

3D PRINTING AND DESIGN REFERENCE DOCUMENT

Document Title:	Designing Faceplates for 3D Printing
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REVISION HISTORY

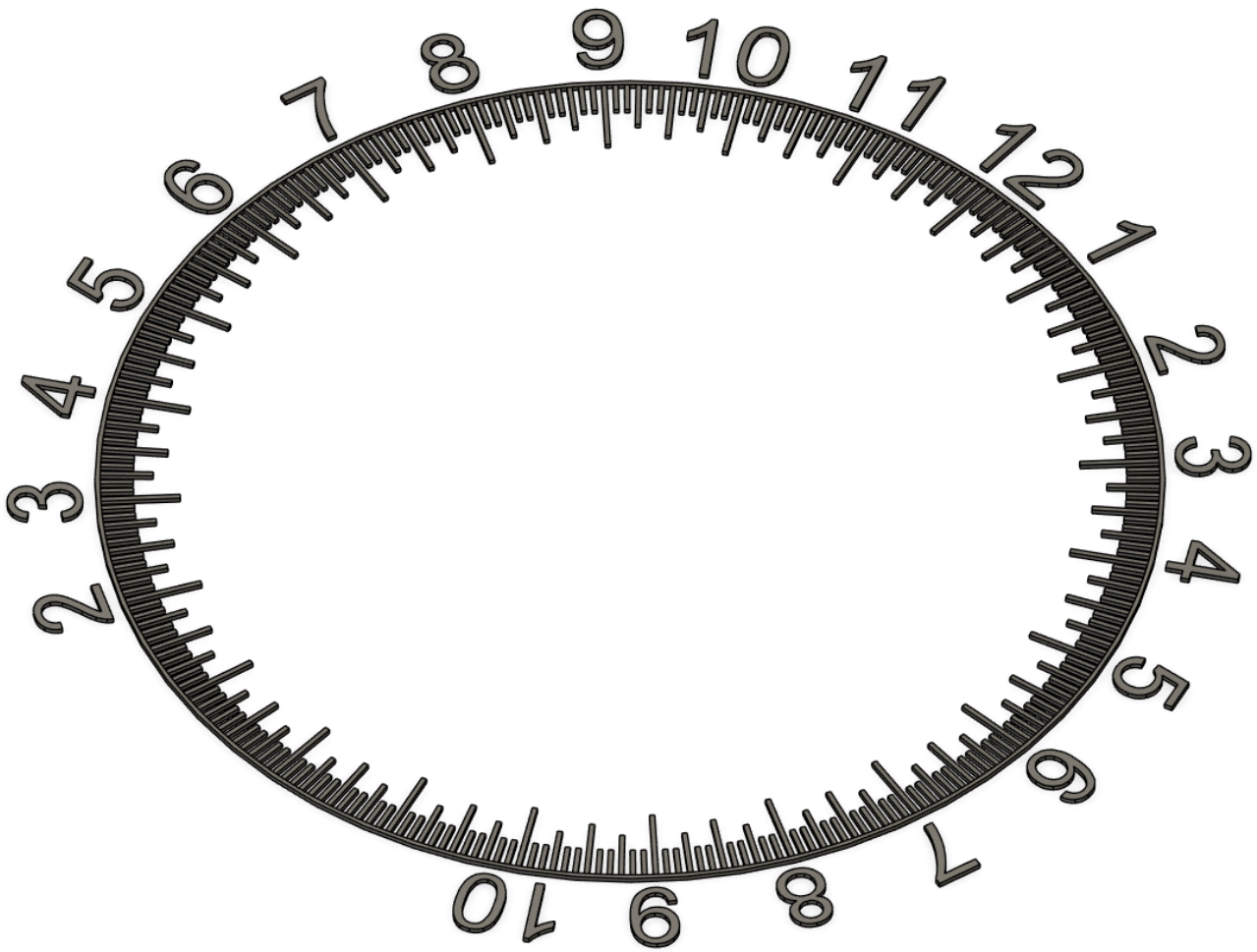
Revision	Details of Modification(s)	Reason for modification	Date	By
0	Draft release	Desingn for 3D printing	2024/10/15 12:19	jattie

