



ALFRED STORER

THE PRINT

“The Print embodies a mesmerising symphony of geometry, with angular facets and sinuous curves converging to form a strikingly contemporary centrepiece.

“Exuding both sophistication and innovation, it is made from reclaimed teak, recycled plastic, epoxy resin and 3D printed recycled PLA.”



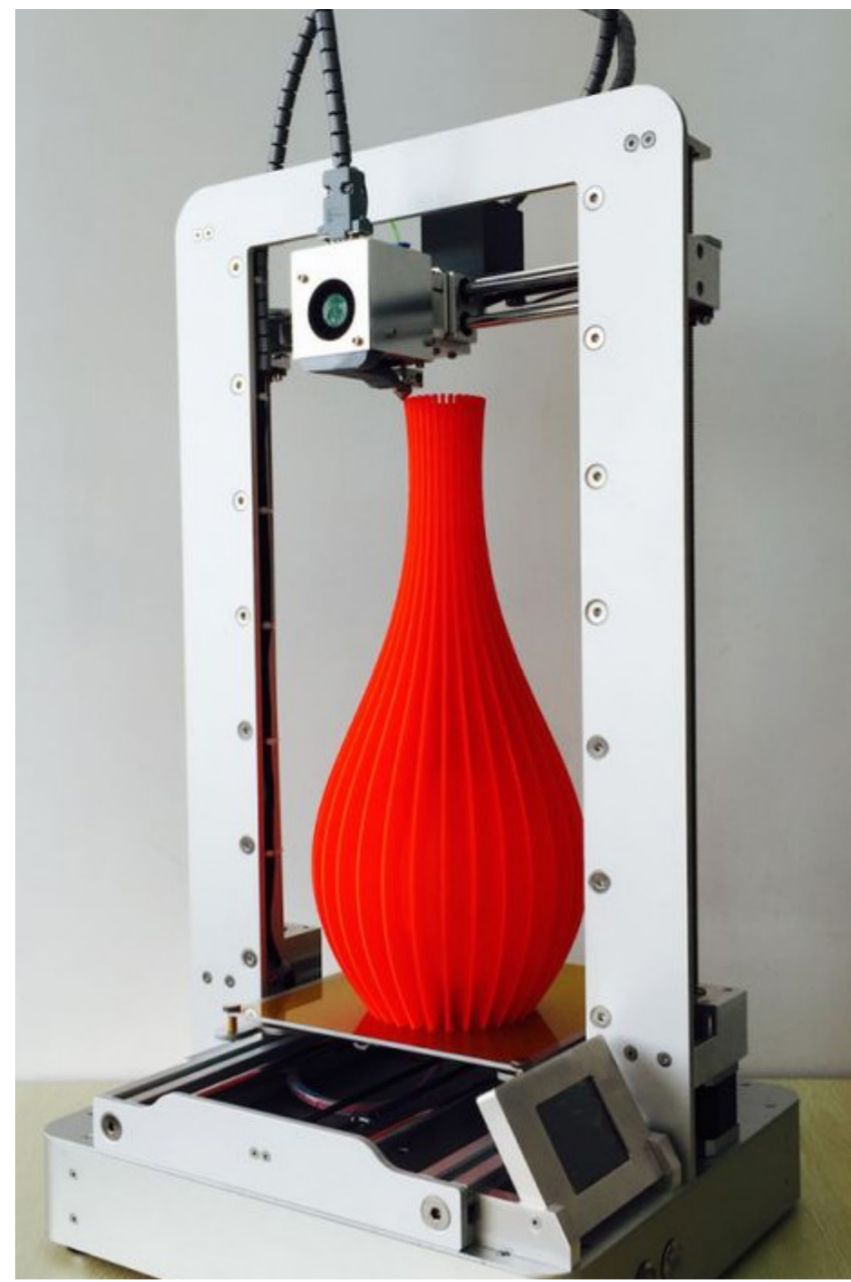
INTRODUCTION

Plastic waste has become one of the most pressing environmental challenges of our time. With millions of tons of plastic entering landfills and oceans annually, finding sustainable solutions to manage and repurpose this waste is crucial.

