

A Jeweler's
Toolkit
By Kieran Croal

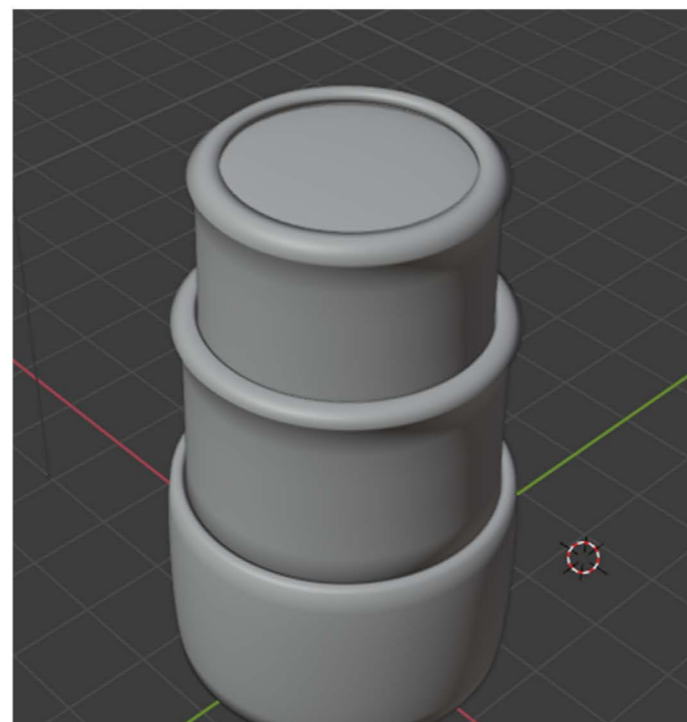
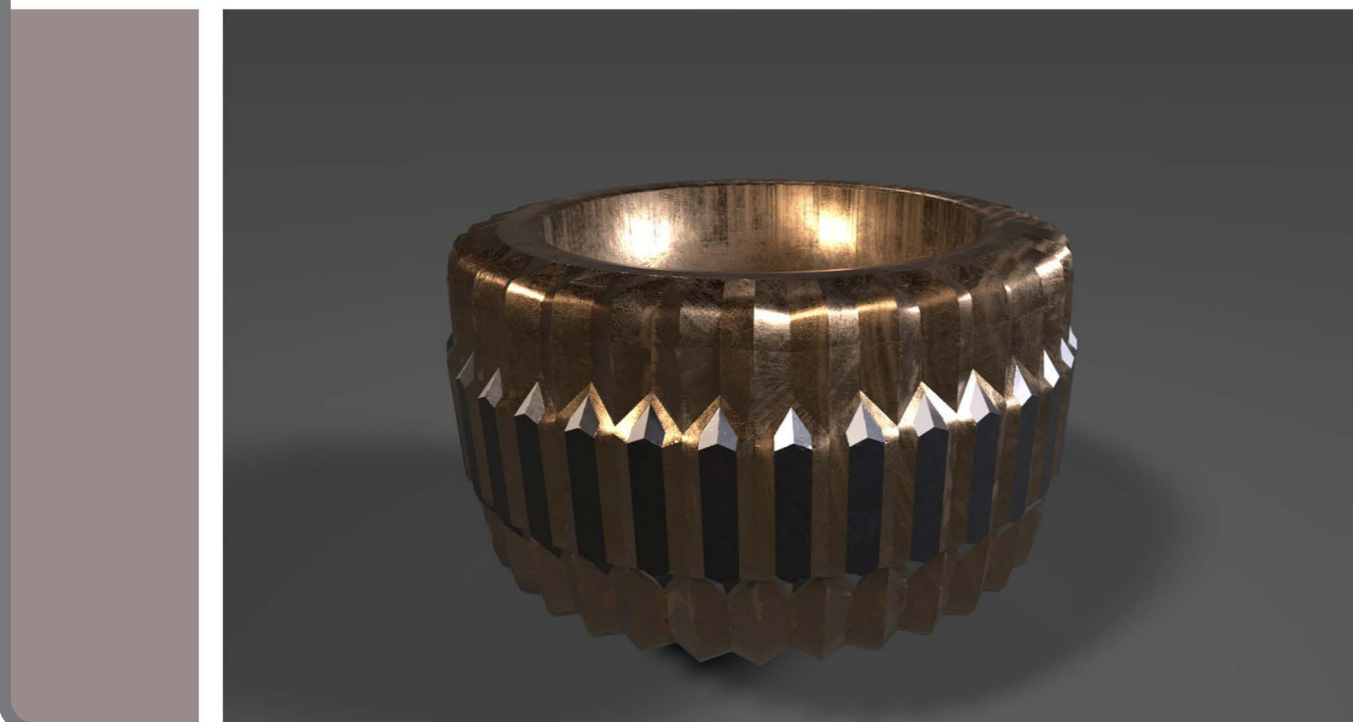
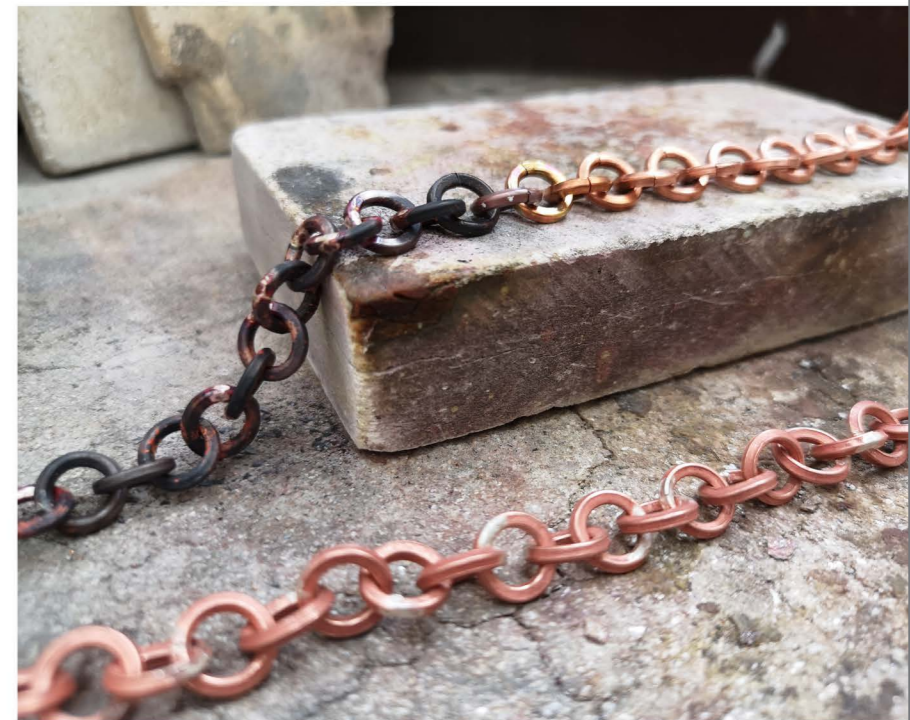
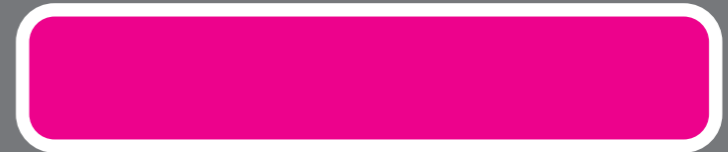
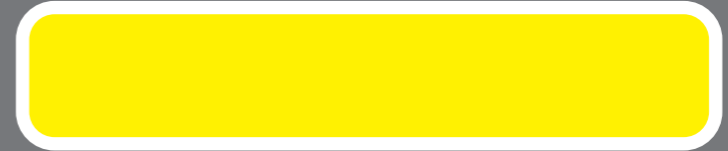


