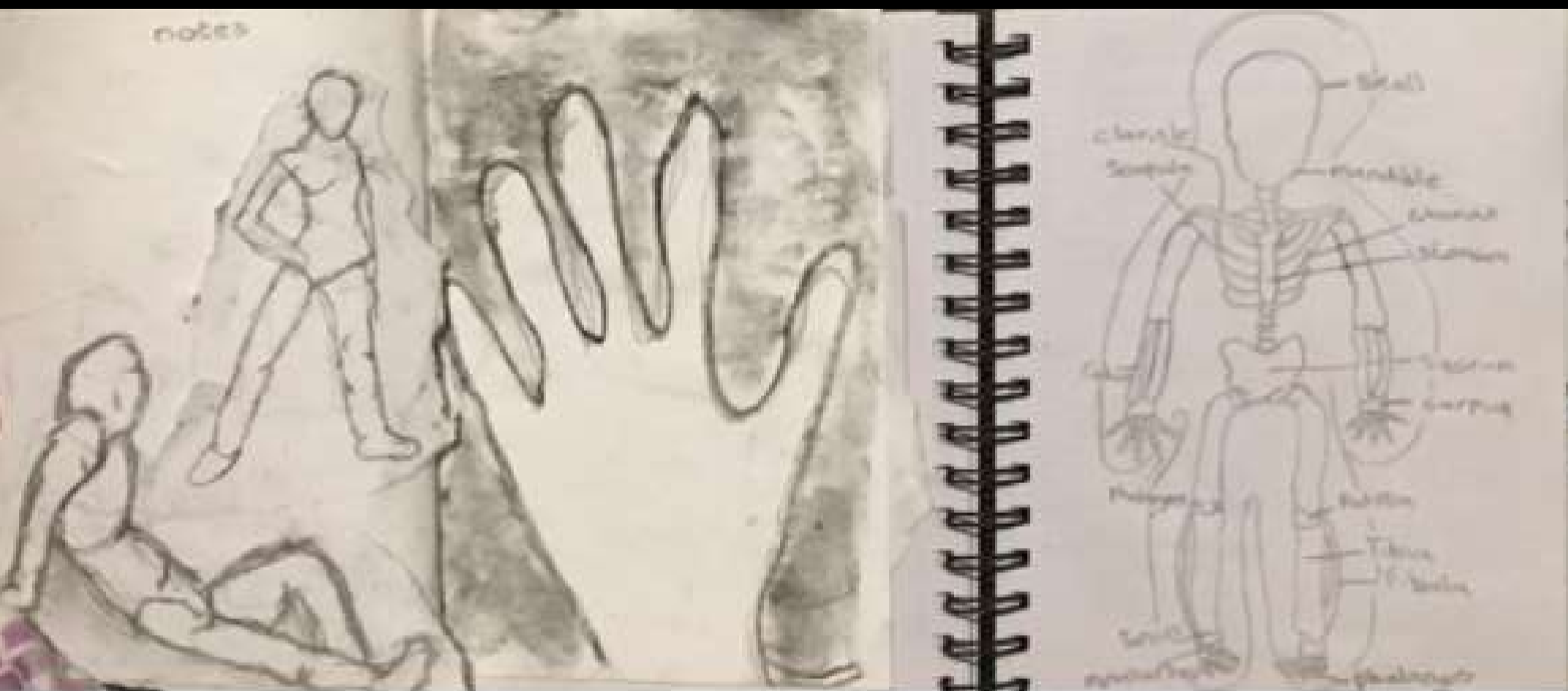
b. History & Development

The introduction of biomechanics has even started the development of electronic replacement limbs that detect brainwaves and accurately interpret them as instructions to working joints and functions within the artificial limb.

Humans have pursued the development of artificial prosthesis throughout history. The earliest recorded discovery of a permanent limb replacement was from the remains of an ancient Egyptian, who was found with a wooden toe as a result of an amputation.







