PD4063 – DIGITAL MODELLING & PROTOTYPING

PROCESS BOOK

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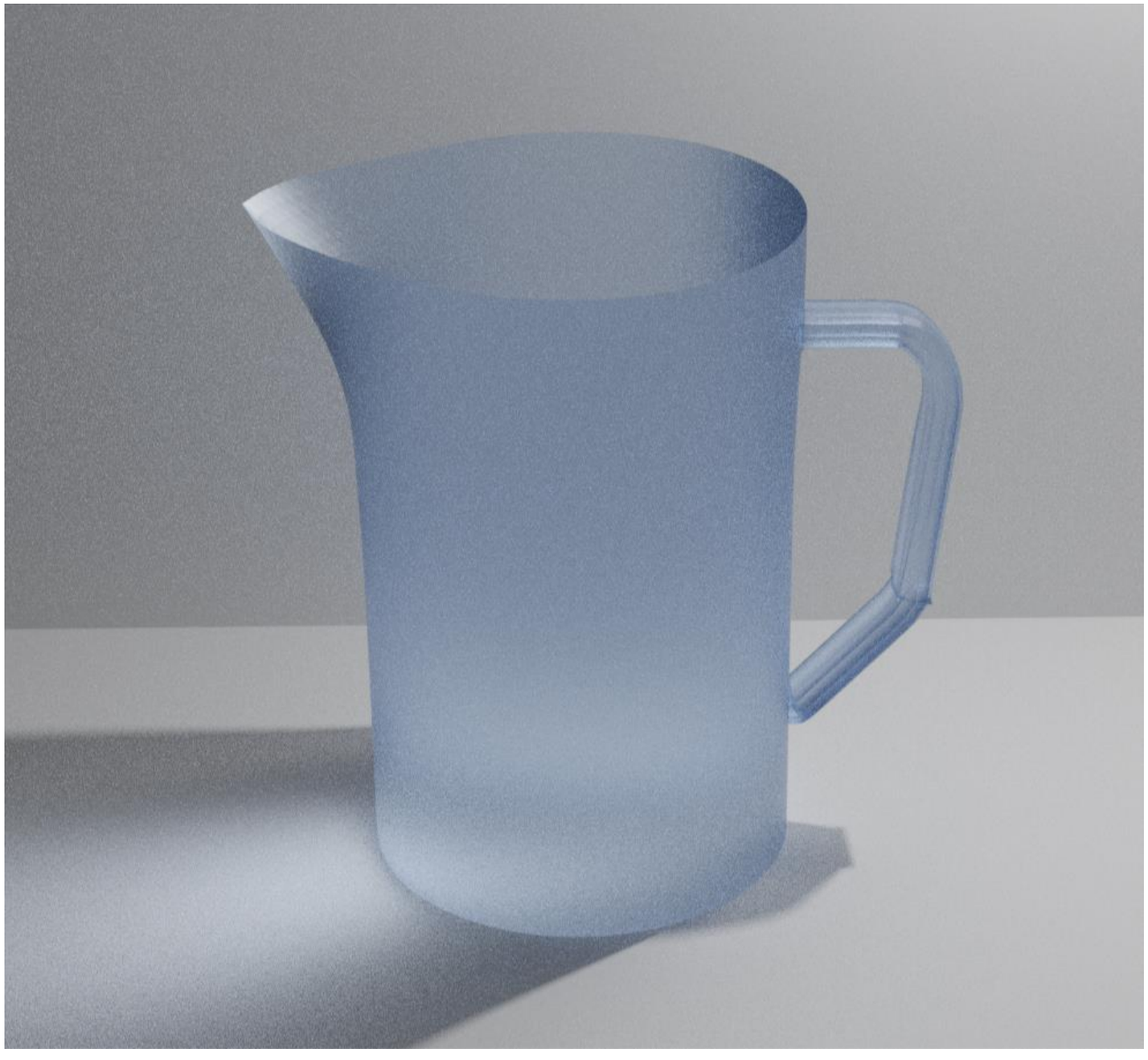
Create a bowl

Geometry

Modifiers

Vertex groups

Class tasks - Week 3

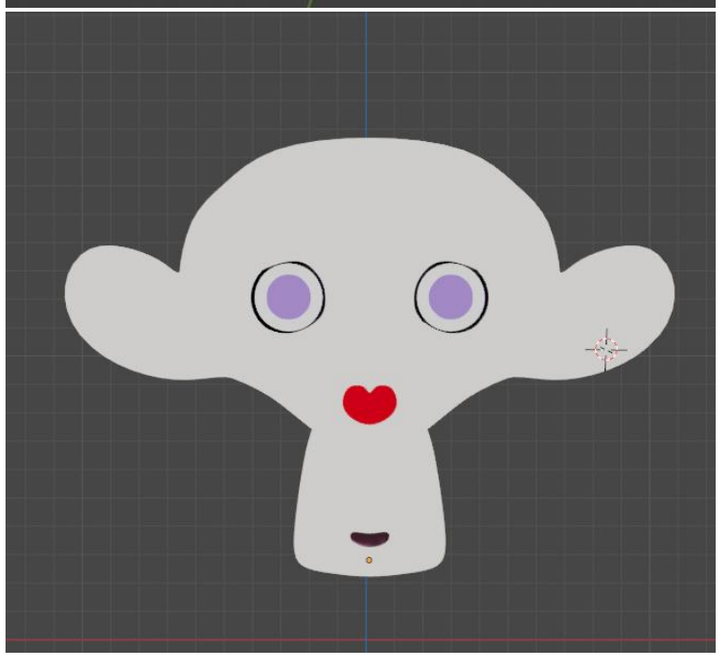


Create a jug

Import Image

Modifiers

Class tasks - Week 4



Monkey Mesh

Adding materials

Experimenting with materials

Class tasks - Week 4

UV Mapping (Adding labels)

Adding materials

Rendering

Class tasks - Week 9

Suzanne repositioned laying on ground

Adding materials

Light and camera repositioned

Project Timetable

1

Choose a well-known product design company and clear it with your tutor.
Conduct an in-depth aesthetic analysis and generate aesthetic design criteria.

2

Generate multiple concepts for shampoo bottles which fit your design criteria

3

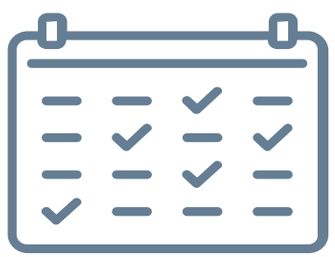
Presentation of chosen concept and how it fits your design criteria.
Begin creating your solution in Blender

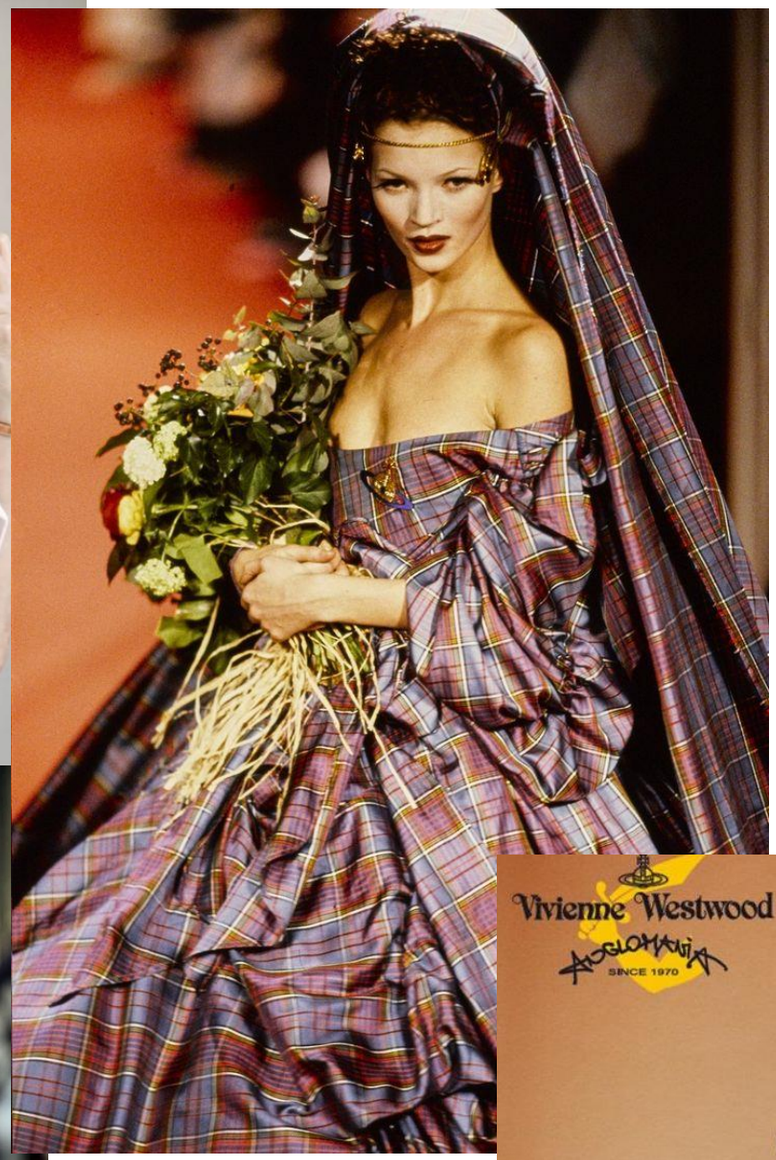
4

Refine your design as your technical skills develop.
Explore materials use, labelling decals, and rendering within Blender.
Record significant development stages through a combination of screenshots, sketches, and annotations.