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Inspiration

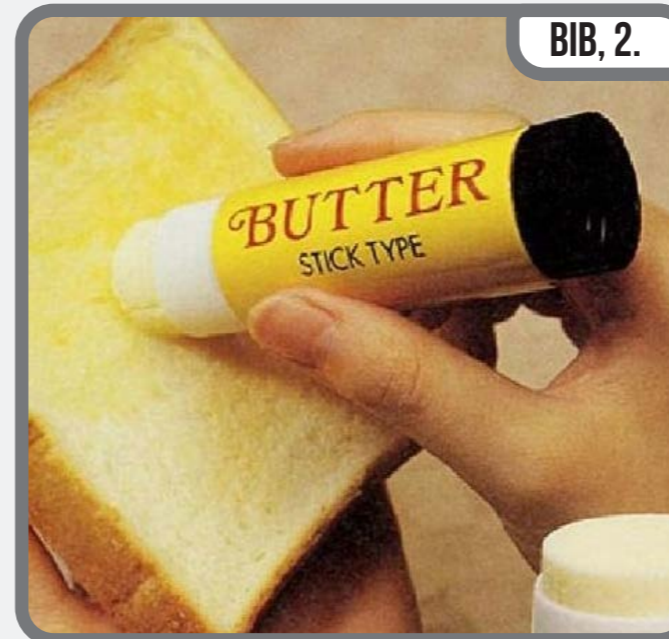
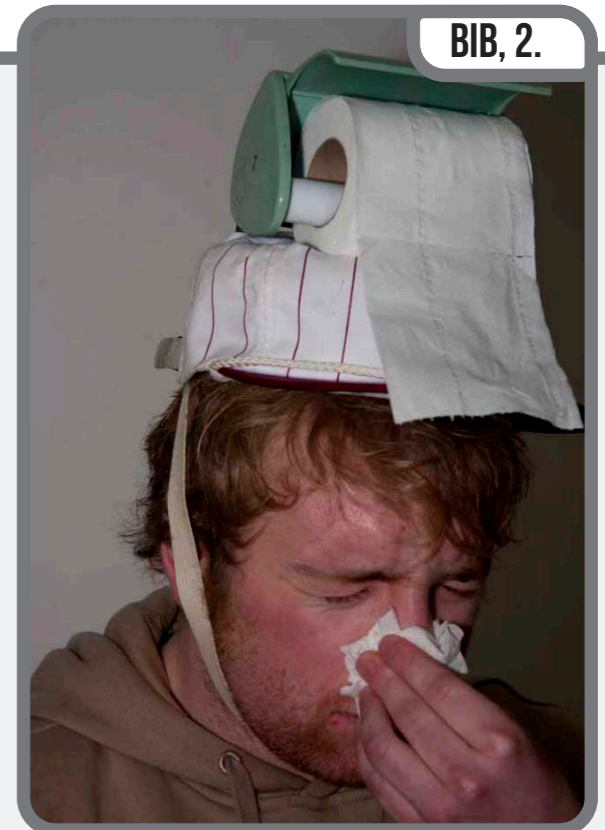
Initially my push into research was focused around the concept of Chindōgu. Inventing various items that made every day a little easier, with often humorous issues.

The process has ten tenants which served as a ruleset to format these items and keep them consistent, but regardless each item often is very unique.



A t-shirt designed to tell another person exactly where to scratch, a hat for a hayfever sufferer, a 'stick' of butter or brush and pan shoes. These concepts were intriguing to me.

I wanted to create something usable and possibly humorous and what really enticed me was the concept of having something wearable with another purpose involved.



Multi-tools, items created to serve a specific purpose and items that combined multiple purposes together.

A few examples being:

The Oura Ring, a ring combined with electronics to monitor heartrate, blood pressure and sleep quality.

A belt buckle combined with a multitool, designed by Jameson Ellis.

A sculptural piece designed by Bathsheba Grossman, a mathematical equation turned bottle opener.

BIB, 3.



BIB, 4.



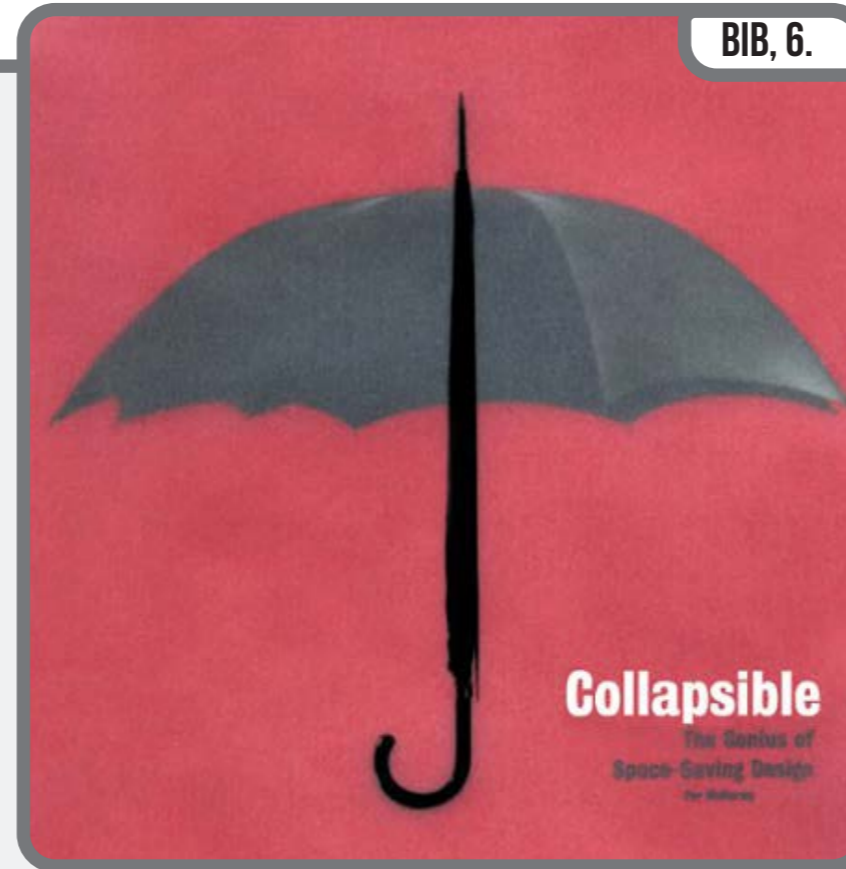
BIB, 5.



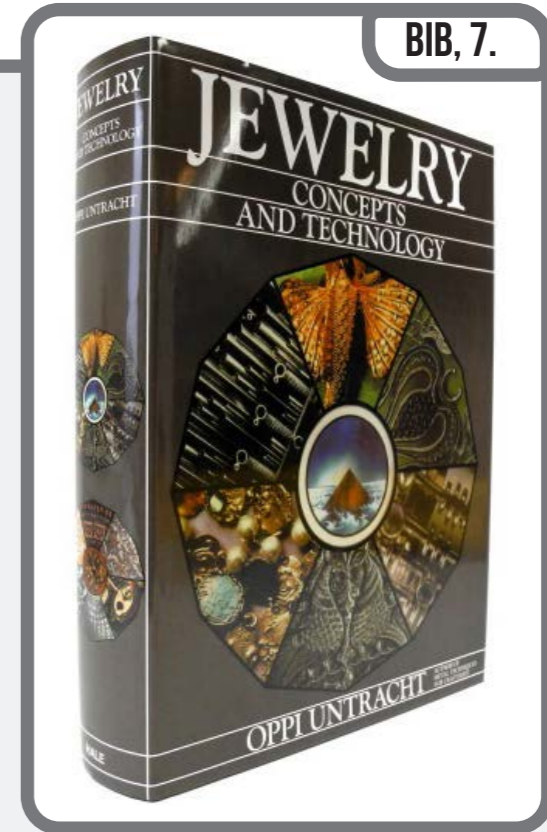
BIB, 5.



BIB, 6.



BIB, 7.



Two books that influenced my work would be 'jewelry concepts and technology' by Oppi Untracht as I began to challenge myself to tackle more difficult processes like mokume gane.

Collapsible by Per Mollerup also offered some interesting details into the world of collapsible items, which influenced some conceptual ideas towards the end of my project.

