

**Level 6 – Research Framework Document - expandable template**

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**Summary Sentence or Research Question: The exploration of pattern and repetition through design and process in order to create irregular outcomes relating to the body.**

**Summary Statement: My project is focused on pattern and repetition and how through using them I can build shapes and structures that are imperfect or irregular in some way. Through repetitive techniques such as layering I aim to produce outcomes that allow for imperfections and mistakes rather than fully controlling every aspect to the exact detail. A part of this comes through allowing the material to act unpredictably meaning that I do not have full control over how it acts on application and after an object is completed. My focus is also on the body and how objects and materials can affect or be affected when in contact with the body. My aim is to create forms which are sympathetic to the movement and shape of the human form and compliment it in some way. Through exploring the characteristics of metal and plastics I try to exploit certain factors they possess such as colour, texture, and flexibility to create forms that can relate to the body whether complimenting, conflicting, or moving with the body. A key aspect of my work is also through drawing and how to translate them into the three-dimensional through building and repeating layers of a shape or material.**

**Key Words:**

- Jewellery
- Body
- 3D printing
- Metal
- Repetition
- Layering
- Flexibility
- Colour
- Pattern
- imperfection

## **Research Methods:**

**Research – analysis of the body, specifically its shape and movement through photography – this is important for me to understand the body as I am making pieces which aim to highlight and fit to certain aspects of the body.**

**-Exploration of colour and combining different colours through layering and mixing – important for deducing which colours will work best for certain pieces.**

**-Analysis of pattern and repetition around me, as it is every where I can constantly notice things which are of interest particularly in terms of imperfections or layers, this is useful for inspiration and ideas that I can relate to my work. Recording this through photography and drawing.**

**Reading books on specific makers relating to research for both my project and dissertation, to inspire creative processes and techniques and thinking. This was important for me in terms of space and importance of colour and material.**

- Susan Behrends Frank, David Smith Invents, with essays by Sarah Hamill and Peter Stevens, Published New Haven, Conn.; London: Yale University Press, 2011
- Adrianna Campbell, Kate Nesin, Lucas Blalock, Terry Richardson, Frank Stella: A timely monograph covering the landmark work and latest career developments of one of today's greatest living artists, Published London: Phaidon Press Ltd., 2017
- Anthony Caro edited by Paul Moorhouse, with essays by Michael Fried and Dave Hickey, Tate publishing 2005

**Research in to the current jewellery market and fashion trends to inform current styles and relevant design. This is relevant for me regarding how to style or place my pieces with the body and what on the body.**

**I visited The Brighton Museum and Art Gallery to gain inspiration from other creative works, also to specifically visit in person the work of Frank Stella.**

**I also researched artists and materials etc online consistently throughout my project as it is an easy tool to find new processes, techniques, and find out about materials as well as seeing what can be done with them.**

**E.g**

- <https://www.craftscouncil.org.uk/magazine/issues/>
- <https://www.dezeen.com/>
- <https://www.irisvanherpen.com/>

**A deep exploration in to the abilities and possibilites of hand held 3D printing which is a large part of my work. Research through vast experimentation of application methods. I also looked in to what had been done with it by other people online to make sure there was nothing similar or things that had been done.**

**Medium for Research: Photography – of people and the body, things around me and in nature, my work and processes, my work to record its relation to the body and how it works. Editing of photos to enhance colour. Also to group my models in order to be able to compare and analyse.**

**Drawing – using a drawing tablet to produce digital drawings to create a range of colours, patterns, shapes, and styles.**

- **Chalk and charcoal drawings for a bold effect**
- **Pen and pencil sketches to grasp and document my thoughts and ideas**
- **A range of drawings to respond to research**

**Machette making**

- **Layering string around objects and hardening with pva**
- **Using wooden sticks to build structures**
- **Hot glue gun layering techniques to create solid forms**
- **Combining coiled metal and string with hot glue to create texture**
- **3D printing pen layering to make irregular shapes**
  
- **Experimenting with metal through processes such as soldering, coiling, flattening, welding, colouring, forging, cutting, twisting, riveting**
- **Merging materials together such as metal and 3D printed plastic in a variety of ways to create a range of outcomes.**
- **Making and fitting 3D printed shapes on to the body**
  