In This project I wanted to create a side table that explores the potential and possibilities of converting plastic waste into a viable 3D printable material, which can be utilized in various applications. By transforming discarded plastics into useful products, we can address two critical issues: reducing environmental pollution and creating innovative, sustainable manufacturing processes.

By converting plastic waste into 3D printable materials, this project aims to contribute to a more sustainable future. It not only provides a practical solution to manage plastic waste but also opens up new avenues for eco-friendly manufacturing and innovation.

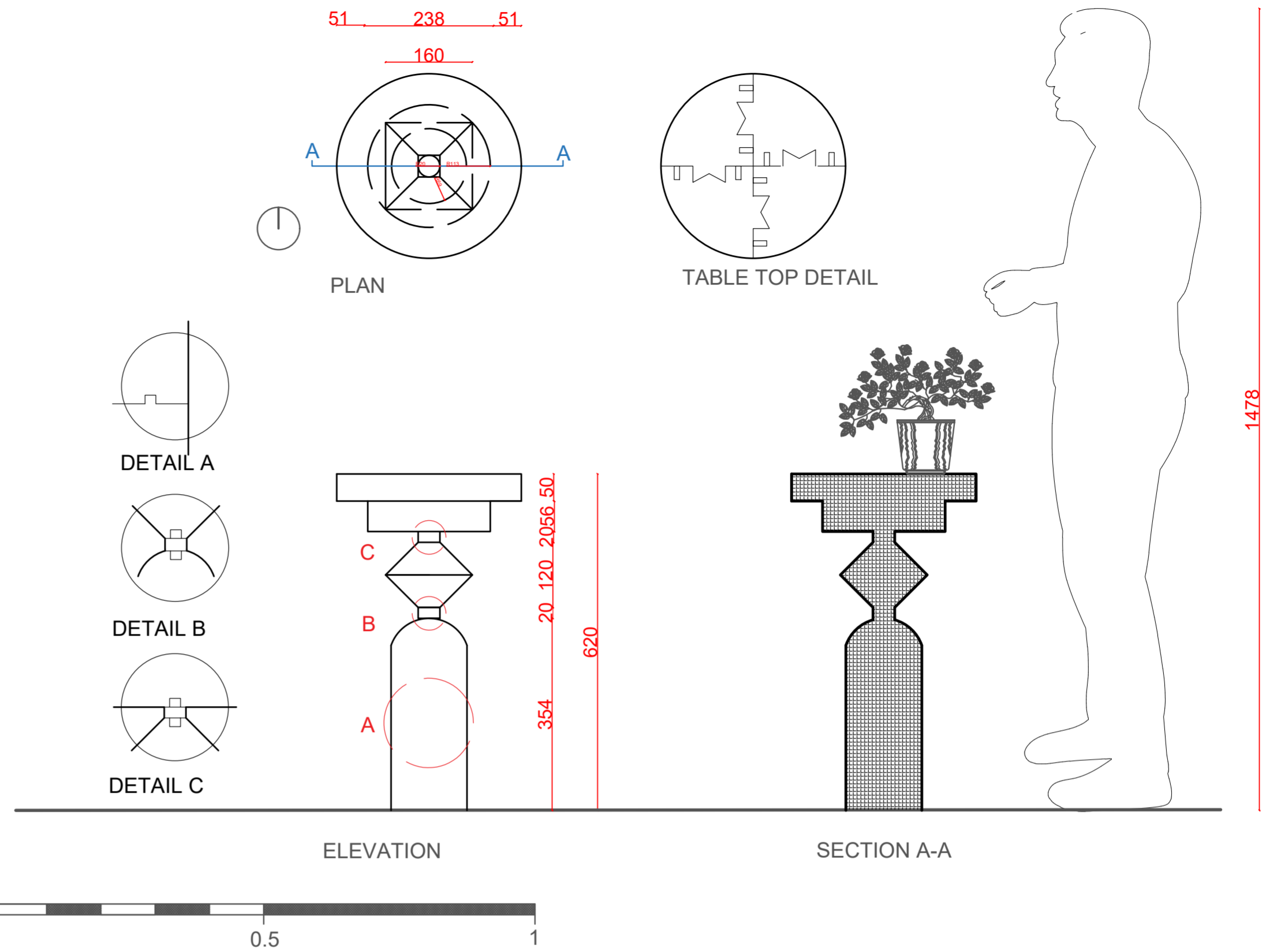




3D PRINTING

3D printing works by taking a digital design and then building it layer by layer using materials like plastic, metal, or even food ingredients. It's like creating a sculpture from the ground up, but with a high-tech twist! Each layer is added on top of the previous one until the whole object is formed.

