CULTURE MASK

TRANSLATION

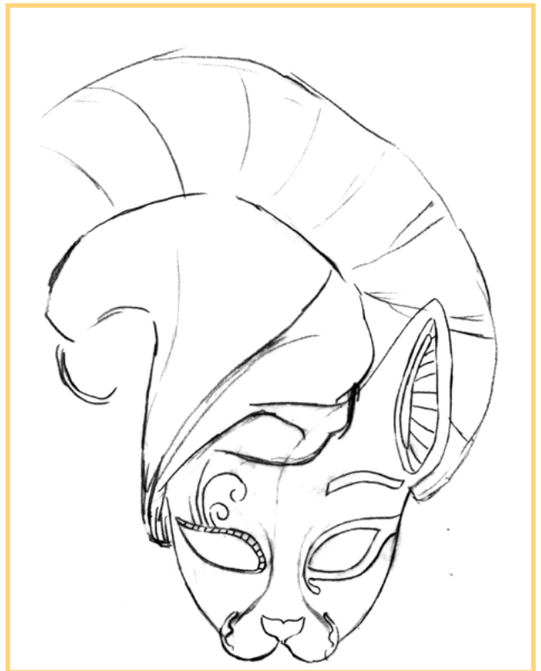
To translate research findings of cultural mask images into new 2D and 3D designs through the use of four types of media: analog (hand)drawing, digital (computer/vector) illustration, Bristol board and wire.

1) Research and locate high quality images of masks from a variety of cultures. Research the following aspects for each mask image: culture, geographic location, history/time period, materials, function/context of use, and the age, gender, role, etc. of the person who wore the mask. Use print sources for your research. Document the author and title of your sources.

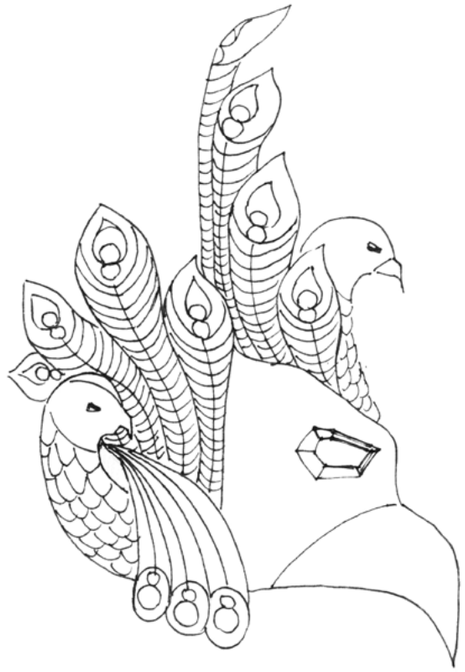
2) Your research will inform the next stage of the assignment. You will choose two of your researched masks to combine into a new mask design. Start by using pencils and paper to draw and compose ideas and elements into a new mask. Think about form, composition and communication. How does the new mask communicate emotion, culture, gender, age, etc.? What elements of each mask do you keep or omit in the new translation? How does the scale and proportion of the elements impact the new design?

3) After arriving at a final hand-drawn concept you will digitize your drawing into a vector image using Illustrator. This will help you to translate the drawing into 3D plane (Bristol) and 3D line (wire) objects.

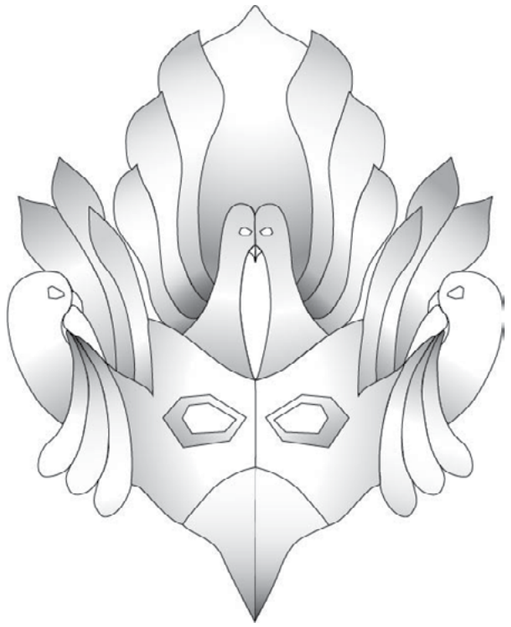
p1,2 Maxico mask
p3 Africa mask
p4 Sri-lanca peacock mask
p5 Venetian Bauta mask
p6 Sri-lanca coraba mask
p7,9 Venetian carnival mask
p8 Egyption cat mask

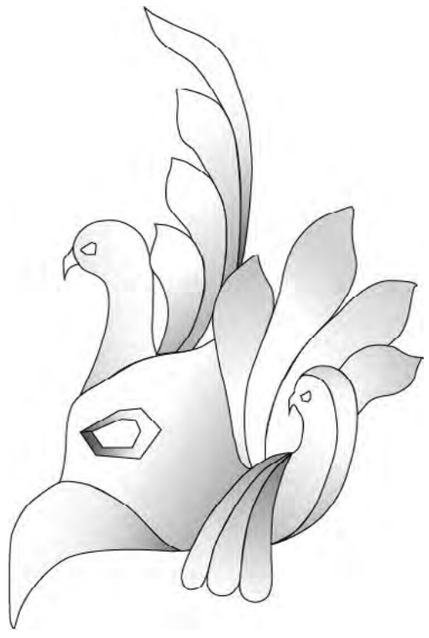


The first group I chose is Venetian mask and Egyptian cat mask. The new mask has one half of its face from the Egyptian cat and the other half from the Venetian one. So it looks like a cat wearing a venetian mask. I like the overall shape and the fan decoration can be cool, but I am not very satisfied with simply put two masks together without any mix. And personally I want my mask to have a great three dimensional effect, but this idea may turn out to be too flat. So I moved on to another idea.

