

Component 2 Three-dimensional Design

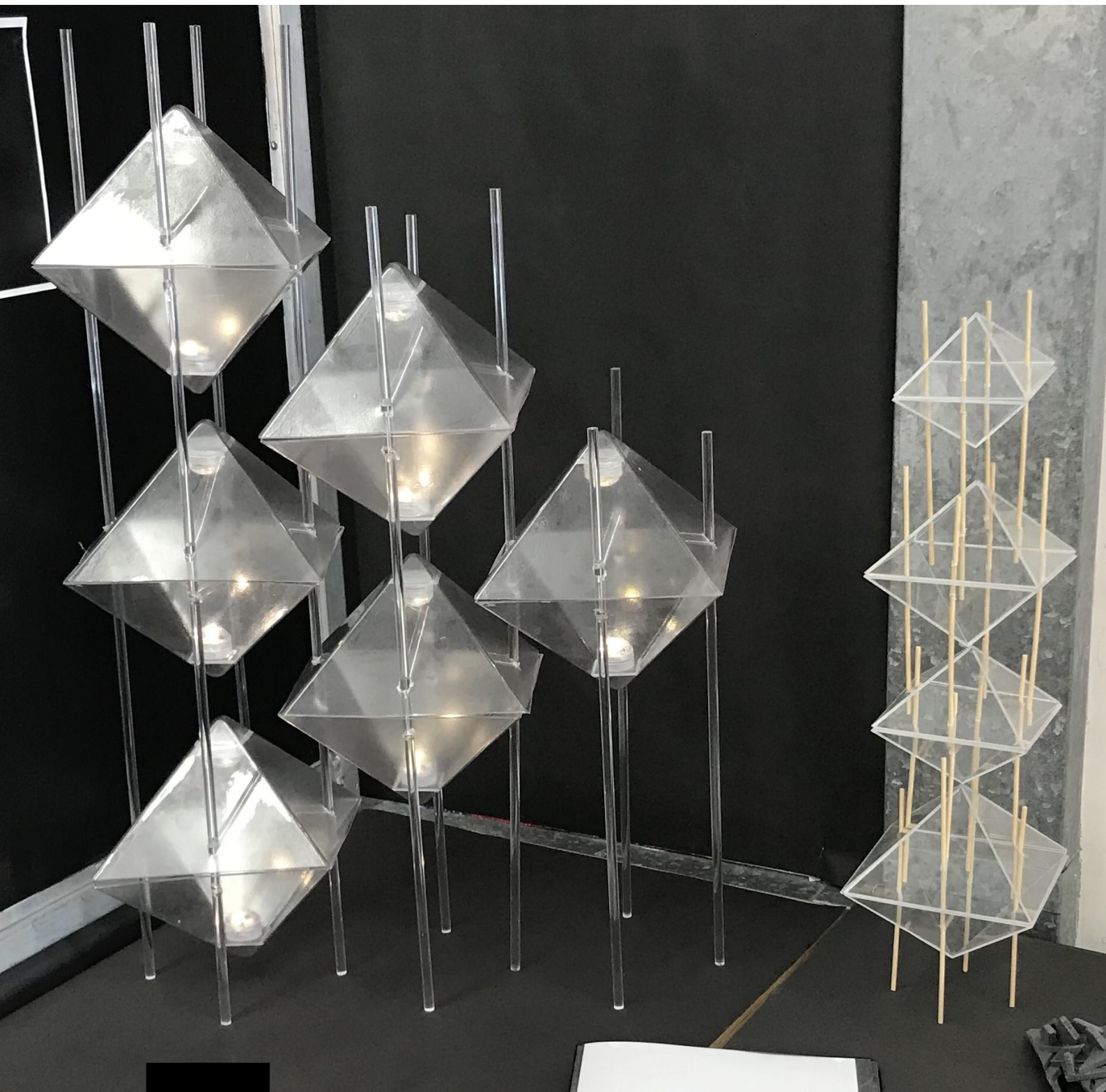
Standard Mark – 60

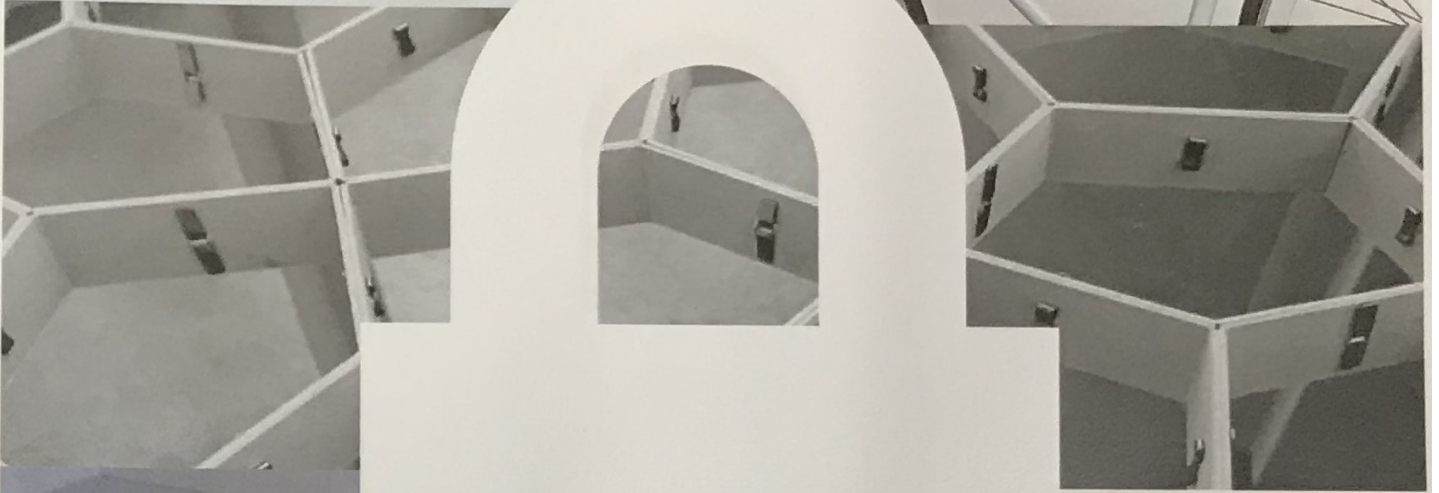
	A01	A02	A03	A04	TOTAL
Mark	15	15	15	15	60
Level	5	5	5	5	
	Fully confident and assured ability	Fully confident and assured ability	Fully confident and assured ability	Fully confident and assured ability	

Examiner comments:
 This comprehensive body of work for the externally set assignment, includes an A3 poly folder of the candidate's work and a series of maquettes and models, including a working light (A04). The candidate's work is informed by focused research on a variety of contemporary lighting designers (A01). A convincing developmental line of enquiry through resolved reflections and some risk-taking (A02), result in refined and perceptive trials and outcomes (A03) (A04).

Keyword descriptors from the taxonomy:

- Advanced
- Refined
- Convincing
- Resolved
- Comprehensive
- Risk-taking
- Perceptive





Starting Points Research

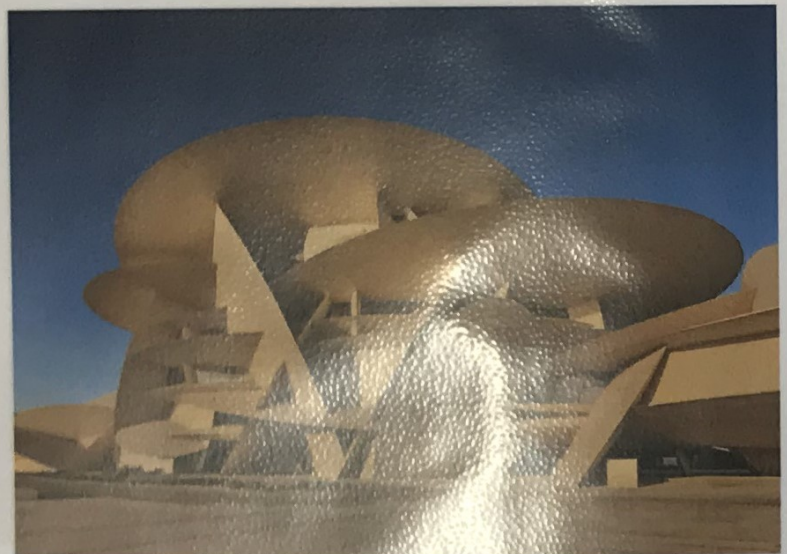
Architecture



This building explores the theme of "Lock" through the interlocking pattern on the exterior of the building. As well as this the theme is explored through the concealment of light as in some parts it shines into the building and in some it doesn't.

Calgary Central Library

In this building we also see how the architect uses an interlocking pattern to create a sort of crumbled look which juxtaposes the building's modern aesthetic. Furthermore we see the building come together as pieces are almost slotted into one another which gives a balanced yet chaotic look creating a locking mechanism as a structure which explores the theme of "Lock"



The National Museum of Man

In this example of architecture we see how the architect using interlocking patterns in their buildings to bring unity and a sense of togetherness. Furthermore in both buildings we see how architects almost slot different parts together almost interlocking them into position which doesn't look out of place in neither of the pieces due to the unity brought by the patterns as I previously mentioned.



Lamp Design



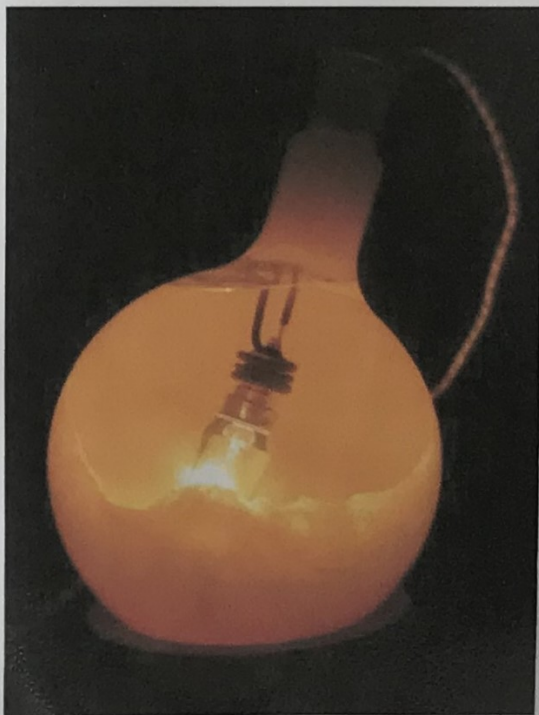
Verner Panton Moon table Lamp

In this example the different pieces which revolve around the light are locked in place by the screw going through the middle which brings stability to the lamp.

In this lamp we see the designer use interlocking pieces which slot into one another in order to bring the pieces together in a natural way.



Verner Panton Spiral Lamp



Droog design, Slow glow

We may also explore the idea of light as well as other things being locked inside the lamp in order to reflect intriguing images as well as adding more interesting and eye-catching features to the lamp.



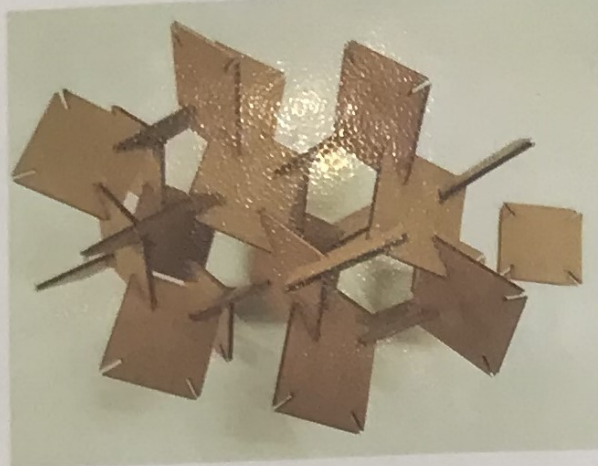
Ron Arad, Ge-off sphere 2007

In this other lamp the layers are locked in position by their shape around a pendant

Product Design



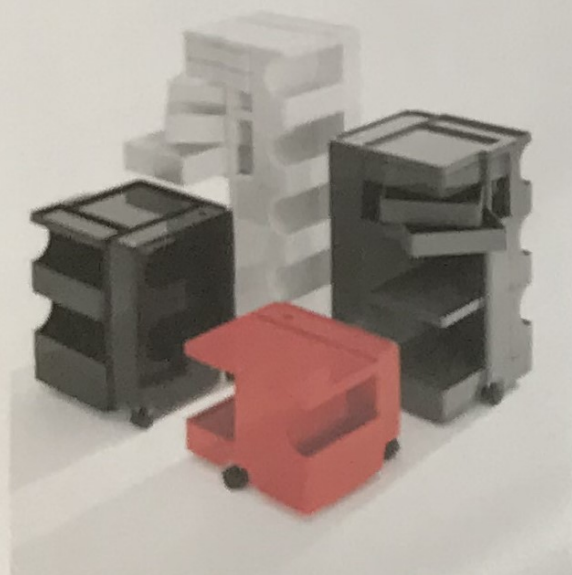
In this example of product design the designer is playing with the form of the two pieces locking them into their position of use. Although not favouring the utility of the product its innovative design gives the piece a unique look



In these two examples we see designers use different cut outs in order to interlock different pieces together to form a greater shape. In the example above there is a repeated interlocking pattern used where below we see a 3D puzzle being formed as different pieces come together



3-D Elephant Puzzle by MUJI



In this example of product design we may explore storage methods and units as a way to lock things inside. In this example we see different types of designs all efficient in their manner but also containing aesthetically an pleasing attribute

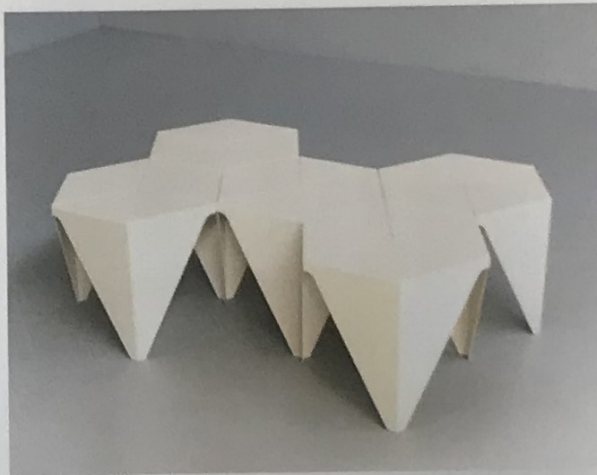


In this example of product design the designer explores utility of the product by locking the different pieces together and keeping a bike safe. Furthermore the product locks the bike into position by stabilizing it.

Furniture Design



In this example of furniture design we see how the designer is locking the two pieces into place through the changing of shape.



Prismatic Table, Isamu Noguchi 1957

Here we see a locking mechanism being used in order for the different pieces to come together as one piece yet also function as individual pieces.



'ZIG + ZAG' designed by Sakura Adachi

We may also look at the Panton chair as inspiration as here we see the repeated use of the same shape allowing the to stack one on top of another as an efficient way to produce space yet its free-flowing design maintains a unique look.



The Panton Chair by Vernon Panton (1967)



Pekka Kuivamaki

In this example of shelving the designer uses the origin as a method to lock and keep its shape in place in a disorganised yet artistically pleasing manner disregarding its utility but rather highlighting its uniqueness.

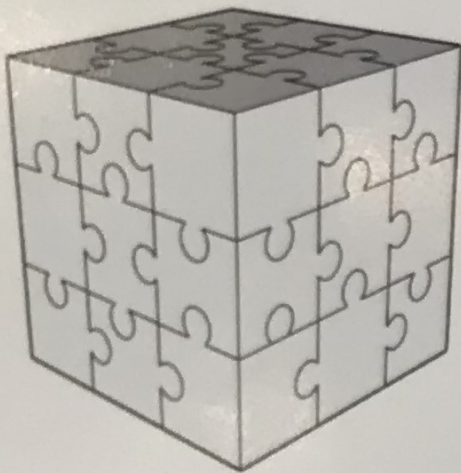
I intend to respond to the
theme of ...

