

Guide To 3D Printing at Frisco Public Library

Get Started

Visit the 1st floor Ask Us desk to get started.

- Bring in your .STL or .OBJ file in on a flash drive.
- One object / component in each file.
- Recommended to design in millimeters.
- Staff will review the file with you, provide a total cost, and prepare your print job.
- Cost is 15¢ per gram of plastic with a \$1.50 minimum.
- Once your object is completed, we will contact you to pick it up.
- Objects will be held for 7 days for pick up.

Tech Notes

- Maximum size:
 - 12 in. (width)
 - 9 in. (depth)
 - 11 in. (height)
- Material:
 - PLA plastic
 - PVA (supports only)
- Printers:
 - Ultimaker 3
 - Ultimaker S5
- Colors:
 - Single or Two Color
- Accepted file formats:
 - .STL
 - .OBJ

3D Rules

- The printers may only be used for lawful purposes and be for objects appropriate for a public library environment.
- Objects must not infringe upon any third party's intellectual property rights.
- Object must not be illegal nor can they be construed as having the intent to harm.
- The library reserves the right to refuse any print request at the discretion of library staff.
- The library will not save or retain submitted files after printing objects.
- Staff will not modify or change models once submitted.

Common Questions

• What colors are available?

The selection of colors is subject to availability. The library frequently has the following colors on hand:

- white
- red
- blue
- black
- silver
- yellow

• How long does it take?

Normally the library will be able to complete print requests in 1 week. We will add your request to our print queue and contact you as soon as the item is ready for pick up.

• How large is 10 grams of plastic?

The weight of an object depends upon how hollow or solid an object is designed and printed. Feel free to stop by the library with your .stl or .obj file and we can give you an estimate of weight and cost. You can also [download Cura](#) that will give you weight estimates.

• Can I estimate the weight of my objects at home?

You can [download Cura](#), the same free software the library uses to estimate weight for pricing.

• Can the library re-size my object for me?

During the design process users should refine the exact dimensions before exporting as a .stl or .obj file. Resizing designs once you are at the library is not reliable as library staff's ability to edit is limited and can introduce complications. We recommend designing your object in millimeters for best results.

• My object has multiple parts. Should I submit them all together as a single file or each as separate file?

You should submit each part or component of your object as a separate file. This allows the library to optimize the print settings for each component. If this is file you have found/downloaded, use [MeshMixer](#) to separate objects into individual STL files ([instructions](#)).

• Can my object be printed in multiple colors?

Each .STL file can be printed in one color. For a single object to be printed in two colors, you will need to group the elements of the object into two groups in your design software. Export each of the two groupings as a separate .STL files. At the library, staff will assist with assigning each of the two files a color and merging them back together into a single object.

3D Design Online Tools and Help

There are a lot of freely available lessons and software online. Here are a few we recommend:

[Thingiverse](#) - Find and download models other users have created and shared.

[Tinkercad](#) - The interactive lessons are perfect for the first time user! This free cloud based 3D modeling software will have you creating your own designs in just a few lessons.

[OnShape](#) - Use either the cloud based software or as an app for iOS or Android devices. More sophisticated design tools than Tinkercad.

[FreeCAD](#) - Advanced users will appreciate the power and depth of this software that can you download for free to your computer. [Video tutorials](#)

[MeshMixer](#) - Clean up, modify, and sculpt 3D models. Perfect for [separating objects](#) into individual STL files. [Video tutorials](#)

[NetFabb](#) - Fix models that have mesh errors and other flaws that prevent them from printing.