- **Exploring movement and flexibility of metal and plastic through tests and experiments – pulling, pushing, twisting, bending**
- **Using water and heat to affect materials in order for them to change form.**
- **Experiments in sugar through solidifying, melting, burning, and dissolving**
- **Exploring colour through a variety of tests in plastic and metal**

## **Material and Technical Investigation:**

**String and PVA – wrapping different coloured string around various shapes and sized objects and using pva to harden the string making it a solid object in itself.**

**Also purposely exploring weak joins so that the form can be in pieces however still connected through the string.**

- **I also experimented with texturing the string forms through layering hot glue on the outside.**
- **I also experimented with weigh through putting stronger forms on top of weaker ones to create a leaning effect.**

In this section of work I also experimented with wood and glue in layering sticks to build a structure.

### 3D printing pen

- Experiments with layering to build forms
- Various application techniques to layer the plastic
- Experimenting with different shapes, sizes, and colours of the 3D printed plastic.
- Fitting and using it to draw directly on to the body to replicate the exact shape of the body.
- Experimenting with the flexible abilities of the plastic and exploring its limits in terms of movement
- Testing its effect in heat, water, and force
- Creating bracelet style forms and pairing them with the body to see how they react with contact and movement.
- Combining the plastic with other materials such as metal and sugar
- Experimenting with creating a selection of patterns

### Metal -

- Coiling and twisting methods with steel and copper wire
- Manipulation through rolling, cutting, bending, and hammering
- Enameling copper to create colour and texture
- Repeated cutting to create layers
- Soldering to make rings or joins for my experiments
- Using spot welders to make steel bands
- Drilling to create multiple holes in steel and aluminium to make rivets in both plastic and metal
- Using heat to colour the metal
- Sanding the metal to create texture
- Painting and sanding back metal
- Combining the metal with plastic to create full flexible structures

### Sugar

- Sugar and water in the oven creating solid sugar blocks and shapes
- Using water and heat to affect the solid sugar forms
- Combing and creating pattern on the sugar using 3d printed plastic.
- Combining plastic, sugar, and metal
- Mixing sugar with PVA and card to make a crystalline surface.

### Wood

- Drilling a large hole through wooden blocks to produce wooden circular bands to be used in the same way as the metal to combine with the plastic to produce and flexible form.

**Timescale of work across the year:**

<b>Summer and beginning of L6</b>	<p>Research into pattern and repetitive processes, photographing my findings. Quick mquettes using basic materials to reflect my ideas and visualise them physically</p>
<b>September</b>	<p>-Start of academic year – artist research for inspiration, more photographs of pattern and repetition around me and responding to them through drawing both digitally and with physical materials. -Began to make models using wood and string with pva to harden to initiate processes using repetition. Starting in light metal workshops experimenting with coiling and manipulation techniques. -Beginning to act on ideas regarding the disconnection of things and how they can be broken and further experimenting with string and pva to reflect this. -Producing digital drawings to document all my ideas in preparation to be visualised three-dimensionally.</p>
<b>October</b>	<p>-Starting to merge materials and explore textures more through string, metal, and hot glue. -First experiments using a hot glue gun and creating solid layered and built up forms. -Introduction of the 3D pen, inspiration from the glue gun acts in the same way only plastic. Layering plastic and creating some basic shapes getting familiar with the tool. -Layering up the plastic using the pen to build some larger and fuller forms. Allowing the material to fall and act without my full control producing more unique outcomes. -Experimenting with different ways to use the 3D pen and ways of applying it to give different patterns and textures.</p>
<b>November</b>	<p>-More familiar with the 3D pen and its abilities and decided to make some larger vessels using two different layering techniques. -Starting to consider the relation of my already made models to the body, how can they relate? -Experimenting with placing my forms on and around the body and documenting this through photography -Back in to the light metals workshop to experiment with various techniques and</p>