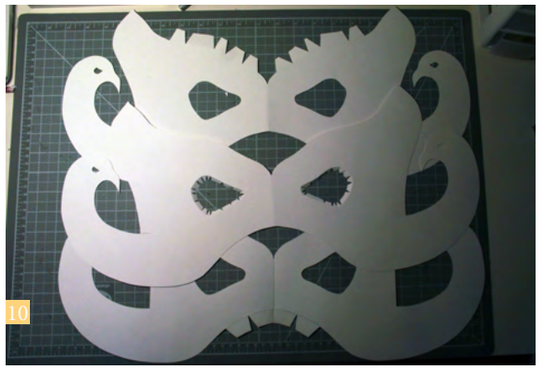


The Venetian Bauta Mask looks like an angry bird. I like the shape of its eyes and beak. Then I felt it could be a good idea to combine the Venetian Bauta mask with the Sri-Lanca Peacock mask, since they both have birds elements, but extremely different, an angry bird and an happy bird. I replaced the peacock face with the face of Bauta and also simplified the three small peacock heads to give my mask an unified style. I like this idea and I finalized my concept with one front and one side view.





The next step was to transfer my sketches to illustrator versions. I scanned my hand drawn final concepts, placed them into Illustrator and used them as under layers to trace over using the Pen and line tools in Illustrator. I reduced the pattern on the necks of small birds since I thought my mask needs more elements form the Bauta mask. The I also added some gradients to the Illustrator line work to make it close to the Bristol board mask I will make later.



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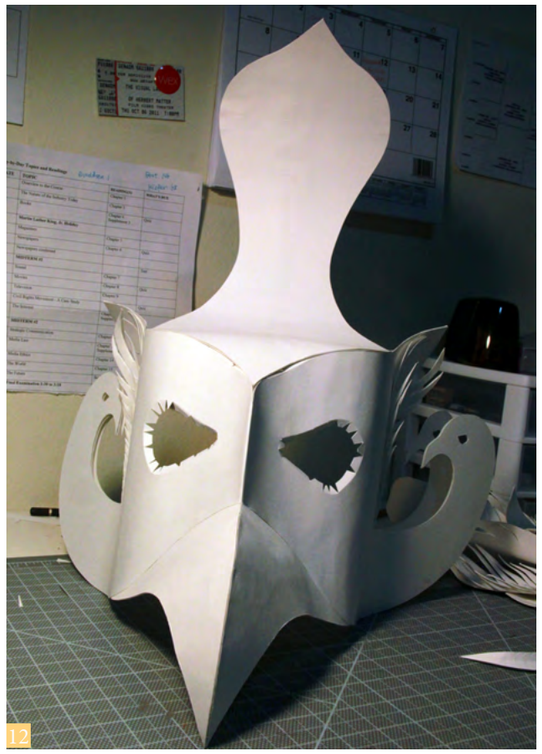

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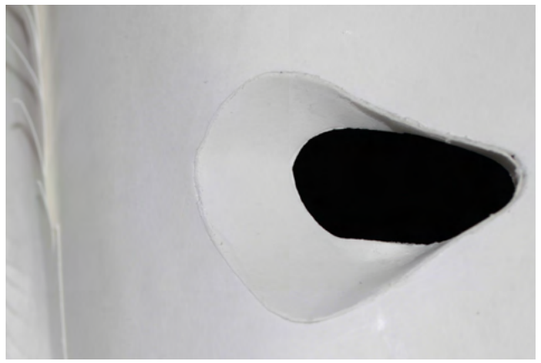
Though I had some experience playing with Bristol board, this one is definitely much more complicated than what I have made before. The first step was to print my illustrator work and cut out the pieces I need on Bristol. The orthographic views, both front and side need to be modified to adjust for the differences in shape before I applied them in a three dimensional format.

The main body formed with three layers of Bristol(p10), to make it strong enough to bear the weight of the paper feathers. I applied thick glue between each layer, shaped it and then let the glue dry. Each peacock feather is made with two layers of Bristol and I cut the pattern before the glue dry which let me achieved a very nature effect(p11). I made the main body (p12)first and then stuck the feathers on the body.



I like how my mask look right now. I especially like the eyes, I can't figure how to make it until the last minute since the shape of the depth is difficult to figure out and can't meet the outline of the eye perfectly. Finally, I found I can make them perfectly matched by sanding away the edge. I feel my craft still needs some improvement, and I could use some more surface texturing or details on face, birds or feathers.