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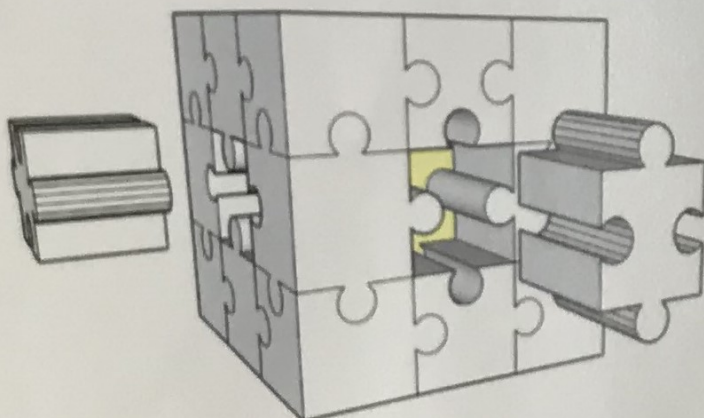
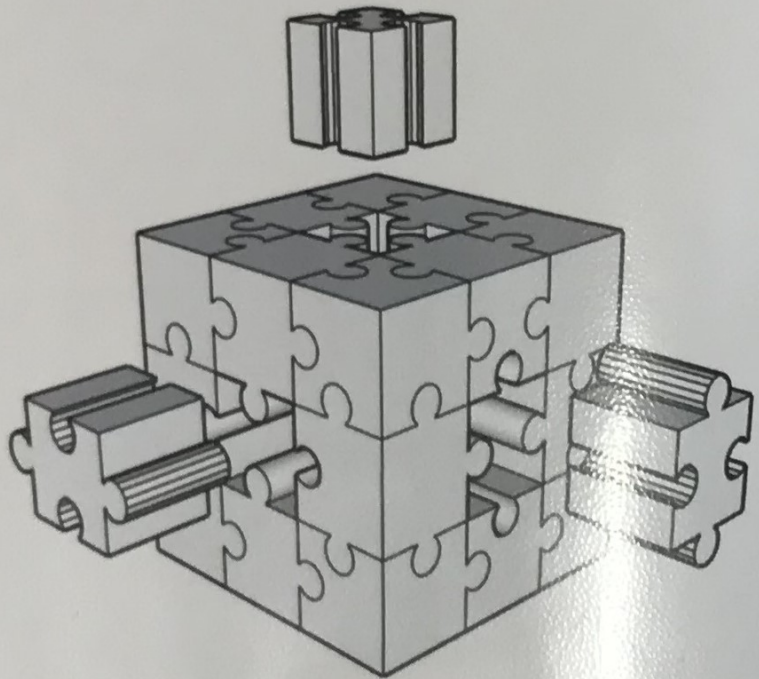
By exploring the idea of concealed
objects in product design

Final Project Idea 1



In this lamp I explored the theme of "Lock" through the concealment of light. By creating a 3D puzzle-like cube I was able to add and remove pieces making each piece of the puzzle not only essential but unique.

Different pieces are slid in and out of the lamp so that one can have as much light as they want or as little making it very adaptable. You can also change the direction of the light by the removal of different pieces. Furthermore not only does this fit one's liking but it is also playful and engaging as you can transmit your own ideas through this interchangeable idea.



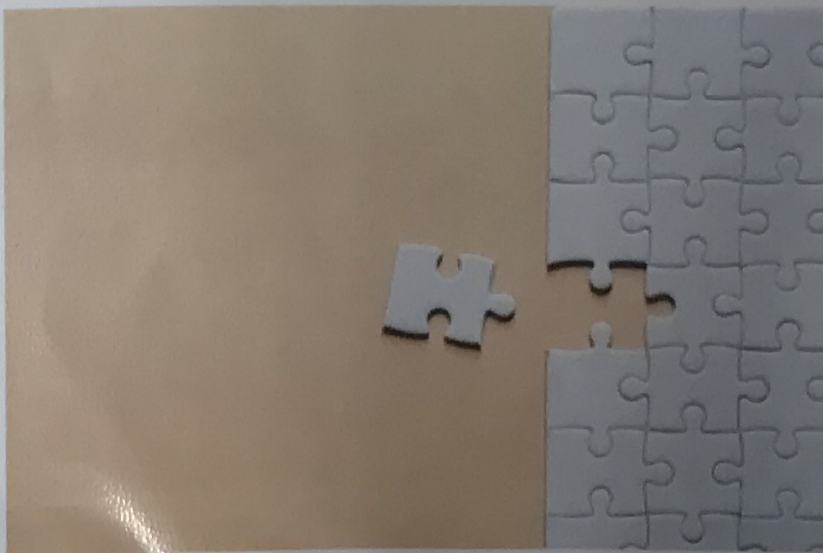
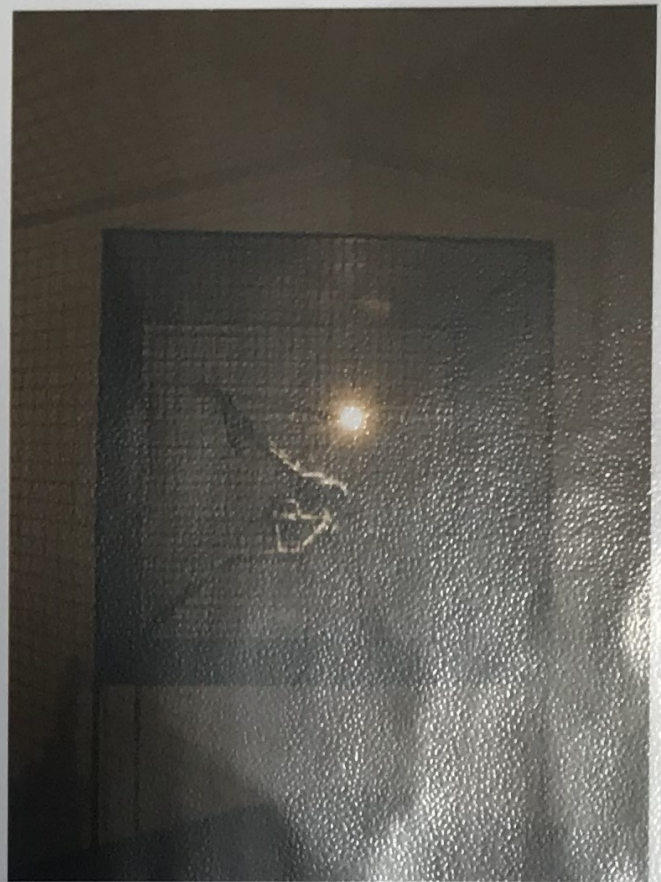
The shape and form of the lamp are very simple allowing the concept to be easily understood due to its complex geometrical nature. The lamp is easily used as a table lamp however due to its very regular shape can also be adapted to be a ceiling, wall, or even floor lamp.

Conrad Shawcross - Slow Arc Inside a Cube I



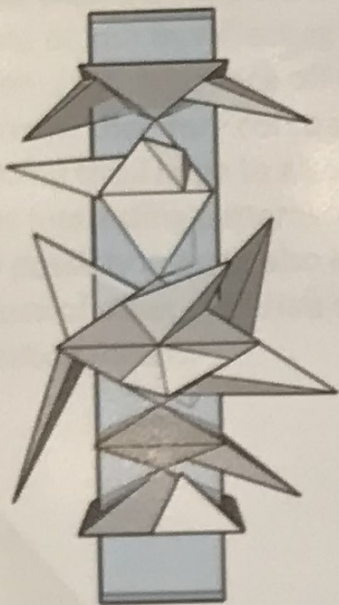
I was really inspired by the geometric aspect of the lamp as through a simple shape the artist allows himself to give a complex form to the interior. By doing this the artist brings a sense of balance in the contrast between the complex and unique interior against the simple exterior.

The main inspiration which I took from this piece is the concealment of light. In this piece the artist uses a gridded cage in order to conceal parts of the light being directed outwards. By doing this a pattern is created on the wall giving a very geometric aesthetic to the lamp.

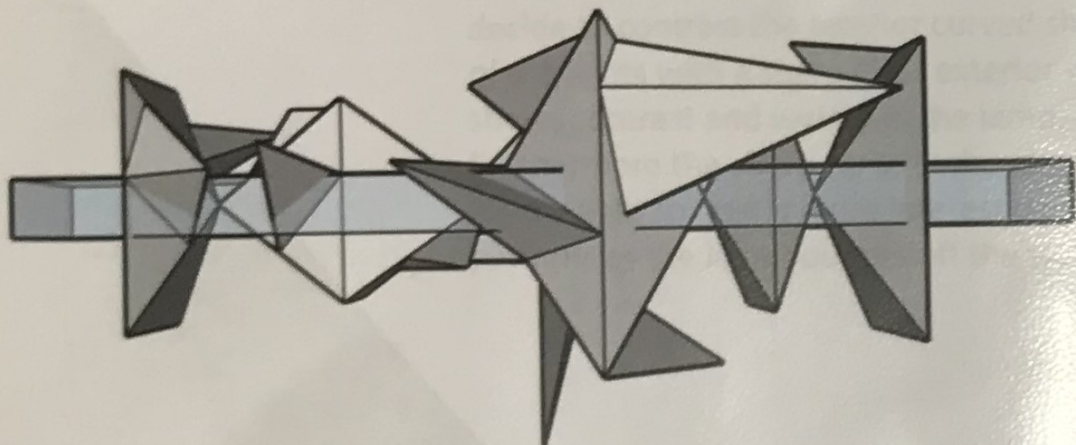


An obvious inspiration of this piece was the concept of a puzzle. The main aspect was how different parts have their own individual role in completing the lamp.

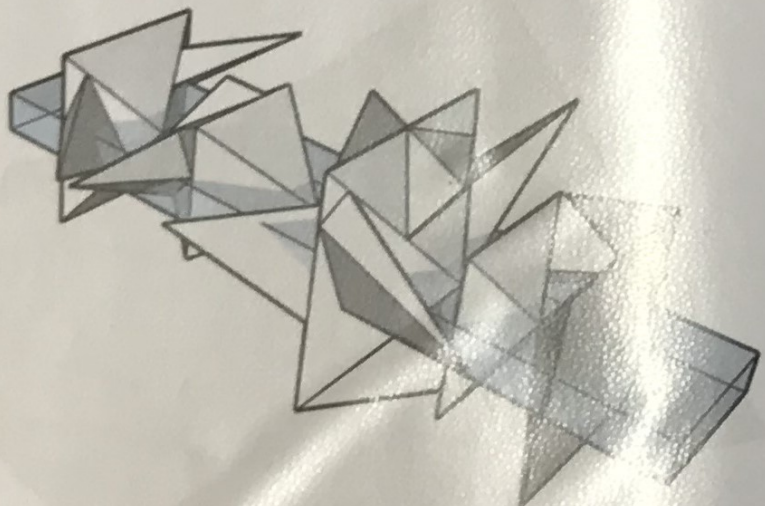
Final Project Idea 2



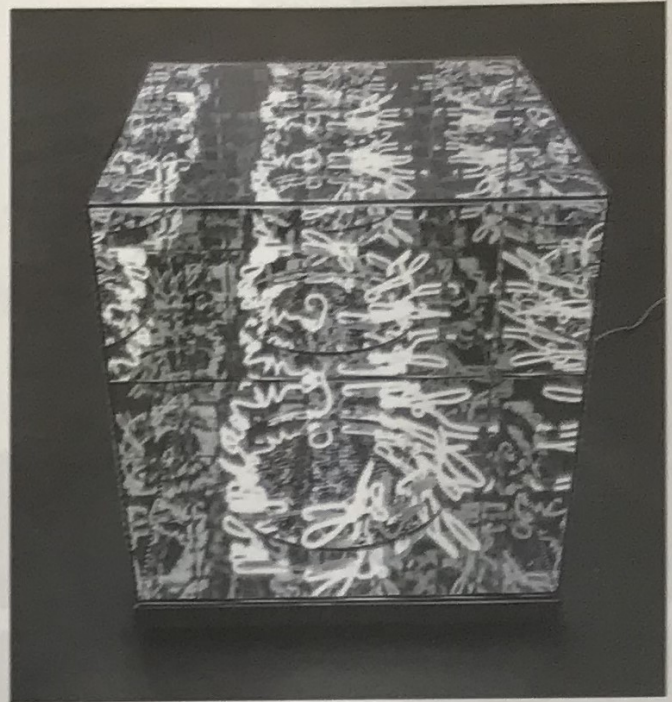
In this example I explored the theme of lock through the containment of light as different pieces of random triangular shapes prevent the ability for light to cleanly travel through. Furthermore, it explores the theme of lock through the light locking the different pieces into place as the two forms are combined.



I really like the contrast between the simplicity of the rectangular prism with the complexity of the triangular shapes which not only give texture therefore giving an off an interesting reflection of light but also bring balance to the shape as a whole.

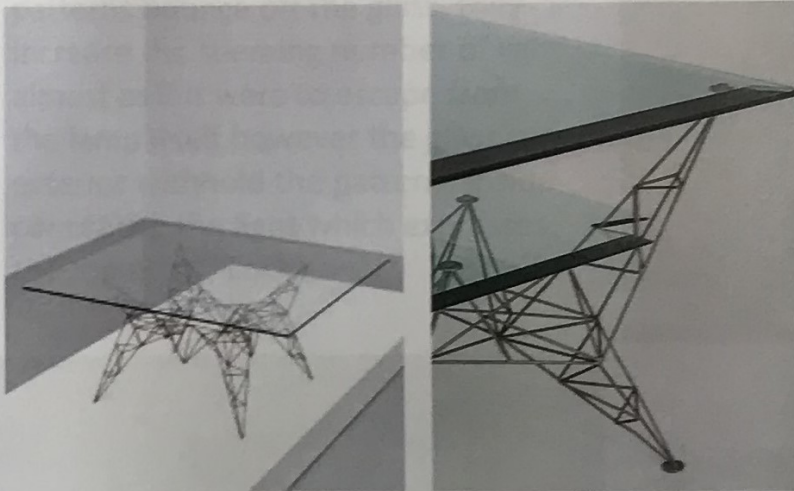


I really like the way that light reflects off the glass in this example creating intricate reflecting patterns. As the patterns bounce off the glass, they increase the seeming number of light almost as if it were to escape from the lamp itself however the glass exterior withhold the patterns inside concealing the light which expresses the theme of "Lock". I decided to implement this into my own lamp through the interesting reflection of light created through irregular shapes.



Brigitte Kowanz - Arise Lamp

I really like the way that light reflects off the glass in this example creating intricate reflecting patterns. As the



Tom Dixon Pylon Dining Table

I was also inspired by this table as I really like the balance between complexity and simplicity which together model and bring balance to the table's structure as a whole. This table explores the theme of "Lock" as the structure lock the table's surface into place.

I was inspired by the way that the glass conceals the inner shape of the table making it more regular, bringing balance to the design. I decided to also apply this to my own lamp through contrast between regular and irregular design.