Multi Colour Designs

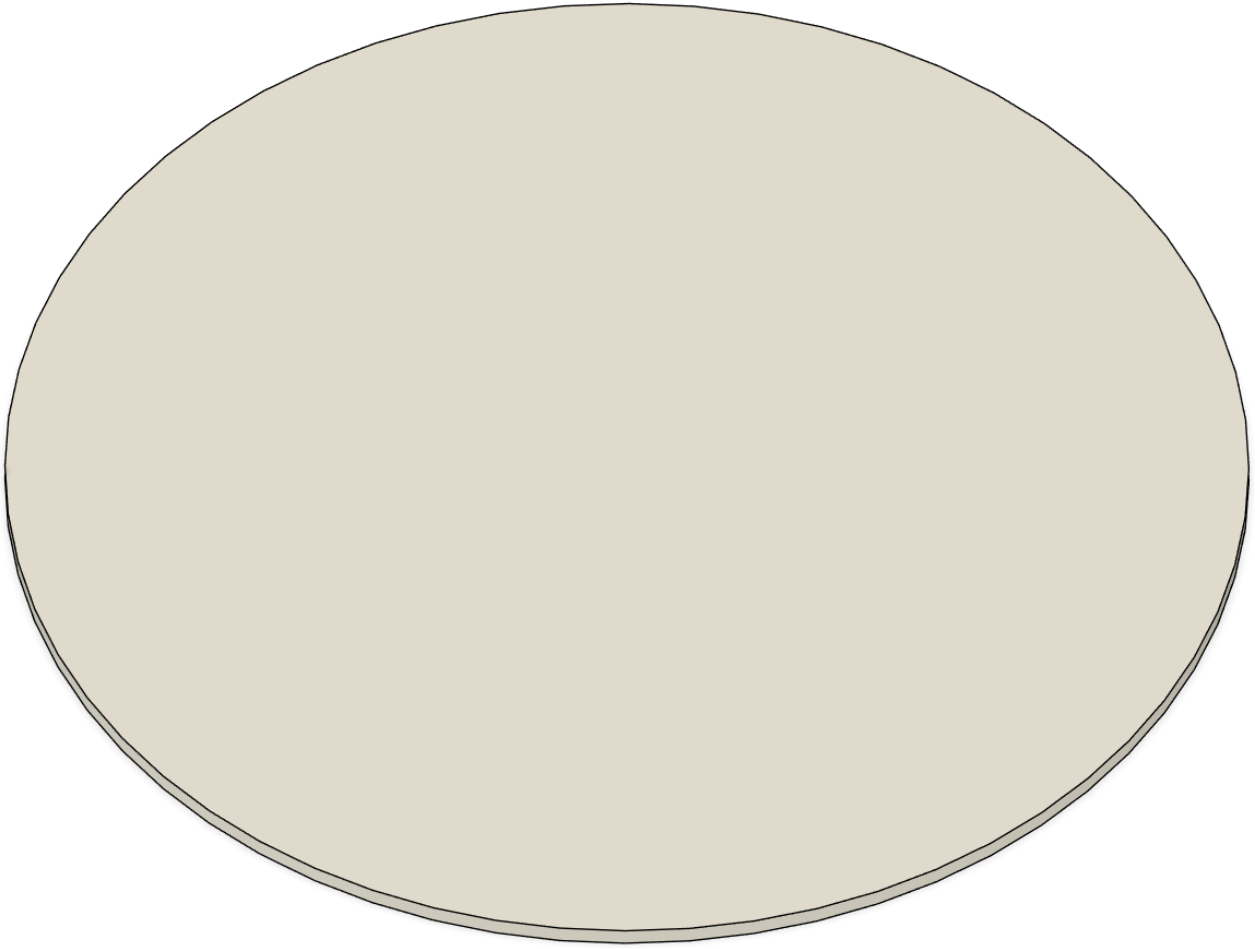
This topic came up working on a various projects that required a faceplate, like a clock face, a ruler or the faceplate for a sundial.

CAD Design Approach

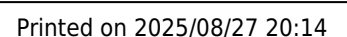
The obvious way is to emboss or slice a surface and paint the layers in using slicers. One very elegant solution is to create the parts you want to see as separate objects.