	<p>processes considering repetition, while also considering how they can be made to be worn.</p> <ul style="list-style-type: none"> <li>-photographing my pieces with the body and analysing how they look and how well they work with my ideas of pattern, repetition, and imperfection.</li> </ul>
<b>December</b>	<ul style="list-style-type: none"> <li>-Now considering metal and plastic and how to bring them together</li> <li>-Taking my metal experiments and finding ways in which to incorporate the 3D pen filament to compliment the metal and add more pattern and layers.</li> <li>-Photographing these outcomes on and off the body comparing how different the pieces look when placed on the body and realising an importance of the pieces relationship to the body and the affect it can have the piece and the body.</li> <li>-Further making of pieces using metal and plastic in more complete and planned ways using steel bands as the structure</li> <li>-Exploring the contrasts of metal with the plastic and how to exploit them, while also finding new ways to connect and join the materials</li> <li>-Using plastic rivets in steel bands discovering a way to create patterns through connecting strips between plastic rivets.</li> </ul>
<b>January</b>	<ul style="list-style-type: none"> <li>-After finding a new way of connecting the materials and creating an interesting pattern I decided to further explore the possibilities of the 3D pen considering movement and pattern.</li> <li>-I began creating shapes that were specifically fitted to the body with various application techniques producing different patterns</li> <li>-Through these experiments I discovered how flexible the 3D printed plastic could be which turned a corner in my project.</li> <li>-I experimented further with the flexibility of the plastic finding the best ways to produce flexible forms.</li> </ul>
<b>February</b>	<ul style="list-style-type: none"> <li>-After discovering the flexibility of the plastic I began thinking of ways to incorporate and join the plastic to metal to create a more structured outcome.</li> <li>-I experimented with steel riveted bands and using the flexible plastic strips to connect 2 bands</li> </ul>

		<ul style="list-style-type: none"> <li>-I continued to refine my ideas and designs and solve problems I was having with the bracelets.</li> <li>-I experimented with many ways of making these and finally found a solution which meant connecting the bands while they are flat.</li> <li>-I then made some completed bracelets using this technique.</li> </ul>
	<b>March</b>	<ul style="list-style-type: none"> <li>-I went on a research trip to a sweet making workshop where I was able to watch sweets being made. I also visited some sweet shops for colour inspiration.</li> <li>-After my research trip I was interested in trying to include sweet like features in to my work. I experimented with sugar and its different forms as well as adding and joining it to other materials.</li> <li>-I concluded after many tests and experiments that sugar was not a feasible material for me to continue to use in order to pursue and carry out my ideas and designs.</li> <li>-I turned my attention back to the metal and plastic bands and how to refine the making process.</li> <li>-I made a selection of bands and tested them to the limits using force and water to see how durable they were.</li> <li>-This informed me of what I needed to do to make them more stable and complete.</li> </ul>
	<b>April</b>	<ul style="list-style-type: none"> <li>-I experimented with ways of adding comfort to the bands using various materials to cushion the insides</li> <li>-I tested colours in order to find the best combinations</li> <li>-I photographed the pieces on the body and analysed their movement in reaction to the body.</li> <li>-Created some more drawings and designs to develop my pieces.</li> <li>-I decided to start using aluminium bands instead of steel as steel was not a fitting material for the image I wanted to create.</li> <li>-Experimented with wood</li> </ul>
	<b>May</b>	Refined and created my final pieces and degree set up

**Identify potential professional contexts for your work: Fashion show pieces – run way jewellery**

**3D Outcomes: A range of flexible Aluminium and 3D printed bracelets**

**Presentation & Display: A trestle table filled with my bracelets showing the different states it can be in and how it can be moved, with 3 large printed photos of the pieces being worn and moved with the body.**

**Portfolio / Publication:**

**Ethical considerations** - If you answer YES to any of these questions then email Patrick IMMEDIATELY

Will you be asking anyone questions (interviews and or questionnaires)? no

Will you ask people to test or physically evaluate your work for you? no

Do you intend to run a workshop that involves a group of people? no

Do you intend photographing, videoing or sound recording anyone? no

Does your work involve children? no

**Brief outline of ethical considerations: N/A**

**BA(hons) Dissertation Title / MDes Essay Titles: Five Sculptors and their use of Pattern and repetition.**