5

FINAL SUBMISSION -
A PDF containing your aesthetic analysis and design criteria, all sketch work (properly
photographed and legible), your CAD workflow, minimum 3 renders of your solution,
and photographs of your 3D printed prototype, annotated to describe how your
chosen solution meets your aesthetic design criteria





Vivienne Westwood

Aesthetic Study - Task 1

Choosen product design company 1

As I was deciding on the product design company for this project it was important for me to pick something that very wild spread with a unique aesthetic. As the Vivienne Westwood brand offers many ways, I can address this project through sketching and concept creation. It answered all my requirements.

Vivienne Westwood

- Innovative & influence
- Provocative design & diverse style
- Bold
- Complex construction
- Unconventional materials
- Graphics
- Punk-inspired & historical (1970s) significance
- Tartan patterns
- Rebellious
- Sustainability

Aesthetic analysis 2

How does it make me feel and why..

The brands provokes many feeling such as:

- Individualistic & unique
- Confidence & empowerment
- Intellectually engaged and socially aware through its messages
- Environmentally engaged
- Sense of connection to history
- Values

The brands entire essences is to inspire change in society and the world.
Colours: Red, black(Anarchism, labour movement), white(neutrality), gold(luxury), grey and striking colours(draws attention).
The brand conveys positive message with a strong determination > the tone of voice is extravagant, honest, direct, educational.
Brand names > shows how Vivienne reflects herself in her work, Shows her dedication and encourages a similar attitude.

Aesthetic design criteria 3

Guidelines and principles used during the design and creation phase

A well know bold and rebellious spirit – graphics, slogans, unconventional silhouettes.
Distinctive and recognisable element through tartan and plaid patterns to associate with her British heritage .
Sense of structure and emphasises female form – unique and provocative aesthetic through tailoring and corsetry.
Draws inspiration from Victorian fashion to 18th century corsetry – depth and complexity to design.
Communicates through clothing to make political and social statements adds intellectual aspect to the brand.
Eclectic and vibrant colours – visual impact and draws attention.
Avant-garde and theatrical nature.
Contemporary through environmental conscious.
The logo – the orb implement 80s.
Represents the past (British royalty) and the future(Saturn ring). Taking traditions into the future.

Bold and artistic bottle design- unique shape, intricate design, caps are golden to represent the luxury. It is elegant with an edge.

The fragrances are both sophisticated and provocative inspired by warm skin and intimacy. Heady, charming and completely seductive, this is the scent of a strong woman.

Plaid design –traditional, timeless, strong sense of identity for the brand, attention grabbing, makes statements

High heel – the length challenges traditional footwear norms

Uses vivid colours to grab attention, and make others stand out and express themselves. Sense of playfulness and creativity. Embrace life with vigour!

Using chains, the punk and rebellion element is added. It can be used as a symbol of restriction and the desire to break free as their work conveys these messages often.

Constructed with circular and diamond shaped frames shaded in a gradient grey hue - ultra-chic, avant-garde, neutral and sophisticated

Complemented with soft gradient lenses in purple- mysterious, unconventional elegance.

Materials

Vivienne Westwood used many different materials for their products such as crinoline, tartan from her Scottish theme, hard velvet and fluffy velvet, leather, faux fur.

They look at more than just the aesthetic qualities of the materials they use. They are working to know where their materials come from at every stage of their lifecycle and consider both social and environmental impacts

Sterling silver and brass alongside imitation metals and stones on their jewellery- artistic flair, expresses identity.
Her jewellery also includes wood, pearl, resin charms, enamel, Swarovski crystals and leather.

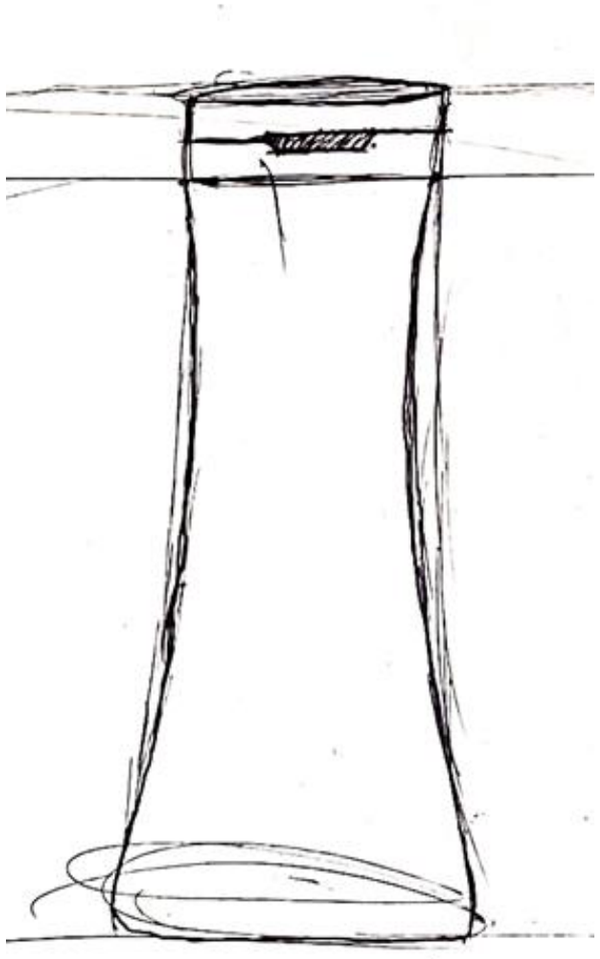
Known her use of tartan and plaid made from woven wool or cotton fabrics

Handmade in Nairobi, the collection is produced from recycled materials by marginalized communities of women. Completed recycled with tent cottons, electrical wiring, and plastic bags

Leather often incorporated into items like jackets, purses, handbags shoes and belts-edgy, rebellious with elegance

Velvet- used in various of the brand, rich and opulent, historical reference

Shape of shampoo bottle

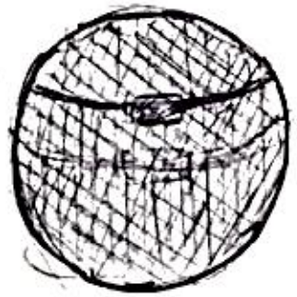


Refers to Vivienne Westwood high heels, the long length with a minor thickness.

Shapes the emphasises the female figure – curves on the bottle shape

Possible shampoo caps

Simple, wildly used.

