



Experimentación y producto

Conor

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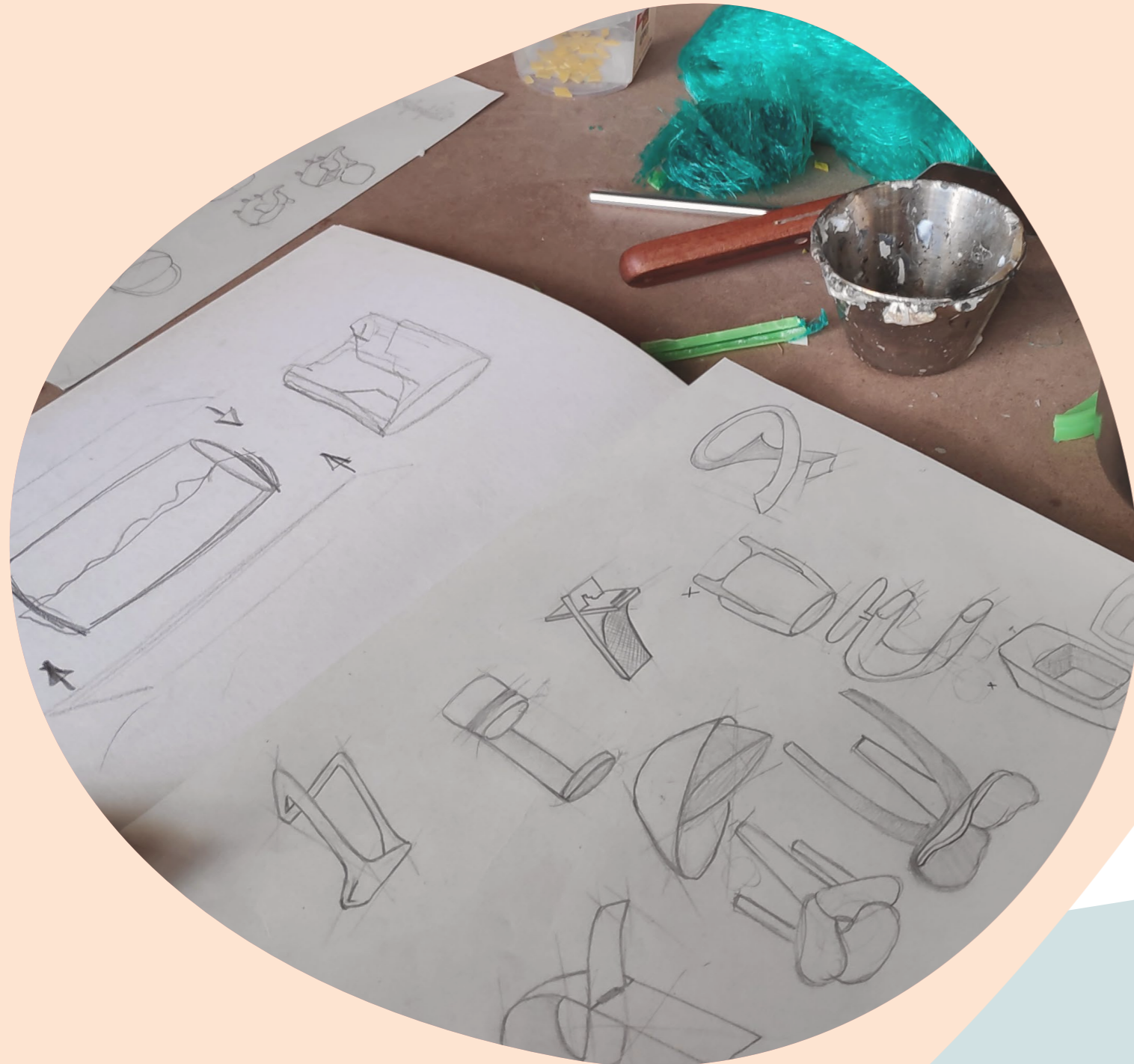
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Conclusion

Abstract

To clarify the project we wrote a short abstract that reads:

Through a line of different experiments with plastic provided by Proplast, we aim to create a stool showcasing the different properties and qualities of the material.