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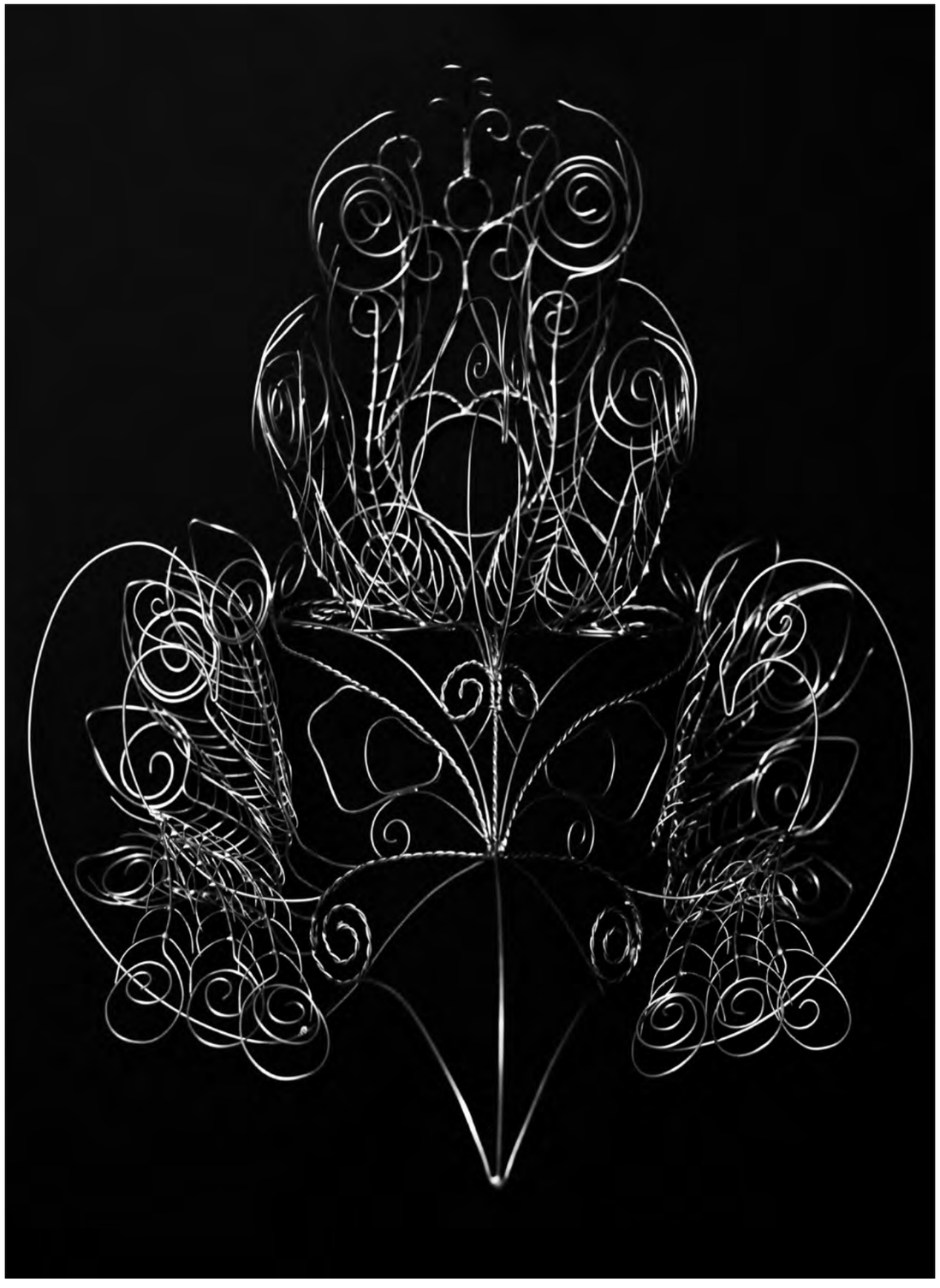
Wire is a quite different material from Bristol. Bristol is surface while wire is line, so it is easier to achieve volume with Bristol while wire has stronger plasticity. So I think the translate from Bristol to wire should be focused on how to build the surfaces with lines and make the mask more decorative. I designed some pattern for the main surfaces I have, like the face(p13,15) and the back(p14) by incorporating some element from the venetian mask.

These are my concept drawings fo, front view and side view of my wire mask. The concept was almost finished at that time, but there were some details I need to test when I moved on to play with wire. For each feather, I would build the stem follow the structure I drew with thicker wire and solder some pieces of thin wires along the stem, but the density is undecided. I might cover the beak with thin wires in the way show in the side view, however, it depends if there is already too many decorative patterns, since I do not want it to become too massy.



I prepared the necessary materials and tools(p16) include 16 and 18 gauge wires, a plate, a torch, a can of flux , a roll of solder, needle nose pliers and wire cutters. In addition of these, I also got some magnets to help me set the wire pieces in place when I soldering and a pair of gloves which I found really helpful when I straightening wire.I believe my well preparation is the key to my sucessful result.

The process is quite similar with the process of the Bristol mask, the body(p17) first and then the feathers(p18,19). There is a detail worth to be mentioned in my design, I twisted two pieces of wire together tightly to form a single piece and applied this technique several times so that it become a unique pattern on my mask.

I am very proud of my wire mask, it is beautiful and well craft. Since this was my first time to practice soldering, it was quite tough to control the time point at first. The joints on the stems of the feathers are closed to each other, it happened many times that the done joints melted again when I was soldering the one close to it. At the beginning, a single piece of feather took me about half hour to make, but the process was shortened to only 10 minutes after I become familiar with the technique.

GEOMETRIC SYSTEM

SPATIALSTRUCTURES

To investigate form creation, visual and structural patterns in the natural world, to acquire a basic understanding of the geometrical organization of 3D form, and to apply the concepts learned to a 3D spatial structure.

1) Research and collect examples of natural organization principles, growth systems and structures found in nature. View those principles through both macro and micro lenses. Depict their structural geometry, linear and planar components, connections, and organizational principles graphically. Visually document the findings in a presentable way. Include a reference bibliography.

2) Derive from this study a number of units (cells) and explore abstract representations of a selected natural structure that has the potential for the creation of a space enclosure or volumetric structure. Special attention needs to be given to the types of connection. Models and experiments should be conducted in Bristol Board to save time and allow for quick ideation.