Then create the faceplate on the same layer, extruding downwards to create a thicker body that the parts in step one, for example, the numbers and lines in part one I created is 0.8mm deep, so will be four layers deep with a print height set at 0.2mm. The Faceplate body I extruded to 3mm.



The next step the using the numbers and dial indicators cut the faceplate and keep the parts you're cutting with.

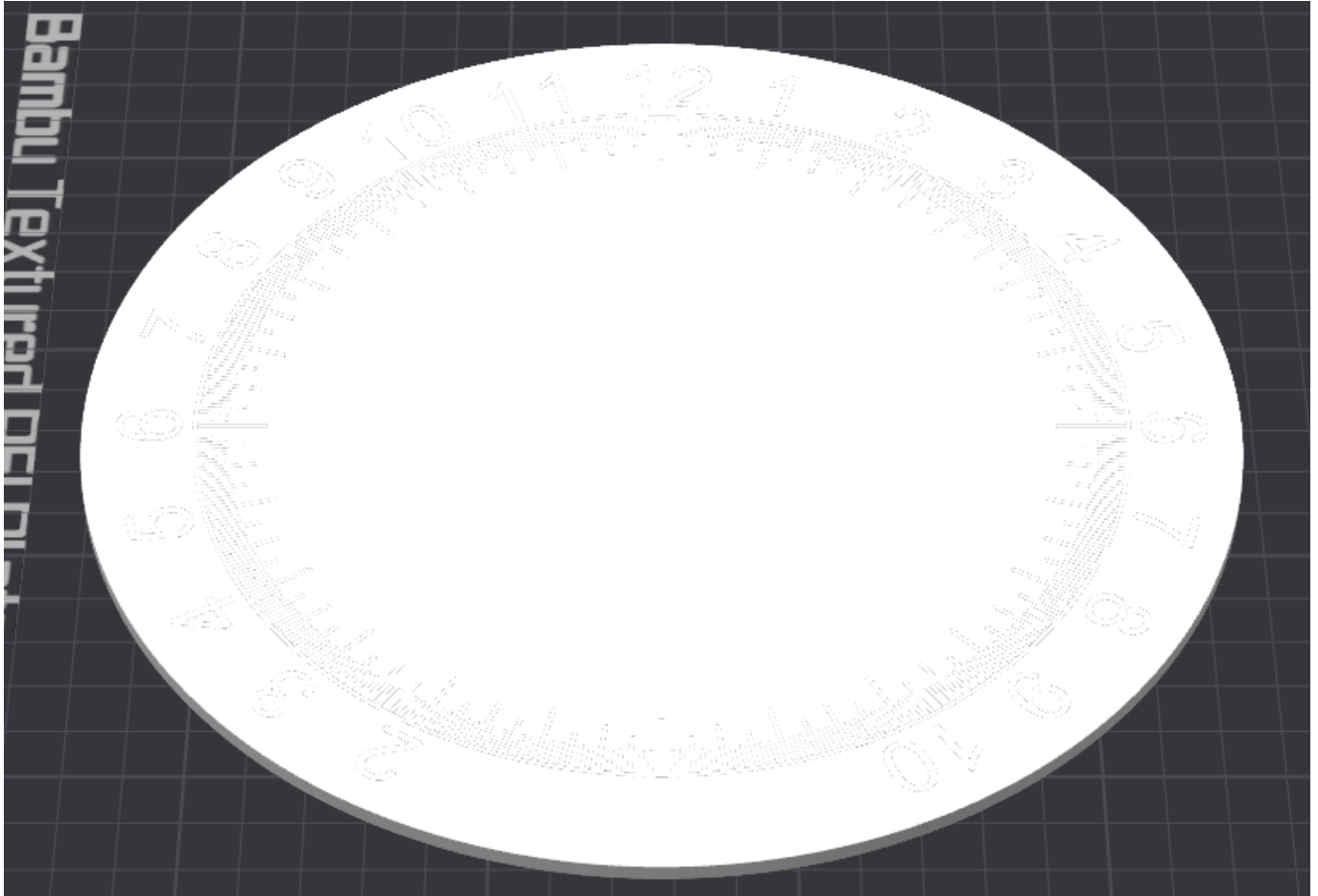




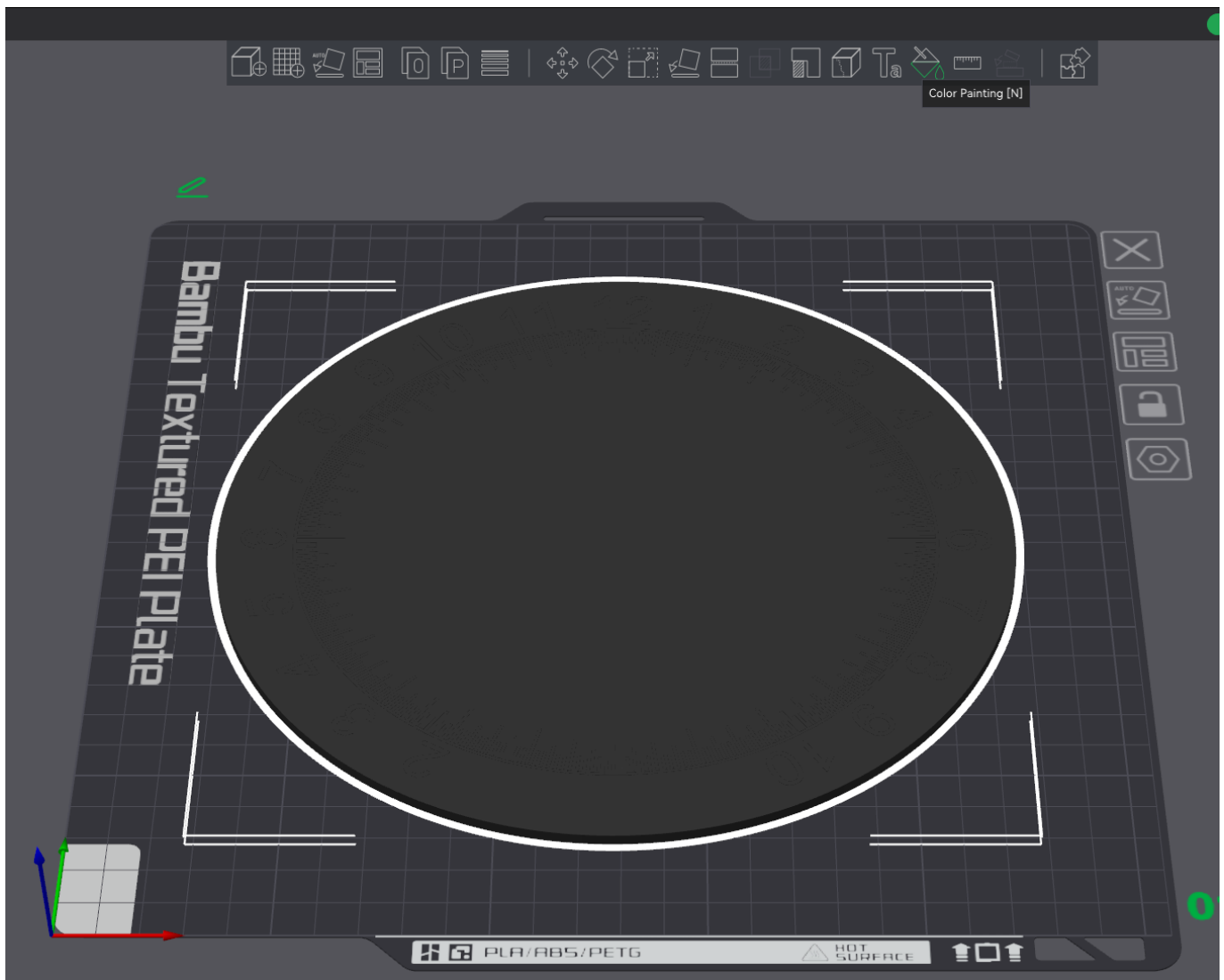
can be slices with all the parts in it's positions.