3D printing is cost-effective because it doesn't require expensive molds or tools like traditional manufacturing methods. With 3D printing, you can create complex designs without the need for extra materials or processes, saving time and money. It's like a budget-friendly way to bring your ideas to life!



CONCEPT COLLAGE



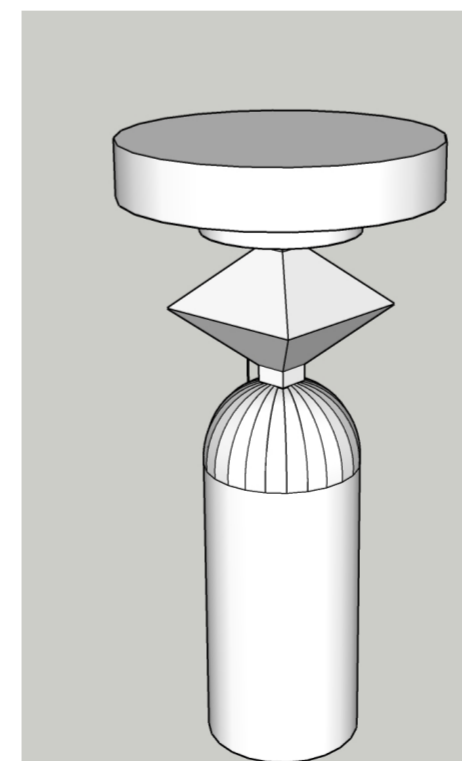