In medicine, a **prosthesis** (plural: prostheses; from **Ancient Greek** *prosthesis*, "addition, application, attachment")^[1] or **prosthetic implant**^{[2][3]} is an artificial device that replaces a missing body part, which may be lost through trauma, disease, or is a condition present at birth (**congenital disorder**). Prostheses are intended to restore the normal functions of the missing body part.^[4] Amputee rehabilitation is primarily coordinated by a **physiatrist** as part of a inter-disciplinary team consisting of physiatrists, prosthetists, nurses, physical therapists, and occupational therapists.^[citation needed] Prostheses can be created by hand or with CAD (Computer-Aided Design), a software interface that helps creators visualize the creation in a 3D form.^[5]

c. Artist Research

Sophie de Oliveira de Barate

ABOUT SOPHIE



Sophie comes from an art background, with a first class honours degree in Special Effects prosthetics for film and TV. She worked as a sculptor for 8 years at one of the UK's leading prosthetic providers, making realistic, bespoke prosthetics for amputees. In her spare time she made more experimental art work in this medium before setting up her own studio and launching the Alternative Limb Project.

Sophie now works as a specialist consultant and works alongside prosthetists to produce realistic-looking artificial limbs as well as more imaginative limbs with direct input from the client to reflect their interests and personality.



