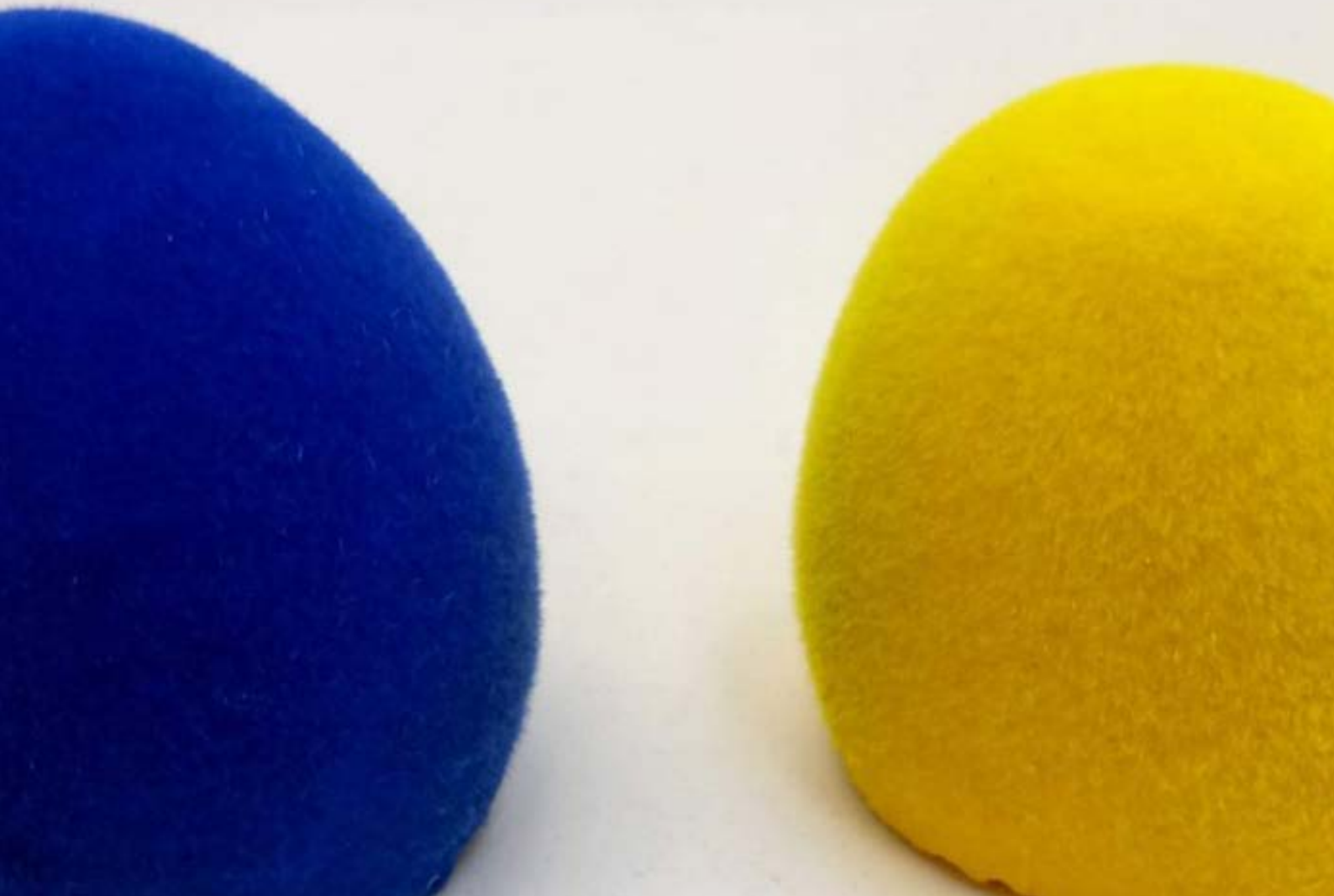


# From Sensory Room to Living Room

By Chantal Spencer

An exploration in everyday therapeutic sensory designs for adults

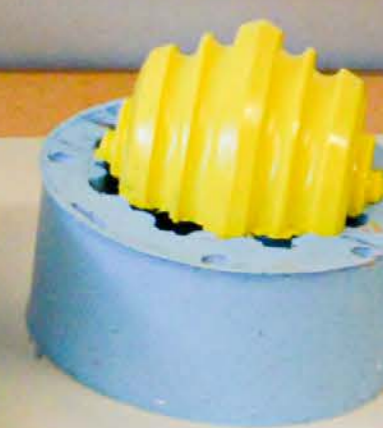




Mixed ink in resin  
Tinted resin



alcohol ink  
effects

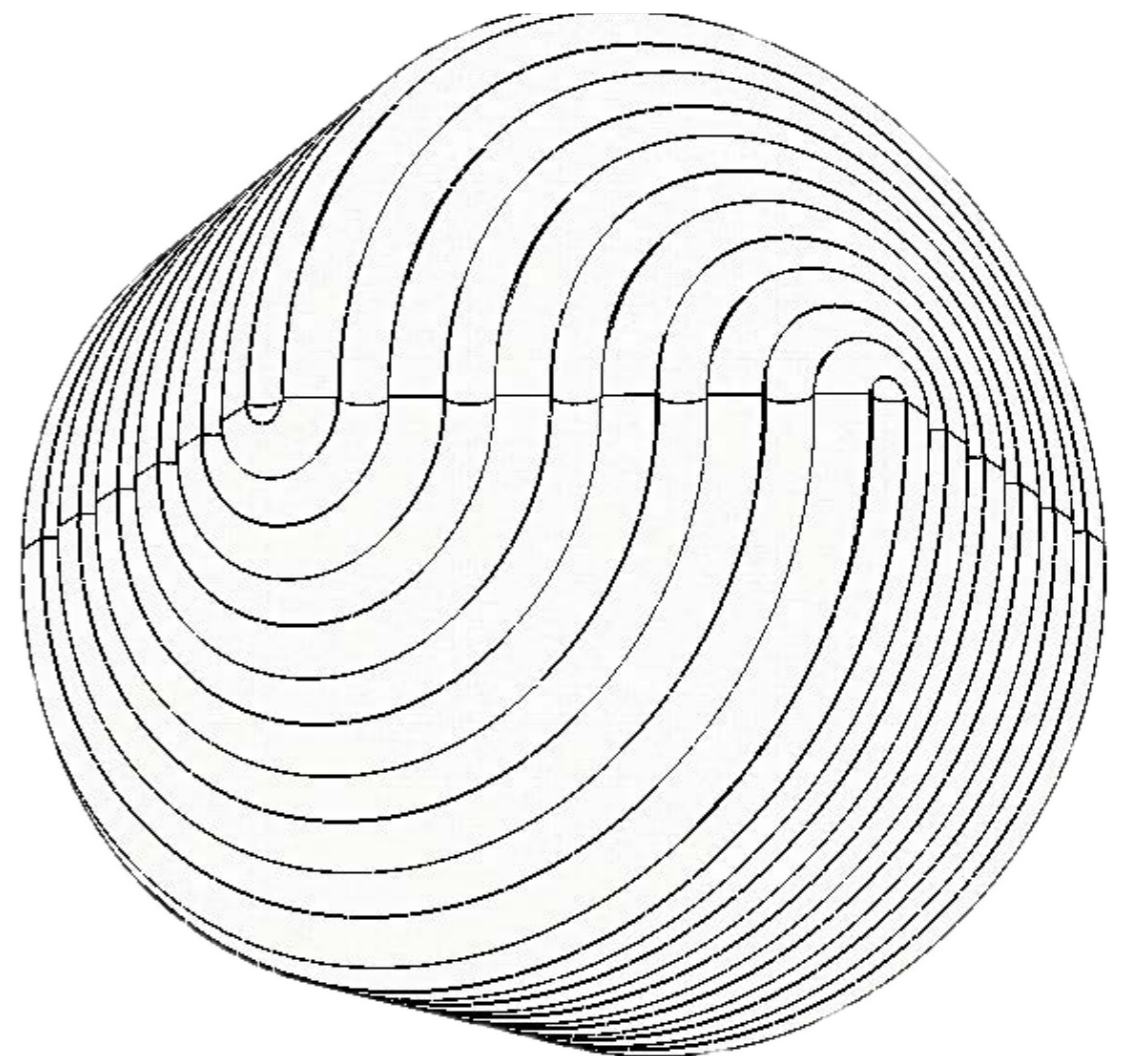
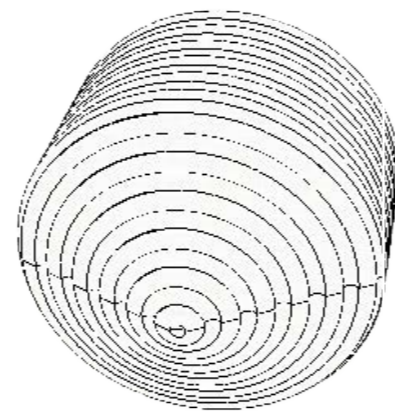
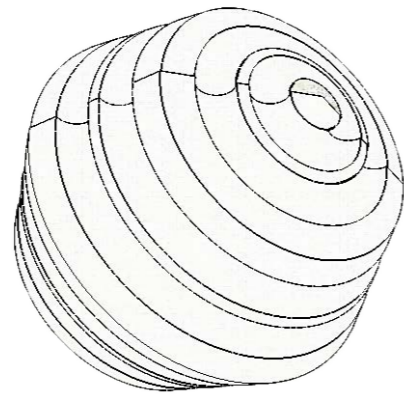
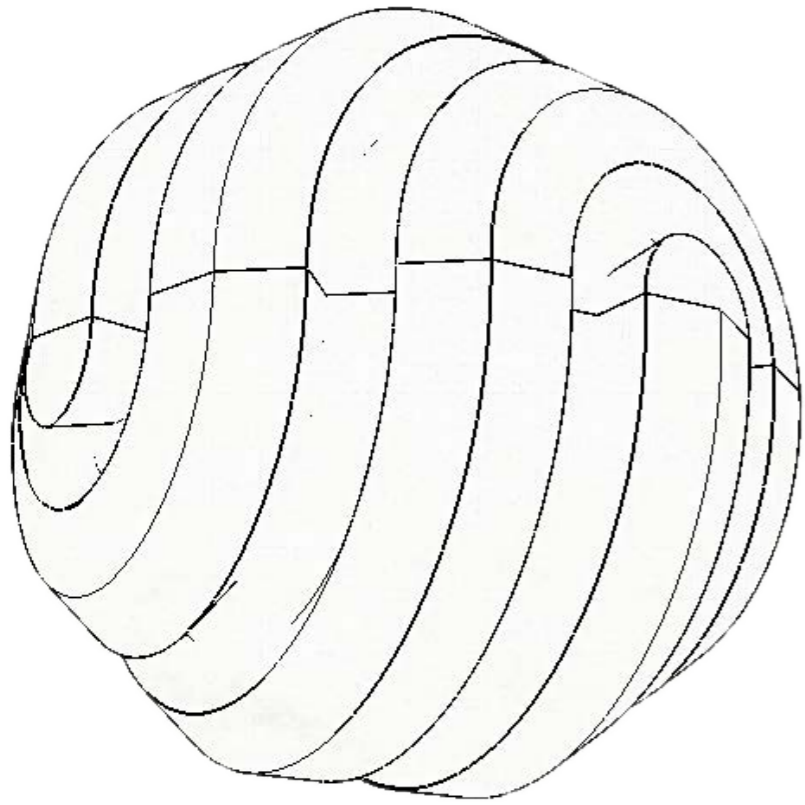


Double staining the last process



original  
30 point





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Introduction.....	p7
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## Introduction:

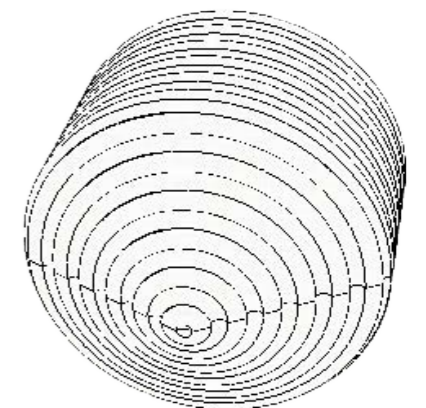
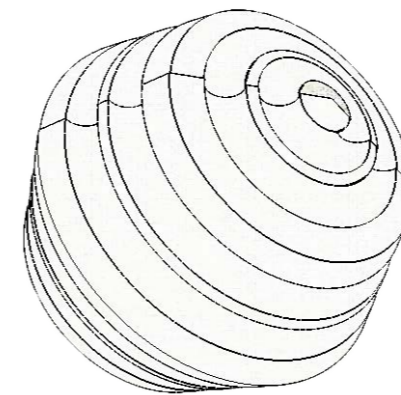
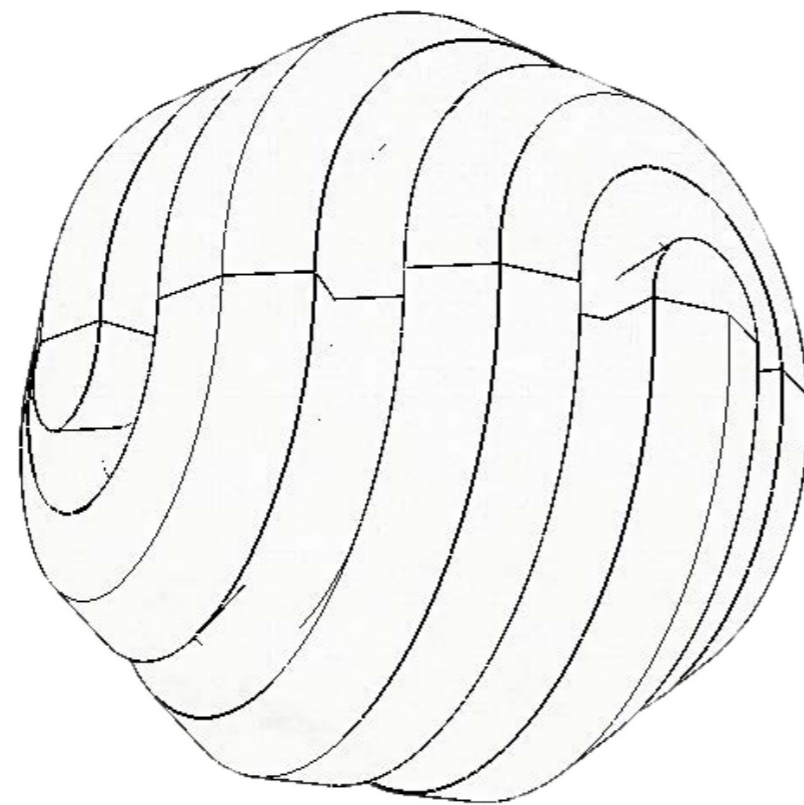
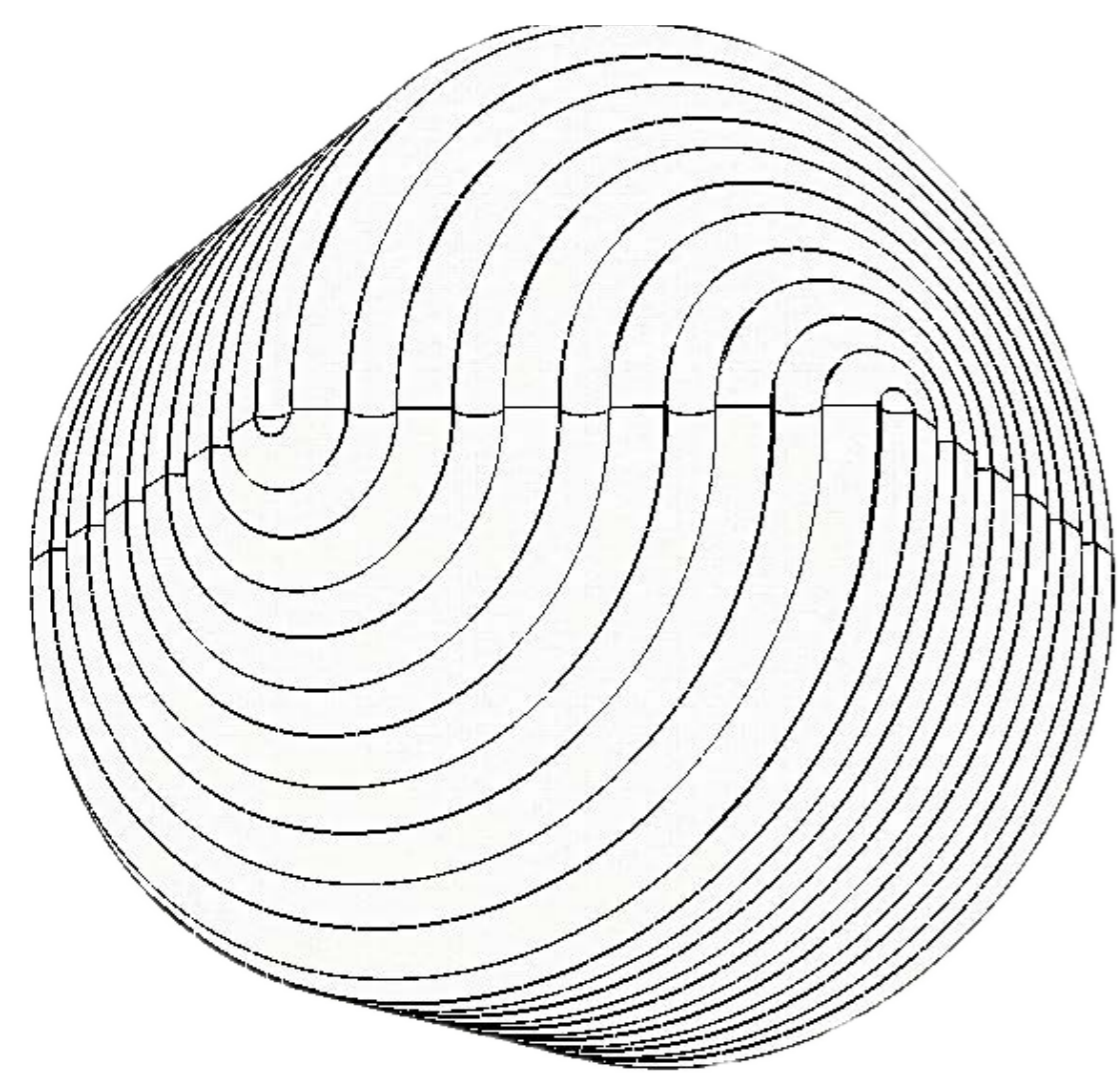
This project is an exploration into how objects, and our interaction with them, can improve our lives.

I'm interested in what connects the psychological and biological, and how such interactions with physical objects can influence our own sensory health.

This document is a folio of all the 3d practical work and digital models that went into the development of these objects up to the 18th March 2020 Corona virus lockdown.

The document is divided up into 4 chapters: Integration, Technical, Organisation and Resolution.

It has interactive navigation buttons to help guide you through my making process. Demonstrating the thought and critical analysis that went into each practical element of my project.



## How to use the interactive elements of this document:

This document contains interactive buttons. The idea behind these buttons is to show the connections between each step of my project and give a clear understanding of how each element of research and development link together.

For example:

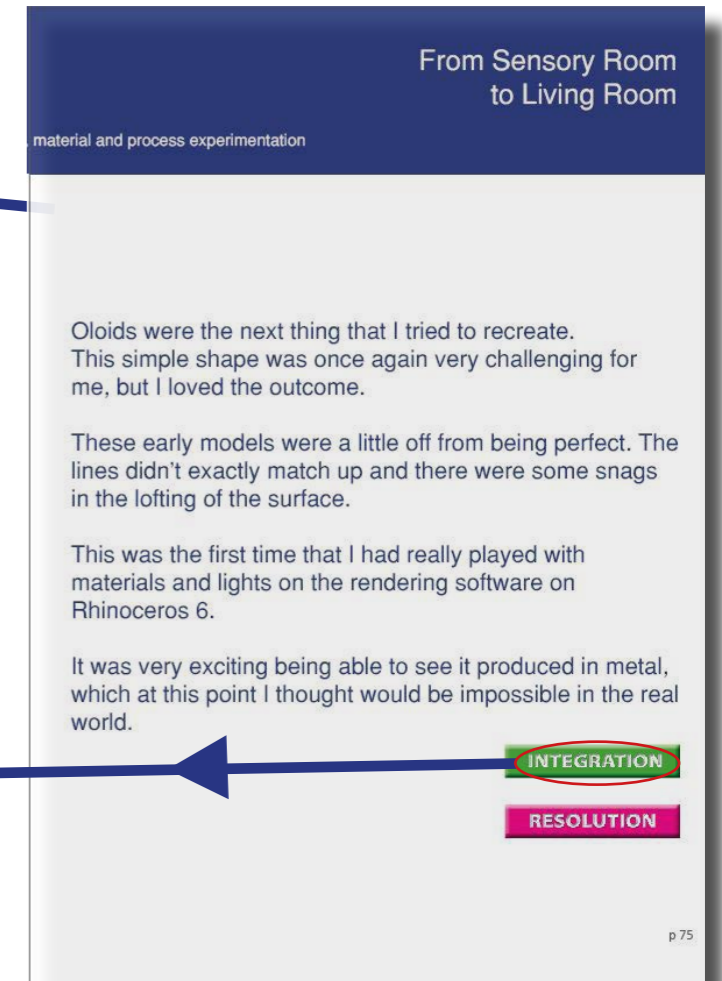
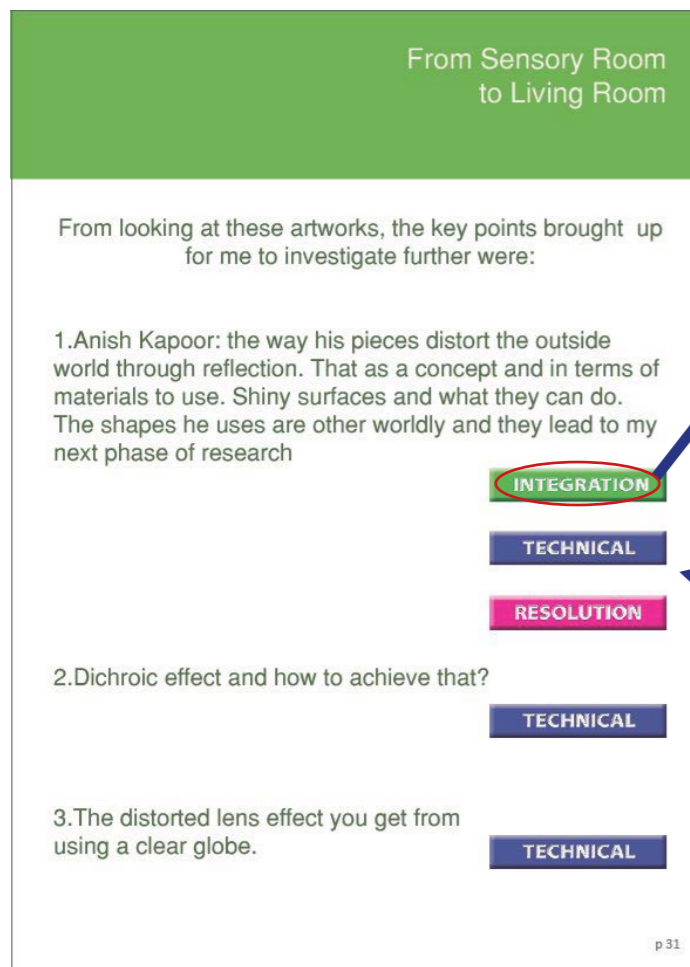
**1.** In the Integration chapter, there is a section that refers to my analysis of some Anish Kapoor artworks. Under that paragraph are 3 buttons relating to that research. This means there are 3 pages linked to this section.

When you see any of these buttons on the document it means that there are one or more sections of the document linked to that page. By clicking the buttons, you will be taken to the first page of the relevant section of the document.



**2.** Clicking the TECHNICAL button will take you to the first page of the section of technical experimentation that relates to that research.

**3.** To return to the Integration page simply click the green integration button and it will take you back to the page you started on.



## Integration:

- psychological therapy

### **Pain-management programmes**

Some people receiving treatment at a pain clinic may be offered a pain management programme (PMP).

The aim of a PMP is to improve your quality of life, despite your pain, rather than reducing your pain.

PMPs are usually delivered through a series of group sessions with other people with persistent pain, in a friendly environment.

The sessions may include:

- gentle exercise
- relaxation and mindfulness
- how to manage emotions related to long-term pain
- group discussion
- learning to pace yourself to avoid pain flare-ups

<https://www.nhs.uk/live-well/healthy-body/how-to-get-nhs-help-for-your-pain/>

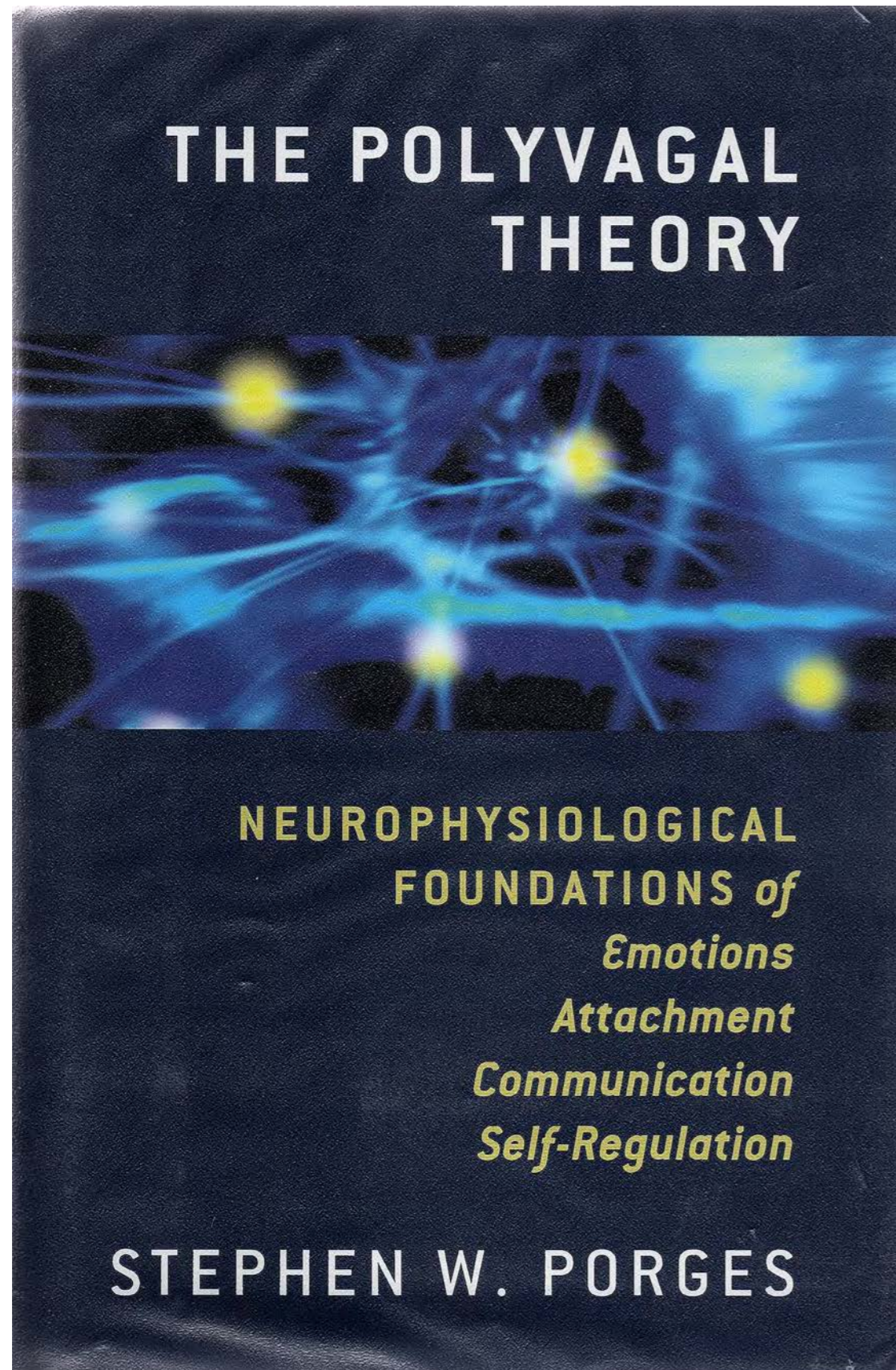
In June 2019, after a lengthy process, I was diagnosed with a condition called fibromyalgia. The main symptom of this condition is chronic pain.

I was surprised and a little dismayed when I was offered a 6-week course on mindfulness to help cope with my condition. I found it difficult to believe that anything other than strong pain killers could reduce my symptoms.

In the name of research, I attended these meetings and began to understand how our psychological well-being impacted on our physical health.

It was an interesting concept that I was keen to explore further. This was the starting point for my project.

Integration:



As a person who is sceptical by nature I didn't want to dedicate an entire year on a project that had no proven, or at least respected, theoretical knowledge backing it up.

This book (see fig p6) opened my horizons to the world of biopsychology. How the mind is affected biologically and psychologically and where the two meet.

This led me to investigate other theories such as the Triune Brain Theory.

**TECHNICAL**

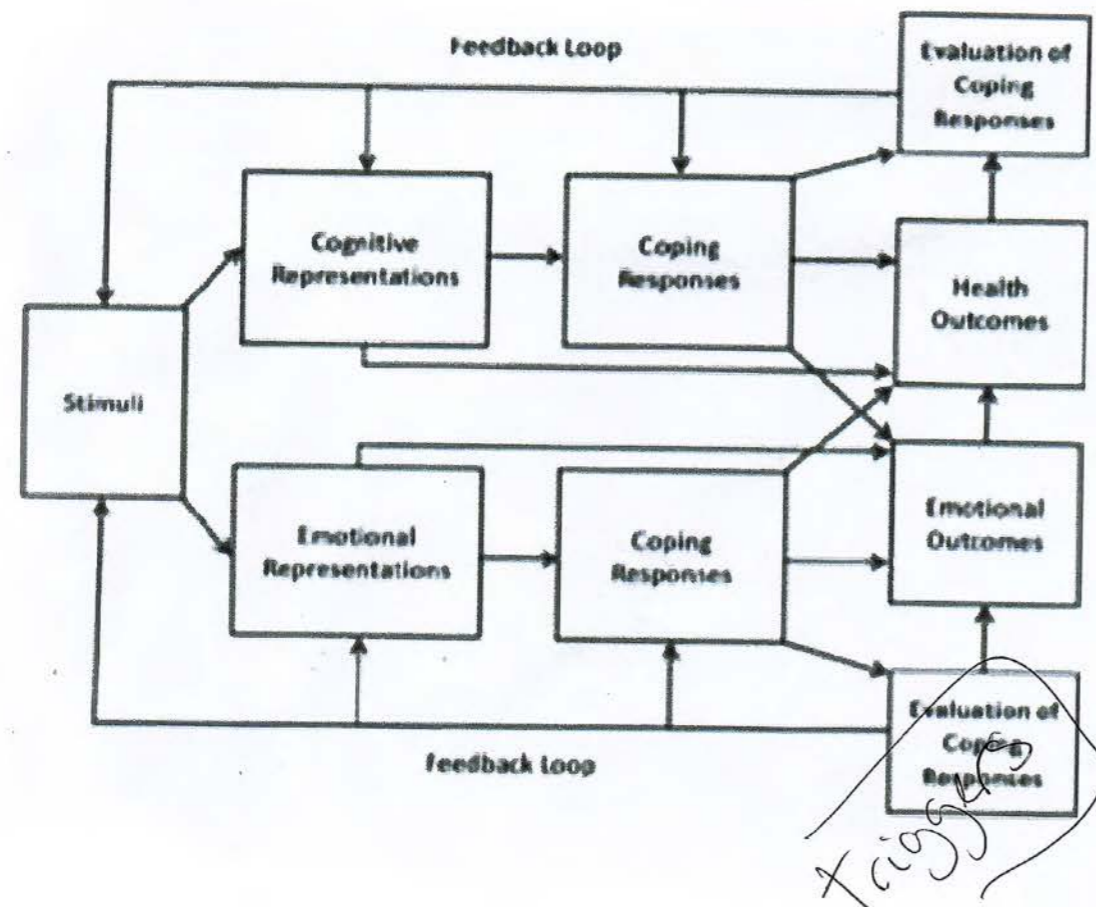
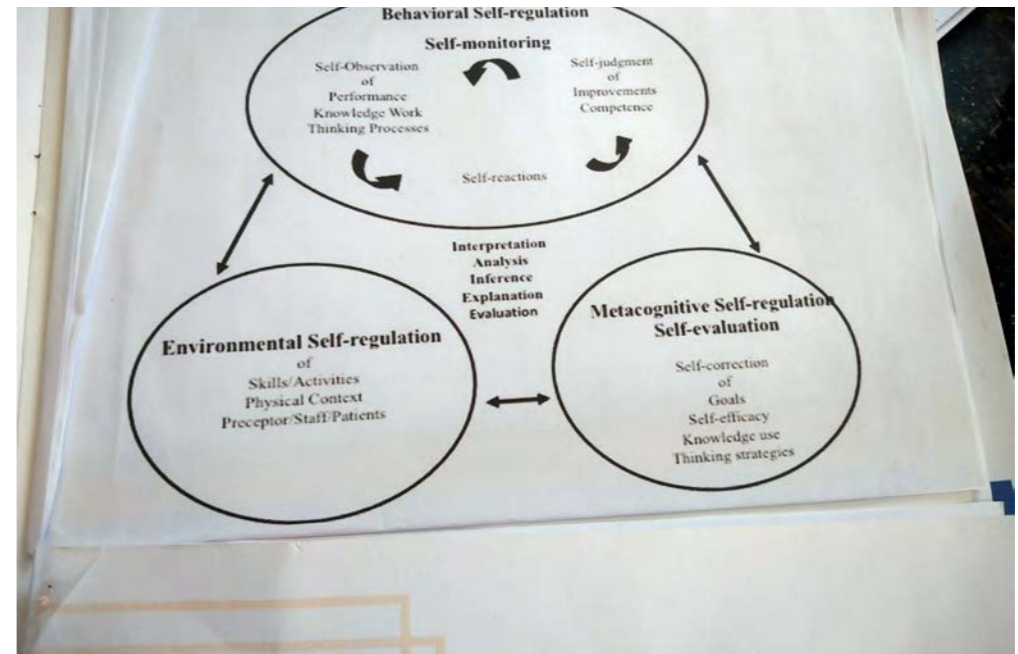
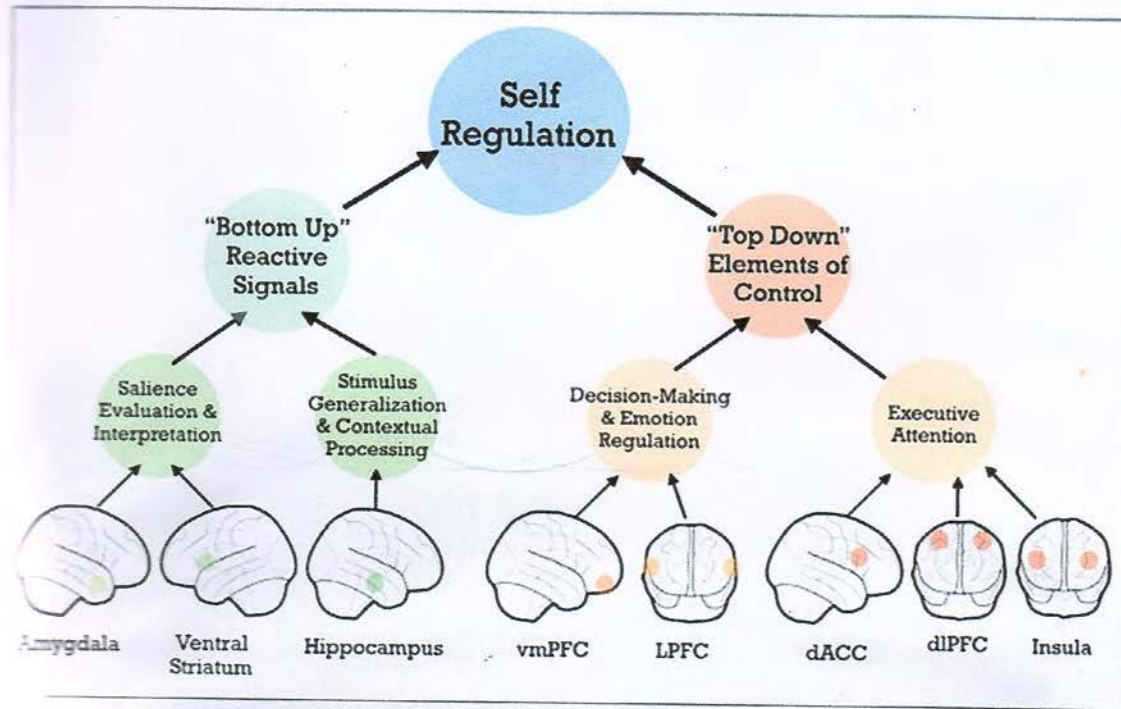
**RESOLUTION**

The Triune Brain Theory focuses on the physical evolution of the brain. In compliment to that, I explored some theories on our emotional/psychological mind. This is where Freud's the Id, the Ego and the Super Ego came in.

**TECHNICAL**

**RESOLUTION**

Integration:



Looking at these diagrams which explain some of the theories that I am basing the therapeutic value of my work on, I wanted to get inspiration for my own poster style explanation. It was important for me to see how others tackle the issues of formatting complex theories into digestible graphs and illustrations. Although these were helpful, I wanted to make my poster much more engaging and livelier.

**INTEGRATION**



Integration:

Sept 2019

**UOB. 3D D&C. L6. RESEARCH PLANNER**

Name: *Sash*      Tutors:      Version: *1*

---

**Intro** Introduce the outline topic, nature and basis of your research project(s) and / or the context or problem? Can you give it a title?

1. Introduction  
*Stimulus - Subconscious feedback from our environment*  
*Autonomic responses - the Vegas nerve - invisible disabilities*

---

**What?** What are you trying to find out and learn through the research? What are the **research questions** you are asking? What new insights or understandings are you seeking?

2. What?  
*What does our environment do to our emotional well-being*  
*does the environment dictate emotion*  
*How can our environments improve our well-being.*

---

**Why?** What are the aims and objectives of the research? What are you hoping it will achieve? Why is it relevant and worth finding out and who (if anyone) might benefit or what might change as a result?

3. Why?  
*to produce designs that lift mood and help improve ~~emotions~~ lives of those with invisible disabilities and general public.*  
*Can stimulating environments at home help de stress.*

---

**How?** What methods will you use to help answer your research questions? How are you approaching undertaking the research? What tools and / or equipment will you need?

4. How?  
*Arduino - small scale - multiples - sound - focus groups*  
*- light - NFC - reading up about the Vegas nerve*

Research Planner Nick Gant 1.5

The preliminary stages of my research are, for me, some of the most challenging parts of the journey to making.

I often find it hard to start when the ideas in my mind are so vague. But I purposefully keep the concepts loose at this point so that I can come up with original ideas and let the research lead me instead of the other way around.

But of course, there must be a starting point. So, I used my personal knowledge and experience of sensory rooms and sensory toys to inform the type of artworks I would be looking for to move forward with my research.

Connecting lights to emotions -  
interesting concept. <sup>Oct 2019</sup>

Video Cuts (/category/11)

## NICK VERSTAND AND FATIMA YAMAHA TO POWER OUR EMOTIONS

11 February 2017

Anna Bogomolova

Our experiences form a powerful force for change. To influence our experiences is to gain control over our emotions and behaviour. The question is: who gets to control? While scientists examine complex relations between personality and emotions, marketing corporations are actively using psychometrics and big data to fuel algorithms to sell us anything we don't need, including populist politics. By reversing the artist-focused paradigm, art can show us, its audience, the strength to influence our experiences.

Our emotions join music and light art to design **POLARIS**, a large-scale installation premiered at **Amsterdam Dance Event**. A group of artists and scientists, led by **Nick Verstand**, invited 20 participants in the audience to wear EEG headsets and bio-signal sensors. Measurements of their brainwaves, heart rate and skin response were translated to algorithms to indicate emotions and trigger the installation in real-time, so that artists and their audience could co-create the piece together.

We talk to **Nick Verstand** about the ambition of **POLARIS** to focus on the experience of the audience. We discuss the experience of co-creation and the concept of ownership of ideas against the art's purpose to catalyse change.



POLARIS is a project by Nick Verstand, Nikki Hoek and Children of the Light  
In collaboration with Fatima Yamaha, Pandelis Diamantides, Showsync, TNO, EagleScience, Red Light Radio and Stedelijk Museum Amsterdam  
Video by Blitzkickers

Anna Bogomolova: Music, light art and contemporary technology — which of the disciplines combined in POLARIS is closest to you?

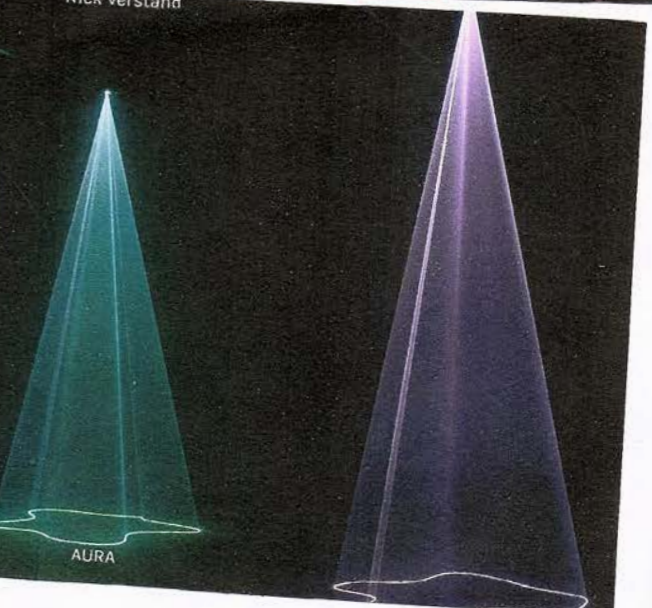
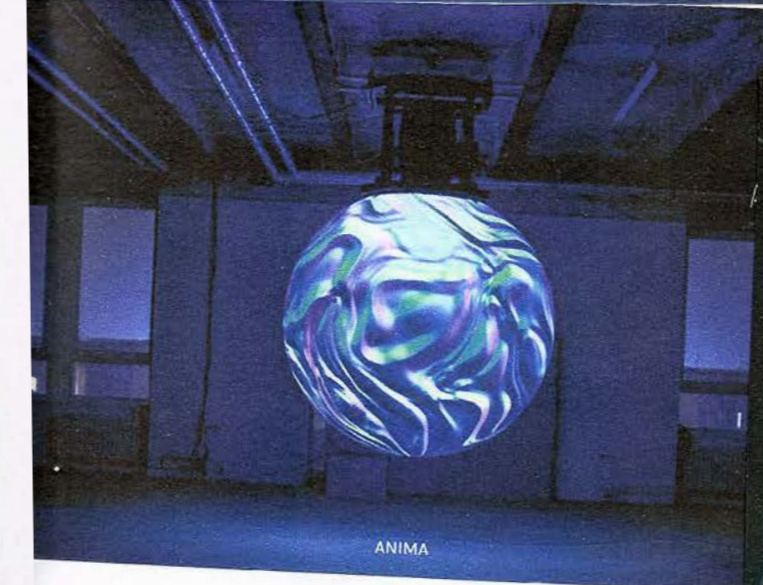
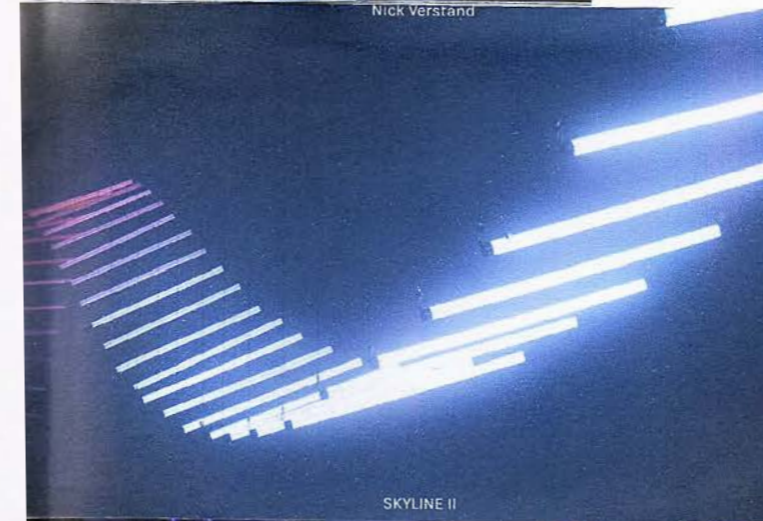
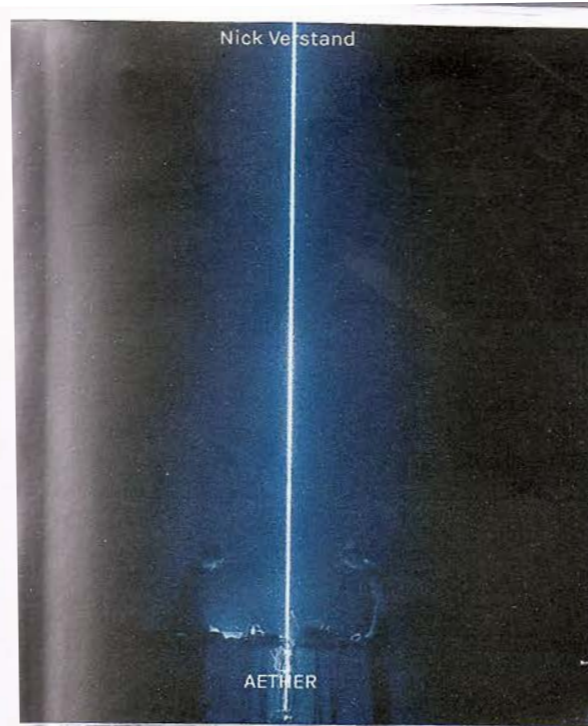
17 February 2017 Anna Bogomolova  
ABOUT (/ABOUT) FEEDBACK (/FEEDBACK)



Video Cuts (/story/children-of-the-light-and-x-howling)



TWO BAR LOOP —  
Video Cuts (/story/occupied-by-emptiness-wibbine-kien-at-slaakhuis-essentials-for-artistic-beings)  
MONOLAKE ON —  
ESSENTIALS FOR ARTISTIC BEINGS  
OCCUPIED BY EMPTINESS AND FULL OF MEANING —  
ESSENTIALS FOR ARTISTIC BEINGS  
WIBBINE KIEN AT HET SLAAKHUYS, ROTTERDAM  
(/story/occupied-by-emptiness-wibbine-kien-at-slaakhuis-rotterdam)



These light installations are so intense I really need to make something glowey again

Oct 2019

dezeen

call for help



Cool air is released onto the user's face to encourage calmer breathing; lavender capsules can be inserted to scent the air and aid relaxation; and a wireless in-ear headphone enables the user to discreetly follow a series of guided meditations.