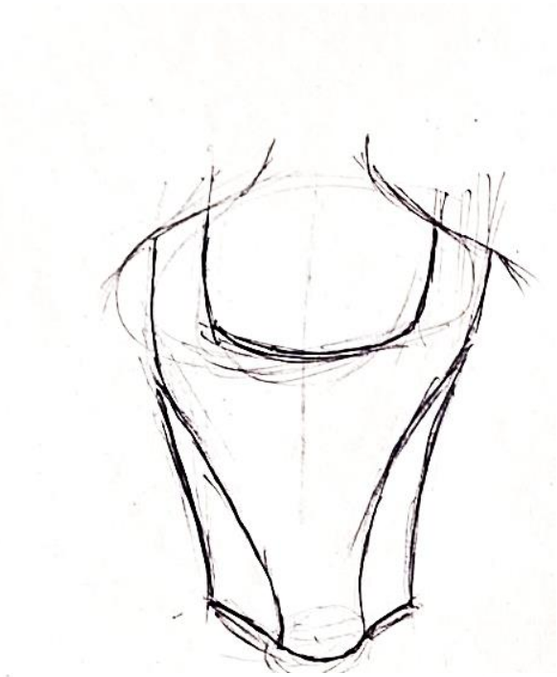


Round cap adds a unique addition and grabs attention

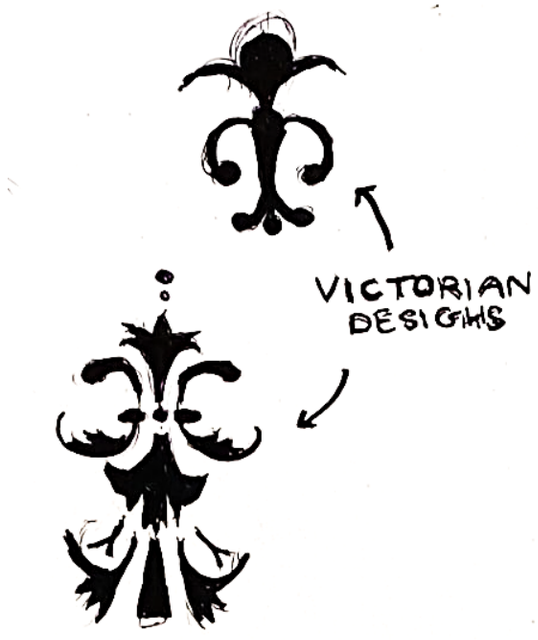
Use of golden colour to represent elegance used for the cap. Good representation once adding the colour.

Use of orb as the cap, complex and intricate design. Could add discomfort to the usage

Incorporations to represent style

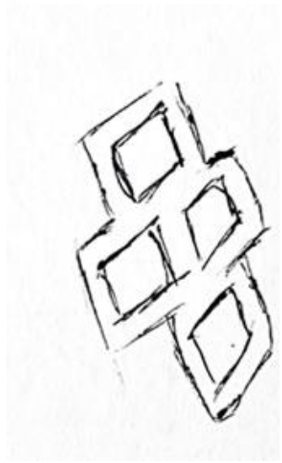


- A corset resemblance in the shampoo bottle.
- Classic garment as a symbol of empowerment and design rebellion



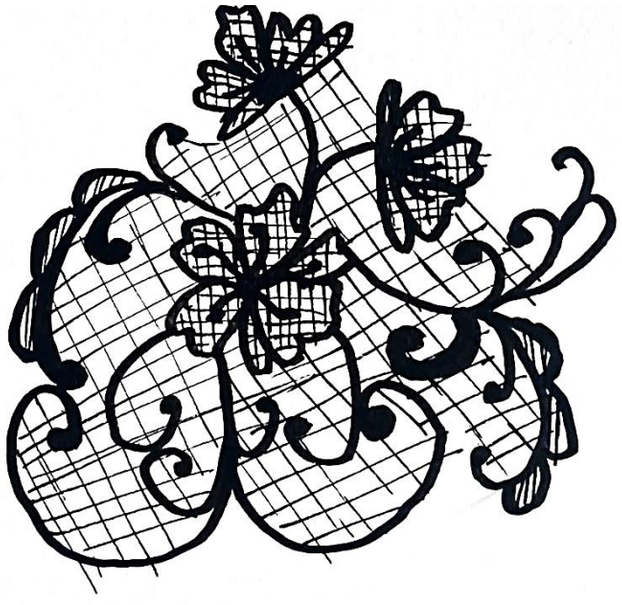
- Incorporation of Victorian designs elements into the product creation.
- Adds an infusing touch of historical elegance into the contemporary style.

Incorporations to represent style



Overlays for the bottle

- Stocking with holes, unconventional design.
- Adds provocative and punk edge to the design.



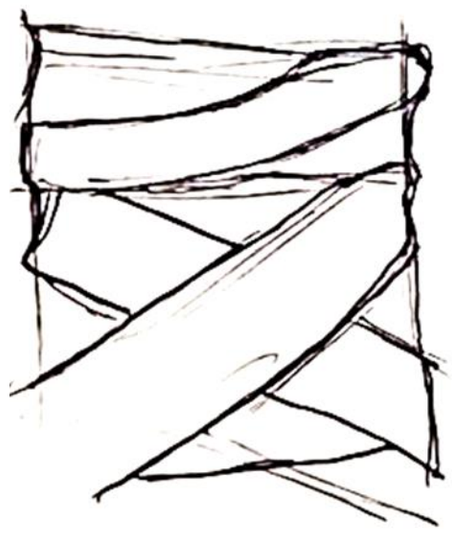
- Lace adds a delicate and romantic touch to the avant-garde design.

Incorporations to represent style

Symbol of breaking free from norms

Laces

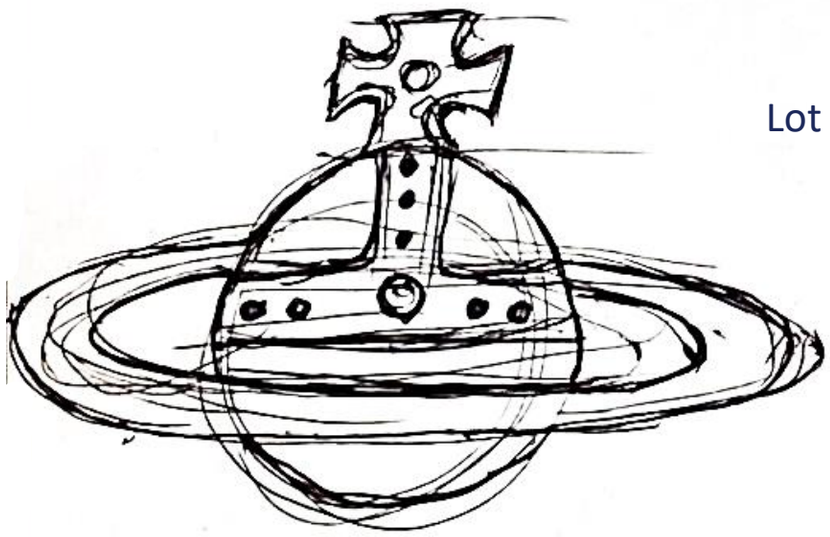
- Bondage elements are a recurring motif in Vivienne Westwood’s design.
- This challenges societal norms and explores themes of power and control.
- It’s a symbol of liberation and self-expression.



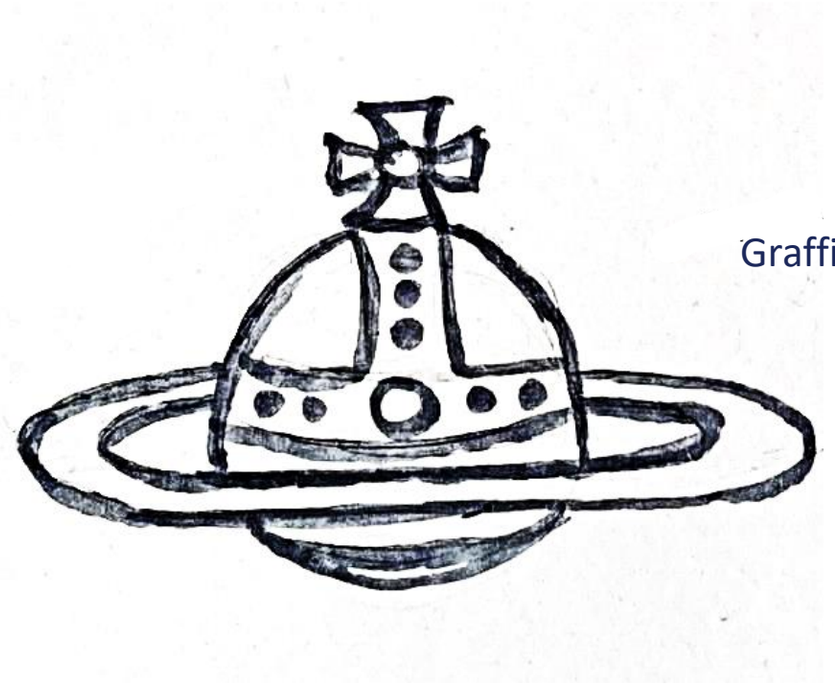
Satin lace-up

- Luxurious satin material and intricate lace up details, elegance and rebellion.
- Touch of vintage glamour to edge design.
- Unique juxtaposition.