Anatomical Leg



Snake Arm



Floral Porcelain Leg



Priscilla



Bloomsbury Droid



Feather Armour



Stereo Leg



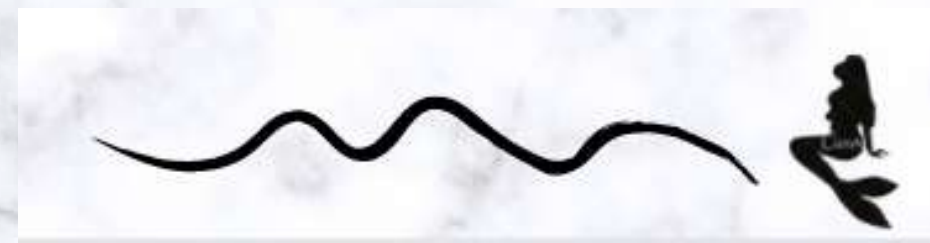
Light Leg

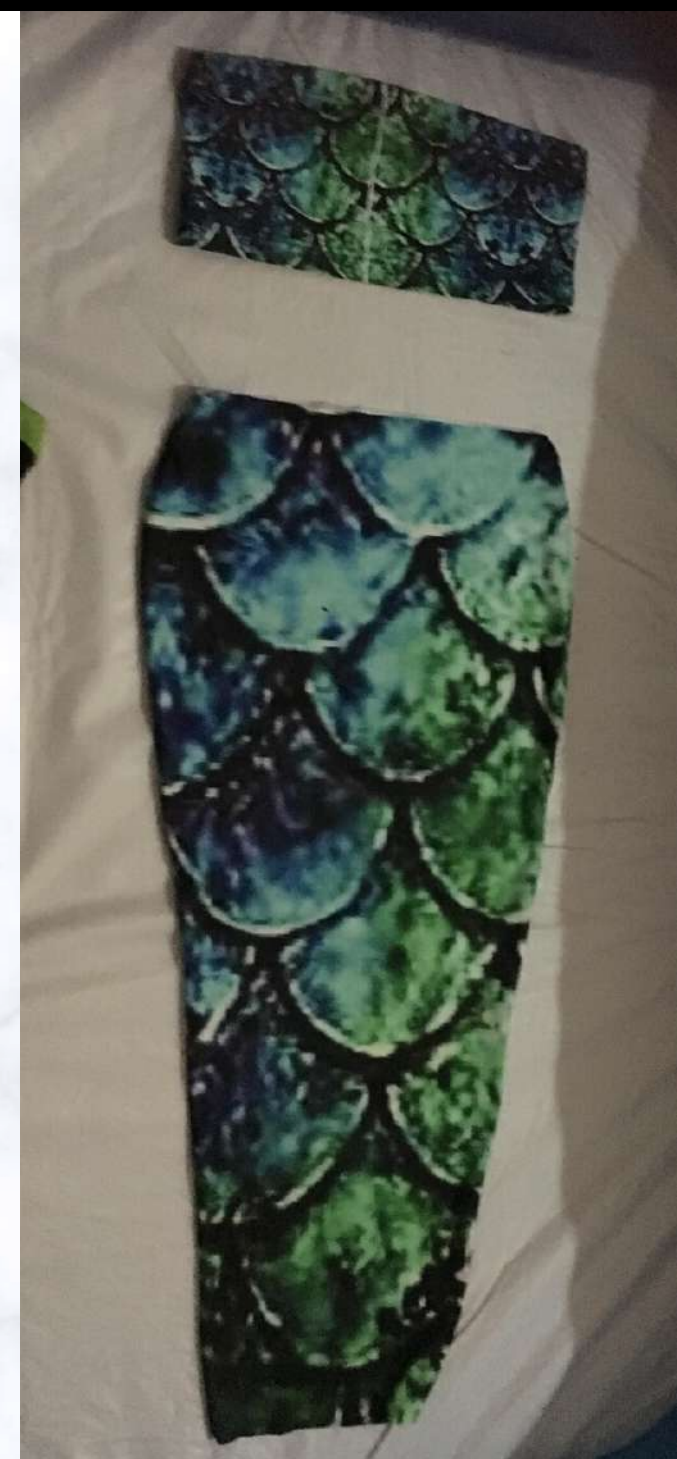


Spike Leg

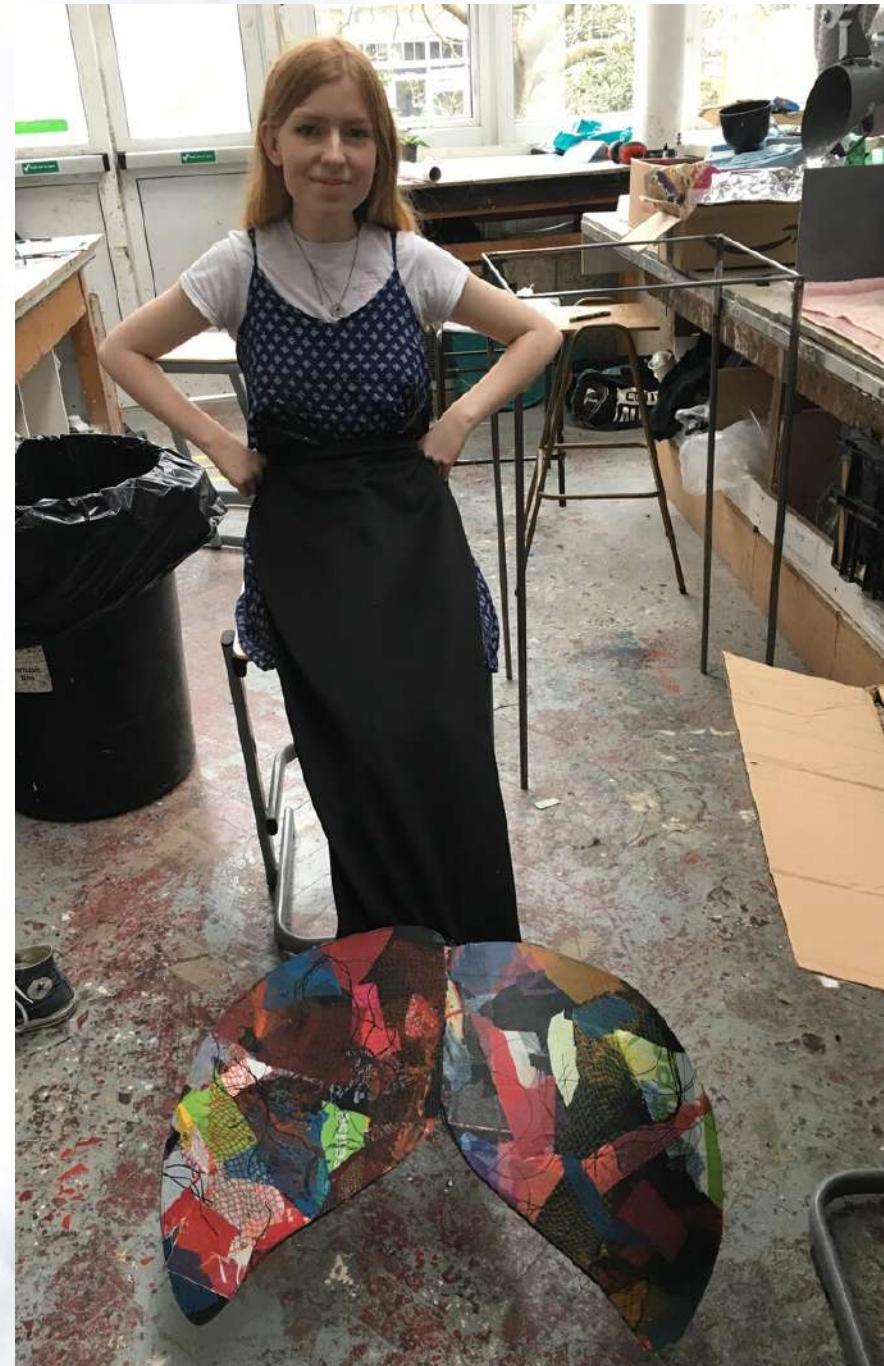
Conclusions and Resolutions

Chapter 4

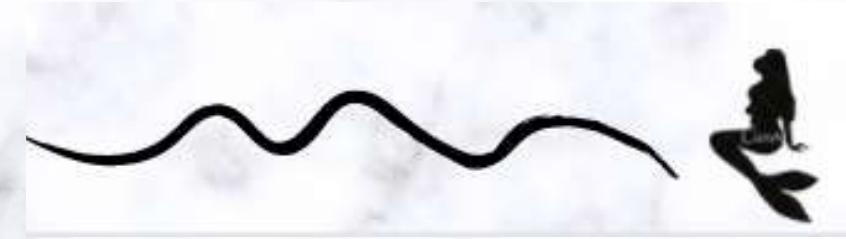








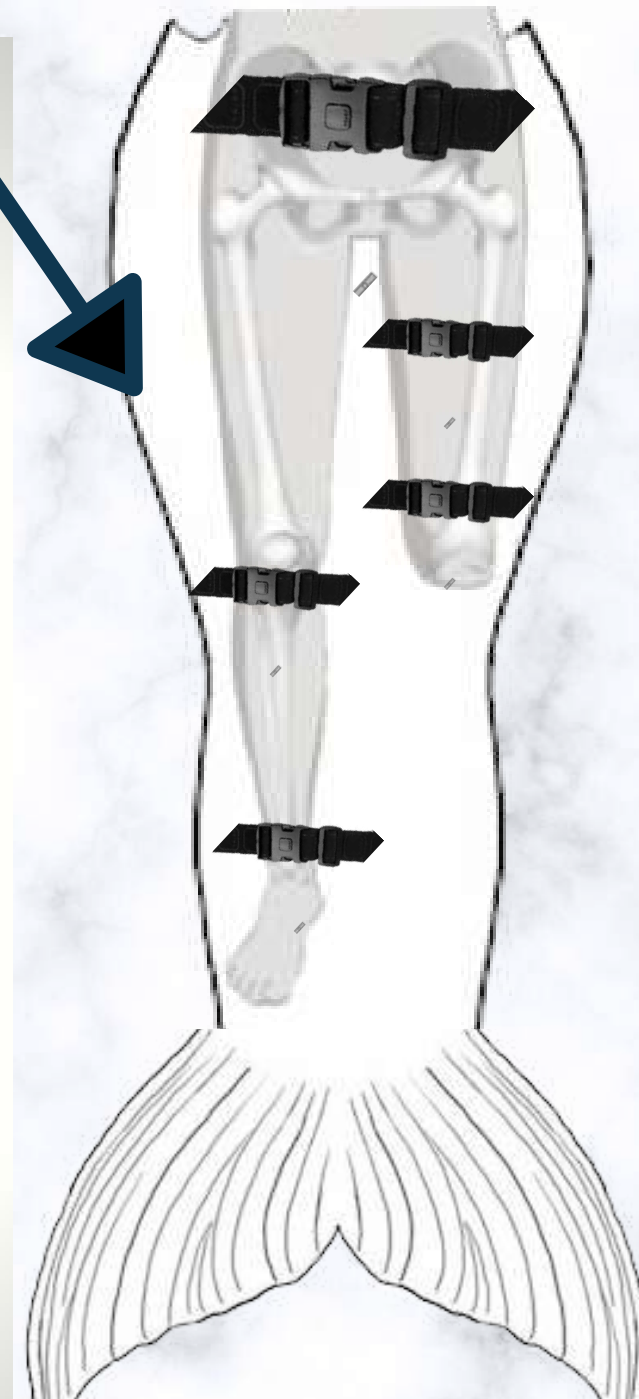
**models
wearing
the tails**



Completed design



Completed version what it would look like altogether inside and out







I also would've liked to have added the straps and suspenders to create the prosthetic effect on the inside to make it more suitable for disabled users. At the moment, the tail is not prosthetic in any way, and requires a variant to fulfill that part of my project aims.