Telfer designed the Calming Stone based on practises he developed to manage his own panic attacks, in conjunction with advice from anxiety psychologists, to offer an alternative method for managing anxiety.

"Other than medication, there is not a product specifically designed to help improve mental health," Telfer told Dezeen.

"After years of struggling with my own anxiety problems, I developed multiple techniques to provide relief during anxiety episodes or panic attacks. I decided to design a device that combines these techniques to deliver instant panic relief anywhere, anytime."



So this is really interesting. Handheld device that reads internal things like heart rate to warn about a panic attack. smooth shapes and glowing light. compact shape that fits in the hand.

Oct 2019

## Integration:



The work of Verstand, Yamaha, the Ramon Telfer 'Panic Stone' and the way they use light as a medium, brought me back to one of my 2nd year project; A sound reactive speech therapy light. (see fig p16).

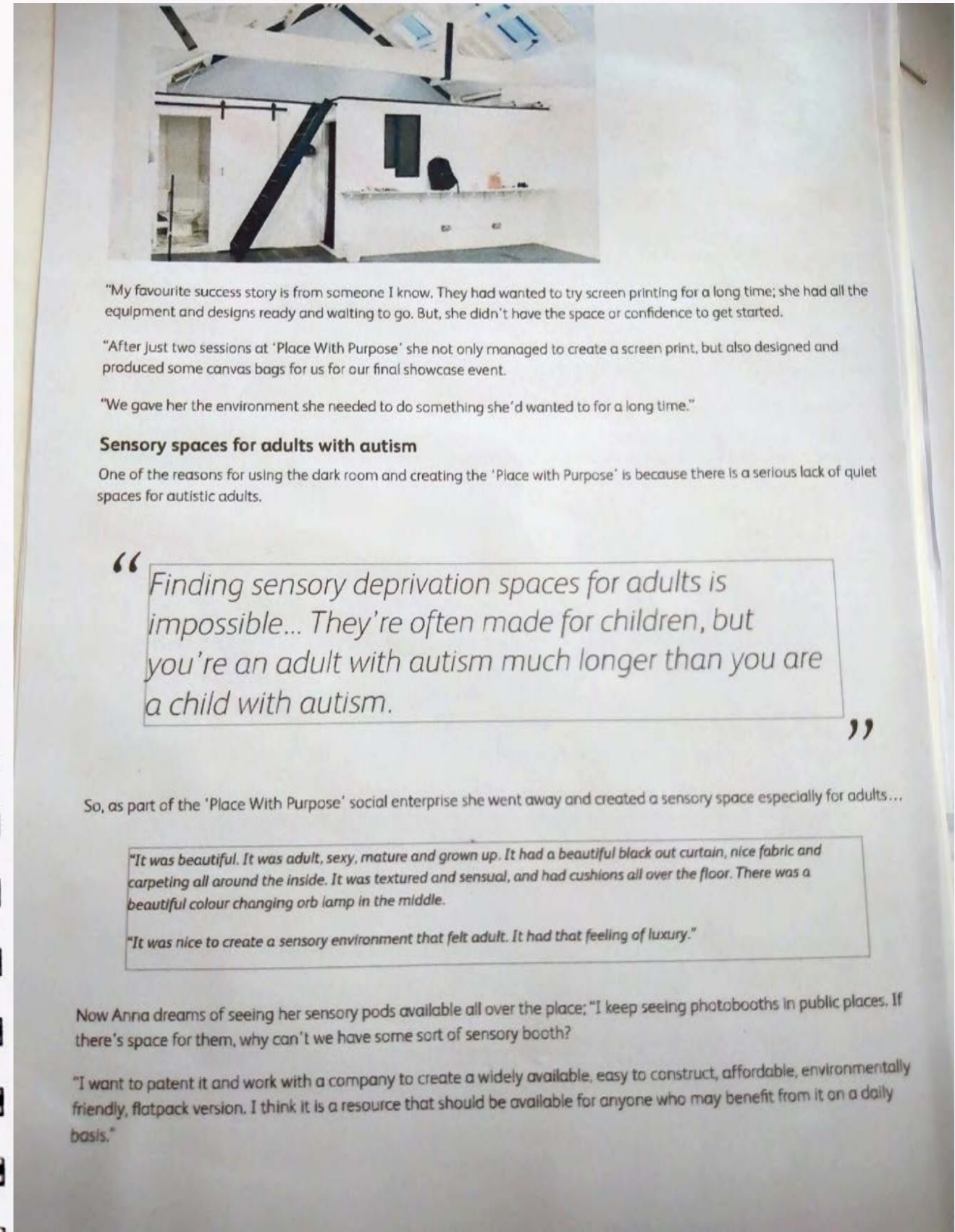
I used rainbow glowing led lights inside some semi-transparent silicone. I wanted to revisit this material use in one of my Sphericons for this project.

TECHNICAL

RESOLUTION



It was an interesting show. But it kind of missed the mark with me. Fidget cubes were not very well made, and the artwork was just ok. Oct 2019



"My favourite success story is from someone I know. They had wanted to try screen printing for a long time; she had all the equipment and designs ready and waiting to go. But, she didn't have the space or confidence to get started.

"After just two sessions at 'Place With Purpose' she not only managed to create a screen print, but also designed and produced some canvas bags for us for our final showcase event.

"We gave her the environment she needed to do something she'd wanted to for a long time."

**Sensory spaces for adults with autism**

One of the reasons for using the dark room and creating the 'Place With Purpose' is because there is a serious lack of quiet spaces for autistic adults.

"Finding sensory deprivation spaces for adults is impossible... They're often made for children, but you're an adult with autism much longer than you are a child with autism."

So, as part of the 'Place With Purpose' social enterprise she went away and created a sensory space especially for adults...

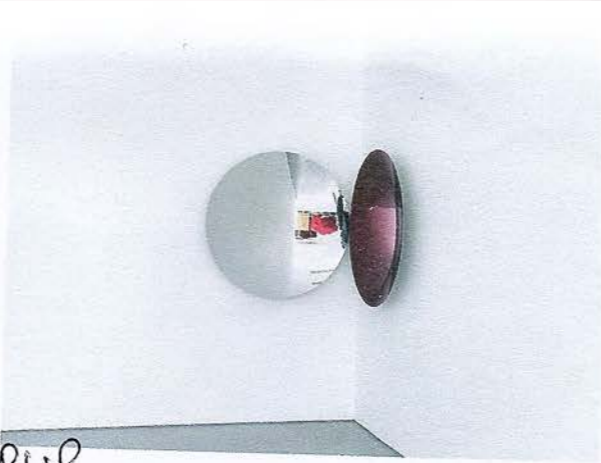
"It was beautiful. It was adult, sexy, mature and grown up. It had a beautiful black out curtain, nice fabric and carpeting all around the inside. It was textured and sensual, and had cushions all over the floor. There was a beautiful colour changing orb lamp in the middle.

"It was nice to create a sensory environment that felt adult. It had that feeling of luxury."

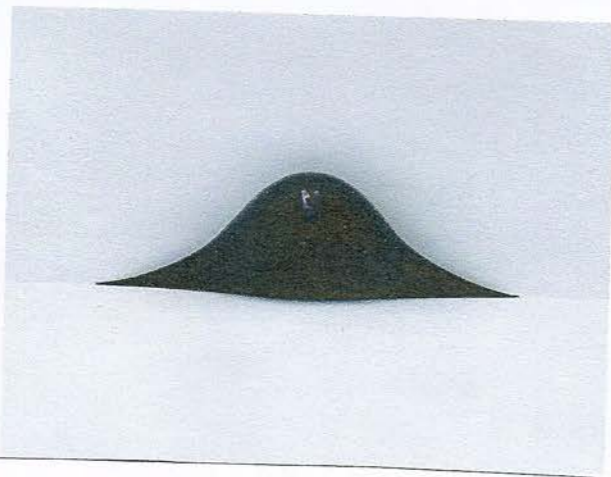
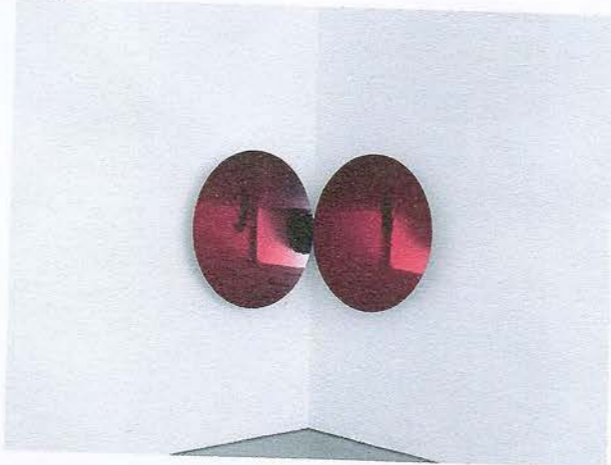
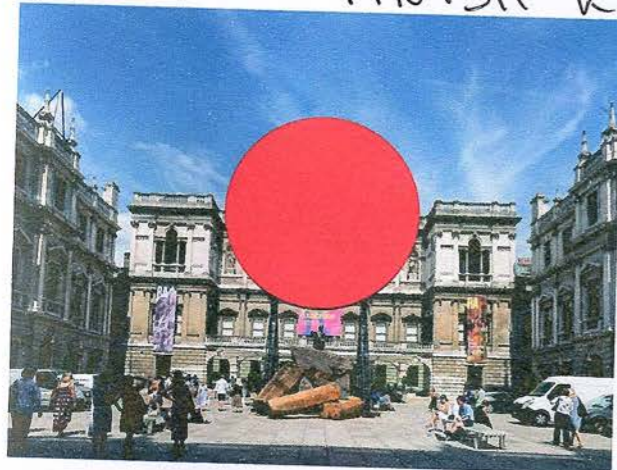
Now Anna dreams of seeing her sensory pods available all over the place; "I keep seeing photobooths in public places. If there's space for them, why can't we have some sort of sensory booth?"

"I want to patent it and work with a company to create a widely available, easy to construct, affordable, environmentally friendly, flatpack version. I think it is a resource that should be available for anyone who may benefit from it on a daily basis."

I feel like I want more from exhibitions like this. Disabled artist can be just as good as non-disabled artists Oct 2019



ANISH KAPUR

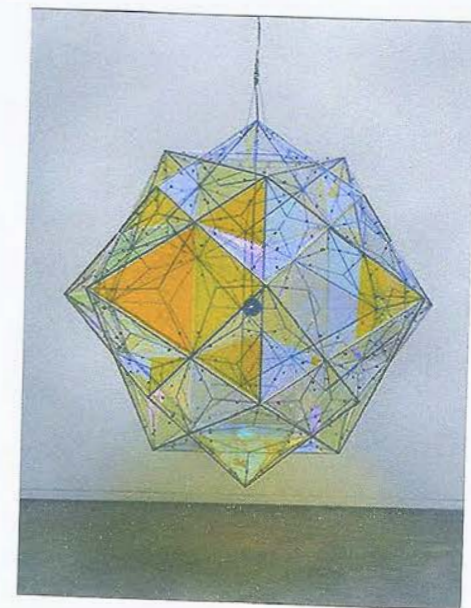
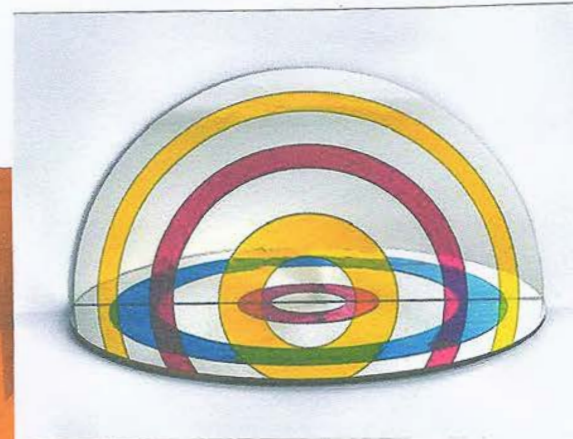
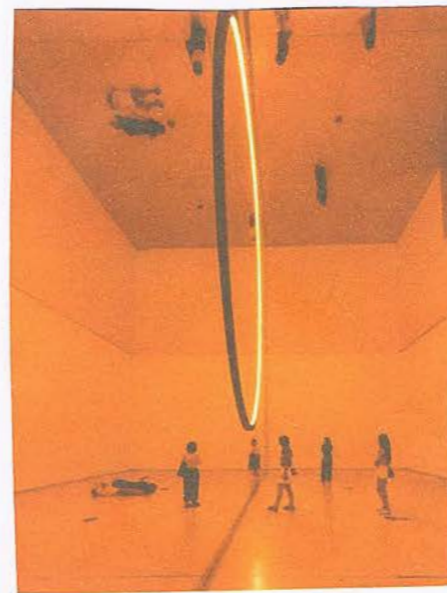


So shiny and stimmy! Seeing the world reflected and distort seems to take you away somewhere. these are like breaks in the world where things are different. like portals or something

Oct 2019

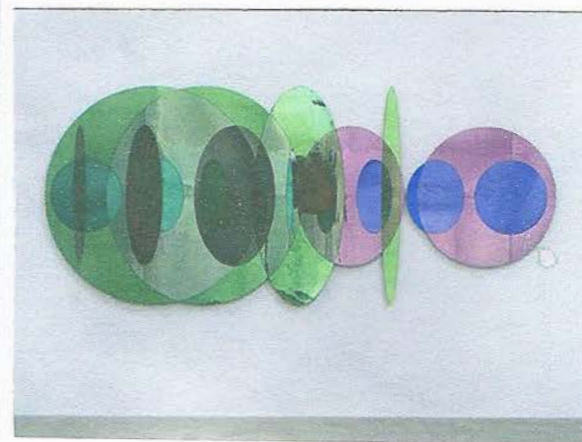
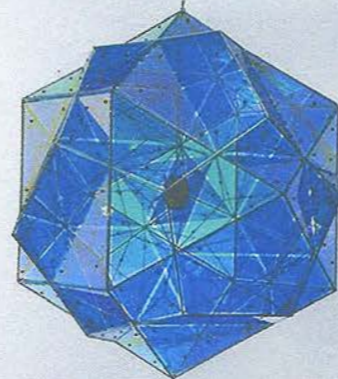
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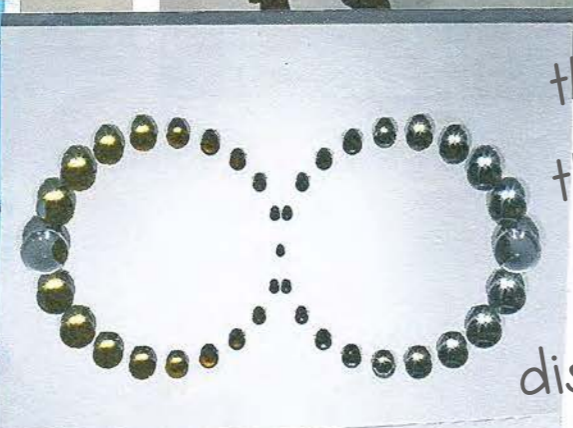
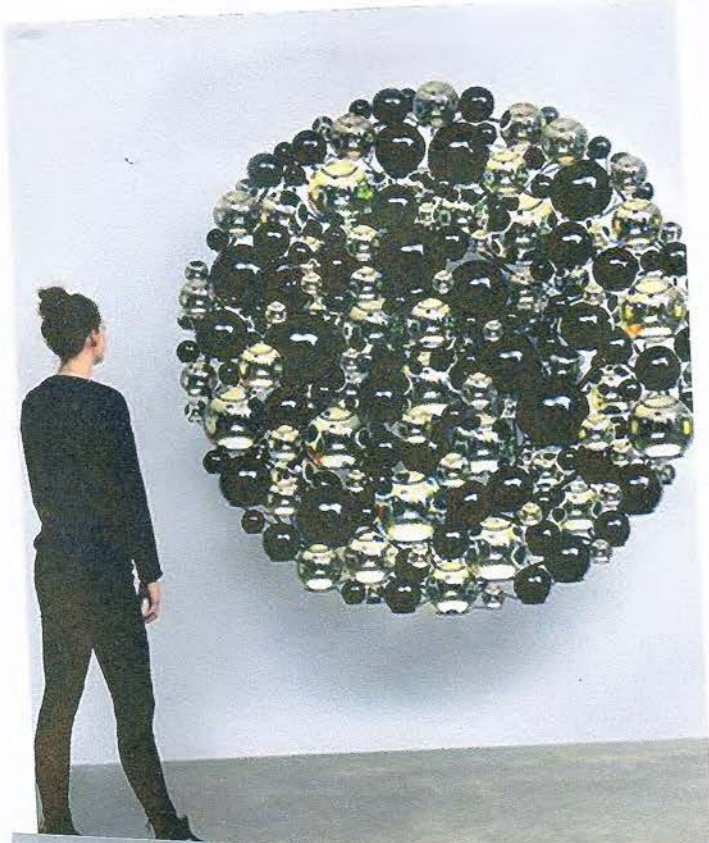
List for visit library



This light is like a portal too, something that removes part of reality. how can I take that and make it into something?

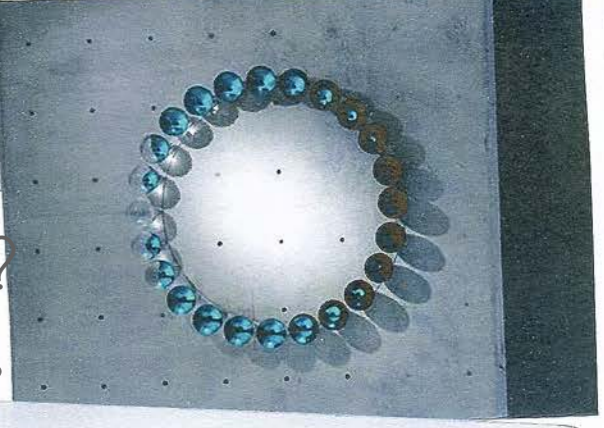
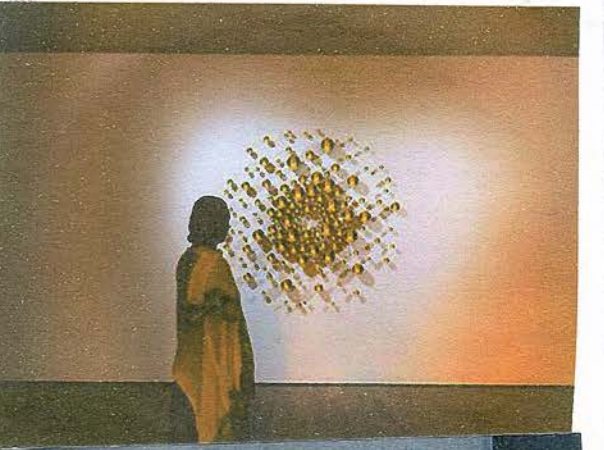
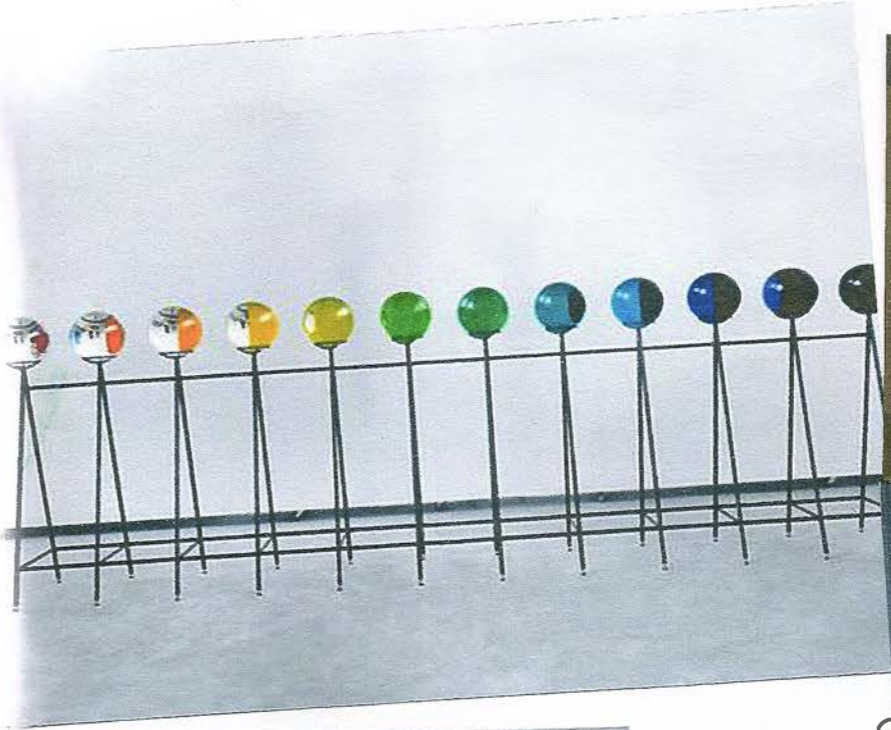
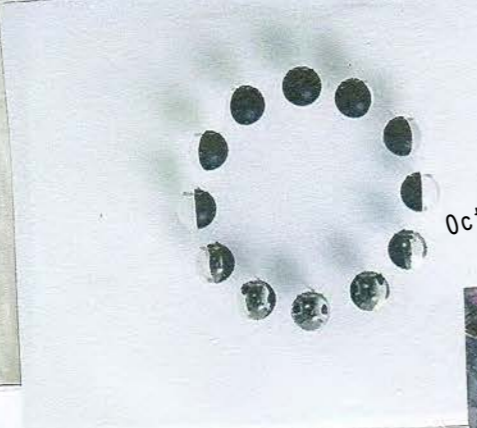
Oct 2019





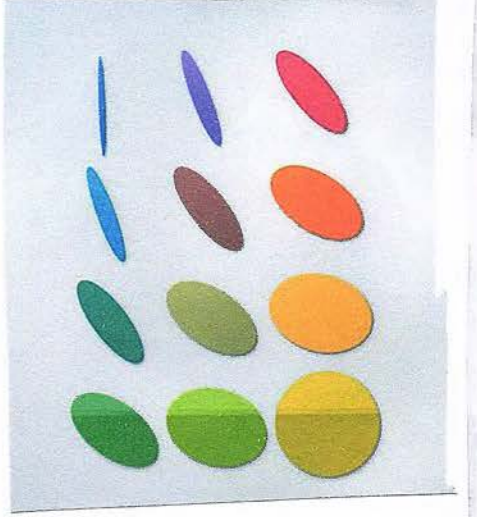
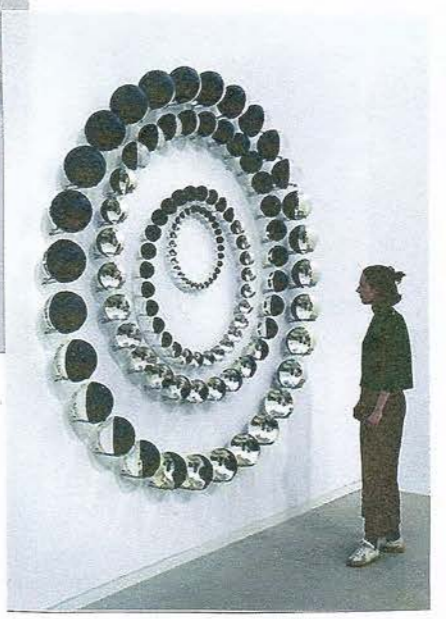
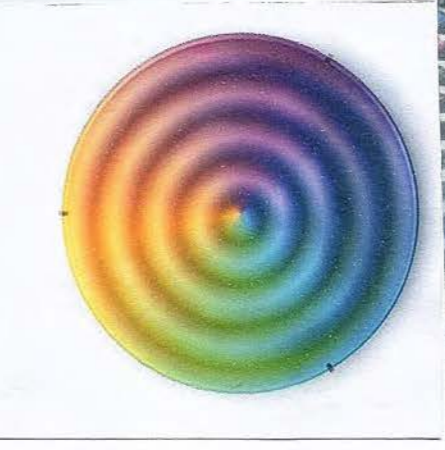
the effect  
the globes  
have  
distorting the  
light!! this  
would work  
with resin?

Oct 2019



what is this stuff?  
how do you trap  
rainbows!??

Oct 2019



Integration:



From looking at these artworks, the key points brought up for me to investigate further were:

1. Anish Kapoor: the way his pieces distort the outside world through reflection. That as a concept and in terms of materials to use. Shiny surfaces and what they can do. The shapes he uses are other worldly and they lead to my next phase of research

INTEGRATION

TECHNICAL

RESOLUTION

2. Dichroic effect and how to achieve that?

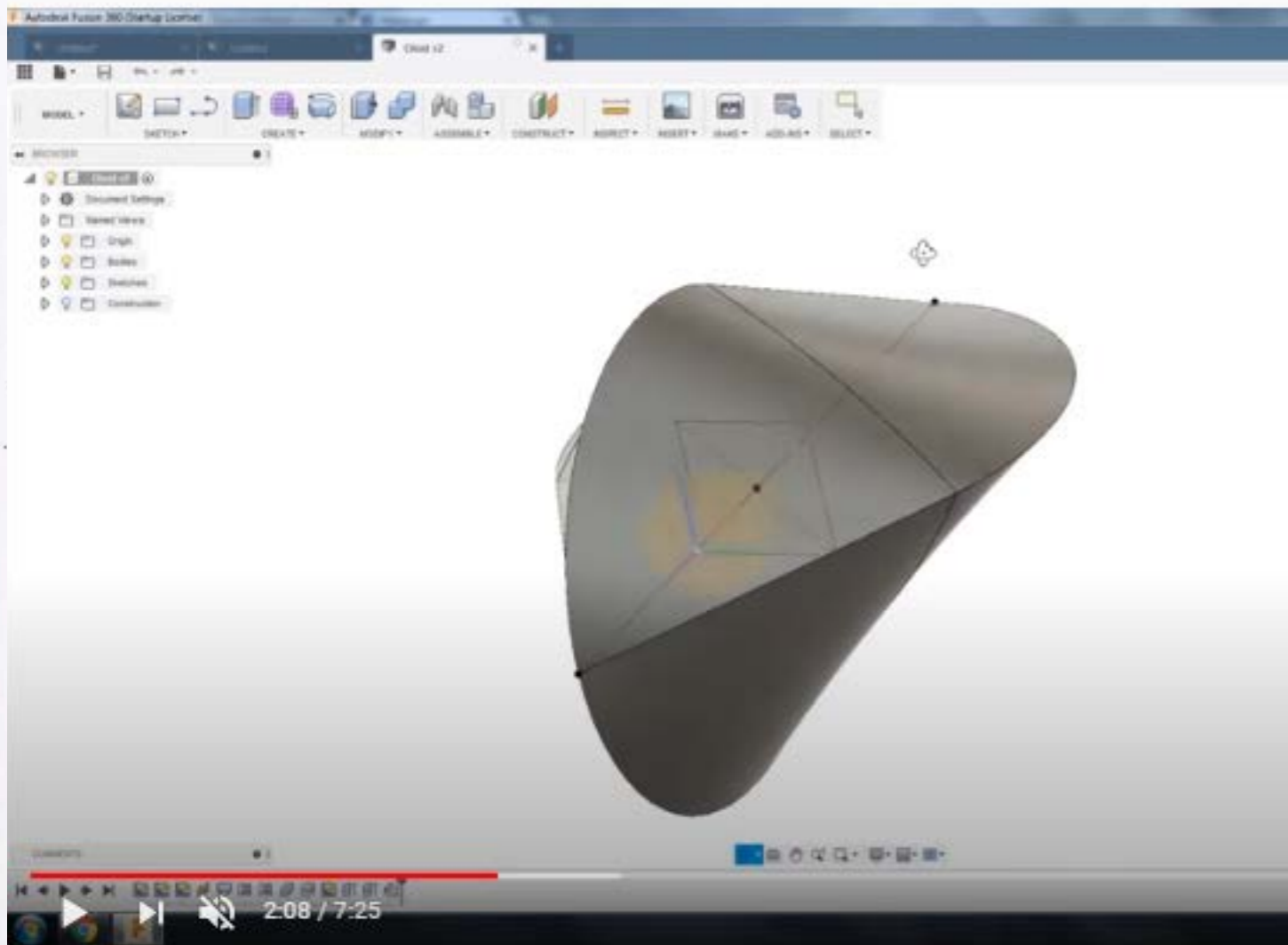
TECHNICAL

3. The distorted lens effect you get from using a clear globe.

TECHNICAL







## Incredible Rolling Objects which aren't Spheres!

10,710,556 views • Aug 26, 2018

172K likes 7.1K comments

**MAKERS MUSE** Maker's Muse  
595K subscribers

These strange solids roll in interesting and unexpected ways! Join me as we explore these curious geometries the Wobbler, Oloid and Steinmetz Solid.

SHOW MORE

6,951 Comments SORT BY

Add a public comment...

Wow!!! I wonder if I can teach myself how to that??

Nov 2019

We are delivering to your region with limited shipping options. Please expect extended delivery time. [Learn more.](#)

New cus



Roll over image to zoom in

## Oloid - An Elegant Desktop Sculpture Influenced by Perfect Mathematical & Geometric Design with Hypnotic Motion- Perfect gift for Professionals, Executives & Teachers

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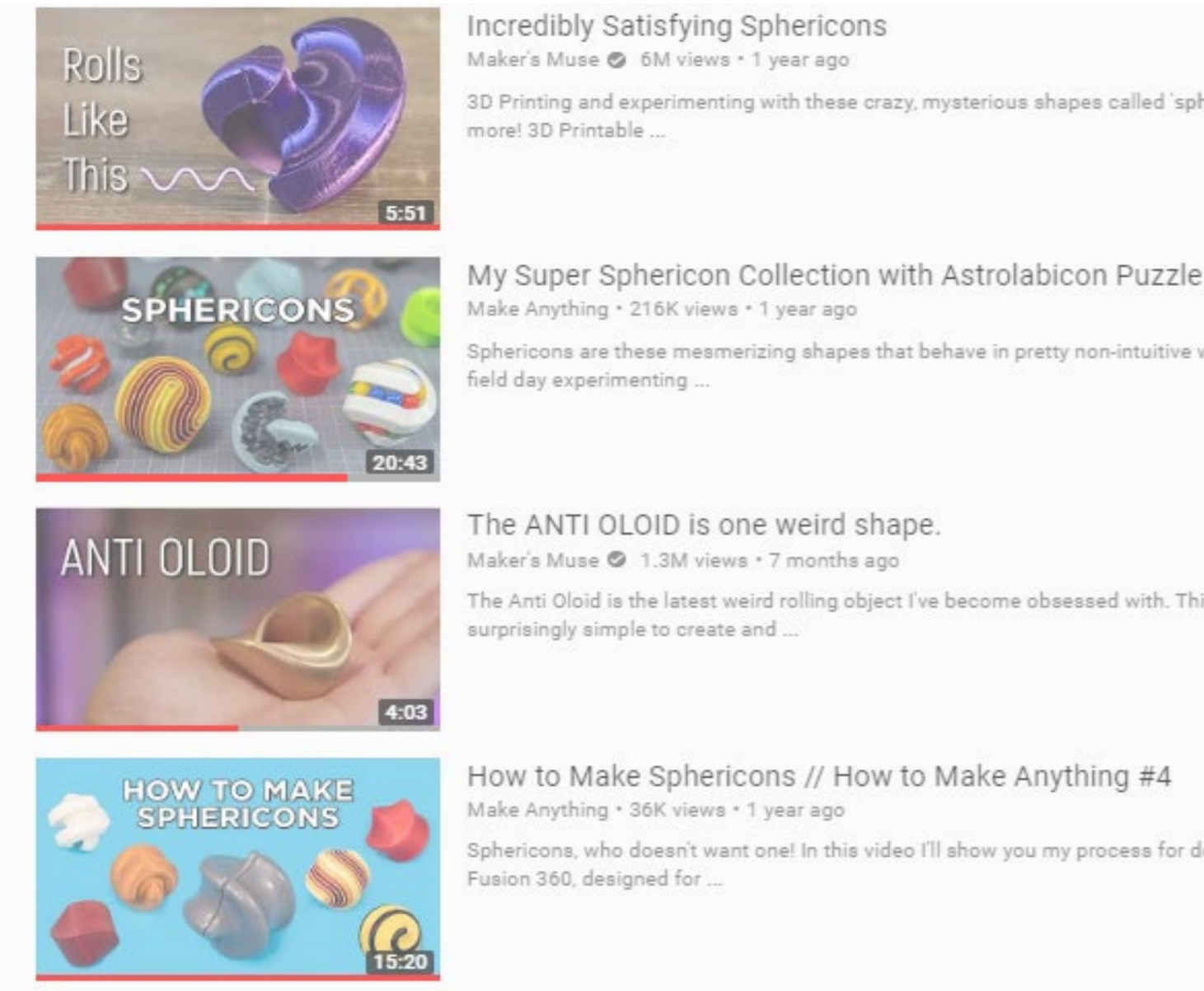
- The OLOID - The stunning geometric shape invented in 1929 by Mathematician & Architect Paul Schatz, brought to life.
- Stunning Shape, Mysterious & Hypnotic rolling motion will captivate audiences of all ages
- The brilliant polished surface signifies value, perfection importance
- Each piece hand-crafted from Solid Molten Stainless steel that will last until eternity
- Perfect for a design piece, a desktop ornament, coffee table conversation starter or therapeutic object to grasp during intense focus.

### Frequently bought together

These are awesome!!!! and they roll in a weird way. But making them out of metal will be really hard. And it would cost a fortune and it's already been done not very original.

Nov 2019

# Integration:



**Incredibly Satisfying Sphericons**  
Maker's Muse • 6M views • 1 year ago  
3D Printing and experimenting with these crazy, mysterious shapes called 'sphericons' more! 3D Printable ...

**My Super Sphericon Collection with Astrolabicon Puzzle**  
Make Anything • 216K views • 1 year ago  
Sphericons are these mesmerizing shapes that behave in pretty non-intuitive ways. I spent a field day experimenting ...

**The ANTI OLOID is one weird shape.**  
Maker's Muse • 1.3M views • 7 months ago  
The Anti Oloid is the latest weird rolling object I've become obsessed with. This is surprisingly simple to create and ...

**How to Make Sphericons // How to Make Anything #4**  
Make Anything • 36K views • 1 year ago  
Sphericons, who doesn't want one! In this video I'll show you my process for designing them in Fusion 360, designed for ...

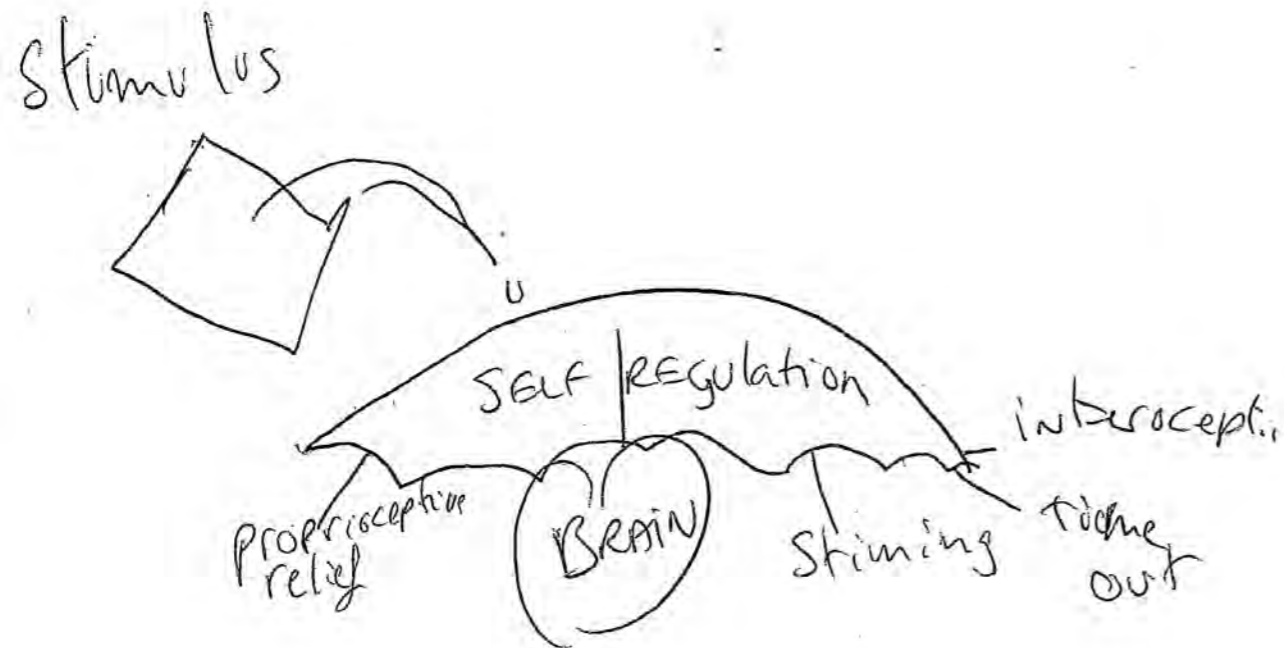
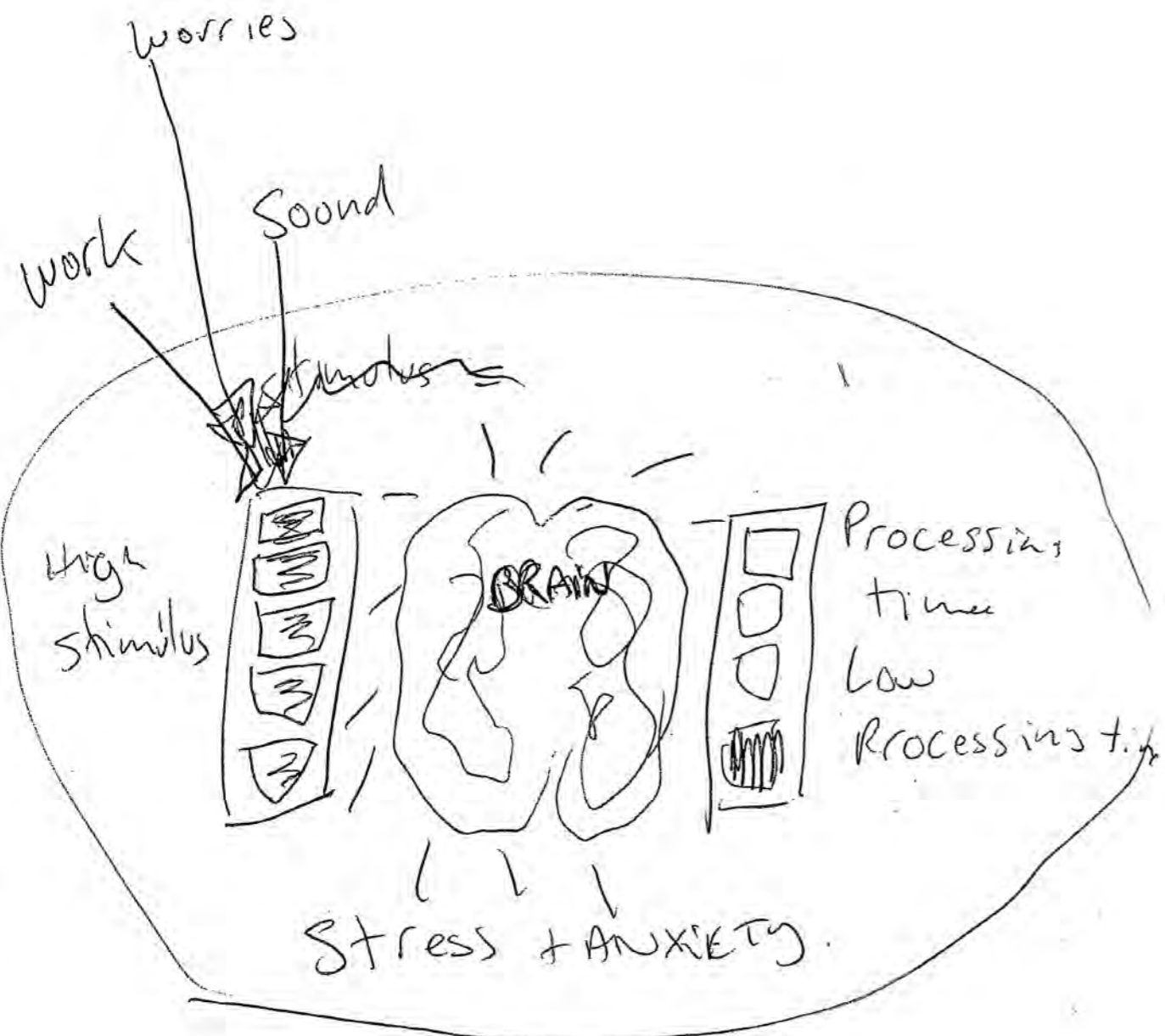
After discovering Oloids as shape I soon found Sphericons too. These shapes and the strange way they rolled were immediately appealing to me and I felt I had found the shape/style of object I was going to go forward and make.