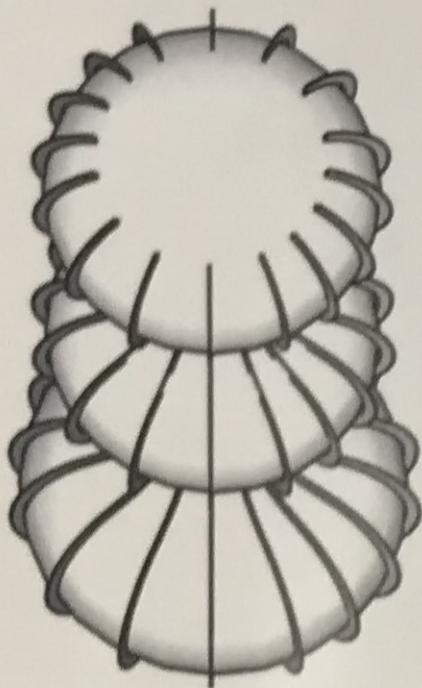
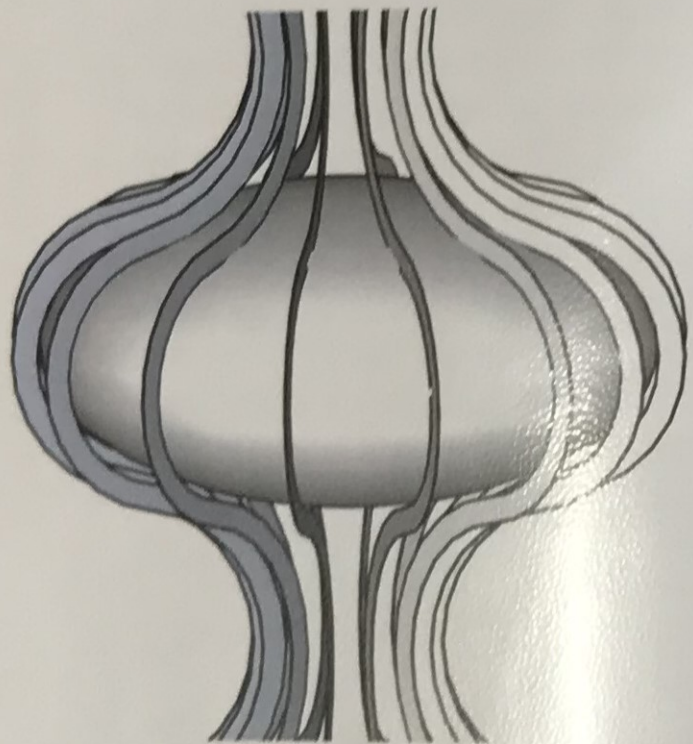


Fredrickson and Stallard table

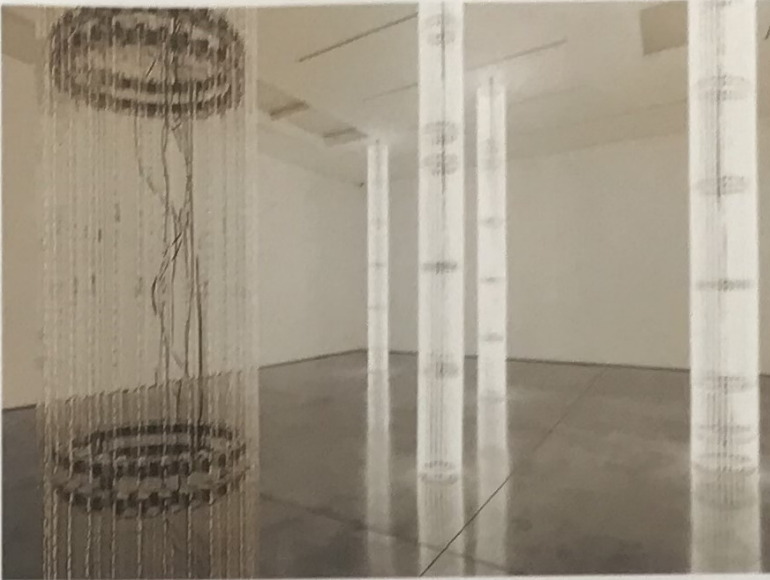
Final Project Idea 3



In this lamp model I explored the theme of lock through different ways. One way was to conceal the light through linear patterns which would therefore deflect patterns onto the surroundings creating an interesting feature.



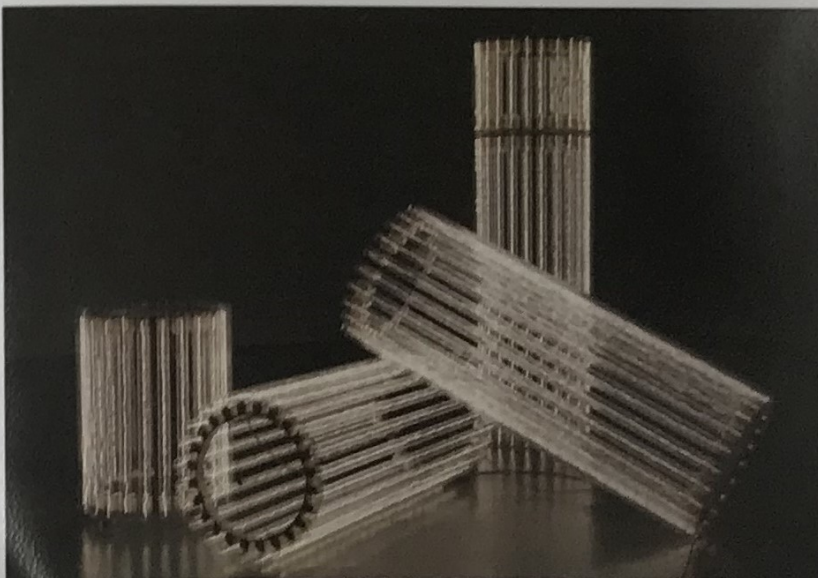
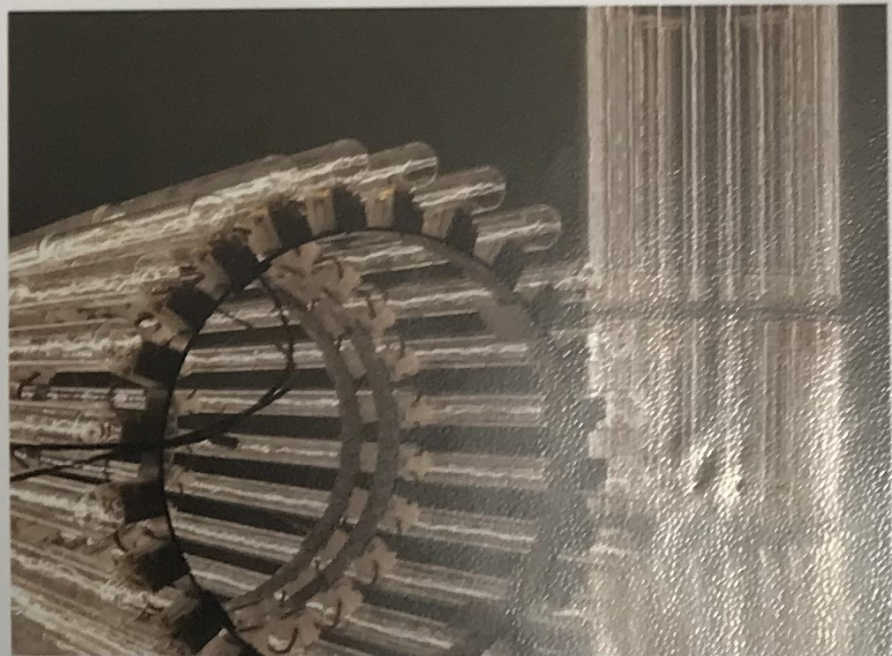
Secondly I explored the theme of lock by locking into place the different light features through the linear patterns, which also bring structure to the lamp, meaning it can be used as a pendant as well as a table lamp.



I was mainly inspired by this piece by Cerith Wyn Evans as it applied well to the theme of lock due to the concealment of shape inside the lamp. This allows to hide unnecessary wiring making the lamp look slick.

*Cerith Wyn Evans -
S=U=P=E=R=S=T=R=U=C=T=U=R=E*

The shape is very simplistic yet intriguing allowing the lamp to take many different forms and size which I hoped to achieve in my own lamp through the stability in its structure.



I really like the way that the lamp creates symmetrical and linear patterns which I decided to apply to my own lamp as this feature gives more overall detail to the simplicity of the lamp.

Final Project Idea 4



In this idea I explored the theme of lock through the partial concealment of light. This was created through a dripping effect using acrylic which is placed over a translucent sphere allowing light to only reach the wanted target.

Furthermore the layers created by the overlapping of the two elements gives the lamp more texture. Texture is also created through the dripping effect which makes the lamp look fluid and slick.



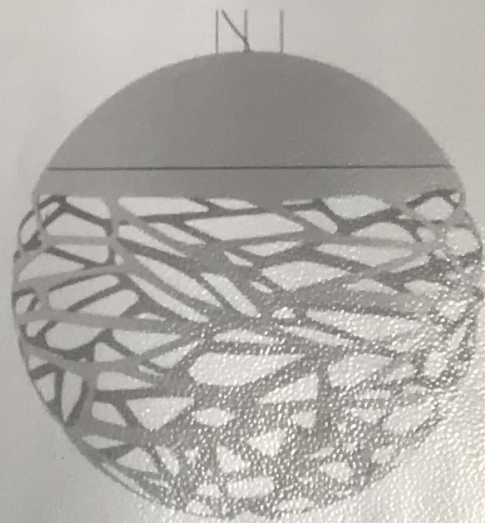
Because of the simplicity of the shape of a sphere this light can be applied in different ways to become a table lamp, a pendant lamp or even a floor lamp.



Blood Table - John Nouanesing

This lamp helped me to explore the theme of lock as itself partially conceals light not only through the pattern by also from the top side of the lamp which projects light only on necessary surface as a ceiling lamp which is something I also tried to replicate in my own lamp.

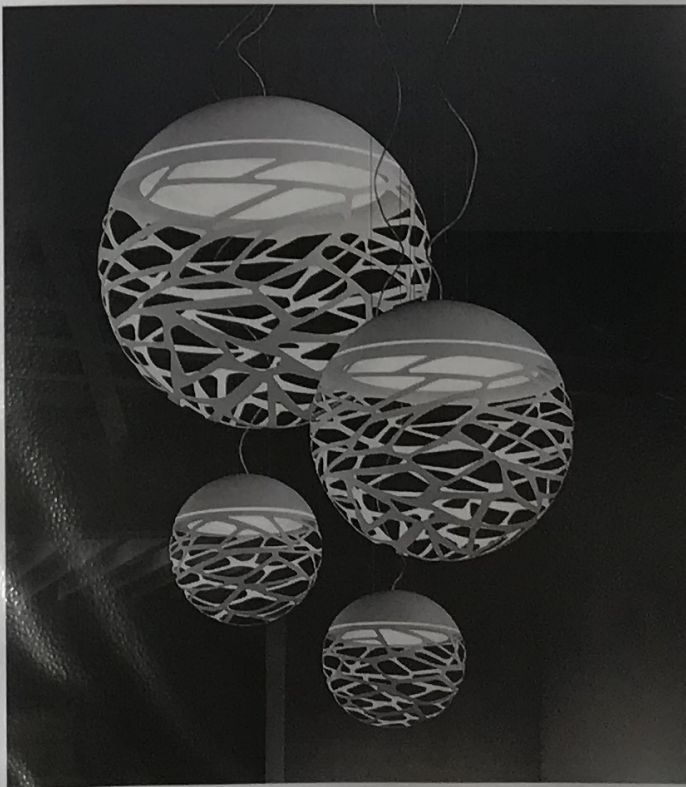
I was really inspired by the dripping effect created in this table here as although it makes it look fragile it also bring stability giving the overall look balance. Furthermore I was inspired by the slick effect created by the surface of the table which I also attempted to recreate in my own lamp.



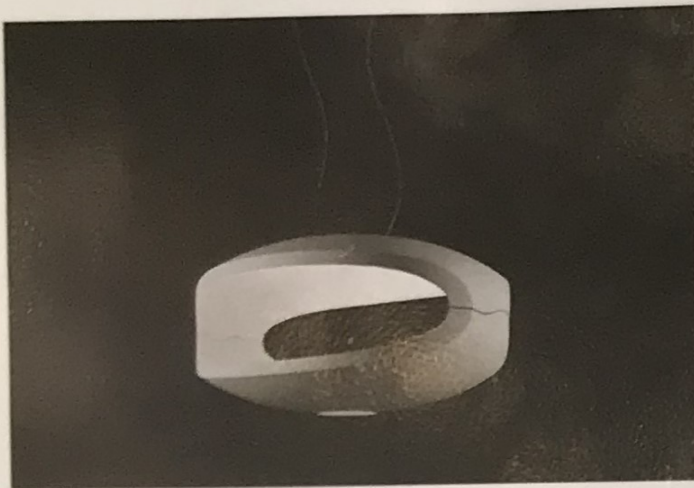
Lodes - Kelly Sphere L SP - Large spherical design chandelier

The lamp's simple spherical design inspired my own lamp as it allows the shape to be applied in different ways such as different sizes or different amounts making it a very versatile design.

I also like the way that the pattern means that the reflection of light is unique which is something I tried to recreate with the dripping design I used, possibly more abstract than the one in this lamp.



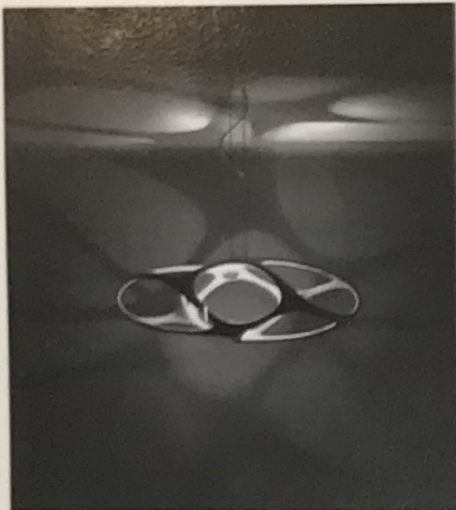
Extended Research



O-Space by Luca Nichetto and Gianpietro Gai

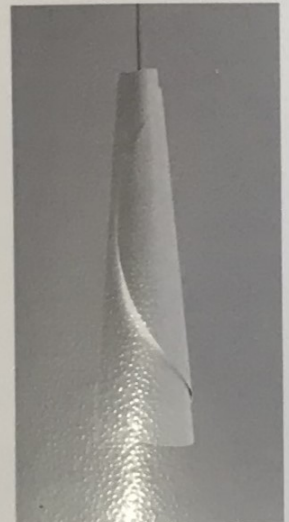


Attracted to Light by Geoffrey Mann



Andromeda by Ross Lovegrove

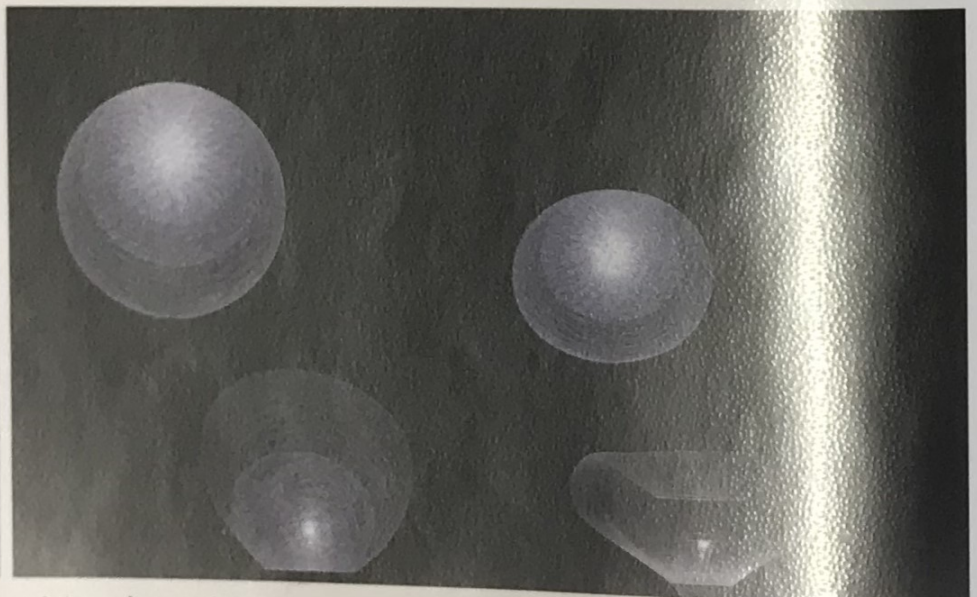
This lamp links with the theme of lock as the light comes from the inside of the strips and is released onto the outside through gaps in the lamp. This concealment of light matches with my original statement therefore I may look into the releasement of light in small portions which would possibly create patterns as an extended development.