The straps on the inside would be there to secure the wearer within the tail, and even if the user was not disabled, it would still function correctly - one just simply wouldn't use the straps.



MerPod

Tailoring

These were my more complete versions of my tail. Once again, my patterns came out quite blurry due to low resolution, and my alignment wasn't quite right when producing the fin, but seeing it on my model made me quite happy. The overall outcome is, by one or two flaws, quite positive. Having the matching life preserver round the chest was definitely a winning idea. I think moving forwards I would carry on working on the resolution of my printed image, and I would've made sure my alignment on my tail was a lot smoother and consistent.

I'm also sad that I wasn't able to get around to making the silicone version of the tail. feel like that piece would've had a lot fo detail in its design and texture.



In hindsight, I find it quite difficult to say my piece achieves its intended purpose. Largely due to the fact I wasn't able to reach an effective point of completion, the piece isn't a prosthetic device. I was hoping to include the prosthetic elements like the additional straps and accessibility, and it was still quite flimsy by the time our studio time was cut so short. As defined in my introduction, I wanted to create a piece that was useable by any wearer regardless of whether the number of appendages, and its so unsatisfying to know that I didn't quite get there. That being said, I'm happy that I was able to produce working floatation devices, which were at least a part of the prosthetic implementation. I could really see a story being told in how my designs had developed, and I'm very proud of my final design which is both fashionable and unisex as my initial brief intended. I was satisfied with the final design of the tail, particularly with the graphics I produced that effectively attained a three-dimensional perception. The benefit of a successful design here is a newfound confidence in my ability to operate image manipulation technology; I really feel like I've learnt some new ways around Photoshop which will certainly be transferrable to future projects.

The tail itself, though sizeable, lacks the structural integrity it would need to survive use in the water. It's rather flimsy, and I with more time and space to work on it, I'd like to strengthen the fin by layering more plastic bags onto its surface, and tidy up the alignment on the fin so as to make sure each section is neatly lined up. Overall, the edges all over the piece are a little rough and jagged, and are in need of smoothening out to streamline and maximise integrity.



Unfortunately, I can attribute a lot of the failures in this project to how much time we lost, both in the studio and in general. Having lost access to vital facilities and support in the studio, a lot of my plans and experiments were cut short, and left me looking for alternative routes to completion that involved a lot of compromise. The biggest loss due to the lockdown was certainly my silicone piece, which had to be completely abandoned much to my despair and frustration. The silicone tail was expected to be a much sleeker, more lifelike texture, ultimately constructing a much more realistic piece. A silicone tail would've involved a lot of additional time and experimentation in the studio, and what little chance I had to explore this route did produce some promising results. The test pieces I managed to create using silicone and neoprene were very successful since I was able to combine them neatly, which provided a very telling indication of what the finished piece was going to be. These maquettes predicted the piece's weight, texture and durability, all of which were very promising.



I'm happy with how my tail borrows from pop culture image of mermaid tails. One of my initial intentions was to help a wearer immerse themselves in the illusion of being a mermaid, and the combination of life-like scales and appropriate texture and colour schemes really do a good job of achieving this aesthetic in my opinion. Whilst the final piece may not be a prosthesis, it does at least serve its purpose as an immersive experience for the wearer.

Looking back, I feel like I didn't balance the two project goals very well. I was original planning to apply equal attention to producing an immersive aquatic experience and producing an convertible prosthesis. In the end, my attention was shifted quite in favour of the aesthetic side of the production process. This was certainly a factor in how I didn't quite manage to implement a prosthetic side of the project. However, I did manage to implement some level of eco-friendliness with the amount of recycled materials I used to make the fin - I manipulated plastic bags that I had collected in day-to-day life. At least I managed to implement a coherent message that coexists quite nicely with the aquatic theme.





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NHS, prosthetics service review ,<https://www.england.nhs.uk/commission->

Hi . Fructose new contemporary art magazine, Cameron Stalheim's Sculptures Indulge Dark Fantasies

*by Nastia Voynovskaya*Posted on August 20, 2014,<https://hifructose.com/2014/08/20/cameron-stalheims-sculptures-indulge-dark-fantasies/>

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