MAQUETTE DESIGN 1



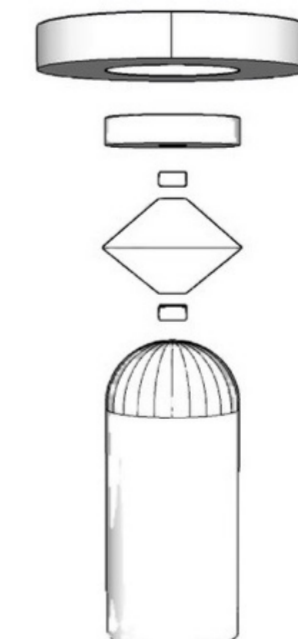
MAQUETTE DESIGN 2



SKETCH FINAL DESIGN



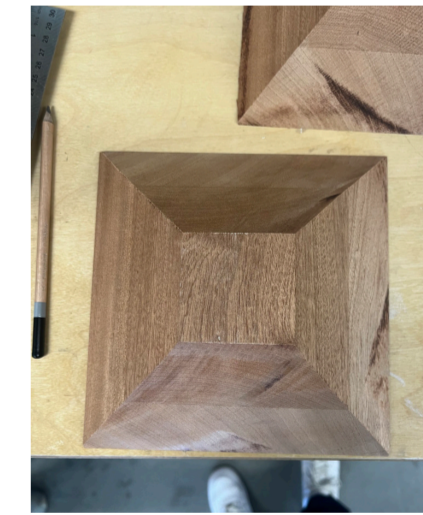
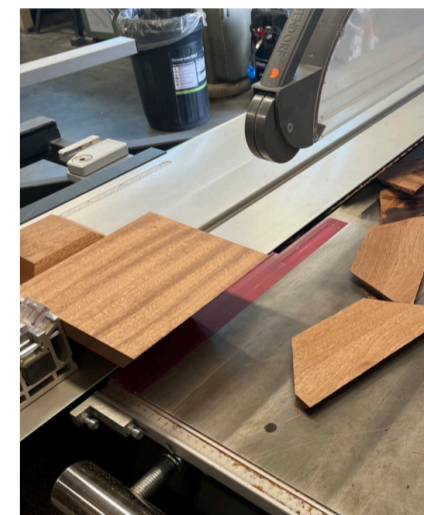
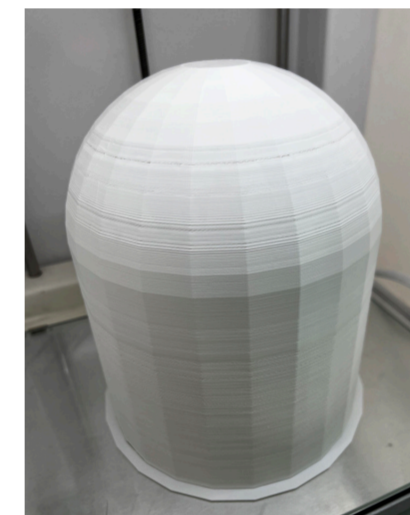
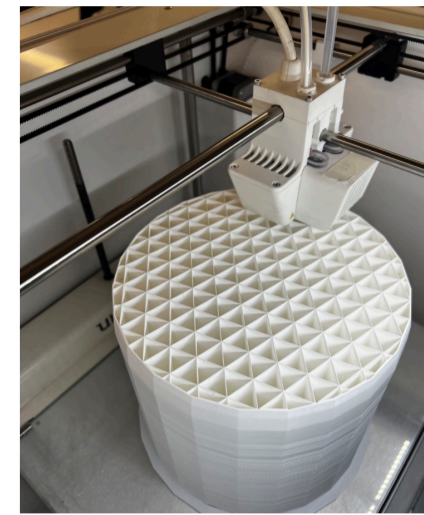
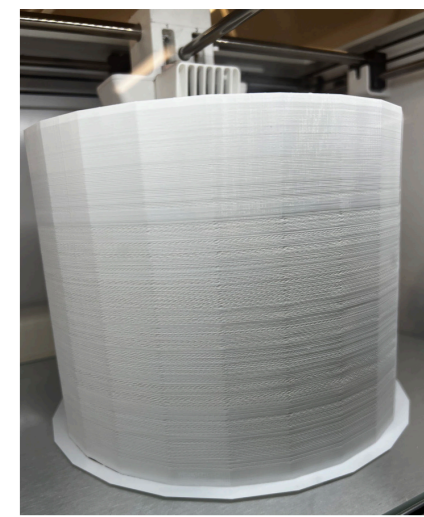
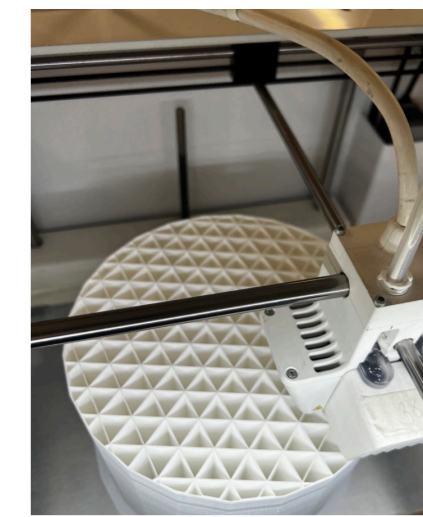