Maki Lamp by Foscarini



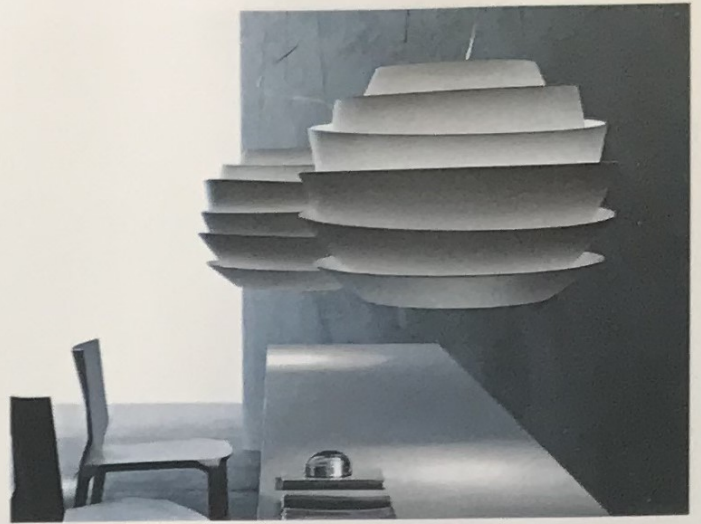
Sufta by Dito



Mayuhana by Toyo Ito



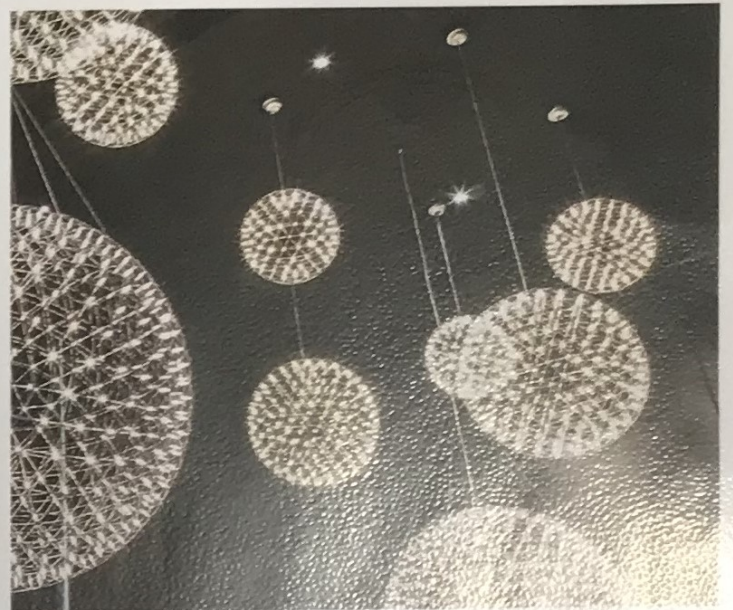
Big Bang by Enrico Fanzolini and Vincent Garcia Jimenez



Le Soleil by Vincent Garcia Jimenez

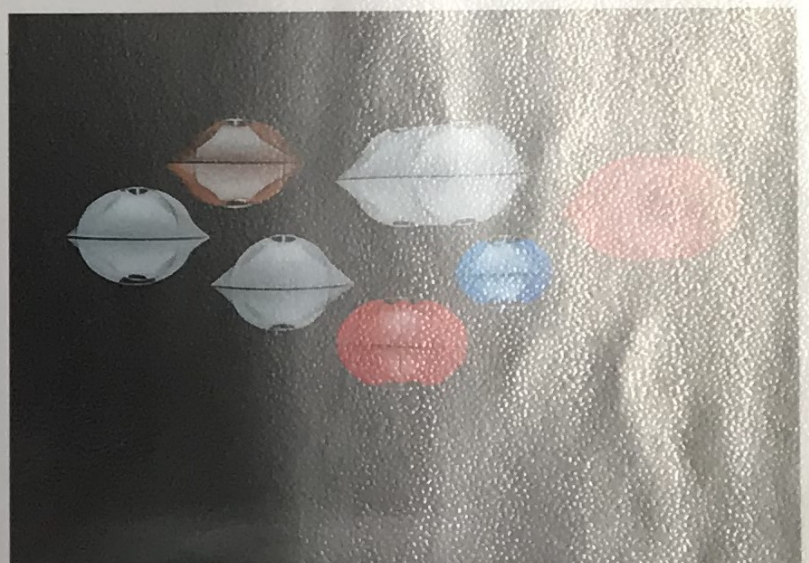


Biomorphic bubble by Jeff Zimmerman



Raimond Puts by Raimond

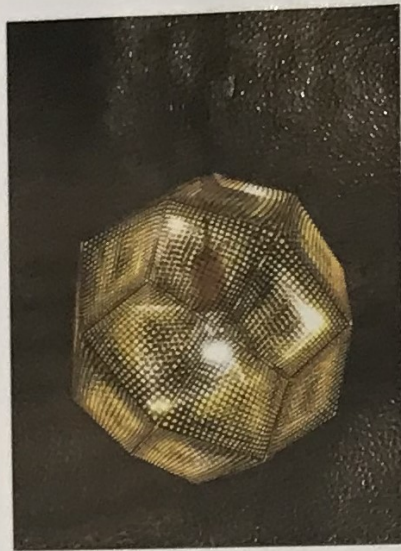
I really like the materials used in this lamp by Benjamin Hubert which not only add texture to the lamp give an impression that the lamp is being stretched which explores the theme of lock as the light is concealed by this material. Furthermore it explores the theme of lock as the lamp is locked in place by this exploding material.



Tenda by Benjamin Hubert



LILY.MGX



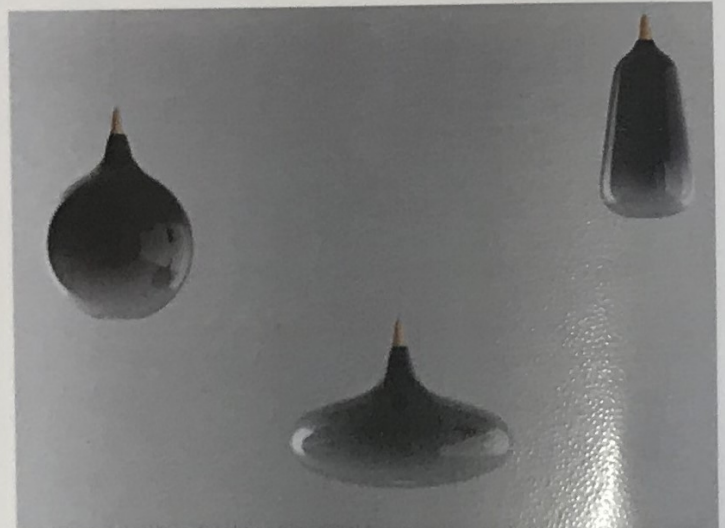
Etch Light by Tom Dixon



Mirror Ball Stand by Tom Dixon



Shylight by Lonnere Gordijn Ralph Nauta



Natura by Hector Serrano



Cloud Softlight by Molo

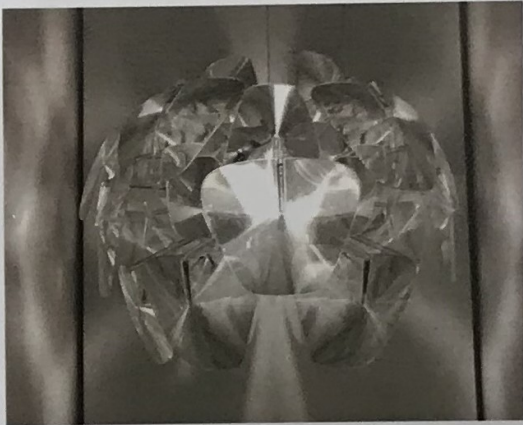
Luceplan Shop Milano



Levante by Marco Spatti



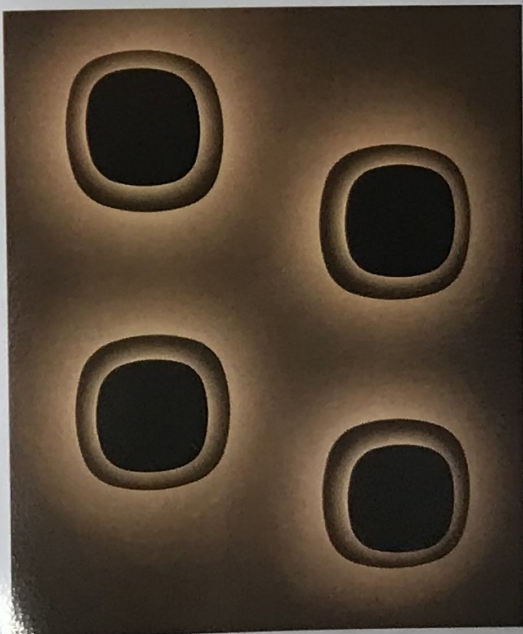
Mesh by Francisco Gomez Paz



Hope By Francisco Gomez Paz and Paolo Rizzato



Carro by Alfredo Haberli

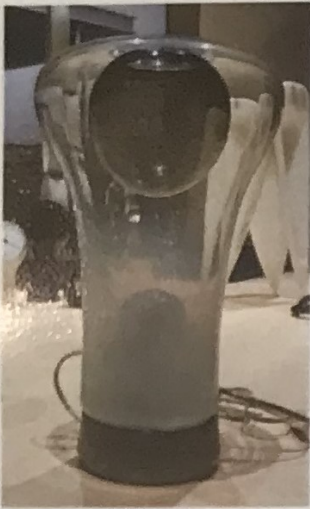


Luthien by Monica Armani

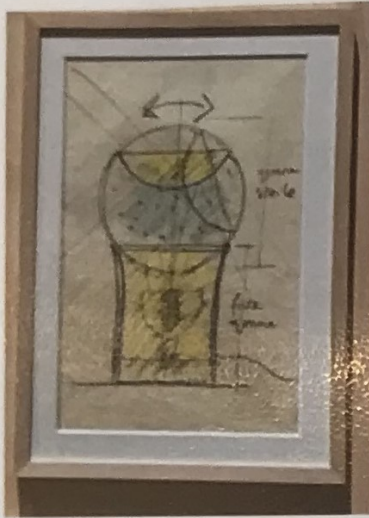


Illa by Zsuzsanna Horvath

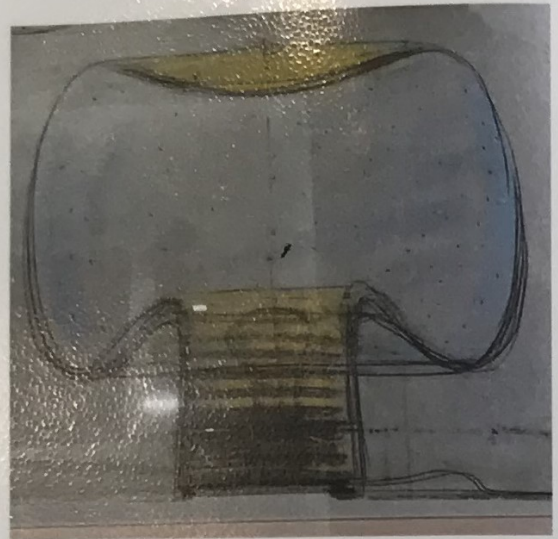
Triennale Museum Milano –Mangiarotti Exhibition



Saffo by Artemide



Study for Saffo by Artemide



Study for Lesbo by Artemide



Sketch for Saffo by Artemide



Lesbo by Artemide



Study for Clessidra Lamp

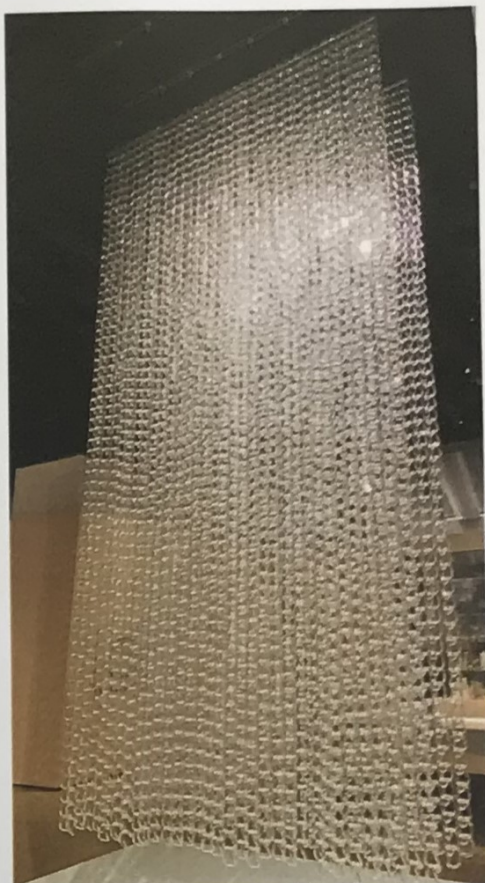


Gople by Artemide





*Site Specific
installation with
crystal hooks
designed by Angelo
Mangiarotti for the
Giogali Collection*