Brain storming

At the start of the brief we brainstormed different product ideas for the western and senegalese market, by sketching, crazy eights and rapid prototyping.

Our aim was to get familiar with the material. We searched for different properties, melting points and molding techniques in the different types of plastic provided.

Allowing ourselves to fully play with, and immerse ourselves in, the possibilities. Therefore we chose a simple product with a simple shape, the stool, allowing us to experiment more. Here we broke, cut, melted, crushed, mixed and much more, letting the process of curiosity guide us.



Concept: the stool

A stool being a functional object necessary in all parts of the world, we thought that rather than take an already established design and completely change it, we would dedicate our time into seeing how we could manipulate the material and how it could be transformed into a classic stool shape.

This shape while still being simple, creates beautiful effects and patterns that melting the material naturally creates.

Heating experiments



Iron



Heatgun



Oven



First shapes

In one of our experiments, we melted plastic directly onto the metal mold. With the right amount of heat and time, the plastic made a dripping effect, as seen on the yellow model picture in the middle.

It looked like it was liquid dripping down. We really liked this aesthetic because it makes you question how it was made and what material it was made of. It gave a natural finish to the plastic that we had not yet seen.

We also tried making he-she molds (top left picture) and other experiments, but we thought the dripping effect was more interesting to try and refine.







Bigger scale

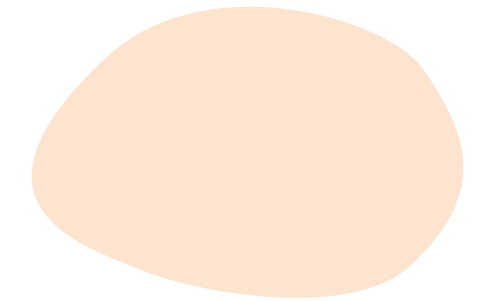
We made a lot of trial and error work that taught us a lot about the plastic and how to handle it. When we tried to create it on a bigger scale, problems arised. It was impossible to obtain even heating on the larger model.

After we tested melting plastic directly onto a mold we decided to try another way.

We created sheets of plastic by putting the shards of plastic on a tray in the oven. Once it melted, we took it out to let it cool to form the sheet. To then get the shape of the stool we put the sheet on top of a metal bucket in the oven hoping the sheet would melt and wrap around the bucket giving us the desired shape.

Unfortunately, when we melted the sheet again, it melted too quickly for us to control and it didn't drip around the bucket like we imagined. Therefore we had to put the idea of the dripping aesthetic to rest and keep experimenting.





Draped sheet



We eventually discovered that the way we would get the best results with the sheet would be to apply it directly on to the mold after it being in the oven using heat resistant gloves and baking paper. This allowed us to control the shape better.

Here we tried to create different shaped sheets to mold around the metal bucket. From left to right we tried to replicate the dripping effect and make a full shape. (see images)

