What is 3D Printing?

3D printing is a process of making three dimensional solid objects from a digital file.

How it Works

The Forge uses the Fused Deposition Modeling (FDM) method to build objects, building parts layer-by-layer from the bottom up by heating and extruding thermoplastic filament.

Process Steps

1. Capture by Design or Scan

2. Pre-Production: Build-preparation software slices and positions a 3D CAD file and calculates a path to extrude the thermoplastic and any necessary support material.

Use pencil and paper and then convert to a digital model using CAD software

Or Scan

Prepare for Print
**Production:** The 3D printer heats the thermoplastic to a semi-liquid state and deposits it in ultra-fine beads along the extrusion path. This continues layer by layer until the final model is revealed.

Where support is needed, the 3D printer deposits a removable material that acts as scaffolding.

4. **Post-Production:** The user breaks away support material away or dissolves it in detergent and water, and the part is ready to use.