Logo representation



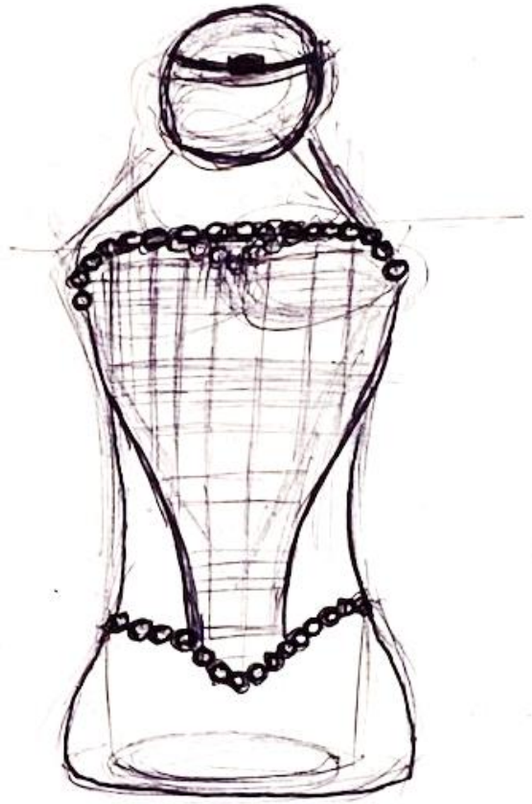
Lot of lines



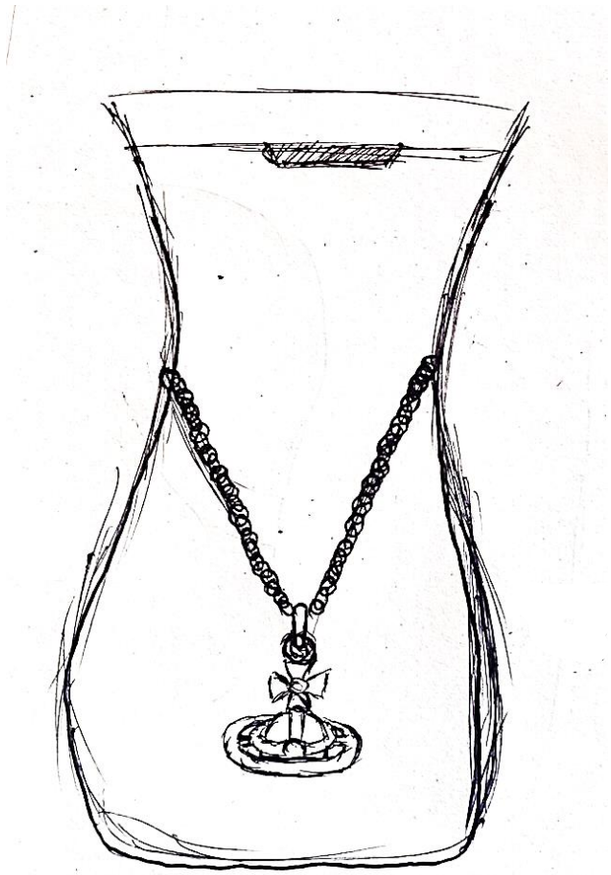
Graffiti

- Form of intentionally dishevelled and deconstructed design.
- Rebelling against polished and pristine
- Symbol of authenticity
- Powerful visual language, reflecting the spirit of counterculture.
- Defiant character

Designs



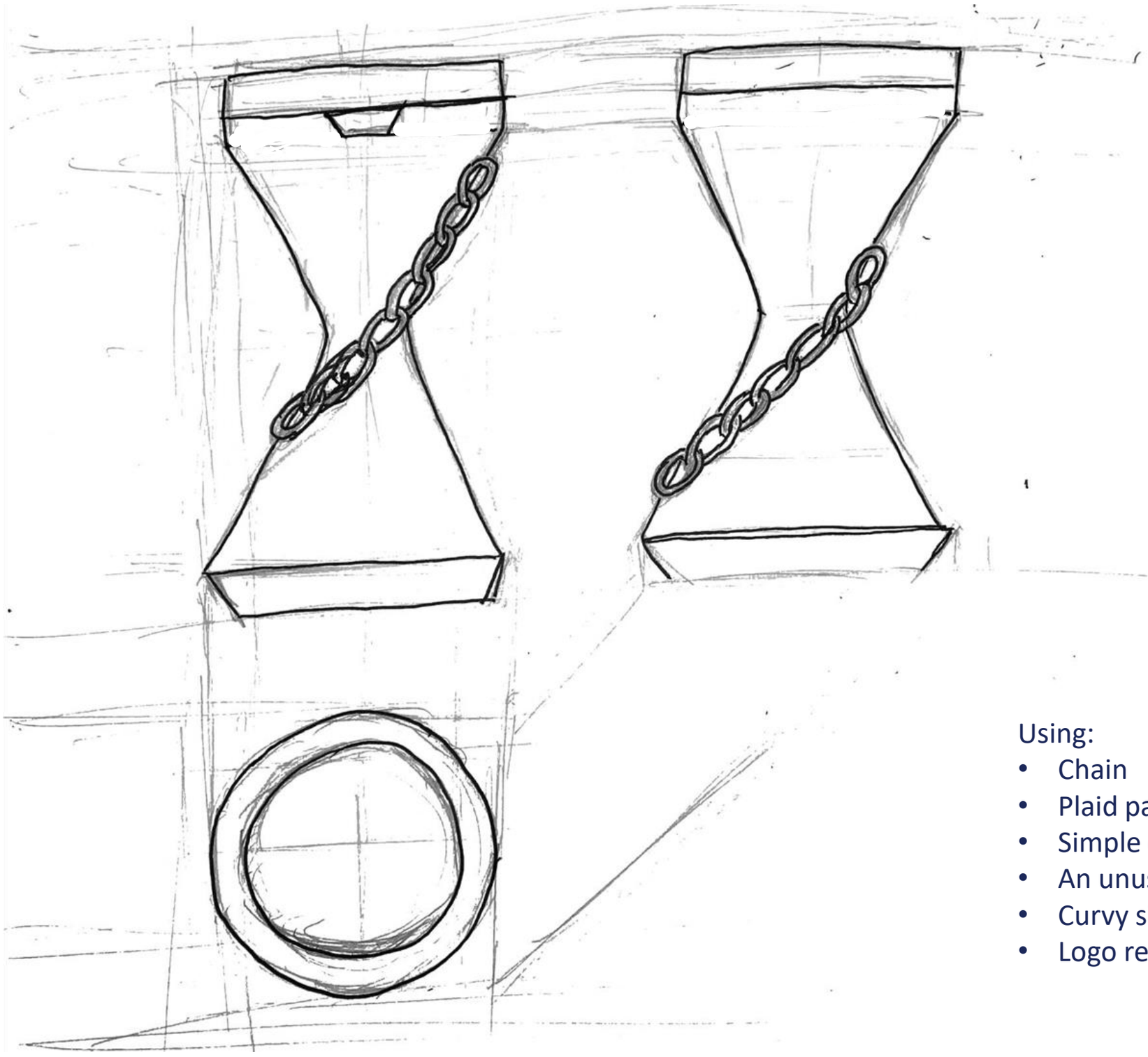
Using:
- Corsetry
- Pearl
- Plaid pattern
- Circular cap



Using:
- Curvy silhouette
- Chains
- Logo representation
- Simple opening

Using:
- Carrying chain
- Large bow for controversy
- Plaid patterns
- Simple opening
- An unusual shape of bottle

Chosen Concept



Using:

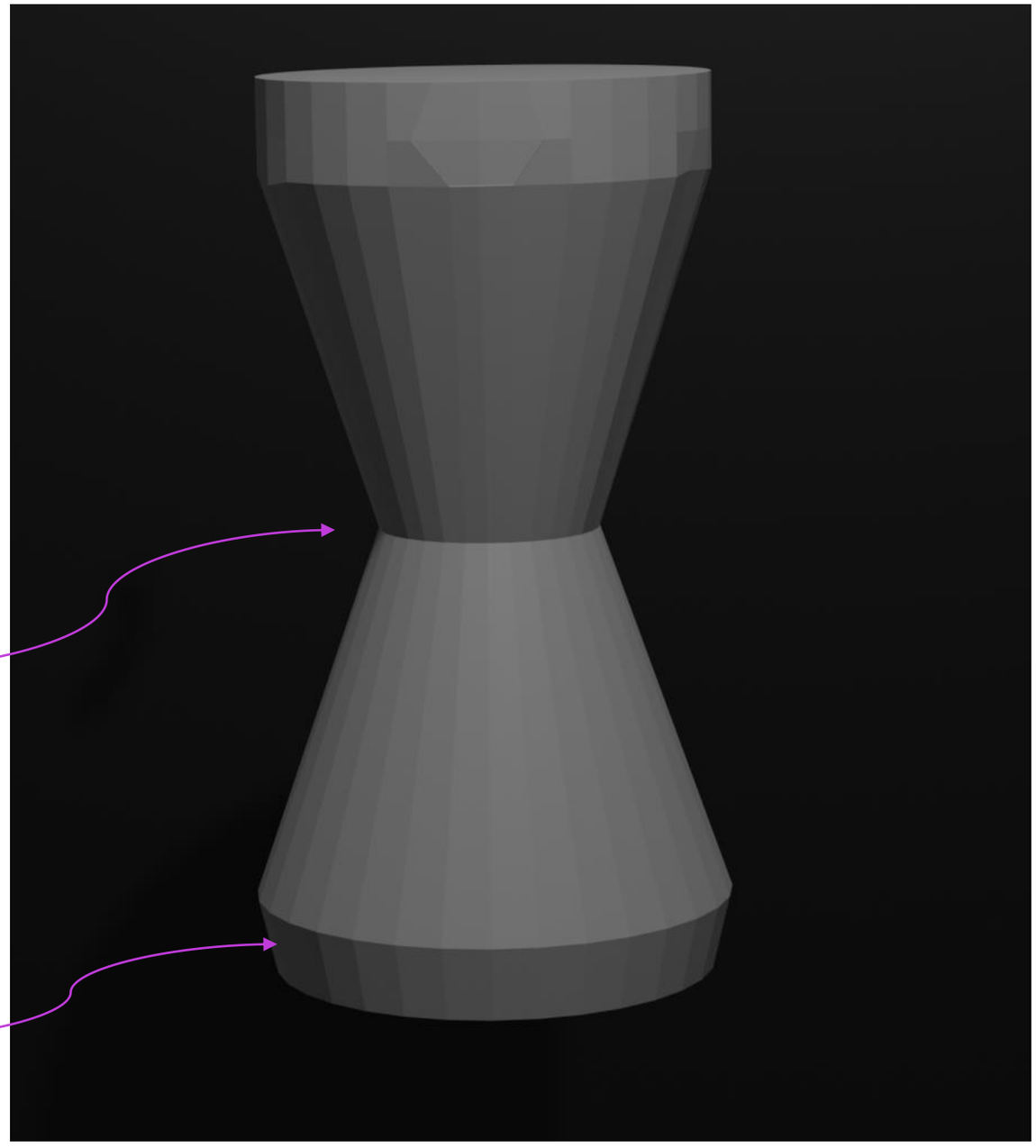
- Chain
- Plaid patterns
- Simple opening
- An unusual shape of bottle
- Curvy silhouette
- Logo representation

Blender- Deciding shapes

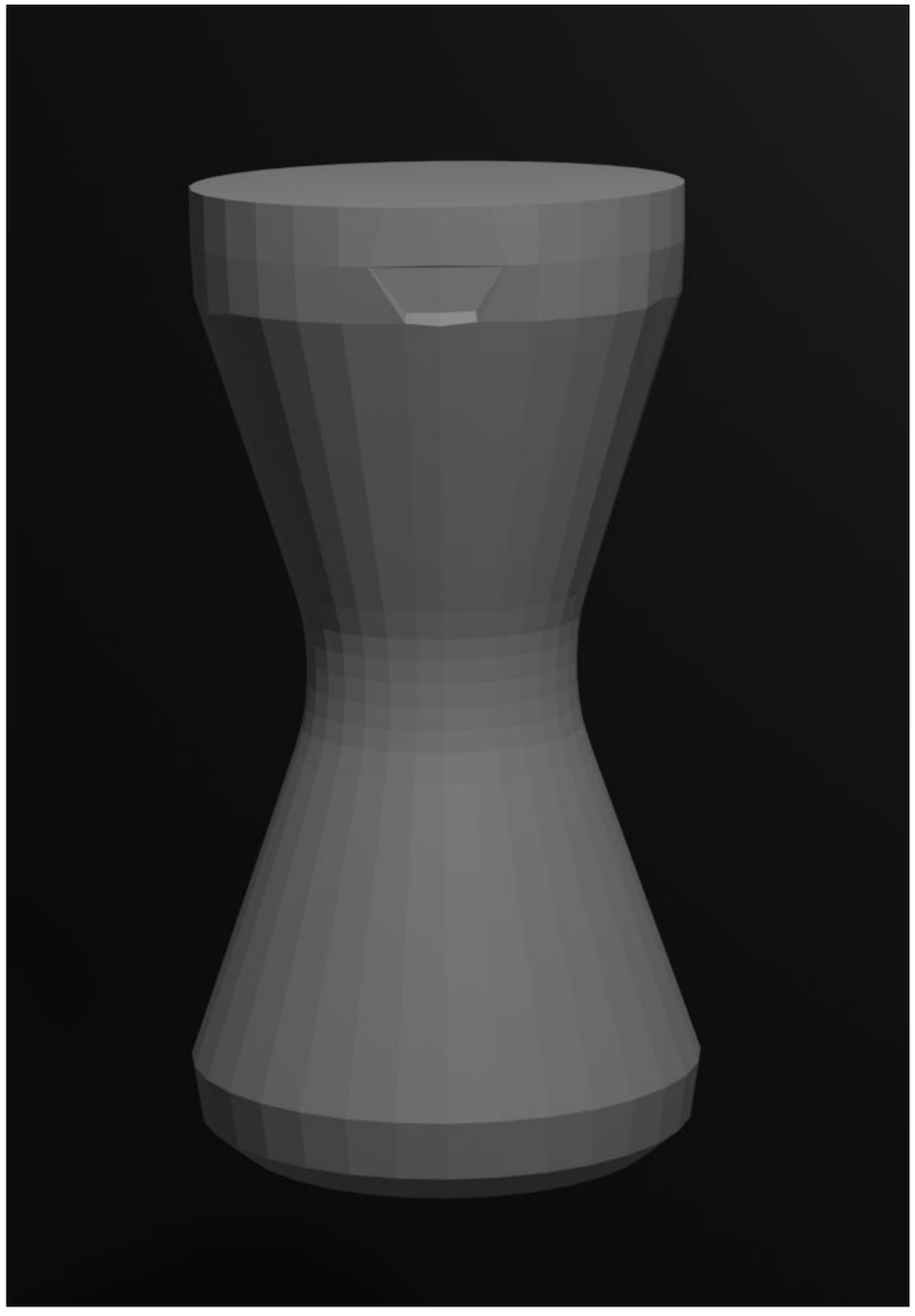
When choosing a shape for the shampoo bottle, I wanted to create a design that reflected the brand identity of Vivienne Westwood One of the elements that Vivienne Westwood uses frequently in her designs is the corset, which is a garment that shapes the body into an hourglass figure by cinching the waist and enhancing the curves. Therefore, it was the most obvious to me that a shape that represented curves should be chosen for the shampoo bottle, as it would evoke the aesthetic and the message of Vivienne Westwood.

To create a curved shape, I started with a basic cylinder as the base of the bottle. Then, I used a tool to slim down the centre of the cylinder, creating a concave curve on both sides. To make sure that the curve was symmetrical and proportional, I added a line of the same length as the cylinder along the centre of the bottle.

However, I felt that the shape was lacking something and looked too simple. I decided to add a top and a bottom to the shape, to give it more dimension and stability. The top and the bottom were also cylindrical. I made the shape look firmer and more complete.