INTEGRATION

TECHNICAL

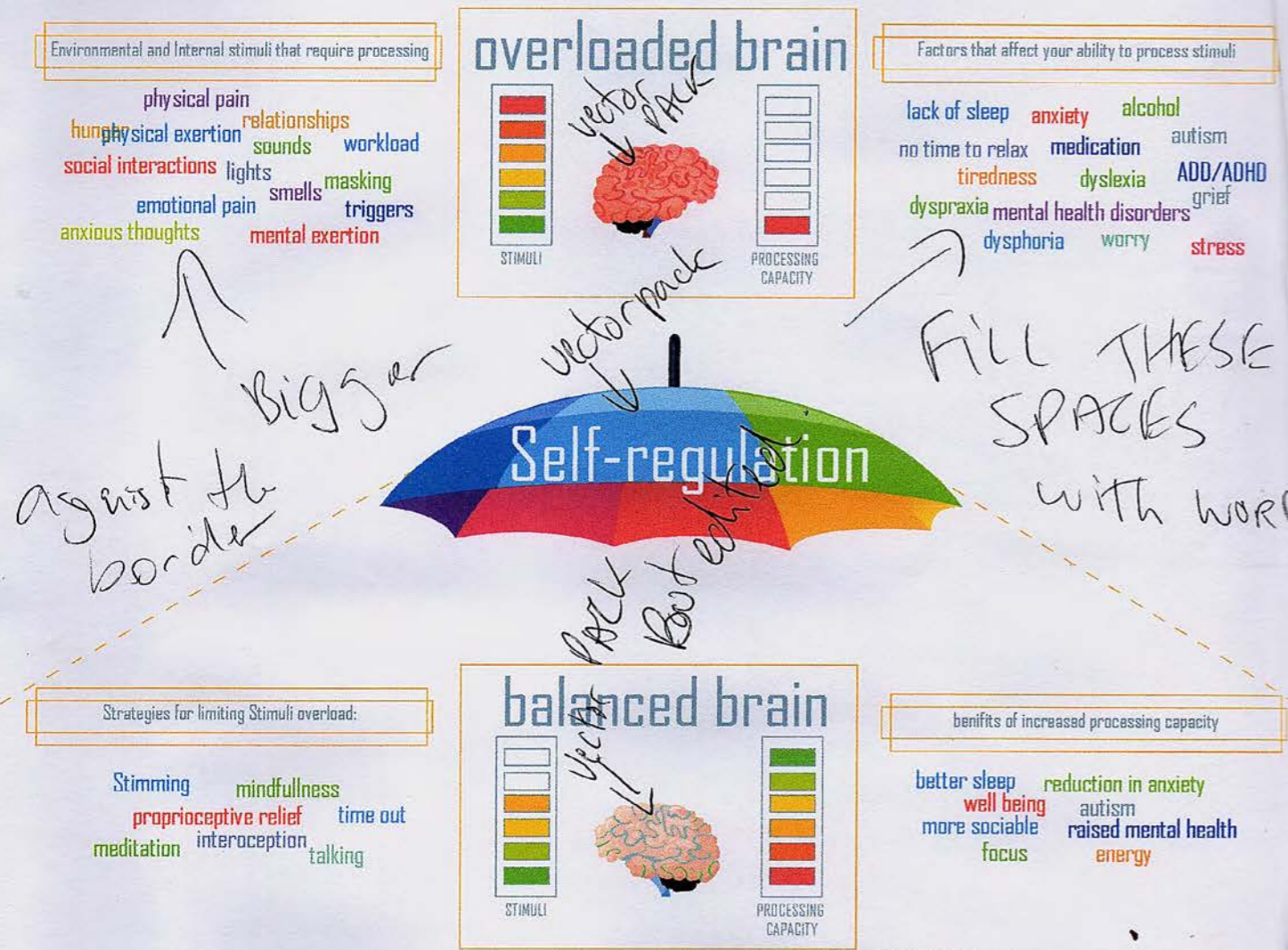
RESOLUTION

[https://www.youtube.com/results?search\\_query=Sphericons](https://www.youtube.com/results?search_query=Sphericons)



# Self-Regulation

Self-regulation is about doing small things throughout the day to help give your brain time for processing and therefore to avoid becoming overloaded.



I like to print off the images that I am working on to make edit notes on them. For some reason having them printed out on paper allows me a sense of objectivity and helps me see what needs to be tweaked. This was the first version of my poster.

INTEGRATION

RESOLUTION



# Integration:

The screenshot shows a webpage from HARKLA. The main heading is "THE 10 BEST FIDGET AND STIM TOYS TO IMPROVE FOCUS IN CHILDREN WITH AUTISM" by Alescia Ford-Lanza MS OTR/L, ATP, dated May 18, 2019, with 4 comments. The featured image is a colorful, starburst-like fidget toy. Below the image is a quiz titled "WHAT'S YOUR CHILD'S CALM AND FOCUS SCORE?" with a "Take the Quiz" button. A sidebar on the right contains a "RECENT ARTICLE" section, a "SIGN UP" form for a newsletter, and a section for "101 of the Best Toys for Kids with Autism (OT Recommended)" with an email sign-up form. A table of contents is visible on the left side of the page.

HOME / SPECIAL NEEDS < PREVIOUS / NEXT >

RECENT ARTICLE

ACTIONABLE AD EXPERTS

Sign up for our wee on special needs!

Name

Enter your email

SIGN UP

Updated by Molly Shaw Wilson MS OTR/L BCP

**WHAT'S YOUR CHILD'S CALM AND FOCUS SCORE?**  
Take our short quiz for your score. We'll give you resources and our recommendations!

Take the Quiz

If you are on this page, then chances are you either already know what stimming behavior is, or are curious about it and what can be done to help alleviate it.

Before we get into our list of the 10 best autistic stimming toys, let's take a quick look at what stimming behavior is as it relates to autism.

Also, if you'd like to learn more about our top picks for adult sensory products, click [here](#).

1. **What to Know about Stimming Behavior**
2. **Stimming for Sensory?**
3. **Stim Toys & Fidget Toys**
4. **Top 10 Stim Toys**
  1. **Toys to fiddle With**
  2. **Toys to shake**
  3. **Light up toys**
  4. **Musical toys**
  5. **Toys to squeeze**
  6. **Toys to watch**
  7. **Spinning toys**
  8. **Something to mouth**

**101 of the Best Toys for Kids with Autism (OT Recommended)**

We've put together an eBook covering the best toys for autism. Enter your email below for the eBook!

Enter your email address

Send my free eBook

Having decided to develop a stim toy, the first logical step for me was to do some market research:

1. What is on the market?
2. How are these objects marketed?
3. What appears to be the market audience?
4. What materials are used?
5. What are the attributes to those materials?
6. What does the object do?

From our previous post, [Learning to Learn to Know About Fidget Toys for ADHD and Anxiety](#), you learned about some of the benefits of fidget toys for support, focus and engagement.

Fidget toys can be stim toys and vice versa!

The benefits of both are positive, no matter what the toys are called. That being said, we will refer to the products in this article as "stim toys" because they are often chosen to redirect or replace "stim" behaviors.

For people with autism, the recommendations for complexity and function of stim toys may be slightly different depending on the user's motor skills, preferred stim behaviors, and reasons for implementing a stim toy. Some parents, behaviorists, therapists, or educators may base their selection of a stim toy in order to provide a more appropriate replacement behavior that is less distracting or less stigmatizing. In some cases, the stim toy redirects what may turn into self-injurious stim behavior.

Whatever your reason for researching stim toys or fidget toys for autism, keep the preferences and sensory profile of the user in mind so you can appropriately match the options to their needs. Remember, we all have multiple tools in our self-regulation toolbox, so explore multiple options!

### WHAT'S YOUR CHILD'S CALM AND FOCUS SCORE?

Take our short quiz for your score. We'll give you resources and our recommendations!

[Take the Quiz](#)

There is a long list of toys that could be used as stim toys, so we are breaking the list down into 10 different categories under which you can look for stim toys on.

If you have any favorite stim toys that aren't on the list, let us know in the comments!

#### 1. SOMETHING TO FIDDLE WITH: SHAKE IT, FLICK IT, FIDGET WITH IT!

One of the hallmark sensory seeking behaviors is hand flapping and finger flicking, these hand movements provide increased input to the joints of the arms and hands. In an attempt to curb some of these extraneous movements while still providing feedback, check out these toys to fiddle with:

- Koosh Ball



wiggly and colourful, round fits in your hand

Nov 2019

- Wood Fidget Puzzle



clicky clackey sound, wood feel, interactive

#### 101 of the Best Toys for Kids with Autism (OT Recommended)

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[Send my free eBook](#)

...to shake the following toys involve those finger and hand movements required to "fiddle", and then the upper arms and shoulders are involved when accessing these types of toys:

- Pop Toob



colourful, clickey movement

- Scarves - add different colors or textures for visual interest

#### 3. SOMETHING THAT LIGHTS-UP

Tapping into the visual system can be calming for many individuals, especially those with autism. Think about the visual effects of a lava lamp, waiting for a slow change.

- Light up Bubble Gun



bubbles, floatey and whimsical

Nov 2019

- Color Changing Eggs



thermo-reactive colour changing eggs! got to find me some pigment that does that!!

#### 4. SOMETHING THAT'S MUSICAL (ADDED BONUS FOR SOME IF THEY LIGHT UP!)

Tapping into the auditory/sound system is predictable sensory input that can offer a calming effect. Just make sure its a sound that is tolerable to caregivers and adults too!

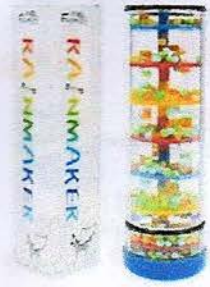
- Light Up Maracas or Tamborine

#### 101 of the Best Toys for Kids with Autism (OT Recommended)

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Enter your email address

[Send my free eBook](#)



colourful, clickey movement, sound, rushing. unpredictable but contained.

Nov 2019

- Wiggly Giggly Ball

### 5. SOMETHING TO SQUEEZE

These sensory toys can offer fine motor benefits as they tap into hand strength to pull, squeeze and squish. The proprioceptive and tactile systems are engaged when manipulating squeeze toys, both systems offer self-regulation benefits.

- Spiky, gooey, squishy sensory balls - throw, squeeze, stretch
- Crazy Aaron's Thinking Putty

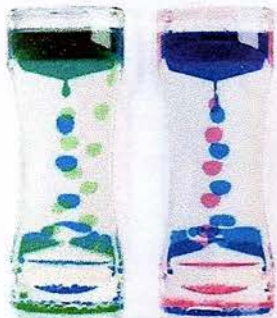


squishy, colourful

### 6. SOMETHING TO WATCH

The visual system is engaged when viewing the following sensory toys; it is important to evaluate the toy to make sure it is calming and regulating or alerting and arousing so that it aligns with your goal for the child.

- Liquid Timer



Colourful, bubbles and drippy movement, unpredictable but contained.

- Rain Stick

### 101 of the Best Toys for Kids with Autism (OT Recommended)

We've put together an eBook covering the best toys for autism. Enter your email below for the eBook!

Enter your email address



None of these are really relevant

### 7. SOMETHING TO SPIN

Spinning toys also stimulate the visual system and can have different effects for each individual. For example, using a fidget spinner can be calming for some kids, but watching things like a carousel or a swing elicit a feeling of dysregulation for others.

- Spinning Top
- Mini Spinny or Spin Again

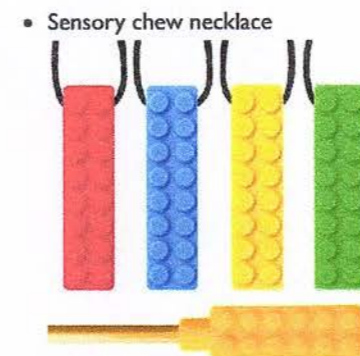


Plus these are all for kids, I want to find some that are made for adults. Nov 2019

### 8. SOMETHING TO MOUTH

Often, kids with autism can be seeking oral motor input, and may do so inappropriately - often ruining clothing, and/or putting non-food items in their mouths. In an attempt to find a replacement item that satisfies the need for oral/chewing input, consider trying one of the following:

- Spiky slap bracelet
- Other chewable jewelry like:




### 101 of the Best Toys for Kids with Autism (OT Recommended)

We've put together an eBook covering the best toys for autism. Enter your email below for the eBook!


Enter your email address

Send my free eBook

# Integration:




- Bitey Beads



### 9. SOMETHING TO BUZZ

Vibrating toys stimulate the tactile and proprioceptive systems. The constant input combined with some deep pressure can offer a sense of calm and organization. Some toys that engage the mouth (like a vibrating toothbrush) can also have oral motor effects that help with food tolerance or speech development too!

- Massager
- Vibrating Snake



### 10. SOMETHING TO LINE UP

Many parents of kids with autism report some atypical behaviors when playing with toys at an early age. They may line up cars, organize animals according to size or color, or something that looks like non-functional play. Seeking order is calming for them, and makes sense in their world. From a sensory perspective, the behavior of lining up toys engages both the tactile and visual systems.

- Cars
- Blocks

**101 of the Best Toys for Kids with Autism (OT Recommended)**

We've put together an eBook covering the best toys for

What did this research reveal to me?

1. Thermo reactive pigment!!

TECHNICAL

2. Stim toys seem to be very child focus:

This is something I already knew but it confirmed to me that it was important to differentiate between a child stim toy and an adult stim toy.

INTEGRATION

3. Bubbles and blobs, movement

TECHNICAL



Integration:

**CALMING ORAL SUPPORTS**

**ECO-FRIENDLY STEEL STRAW SET (WITH CLEANING BRUSH AND TRAVEL POUCH).**



Did you know that drinking thick liquid through a straw has been proven to provide many regulatory benefits, including having a regulating effect to calm and soothe when needed?



Also featured in our Hygge Me Calm Sensory Support Package with Bamboo Drinks Bottle.

There are many ways to bring sensory supports to your day. Explore different smoothie and milkshake recipes to support your calm.

This Eco-friendly steel straw set comes with three steel straws, a cleaning brush and carry pouch. Easy to carry in your bag to avoid the dreaded disintegration of paper straws in your mouth when eating out or use with your drinks bottle as a regulation support at work or home.

These straws are also available in our sensory support package 'Sensibile Sensory Care Gift Set'.

Eco-friendly Reusable Stainless Steel Drinking Straws from £5.00

**THE FEATHER TRIO NECKLACE SET**

The feather has been thought to symbolize the connection between our mind, body and spirit. 'Ack, ahn, fiddle, ahn'. These necklaces are made from food grade silicone and natural wooden beads for simple elegant designs and discrete sensory support. Use as a hand fidget or suck and chew for calm and comfort. These necklaces are a 'must have' for on the go sensory support.



Feather Turquoise Chewie Necklace £5.00



Feather Pink Chewie Necklace £5.00



Feather Grey Chewie Necklace £5.00

**SPINNER-RINGS**

THERE ARE MANY WAYS THAT YOU CAN USE VISUAL SUPPORTS TO PROMOTE MORE OPPORTUNITIES FOR CALM WITHIN YOUR DAY.



Did you know that providing yourself with a fidget support can help your concentration?

Did you know that you can use visual supports to create a calming focus when relaxing or meditating?

Many people find that by having a discrete visual support available to them when at work or travelling, it can help reduce the anxiety during busy and stressful times.

Silver Steel Spinner Ring £10.00



Rainbow Clear Spinner Ring £10.00

Having a fiddle support can also help with transitioning from a busy to calm pace such as work to home when used as a transitional object.



Rainbow Cross Spinner Ring £10.00

<https://www.hygge.me.uk/>

One of the very few designers that I could find who specialised in stim and sensory toys for adults. She has a master's degree in inclusive arts and has been very helpful in giving me insights into what literature to read at the start of my project.

INTEGRATION

# From Sensory Room to Living Room

## Integration:

### Focus group ethics proposal:

The idea was to have 10 to 15 people with varying experience of stimming and stim toys come to a focus group to evaluate my stim toys.

1. Some neurodivergent and some neurotypical.

2. They would be asked to attend an hour and a half meeting where we would all sit around a table together discussing topics around self-care in public.

3. On the table would have been a selection of stim toys made by me and also some commercially bought toys.

4. The principle was to not directly discuss the stim toys during the discussions but rather use them as they should be used to help a person remain relaxed and increase focus.

**B Does your research project require ethical review?**

Does your project require ethical review?

The following checklist should be used to determine whether your project falls within the scope of the University's Research Ethics Policy, and whether ethical review will be required (see section 3 of the [Research Ethics Policy](#) for further information on the types of research that fall within its scope).

**B1: Does your project involve any of the following (please tick all that apply):**

- The participation of humans (eg interviews, surveys, focus groups, observations, photography, audio or video recording, physical activity or invasive/intrusive procedures)?
- The use of bodily materials derived or obtained from humans?
- Access to, collection of or use of personal human data or property? (personal data is data about an individual from which they could be identified)
- Access to, collection of or use of (non-personal) sensitive or confidential data?
- The potential to expose any person, whether or not participating in the research, to physical or psychological harm?
- The potential for significant negative impact on or damage to the natural environment?
- The potential for significant negative impact on culture or cultural heritage?
- The use of, or study of animals of any kind?
- Any other ethical issues raised by this research project that in your opinion would warrant ethical review?
- None of the above.

**C Course information**

**C1 Course title**

3d Design and Craft BA(Hons)

**C2: Module Code**

ADD315

**C Supervisor Details**

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**E2: Please indicate on the checklist below any potential ethical issues (please select all that apply):**

- Will the research present any physical risk to participants (including the researchers), such as the potential to cause them harm, more than minimal pain or discomfort, or exposure to dangerous situations or environments?
- Will the study involve participants who could be considered vulnerable, or could participants feel coerced or obliged to take part or disadvantaged by not agreeing to participate?
- Will participants be asked to discuss or reflect on sensitive topics, or could the research cause them stress, distress, anxiety, humiliation or other negative emotions?
- Will participants take part in the study without their knowledge and/or consent at the time, or will the research involve deception?
- Does the study require the co-operation of a gatekeeper in order to access participants?
- Will the research involve access to records of a confidential, personal or sensitive nature, or collecting personal/visual information (eg photographs or video recordings) that could potentially be sensitive?
- Will the research involve accessing participants or data of a personal nature via an online environment or internet setting (eg chat rooms, social media, instant messaging etc)?
- Will financial inducements (other than reasonable expenses and compensation for time) be offered to participants?
- Might the research involve the disclosure of confidential information beyond the initial consent given?
- Will the research involve the use and/or storage of human tissue (including bodily fluids such as blood, urine or saliva)?
- Does the research raise any other significant ethical issues?
- None of the above issues apply.

**E3: Does the research have the potential for causing significant negative impact on the environment (including animal or plant populations, or rare or protected species, habitats or sites)?**

Yes

No

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**Research involving activities or locations with potential for risk of harm**

It is likely that your research will require a health and safety risk assessment. If you are a member of staff and have access to the AssessNET online risk assessment tool, you should use AssessNET to carry out your risk assessment. Download your assessment as a PDF, and attach it at question L5.1 on section L of the BREAM form. You can find information on AssessNET and how to log into the system here. Alternatively, if you don't have access to AssessNET, you can complete a Word version of the form, which can be found here.

You can also find some example templates of risk assessments below:

- Research risk assessment (low risk)
- UK travel trip risk assessment (low risk)
- International travel trip risk assessment (low risk)

**E4: Will the research be conducted outside the UK?**

Yes

No

**E5: Some Schools may carry out research that involves particular types of risk on a routine basis (eg taking blood, manual handling of participants or working with specific hazardous substances, involving children as participants in a school setting, taking photographs or videos of participants), and may already have specific protocols that cover procedures and guidelines for dealing with these risks. Are any of the ethical risks you have identified covered by such a protocol (if you are unsure please seek advice from your supervisor or the administrator/chair of the ethics panel or committee)?**

Yes

No

**E7: If you have ticked any of the issues on the above checklist, it is likely that your research will require Tier 2 review by a Cross-School Research Ethics Committee. Please indicate below whether you consider that your proposal should go for Tier 1 (School level) review or Tier 2 (CREC) review.**

My proposal involves a low level of ethical risk and should be reviewed at Tier 1 (School) level.

My proposal involves a higher level of ethical risk and should be reviewed by a Tier 2 Cross-School Research Ethics Committee.

**E8: To which School Research Ethics Panel are you applying? (Please note that this should normally be the Panel for the School in which you are based). If you have any questions about the review process please contact your School Research Ethics Panel Chair or Administrator.**

School of Art

**F Description of Project**

Page 5 of 13

**F1: Please provide a brief outline of the proposed project, including the aims, purpose and design of the study, and the research methods to be used. (Maximum 10,000 characters)**

Description of project:  
The primary function of this research project is to invite a selection of people, with a range of sensory needs, to come and physically test the objects that I have been designing. These objects are known in common terms as 'Stim' toys. They are generally used by autistic people but have been gaining in popularity amongst those who suffer anxiety and depression. My toys have been designed for use by adults as my research has shown a lack of adult sensory toys on the market at the moment. The idea is to create objects that can improve sensory health and promote wellbeing through positive daily routines as part of a comprehensive self-care plan. The secondary function of this research is to build on my previous research around self-care in public places. This is one of the core autism considerations for all of my products. My goal is to help people feel more confident about self-care in public spaces, by producing items that have social value rather than repurposed children's toys or uniquely medical equipment. Gathering anecdotal stories from real world situations is essential for me to make crucial decisions on my product designs and how they are represented to the public.

Research Approach and Methods:  
I will be inviting between 10 and 15 participants to attend a focus group meeting that will last around 1 hour to 1.5 hours. I will be asking them to discuss specific topics as a group. It will be sound recording the conversations.

- Stimming.
- Self-care in public places.
- Self-care in private places.

I will have a selection of 'Stim' toys on the table, some made by me and others that I will loan from the 'Scope's Local People Program. I will have two cameras and tripods that will be making the table and people's hands using the objects. This will help me gain visual knowledge of how people interact with the 'Stim' toys. I will have a handheld camera to take photos of people using the items also. Participants will fill out an anonymous online survey. The questions will be focused on the user experience of the 'Stim' objects that I have designed. The venue will be wheelchair accessible, private room with good lighting conditions and away from external sensory noise contributors that may affect the participants.

**H Participants**

**H1: What sort of participants (eg age range, ethnicity, number, gender) are to be recruited? Will any vulnerable groups or individuals be involved (consider the concept of 'vulnerability' in its broadest sense)? (Maximum 1,000 characters)**

All participants will be aged 18+ and of any gender. The ideal would be to have half of the participants would identify as neurodivergent (self-identification is accepted) and the other half a mixture of neuro-typical people that have and haven't had 'Stimming' before. The participants will have a range of disabilities that vary from physical disabilities to mental health issues and those on the Autistic Spectrum.

**H Inclusion/Exclusion Criteria**

**H2: What inclusion/exclusion criteria will be used? Are there participants who would not be suitable for your research? Is exclusion from the research likely to deny an individual access from services or opportunities that would otherwise have been provided? (Maximum 1,000 characters)**

Inclusion criteria: Over 18+ and an interest in using stimming and stim toys to help manage daily sensory needs.  
Exclusion Criteria: Those under 18, People with no prior knowledge of stimming or stim toys, 'vulnerable' people who are unable to give their best consent.  
\*Hard definition of Vulnerable People:  
"A vulnerable adult is a patient who is or may be for any reason unable to take care of him or herself, or unable to protect him or herself against significant harm or exploitation."  
[www.ubc.ca/health/ethics/consent/Consentlawupdate/WhatIsMeantByVulnerableAdult.aspx](http://www.ubc.ca/health/ethics/consent/Consentlawupdate/WhatIsMeantByVulnerableAdult.aspx)

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# From Sensory Room to Living Room Integration:

## Focus group ethics proposal: keeping data safe

A serious concern for this type of focus group is that some people do not want to publicly disclose that they have an invisible disability or long-term health condition. This meant that I needed to have a very tight plan of how I would use photographs and statements.

1. All the attendees were to remain anonymous.
2. There would be footage and photographs but only their hands and arms would be in shot.
3. They would be given the opportunity to cover up or remove anything that may identify them on their hands and arms.
4. All attendees would sign an agreement that the photos could be used in social media and publications to the general public.
5. The discussions were to be recorded and transcribed

be me within 72 hours and then permanently deleted. This would have been another measure to keep the attendee's personal information safe.

### H Recruitment of Participants

H6 How will initial contact be made? Include details of gatekeepers and others who are to be approached. Please supply a copy of any means of advertising, such as posters, leaflets, emails, web pages or letters (you can upload these in the Documents section of this form) (Maximum 1,000 characters)

I have set up a Facebook event page for this project. It is on my business profile and I have invited specific people to join the event. I have also made it public so anyone can show interest. I run an organisation for what with invisible disabilities and this means I have connections with a large number of people who would be suitable for participation. Additionally, those people are professional acquaintances so will not be affected by friendship or other contributing factors. Because of the nature of my working relationships with these individuals, I already have a knowledge of how their conditions affect them. This will allow me to select a range of people with different sensory sensitivities. For those that I do not have this information already, I have simply asked them if they '50m' or are interested in the idea of using '50m toys to manage their sensory health. I have asked for people to fill attending as a show of interest and that I will select individuals from that pool.

### H Voluntary Participation

H8 Will participation be voluntary and free from coercion? Will participants be able to withdraw from the study at any time without giving a reason? If so, will it still be possible to withdraw their data (this may not be possible once data has been anonymised or aggregated, or in a group situation such as a focus group where it may not be feasible to remove individuals' data). Please consider any existing relationships you have with participants that could potentially influence their decision whether or not to take part. (Maximum 1,000 characters)

yes

### H Information for Participants

H5 Please outline how participants will be informed (orally and/or in writing eg via a participant information sheet) about the research and their participation in it. How will you ensure that information is provided in a format/language suitable for the target audience? (you can upload participant information sheets in the Documents section of this form) (Maximum 1,000 characters)

I will be asking each participant to sign several consent forms (see attached documents). These will be created in the participants and signed on the day with verbal explanation from me. I will be using clear language and ensure that each applicant understands exactly what is said on the forms they are signing, with verbal assistance if required. I will be selecting adults that have an ability to read and write in English and are cognitively capable of understanding what is being asked of them.

### H Consent

H6 Will participants give consent to take part prior to their participation?

- Yes  
 No

Page 7 of 13

H6.1 Describe how consent will be sought and obtained, eg via a consent form. If written consent is not being obtained, please explain the reason and give details of alternative arrangements that will be made. (you can upload consent forms in the Documents section of this form) (Maximum 1,000 characters)

They will give consent on the day of the focus group. (please see attached consent forms)

### H Payment

H7 Will participants be reimbursed or paid for their expenses and/or time? If so, please provide details of any payments or vouchers to be offered, refreshments etc to be provided, or other reward such as entry into a prize draw. You should ensure that any payment or reward is proportionate to the level of participation, and does not constitute an inappropriate inducement to take part. (Maximum 1,000 characters)

Participants will not be reimbursed for their participation.

### I Confidentiality and Data Protection

### I Confidentiality, Anonymity and Privacy

I1 Please describe what arrangements will be made to anonymise data, to guard against invasion of privacy or to ensure confidentiality. If there are limits to confidentiality (for example, if someone reveals the threat of potential harm to themselves or others, or an instance of professional malpractice) please describe those and say how they will be addressed. (Maximum 2,000 characters)

Each participant will be given an anonymous name. Video footage will only be of their hands playing with the toys. Any jewelry that may identify them will be removed by the participant. Participants will be given the option to remove any jewelry and/or cover and marks or tattoos that may identify them. I will supply medical tape for those who wish to use it in this instance. The Facebook event page list of attendees is private, which means it is only visible by me. Audio recordings will be transcribed and redacted will be referred to by their anonymous name.

### I Data Storage and Handling

Page 8 of 13

I2 Please describe what arrangements will be in place for the collection, handling, transfer and storage of data (both physical and digital), how long it will be retained and how it eventually will be destroyed (normally for staff research, data should be kept for a minimum of 10 years and for student research, data should be retained at least until their award has been conferred). Who will have access to the data other than the researcher (eg supervisors, transcribers), where will the data be published (eg dissertation, academic paper, exhibition, online), and who will have access to the results? (Maximum 2,000 characters)

I have been funded by both the NHS (4 years) and Brighton and Hove City Council (3 years), yearly updates on how to manage personal information. I will be transcribing all the relevant information that I have received from the focus group within 48 hours and identifying the participants by their anonymous name. I will then permanently delete the audio recordings. The video footage will be seamless, and the cameras will be angled in such a way that only hands will be able to be seen. The video footage will be used as part of my end of year exhibit and be published on social media with the participants consent. The Facebook event is public, but the list of attendees is only visible by me. And once the event is over, I will permanently delete it from Facebook. I will be asking the participants to answer an anonymous questionnaire at the end of the focus group. I will be using the JISC online Survey.

### I Collection or Use of Personal Data

I3 Will you be collecting or using sensitive (special category) personal data (ie from which participants could be identified) as defined by the GDPR (Personal data from which participants could be identified that reveals racial or ethnic origin, political opinions, religious or philosophical beliefs, trade union membership, the processing of genetic data or biometric data for the purpose of uniquely identifying a person, data concerning health or data concerning sex life or sexual orientation)?

- Yes  
 No

H4 Will any personal data be collected, stored or transferred outside the UK or European Union?

- Yes  
 No

### J Ethical issues, risks and benefits

Ethical issues and risks: If you ticked 'yes' to any of the ethical issues in section E of the form, you will be prompted to address these below. For each of the types of issue, please identify any potential ethical risks and say how they will be addressed, and how any negative impact(s) will be minimised. Please ensure that you complete a risk assessment form and upload it to your submission in the Documents section of this form.

### J Sensitive Topics and Potential for Distress

Page 9 of 13

J3 Discussion or reflection on sensitive topics, or potential for causing participants stress, distress, anxiety, humiliation or other negative emotions.

I will be asking them to discuss specific topics as a group:  
1. Stimming,  
2. self-care in public places  
3. self-care in private places  
These conversations occur later in the sensory room. As specified in the Participants Information Sheet, if the discussion becomes challenging for any participants, I may end that topic and suggest that, if the participant let it was important to the research, they send me the information in writing at a later date. This will be referred to at the start of the session and I will seek verbal agreement from all present on the matter.

### J Access to confidential, sensitive or personal information

J5 Access to records of a confidential, sensitive or personal nature, or collection of personal visual information such as photographs or video recordings.

I will be video participants hands and recording the topics discussed, which will then be transcribed and referred to anonymously. I will be photographing participants on a digital air camera through the focus group with their verbal consent for each photo in addition to their written consent given at the start of the focus group.

### J Benefits or Positive Impacts of the Research

J14 What are the expected benefits or positive impacts of the research on participants or their communities, or to any animals involved in the research? Possible impacts might include psychological, health, social, economic or political changes or ramifications, either at the time the research is carried out or in the future. Sometimes the benefits may be to the wider community or to individuals in the future, rather than to the participants themselves, and if so this should be made clear. For student research projects it may be that the benefits include the educational value to the student.

The expected benefits of this research is to gain more knowledge around the subject of self-care in a public setting. And to find out from users if the object I have designed would make them feel more comfortable to do that. This project could help many people with invisible disabilities feel happier to be themselves. It will feed into a movement that is happening now in the world of disabled people's rights that they should not have to hide their sensory needs. The project is also about empowering disabled people by creating desirable objects that are removed from the usual medicalised approach to managing symptoms of disability. The project is also about designing therapeutic objects for adults on the Autism Spectrum, as they are so often entirely forgotten about in the world of therapeutic design. The work will feed into the current Autism Rights campaign that Autism is not just for children.

### L Documents and Uploads

Please upload the following documents in support of your application where applicable. Please upload all files in PDF format.

### L Participant Information Sheets

Page 10 of 13

## Stim toy Focus group

1. would you consider Toy number 1 to be a stim toy? \*

- Yes
- No
- maybe

2. would you consider Toy Number 2 to be a stim toy? \*

- Yes
- No
- maybe

3. would you consider Toy Number 3 to be a stim toy? \*

- Yes
- No
- maybe

4. would you consider Toy Number 4 to be a stim toy? \*

- Yes
- No
- maybe

5. which Toy do you feel is most successful and why? \*

6. which is your least favourite Toy and why? \*

7. would you like to see these Toys in a softer, squishier material? \*

- yes
- no
- maybe

Comments:

8. would you prefer the larger Toys to be smaller and more portable? \*

- yes
- no
- maybe
- Other (please specify):

Comments:

9. Do you feel these Toys appeal to an adult market? \*

- yes
- no
- Other (please specify):

10. Do you feel these Toys are designed in a way that is appealing and desirable?

- yes
- no
- Other (please specify):

11. Do you feel these toys would help you feel better about self-care in public spaces?

- yes
- no
- Other (please specify):

12. would you use these Toys to self care in private spaces?

- yes
- no
- Other (please specify):

13. anything else you would like to add about the products that you have tested today? \*

# From Sensory Room to Living Room

## Integration:

### Focus group ethics proposal: questionnaire

At the end of the session, the attendees would have been asked to fill in an anonymous online form to evaluate how they felt about the stim toys I had designed.

This would have given me some real-world data to help me resolve some of the question that were brewing in my mind in regards to materials and colour choices.

I had very specific questions that I wanted answered. However, I tried to phrase the questions in a way as to not push my view onto the attendee, whilst at the same time getting the answers that I need.

For participants of: Stim Toy Focus Group

Hosted by: Chantal Absolom (C.SPENCER3D)

Location: University of Brighton

Date: 11<sup>th</sup> March 2020

Thank you for agreeing to participate in my research project. Please could you confirm your dietary requirements in the form below by ticking the according box.

Many thanks,

Chantal Absolom

DIETARY REQUIREMENTS	Yes	No
Gluten Free		
Vegan		
Dairy free		
Other		

Allergies	Yes	No
If you have responded yes to this question, please give details below.		

Name (please print).....

Signed..... Date.....

The screenshot shows a Facebook event page for 'Stim Toy Focus Group'. The event is public, hosted by C Spencer 3D, and is scheduled for Wednesday, March 11, 2020, at 12 PM - 3 PM at the University of Brighton. The page shows 226 people who have responded and 18 responses. There are 7 people going and 11 interested. The page also features a 'Get More Responses' button and a 'Track Ticket Sales' section.

# From Sensory Room to Living Room

## Integration:

Focus group ethics proposal: accessibility

It was of up most importance that this session was as accessible as possible.

1. Using Facebook to communicate and invite people to the session as this was easier for people to interact with rather than emails.

2. Dietary requirements sheet was so that I could have offered tea and biscuits to the attendees that would have dietary restrictions

3. The use of pronoun stickers, would have been used, in the session as a way to help our trans community feel welcome. Any meeting or event that I organise has these stickers and I designed the poster myself as an easy way to explain to people what the use of the stickers is for. The wording came from Brighton and Hove city council website.

4. Having a clear agenda for people to be aware of before they arrived would have helped with any anxiety about the event.

5. I kept the times short and concise to not tire people out.

### WHAT ARE PRONOUN STICKERS FOR?

THE 'MY PRONOUNS ARE' STICKERS AIM TO POINT OUT THAT **YOU CAN'T ALWAYS ASSUME WHAT SOMEONE'S GENDER IDENTITY AND PRONOUNS ARE.**

TRADITIONALLY, PRONOUNS HAVE ONLY DESCRIBED MALE OR FEMALE – HE OR SHE, HIS OR HERS. IN THE PAST PEOPLE WERE FORCED TO CONFORM.

NOW THERE IS MORE FREEDOM AND SAFETY TO BE OURSELVES. **BUT THERE'S STILL MORE TO DO.**

**WE ARE ALL FREE TO DEFINE OUR OWN GENDER AND WE SHOULD ALL RESPECT OTHER PEOPLE'S IDENTITIES, TRUTHS AND RIGHTS.**

IF SOMEONE'S PRONOUNS DIFFER FROM WHAT YOU ASSUME, IT'S FOR YOU TO ADAPT. IT'S OKAY TO ASK.

WHO A PERSON IS MAY NOT MATCH WHAT YOU EXPECT **AND MAY NOT BE DEFINED EASILY.**

GENDER DOESN'T NEED TO BE DEFINED. YOU DON'T NEED TO KNOW IN **ORDER TO HAVE A CONVERSATION, WORK OR TREAT PEOPLE WITH DIGNITY AND RESPECT.**

MAKING ASSUMPTIONS CAN BE HURTFUL AND DISTRESSING. IT HELPS TO KNOW WHAT PRONOUNS PEOPLE USE.

**READ THE BADGE, RESPECT PEOPLE, IT'S THAT EASY.**

### Focus Group Agenda

From Sensory Room to Living Room – Stim Toy Focus Group  
By Chantal Absolom

- 10:00 - 10:15:** meeting and greeting participants and taking them to the room
- 10:15 - 10:25:** Intro to project and what will be expected of participants.
- 10:25 - 10:35:** Labels and running through code of conduct.
- 10:35 - 10:40:** Consent forms.
- 10:40 - 10:55:** Open discussion around stimming in general:
  - Examples of stimming
  - Examples of stim toys used.
  - Unusual ways people might stim.
- 10:55 - 11:10:** Open discussion around self-care in public.
  - What is self-care?
  - What is self-care in a private place?
  - What self-care would you be comfortable with in public?
  - What self-care would you like to be able to do in public?
- 11:10 - 11:20:** Feedback on stim toys. Verbal feedback on stim toys. An open discussion about what positives and possible improvements.
- 11:20 - 11:30:** Quiet time. This time is for participants to fill in the anonymous online feedback survey questions.

Many thanks,  
Chantal Absolom  
[c.absolom@uni.brighton.ac.uk](mailto:c.absolom@uni.brighton.ac.uk)



# Participation Information Sheet

## From Sensory Room to Living Room – Stim Toy Focus Group

By Chantal Absolom

### The Project:

My Name is Chantal Absolom and I am currently studying 3d Design and Craft Ba(Hons) at the University of Brighton. I am in my final year and this project will be part of my degree show in June 2020. I have been working on a project which is all about Self-stimulatory behaviour, otherwise known as stimming. Having worked on designs for objects to stim to, over the last 4 months, I am now ready to have them tested by a group of individuals in a focus group at the university. My aim is to get feedback from people who use stim toys or have an interest in using them to manage their sensory health.

During the focus group we will be holding discussions regarding self-care in public, as my objects are designed to be desirable objects that would make a person feel more at ease to use in public.

This project is more than just a product design brief, I hope to create empowering work that supports those with disabilities to Self-care in public, enabling them to manage their sensory needs throughout the day which will help improve their standard of living. Raising awareness and creating beautiful objects for a sector of society that the design world often only considers in the medical format.

### Invitation :

I would like to invite you to take part in our research study. Before you decide we would like you to understand why the research is being done and what it would involve for you.

I will go through the information sheet with you and answer any questions you have. This should take about 5 minutes. Talk to others about the study if you wish and ask us if there is anything that is not clear. You will be given time to think about whether you wish to take part before making a decision and may take this sheet away with you.

### Why have I been invited to participate?

I am looking for 18yrs+ who are cognitively able to give consent, that have used Stim toys before or have an interest in using them to manage their sensory health.

### Do I have to take part?

This study is entirely voluntary, and you may withdraw from the study at any given point without giving a reason and without incurring consequences from doing so.

## Integration:

The whole process was very interesting and extremely valuable to have done despite the covid-19 pandemic putting a stop to it. I am pleased with how thoroughly I tackled this and feel that I learned a new skill and gained confidence in the level of research that I am now undertaking. Even though I didn't get any real-world answers from the focus group, I still had a pretty good idea of what I wanted to get out of it. However just the process of writing it all out helped me with my own conclusions later.



## Participation Information Sheet

### What will happen to me if I take part?

If you decide to take part, you will be asked to attend a focus group at the University of Brighton City Campus building. This focus group will have a maximum of 10 participants in total. You will all be in a room together and will be given name and pronoun labels, but no other personal information will be given to other attendees. You may use a false name at the focus group.

The focus group will last around 90 mins.

We will all sit around a table together and play with stim toys, some of them will have been designed and made by me.

During the focus group we will be having open discussions around self-care, in particular self-care in public, whilst participants test and play with the stim toys.

At the end of the session participants will be asked to fill in an anonymous feedback survey about the stim toys.

I will be videoing participants hands and sound recording the discussions around the table. I will also be taking ad hoc photos with an SLR camera, with additional verbal consent, if I feel it is relevant to the research.

You will be asked to remove jewellery and cover any identifying marks on your hands and forearms with medical tape, to ensure anonymity. We will supply the medical tape.

We will supply tea and coffee and biscuits (please fill in the dietary requirement form)

### What are the potential disadvantages or risks of taking part?

My aim is to create a safe space for discussing topics that could be emotional. As people may discuss times in which they had a negative experience self-caring in public or when they have felt they needed to but were unable to.

If the discussion becomes distressing for any participants, I may end that topic and suggest that, if the participant felt it was important to the research, they send me the information in writing at a later date.

### Will my taking part in the study/project be kept confidential?

- You may use a false name at the focus group
- All the participants data will remain anonymous.
- Any video footage will be solely of the participants hands, any jewelry or identifying marks will be covered.
- The audio footage will be transcribed by me within 48hours of the focus group and then deleted permanently.
- Each participant will be given an anonymous name in the transcription and no additional data will be held on them or collected.
- The Facebook event page where participants are showing interest, has a private list of attendees that can only be seen by me and will be permanently deleted once the focus group has concluded.



## Participation Information Sheet

### What are the potential benefits of taking part?

This research will help me design a new range of adult stim toys. This research will highlight issues that are rarely talked about and will help raise awareness of self-care and how important it is to remove the shame aspect of it that a lot of people face.

This research could help move forward attitudes to how we design for disabled people and will be added to the voices of those who are moving away from the conventional over medicalised approach to symptom management.

### What will happen if I don't want to carry on with the study?

All participants may withdraw from the study at any given point without giving a reason and without incurring consequences from doing so. You will be asked to give consent should you withdraw from the study, the data collected up to that point may be used by the researcher for the purpose of the study, you may revoke that consent at any point.

### What will happen to the results of the project?

The results will be published as part of my research document which will be shown at my final show in June 2020. You will be invited to the Private view for the whole show and also invited to attend a private view that will occur during one of the days that the exhibition is running. This will be at a time when there are much fewer people and will be more suitable for those who have physical impairments and/or sensory sensitivity.

### Contact details

Chantal Absolom

Email: [c.absolom1@uni.brighton.ac.uk](mailto:c.absolom1@uni.brighton.ac.uk)

Facebook: [www.facebook.com/cspencer3d](https://www.facebook.com/cspencer3d)

Instagram: [www.instagram.com/c.spencer3d](https://www.instagram.com/c.spencer3d)

### What if I have a question or concern?

You should provide contact details of a person independent of the research study who could be contacted in the event of any problem or concern. This should normally be the Chair of the ethics committee or panel that has reviewed the application, unless they have an involvement in the project or other conflict of interest.

### Who has reviewed the study?

Explain that the study has been reviewed and given a favourable ethical opinion by the relevant Research Ethics Committee or Panel.

**Technical:** Develop and apply in-depth, systematic understanding of technical, material and process experimentation



In the first stages of my projects, when I am still trying to decipher what I am actually going to make. I focused on how I would communicate my ideas.

In the past two projects I have used short films with illustrations to explain the more complex parts of my research and development. This year I intended to make a 3d stop motion animation of my 2d characters. I was playing around with

Jesmonite and different coloured flocking powder to see how they photographed. I cast them from the inside of actual Hen's eggs to get the perfect egg shape.

I didn't end up using any of these in my final work, but it gave me somewhere to start and as Picasso said:

*"Inspiration exists but it has to find you working"*





Background No 1  
Saved as Ai file. in 16  
animation  
folder.