Lari Lamp Artemide



*Variazioni by
Mangiarotti*



*DNA Lamp by
Mangiarotti*



Alabaster Lamp – The Mark



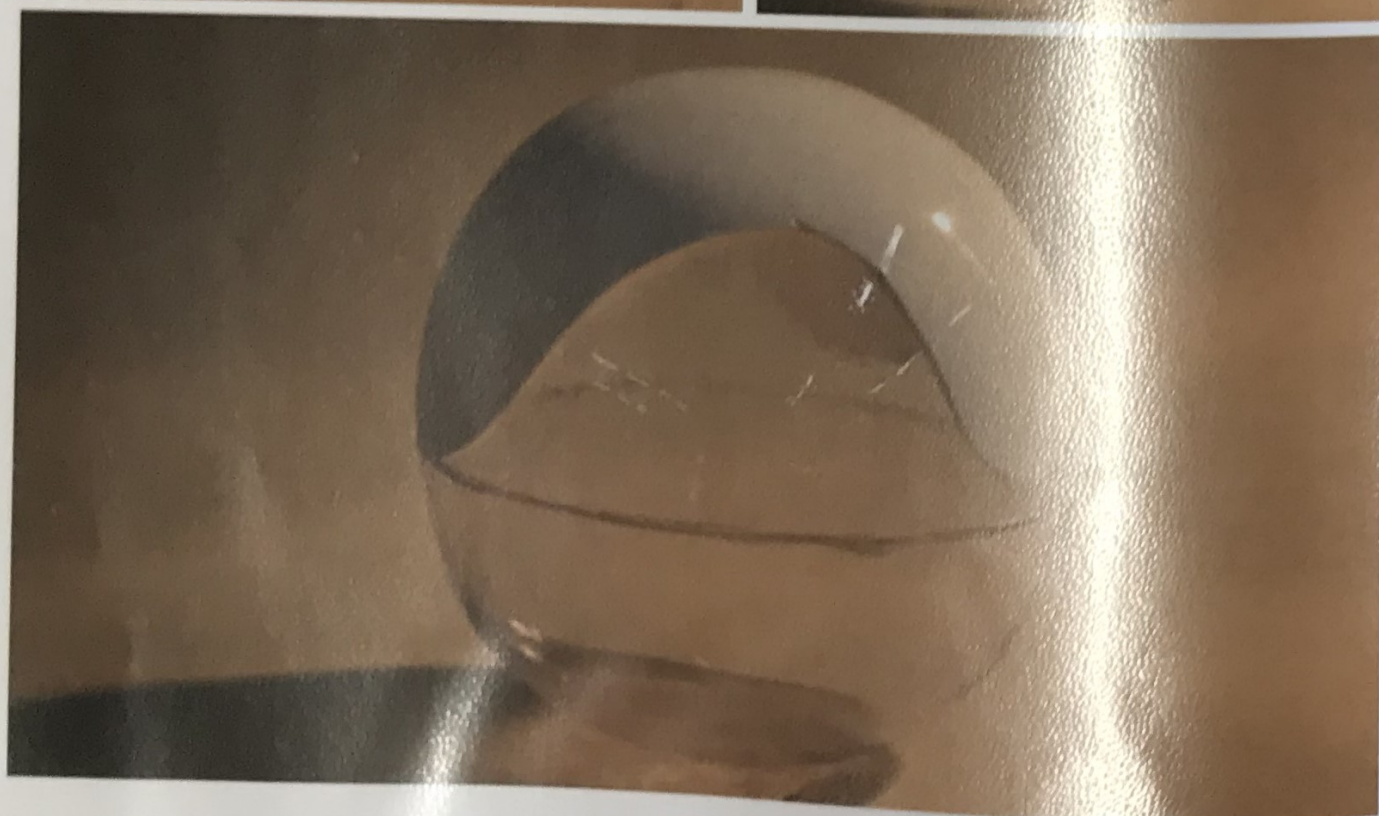
Alabaster Lamp Plan

Extending Ideas Through models

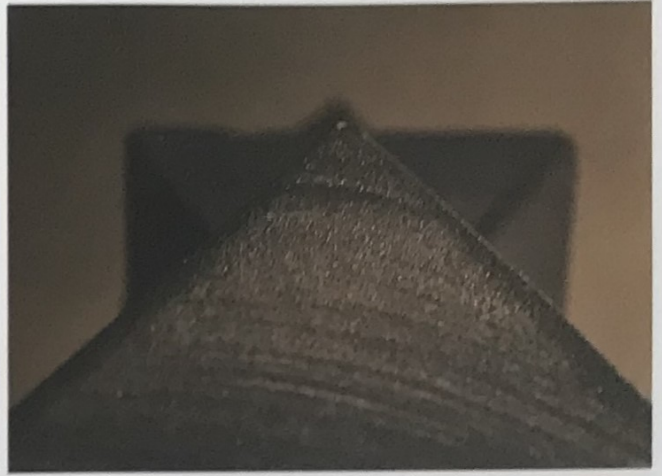
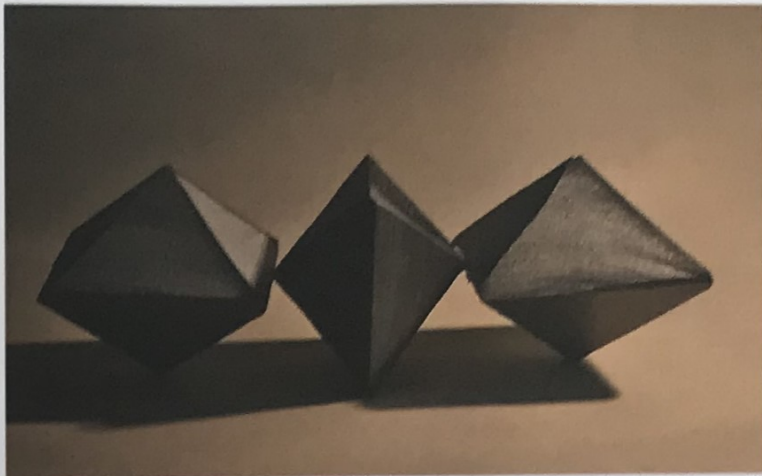
Model 1



This first model was a development of initial idea 6 where I experimented with different surfaces achieving different light patterns as well as contrast. I also attempted to simplify the original model by using less curves giving the lamp a slick minimalistic look however I didn't see a lot of areas to explore in this model therefore I decided to develop initial idea 2.

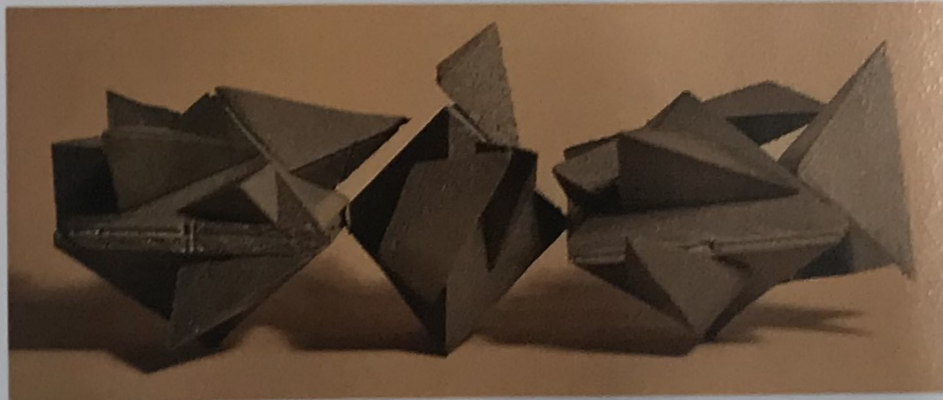


Models 2 and 3



Model 2

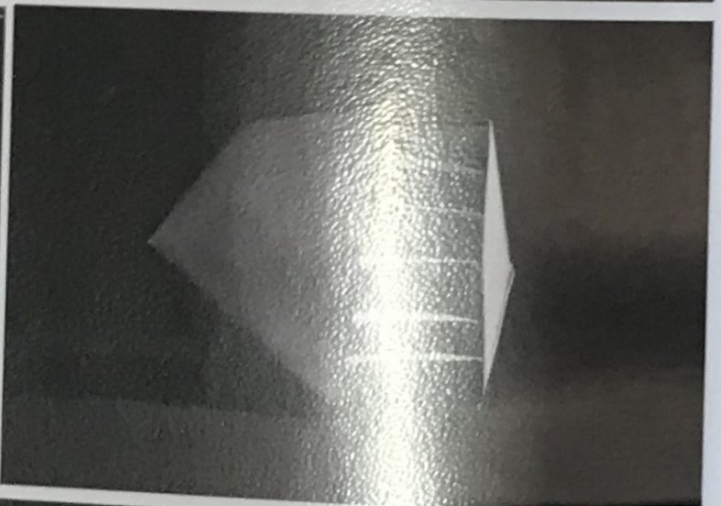
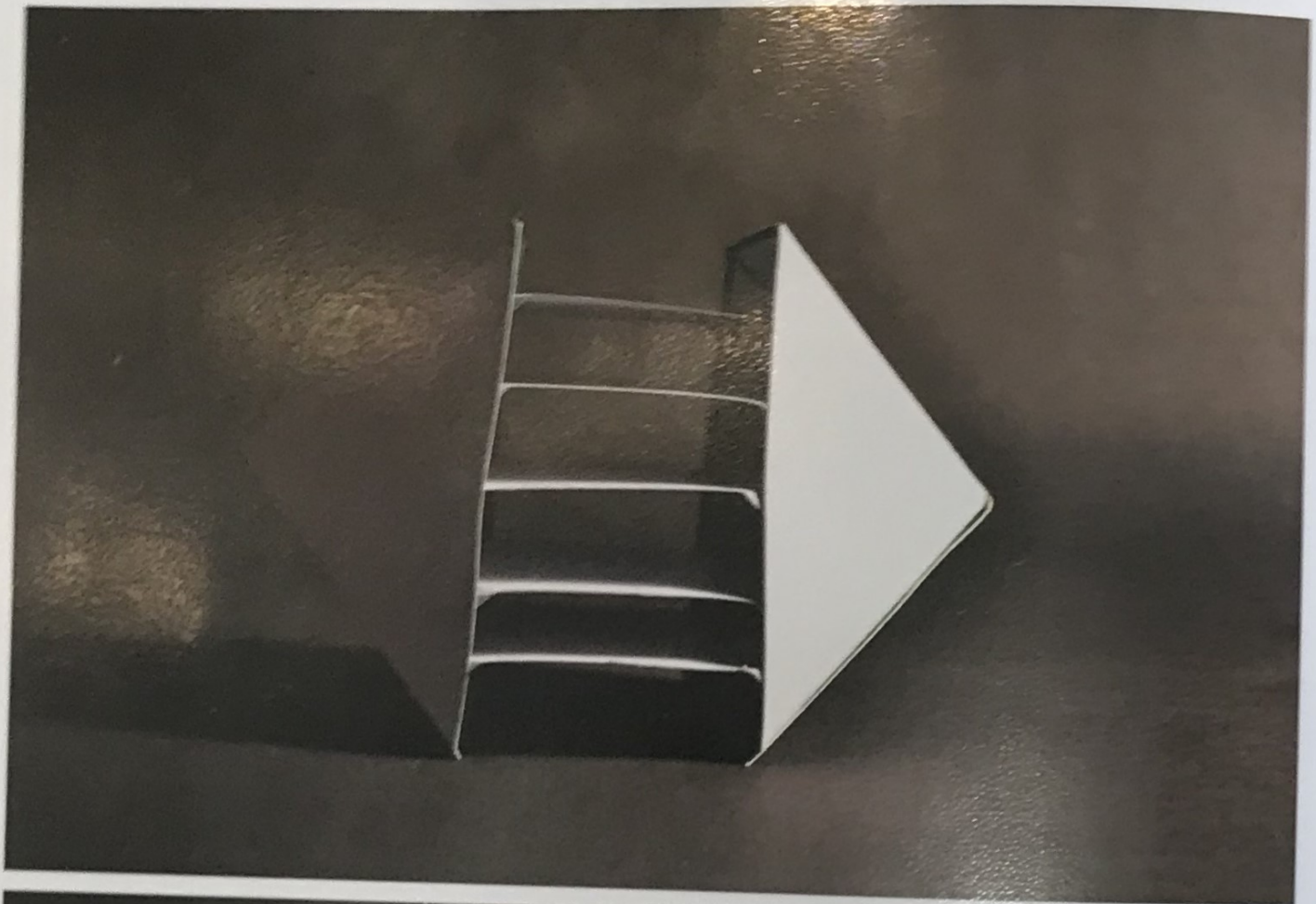
I also decided to develop Initial idea 2 this time again trying to simplify the original shape through the symmetrical use of shape. I also experimented with the positioning of the shapes which achieve reflections of light bouncing off one another



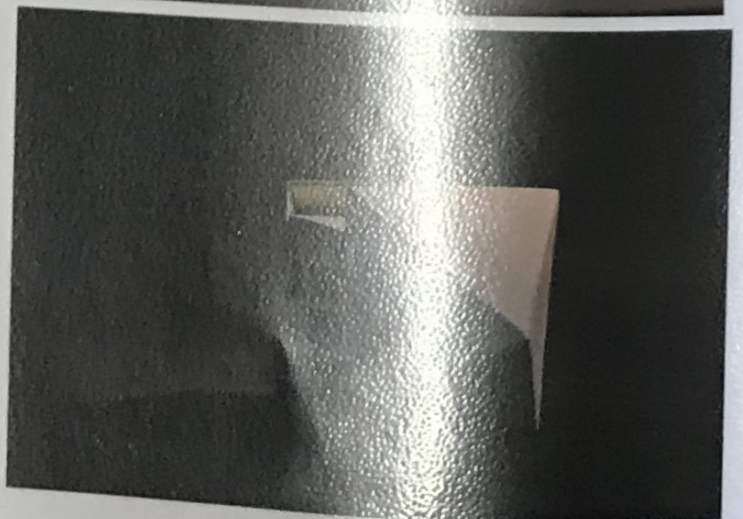
Model 3

I proceeded to develop Model 2, however this time adding more form to it. I decided to keep the triangular theme going by adding fragmented sharp shapes in order to achieve a chaotic pattern held together by the unity of the shapes.

Model 4

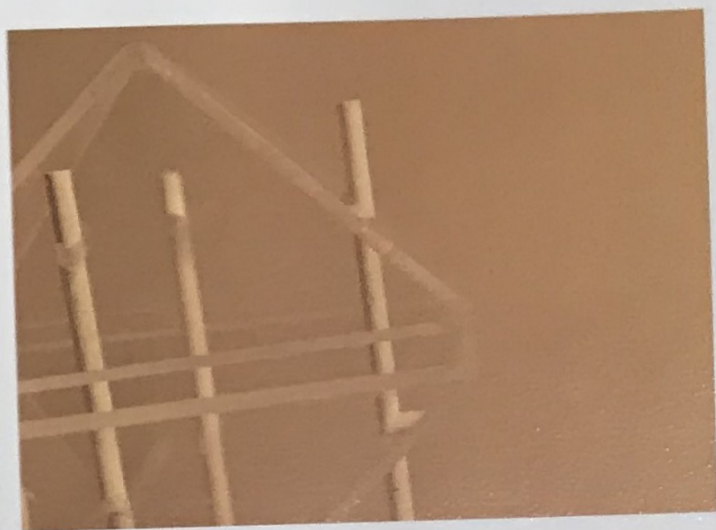
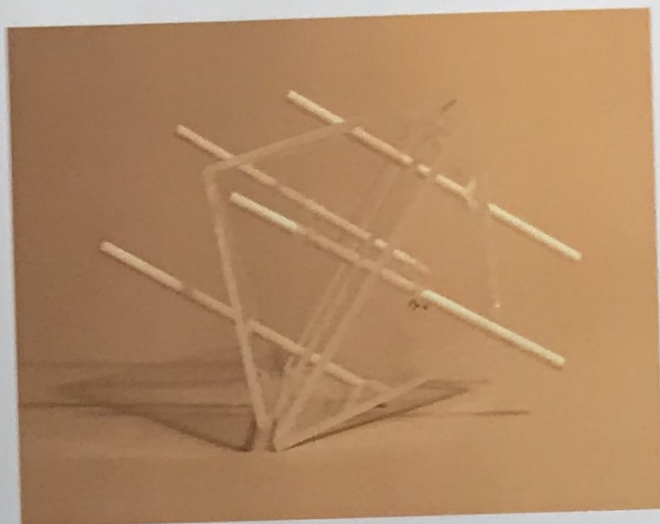


I decided to split the original shape into two, connected by slits of paper in order to explore with negative space. This achieved a more simplistic look which helped me move away from the chaotic structure in order to experiment with shape. The overall form is very geometric therefore showing unity with the previous model in my development.

