Test 1: Combining Chainmill 3d print with fabric.
AIM
to determine if 2 different ways to create movement with a 3d printed material can work together. In this case the chainmail fabric and the 3d printing on top of fabric.

Variation
2 different fabrics:
- lace material TULE (synthetic)
- silk, organza

2 different chainmills, found on the internet

Chain mail 1:

Free STL file Chainmail - 3D Printable Fabric・Template to download and 3D print・Cults (cults3d.com)

Chainmill 2:

Free STL file Medieval Style Chainmail Fabric・3D printer design to download・Cults (cults3d.com)

Using the fabric will answer 3 questions: will the chainmill stick onto the fabric and will the fabric influence its flexibility. It is also important to see if the different fabrics have a different aesthetic look.

Using then the 2 different chainmills on both fabrics will determine which type of chainmill works best (which will influence the way I might design chainmill in the future).

Inspiration
- Free STL file Chainmail - 3D Printable Fabric・Template to download and 3D print・Cults (cults3d.com)
- Free STL file Chainmail・3D print design to download・Cults (cults3d.com)
- The smart chain mail fabric that can stiffen on demand - YouTube
- Experimenting with 3D Printed Fabric - YouTube
- 5 Ways to 3D Print Fabric | Experimenting with 3D Printed Textiles - YouTube

HYpothesis 1
The chainmail will easily stick to the tule, because it has many holes. It will not stick to the organza because although it is a thin fabric, it is a dense weave.

Hypothesis 2
The first chainmail will stick better to the fabric as it is thicker. The second chainmail might not because it is a very thin design.

BOM
fabrics:

- Tule (pvc)
- Organza Silk

3D filament:

- PLA, white

Printer:
3D printer Ultimaker 2 extended +

Skills:

- knowing how to operate a 3d printer
- knowing how to slice a 3d design