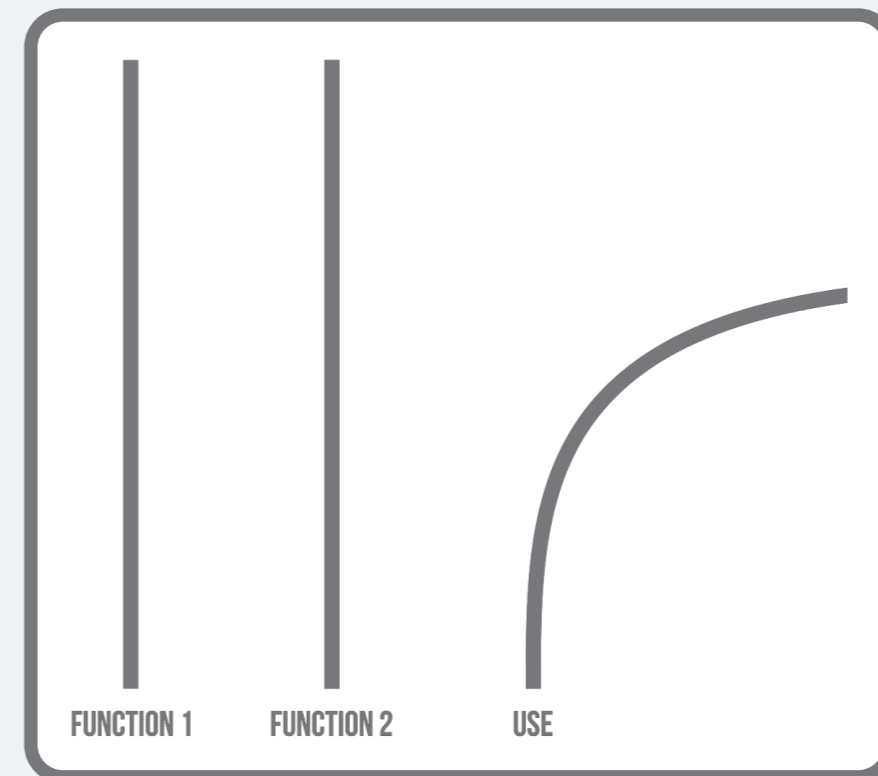
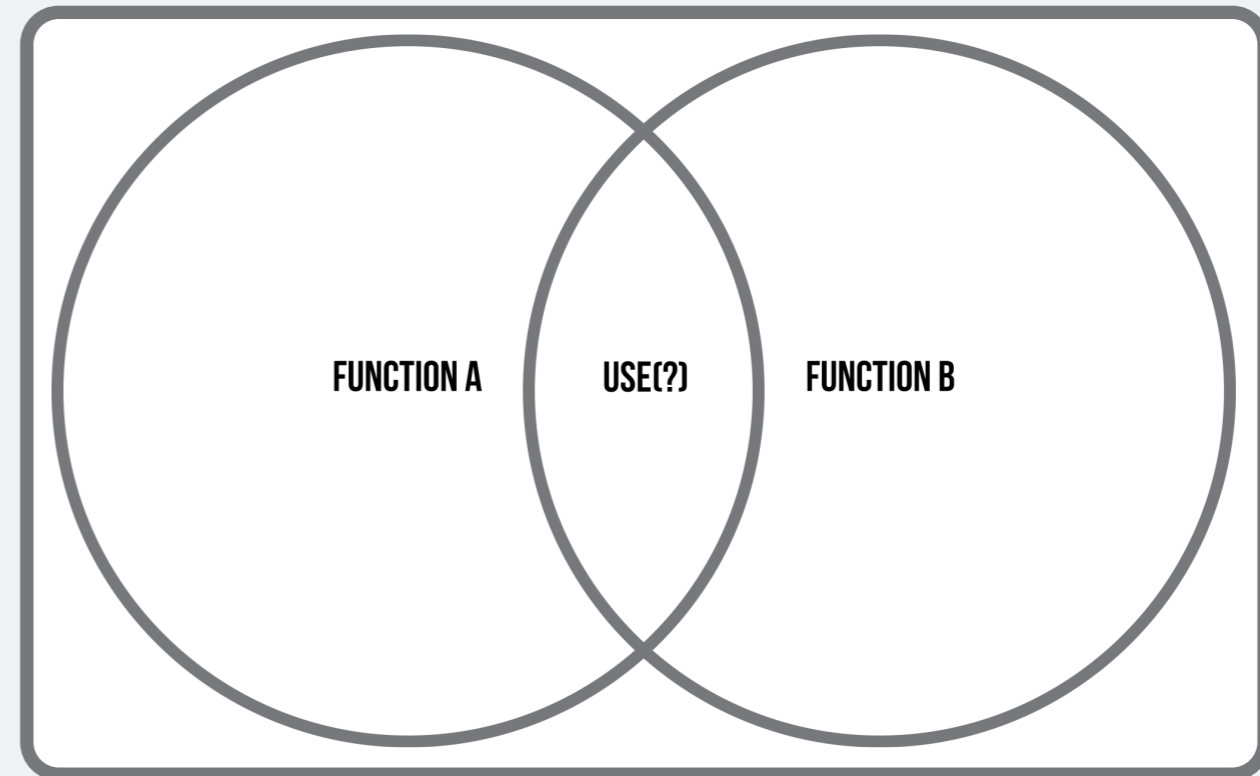
Ruleset

For my ruleset I wanted to incorporate two functions into a piece. A function as a piece of jewelry and a function as a tool.

The functions must be balanced between the two, that means if the design leans heavily either way, both functions always must be workable.

The combination of these functions must be randomly chosen together.

What is also interesting is that this process could mean that a purpose with another use could come out of bringing these two functions together, so the actual use can deviate entirely from what is intended.



Jewelry Function

- Armlet
- necklace
- pendant
- bangle
- bracelet
- cuff links
- ring
- brooch
- earring
- chatelaine
- anklet
- amulet
- locket
- medallion
- hair pin
- hat pin
- crowns
- circlet



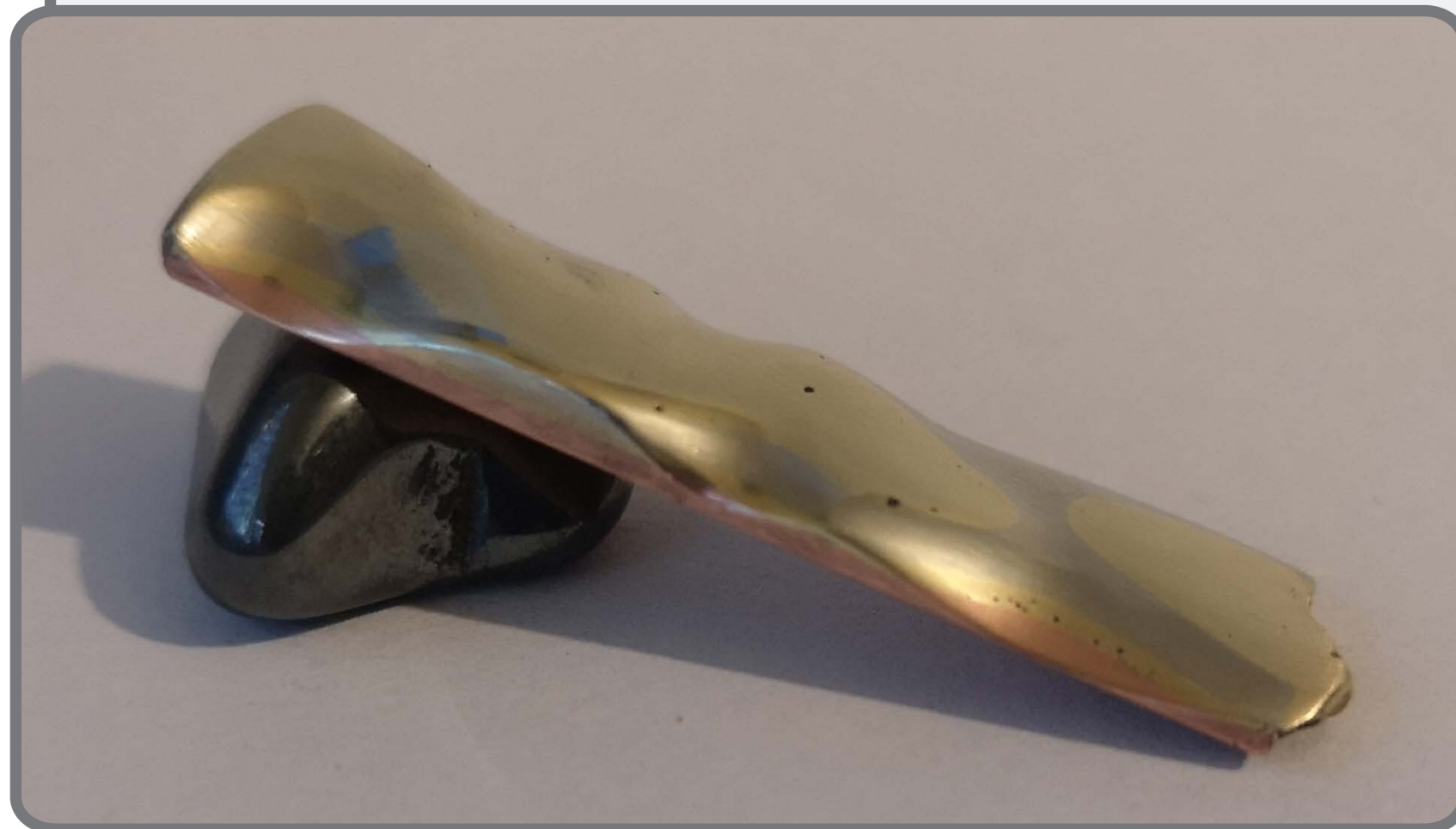
Base Use

- scoop
- carve
- shape
- guide
- measure
- cut
- carry
- stab
- sew
- protect
- hold
- tighten
- open (Can opener?)
- Store
- Battery
- Enlarge (microscope?)
- Screw/unscrew (Torc?)
- Communicate
- Hold hair
- Illuminate
- Cover
- Record
- Prune (Snip)
- Play (Fidget)
- Brush (Hair)
- Smash
- Write



Choosing one jewelry function and one base use, what do you end up with?