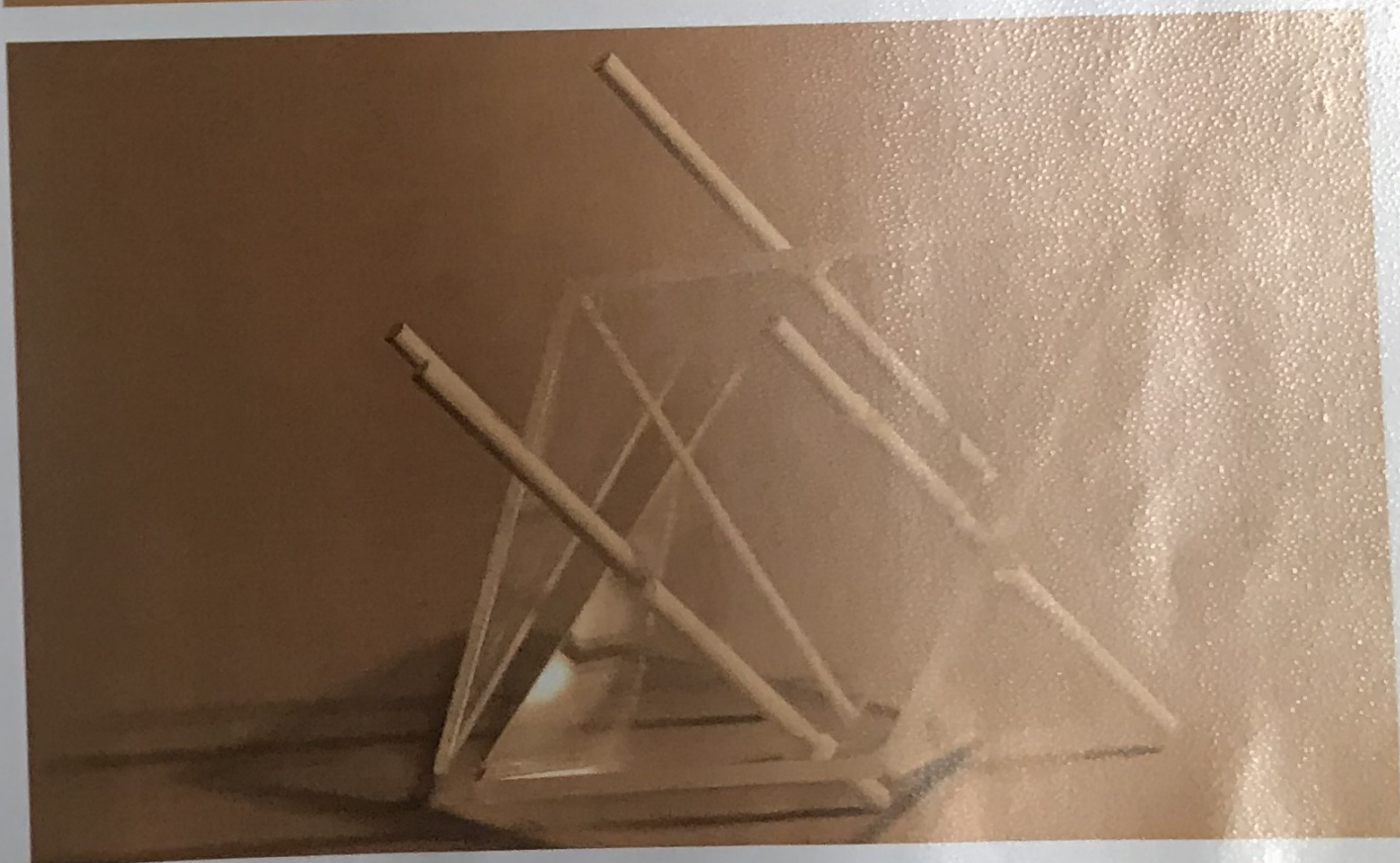


Experimenting with Form and Materials

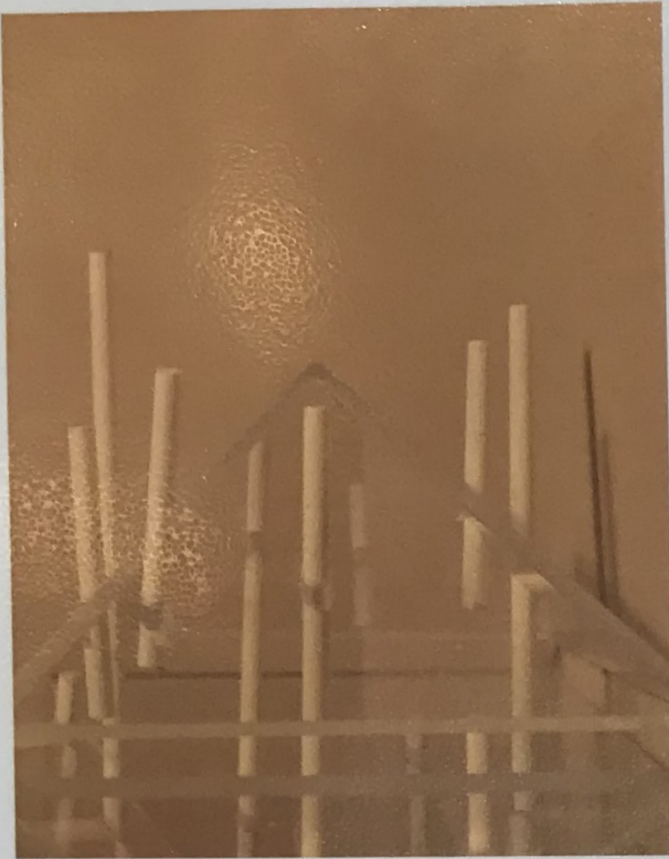
Model 5



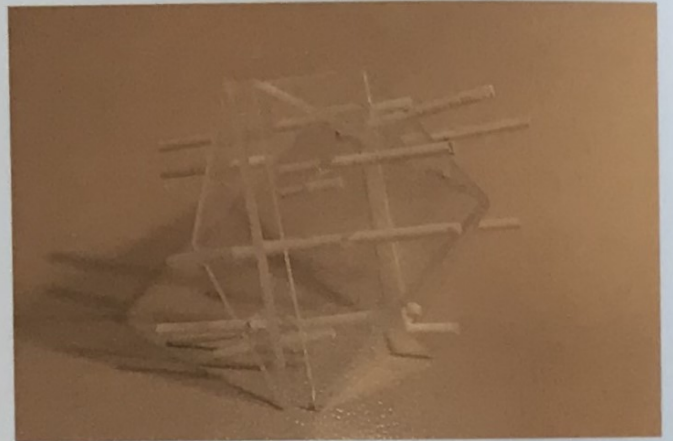
I decided to develop model 4 by exploring the method of connection between the two shapes. By using rods I was also able to bring the shapes further and closer together, controlling the concealment of light. The rods bring balance to the shape while also keeping its slick simplicity.



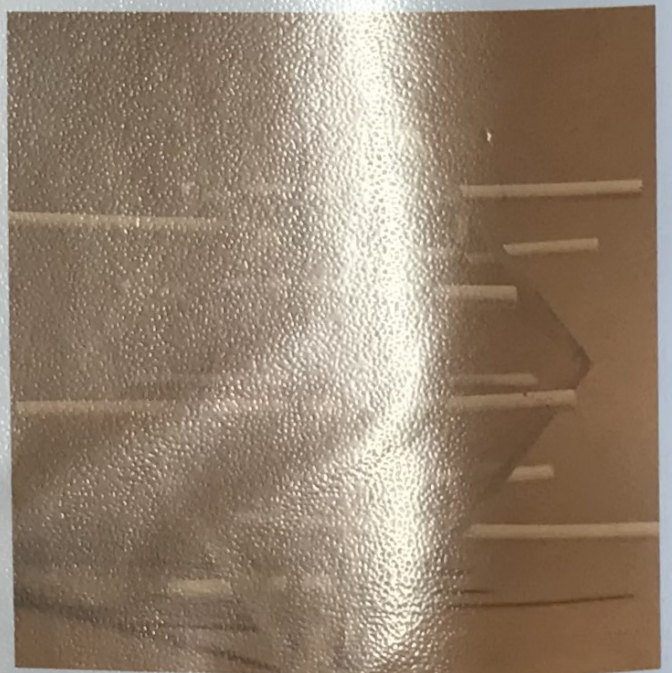
Model 6



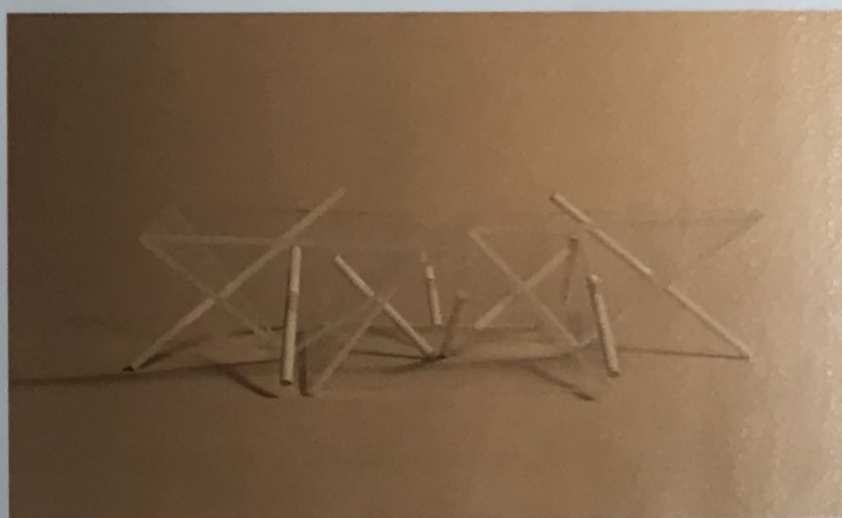
In order to add intricacy and detail to my design I experimented by adding more form through the white wooden rods which contrast the simplicity of the outside shape.



By adding more rods I was also able to play more with the reflection of the light as it created more interesting patterns. The large amount of rods gives the overall model a very rich look rather than the more bare one of the previous model.

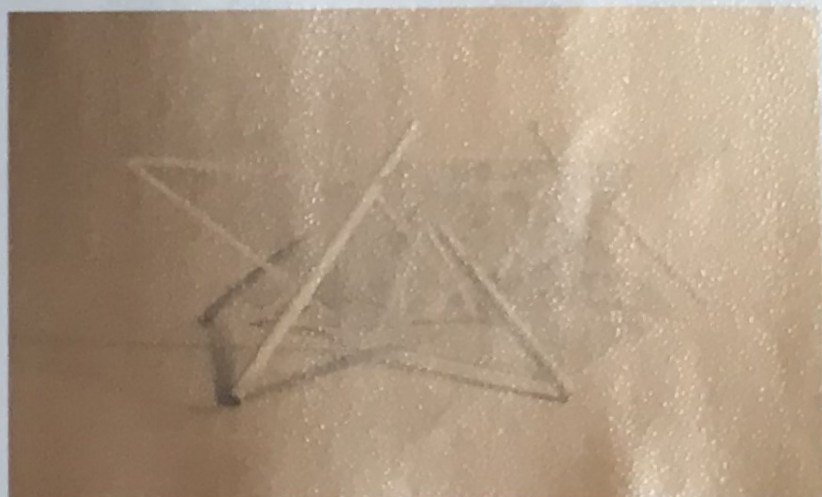


Model 7



in order to experiment with shape in this model I explored the positioning of the shapes. This allowed me to simply use rods which I previously complicated in model 6 in order to not only bring balance to the positioning but also give the overall model a slick modern look.

The rods in this piece are really useful in bringing stability to the model as well as giving it structure and order. This allows me to complicate the positioning of the shapes. Contrast is achieved through the difference between the wooden painted rods and the clear acrylic.



Analysing Falkland Suspension by Artemide



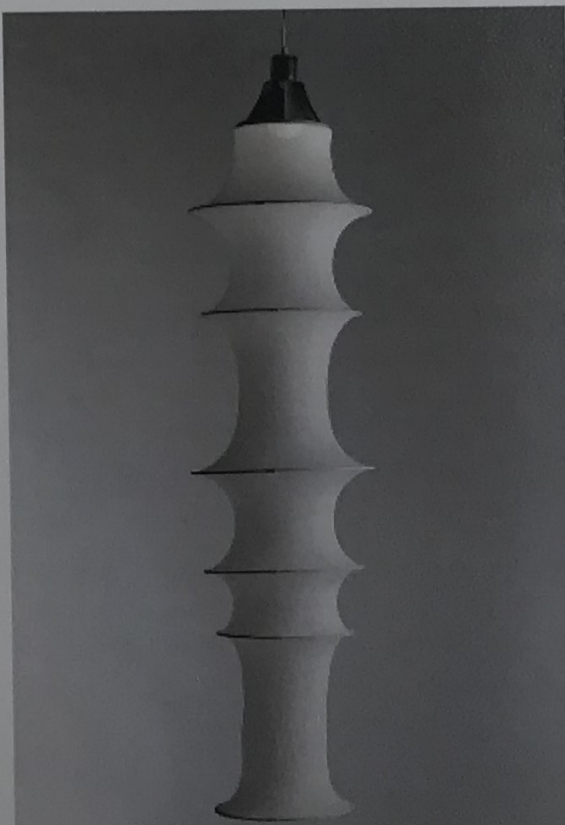
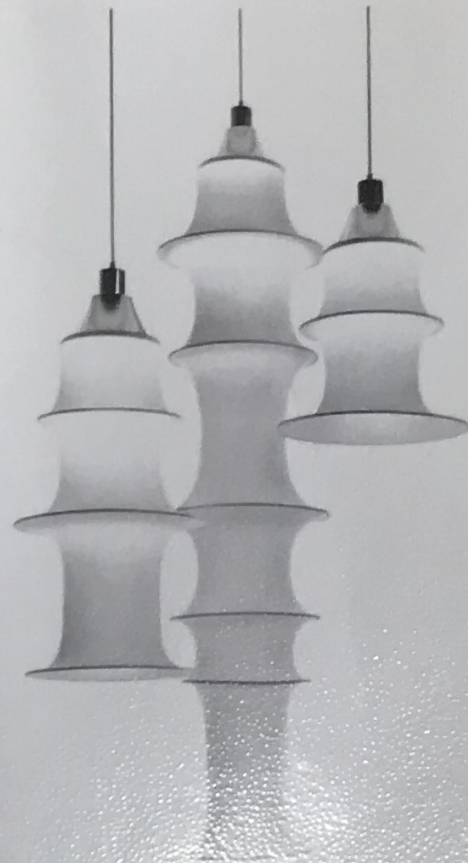
Bruno Munari designed the Falkland suspension in 1964, however, this staple piece of design history is still ground-breaking to this day, currently housed at the Museum of Modern Art in New York. Falkland suspension is a lamp with a spontaneous shape that is achieved by the contrasting forces of its components: the tension of a stretched tube of finely woven fabric and the weight of seven different sized metal rings. A single light bulb and aluminium reflector illuminate the curves of the fabric.

The designer manipulates the formal element of the woven fabric in order to connect different parts of the lamp together such as the different rings and the ceiling attachment. The colour which has been used is very neutral which allows it to fit with different surroundings easily and collaborate with elements near it.



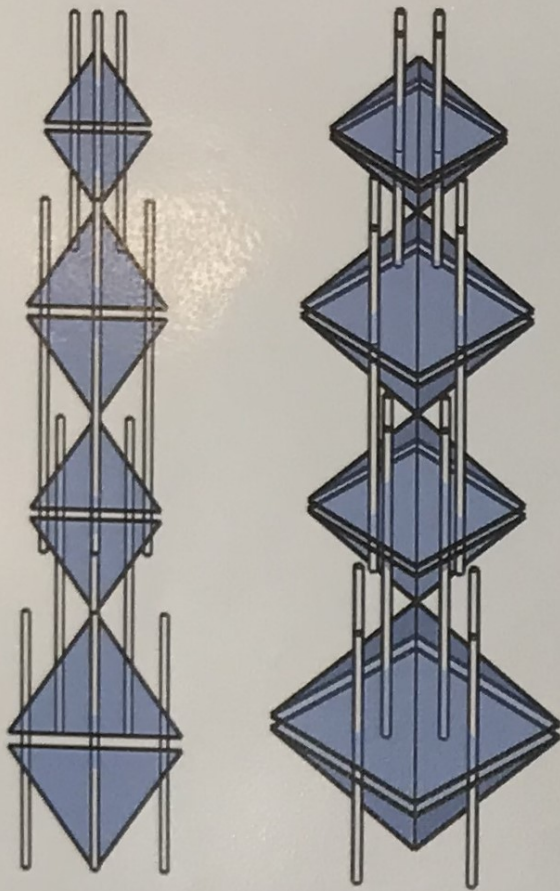
The design is similar to a bone as it is very natural and irregular in its form. The lamp differs from the competition due to its very unique natural features. By using regular forms, the designer is allowed to add complexity and intricacy to the lamp through different elements such as the regular pattern of the slick curves or through the interesting reflection of light produced by these curves and the smooth fabric material.

The materials used by the designer are simple and easy to find therefore making the production cheaper but also less wasteful due to the recycling elements of both metal and nylon. This lamp however has been composed with great intricacy which is relevant to its price tag therefore targeting mainly the middle-upper class of society. The lamp is very slick and modern which allows it to stand out due to its uniqueness but allow surroundings to pop making it suitable for most users in places such as homes or bars. As well as this the user has the option of different sizes regarding the length of the lamp making it adaptable for furthermore scenarios.