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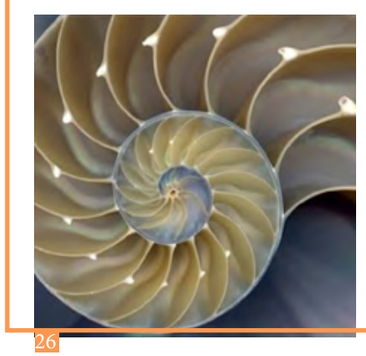
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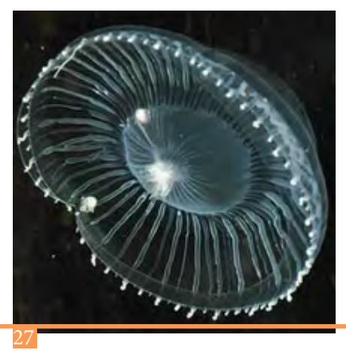
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p20 Sun flower
p21 Green spider mum
p22 Rost
p23 Dandelion
p24 Honeycomb
p25 Double helix
p26 Sea shell
p37 Jellyfish
P38 Snowflakew

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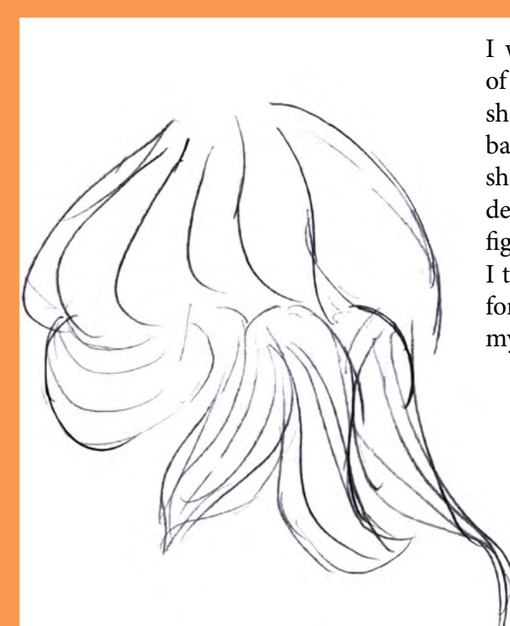
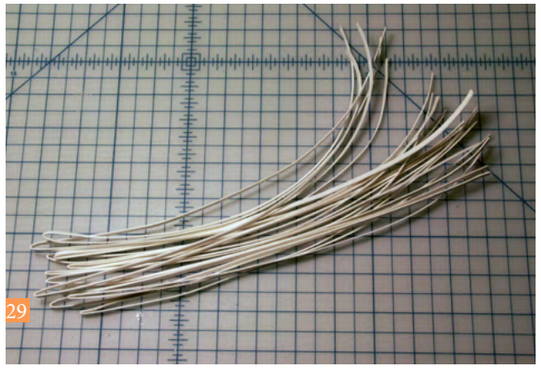