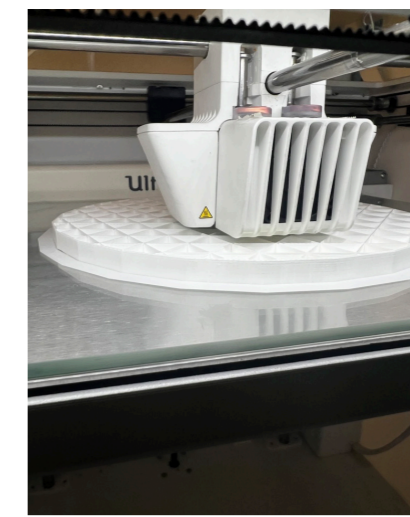
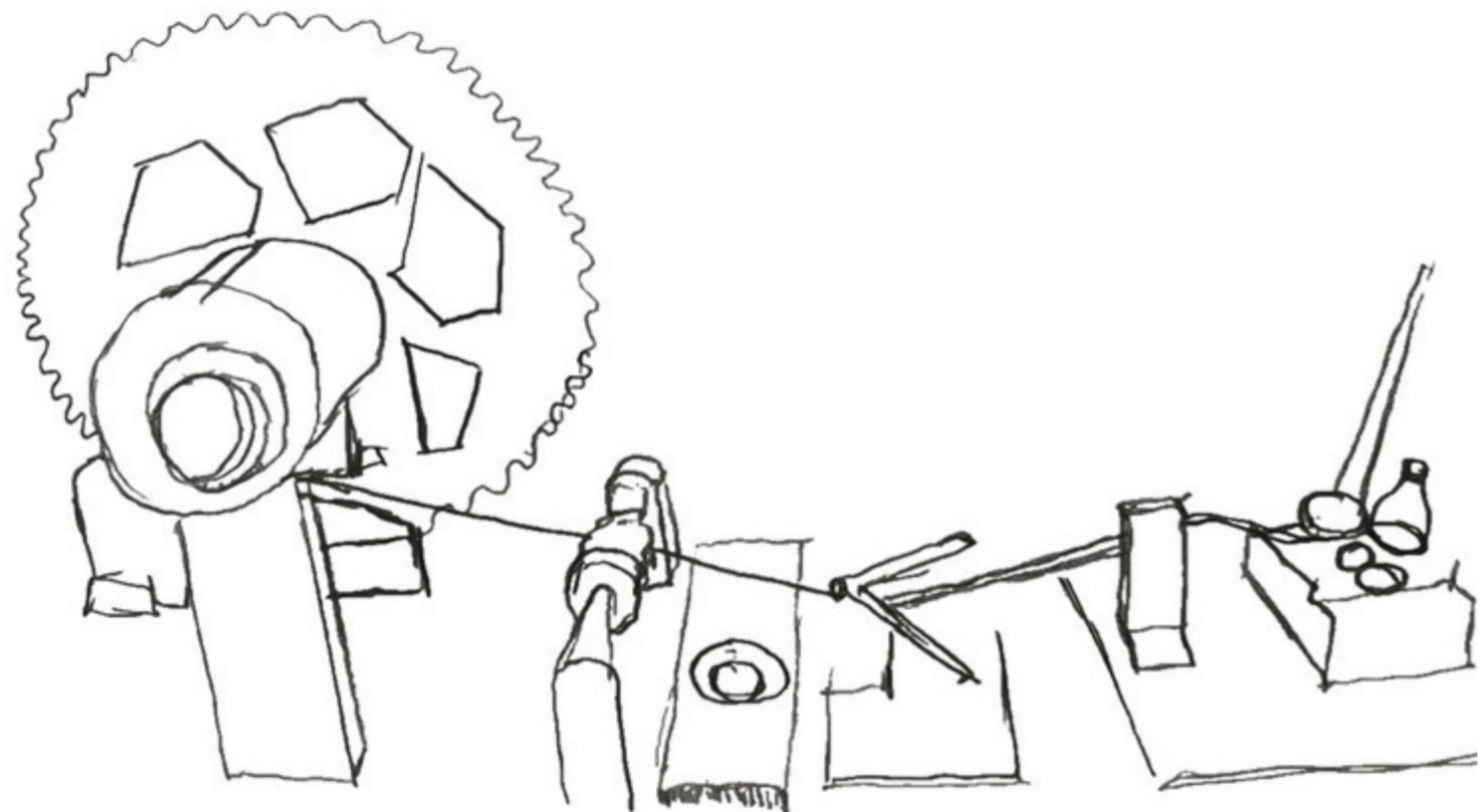
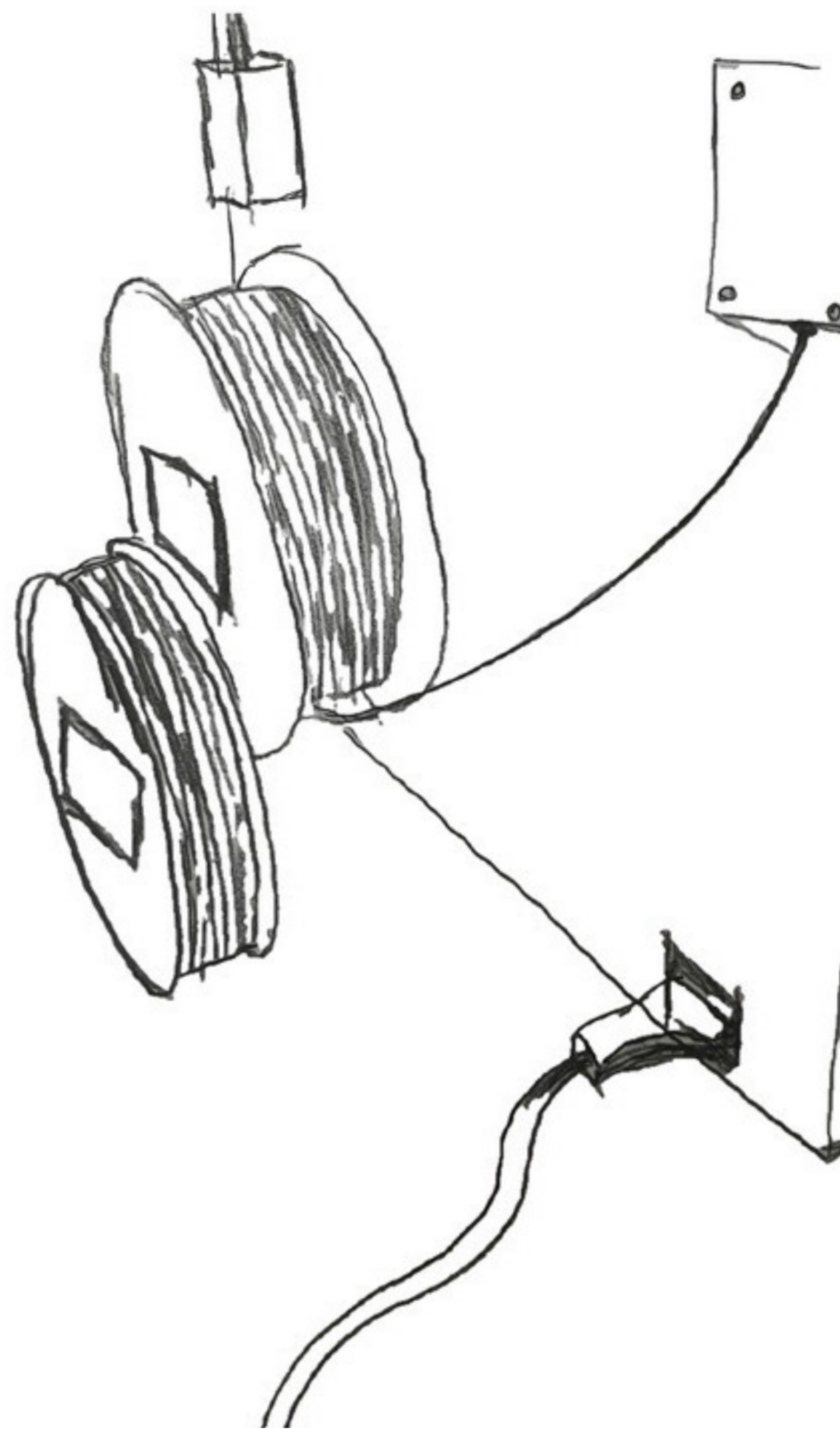
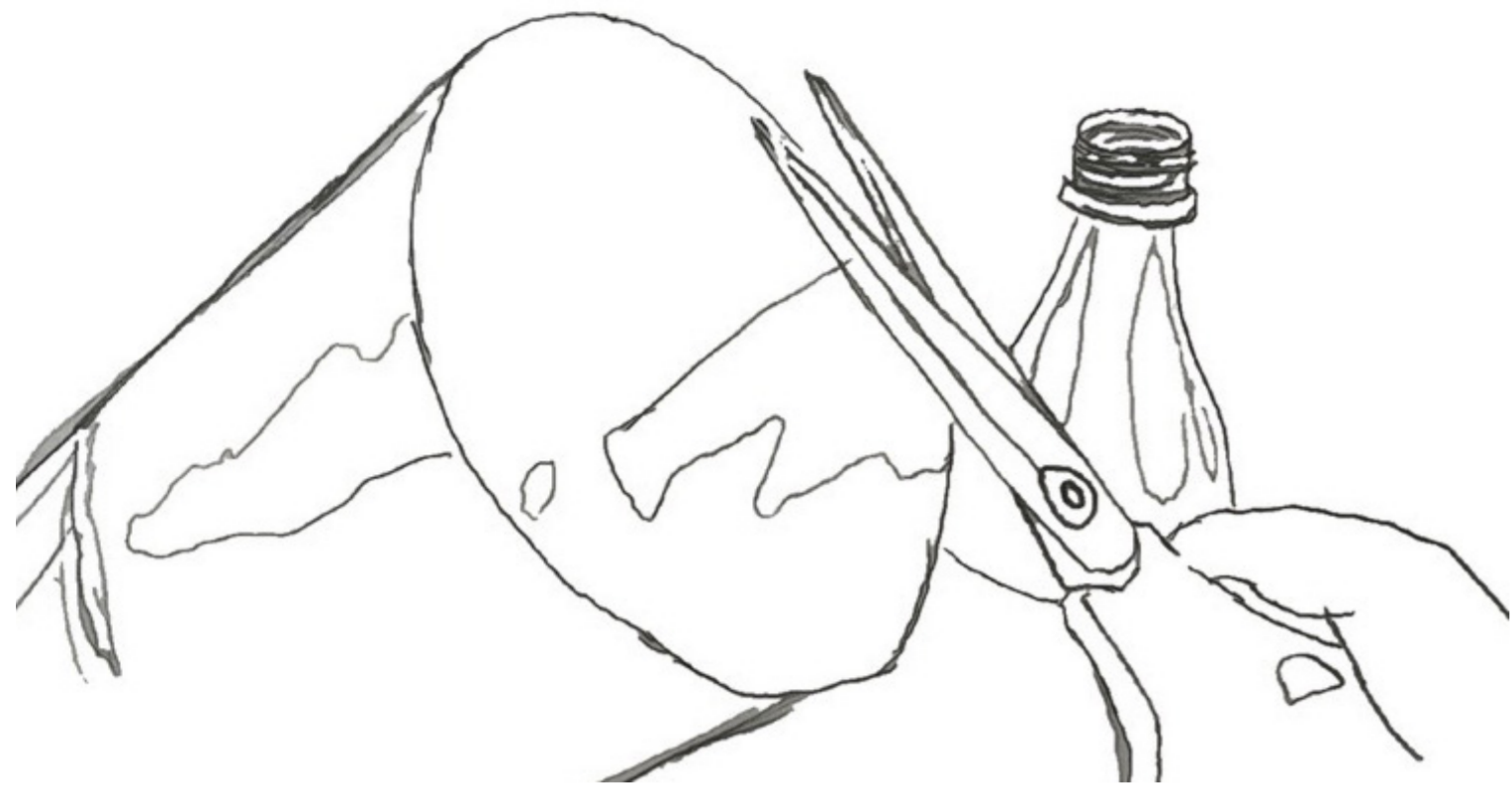
SKETCHUP MODEL



EXPLODED VIEW OF MATERIAL DESIGN COMPONENTS



FINAL DESIGN



Transforming plastic bottles into 3D printable filament begins with a thorough cleaning process to remove labels, adhesives, and any contaminants. Once cleaned, the bottles are cut into strips or small pieces that can be easily fed into a machine. These plastic pieces are then heated in an extruder, melting them down to create a viscous liquid. This molten plastic is carefully extruded through a fine nozzle to form a continuous, thin filament. As the filament exits the nozzle, it is immediately cooled and solidified to maintain a consistent diameter, which is essential for high-quality 3D printing. The cooled filament is then wound onto spools, making it ready for use in various 3D printing projects. This method efficiently repurposes plastic bottles, reducing waste and promoting eco-friendly manufacturing practices.