Slicer Treatment

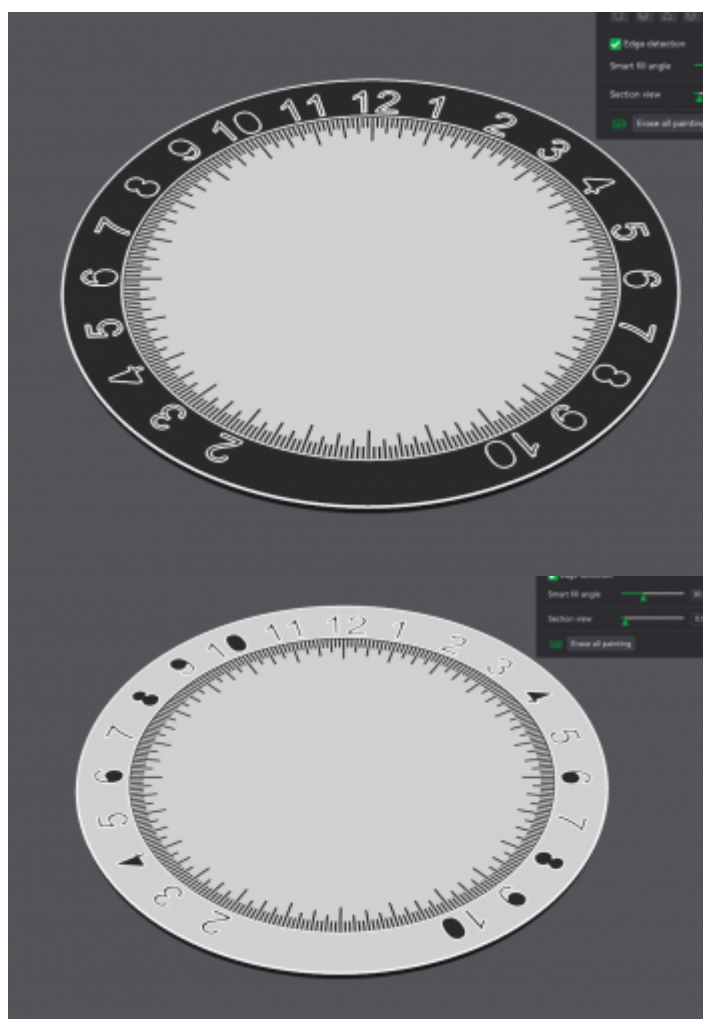
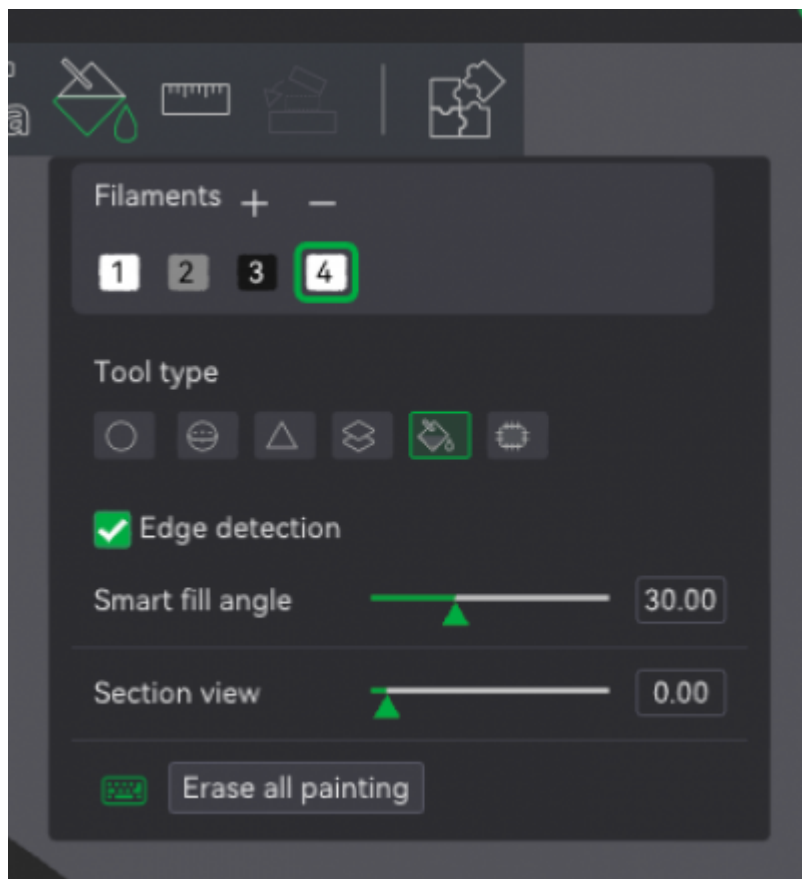
I am using Orca slicer and Bambu Studio. The first step importing it into a slicer it looks like this.