I really like the contrast between the organic form produced by the smooth, irregular surface of the lamp and the more industrial geometric shape of the rings bringing balance to the lamp. I also want to develop this into my own work by manipulating the different parts of the lamp to also be irregular by using different sizes. As well as this I want to experiment with the reflection which my lamp produces by using the reflection of light through different surfaces which is here achieved by the different curves and the material which lets partial light through. Overall, I would like to bring variety between the complex nature of the curving lamp and the regularity of its structure into my own model in a similar way.

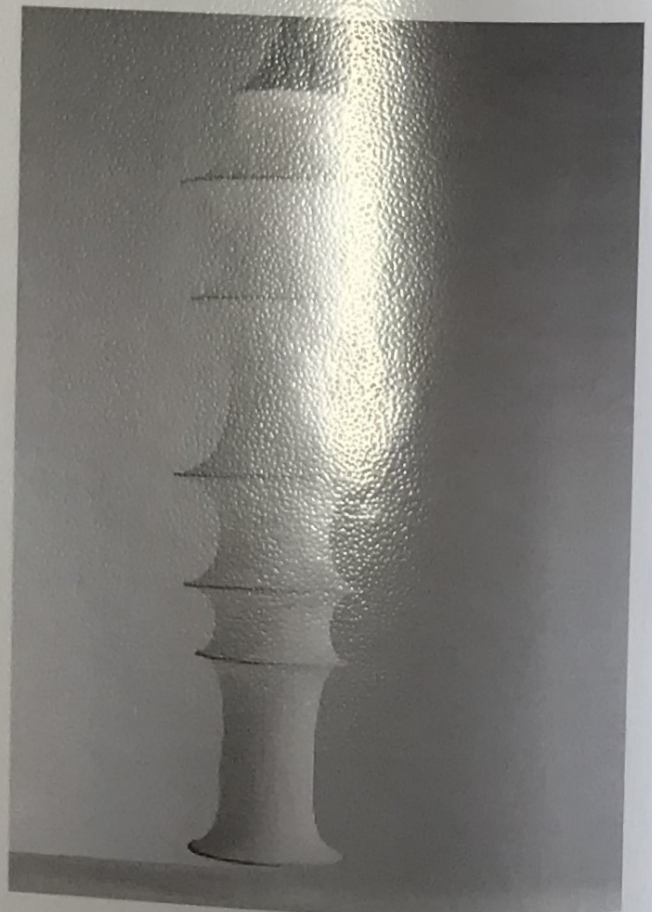
Essay development

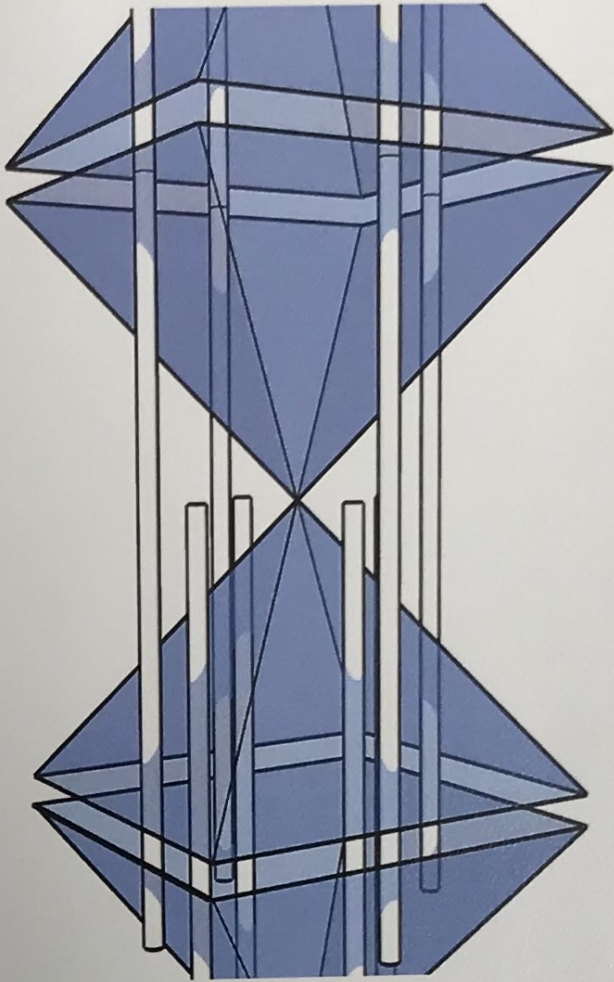


I was inspired by Bruno Munari's Falkland suspension Lamp due to its balance between simplicity and complexity. I really liked the way through which he was able to experiment with different lengths in his own design therefore I decided to do that myself by keeping the shape itself quite simple and its organisation more complex. I also liked the order brought by the rings which give the lamp all of its structure. To this I implemented the rods which I previously used as a base for my lamp but also as a way to connect all the pieces together.



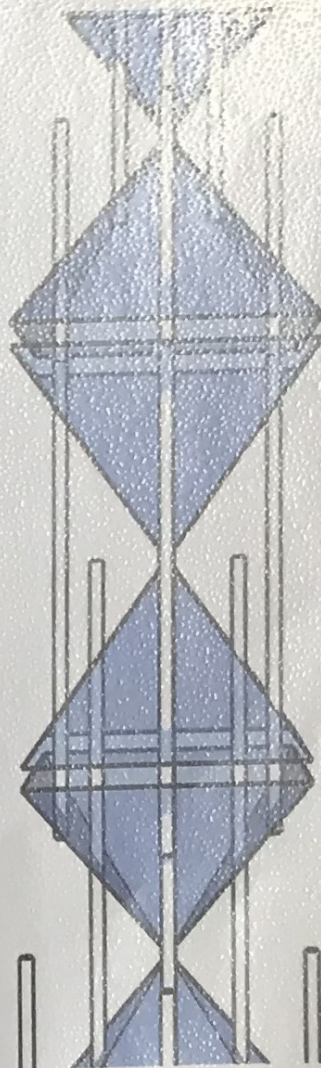
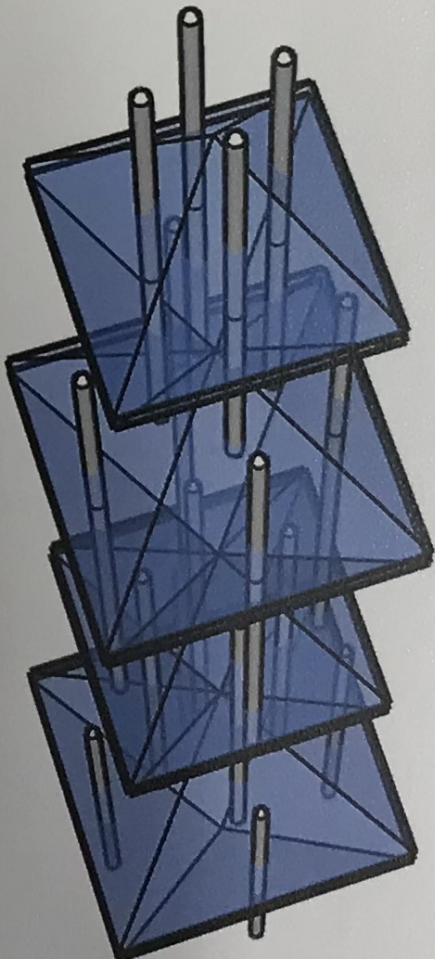
Bruno Munari – Falkland Suspension Lamp.



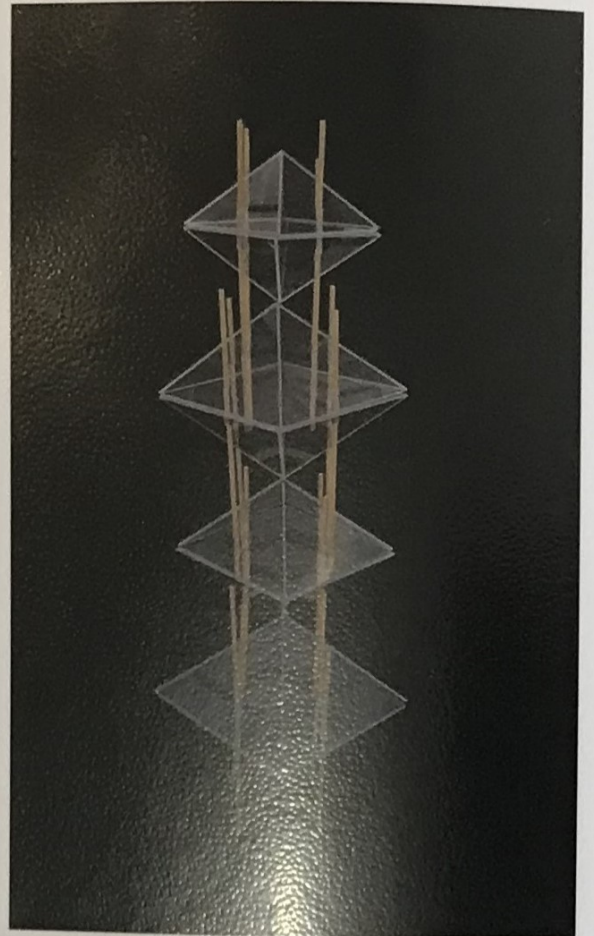
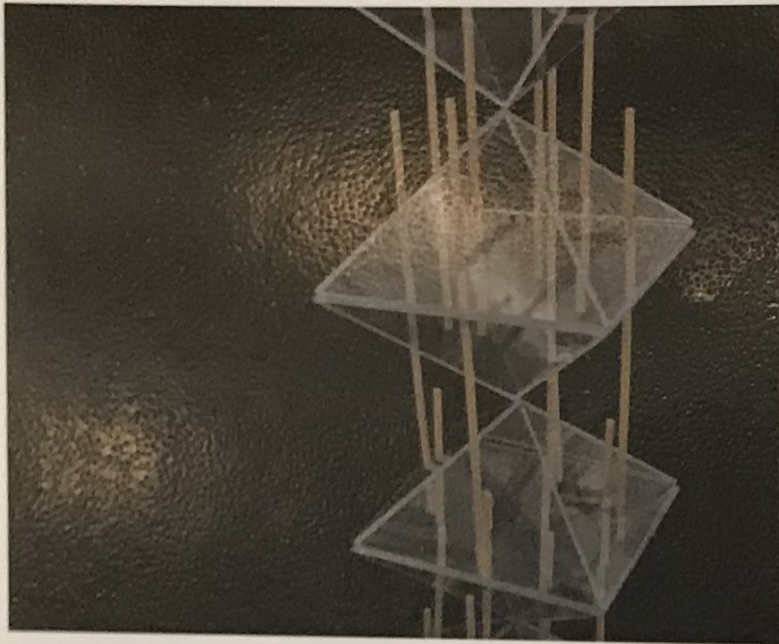


In this prototype I kept the theme of concealment of light due to the ability for the lamp to move up and down as a result of the rods allowing to the user to use as much light as necessary.

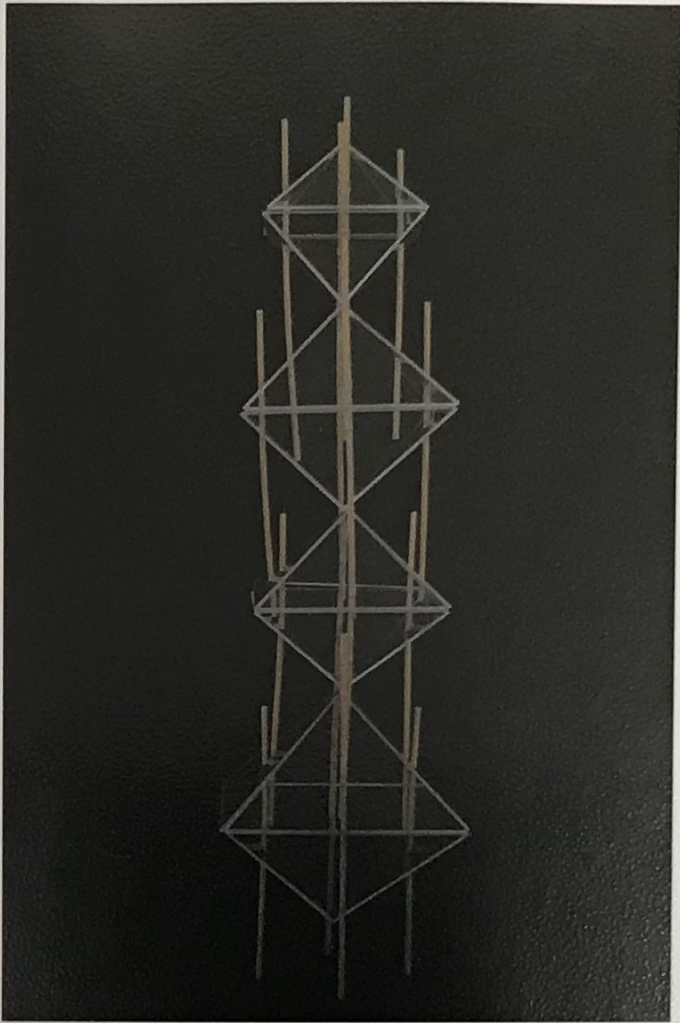
As well as this I was able to bring balance to the piece not only through the different sizes of the pyramids but also through the different placements of the rods, some coming closer together and some further apart. This way I was able to break the pattern of this very geometrical design.



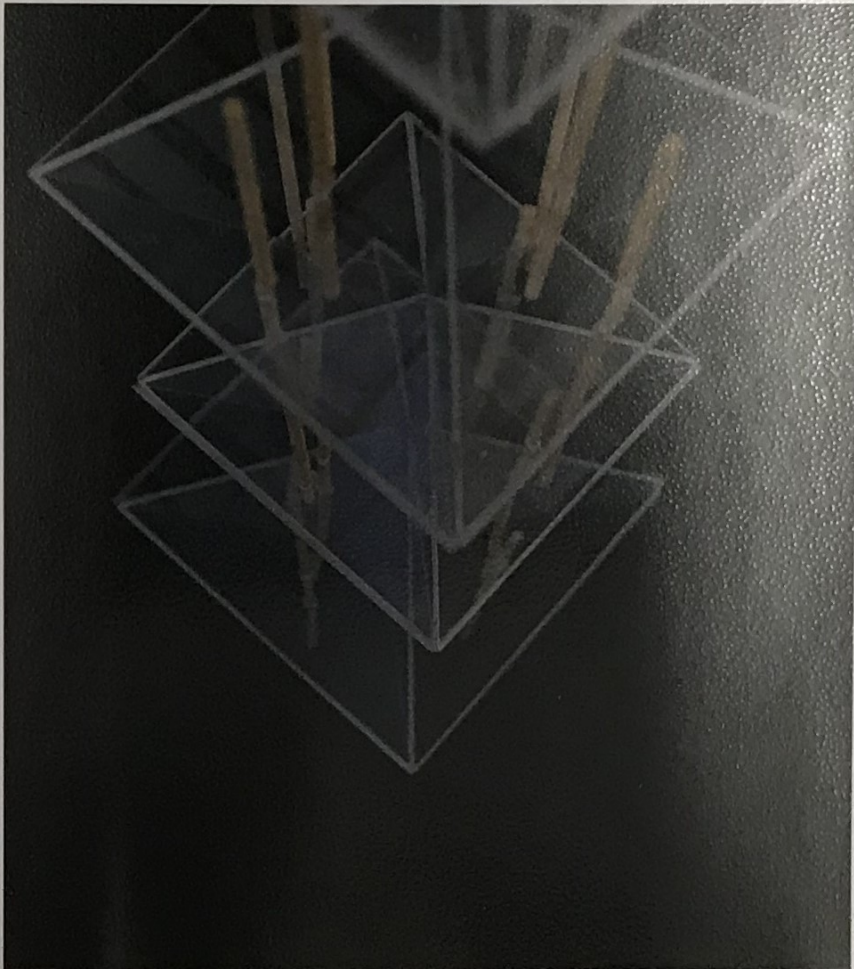
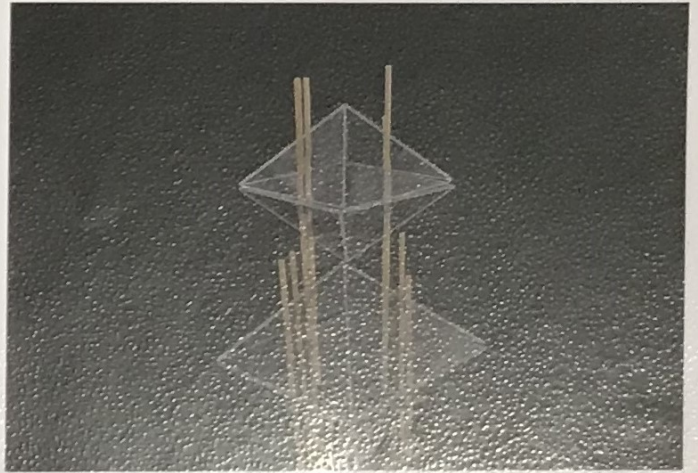
Final Piece Prototype