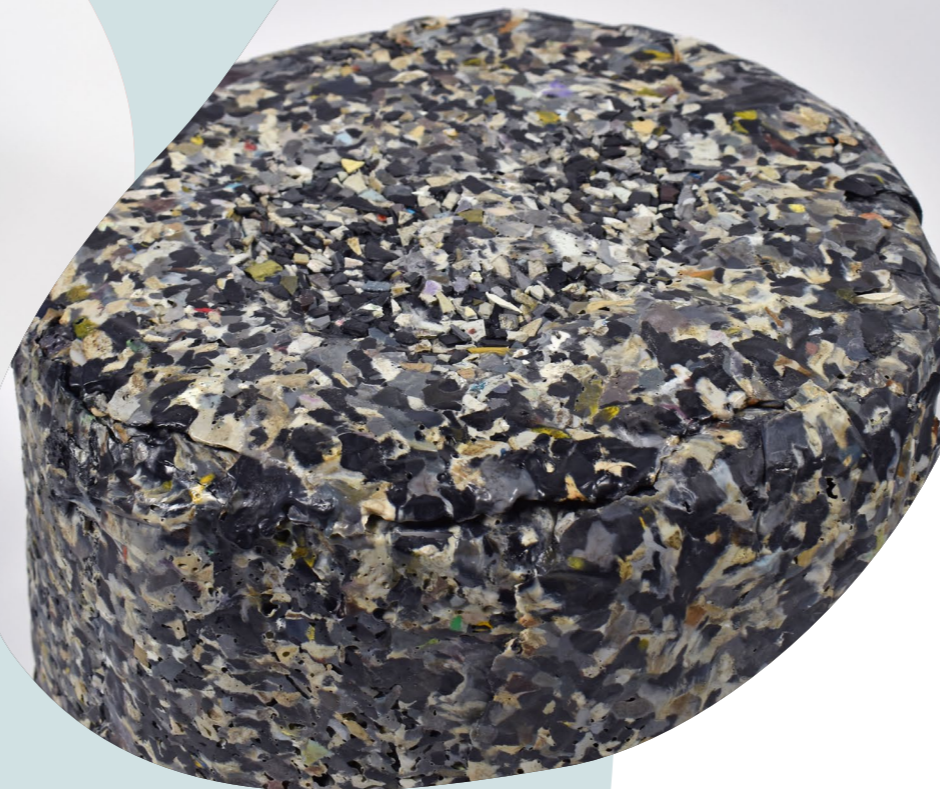
The full sheet melted over the bucket created a draped fabric effect which really appealed to us. This led us to try and gain this same effect on the full scale stool.





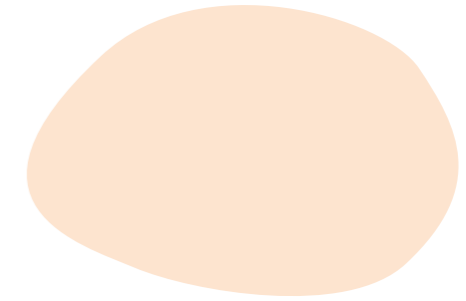
1:1 model

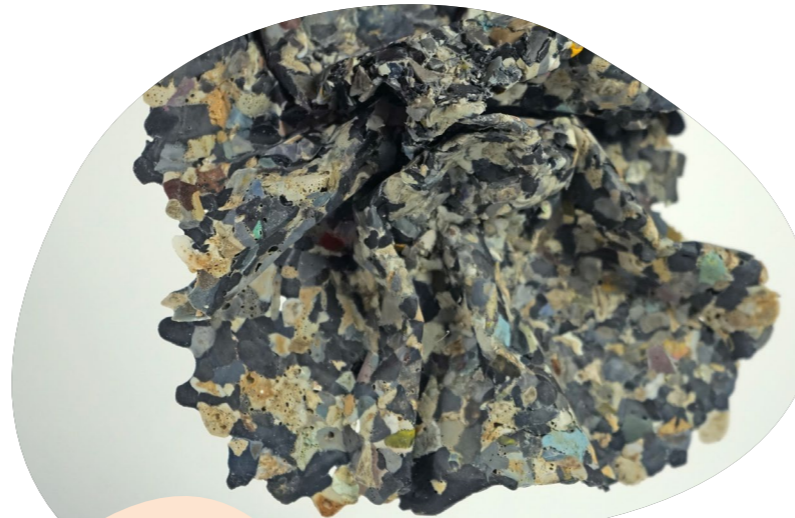
Here you see the final model in the scale of 1:1. A fully functional stool that you can sit on. We realized that the best way to create a stable construction was by melting sheets in the oven and molding them around the shape when hot. The dream was to create a big sheet in the oven 1m x 1m to shape around the mold to obtain the draped fabric effect. Taking time and resources into account, we had to use another method. The finished model is made by 10 small sheets (40 cm x 28 cm) pressed together when hot on the metal mold. Although it misses the aesthetic of being either dripping or draped, the pattern of the melted plastic turned out in a way that we were really happy with.