File to  
Point at  
Home

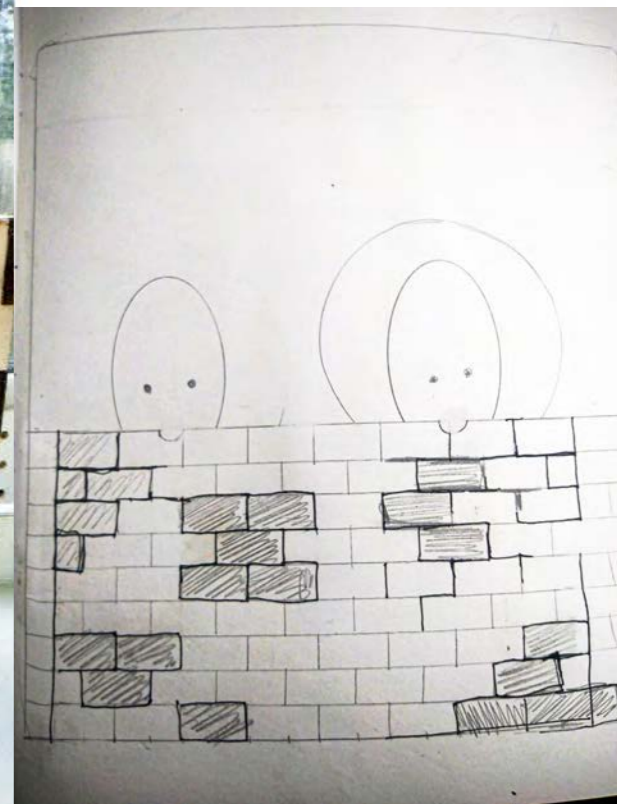
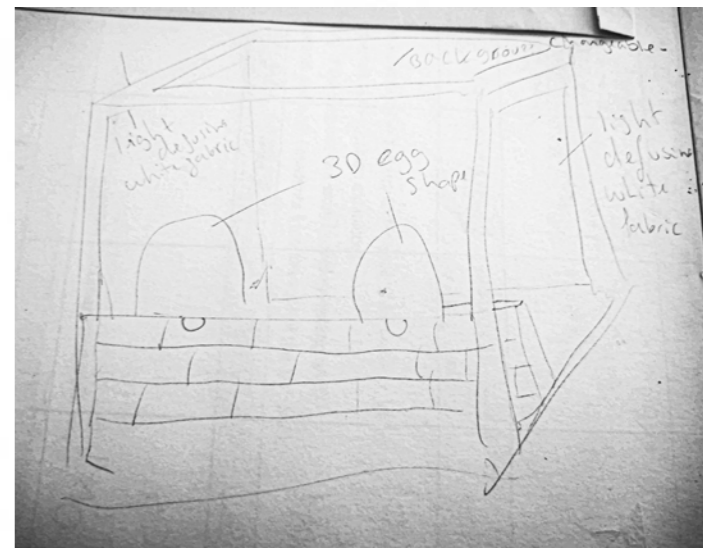
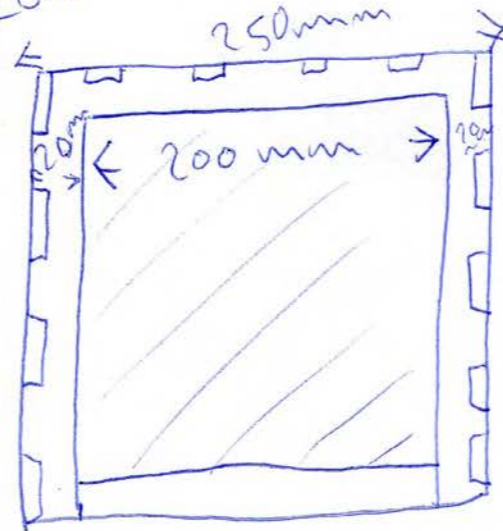


Space background  
Print at uni  
for quality -  
Print a 250mm  
by 250mm

Here I was looking at dolls house wallpaper and I designed a couple of things on illustrator. The top one is a re-peat pattern wallpaper and the lower one is meant to be a space themed background

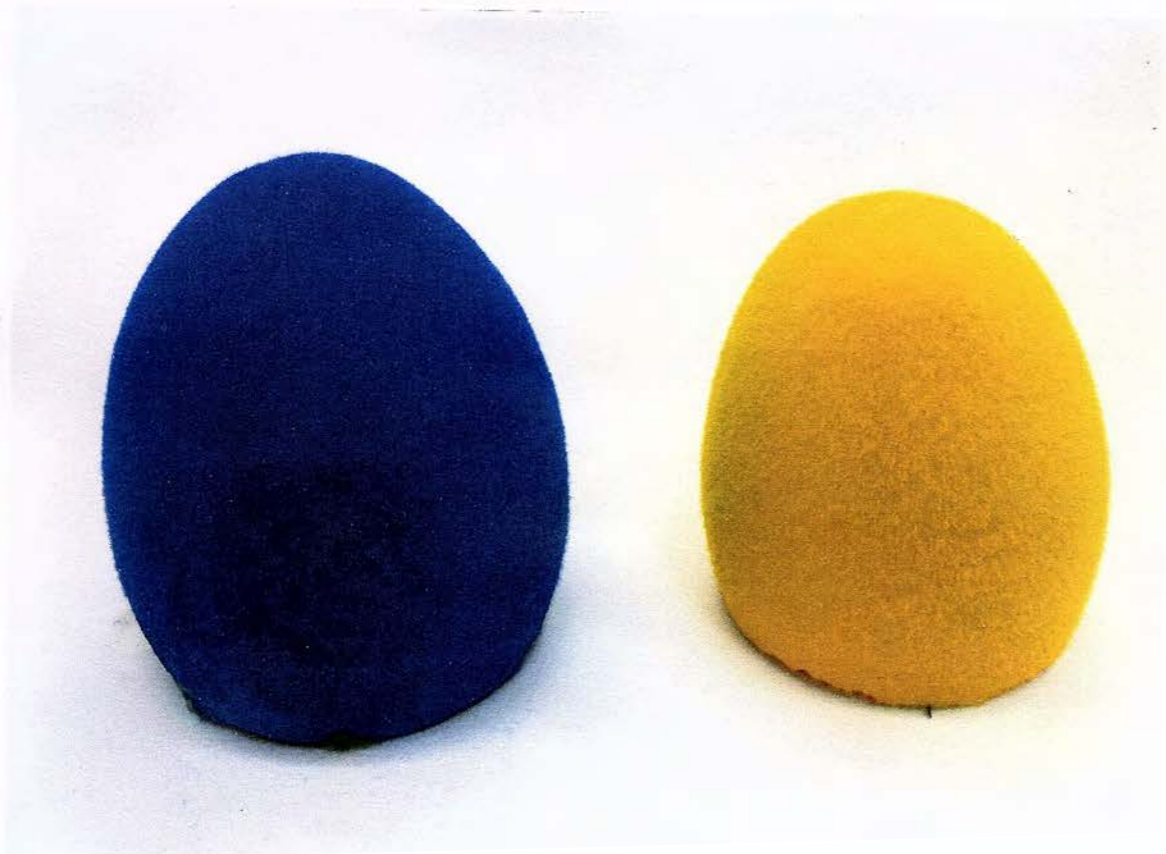
Oct 2019

FRONT The Stage prep for the stop motion film



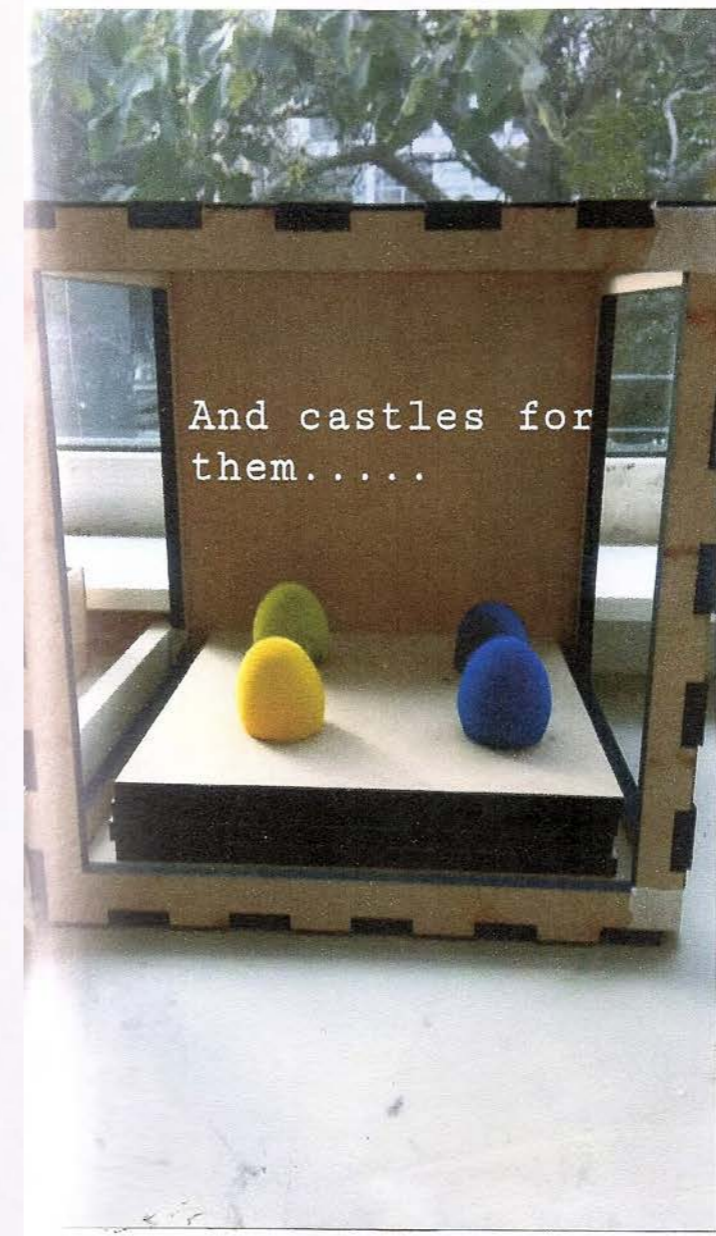
I designed a stage on illustrator that was laser cut out of plywood. The stage had open sides at top so that it could be light from several angles.

Oct 2019



I really like the way these Photograph and the contrast between the colours. The only issue is that the blue has more connotations towards being cold and less vibrant. So if I use the yellow and blue, one will be perceived as fun and the other dull. I think I need to do 2 vibrant colours.

Oct 2019



**Journal Instructions**

Select "Create new journal entry" and write or copy/paste into textbox.

Thursday, 10 October 2019

**version 3 of research document**

Posted by Chantal Absolom at Thursday, 10 October 2019 12:43:00

After my last tutorial with Nick I decide to focus on creating a simple jargon free way of explaining what I am intending to do this year. I used the method that we did in a group tutorial with Jenn last year, trying to get my ideas out in one sentence. I have edited the first few sections of the research framework document and next week I will focus on creating a plan for what comes next. I have decided to submit the newspaper that I have been working on over the summer as part of my proposition. Nick suggested I create diagrams to explain my theories and to clarify some of the jargon I need to use. I will try and get this done for Monday. The newspaper is not finished and will be something I will be working on all year as I intend it to be full for my final show. It's a way for me to collate a lot of my research in an interesting way, rather than just printing of endless reams of screenshots.

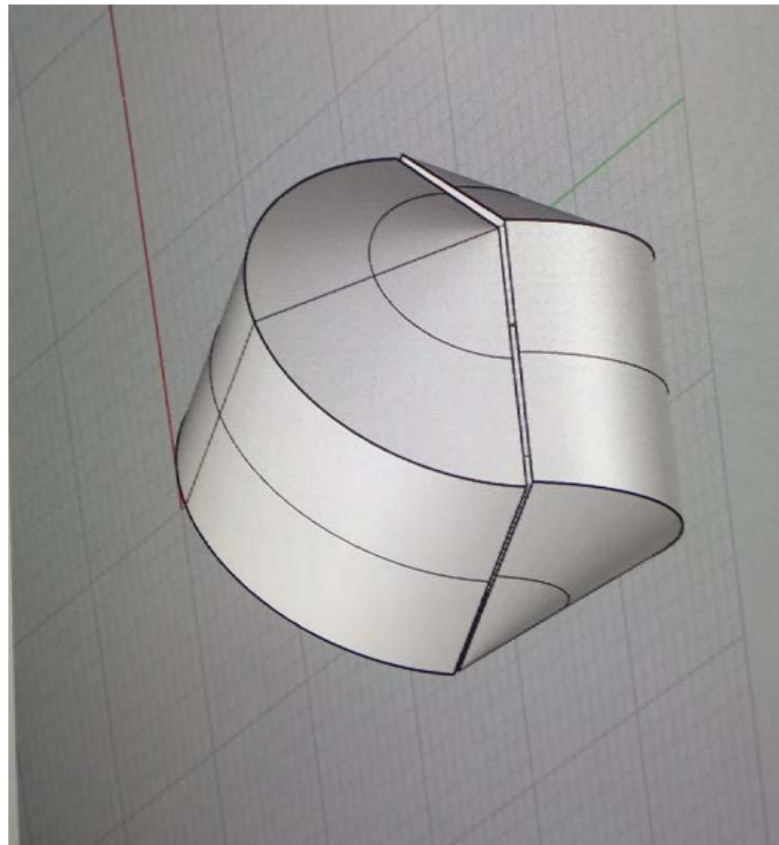
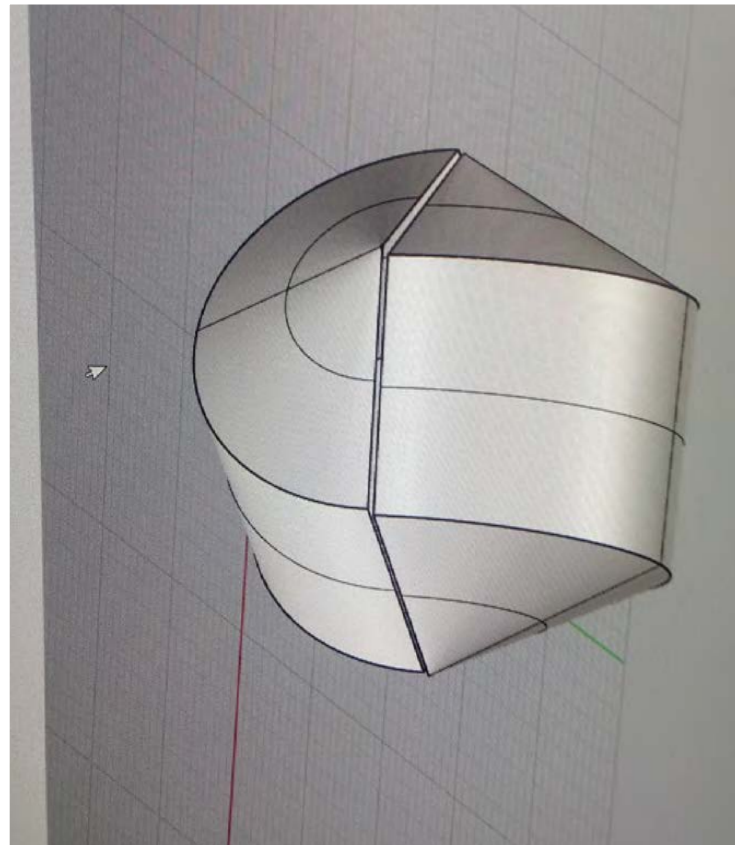
I've been really happy with the small amount of experiments that I've been doing in the workshop and have designed a stage for my videos to be shot in. I've designed and laser cut the box as it is the easiest way for me to build at the moment without me hurting myself.

I've just received a big order of the dichroic film I've been playing with so I look forward to spending lots of time in the workshop next week making weird stuff, as I'm exploring visually stimmy things with it.

- Attached Files:
- 73352329\_711987575943806\_6320540341707472896\_n.jpg(193.7kb)
  - 72481981\_2508233549396020\_2457281185248706560\_n.jpg(386.9kb)
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  - RESEARCH FRAMEWORK DOCUMENT oct 10 2019.docx(244.6kb)

Comment

**Technical:** Develop and apply in-depth, systematic understanding of technical, material and process experimentation



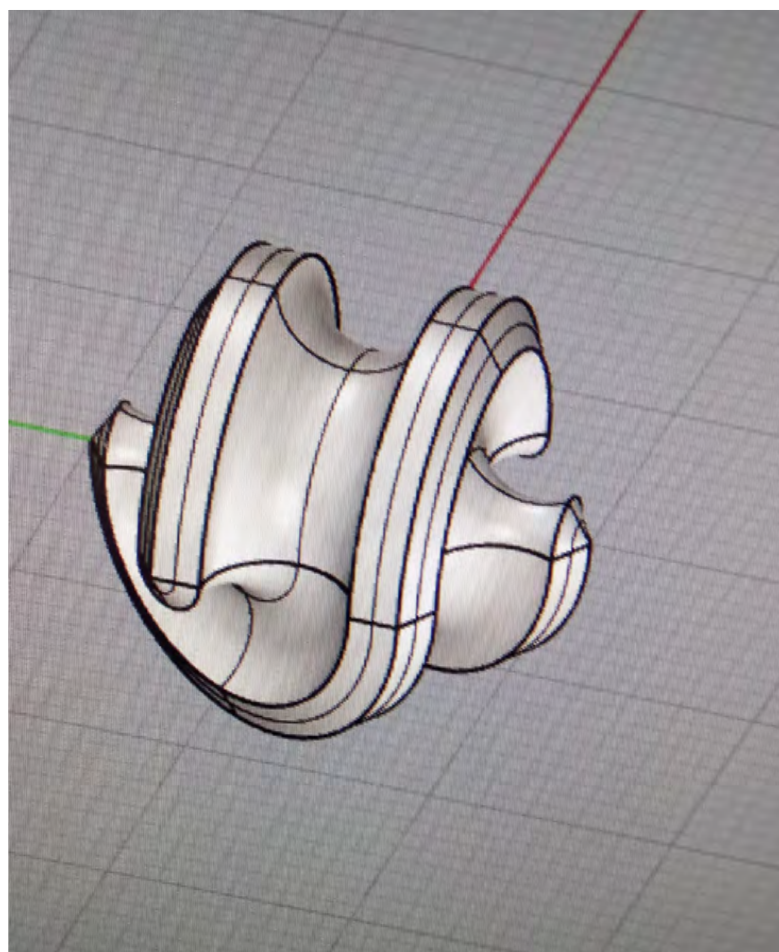
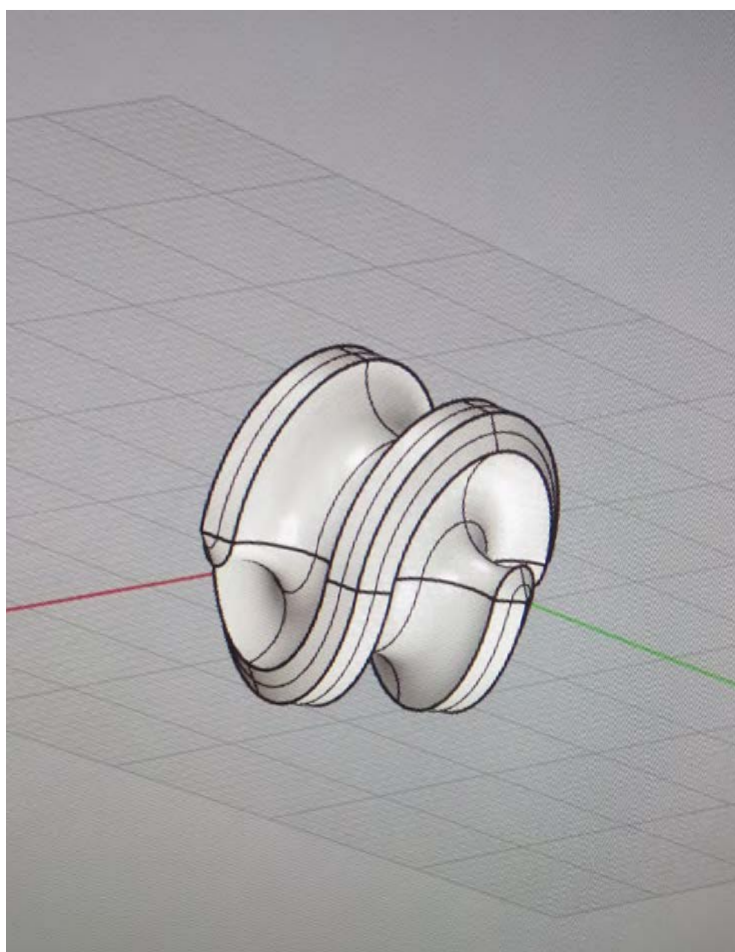
Due to my health conditions, hammering, sawing, carrying heavy weights, awkward angles and all such things were off my list of things I could do. In a way this list of restriction was actually helpful in the design process as it gave me parameters in which to begin sprouting my ideas.

I had decided that this project would have to be something small enough for me to handle without causing myself injury. Something that could be made with minimal physical effort.

It quickly became clear that 3D printing digital models was going to be the best way for me to produce work that fitted within those parameters.

My research revealed these intriguing shapes called Sphericons and Oloids. Not only did they look mesmerising, but they also rolled in a strange but satisfying way.

I decided to try and 3d model the simplest version and then see if I could add some extra dimension to them. These early models seemed simple to do but really stretched my 3 modelling knowledge.



INTEGRATION

RESOLUTION

**Technical:** Develop and apply in-depth, systematic understanding of technical, material and process experimentation



The easiest way to 3d print the Sphericons was to print them in two halves. and then stick them together with super glue once they had been printed.

I used filler to fill in the gaps and imperfections.

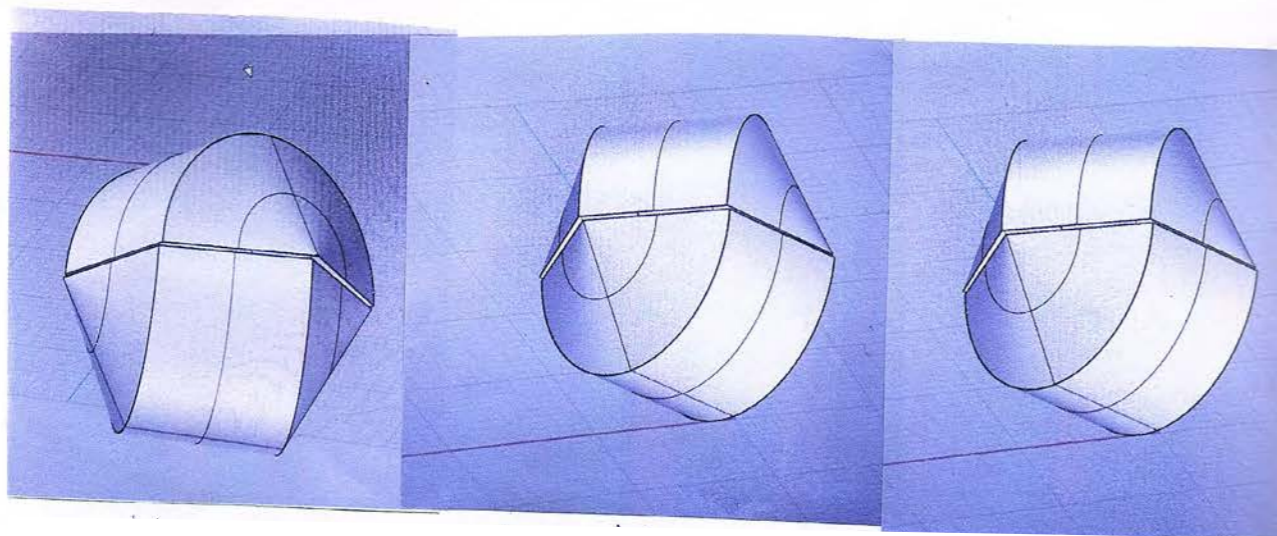
These were printed in PLA as I had been told they would be easier to sand. It was still a very long process to sand away all the 3d print lines.

I really loved these prints; it was really exciting to be able to model something on the computer and then have it magically appear in the real world.

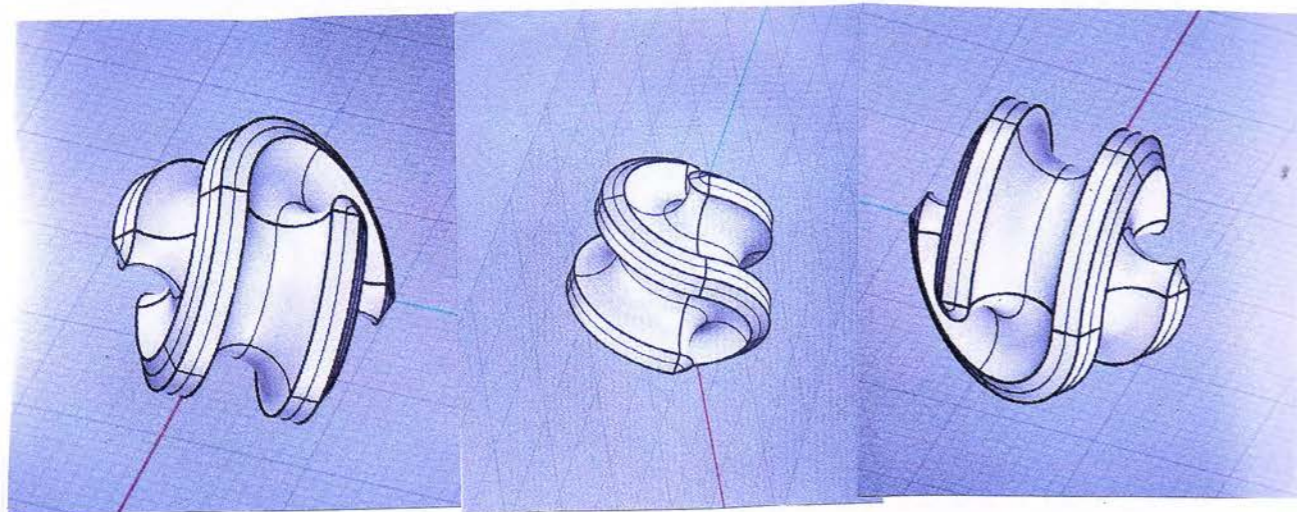
I had 4 halves printed so I used double sided tape on one of them so I could still move and twist the two halves together as that is how the shape is made.

I was interested in being able to show that and being able to play with them in more than just the ability to roll them.



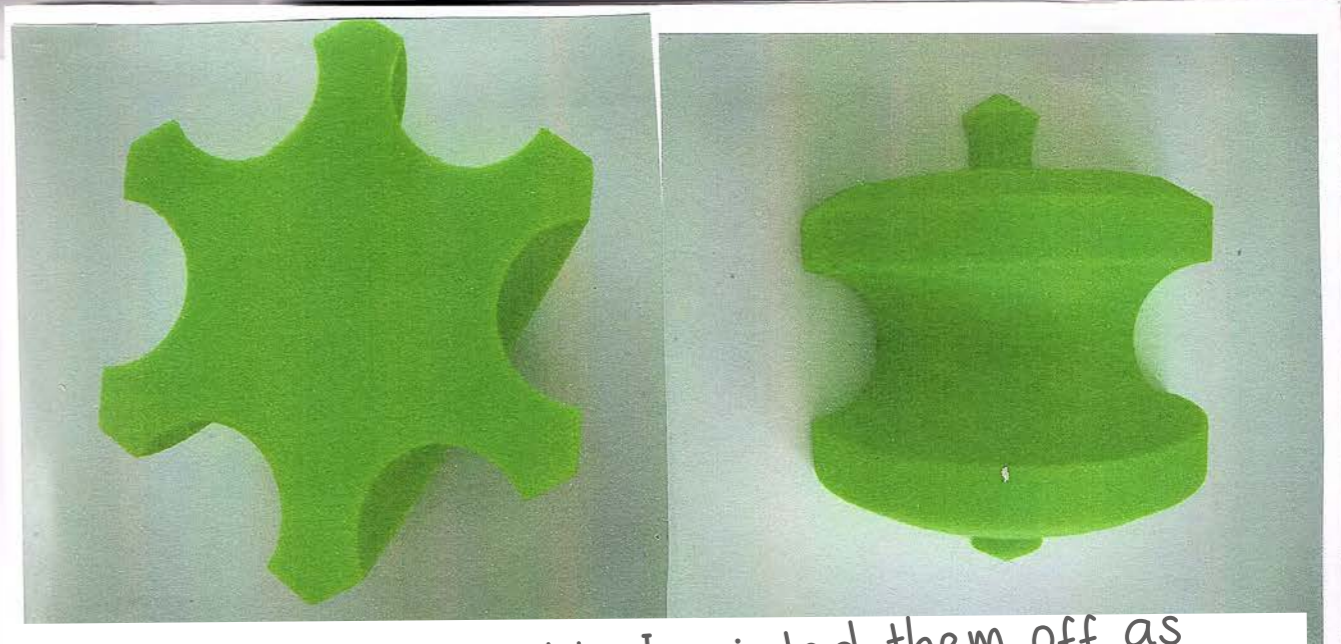


Saw these on YouTube. These are my initial sketches on Rhino. Have to work on getting them centred and precise. But really happy with actually being able to do it!!

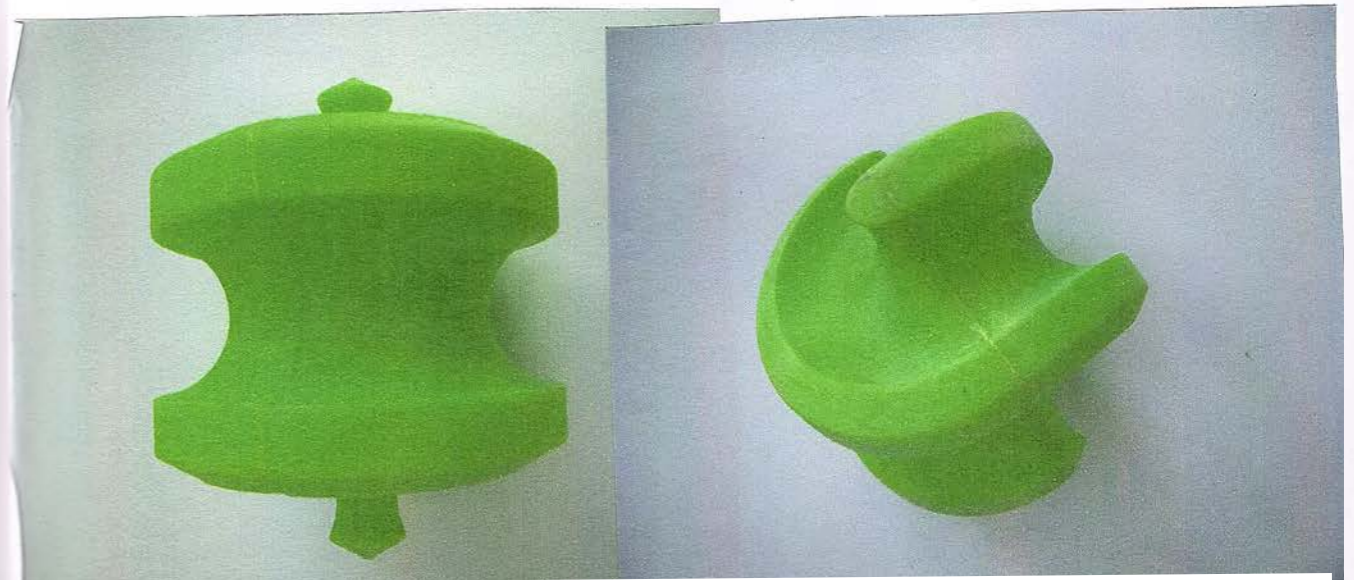


Second sketch: Carved out paths to add some more interesting curves and lined it up nicely!!

Nov 2019



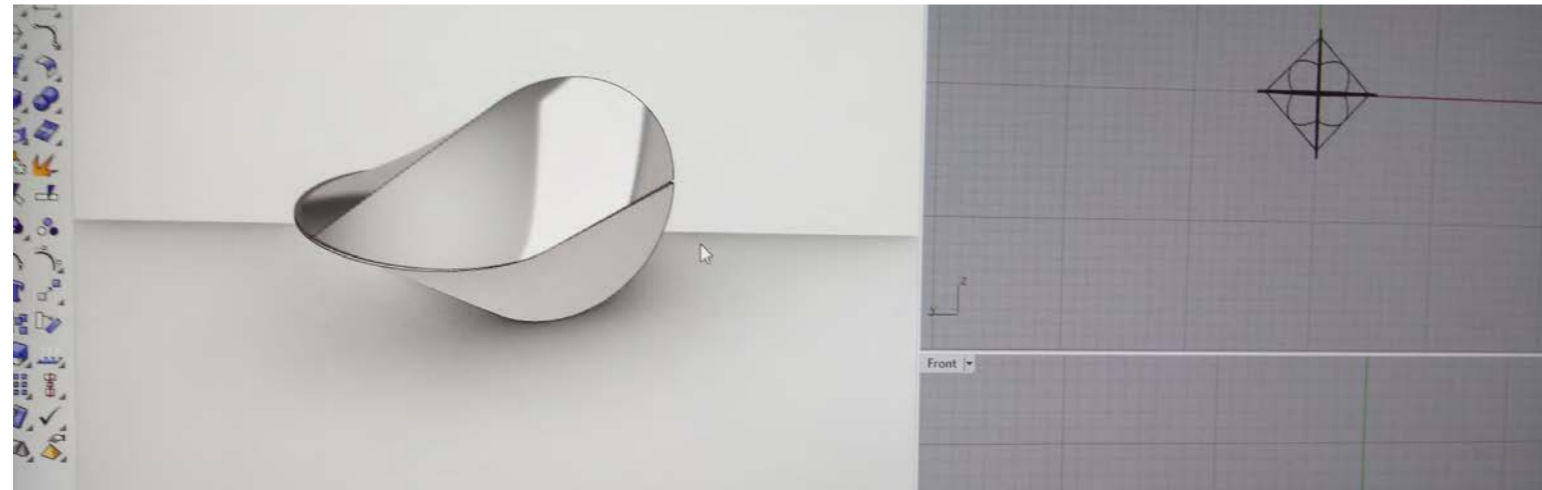
To make it printable I printed them off as two sides that could be attached together.



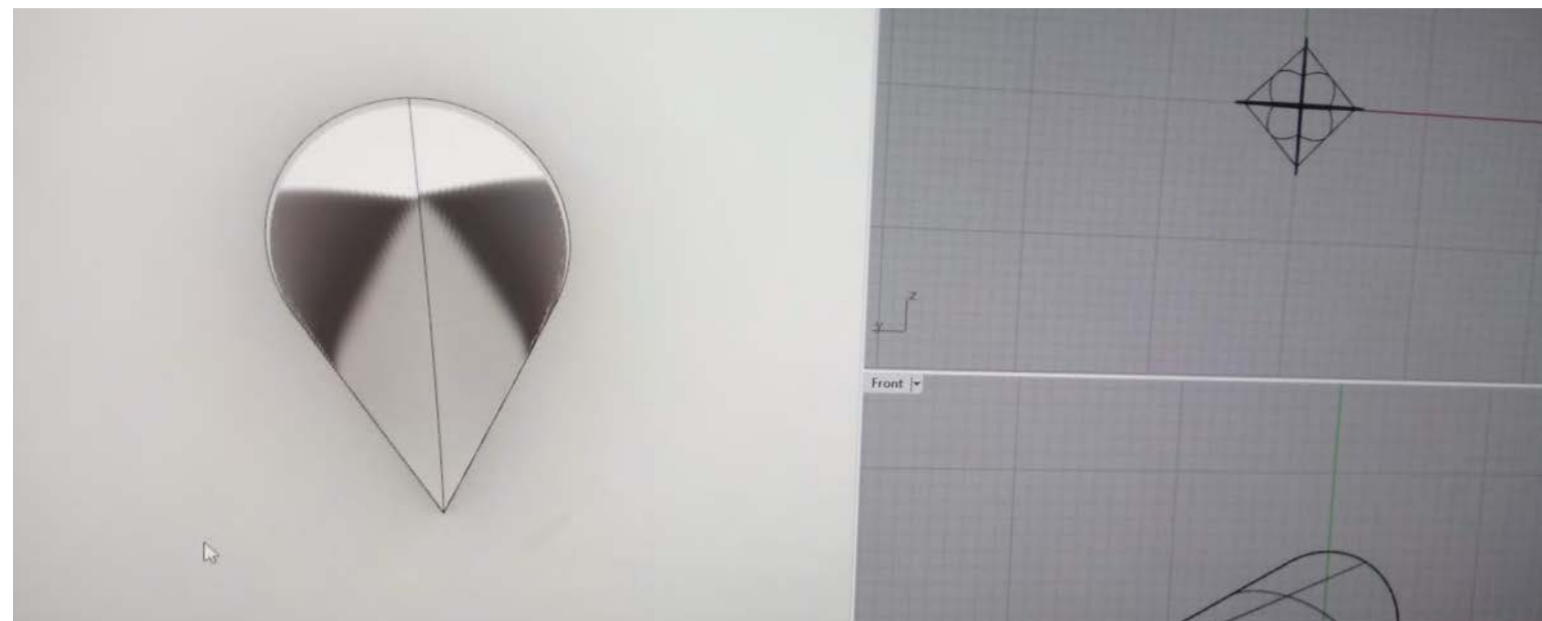
One of the main elements of the design is the way it rolls. These do roll in an interesting way but it's a bit hit and miss, so it does draw you in but it's not really the relaxing sensation I'm looking for

Nov 2019

**Technical:** Develop and apply in-depth, systematic understanding of technical, material and process experimentation



Oloids were the next thing that I tried to recreate. This simple shape was once again very challenging for me, but I loved the outcome.



These early models were a little off from being perfect. The lines didn't exactly match up and there were some snags in the lofting of the surface.

This was the first time that I had really played with materials and lights on the rendering software on Rhinoceros 6.



It was very exciting being able to see it produced in metal, which at this point I thought would be impossible in the real world.

INTEGRATION

RESOLUTION

**Technical:** Develop and apply in-depth, systematic understanding of technical, material and process experimentation



The same applied for 3d printing the Oloids. The shape would be much easier to print in two halves as it offered a flat surface to print from.

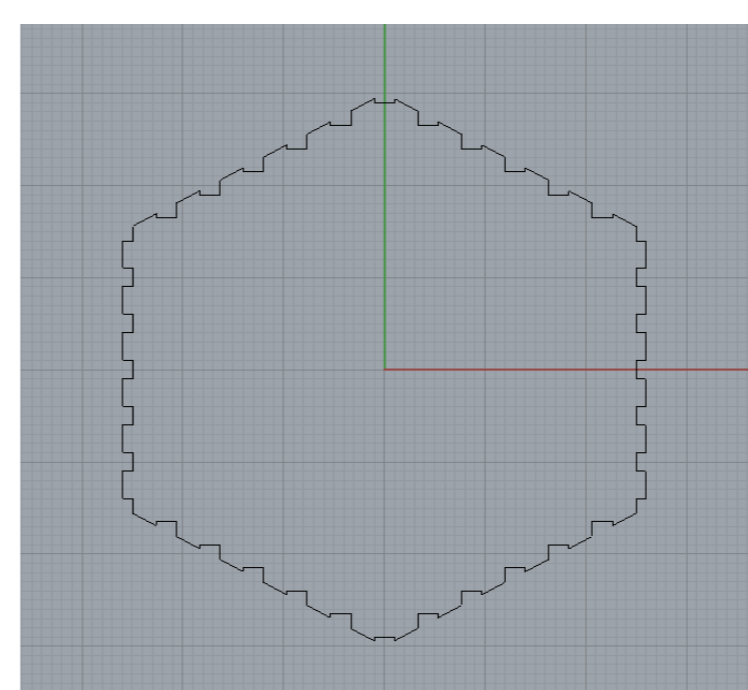
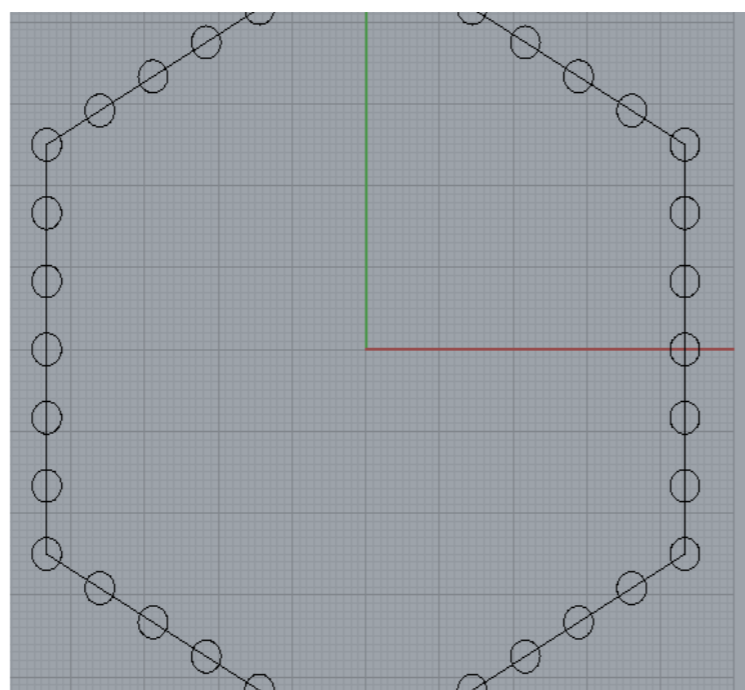
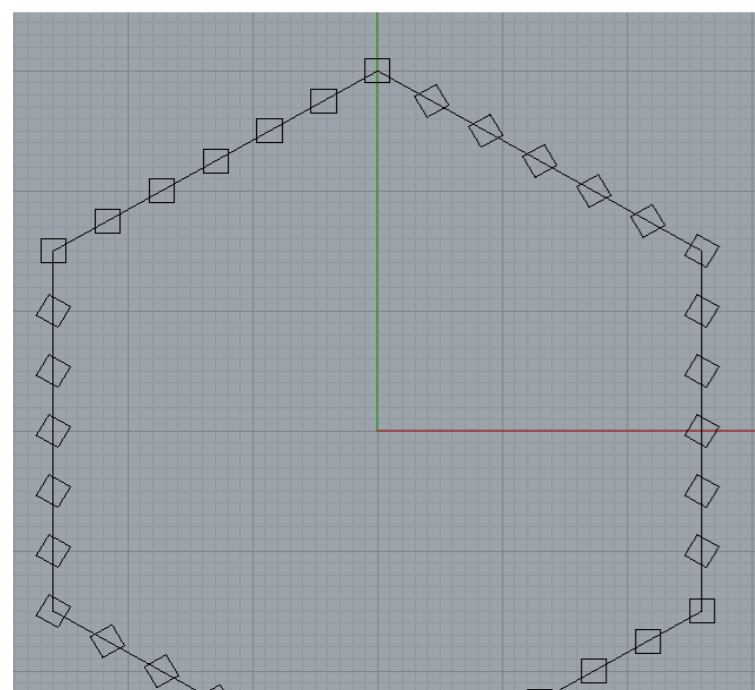
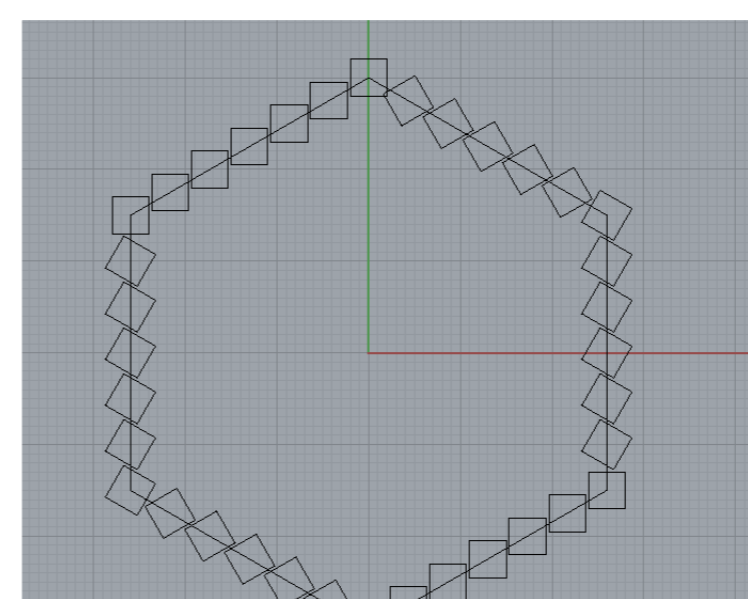
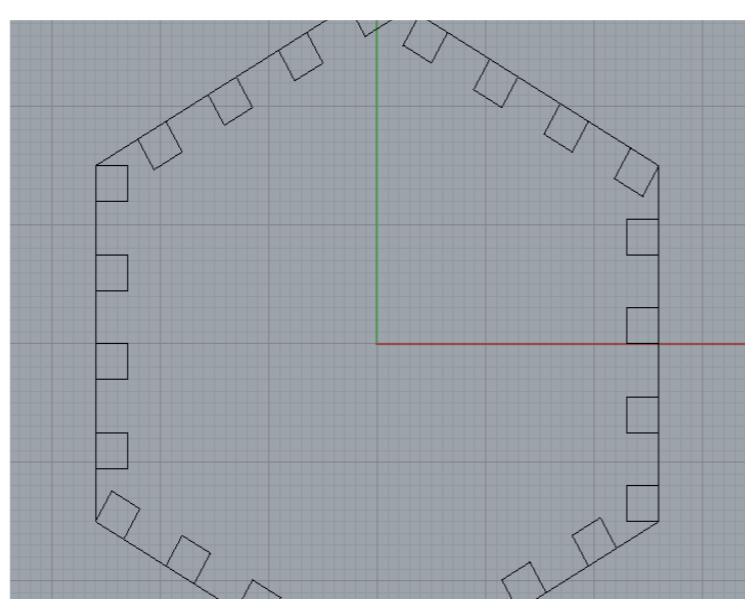
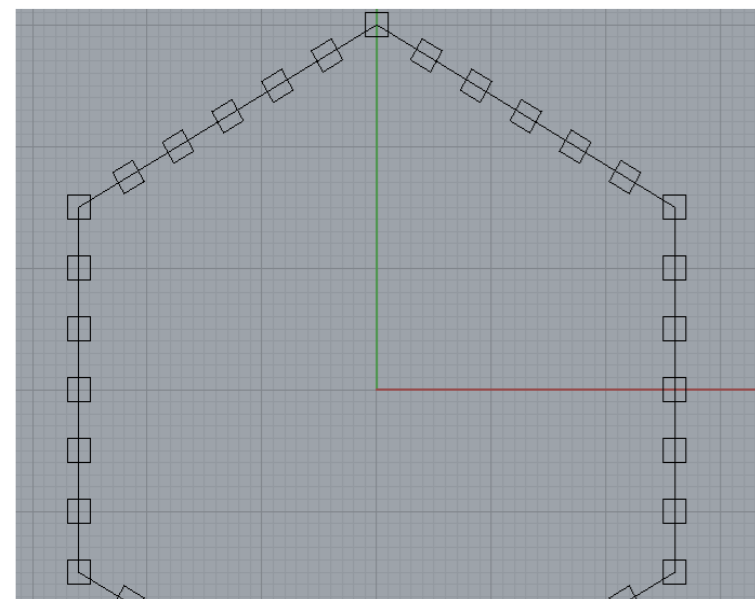
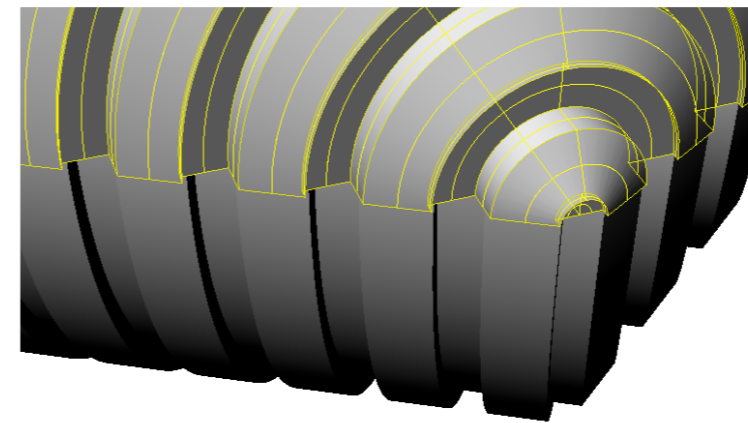
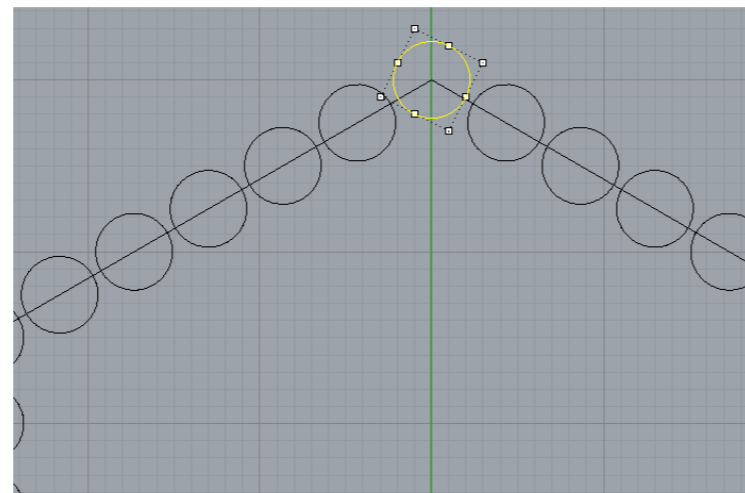
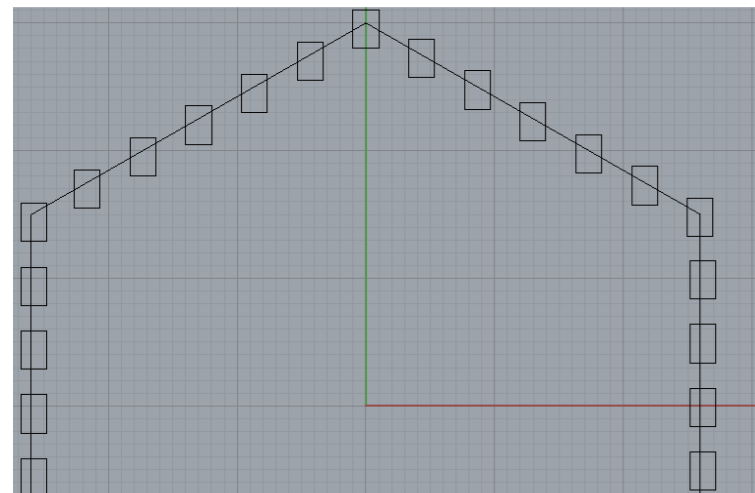
Due to the nature of 3d printing by extrusion there is a risk that shapes can warp and buckle if not printed at the correct axis.