Mokume Gane

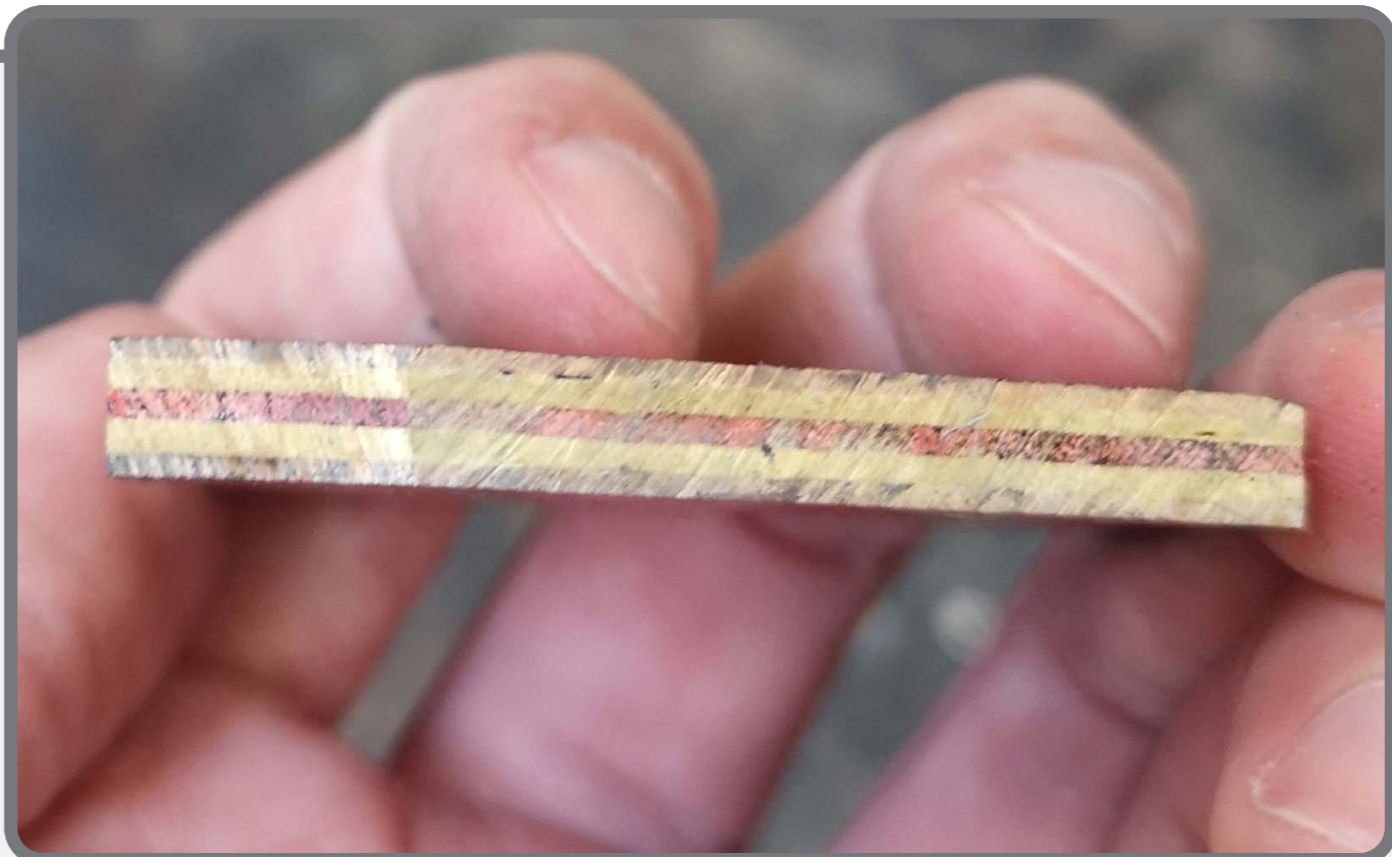
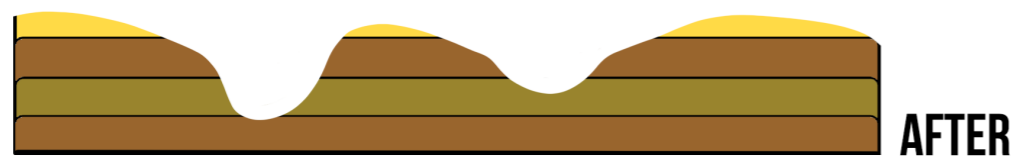


These items were two pieces I made from exploration into the Mokume Gane process. A pendant and a Ring.

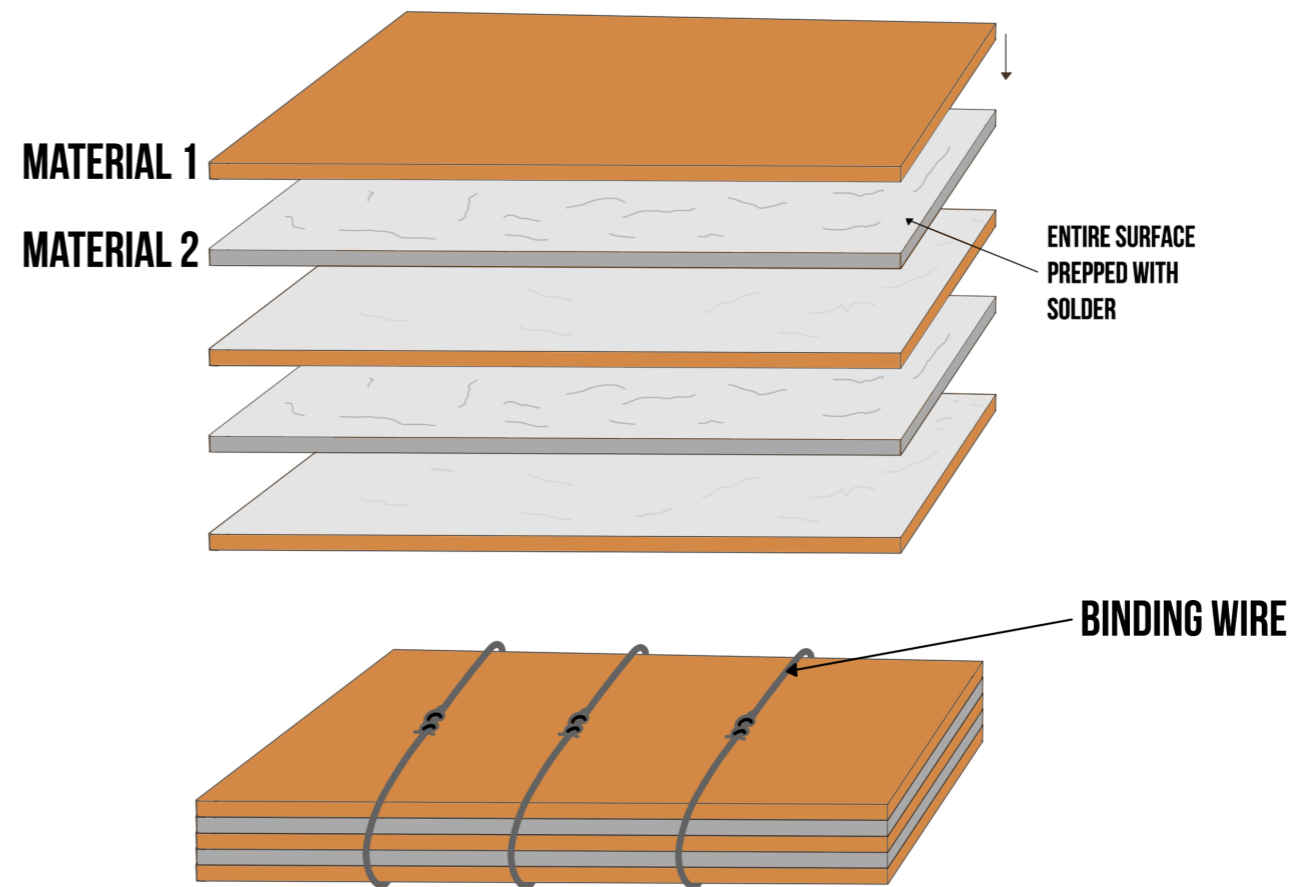


My first **messy** attempt at Mokume Gane.





Mokume Gane is the process of layering layers of non-ferrous metals in fusion lamination, creating a 'wood-grain' effect.