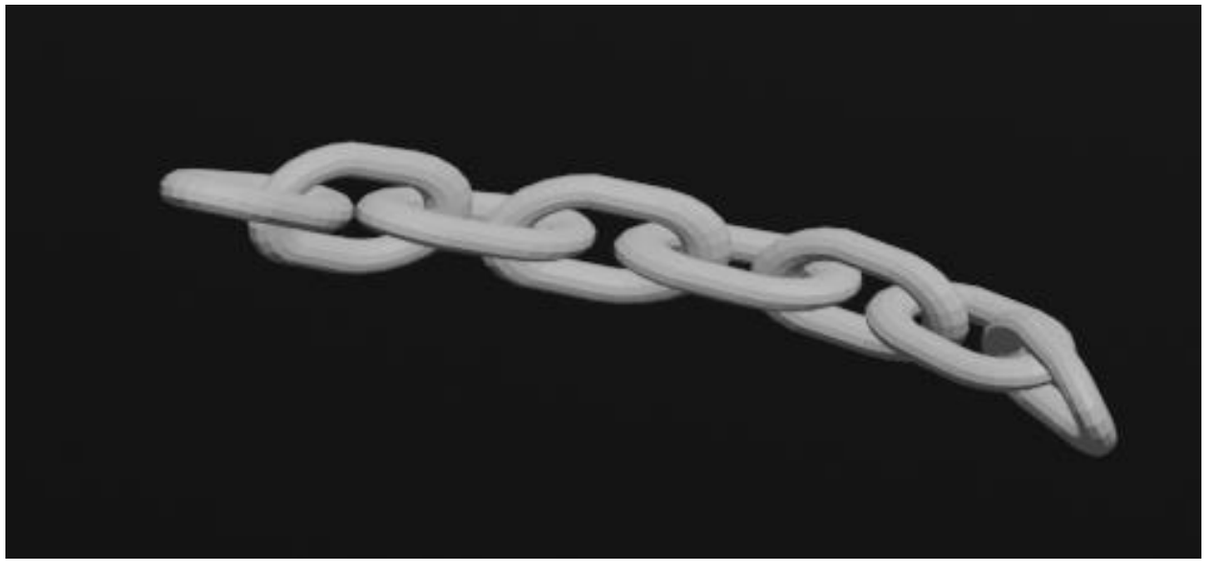


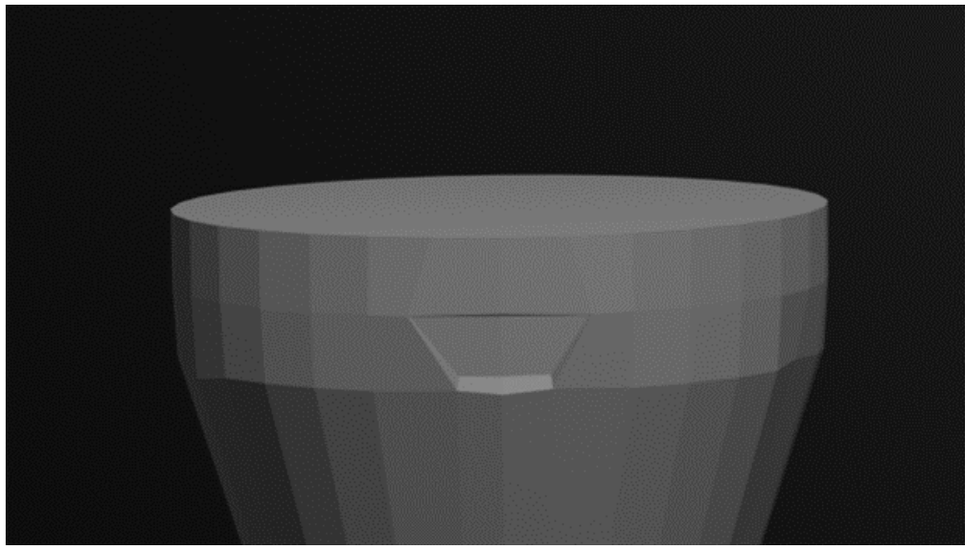
Blender- Defining the shape



I made the curve more obvious by adding a bevel, enhancing its prominence and giving it a distinct, polished appearance that draws attention to its curvature.

Blender- Additions

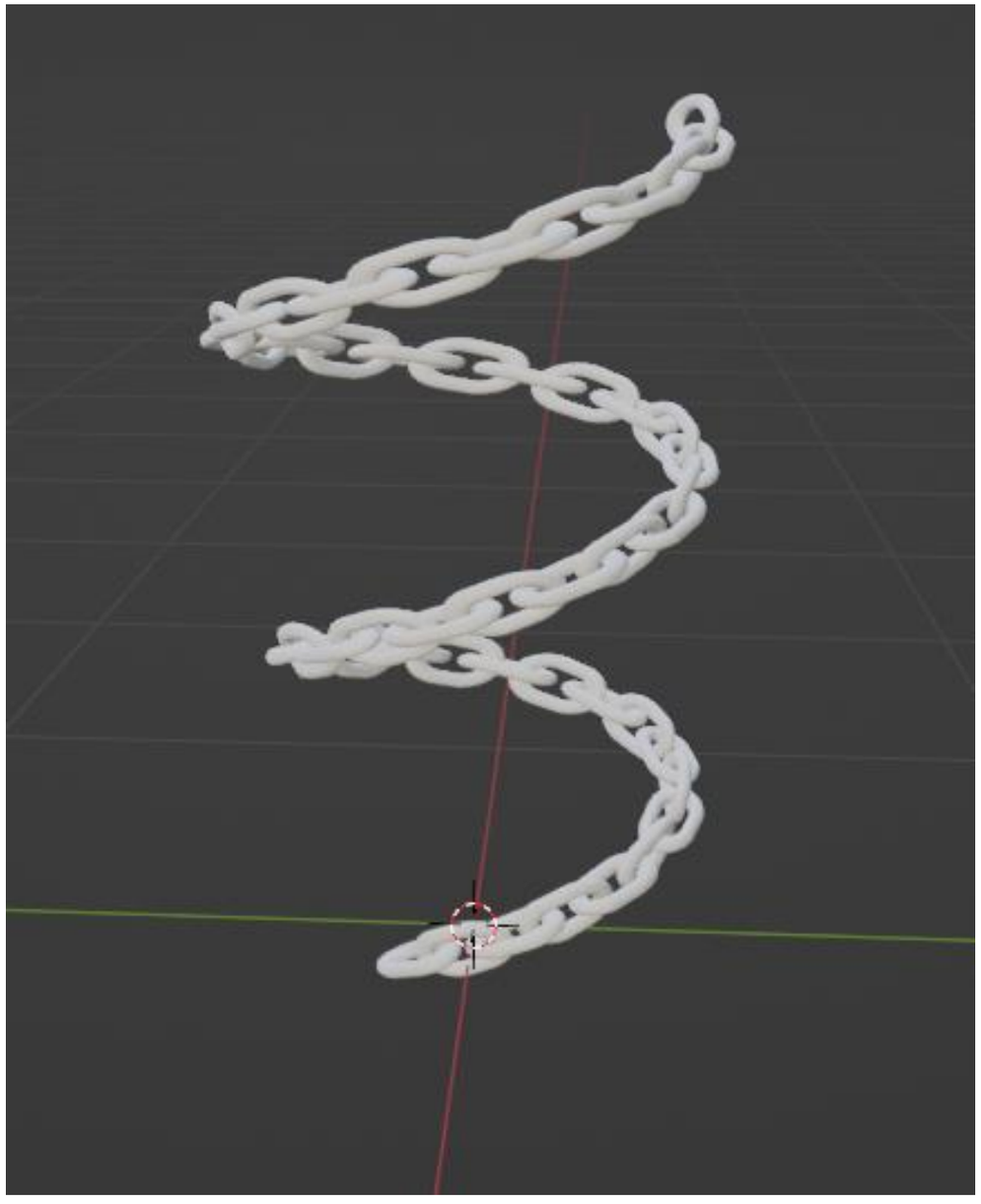




One of the ideas that I had for my model was to add a chain to it, which would create a contrast with its appearance and convey a sense of rebellion. I started by making a circle and stretching it along one axis to form an oval shape Then I rotated another oval by 90 degrees so that it was standing up. I positioned it so that it went through the hole of the first link, creating an interlocking pattern The two had to interlink. After that I added solidifier to add its thickness. I was able to expand it as much as I wanted with duplicate.