Once again I sanded and polished up the 3d print to a high gloss finish. I used sandpaper from 80 grit to 1200 grit and then polished it on the polishing wheel. It still left some lines from the print. Even though I had spent at least 6 hours in total trying to prepare the print. Plus, there was no real way to hide the filler line unless I was to use spray paint. I didn't want to use paint as I felt it would not be the durable finish I needed.

It became clear that these did not have the heaviness and satisfaction in holding them because they were too light.

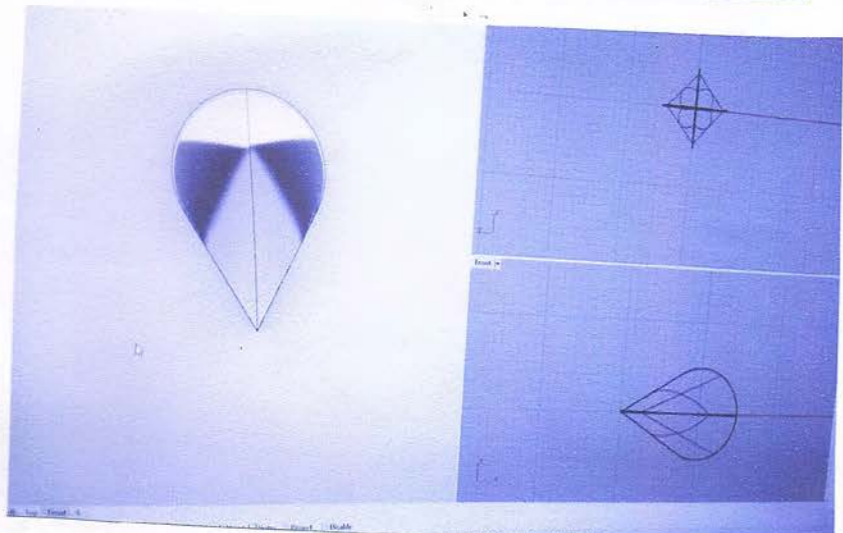
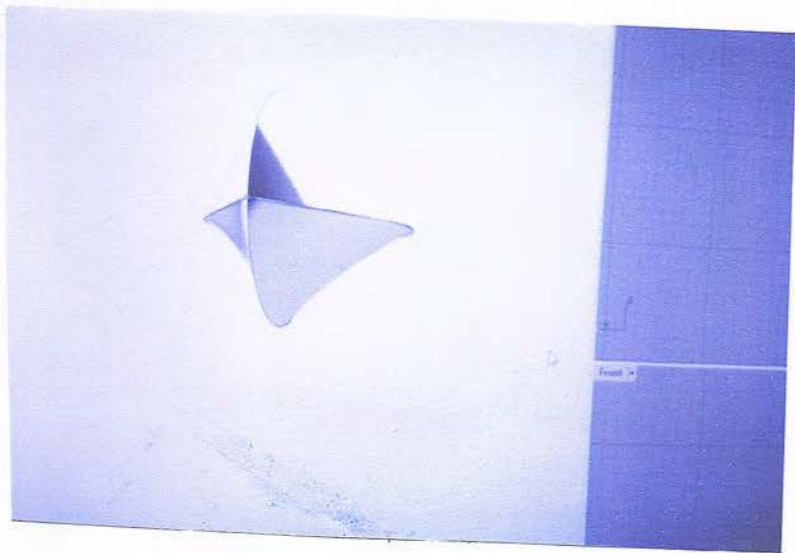
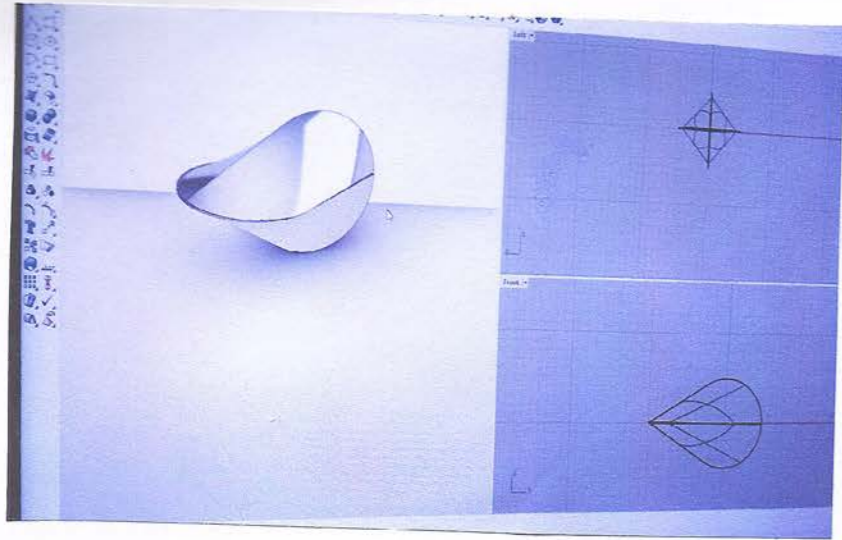


**Technical:** Develop and apply in-depth, systematic understanding of technical, material and process experimentation



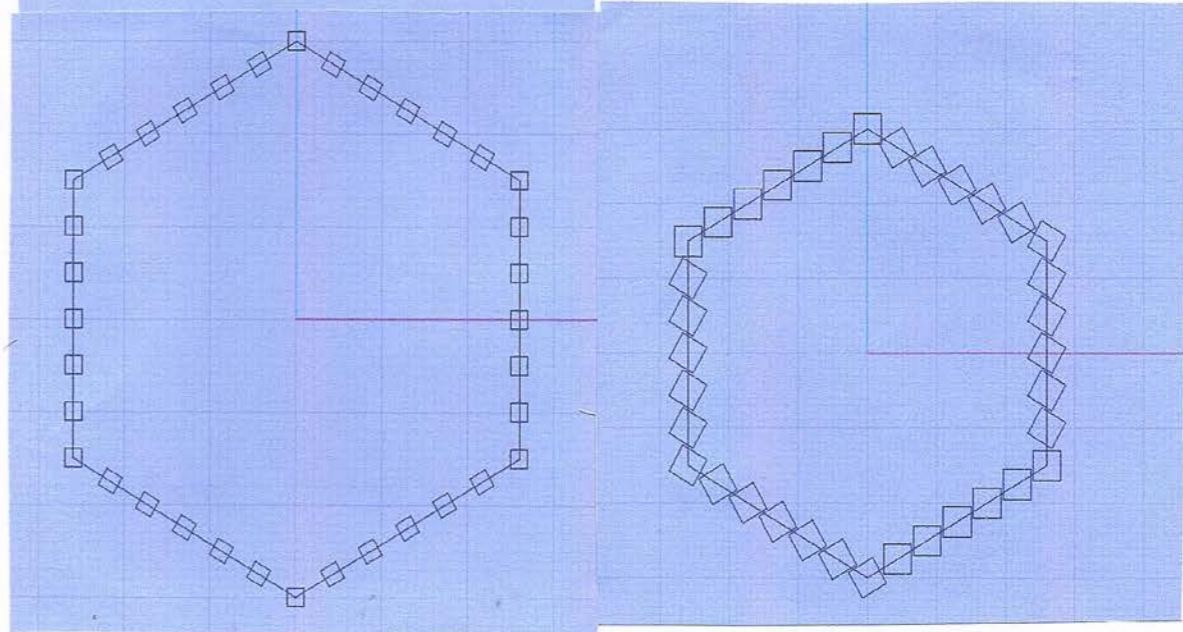
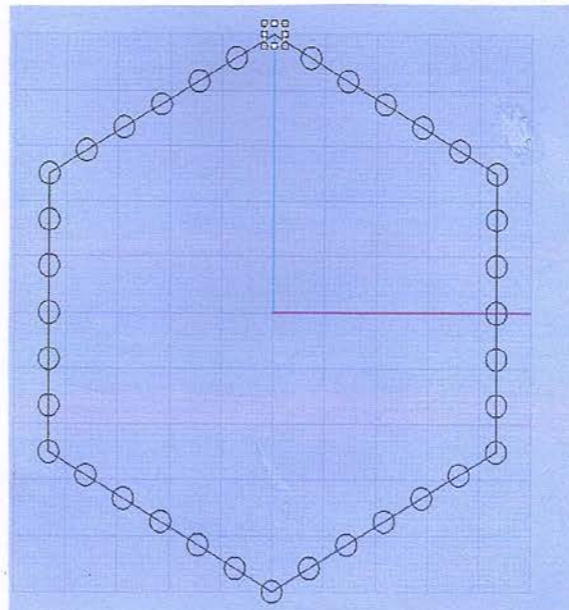
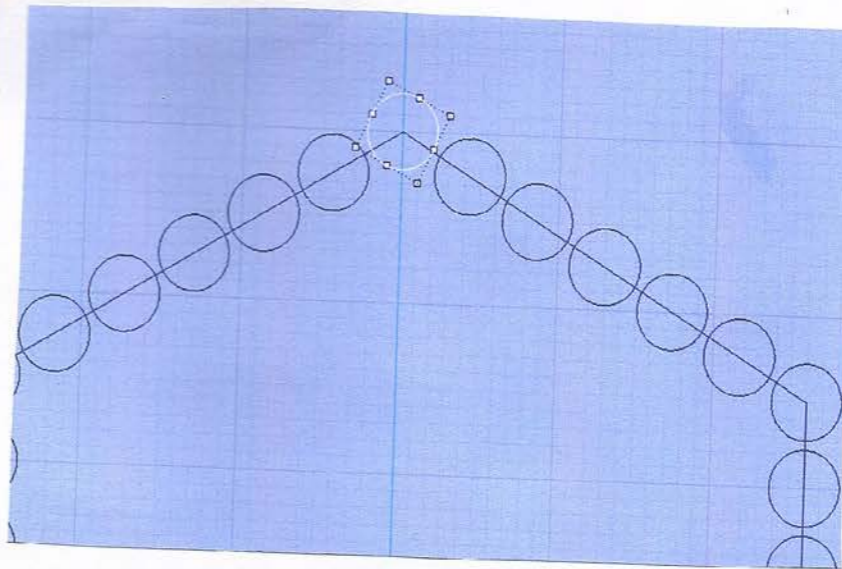
So, this is where the real fun started. I had to teach myself the principles of how these objects worked and then how that could be applied in the 3d modelling software. I gained an in-depth knowledge through trial and error. All of these snapshots are of failed attempts to redesign the Sphericon in a more complicated way.





This turn out really well. Again printed it in 2 bits and put them together. this rolls really nicely and feels great in the hand. would be awesome if it was plated in metal!!

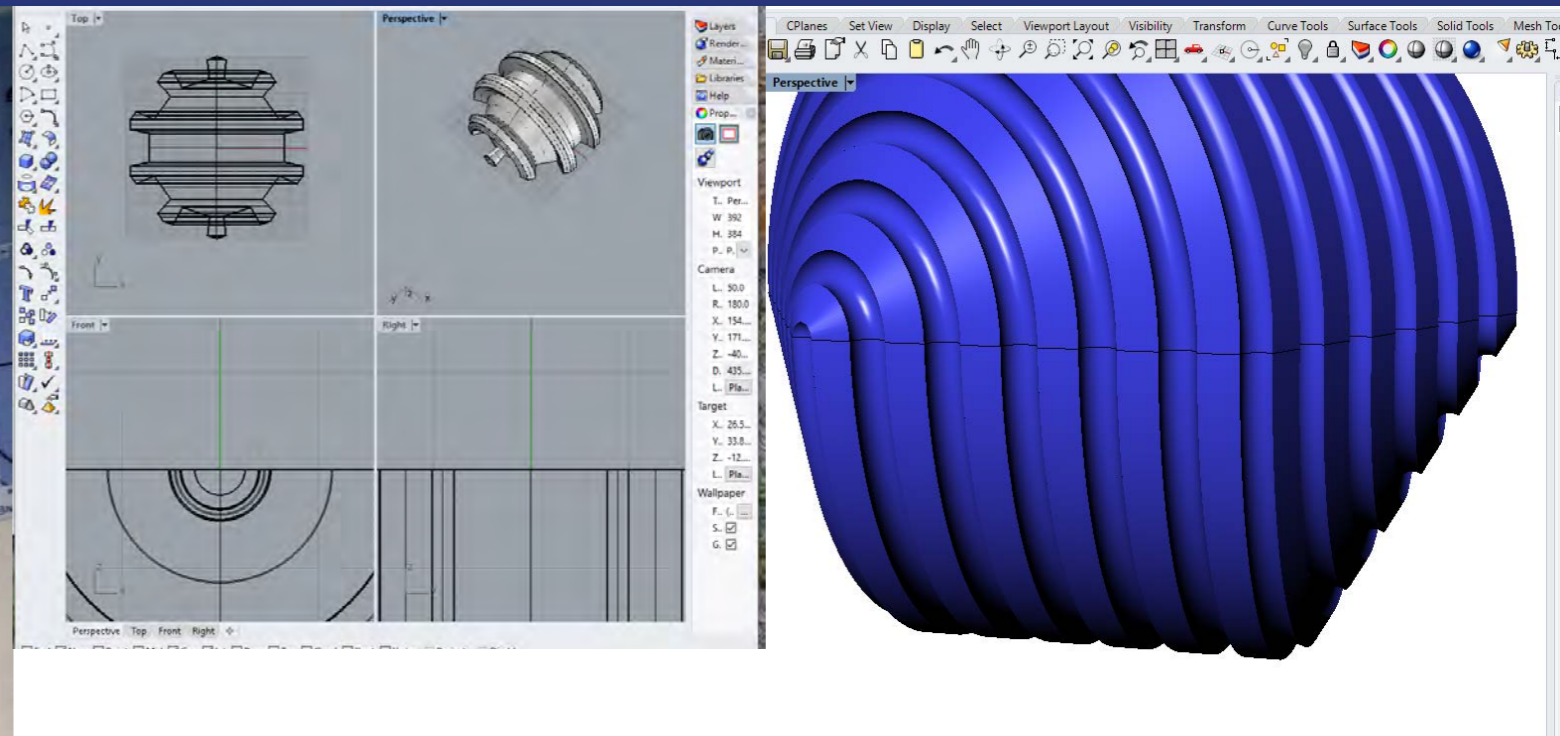
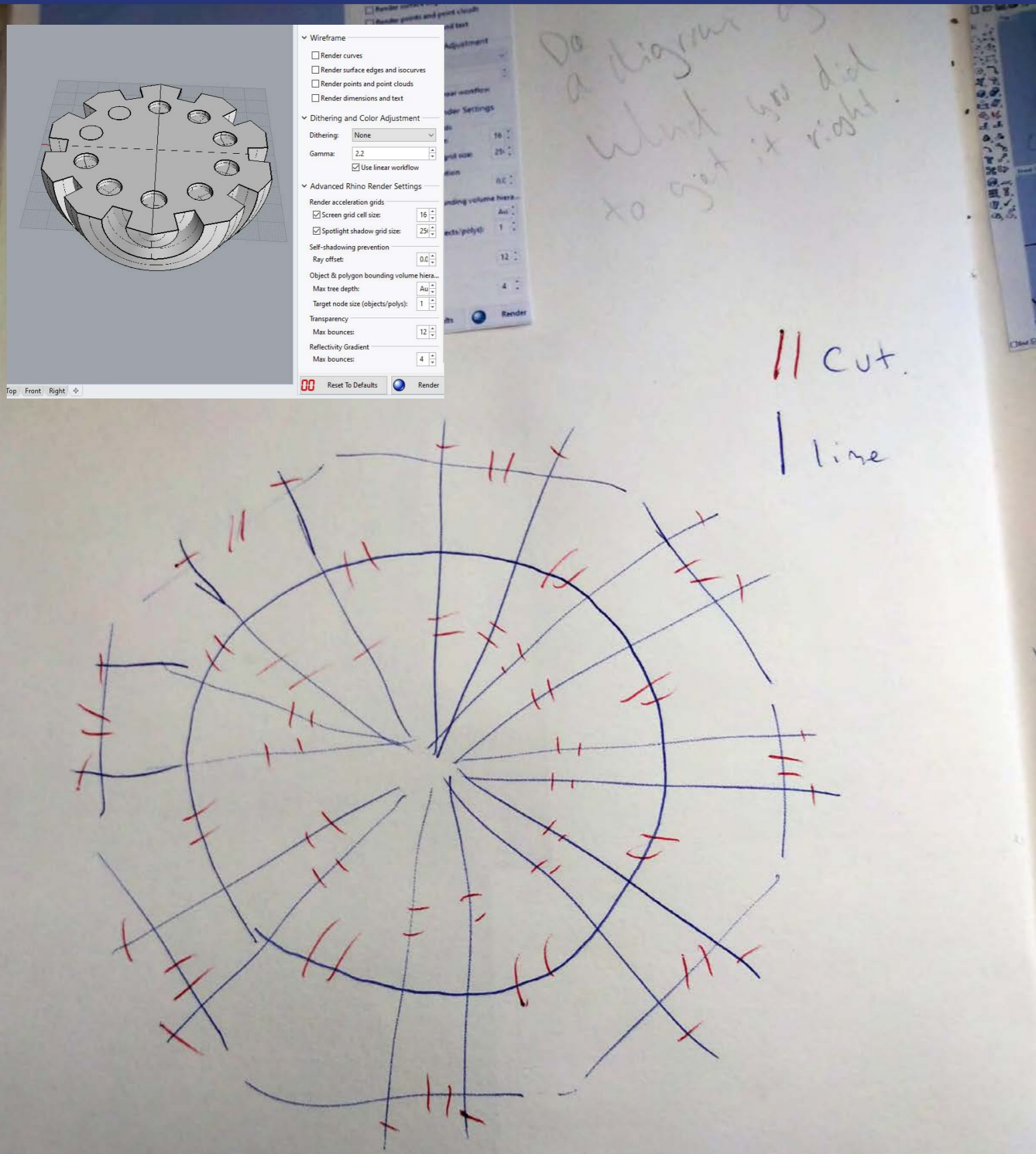
Nov 2019



Trying to make more complicated shapes  
 aaaagggghhhh!!! Circles  
 caused no problems, but flat  
 bottoms were a nightmare!

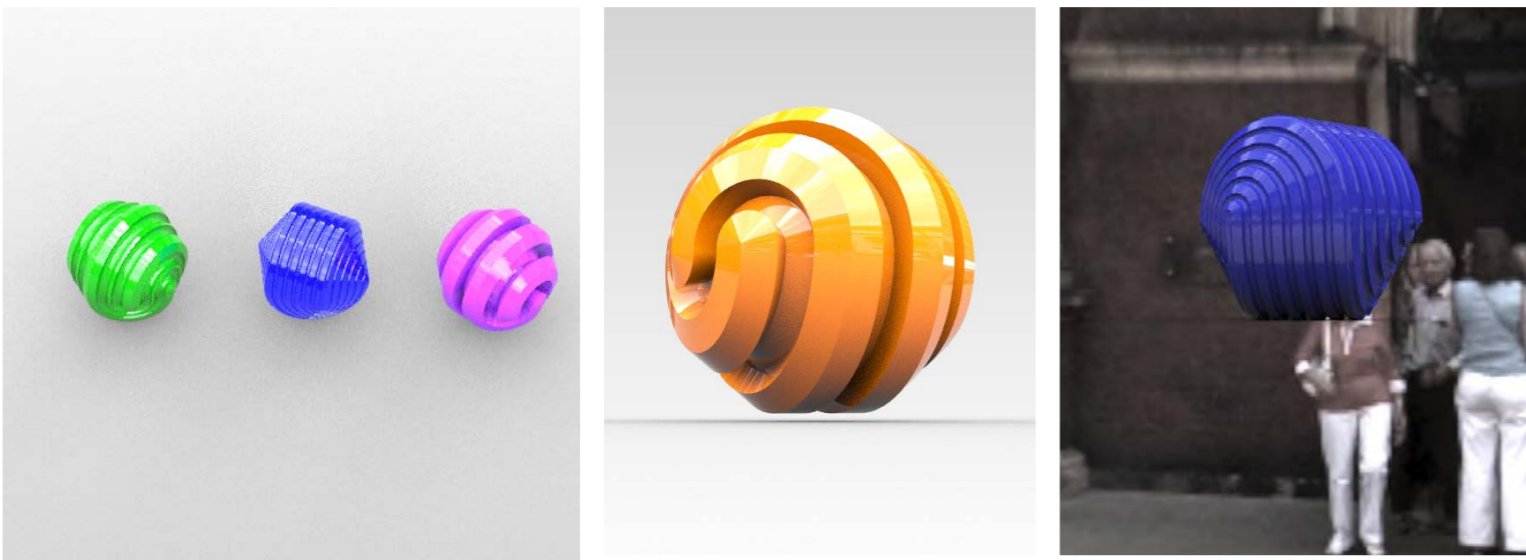
Nov 2019

**Technical:** Develop and apply in-depth, systematic understanding of technical, material and process experimentation



In the end I found the formula I was looking for and managed to get a square base on the ridges of the Sphericon. There is absolutely no reason for them to have a square base, I just felt that the challenge presented itself and I had to try and work through the issue.

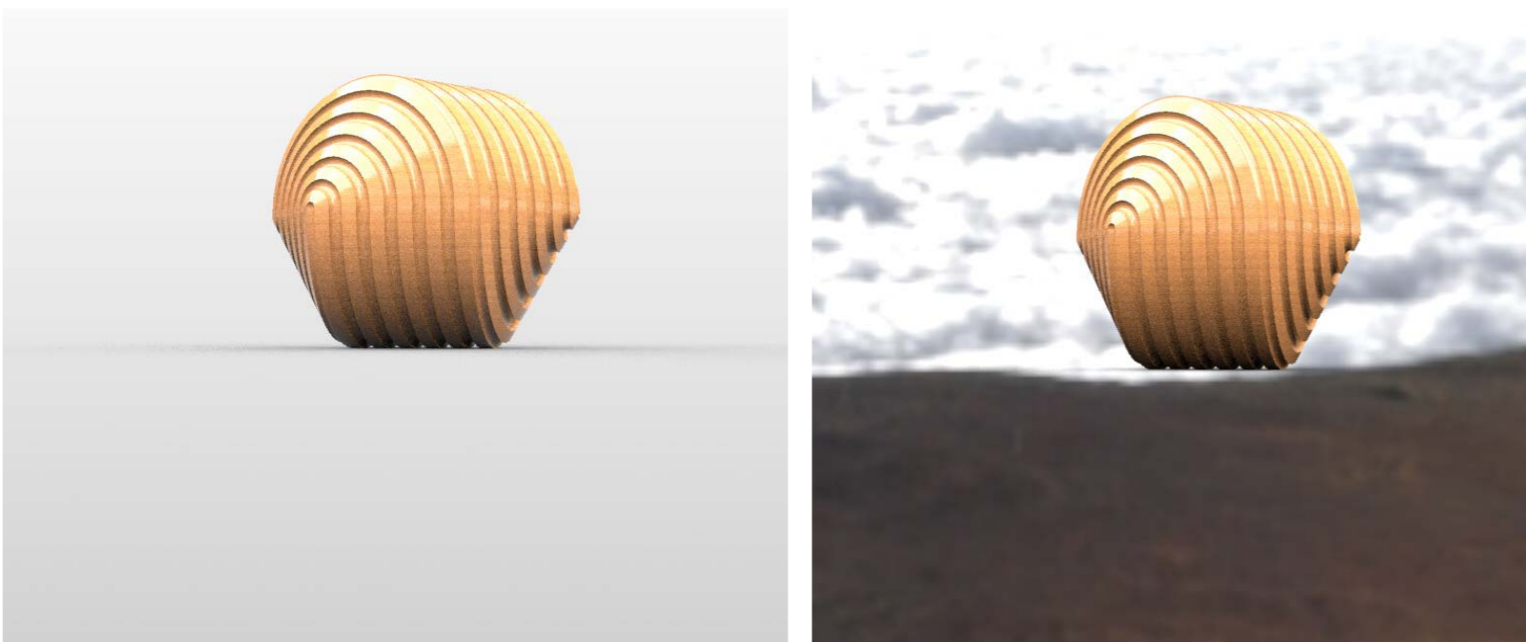
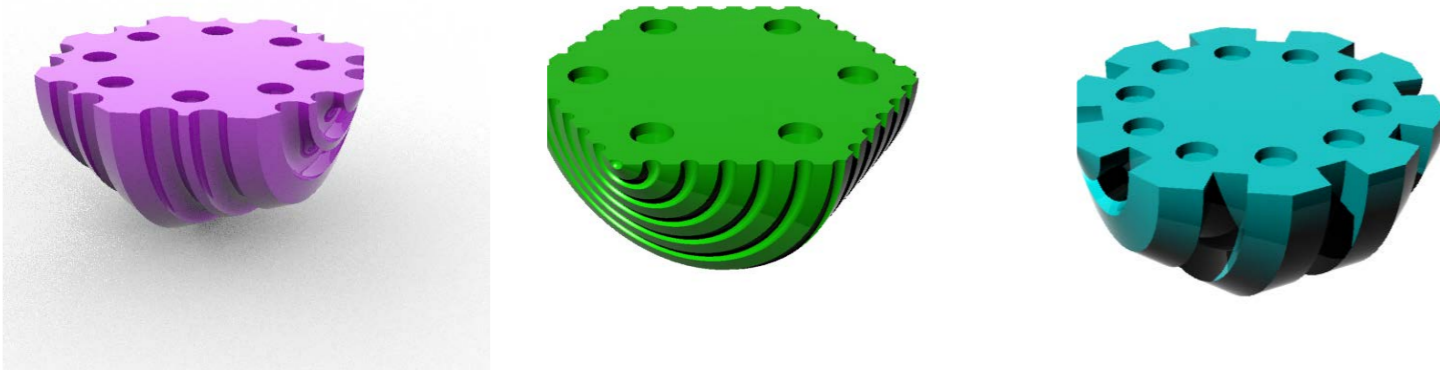
**Technical:** Develop and apply in-depth, systematic understanding of technical, material and process experimentation

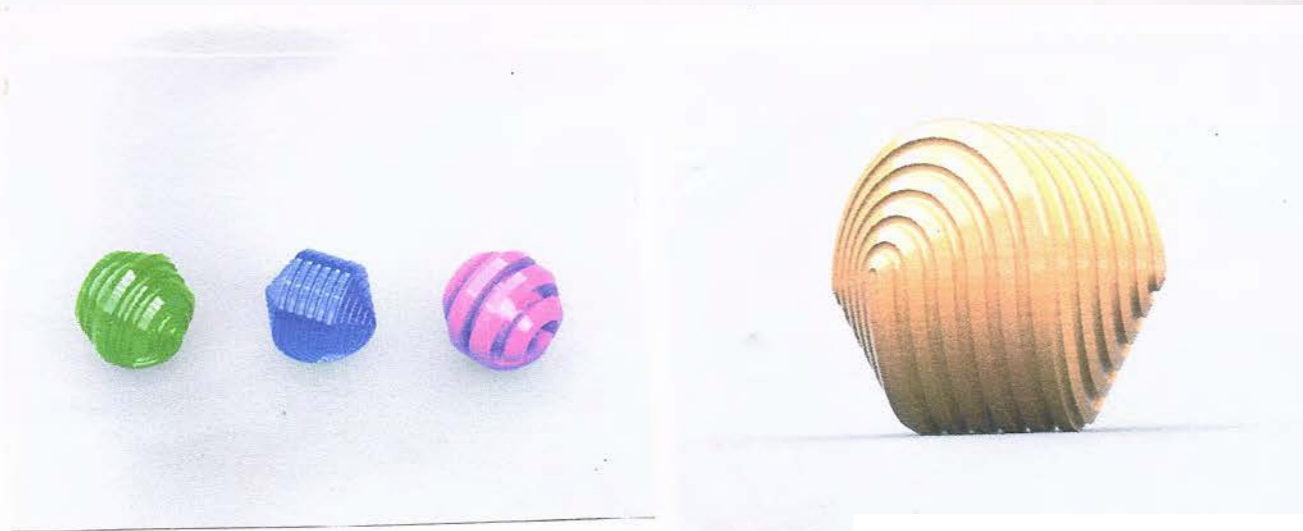


Once I had designed my 3 different types of Sphericon:  
6 sided, 8 sided and 10 sided.

The next process that was an important part in the design  
process, was rendering.

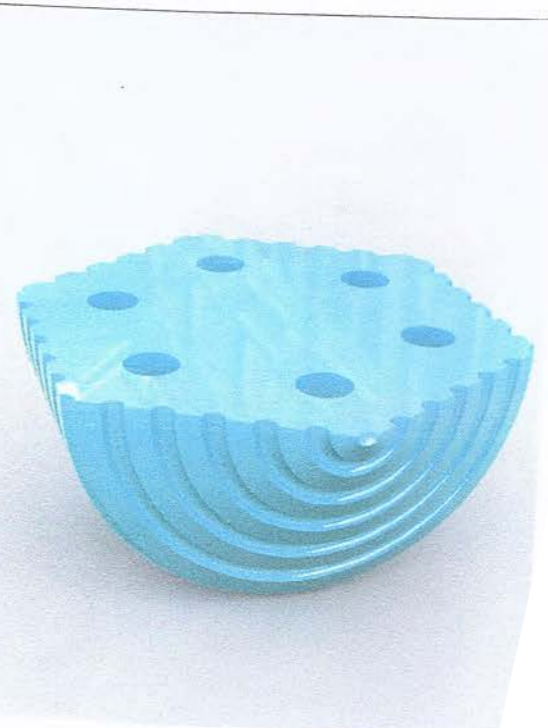
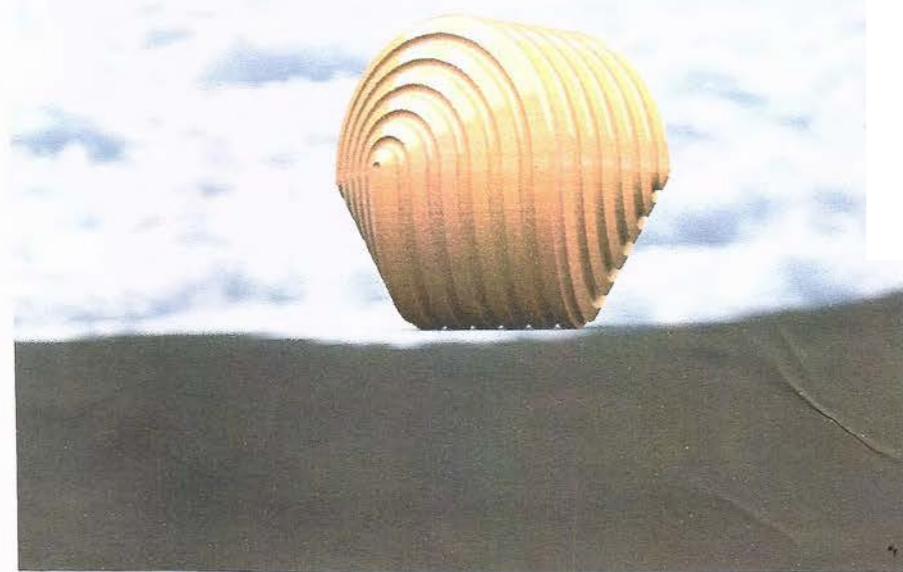
This again seemed like it would be a simple process but it  
was very easy to entirely loose the light and make an  
absolute mess of what you were trying to render.





Had some fun rendering and seeing what they would look like with a high gloss finish and practicing ways to present and form my ideas.

Dec 2019

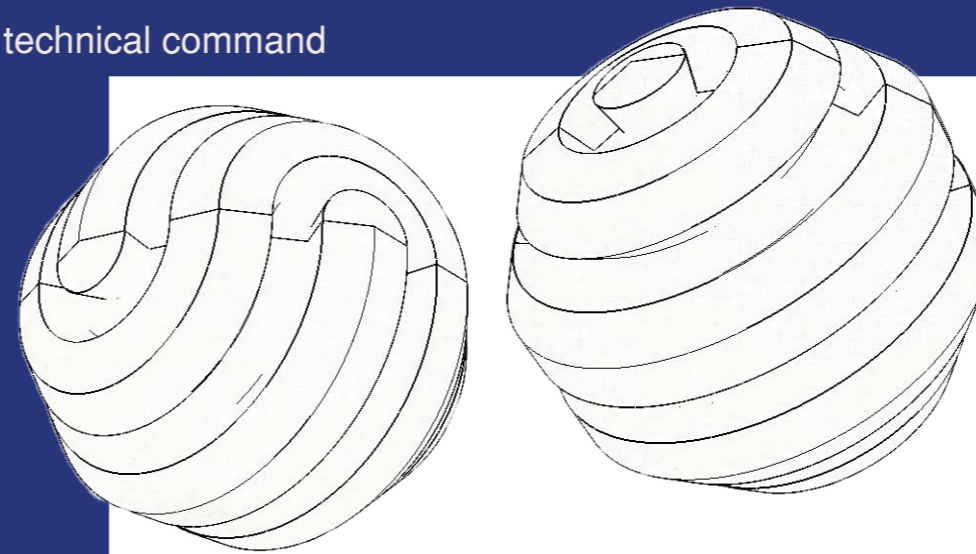
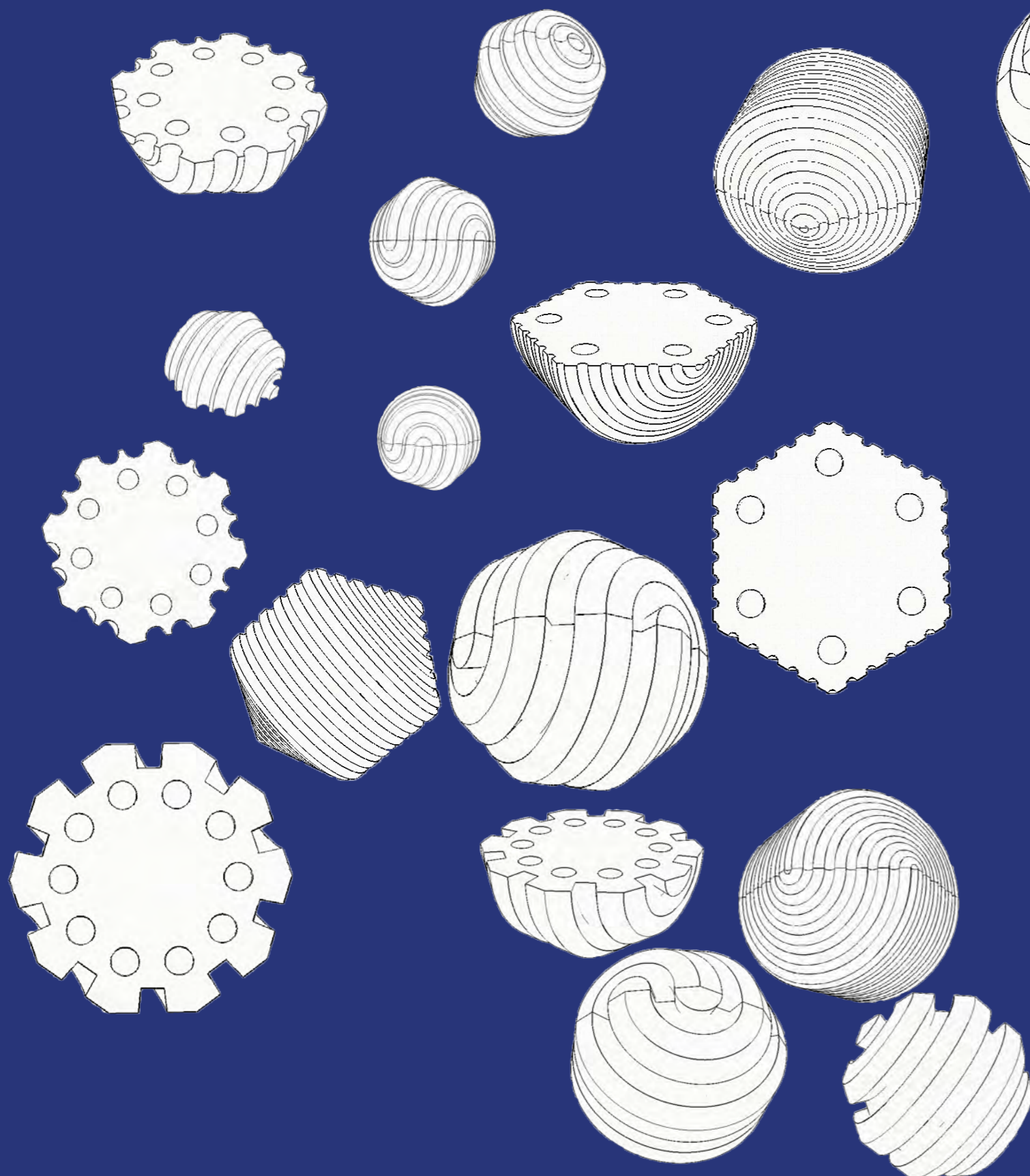


This is an updated version now. After having a group review and Jem said that the magic is in the twisting movement. I felt that it would be good to explore that aspect further

Dec 2019

I've added spaces for magnets to go into. So the object can be spun around but the magnets act as a register so that the twist is always in the right place.

**Technical:** Demonstrating an advanced level of skill, craftsmanship and technical command



The next stage in this project was finding a way to communicate how the toys would work, as they are not obvious items and need explaining.

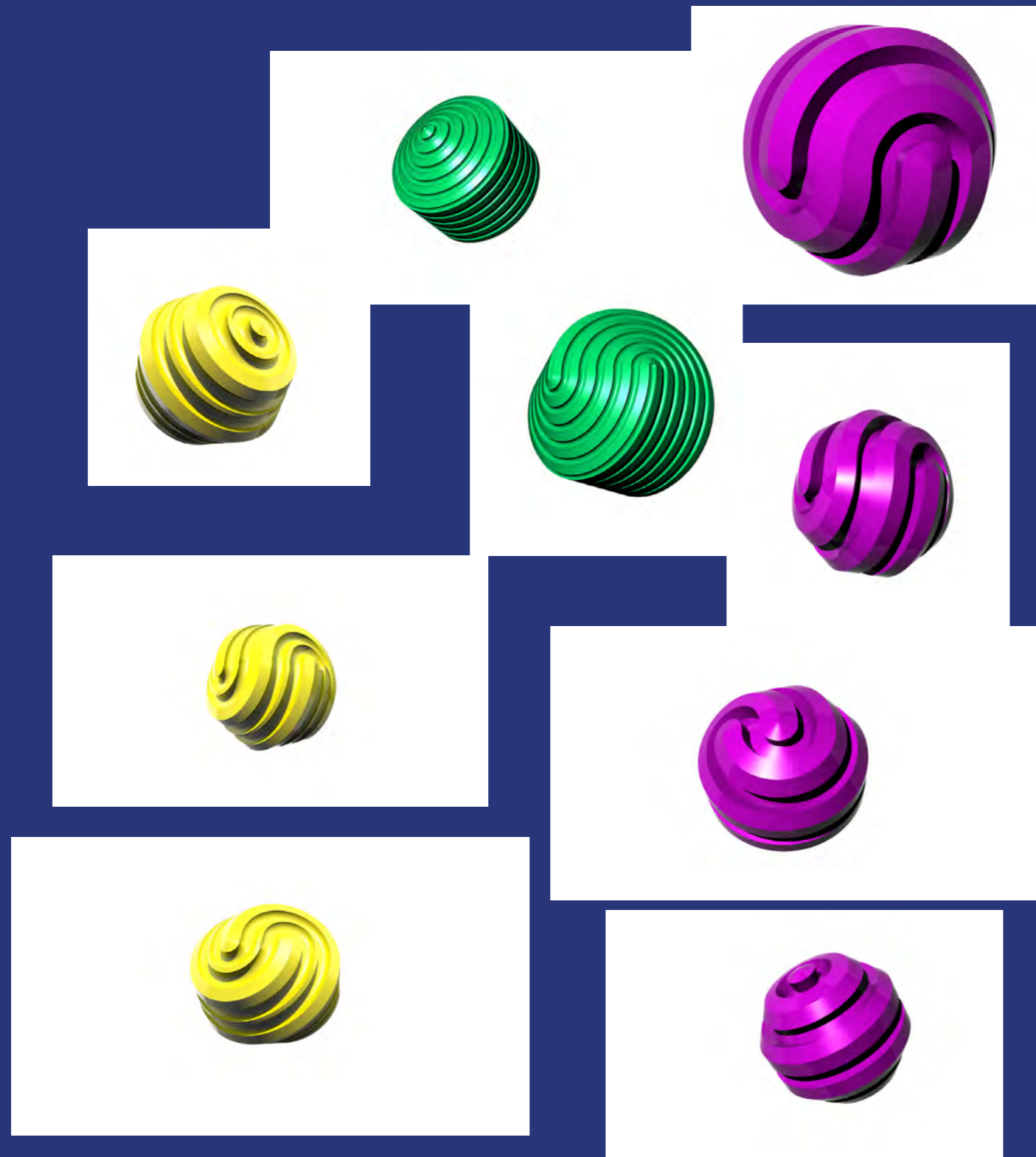
I used Rhinoceros 6 3d modeling software to make 2d shapes in the pencil mode.