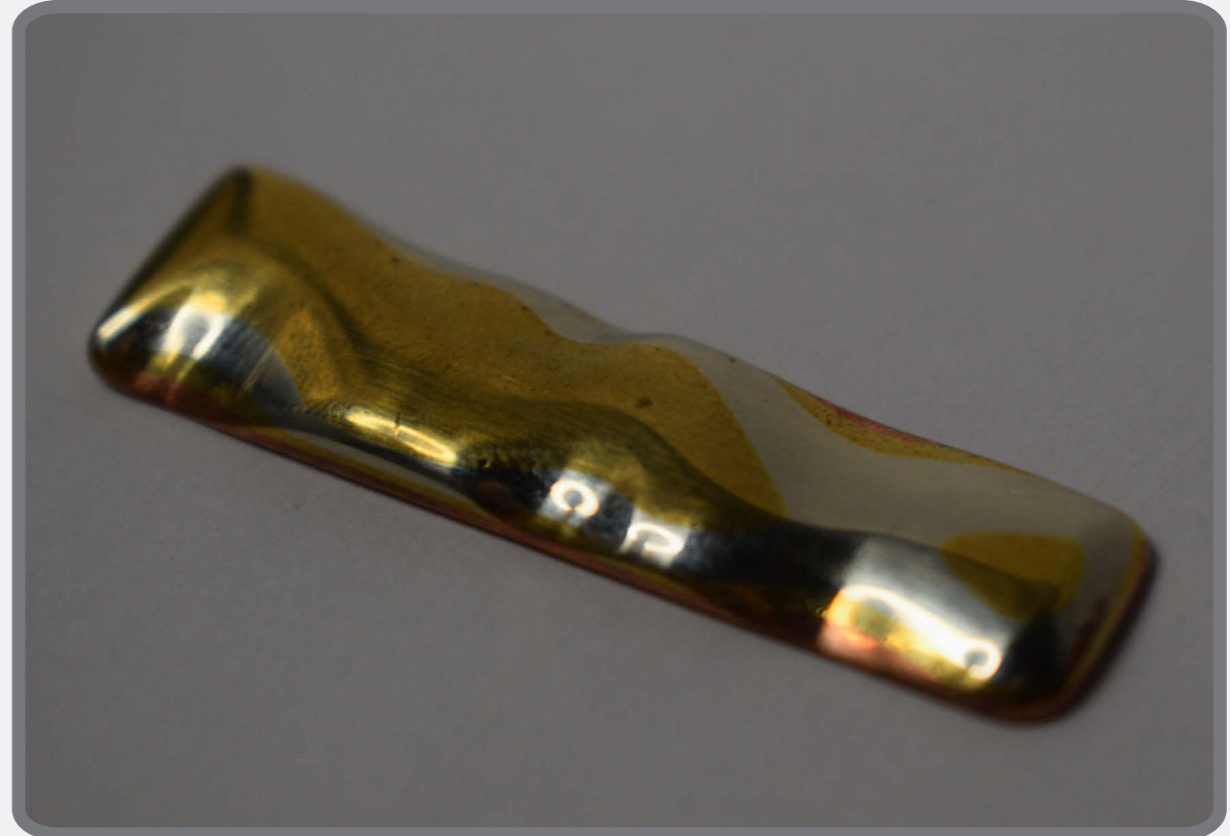






Making a second piece of mokume for a simple pendant.









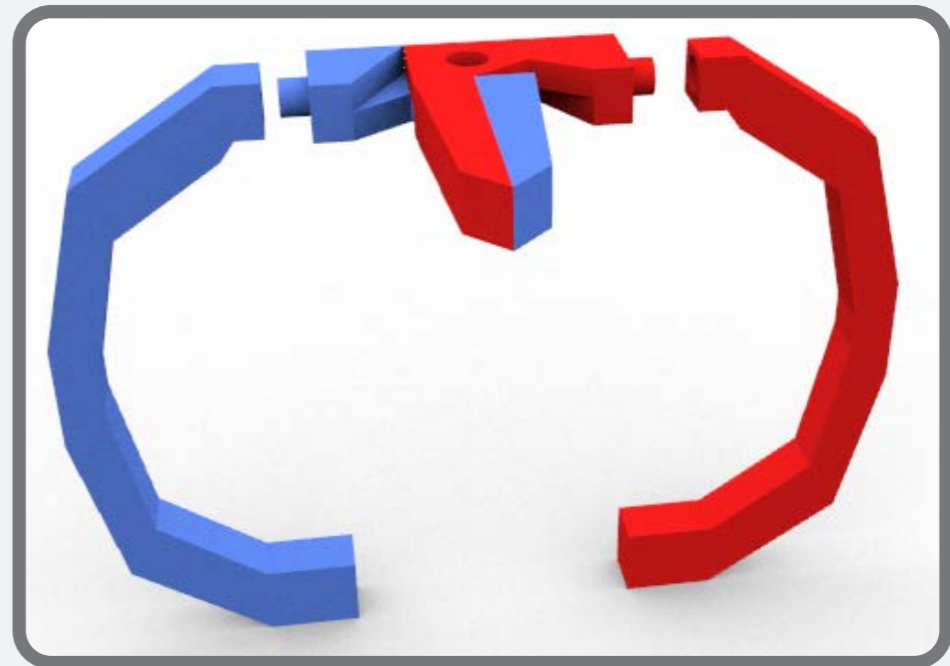
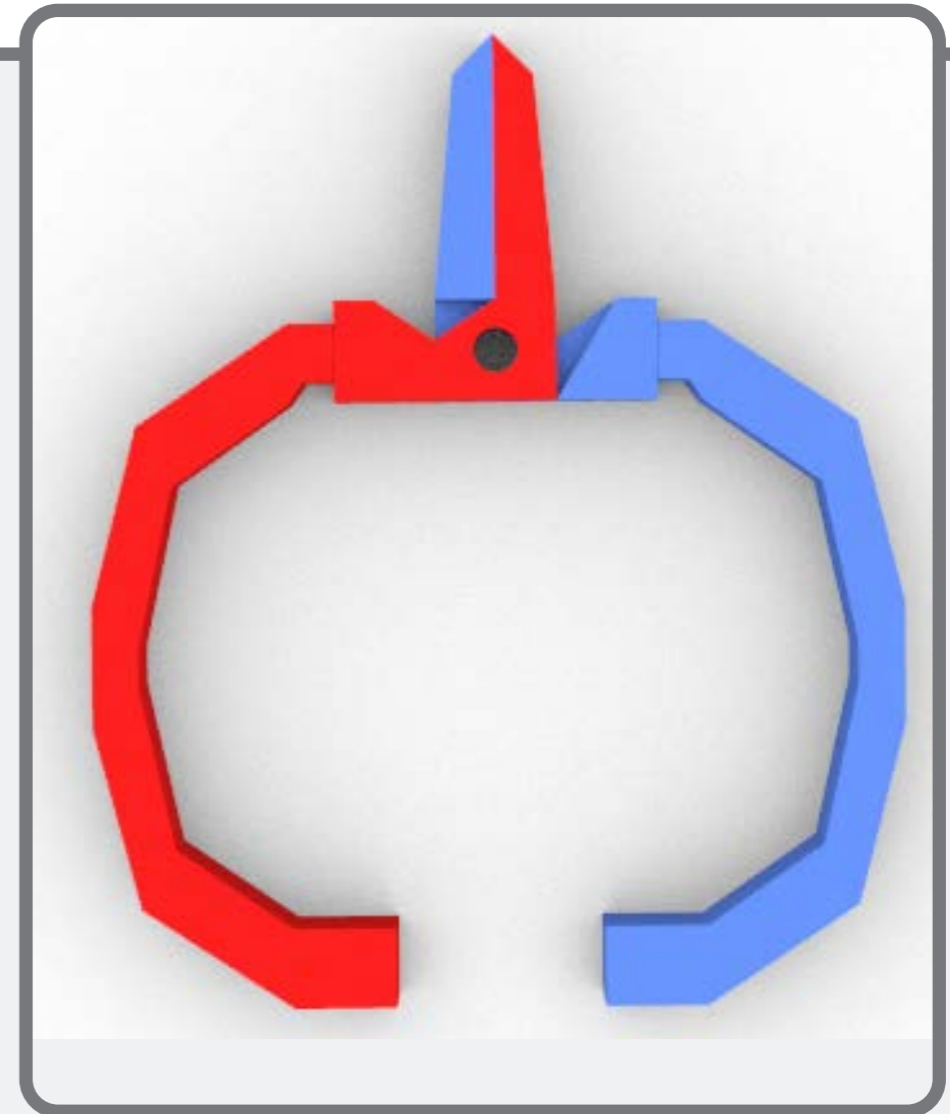


Plier
Bracelet



My first project, a bracelet that serves as pliers. Made from the words 'Bracelet' and 'Hold' from the randomiser.

First designed in Rhino, before transferred to copper.