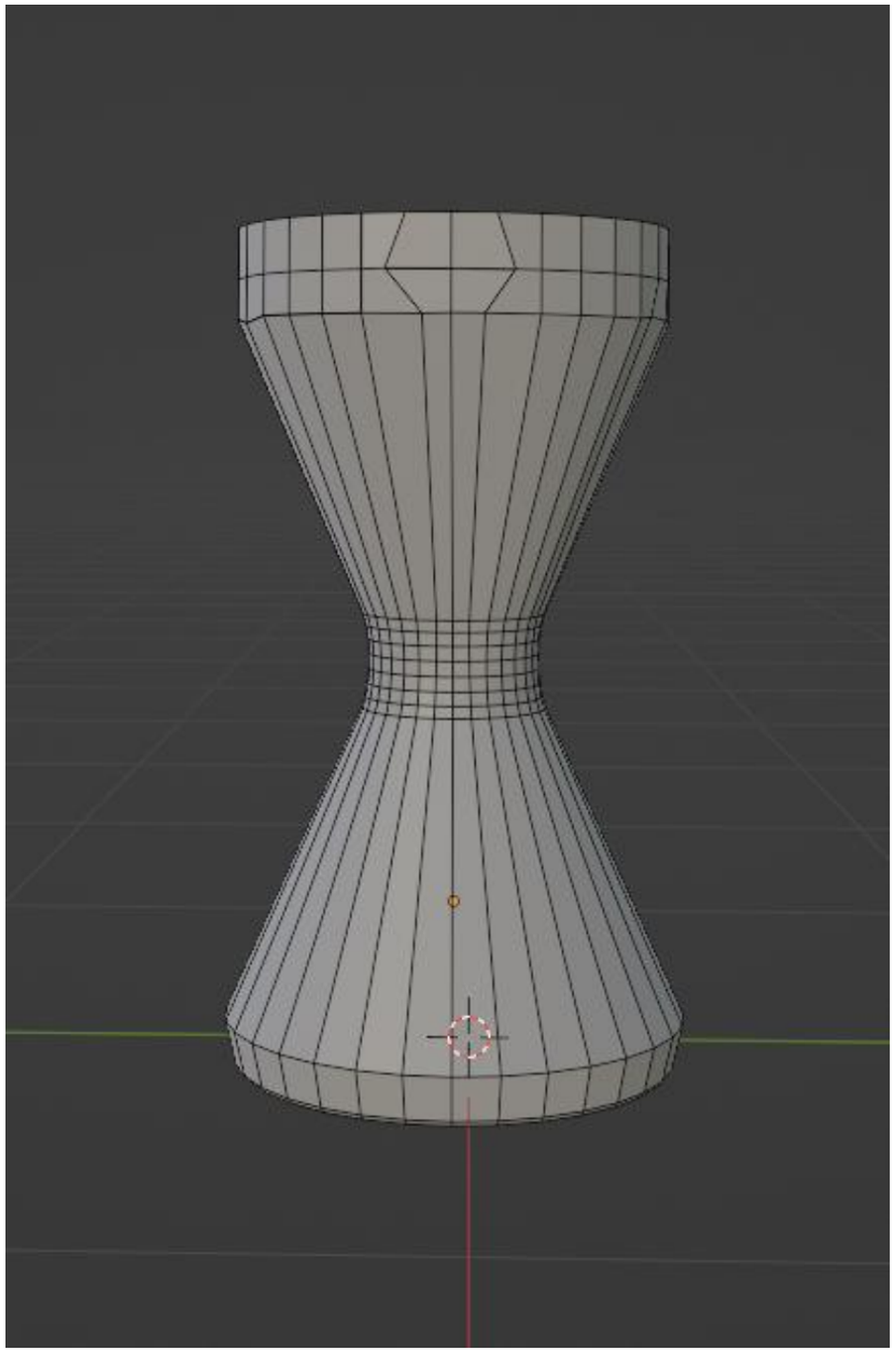
To facilitate the process of opening the bottle, I used the cut tool to precisely carve out a shape.

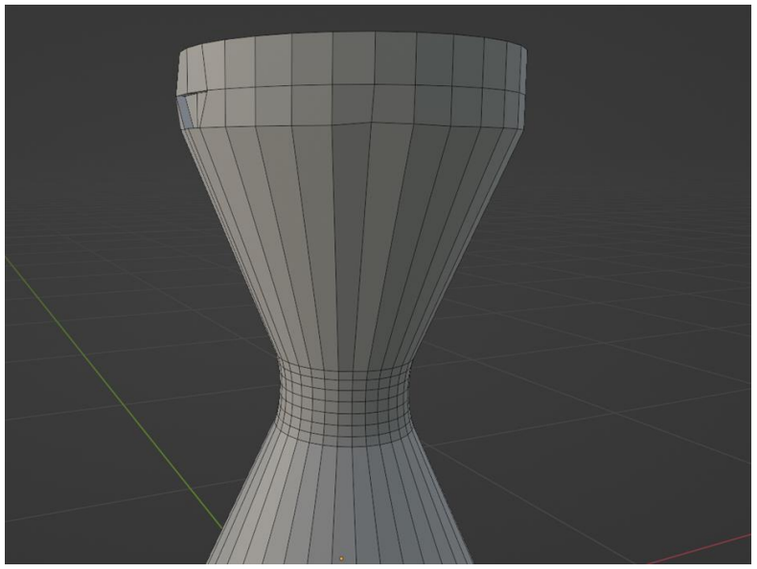
Blender- Chain form



By using the curve tool on the chain, I was able to manipulate the direction and angle of each link in the chain, creating a smooth and continuous curve that matched the shape I had in mind. The curve tool made the process of bending the chain easy and effortless, without causing any damage or distortion to the chain.

Blender- Repairing shape

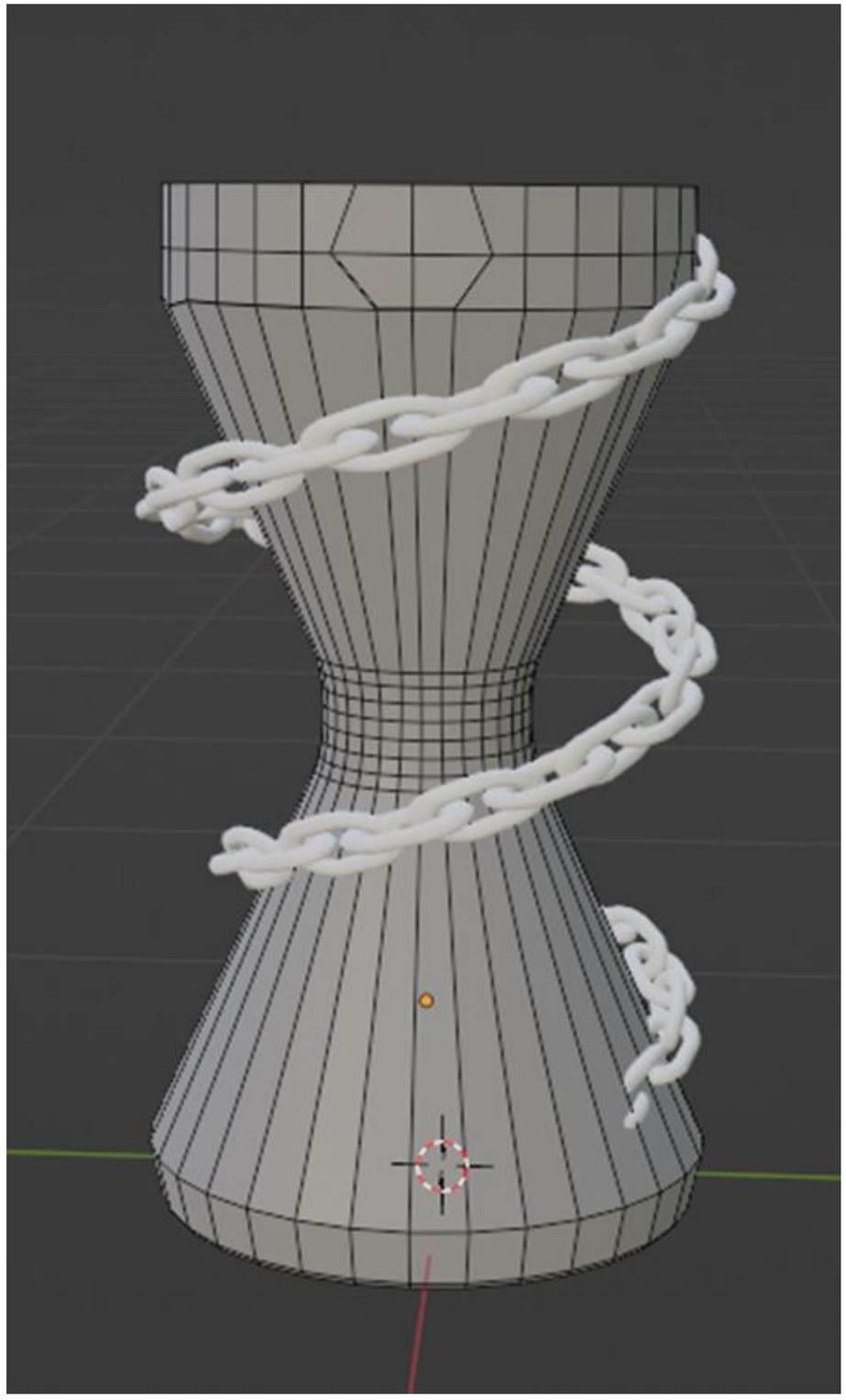




However, I felt like the shape was missing the extreme feel to it that Vivienne Westwood often uses in her designs. She is known for her rebellious and unconventional style that challenges the norms of fashion. I decided to slender down the curve aspect of the model, making it sharper and more angular. This way, I hoped to achieve a more edgy and dramatic look that would reflect Westwood’s aesthetic.