I then edited them in Photoshop as they were too light.

Finally I brought them into to Illustrator to export them as PNG assets so that they could be placed into a photograph or illustration without a background.

This meant that they were the shapes themselves, like cut outs instead of photos.

**Technical:** Demonstrating an advanced level of skill, craftsmanship and technical command



Here is an example of what the Sphericon would look like before the work I did on them.  
Full colour with an annoying square background. It looks much less professional and is restrictive when making an illustration.

**Technical:** The production of a body of three-dimensional work in chosen materials and/or media



Prepping the new 3d prints for casting. This time actually went a lot quicker. I did sand each one for over 3 hours but used primer spray in between the last few layers. this gave me the smooth finish i was looking for.

**Technical:** The production of a body of three-dimensional work in chosen materials and/or media



The process of making the moulds took about 2 weeks. I took my time to make sure that the mould was as good as it could be and that there were no imperfections.



**Technical:** The production of a body of three-dimensional work in chosen materials and/or media



I designed the moulds with a flat base made from pouring Jesmonite into a cylinder attached to the base of the mould. This allowed me to have a steady and level mould that I could pour my resin in.

**Technical:** The production of a body of three-dimensional work in chosen materials and/or media



The next stage of the mould building process was to create a lid that would mark out where the magnets should be place.

I did this by pouring a layer of silicone approx. 2cm thick. I had to redo this process twice as the original design for the Sphericon was to have the magnets showing on the surface of the design. But after I discovered how dangerous they were if swallowed I decided to make them embedded into the resin and the cover over the top. This small change brought about weeks of issues.

I drilled out the holes on the milling machine, so they were 5 mm deeper than the initial design and re-poured the silicone lid.



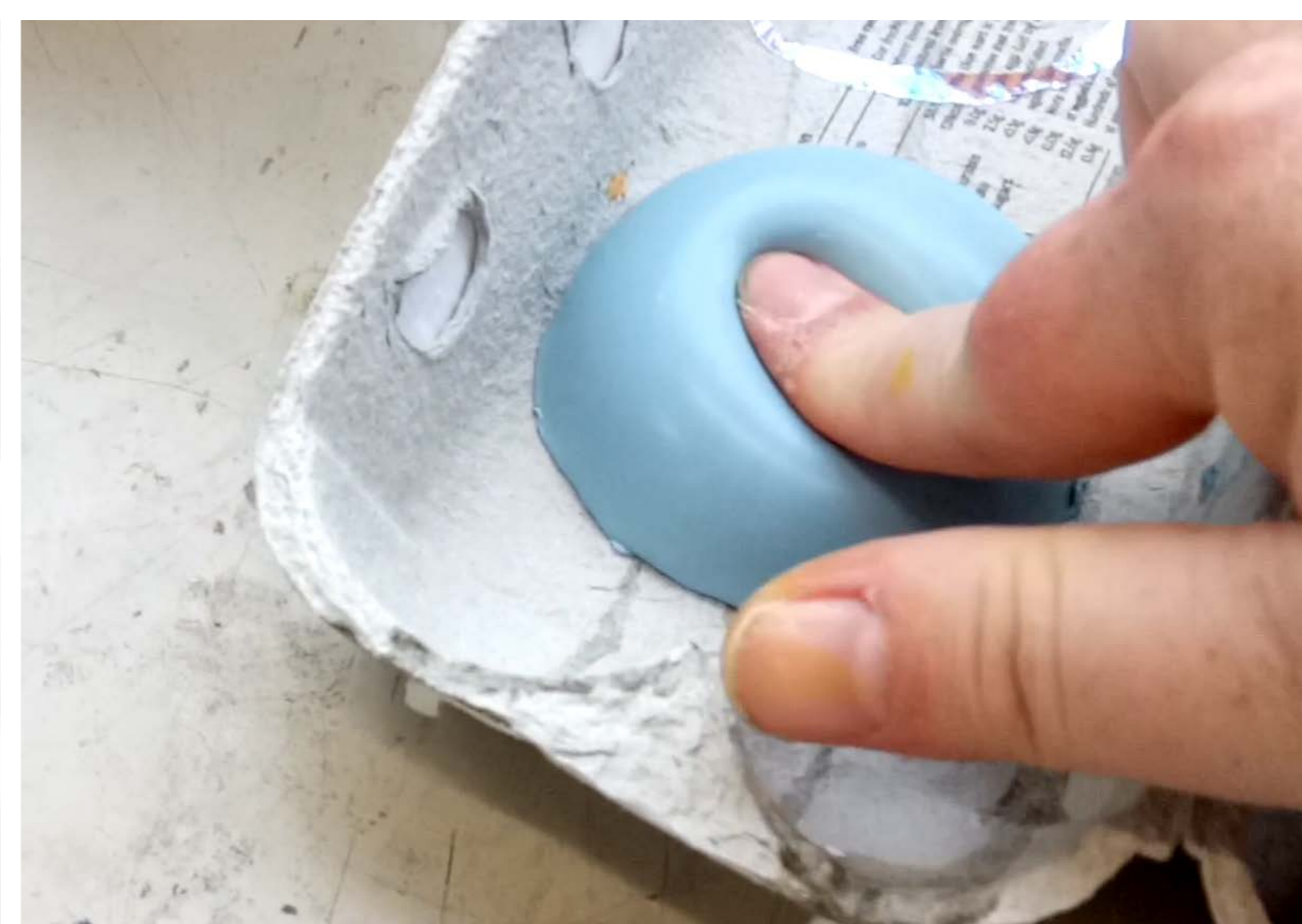
Technical: Material experimentation

My research into stim toys revealed an interesting pigment that I just had to try out. Thermo reactive pigment that can be applied to a liquid casting substance. I liked the idea the toy itself could be changed by holding. It was a very fun material to play with. It definitely held your attention but not in a distracting way.

During my Pecha kuccha, I distributed these around the class so that they could experience what it is like to listen whilst stimming. I had lots of positive feedback from that.

I didn't end up using it as part of my final pieces because, although it is great, I felt that I was trying to create a more adult centric selection of toys and this felt like it had a more childlike narrative.

INTEGRATION



**Technical:** Material experimentation

I really fell in love with the dichroic film. The way it changes such simple shapes and it's almost magical qualities. These tiny little resin blocks were very engaging but in a very subtle way. I often found myself playing with them whilst trying to work out a problem.

I went on to use this film with my oloids experemements.

INTEGRATION

TECHNICAL

Technical: materials experimentation



These were my experiments that came from looking at Ólafur Eliasson's work. I want to see how the resin worked in a globe shape and if it had the same light bending qualities as the glass globes used in his work.

It did and I went on to explore how this would work with the Oloid casts with alcohol inks.

INTEGRATION

**Technical:** Develop and apply in-depth, systematic understanding of technical, material and process experimentation



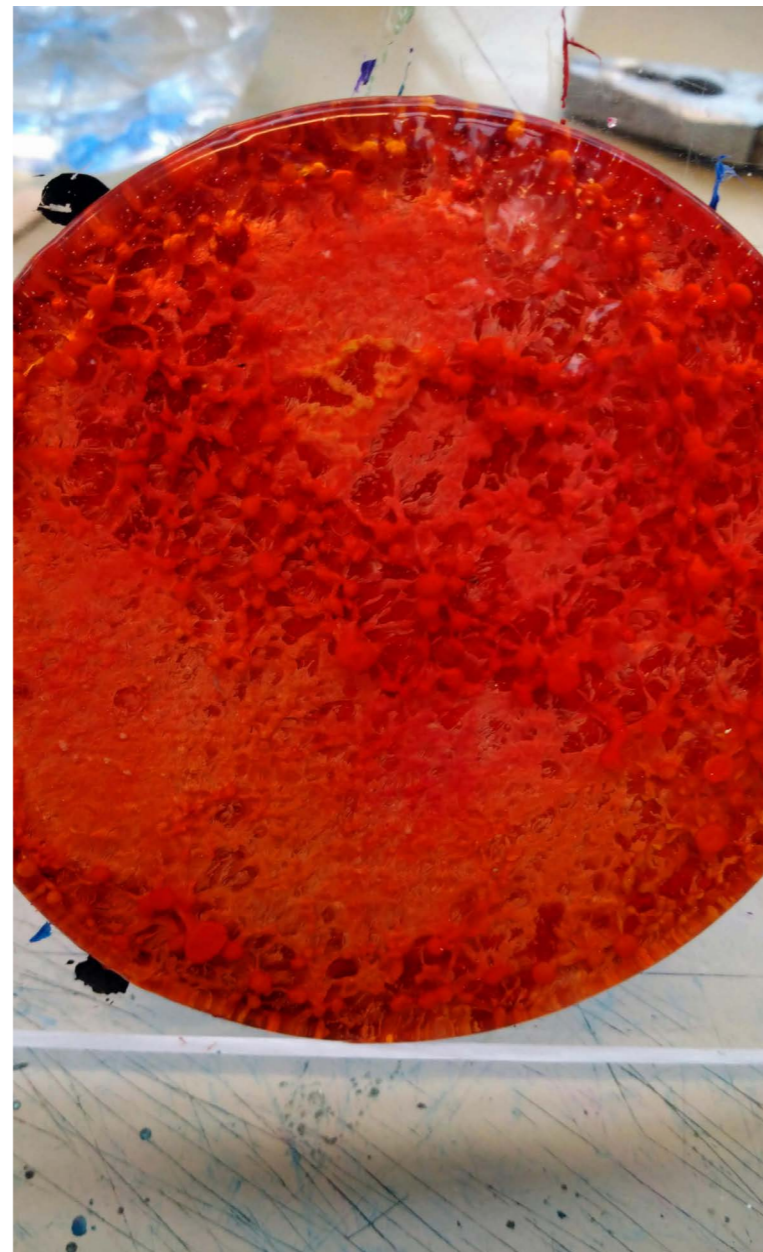
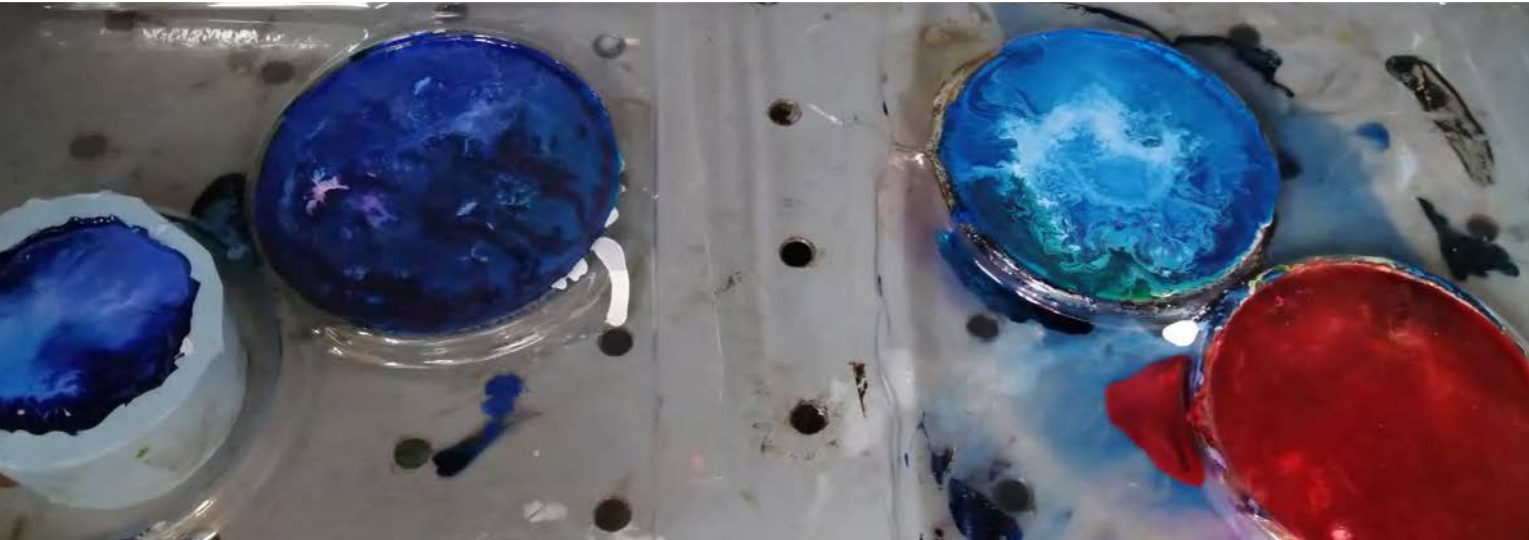
## Experimenting with alcohol inks in resin.

When using alcohol inks in resin, there is a particular way of adding the inks that will create these strange blobby effects. The process is that you drop alcohol inks into the uncured resin. First you drop the coloured ink and then on top of that you place a drop of the opaque white ink. The opaque white ink infuses with the coloured ink and as it has more weight, due to the opaqueness, drags the pigment through the actual resin.

What I discovered early on is that cheap white ink would not work. This just produced a big brown mess. So, I had to buy a more expensive higher quality white ink that was a more pigmented.

INTEGRATION

**Technical:** Develop and apply in-depth, systematic understanding of technical, material and process experimentation



After struggling to get a good effect in deeper shaped moulds, I decided to try shallow round ones. This meant I was wasting less resin and could see much more clearly what had actually happened to the pigment. What I found was that the cold blues, pinks and greens worked really well together.





Here you can see the difference between using cheaper less pigmented white the top 8 circles in the pic that look all muddy and undefined.

I tried dropping the ink at different time, 5 minutes apart to see if that was the cause before I realised it might be the ink.

The good ones!! made with posh ink.

Halfway through testing I had to start using a different type of resin.. this meant doing another set of timed tests as it turned out that the consistency of the resin itself -affects how the ink moves through it. the longer you wait the more cured the resin is and so the thicker it is.

**Technical:** Develop and apply in-depth, systematic understanding of technical, material and process experimentation



There were several issues with the casting process. The first was that the resin itself was shrinking during the curing process. I later discovered that was because the company had given us the wrong catalyst percentages for the resin, I was actually using 5 times as much catalyst as I needed to.

I didn't find out about this for several weeks by which point I had changed the way that I was doing the casting. I really want to use the alcohol ink effects in the casts but due to shrinkage the alcohol inks were running out around the outside of the mould, ruining the surface of each casting. Also, the shape of the actual object just didn't compliment having a complicated ink pattern inside.



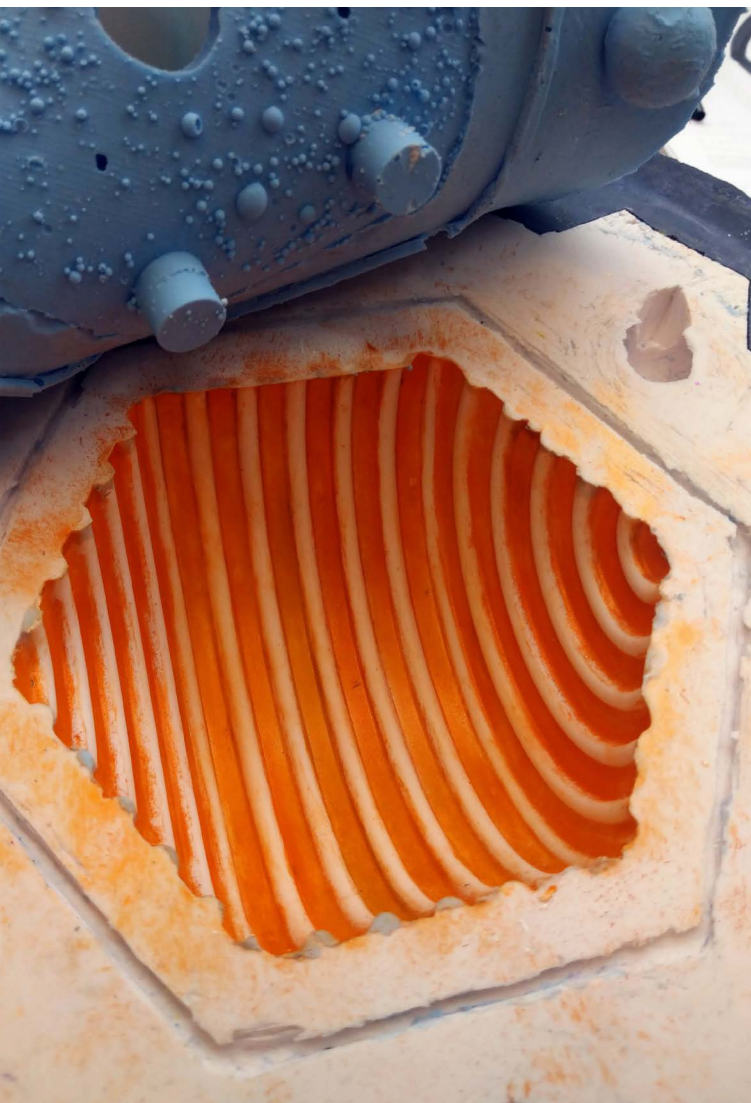
It was at this point that I decided that I would just pigment the resin as a whole for the Sphericons and keep the alcohol inks for the Oloids.

**Technical:** Develop and apply in-depth, systematic understanding of technical, material and process experimentation



I tried to give the resin a translucent quality still, as I felt it would give it a more stimmy feel. Unfortunately, translucent resin meant that you could see the magnets and I didn't want that. So, I tried to do a two-tone version. Again, the blight of shrinkage was making that impossible. I tried different colours and still the top pour leaked over the first pour and made a huge mess.

**Technical:** Develop and apply in-depth, systematic understanding of technical, material and process experimentation



Next attempt to colour the resin was using eye shadow in the actual mould. I made a small scrapper tool to help me tidy up the edges and clean away any excess.

That unfortunately did not work either as it was just impossible to create the absolutely perfect lines that I needed.

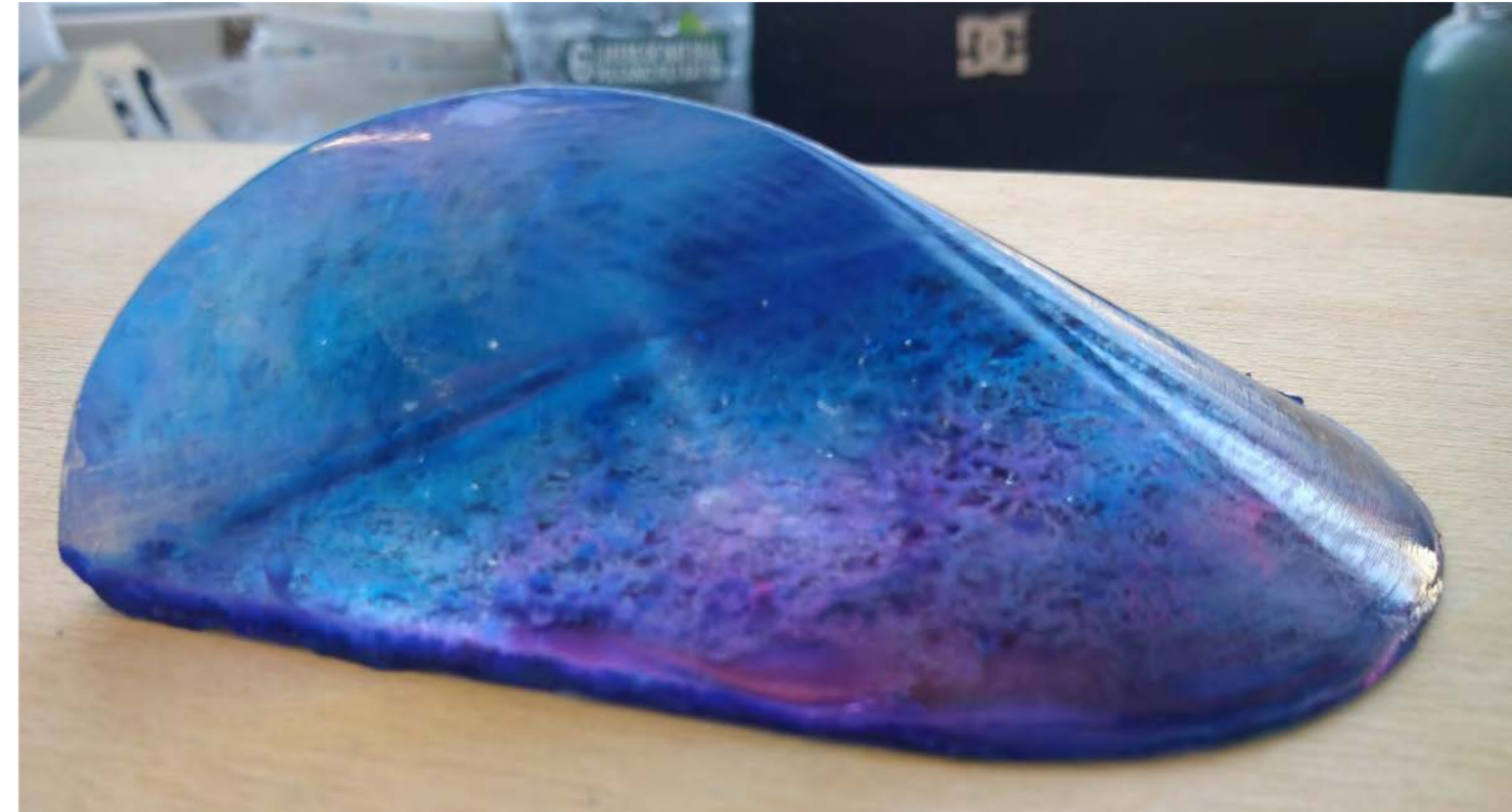
Quote from my tutor Nick:

*"They live and die by how precise they are"*

And he was right. What I needed to do was use an opaque solid colour for the resin.

It would then mean that they could be polished up and any errors in the casting process could be corrected.

**Technical:** The production of a body of three-dimensional work in chosen materials and/or media



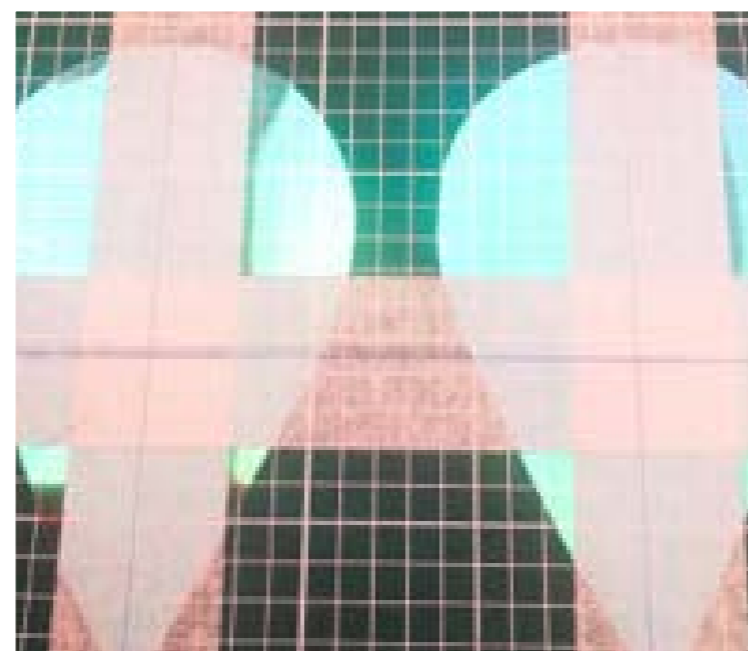
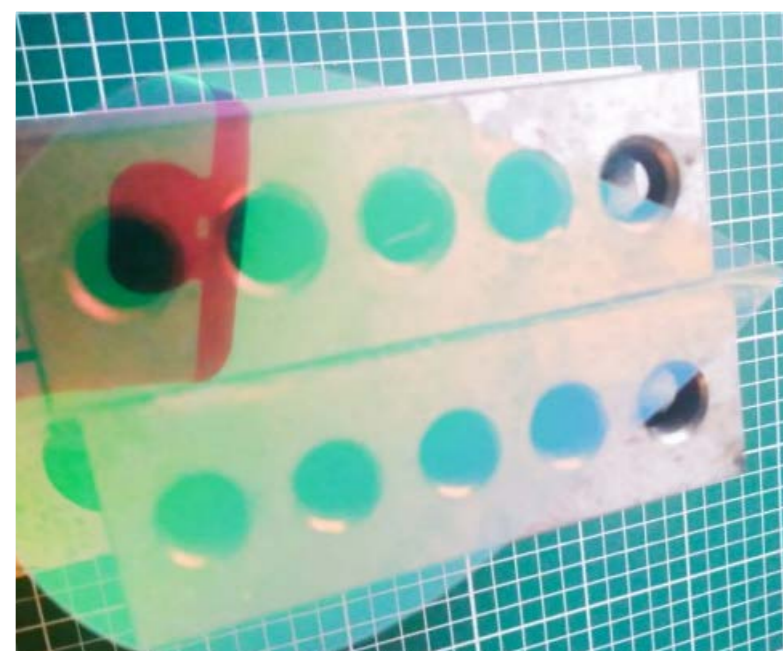
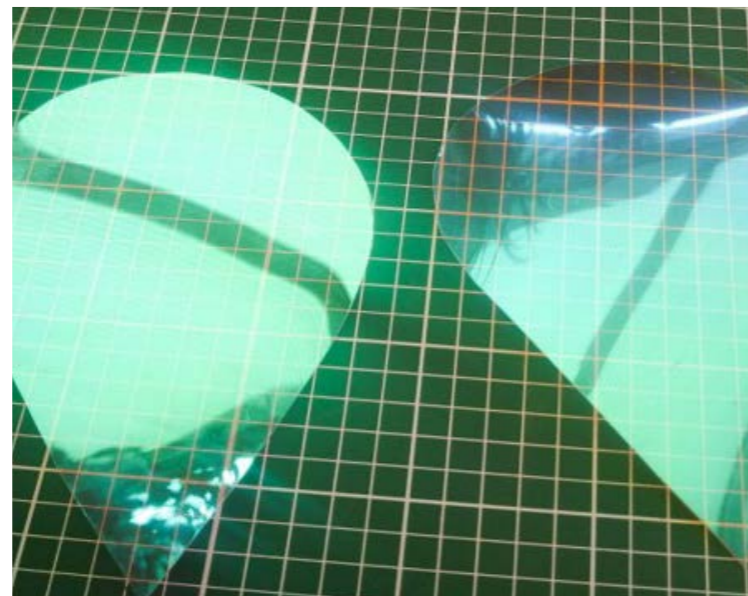
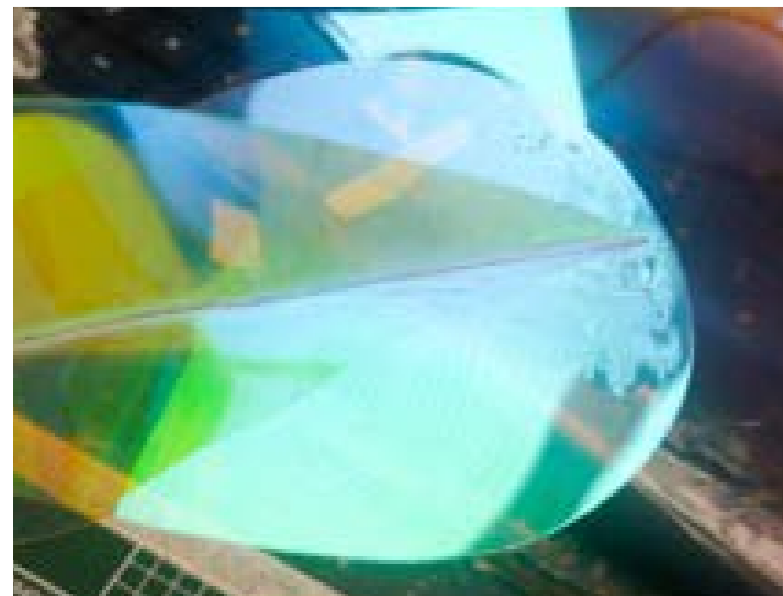
The alcohol inks worked well with the shape of the Oloid. The simplicity of it complemented the complexity of the effect the inks produced in the resin.

Another set of problems occurred though when I had to change the resin I was using. As the viscosity difference meant that the inks would just run straight through and ruin the Oloid. I managed to get two sides done and attached together. It slipped out of my hands on the polishing wheel and broke off a piece.

Although the optical effect of the resin looked great and the alcohol ink also worked really well. It was just not work-ing as a process for making a highly finish design. The line through the centre that was created by joining the two halves took away from the smooth shapes of the Oloid.



**Technical:** Develop and apply in-depth, systematic understanding of technical, material and process experimentation



To use the dichroic film in the Oloids I had to cut them into the right shape so they could be floated in the resin. I had to use very thin plastic sheets to stick the film to so that it could disappear inside the resin. The issue was that the thinness of the film meant it bowed on the tips. I decided to use super glue to adhere them together. that left some white makings where the glue dried on the film, but I was hoping it wouldn't be visible when immersed in the resin.

**TECHNICAL**

**Technical:** Develop and apply in-depth, systematic understanding of technical, material and process experimentation



The opalescent effect achieved with the dichroic film is effective.

It definitely worked well and has an other worldly glow to it.

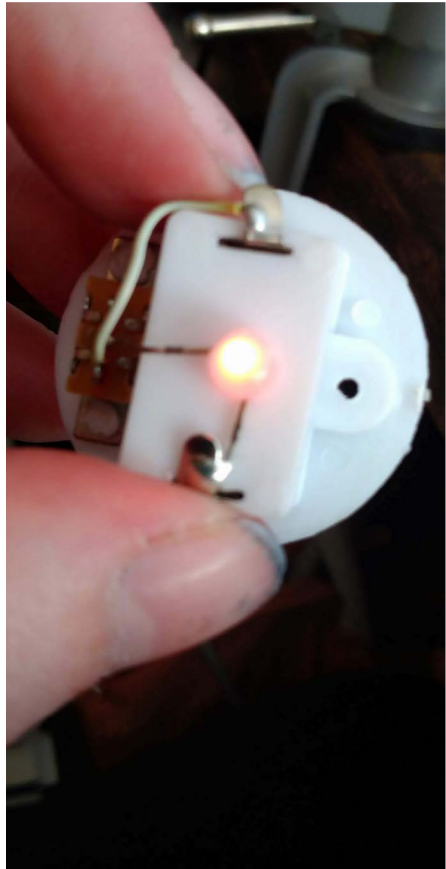
The issue is that the lines of the film can be seen through the resin, bisecting one of the sides.

Once again the effect is great, but it is just not going to work as a final product.





**Technical:** Develop and apply in-depth, systematic understanding of technical, material and process experimentation



This was a small test to see if magnets were conductive as I wanted to use that conductivity in a glowing Sphericon.

This experiment is 3 batteries that normally light up the LED light and a magnet between the terminal. The light still worked, this told me that the magnets were conductive.



These three tests were to see how strong the magnets were.

I tested them with different thicknesses of material between them to see if they would work when covered in a layer of resin and how thick that layer could get before it affected the pull too much.



Here I am trying to make conductive plastic from dissolved polystyrene and graphite powder.



The idea was to create a substance that could cover the magnets still when in use on the glowing Sphericon. This did not work. I think the issue is with the solution of the polystyrene. The technique required a mechanical stirrer to stir the solution for over 2 hours. Without that, I think that the solution just is not dissolved enough so the electricity could not flow through it. when tested with a multimeter it showed no conductivity.



**Technical:** demonstrating an advanced level of skill, craftsmanship and technical command



Here is the red 8-sided Sphericon being used. It has a few issues that need to be solved, like some of the strands from the brushes used in the casting process dislodged into the resing and show up on the surface. Easily fixed with just getting a better brush for the casting process.

The magnets needed to be slightly lower. But all in all, this was an achievement.

The pieces fit together perfectly. The twist registered on each turn to exactly where it needed to be and the finish on the resin was shiny and smooth. The Sphericon had a great weight to it, very satisfying to hold in the hand.

**Technical:** Demonstrating an advanced level of skill, craftsmanship and technical command



Here is the blue 6-sided Sphericon, very happy with this one also as it was almost perfect. I had to rush the finish as we were about to go into lockdown, but the pieces worked. The magnet registration worked, and all the corners lined up in all the positions.



**Technical:** Develop and apply in-depth, systematic understanding of technical, material and process experimentation

The challenge here was to create a battery pack that could be inserted into the Sphericon and would have a smooth surface as it would be on the inside face on each side of the Sphericon.

Key attributes:

1. Screw top
2. A groove in the lid that could be unscrewed with a penny.
3. Had to fit 3x a318 batteries as they produce 4.5v of power that the rainbow LED requires.

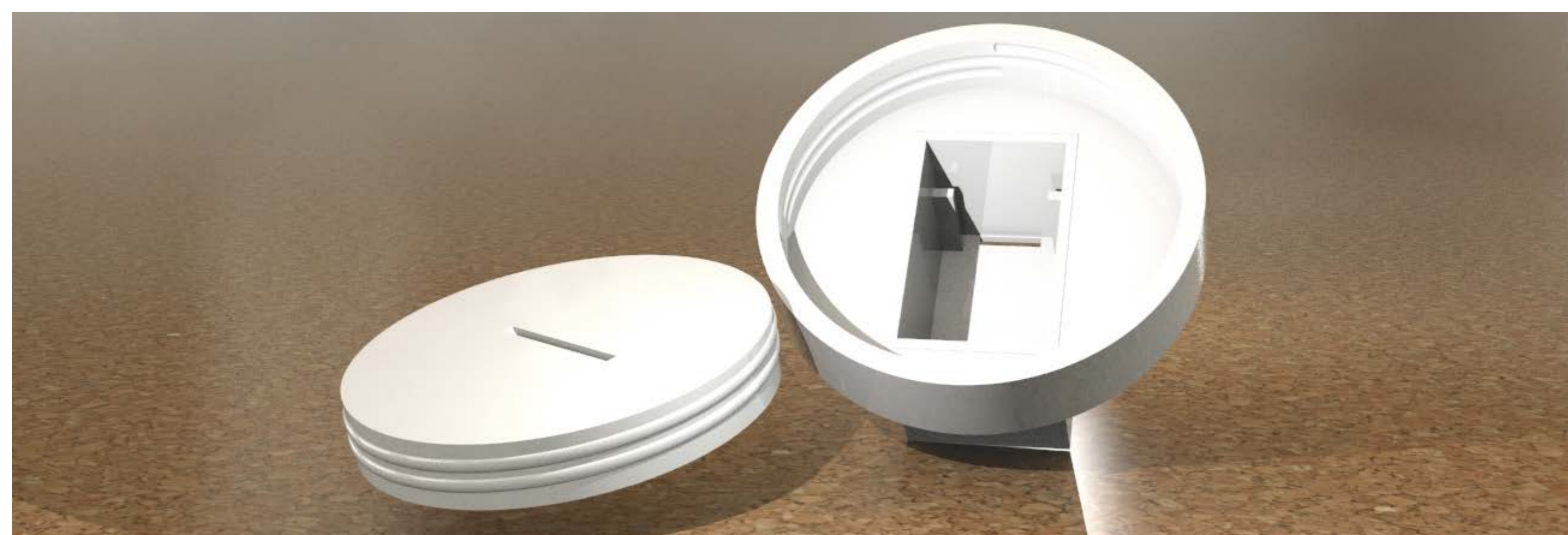
New things learned:

1. How to use layers.
2. How create a male and female screw
3. Creating complex forms that all fused together so that they print properly.

INTEGRATION

RESOLUTION







**Technical:** The production of a body of three-dimensional work in chosen materials and/or media

MAGNETS CONDUCTING ELECTRICITY  
FROM THE BATTERIES

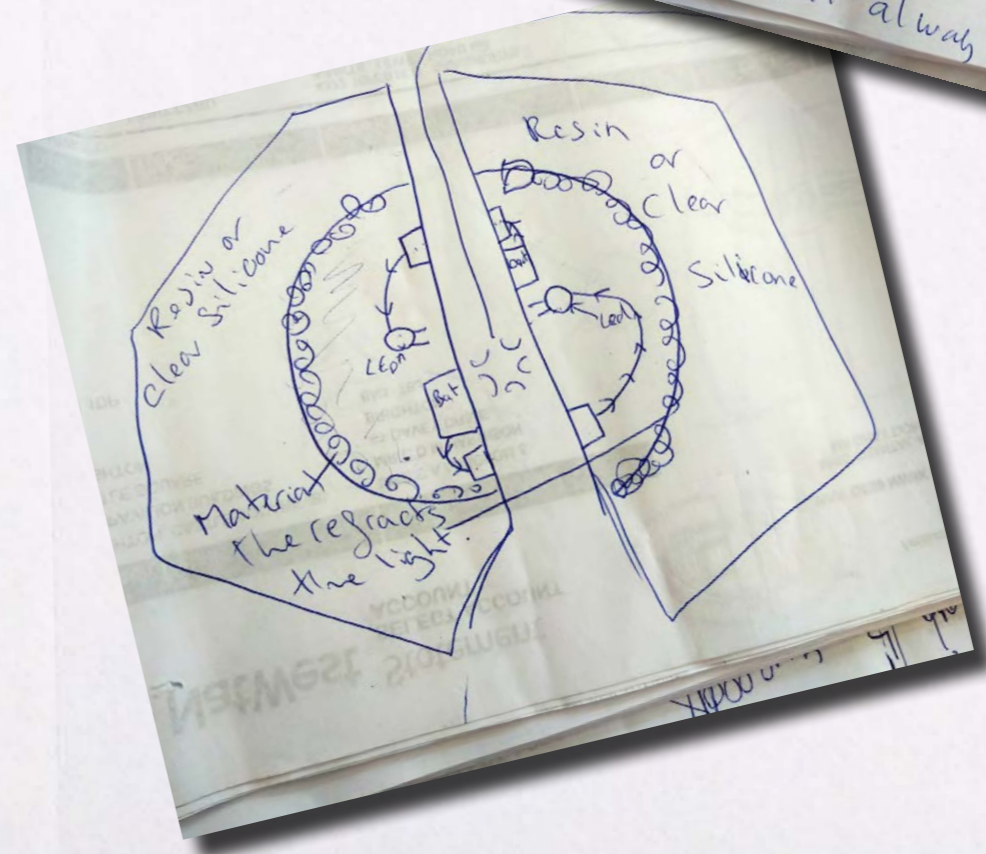
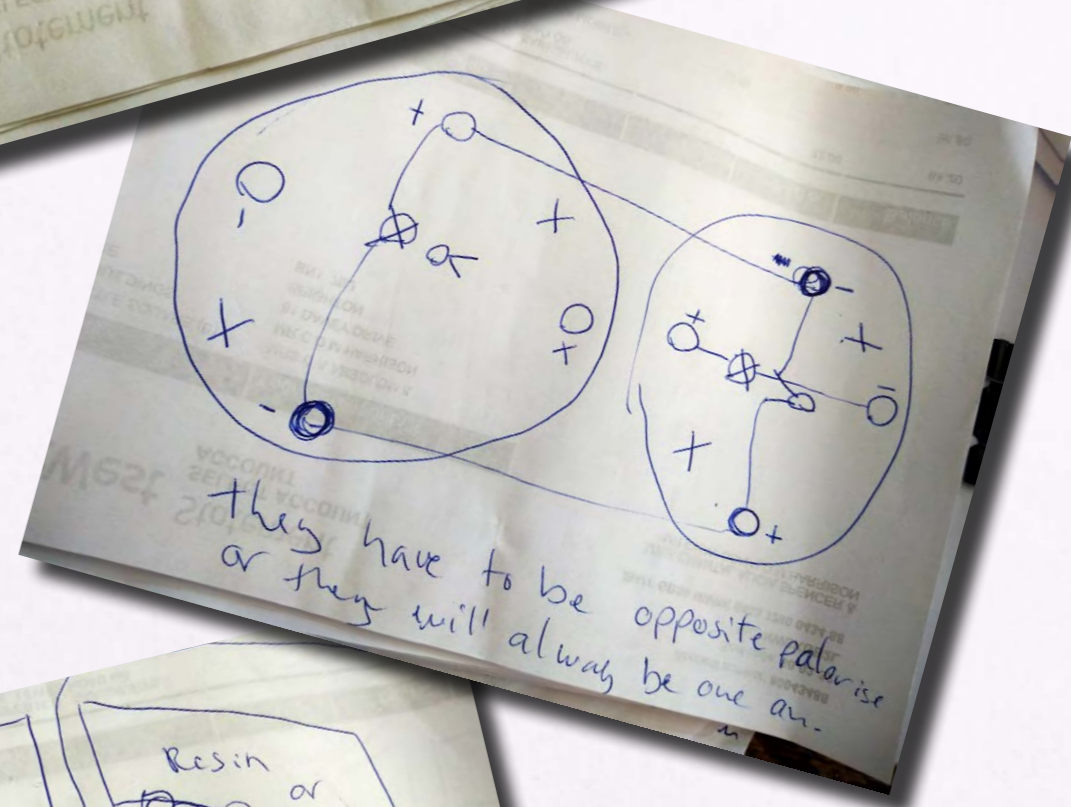
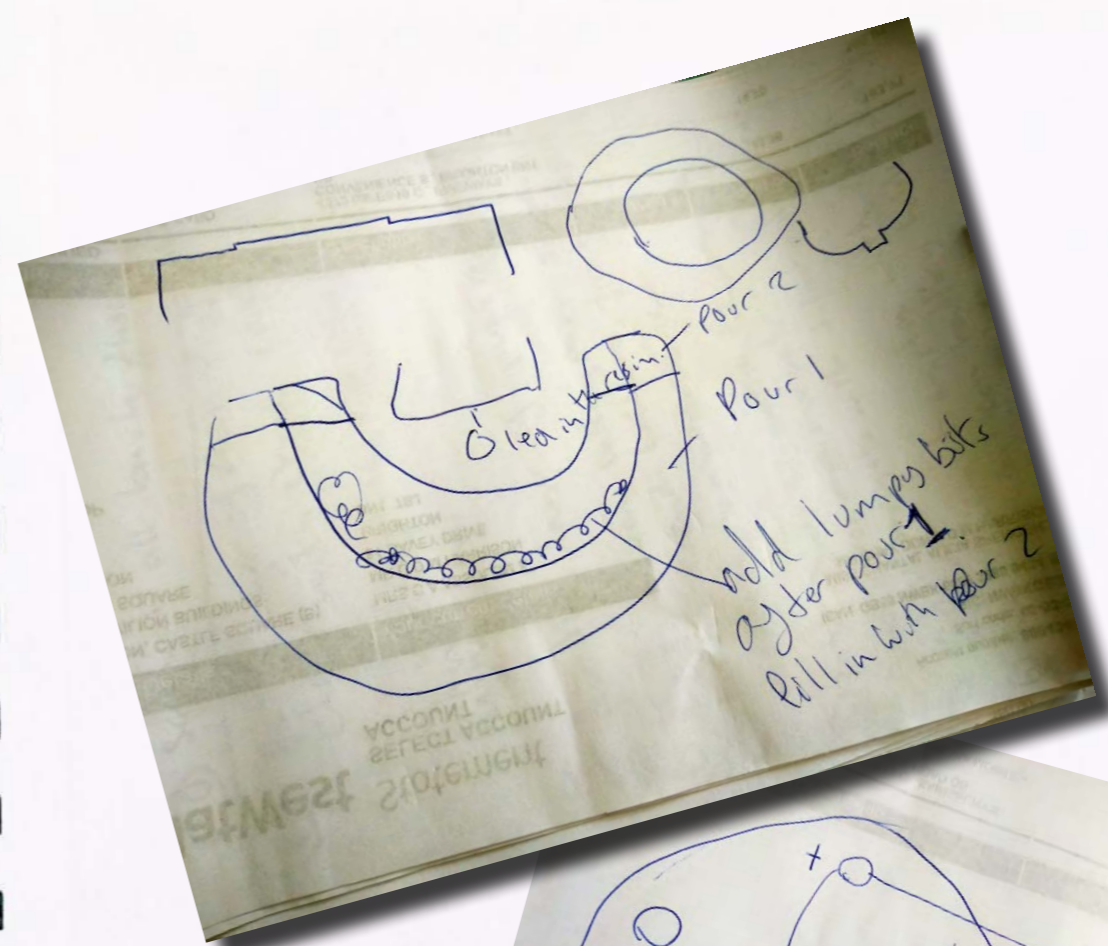
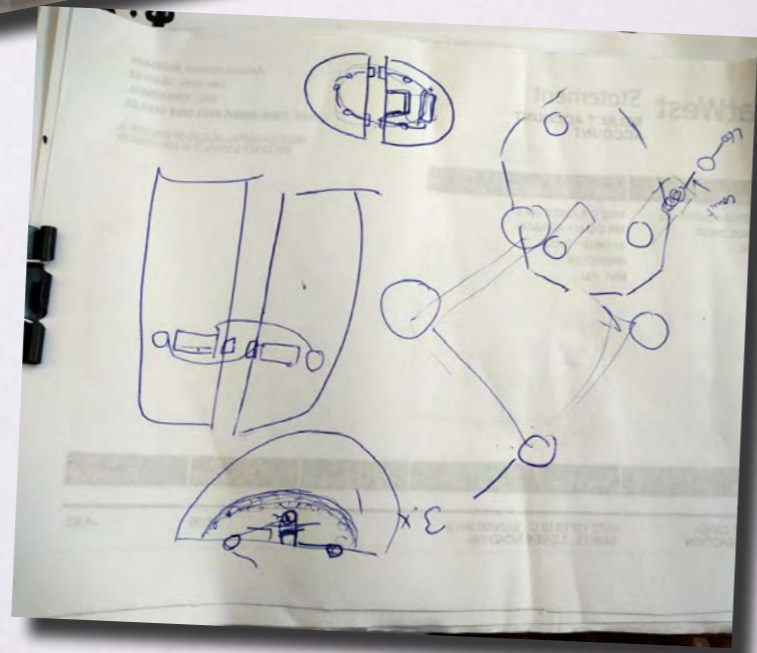
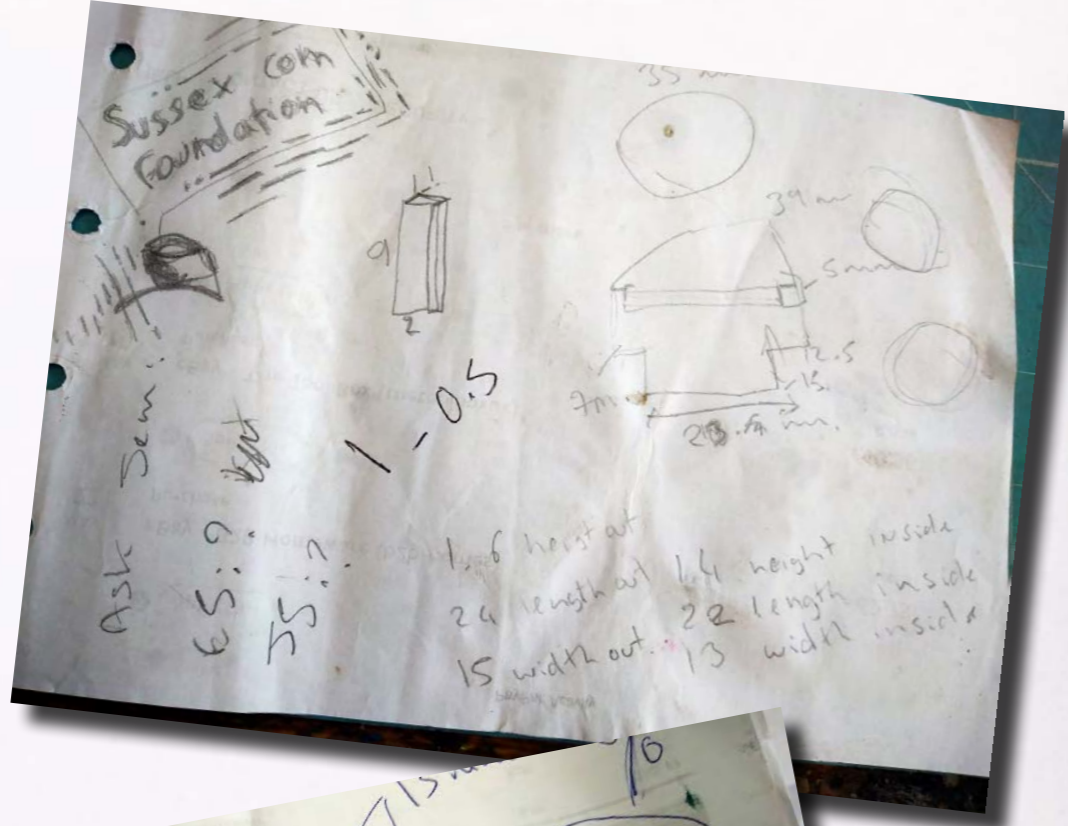
MATERIAL THAT IS TRANSDUCENT  
BUT CRYSTALLISED SO IT REFRACTS  
THE LIGHT, WHICH MAKES IT POSSIBLE  
TO ONLY USE ONE LED.