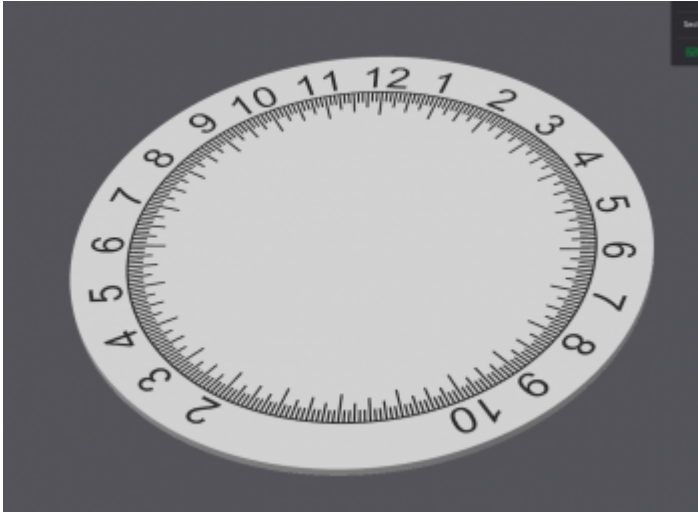


I then change the default filament to black and then proceed to paint in the faceplate white.



Select the fill paint style and paint colour.

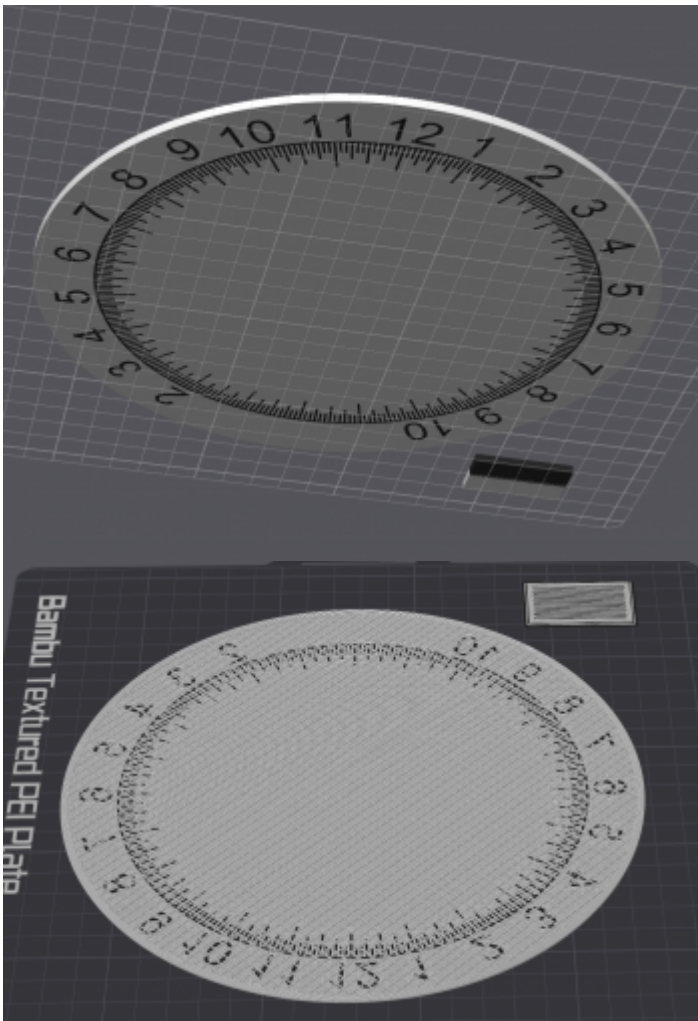




Paint all the white parts in including the sides and bottom until it looks like the third image.

Even Better Surface Print Quality

For even better print quality I flip the image upside down.



Printing like that leaves my texture build plate impressions on the top surface resulting in a really professional looking result.

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