I was captivated by the mystery and miracle of the ocean. I like the compact structure of shell and the elegant of jellyfish. So my idea is basically to combine the spiral pattern with the shape of jellyfish, and I drew a series of sketches depend on this concept. I had some problem to figure out my cell during the process, initially I thought I should use tons of Bristol strips to form the overall shape so that a single strip is my cell.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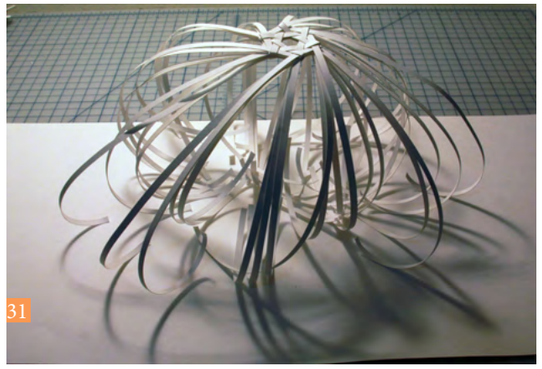
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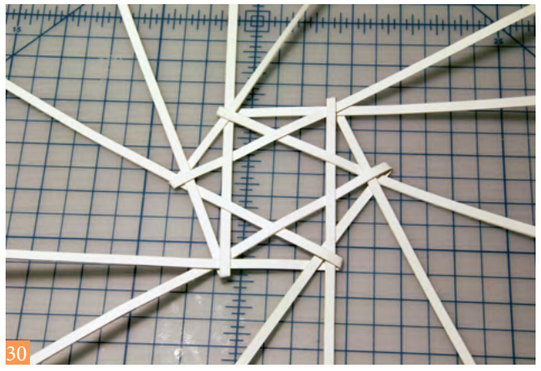
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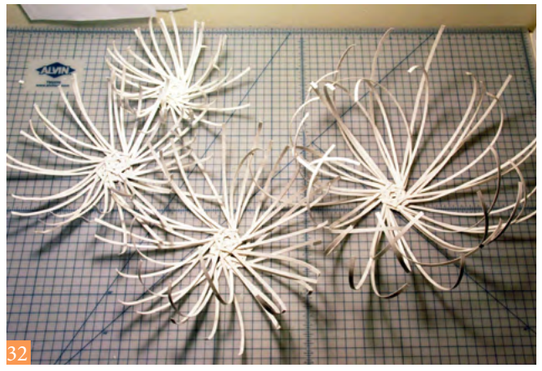
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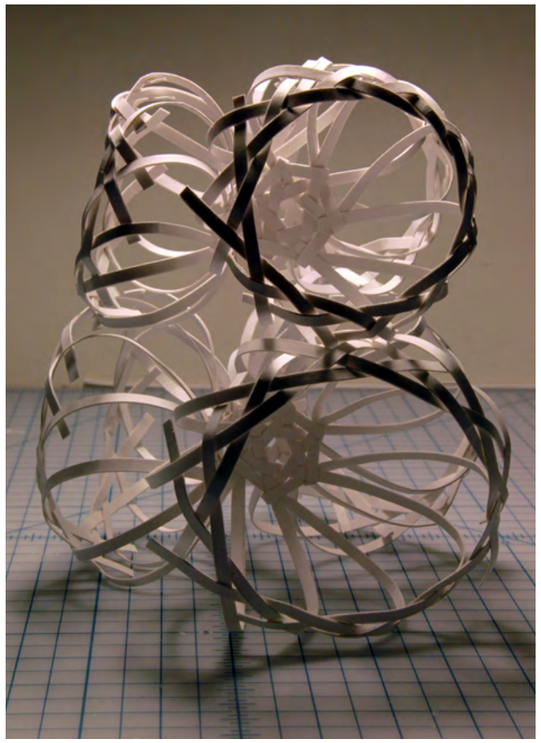
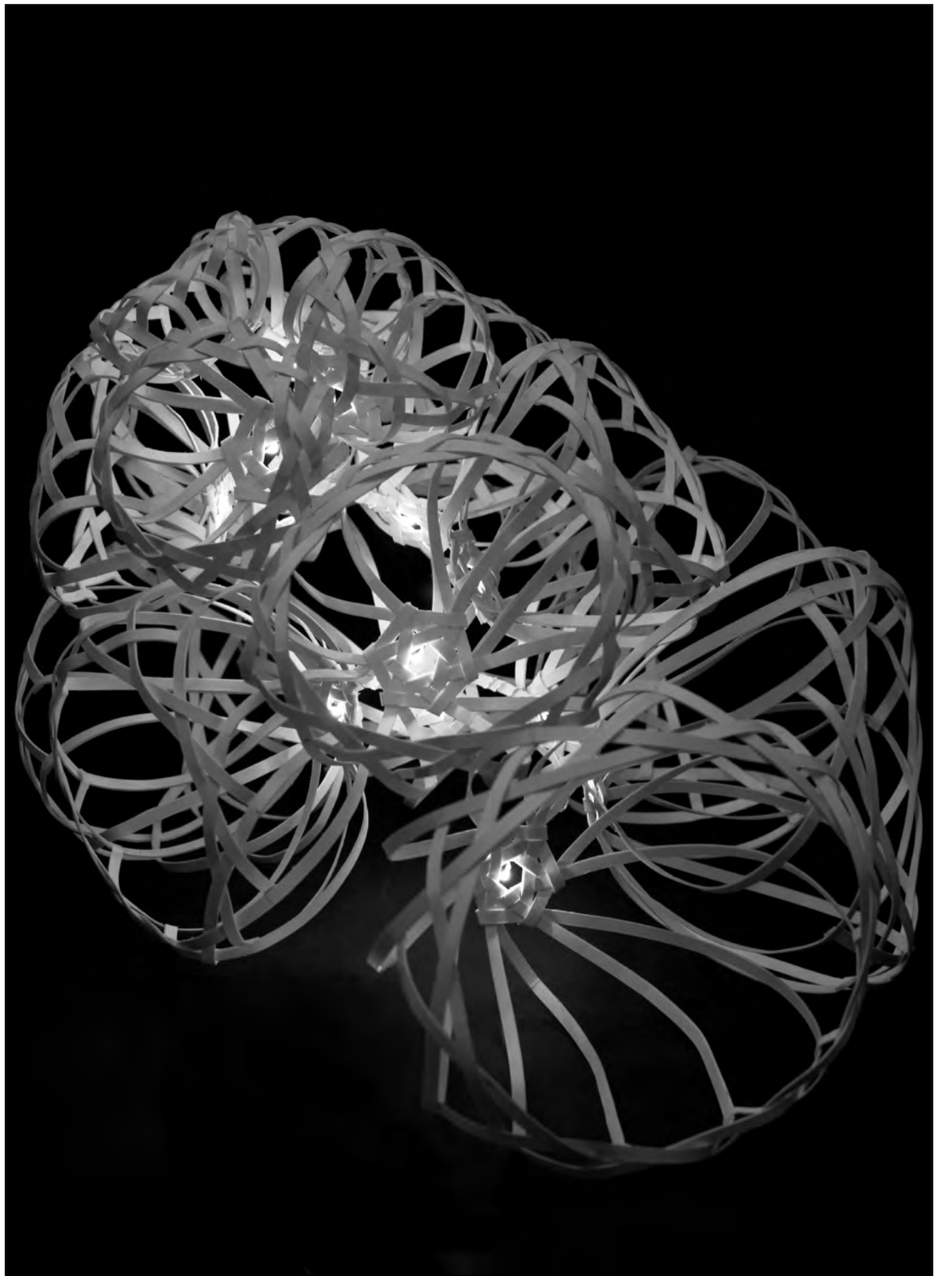
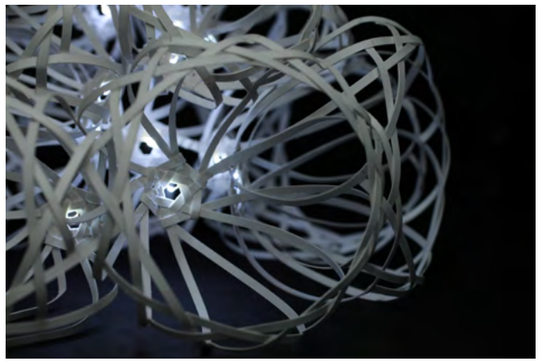
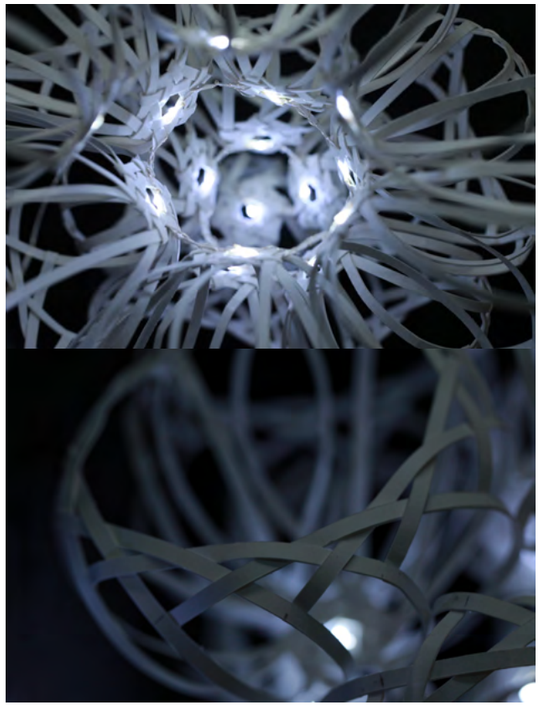
~~I cut a lot of long strips and glued two pieces~~ together to make a double thickness strip(p29), since from the experience of Bristol mask I learned that glue can give shapes to Bristol. Since the shape I want to make requires those strips to be settled at a single point on the top, I figured out a weaving structure to connect all the strips. After folded those strips, I weaved six strips together in this way(p30), pulled tight and then curved the strips to become a flower shape. This process had to be finished before the glue dried. I repeated this process several times and then put my flower shapes together. I like the jellyfish shape I achieved, but at this time I started to become not sure about what is my cell. My process is all about repeat, but it turned out to be too confused to tell the strips are repeated follow a rule. At the same time, I found the flower shape could be a good cell, so I started to redesign my tessellation model with my new cells.