VOID FOR  
ELECTRONICS

SILICONE OR CLEAR  
RESIN OUTER LAYER

RAINBOW LED LIGHTS THAT HAVE AN  
INTEGRAL CHIP SO THEY CYCLE  
THROUGH THE COLOURS WITHOUT  
ADDITIONAL HARDWARE

BATTERY PACKS WIRED UP ON  
OPPOSITE SIDE OF THEIR RESPECTIVE  
LED LIGHT



**Technical:** Develop and apply in-depth, systematic understanding of technical, material and process experimentation

Had a bit of a rethink with the glowing Sphericon. I decided that I wanted to cast it in silicone as I had previously worked with silicone and the way it distributed the light was exactly what I was looking for.

Key features:

1. The battery compartment needed to fix into the silicone.

For this I designed an array of holes where the silicone could run through and when cured it would hold the battery plate into it.

2. The plate should be as large as possible.

To act as a smooth surface to help the Sphericon slide to the next position as the silicone itself would have a lot of friction.

3. The plate should have inserts for the magnets.

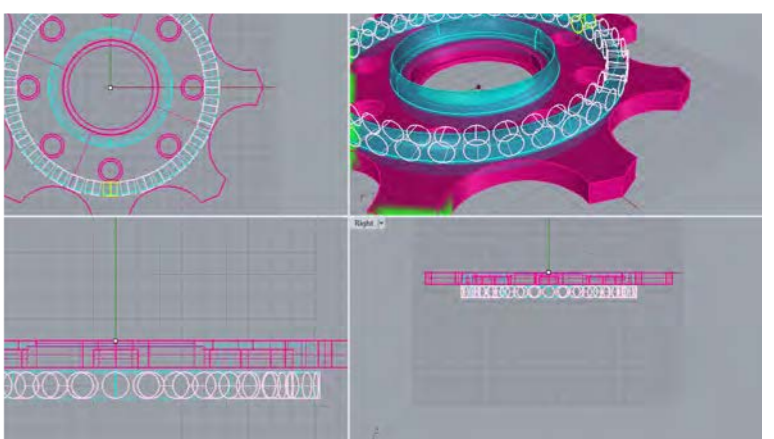
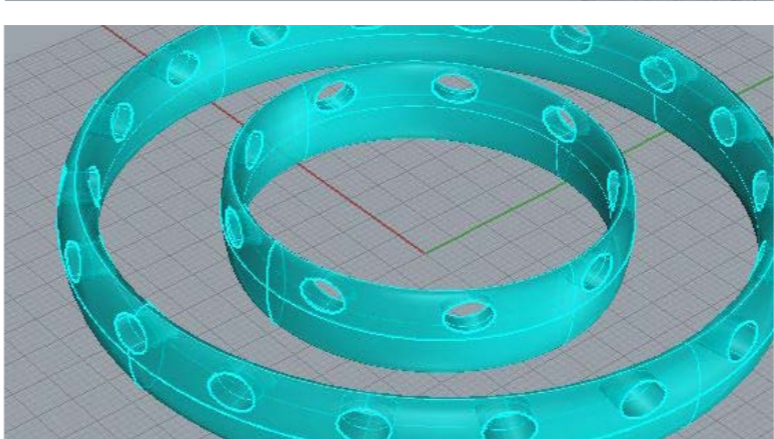
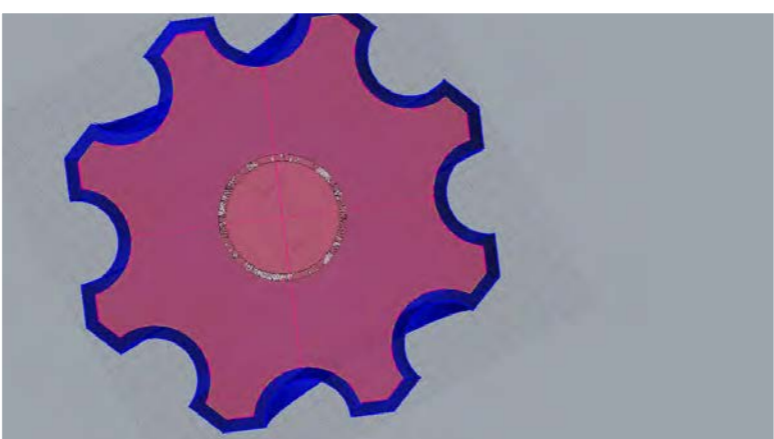
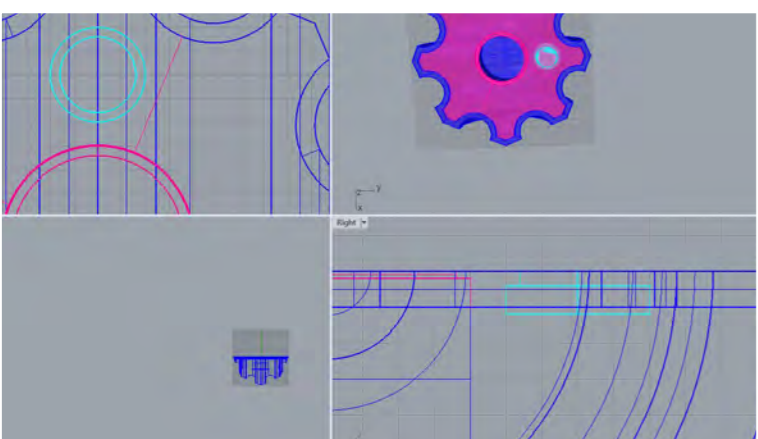
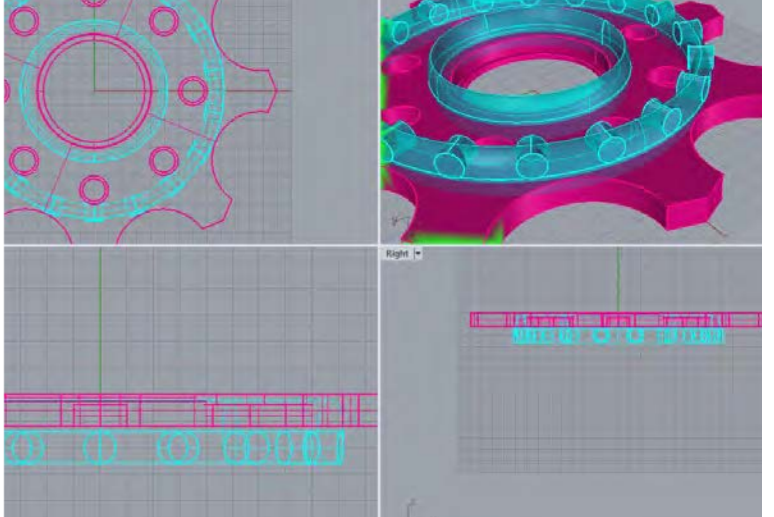
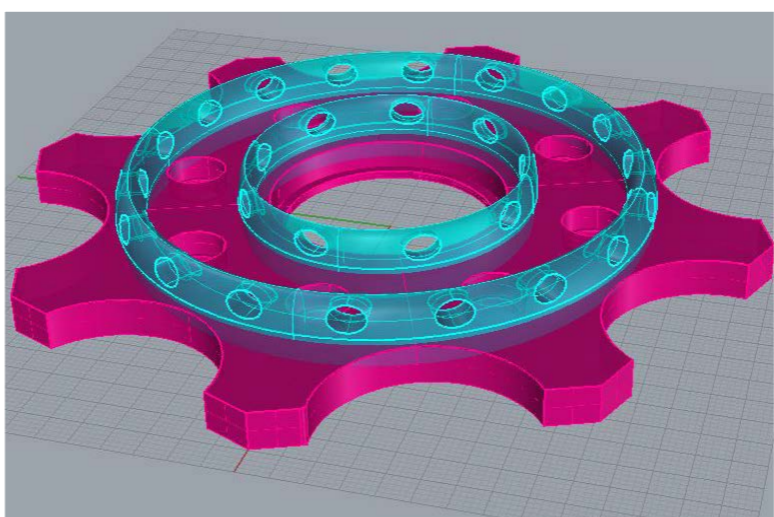
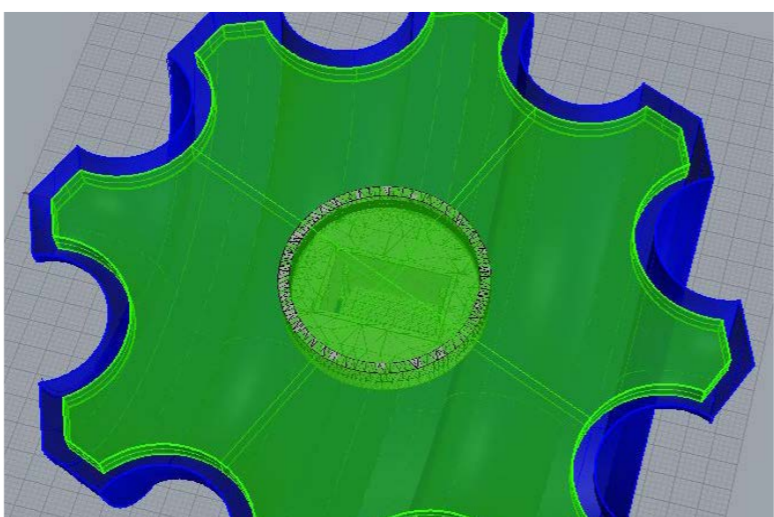
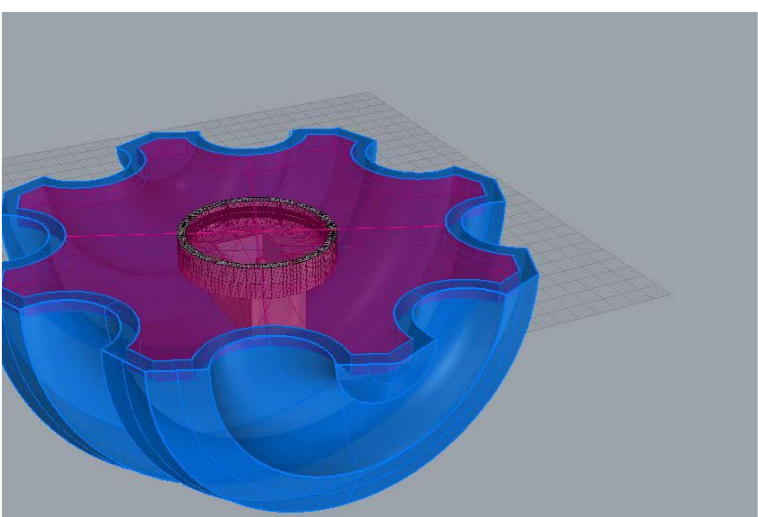
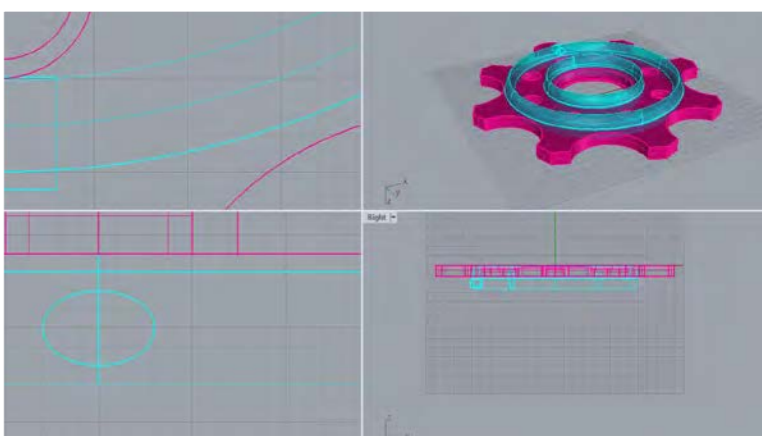
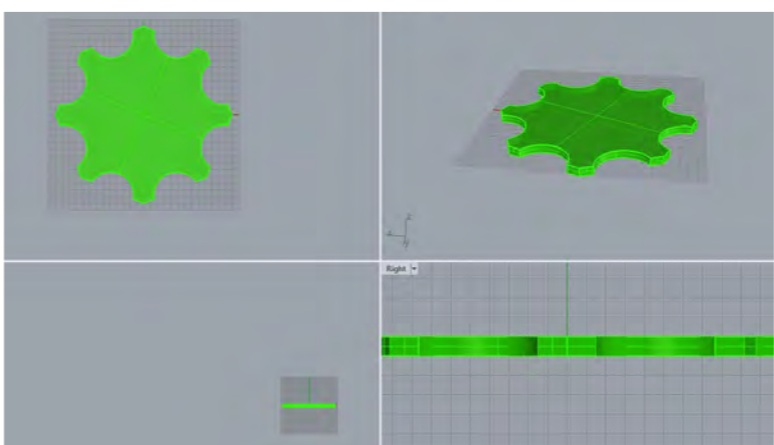
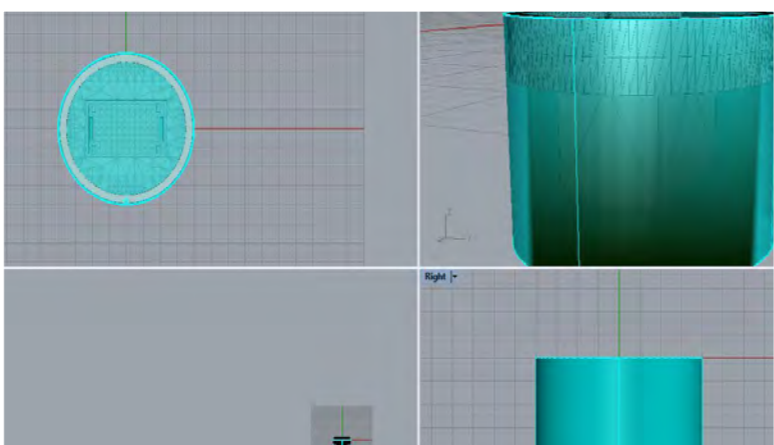
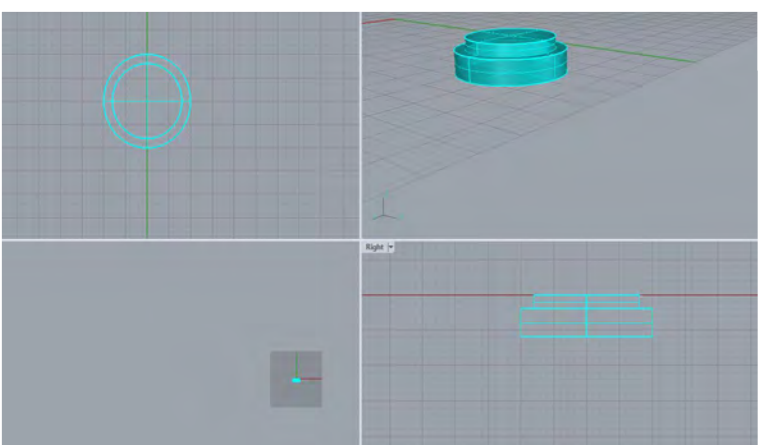
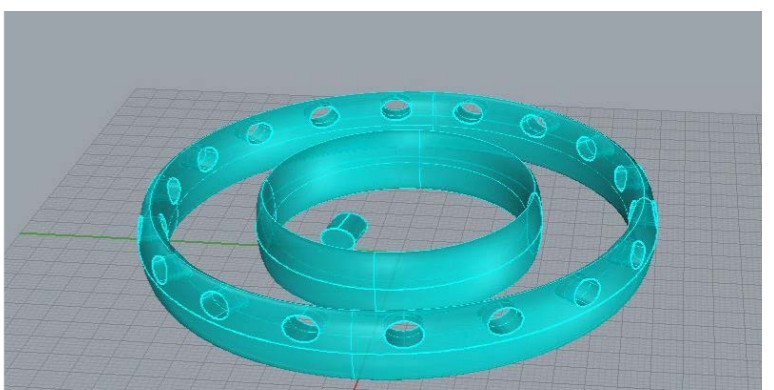
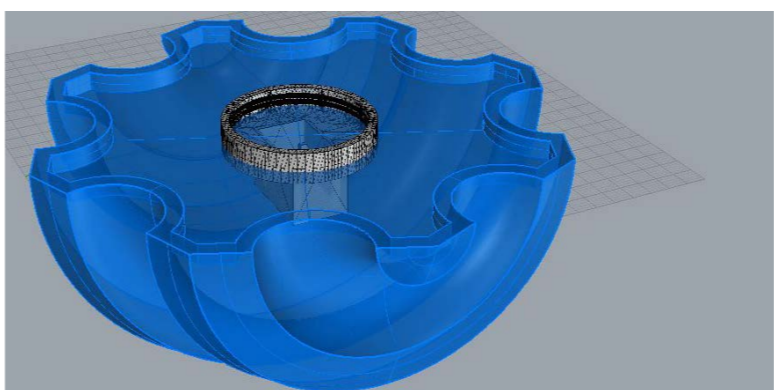
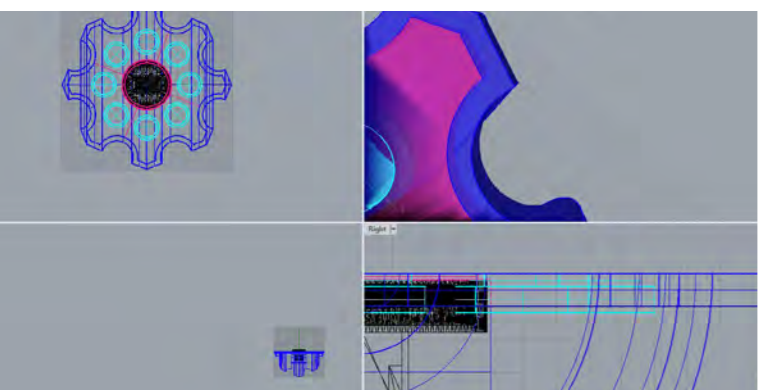
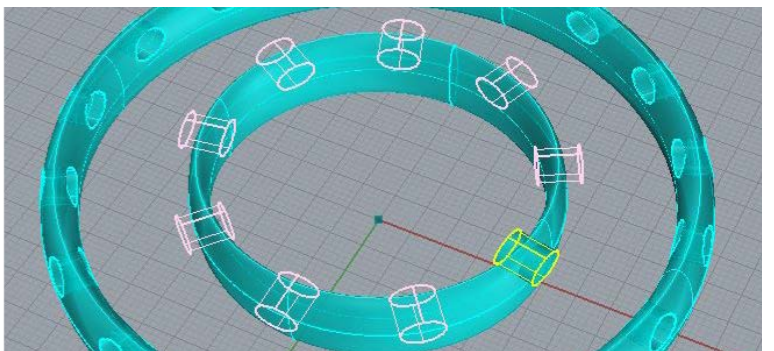
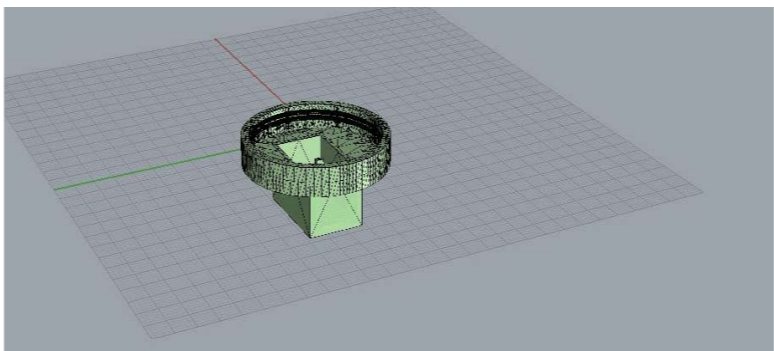
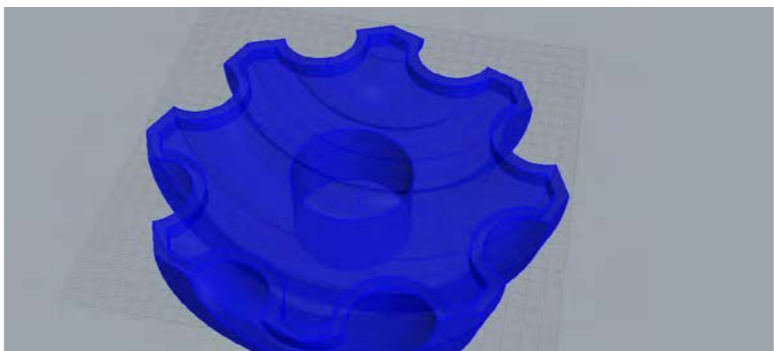
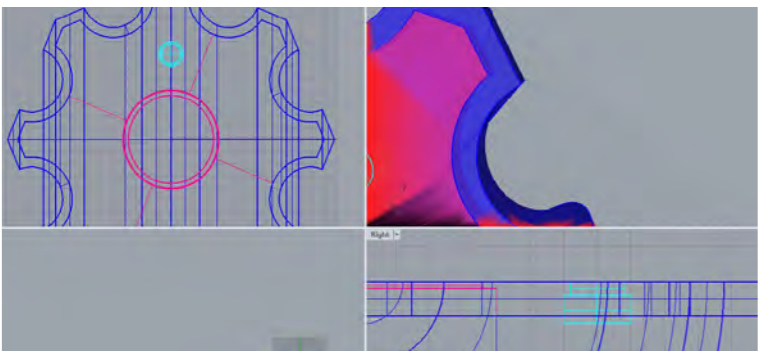
That allow the magnets to be attached from the inside of the plate to maintain safety.

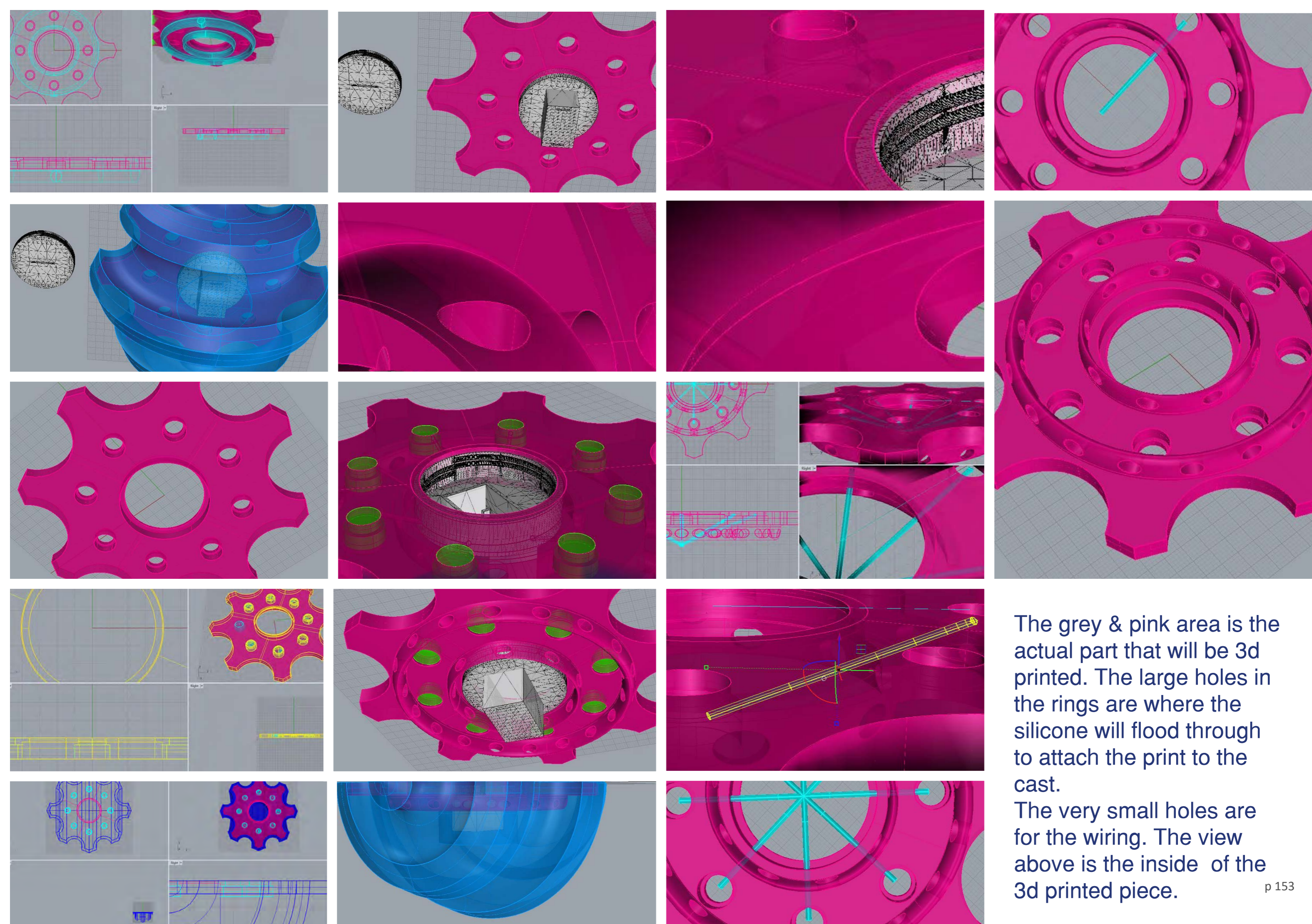
4. The plate should have inserts on the outside for the copper washers.

They act as conductive surface for the power to travel between the two halves of the Sphericon.

5. There should be tubes for the wiring to be threaded through

To enable soldering onto the copper washer, allowing the power to flow from the battery pack terminals.



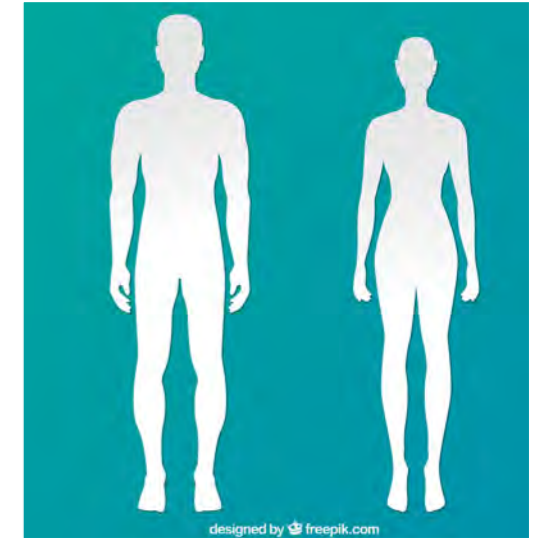
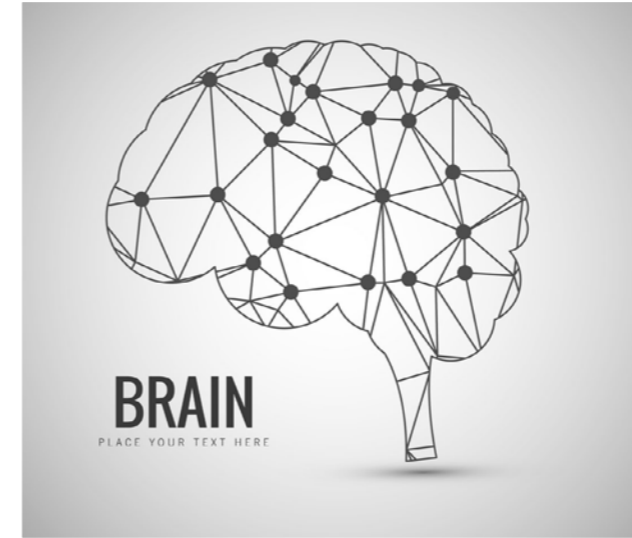
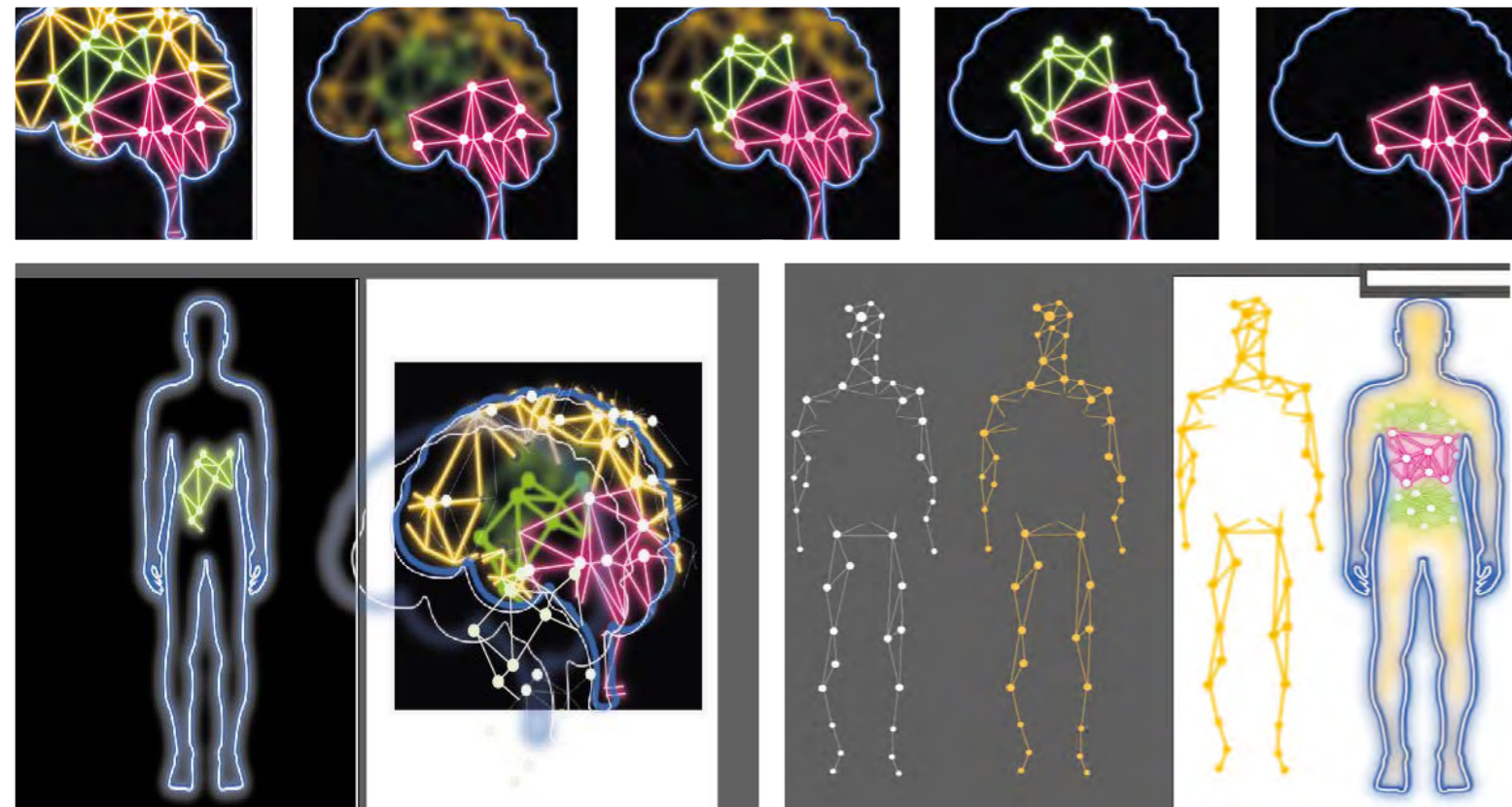


The grey & pink area is the actual part that will be 3d printed. The large holes in the rings are where the silicone will flood through to attach the print to the cast. The very small holes are for the wiring. The view above is the inside of the 3d printed piece.



# From Sensory Room to Living Room

**Technical:** Develop and apply in-depth, systematic understanding of technical, material and process experimentation



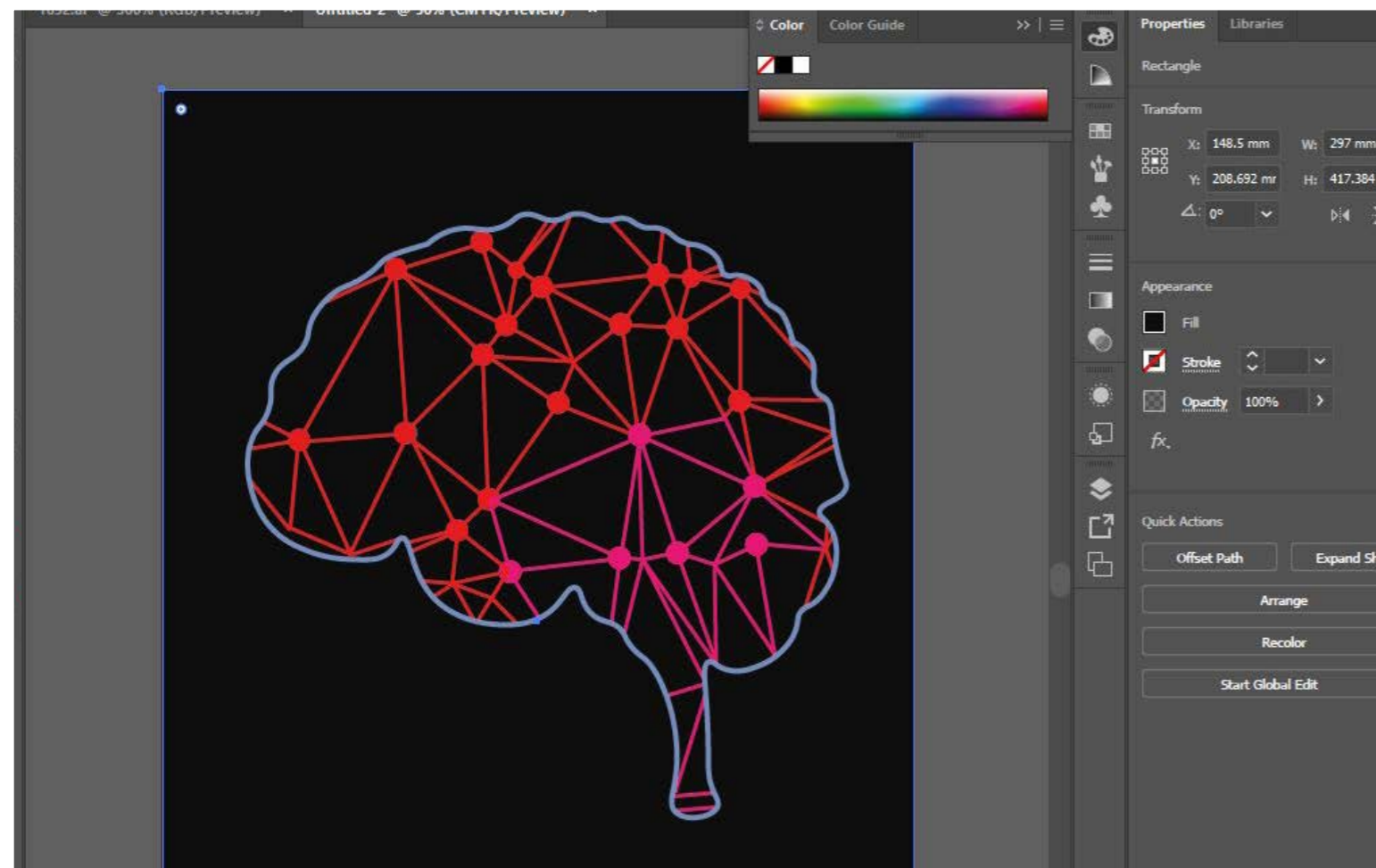
Learning how to make neon illustrations:

I used some free downloaded images (above) as the basis of my illustrations.

I traced over the images to get an outline and layered them several times using gaussian blur and lightening the colour. This created a cool neon glow effect.

INTEGRATION

RESOLUTION



## Organisation: demonstrate competence in planning, managing and executing a programme of work presented for exhibition; the Research Framework Document;

October 2019 to November 2019:

This time was spent collecting information and working out how to communicate my ideas. Researching what Stimming is and who does it. Finding out about how sensory regulation works and then how to explain that. The challenge at that time was that some people seem to get the idea a lot more easily than others. Finding a way to communicate and present my work in a way that works across the board was interesting and not easy. I spent a lot of time on Illustrator learning how to construct Illustrations that would help with communicating very complex theories.

December 2019 to January 2020:

I spent this time working on designing the actual stim toys in Rhino and developing my skills area in the digital realm. Historically, winter is a difficult time for my condition, so I had planned to use this time to do digital work and then move onto the physical workshop work in January. It worked well as a strategy, I achieved a lot and I managed to not injure myself in the process. Spending a few weeks intensively working on a new skill helped me move forward with my skill level, much further than if I had been doing other things too. It also made me feel really excited about getting back into the workshop and start making in the real world.

January 2020 to February 2020:

This month was dedicated to getting stuck into material experimentation. I had accumulated a lot of elements to try out and had a great time playfully but meaningfully trying out all the different types of pigment and films etc. I also took 2 weeks to meticulously build my moulds that I had made from the 3d prints of the sphericons I had designed in December. I took my time with every element of the moulds and it really paid off. The mould stood up to over 30 failed casts in the end and they were still perfect on the cast. Having small things to do in between the meticulous mould building helped me take my time with them, it took the sense of urgency away as I felt I was still being productive even when waiting for layers of my mould to dry.

February 2020 to March 2020:

This month was almost entirely dedicated to working out how to cast the Sphericons in resin. This was not an easy task, everyday another issue arose, and I would fix that one to discover yet another one. This was a month of self-doubt and perseverance. I also came to some stark realisations that the Oloid casting wasn't working and even though I loved the materials I was using; it wasn't quite hitting the mark that I wanted to hit with regards to designing for adults. I felt it needed to have a different type of material in my range. I really wanted to produce something in

metal, but the difficulty with that is I have no experience of casting metal and felt like it would be too late in the year to start learning an entirely new skill.

I had spent some time designing and working on a way to create a glowing Sphericon, that was proving to be very complicated yet a really engaging process that combined electronics, casting and 3d printing in one go. I was still working on the details of construction at this stage.

I began researching electroforming and discovered that it is possible to electroform straight onto 3d prints. This seemed like exactly the right technique for me to bring elevated materials into my design, with the skills that I have and within a budget I could afford. Little did I know that this would be my last full month in the workshops due to the covid-19 pandemic.

March 2020 to April 2020:

Eventually, I worked out a technique that would work and I managed to make my first prototype sphericons. This month was meant to be all about refining the technique and producing some flawless objects for the show. I had planned to have all 3 sphericons completed by the Easter holidays. I had planned to spend the Easter holidays design and 3d printing the battery packs for my glowing spher-

icons and doing all the wiring and electronics, so that they would be ready to cast as soon as I got back. I had bought an electroforming kit and would be getting the Oloids electroformed in silver and copper in the last few weeks in the workshops.

Little did I know that we would be put in lockdown two weeks into the month and have to stop all physical making. I continued to design my Sphericon battery pack and worked out how it could be constructed if I had had the chance to do it in real life.

April 2020 to May:

This time was spent reflecting on all the work that had been done over the last 11 months. From the first investigations into researching my dissertation, to all the knowledge and skills I had learned with regards to my digital work and the properties of casting resin.

In a way it was a time when I went full circle, back to working out how to communicate all this work in a palatable concise way. Fishing out the important parts and evaluating my journey through my research. This was actually an extremely valuable time for my project. albeit it a sad time as I was not able to finish my physical work. It gave me an opportunity to see the value in the research as a stand-alone project, and that it still had value even without a final object to hold in the hand.