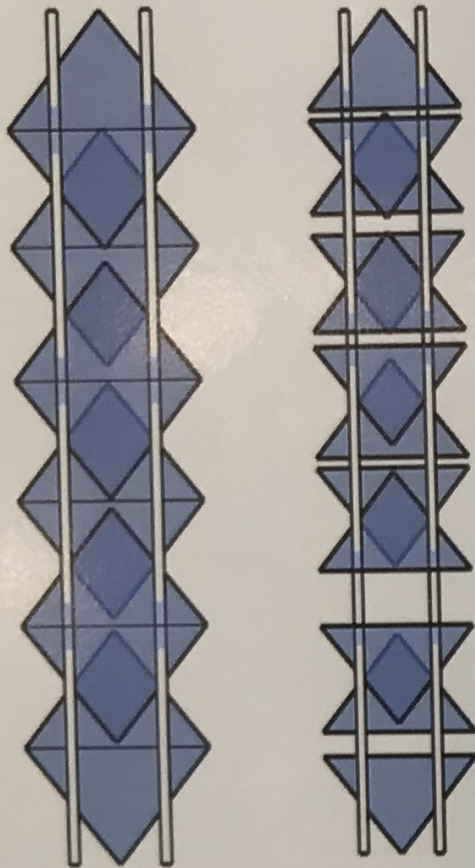
In this prototype I decided to experiment with the contrast between clear acrylic and wood which gives the overall form a more interesting texture. As well as this I found the rods to be very successful in bringing the shape stability and connection throughout. The overall balance between variety in the geometrical patterns used helped the shape of the lamp pop out more due to the varying sizes of the pyramids and the placement of the rods coming closer and further apart.



In this prototype I found the reflection of the surroundings and light onto it to be very interesting due to the different angles in the pyramid allowing light to bounce off one another. This interesting reflection almost brings a different layer to the lamp which makes it appealing to the eye.

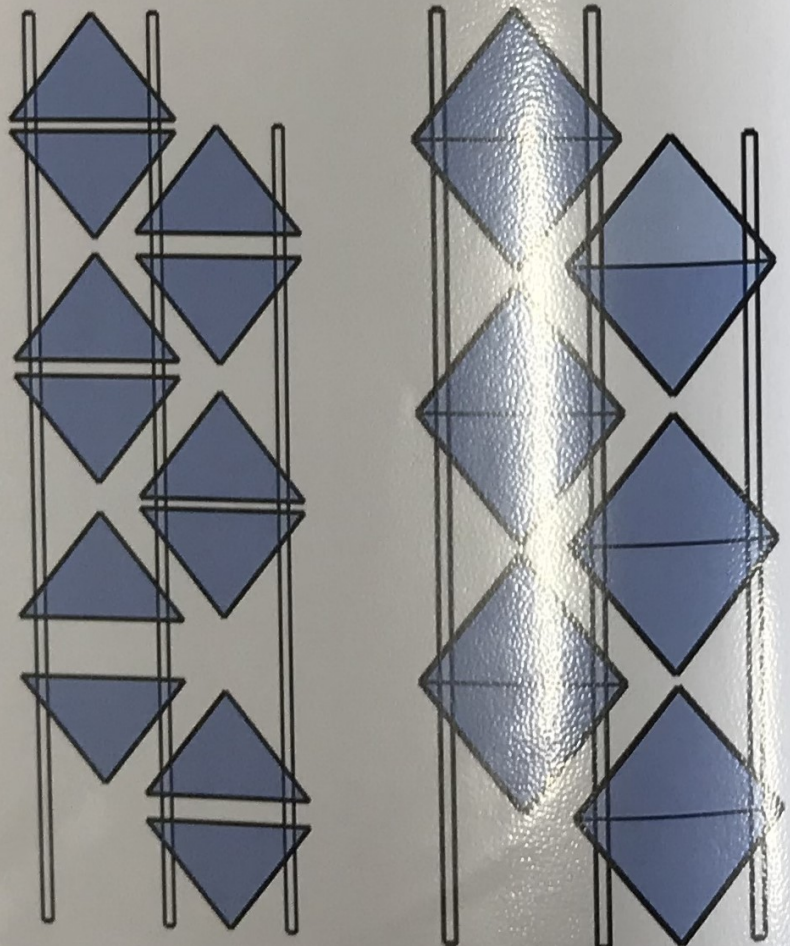


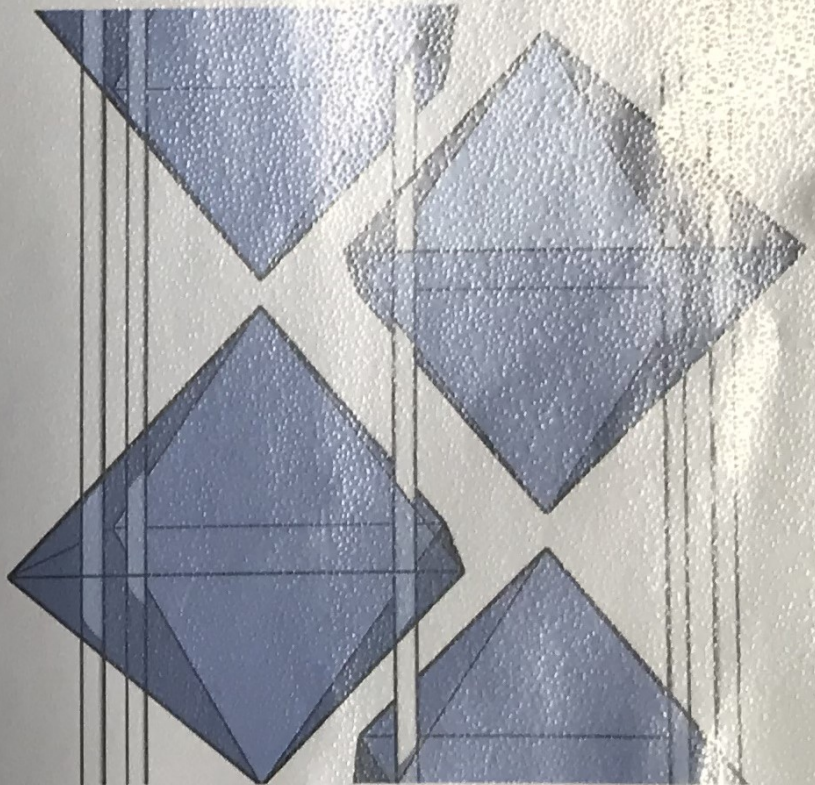
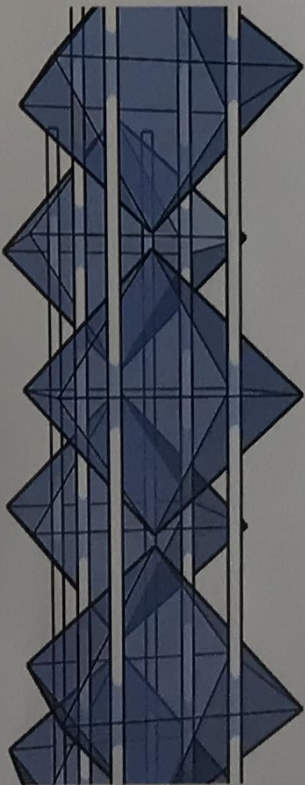
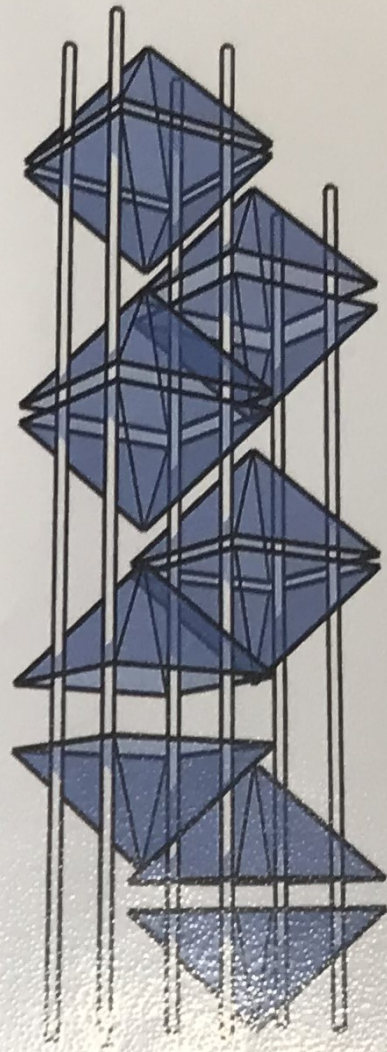
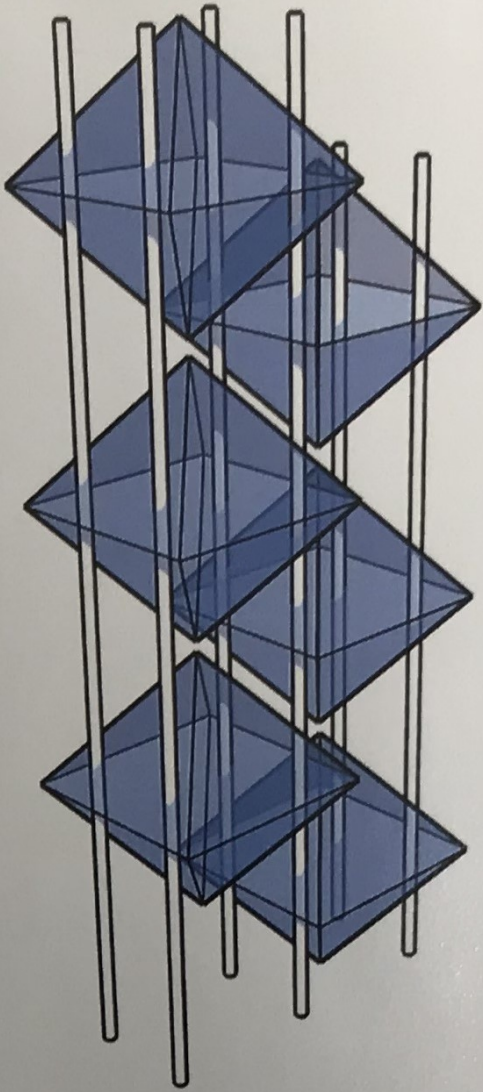
Final Piece Development



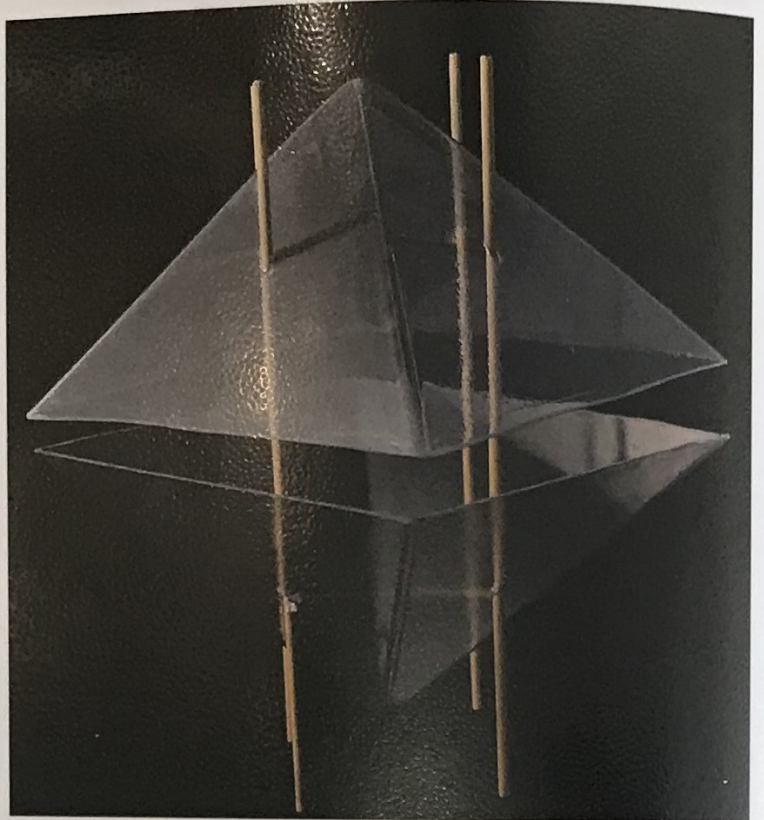
I decided to develop my model by placing the pyramids adjacent to each other in order to bring another layer to my model. This new placing will not only add more complexity making it more intriguing but also give an element of richness to it. This richness provided will be evident through the additional light which the model will now be able to provide. By adding more form to the design the lamp's ability to play with the reflection of light will be furthermore noticeable, again adding to that element of richness in this final development of the lamp.

I have also decided to change the placement of the rods now placing two on each therefore making it not only easier to add and remove pieces but also keep its element of stability provided by the rods. It will also keep its ability to move up and down which is the key aspect in my aim to explore the concealment of light.

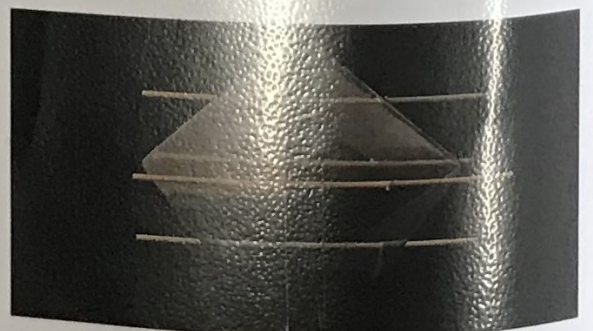
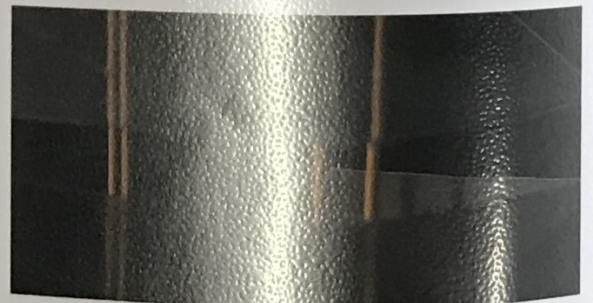




Final planning



Leading to the final piece I have experimented with the making of a mould in order to make the final building process far easier. As well as this the mould will allow me not only to save time but to produce more accurate replicas of each pyramid by taking out human error from the making process.





In order to prepare for my exam I decided to test out my lighting mechanism using submersible LED lights. These submersible LEDs will allow me to control the lamp through wireless methods. This will allow me to keep the slick look of my product as no wires will interfere with my design. As well as this the submersible LEDs look very futuristic making my design look modern whilst also adding more detail which makes my lamp not only look more interesting but also more appealing to the eye.