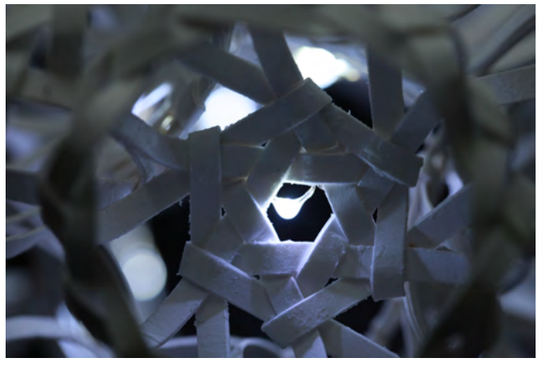


I weaved the ends of the strips together to make a more closed structure cell, like a bowl, since this shape has more volume than the flower one. I made my cells slightly vary in size and tried different ways to connect them. My final decision was to string them follow a spiral curve, so that they could form a sea shell structure.









To make the model more interesting, I purchased a LED string. I was really lucky to be able to find such a perfect light. After I installed the string carefully along the spiral curve, it is hardly visible in daylight and at the same time very beautiful in dark. As summary, what I learned from this process is I should always be ready to change my design, everything can happen and every choice is worth trying.

INTERACTIVE WOODTOY ANIMAL

To investigate form configuration, material properties, structural principles, and mechanical articulations and behaviours applied to a product for a specific user.

1) Choose an animal and analyse/research its form and behavioural patterns. Mammal, Reptile, Insect, Amphibian, Fish, Bird, Crustacean, etc

2) Combine the gathered understanding about the user and animal, and create a series of toy sketches. A toy must include at least one example of a simple machine (i.e. Behavioural pattern). Sketches need to be multi- view and demonstrate scale, etc. Render final drawings in Illustrator with the intent of being templates/schematics for cutting.

3) Using foam core, construct a working prototype of your concept in full scale.

4) Final deliverable is a wood model and a poster of the schematic drawings, required materials, dimensions and templates.

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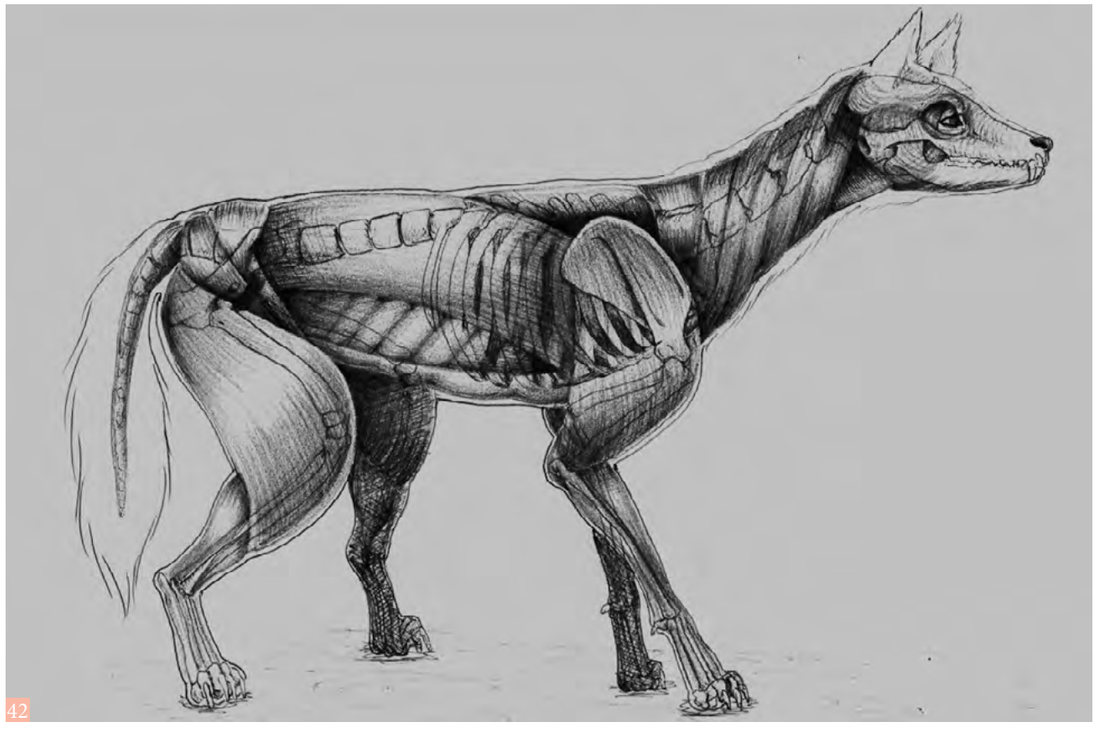
The machine I found is called ball joint, which is a technique widely applied in the dolls in Japan. I found some instructions about how the ball joint is made. The ball joints are placed at the waist, thigh, knee, ankle, neck and other joints to make the dolls extremely realistic with almost all human motion. I think this is a really cool technique and I want to make a vivid pet toy with it. The body structures of animals are different from human beings', which make this idea challenging but worth a try.