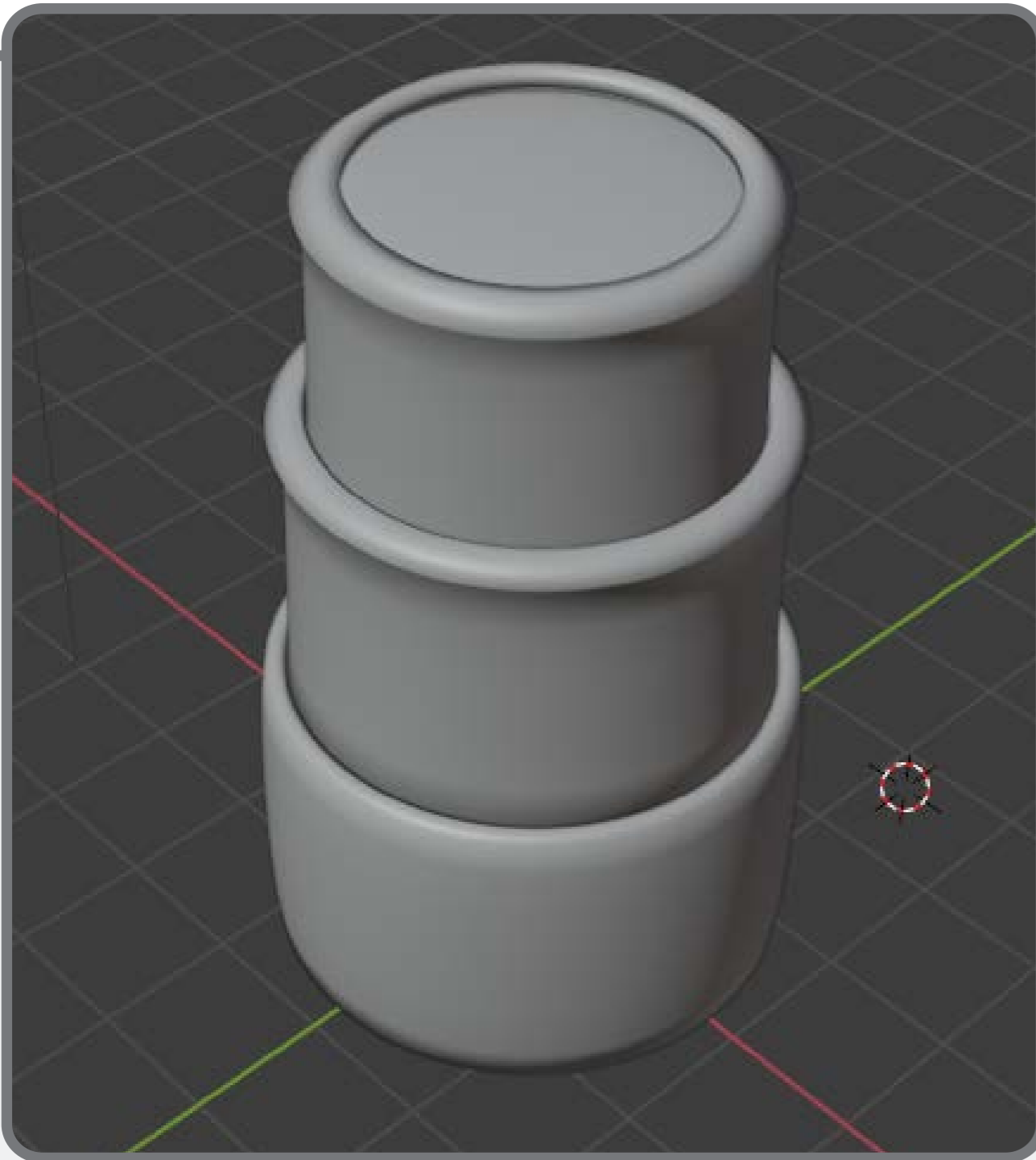




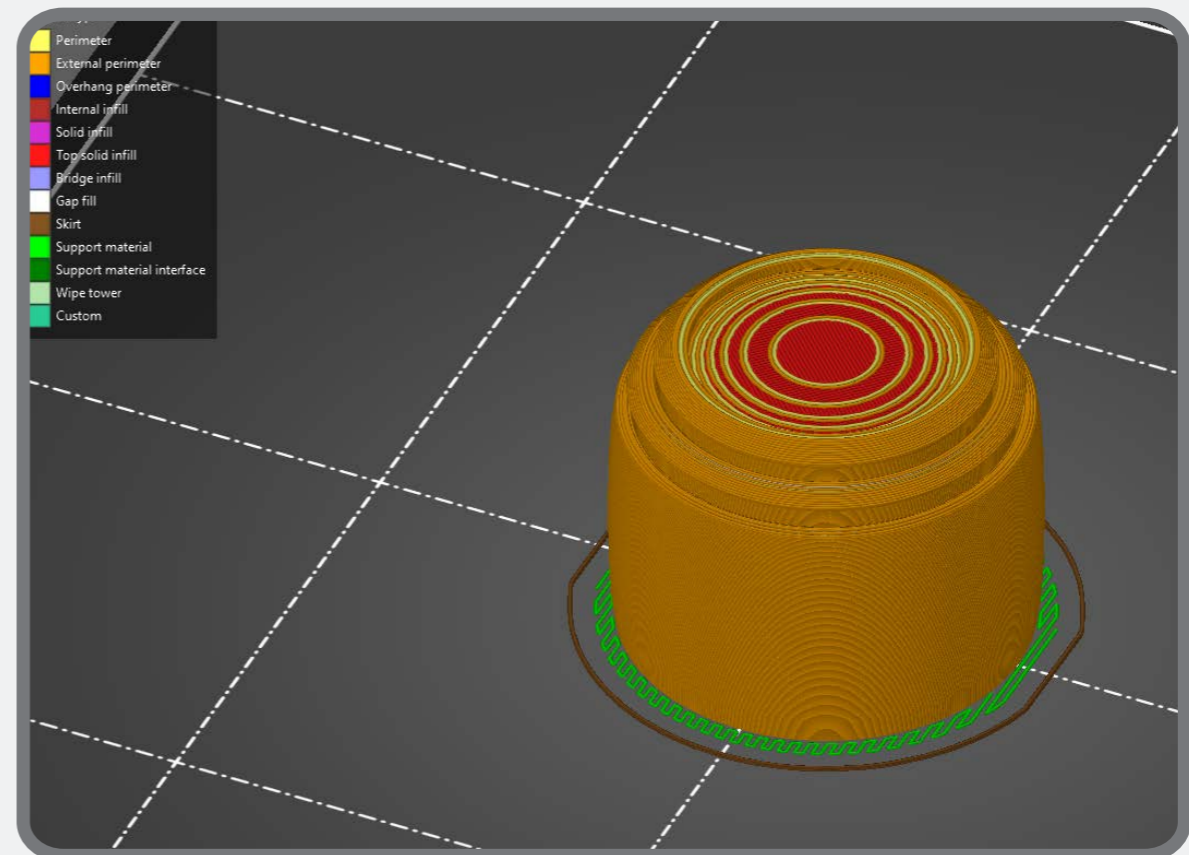
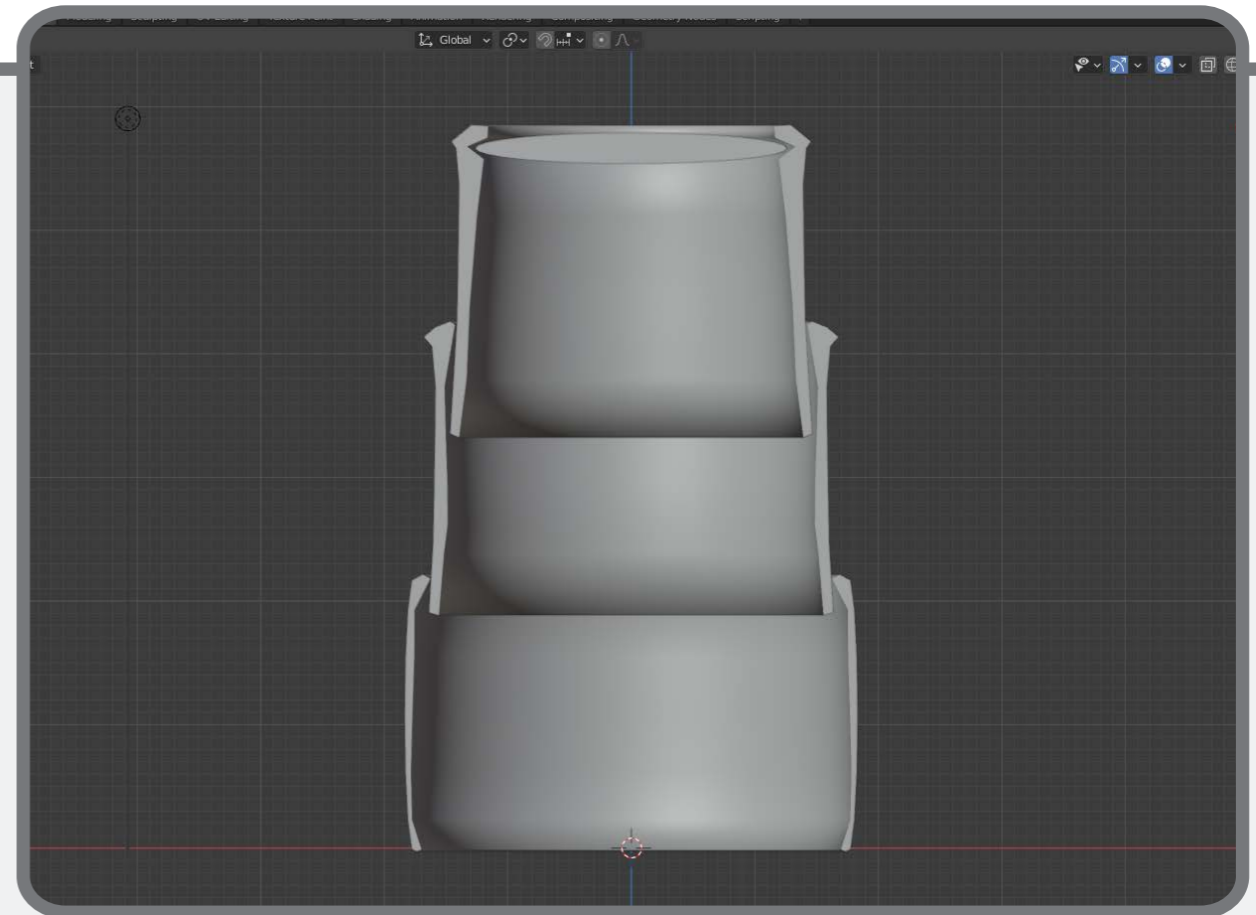