45g polystyrene + 10g graphite

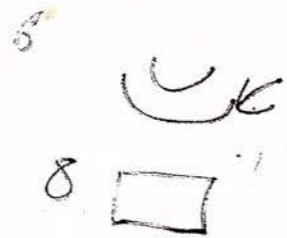
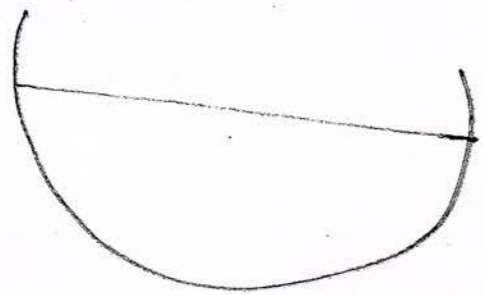
6 Sided: resin 226g. half  
oiloid: resin ~~505g~~ 505g?? half

10 sided : 160g not full + 40g+??

MM

Step 1.

Pour up to line  
in translucent  
colour. (check g)



Lid on. (should not touch the nobbles.  
~~pour inserts~~)

Step 2: pour opaque layer + inserts (lid on.)

Step 3: add inserts - then magnets - cover in  
opaque layer.

## Organisation:

Each Sphericon required a different amount of resin, and because the resin had to be cast twice to ensure each half was exactly the same, that meant that I had to measure out enough resin for two and add the pigment to that.

Also having the right weight vs catalyst ration is important too. As I had a lot of experimentation going on I had to make sure I was taking down notes as I went.

They often became a little messy and appeared disorganised. But they were then reinterpreted into an organised system of weights, measures and even labelled cups. These helped me remember what colour went where and how much of it needed to be poured and how much catalyst (see next page photos for comparison).



up to the line on the 6 sided mould  
 440 for both sides.

220 whole thing -

Layer 1  
 6 sides - 130g

Layer 2 + inserts -

70g opaque

Layer 3 - 20g opaque

Make up 180g opaque in separate cup.  
 Catalysed

8 sided -

500

Layer 1 - 140g

150

Layer 2 + inserts - 70g opaque

Layer 3 - 20 opaque

350

90

90

~~240~~

~~240~~

~~240~~

220  
 310 Phew!

130  
 + 180  
 310

sticks magnets black side down

## Organisation:

Working out the order of business on the way something is going to be made before actually making it really helps keep waste down and streamlines the making process.

- ⑩ sand it all back flush.

---

- ① pour 1 layer of resin degassed super clear with Dome cap
- ② Pour crushed granules + clear resin up to ~~magnet~~ battery line.
- ③ Pour thin layer of opaque resin (0.5mm)
- ④ place silicone battery pack shape + wire trench holders. fill to top ~~magnet line. opaque resin~~
- ~~⑤ add wires connected to magnets.~~
- ⑤ add wires and magnets.
- ⑥ in fill magnets with silver conductive epoxi.
- ⑦ in fill wire trenches with resin
- ⑧ remove silicon battery holder, drill 5mm hole for lead.
- ⑨ stick in battery pack and wire it up



## Organisation:

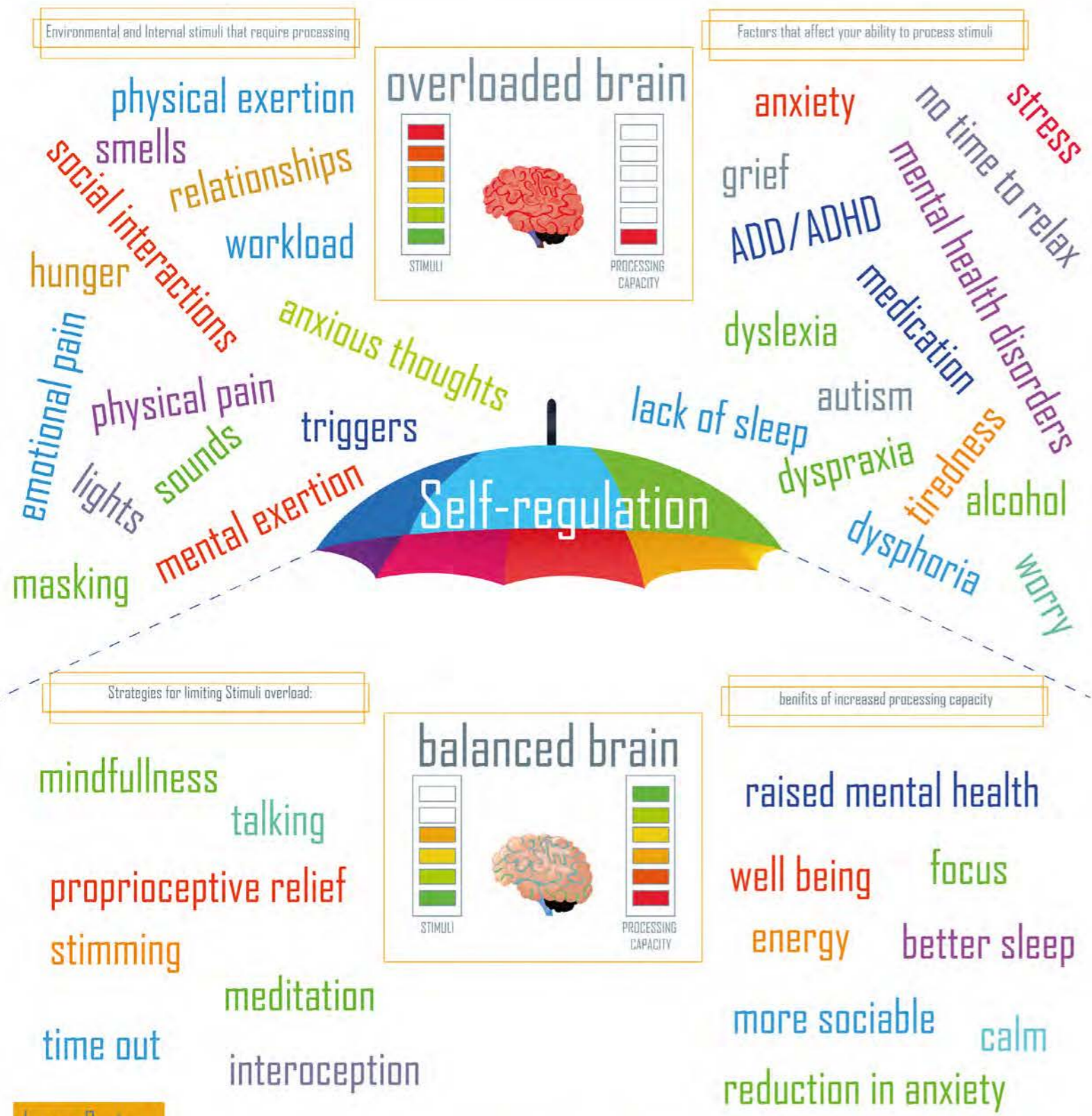
Label everything!!!!

Marking out exactly where parts of your mould need to be.  
Notice the lines on the ends of the lolly pop sticks that  
relate to the lines on the mould.

This was a last-minute fix, an attempt to find a workable  
way to embed the magnets without them spinning around  
in their whole.

Each Sphericon had to have one and they were all slightly  
different, so it was important to keep things organised and  
label each one.





# From Sensory Room to Living Room

## Resolution

This poster was part of my proposition exhibition work. It was important to me to be able to visually explain some of the more complicated theories and words that made up the research that my project was based on.

INTEGRATION

### Jargon Buster:

**Stimming** is a slang term for self-stimulatory behaviour. Everyone has 'stims' that they do subconsciously, from twisting your hair to fidgeting your hands. Some people dance to stim purposefully to help block out external stimuli. This type of stimming is generally more pronounced and obvious from hand flapping to staring into bright lights. Stimming objects are often used to help the 'stimmer' enter a higher state of relaxation. The more stimmy the object, the more external stimuli it blocks, and the higher the state of relaxing it can bring.

**Proprioceptive Relief** - this is a term used for deep pressure relaxation. Proprioception is your sense of where you placed in the physical world. This sense is responsible for the good feeling you get from receiving a hug or walking up under a nice heavy duvet. Some people use weighted blankets and other deep pressure activities to give them proprioceptive relief.

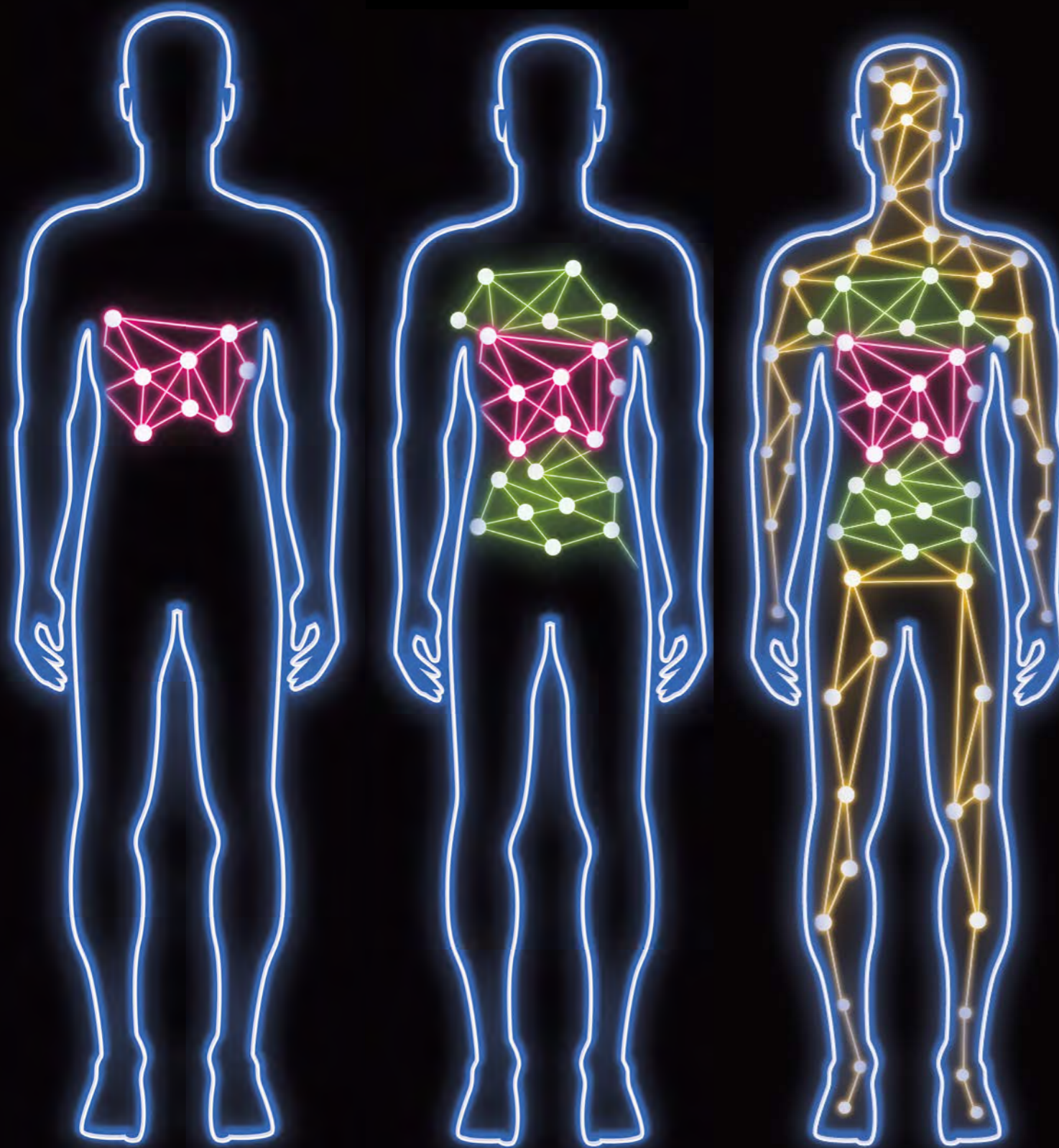
**Triggers** - is a term used to describe a Psychological impact from a time in a person's past. These can be good or bad and can bring on a flashback episode in a person that reduces their ability to process the here and now as they are, psychologically, living in two times simultaneously. Triggers can last from fractions of a second to months and can have a significant impact on a person's day to day life if they have experienced trauma.

**Neurodivergent** - a term used to describe a person's ability to read their own body and emotional needs. Many neurodivergent people and mental health disorders can inhibit a person's understanding of their emotional state. This can sometimes manifest as a complete inability to put a name to emotions, which is known as Alexithymia. It is important for self-regulation as you can easily overload yourself if you are unable to identify the fact that you are in a state of mind that is reducing your ability to process stimuli.

**Neurodivergent** - a term used to describe when a person has certain behaviours that are intrinsically part of themselves but does not feel able to show them in general day to day life. Neurodivergent people often find their behaviours and personality traits to appear more neuro-typical. Those with mental health issues often hide their anxiety or depression. It can be as simple as not showing your boss that you are tired from a night out, but habitual, making excuses seems mental health issues, low self-esteem and overpassive traumatic stress.



## Resolution



These were the resolved illustrations that I made to represent the Id, the Ego and the Super Ego. I wanted to give them a 70's pseudo-science style look in a tongue in cheek way. They are made to represent the three different parts our psychological mind.

INTEGRATION

TECHNICAL

## Resolution



These were the resolved illustrations that I made to represent the 3 different evolutions of our brain according to the triune brain theory. Both these and the Men in the previous page are used in my creative enquiry publication.

INTEGRATION

TECHNICAL



## Resolution

These are my resolved Sphericons. I'm happy with the outcome of these. The magnets register to the correct spot and the generally feel and finish of them is exactly how I intended them to be.

### 1. For adults?

Yes, these say adult toys to me, with a nod to the traditional toys for children.

It's important to remember that part of the message these stim toys are putting across is to shed some of those societal hang ups about self-care. This involves embracing a less serious and more childlike approach to it. I wanted these to walk a fine line between adulthood properness and childish playfulness.

### 2. Do they please the primal parts of our brain/mind?

Yes, they feel great to hold, smooth, heavy and the magnets give a satisfying clunk.

These toys are designed to please the less evolved parts of our brains in order to keep our brains less stressed. To do that it has to feel satisfying to hold and play with. This will give the brain small low-level pleasure and used regularly can help reduce day to day stress.

### 3. Do they give you a sense of taking you out of the time?

Yes, the lines and the way they spiral around the object gives them other worldly qualities.

The essence for these toys was to make sure they were intriguing enough to make the user lose themselves slightly in the playing with them but also be the type of toy that you would play with without even looking at it. I feel this goal was achieved.

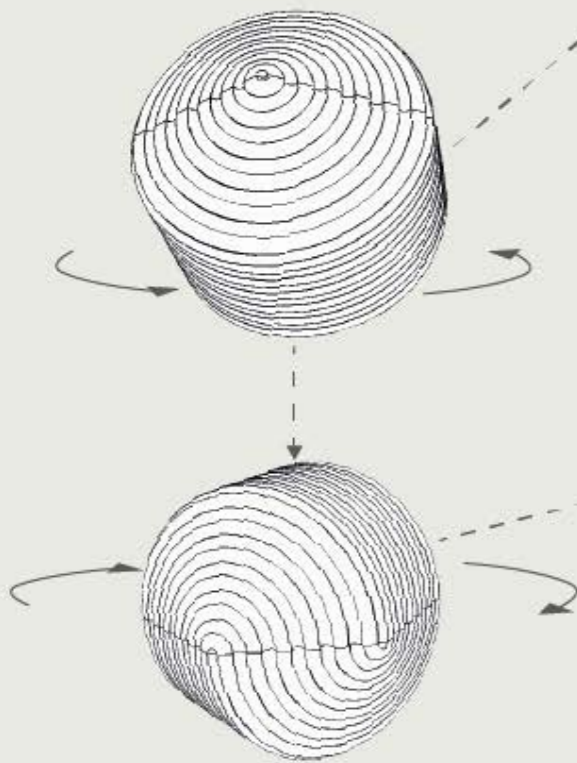
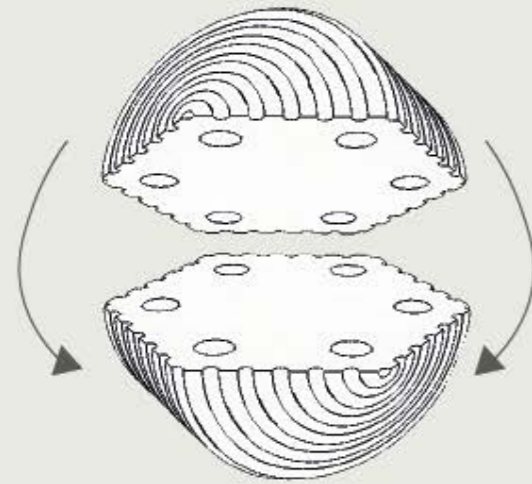
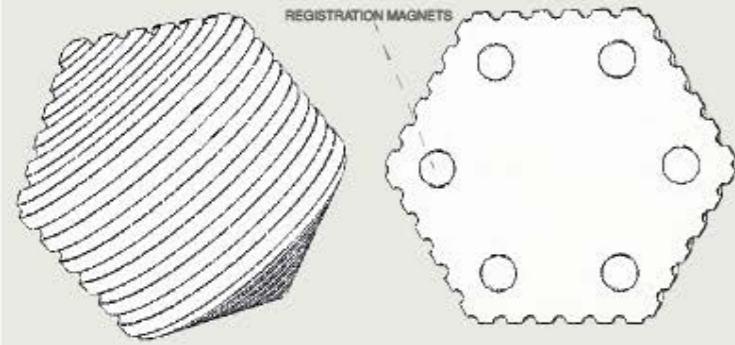
INTEGRATION

TECHNICAL



## Resolution

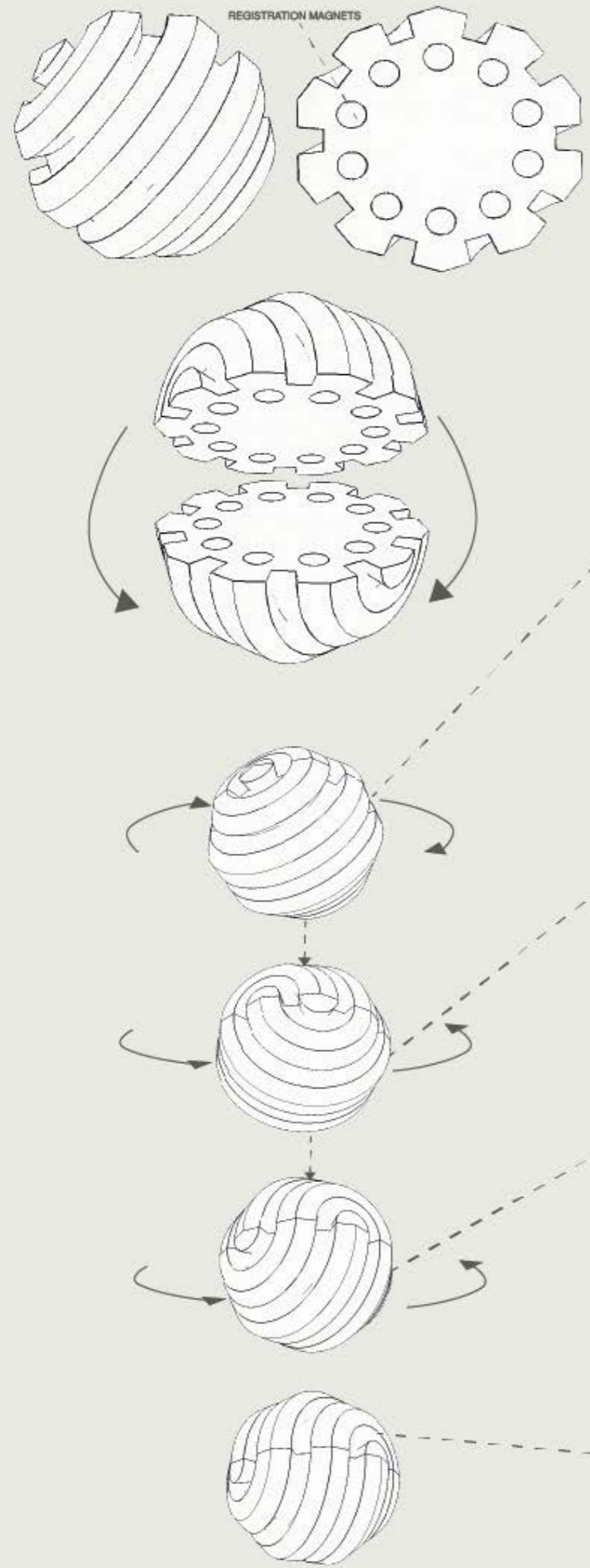
### 6 SIDED SPHERICON



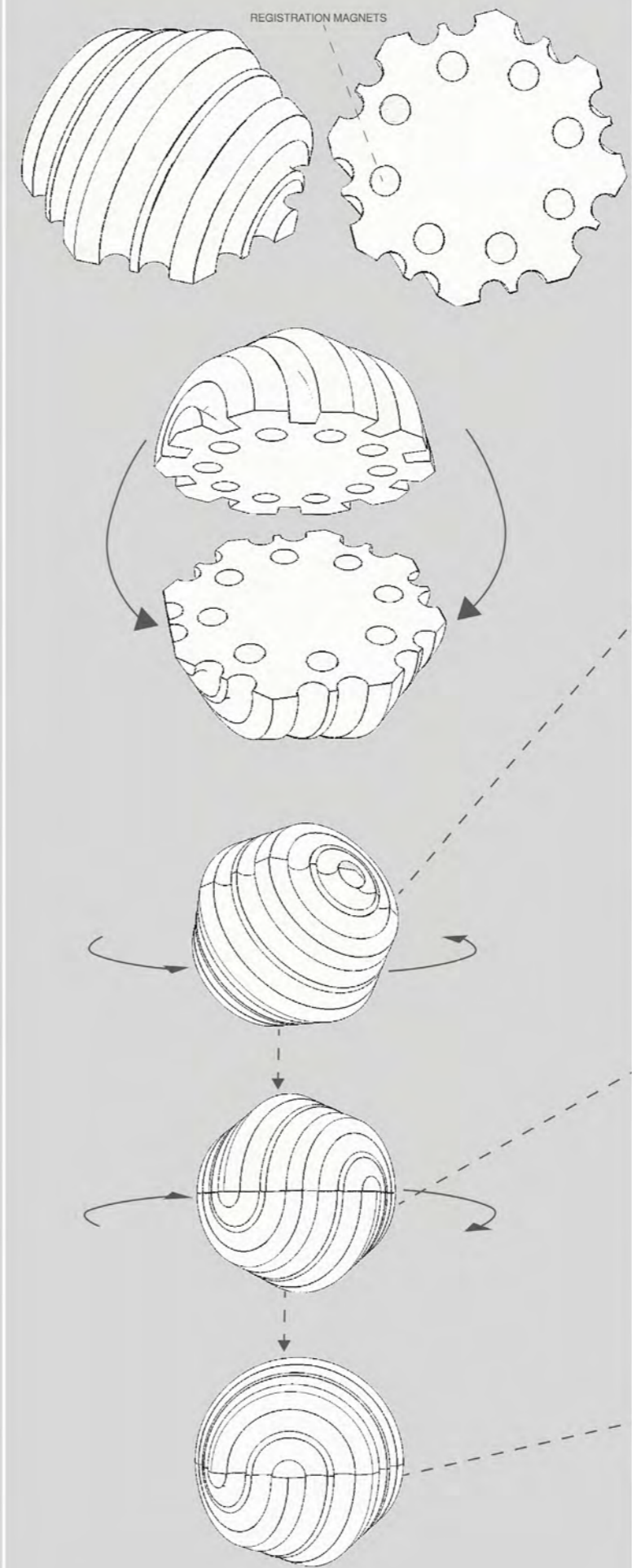
These are my resolved posters of how my Sphericons work. What was I trying to achieve with these and has it been successful?

The main issue that I was trying to overcome is that the Sphericons that I have made are new inventions that most people have not seen before. I wanted to have something really clear and instructive purely based on how they function. I am over the moon with these illustrations, they are clear and uncomplicated without being condescending or childlike.

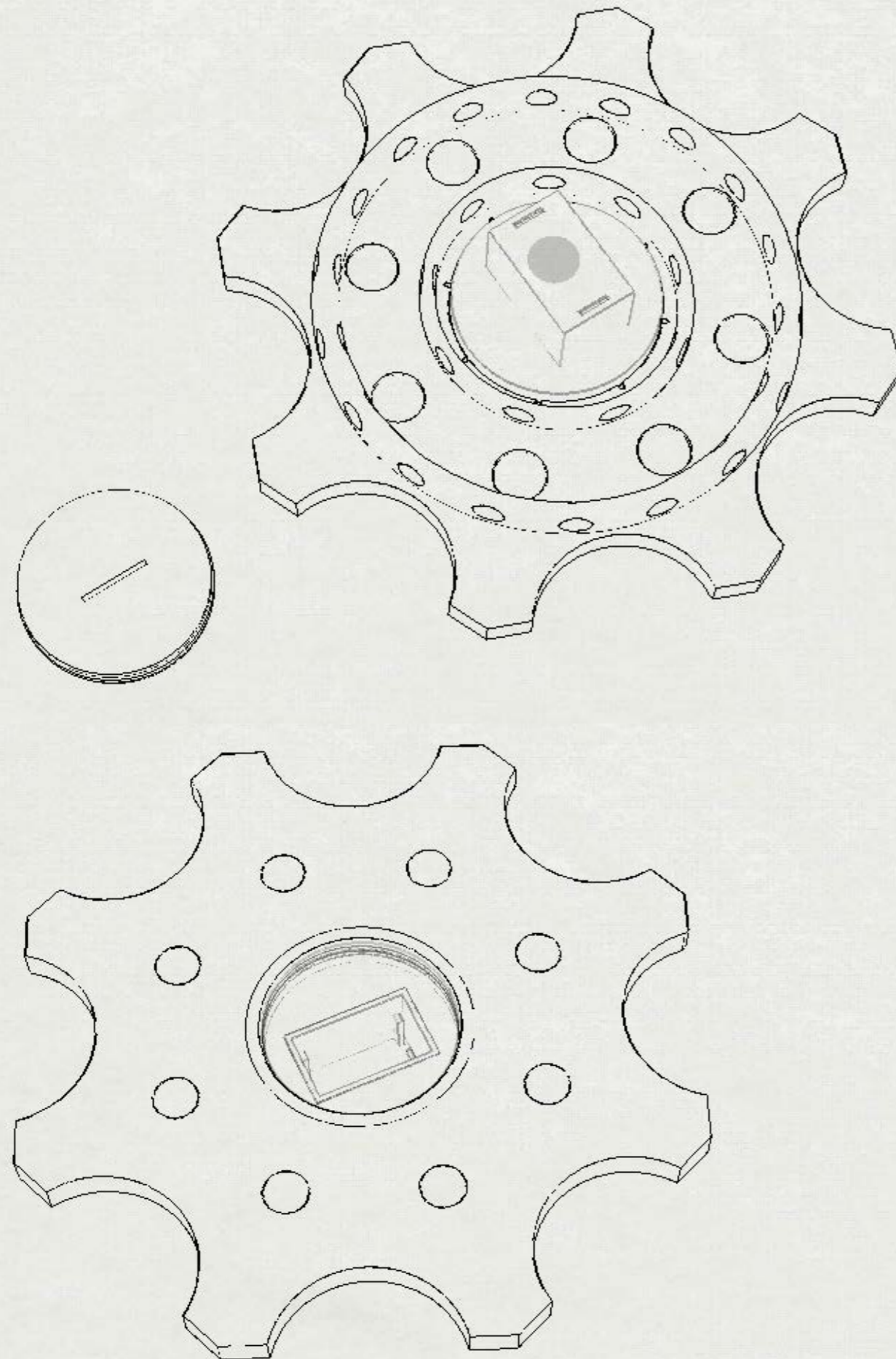
10 SIDED SPHERICON



8 SIDED SPHERICON



## Resolution

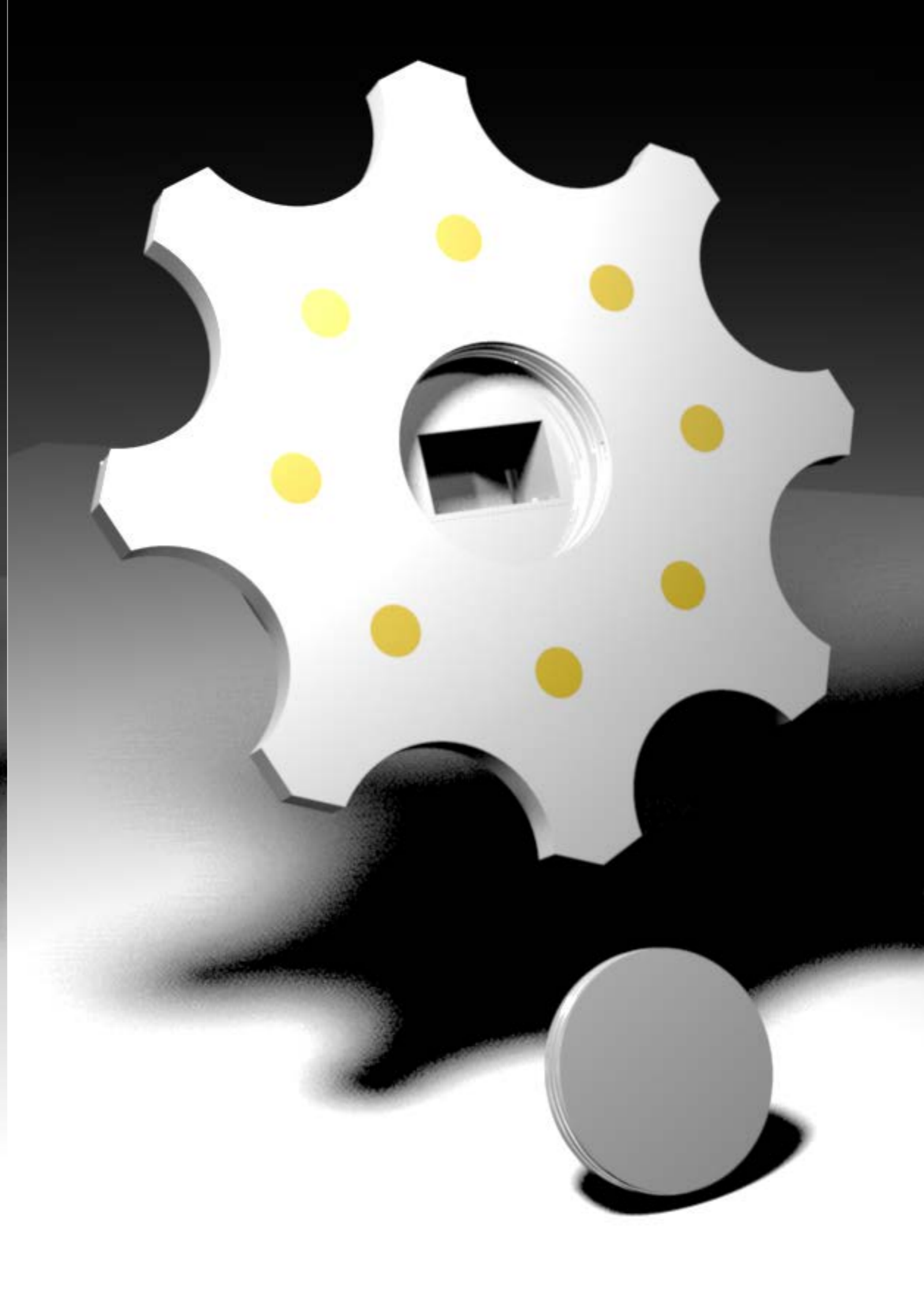
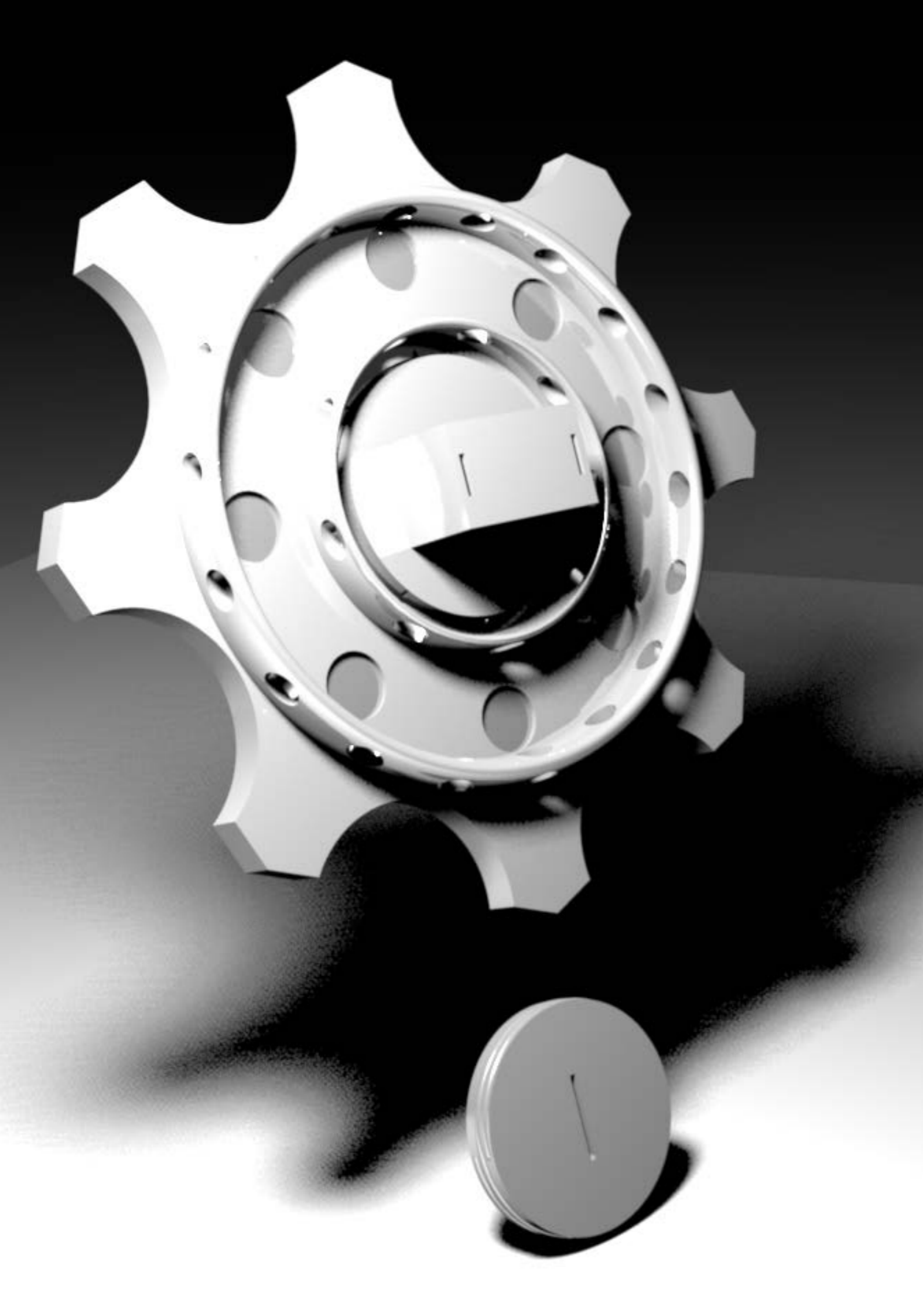


This is the final design for the battery pack that will be going on the glowing Sphericon that I have designed. Issues that had to be overcome:

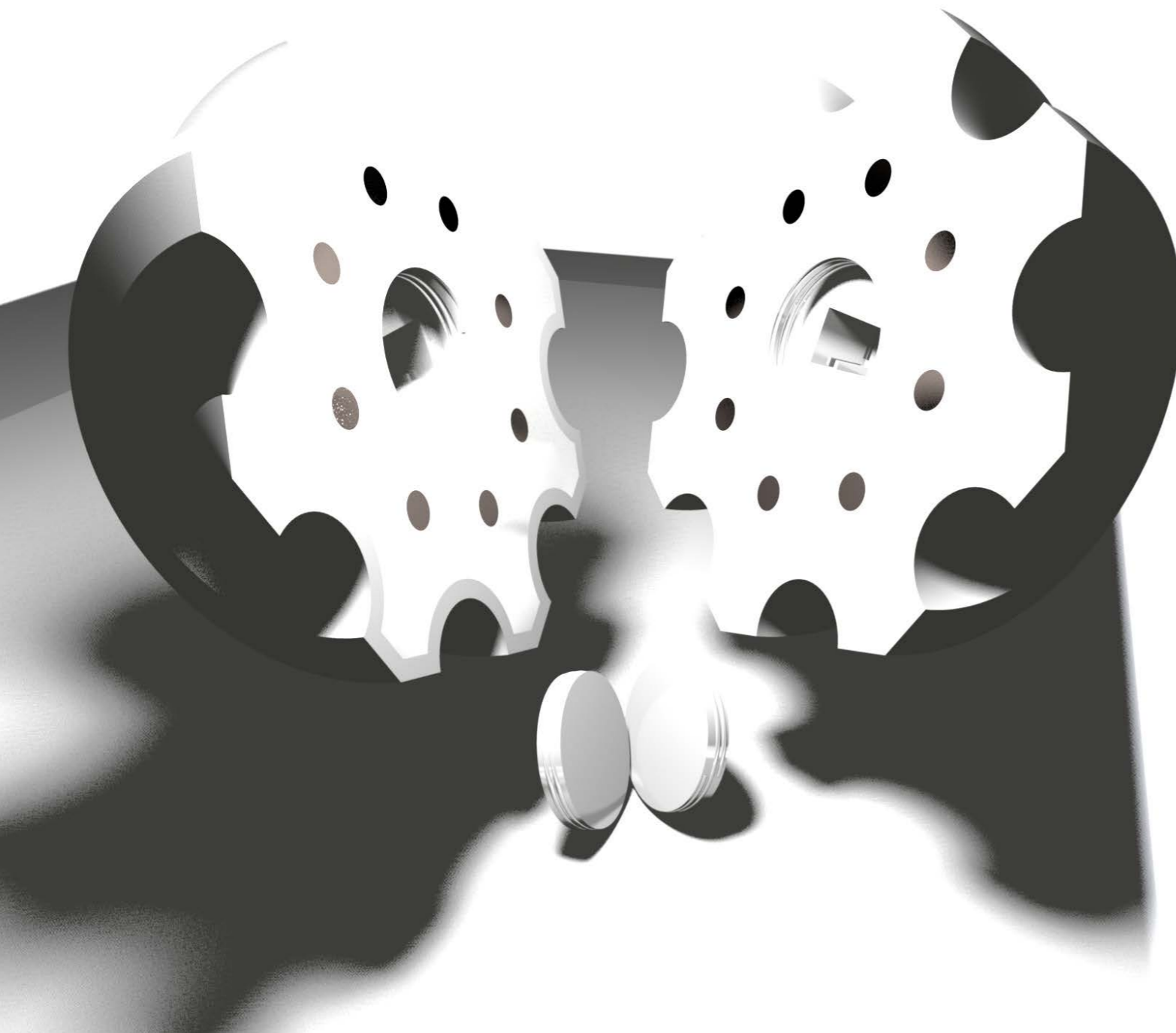
1. Attaching plastic to silicone: The circle of holes will allow the silicone to cure inside them and when set will create a strong permanent attachment.
2. Changing the battery: of course, anything battery operated needs to have access to the batteries to change them when they run out. I made a screw top that can be undone with a pen or screwdriver. Happy with this solution.
3. Magnets and wiring: I needed a space for everything to live, the batteries the wiring and the magnets. To keep the magnets safely away from the top layer they are recessed underneath the battery pack and the copper washer are recessed on the top. Creates a smooth surface so the two halves can slide over each other comfortably.

INTEGRATION

TECHNICAL



## Resolution

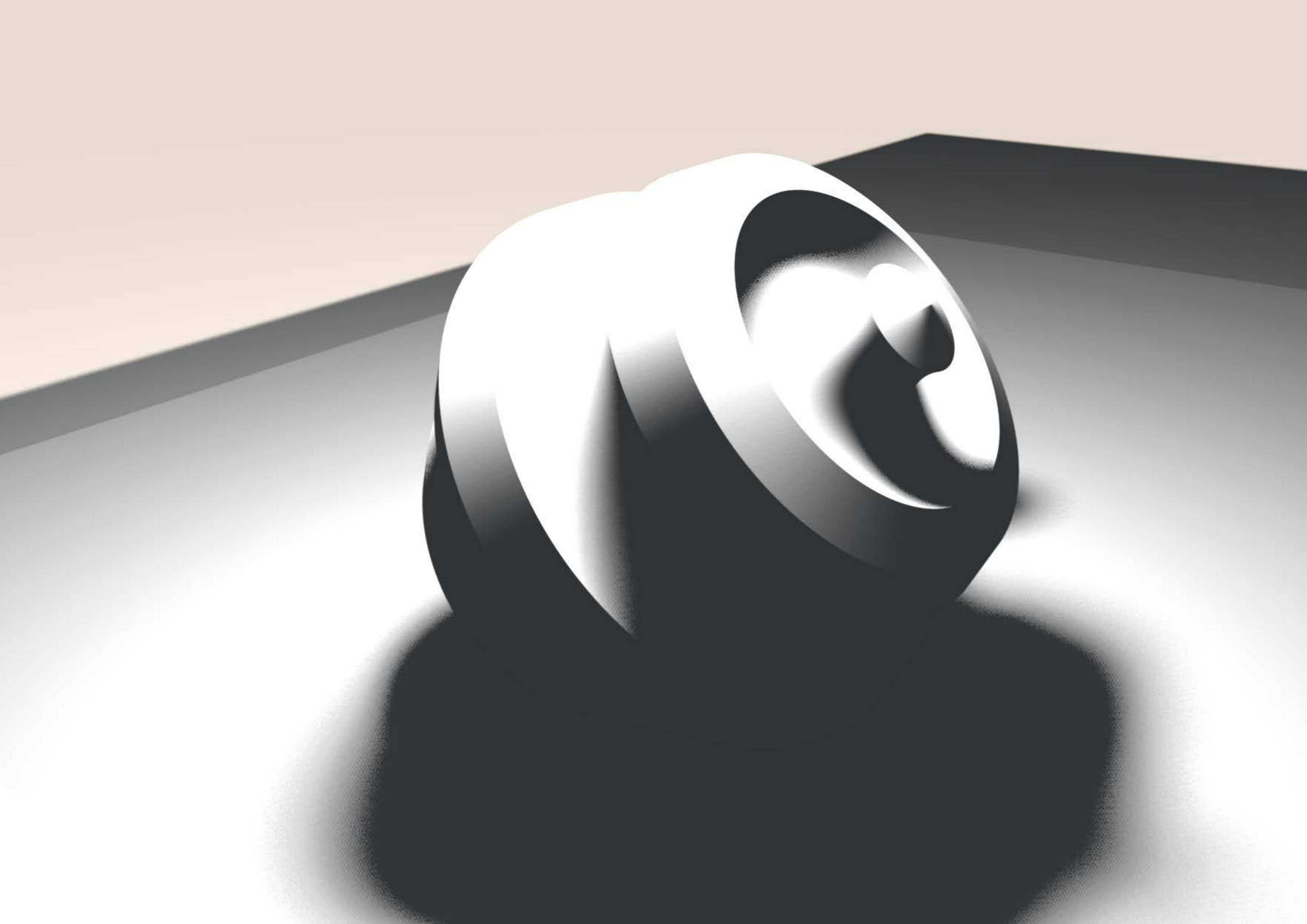


One of the key elements to this Sphericon is that it can turn on and off without the need for a button.

I have wired the LED light to be powered by the battery on the opposite side of the Sphericon. The current is passed through the copper washer. This means that when you turn the Sphericon to a point where there are two negative poles touching each other the light will be off. Twist it to the next stage and the lights come on!

It is a single LED light that is programmed to slide through 8 different colours. This means that the two sides will probably be different colours. From a sensory point of view this is great as it gives something extra to the toy.

This toy is of a higher sensory value than the resin ones as it has lights, therefore, having more going on is a positive thing. The idea is to have different levels of stim toys depending on what situation you may be in.







## Resolution

The way that I resolved the Oloids issues was to go back to the initial design.

The first time I saw the Oloids they were made out of metal. That and the combination of the resin and silicone Sphericons made me feel like if I was trying to create a space for adult, the materials that I was using were fighting against that. Instead I wanted to find a way that I could create this object in metal. I subsequently found out that electroforming onto 3d prints is not only possible but also pretty easy and inexpensive when you use an electroforming wand. I will be continuing with this technique over the summer and getting these Oloids and anti-Oloids made in the real world. I'm excited about the prospect of combining these making techniques. As covering something in metal immediately adds social value to it. This will elevate the plastic ones to more desirable and grown up.

INTEGRATION

TECHNICAL