p33-35 The knee joint
p36,37 The thigh joint
p38 The ankle joint
p40 The waist joint
p41 The neck joint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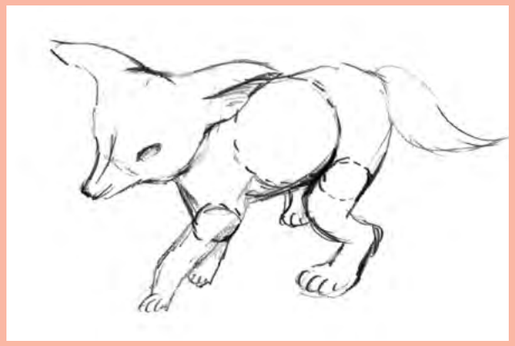
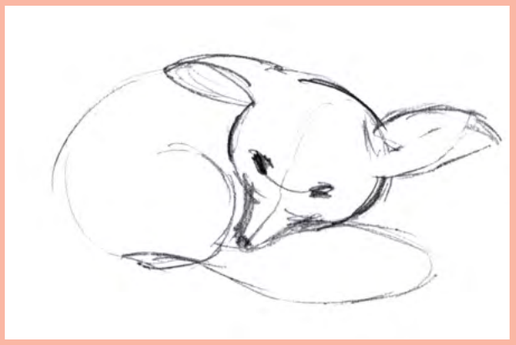
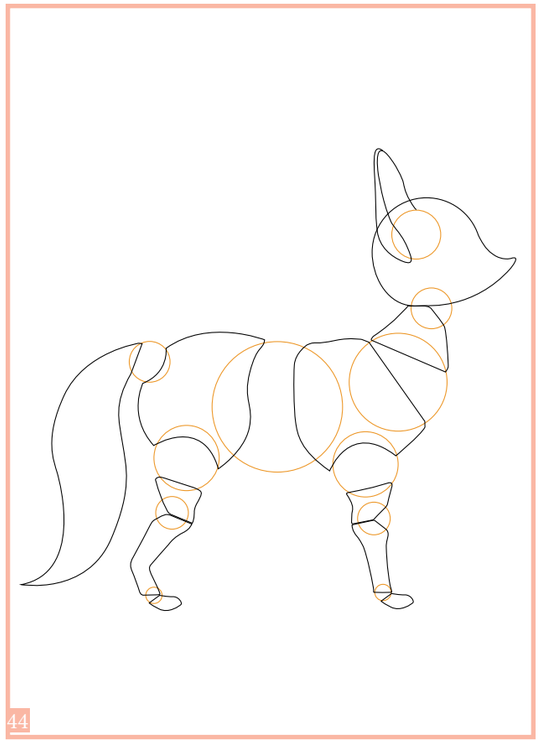
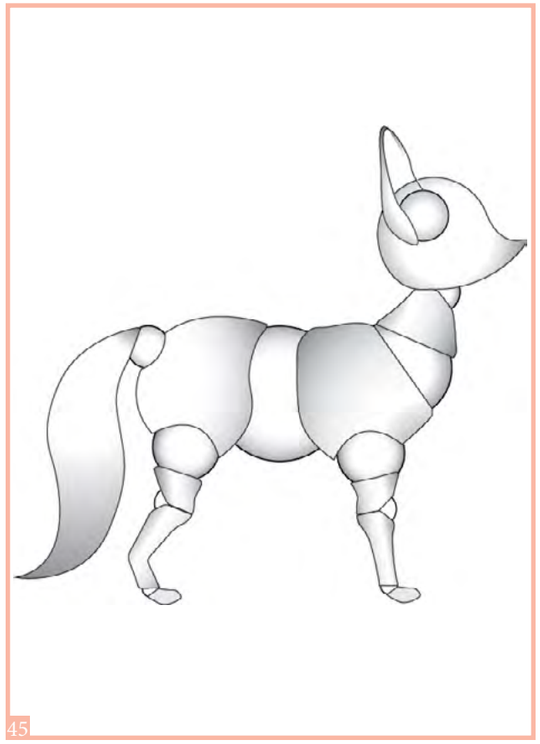