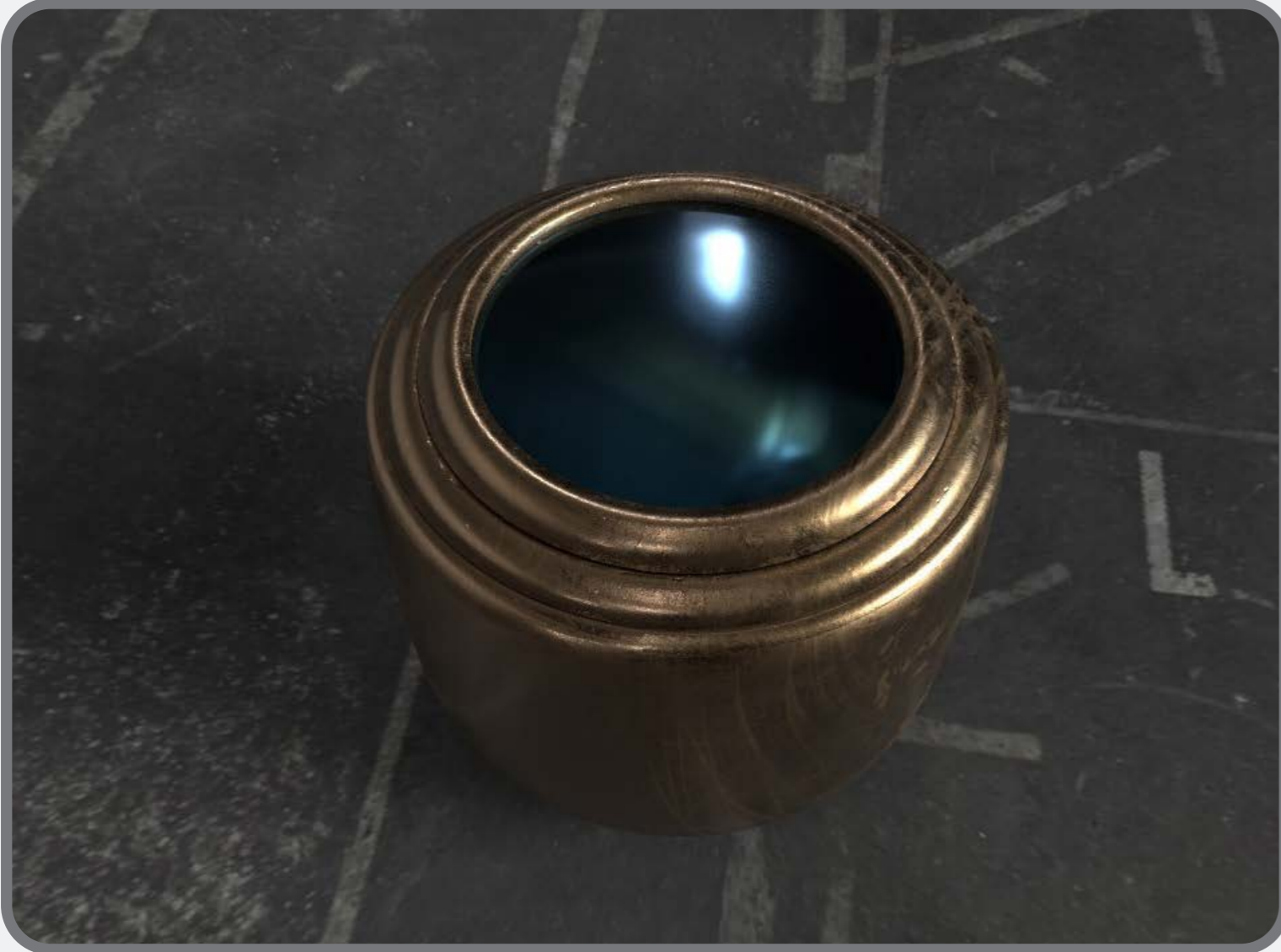
Telescopic Pendant





Some of my original 3d renders to design, using Blender.





For this piece, my randomiser gave me 'Pendant' and 'Enlarge'.

Digitally designed using Blender and Substance painter. 3D printing the piece in PLA for sizing.



The simplified final design for the telescopic pendant.