The dimensions are:

- Top Diameter of 32cm
- Bottom Diameter of 38cm
- Height of 35cm





Discoveries

In conclusion we discovered that the plastic can be manipulated into many shapes through our method of applying sheets on to a mold.

This then gives you the possibility to create something like OUR final stool shown or to create wider ranges of functional products displaying a beautiful mosaic finish.

We also feel that the melting and draping effects can be incorporated into many designs providing we had more industrial size melting apparatus. If given the time to carry out further development we feel we would be able to refine the stool and perfect it to our liking. We hope you enjoyed our experimentation process and we welcome any questions.

Further Development

Having seen the multiple finishes and molding techniques that the PP plastic allowed us to perfect, we chose to dig deeper into one of the methods. Finding the draped fabric aesthetic appealing, we started brainstorming how to create a storyline, explaining this visual quality of the material.



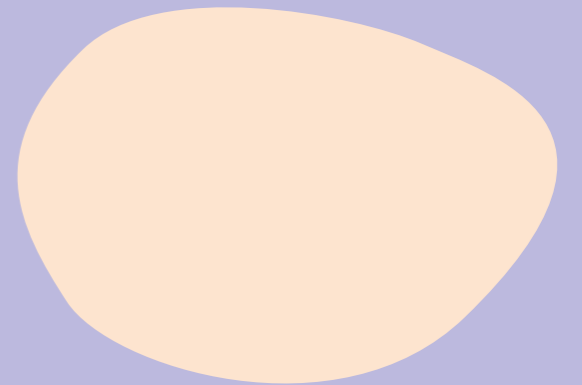
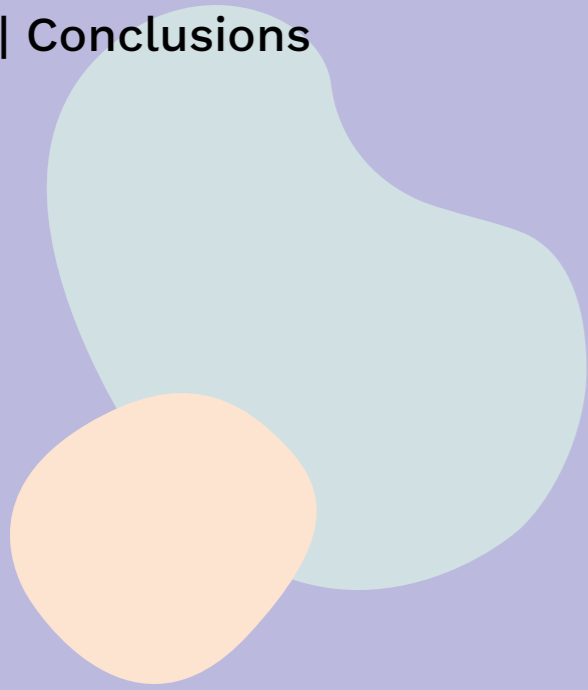


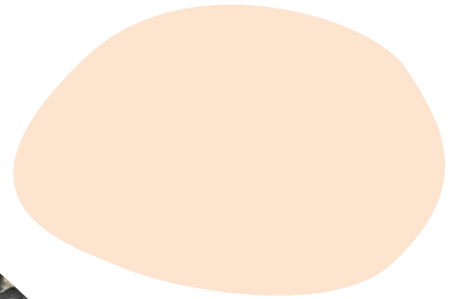
Conclusion

‘Picking up a napkin’

As a result of manipulating the plastic into the desired shapes we ended up with this series of pictures. The series are communicating how you can pick up the plastic as if it were fabric. Focussing on how the fabric would naturally curl and fall when picked up. Our aim was to create a curiosity around the material and question how this was created.









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