Blender- Connecting chain and shape

I laid the chain against the main body of the shampoo. I experimented with different ways of wrapping the chain around the bottle, such as twisting, looping, or crossing it. I figured out that this amount of wrapping around the body looked the best, as it created a balance between the chain and the bottle and enhanced the visual appeal of the design.



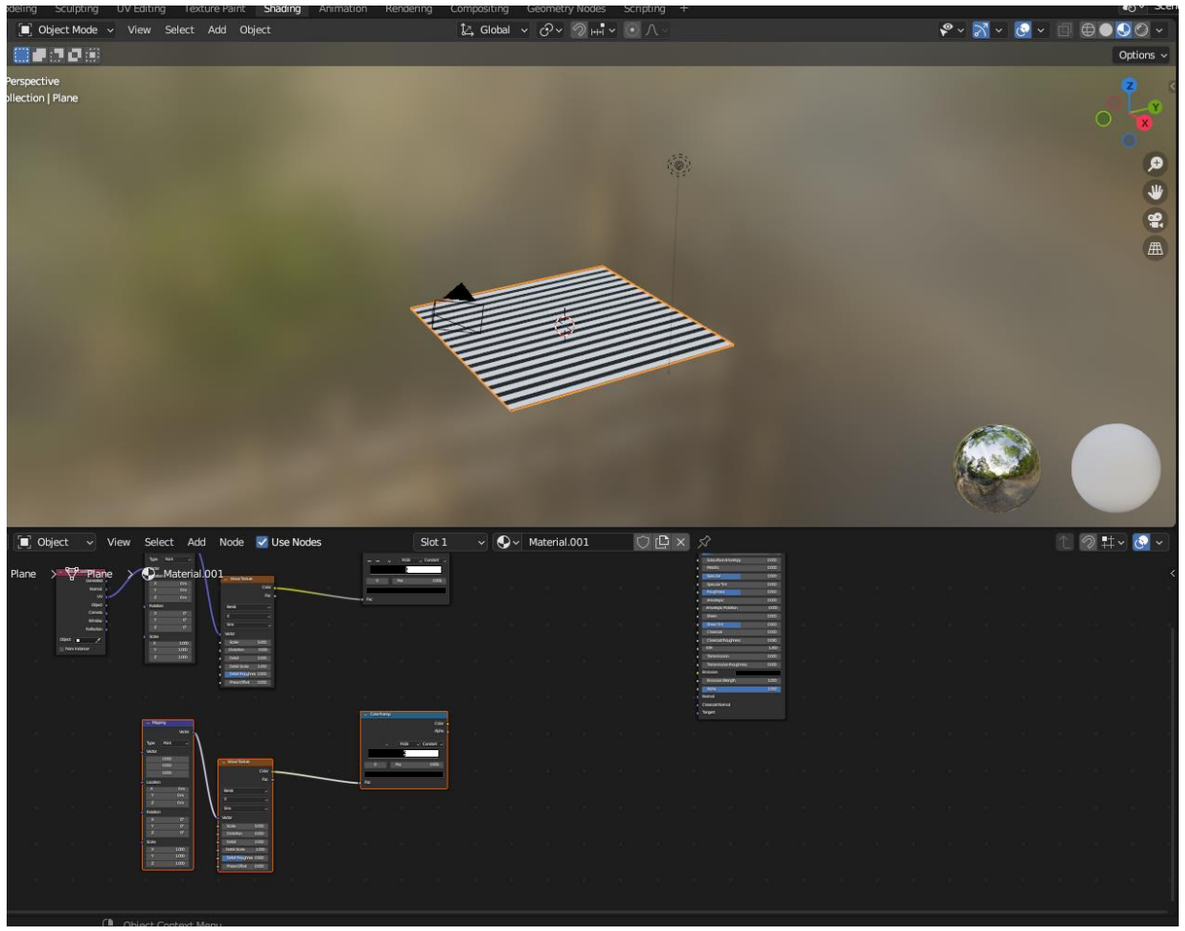
Blender- Adding a handle

I experimented with the idea of adding a handle to the bottle. It made the bottle look bulky and awkward, and it did not fit well with the sleek and simple design that I was aiming for. Therefore, I decided to discard the handle and stick with the original shape of the bottle.

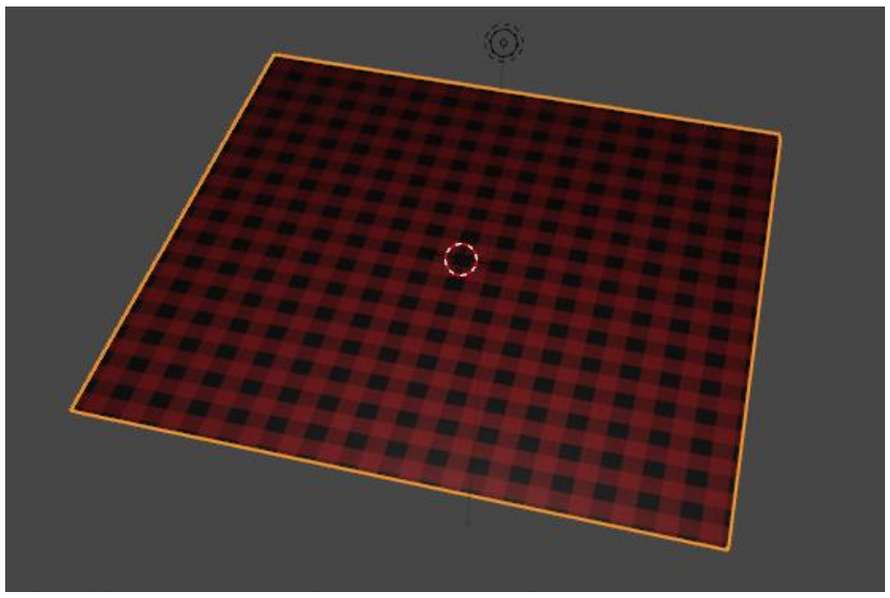
Blender- Using materials

I knew I wanted the chain to be gold as it has a nice contrast with the plaid pattern. The shading tool allowed me to adjust the brightness, contrast, and saturation of the gold color to make it more realistic and shinier. Gold is also frequently used by the brand as it shows luxury. The black really emphases the curve on the body. Black is a color that creates a slimming effect and draws attention to the shape and contour of the body. By using black, I was able to highlight the curve and silhouette of the body.

Blender- Creating the pattern



I created the pattern in the shading tool. I picked a commonly used pattern with a dark red to portray the Vivienne Westwood colour choice. Although the brand explores all types of colours. I decided to stick with the most common association.



Blender- Adding the logo

By using the logo with background removed prior I was able to attached it to the main body. I also expanded the logo to make it achieve a more luxuries feel than using a label. This simple process not only improved the overall design but also added a touch of sophistication and exclusivity to the travel size shampoo bottle.

Final Render and Validation

Vivienne
Westwood

Design Criteria

1. Bold, rebellious ✓
2. Using graphics, slogans, tartan, and plaid. ✓
3. It shapes and challenges the female form ✓
4. Unusual shape ✓

1. It speaks out on political and social issues, adding depth to its design. ✓
2. It uses bright colours, avant-garde style. ✓
3. The logo ✓
4. A luxurious feel. ✓

- It speaks out on political and social issues, adding depth to its design.
- Bold, rebellious

- It shapes and challenges the female form
- Unusual shape

- Using graphics, slogans, tartan, and plaid.
- It uses bright colours, avant-garde style.
- A luxurious feel.

The logo

Conclusion

The project was a rewarding and enjoyable experience for me, as I got to design a creative and fun product. I had a clear vision of the features I wanted to include in my design, such as the most recognizable feature on the shampoo bottle. I chose a concept that was not too difficult to create in blender, but also reflected the brand identity well. I learned how to create a chain using various tools in blender, which enhanced my skills and knowledge of the software. However, I also faced some challenges during the 3D printing process. I realized that my design required many supports, which were hard to remove. I had to use heat and pliers to detach them, and I was worried that some parts might break. Despite this, I gained a lot from the project, such as how to design items in a certain theme and how to conduct research. Most importantly, I discovered many new tools and features in blender that I can use for future projects.