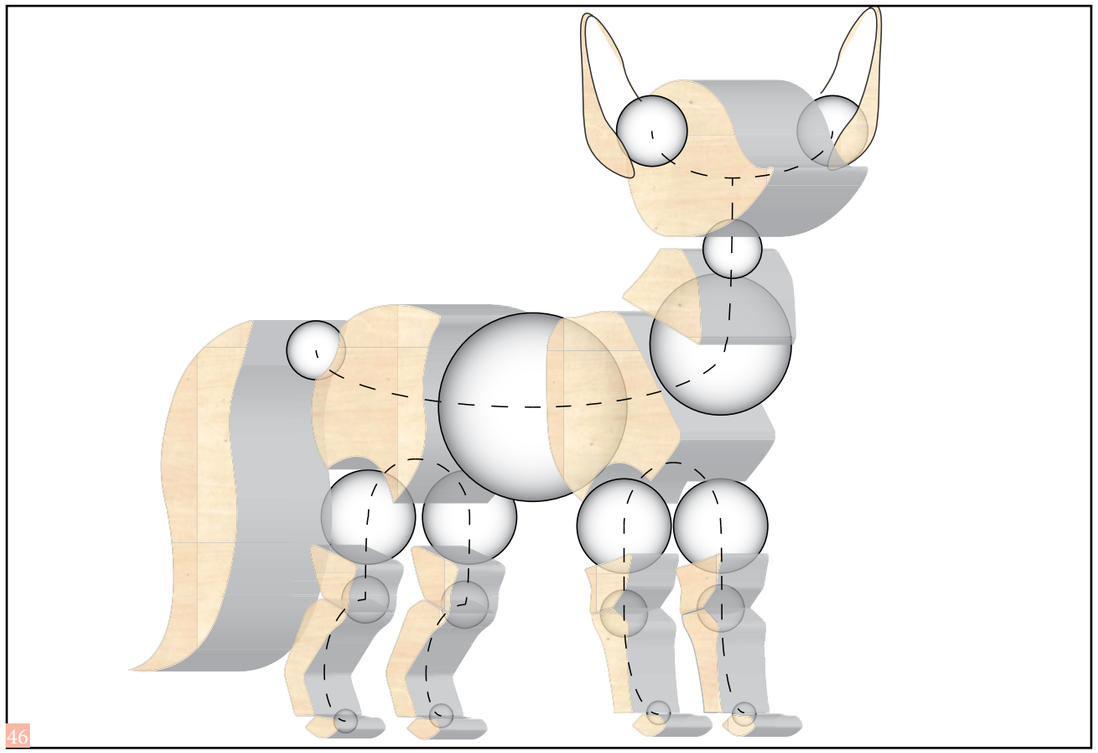


After some random researches, I found the Fennec Fox could be a wise choice. I fell in love with this adorable fox at first sight, which has two big ears and can curl up into a ball. Idealistically, if I set ball joints on its ears, it could cock its ears or drop its ear or do both at the same time very flexibly. I could do the same thing to the waist and legs joints to achieve as many motions as possible. In order to set the ball joints appropriately, I also researched the body structure of fox(p42) and drew several concept sketches according to it.
I tried to make a model with foam but foam cannot really represent the round shape. As a result, although I had finished my concept drawing(p43), I was still not sure about how it would turn out to be and how well the joints could work.





Like the Bristol Mask process, I scanned my hand drawn final concepts, placed them into Illustrator and traced the contour line. I used solid black line to represent the body structure and the orange dash line to represent the ball joints. (p44)
I also tried to add some gradients since this was the only way in which I can imagine how my toy will look like at that moment.(p45)

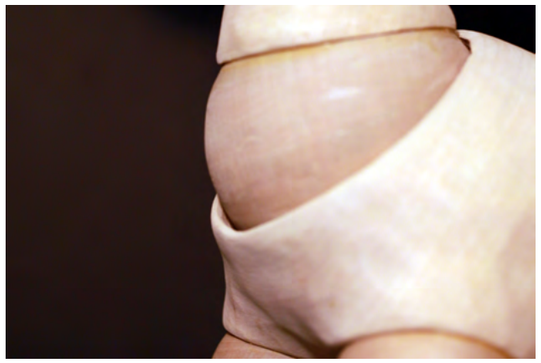


Furthermore, I developed an extended version of my toy with the extrude function in Illustrator, which I found very useful in my following process. Though it still cannot show the round shape I want to achieve, but it clearly shows how I shall cut out all my parts and how to connect them. I also coloured it with the bass wood pattern, which is the wood I purchased.

Bass is a soft wood, since I will have tons of sanding work, soft wood should be perfect for me to work with, and I like the clear pattern of bass, which is a similar color to the fur of fox. Fortunately, I found all the different sizes of wood balls I need either from Hobby Lobby or online wood product shop. I also got some elastic from Wal-mart. Now, I am ready for the workshop.

Though we already had some shop training, I was really nervous before I started. The machines still looks dangerous to use. But after I started to cut my first block I began to enjoy the process. Mine is a relative tough one since the machines in the workshop are more efficient to cut rather than sand, thus I spent almost the whole week in the work shop. I used the band saw to cut all the pieces as planned, this was the most easy step in the whole process. I drilled all the holes I need before sanding the blocks since I need flat surfaces so I can clamped them on the machine table. And then, I sanded them to become round shapes, which took me quite a long time. The final step was to connect all the parts with elastic. The ears work great as well as the body and the neck. Everything moved smoothly at that point.

The legs totally made me mad. I thought the problem is I put too much ball joints on each leg, and the wood is a material much heavier than I imagined. So, after I connected the legs to the body, they can not bear the weight of the body and I cannot control the joints to move as I want .As a result, my fox was not really able to stand up. Though I was really disappointed with it, I totally understand I still need to finish the project before deadline, so I had no choice but glue all the leg joints. The ball joints on thighs and knees cannot work anymore, but I was still able to keep the ankle joints moveable. And when I let my fox stand on the table, I known I like it. From this experience I noticed how important it is to make a good mock up model, it can help me understand some unexpected difficulties I will meet. One more thing, sometimes ,when you can give up something, you can gain something.



I would say this is a very interesting process and I learned a lot from it. I really appreciate the patience of Chris and Jeff, who gave me suggestions on how to use the limit tools I have to achieve the shape I want. I like the little fox I made, I will keep it forever and this precious experience as well.