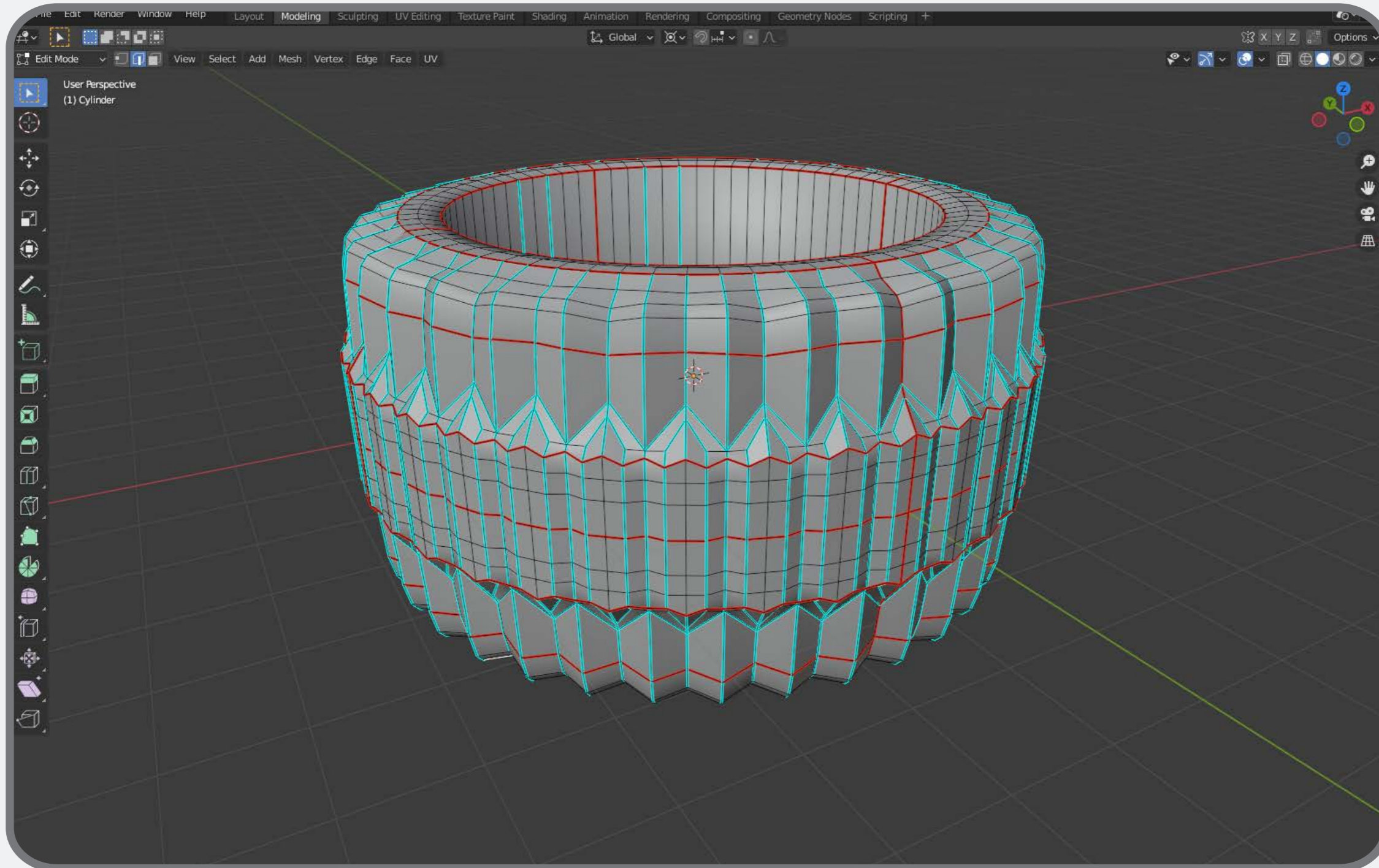


The telescopic pendant works for really zooming in on things.

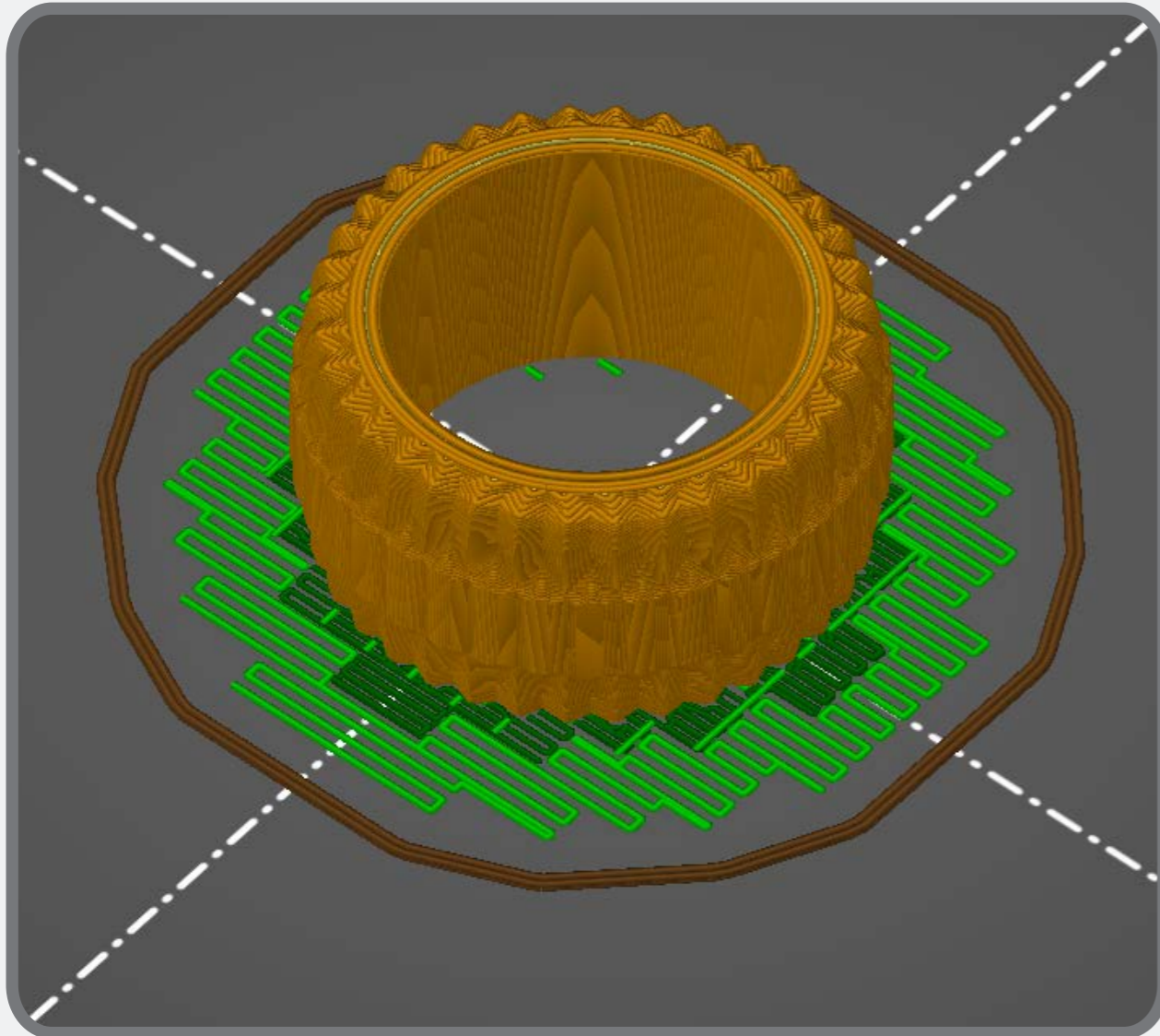


Degree Ring





Made from the words 'ring' and 'guide' from the randomiser. This ring can measure 360 degrees in tenths around its perimeter.



3d printed in PLA and worked for its purpose, being a guide to measure degrees.



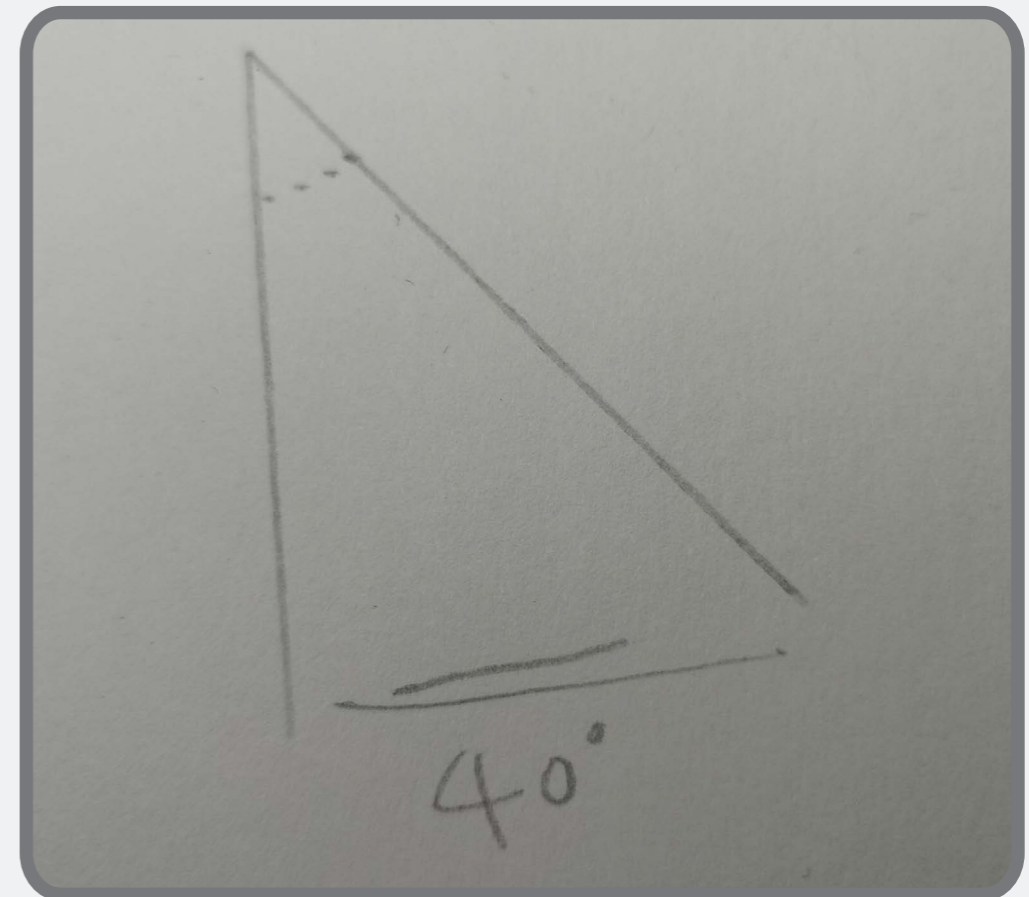


Measure 4 grooves.

Mark in the centre of the ring and join lines.

Voila, 40 degrees.

The ring is accurate, being about 2-3° degrees off.



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