



## Guide to 3D Printing

### General Info:

- 3D printing enables designers to build custom objects out of plastic in the library makerspace.
- In the past, patrons have printed toys, key fobs, cookie cutters and more.
- Our printers are Flashforge Inventor 2s, and have a print volume of 5.9” x 5.5” x 5.5.”
- Our printers are not designed for large jobs, and we may not be able to print items that take up the entire bed.
- We print using 1.75 mm PLA filament, which is biodegradable, making it safe to use indoors.
- Use of ZBPL’s 3D printers is open to the public by appointment, pending the availability of Sandbox Staff. Any patron wishing to print should send their file to [mdaab@zlibrary.org](mailto:mdaab@zlibrary.org) to make an appointment.

### Cost:

- Cost is determined by the time it takes for the print to be completed. Our rate is \$0.25 per 15 minute increment.

### Rules:

- Prior to making an appointment, you must have your file prepared in a .STL or .OBJ format.
  - We recommend that you send your file via email prior to coming in to confirm that we are able to print it.
  - If you are unable to send your file digitally, please bring it with you on a USB flash drive.
- The Sandbox staff reserves the right to deny any print requests if the print job...
  - ...Requires too much time to print. This is left up to the makerspace staff’s discretion.
  - ...Contains a file size too large for the printers to upload. Large files have crashed our machines in the past, as they are intended for educational rather than industrial use.
  - ...Is obscene or otherwise inappropriate content. This includes 3D printed weapons or weapon replicas.

- ...Is in clear violation of copyright or intellectual property laws. If a patron obtains their design from an online source, they are responsible for determining whether the file has a creative commons license and is available for free distribution.

#### Tips For Choosing Your File:

- Any 3D design software can be used by the patron to design files as long as the file is saved in a .STL or .OBJ format.
- If you have never designed before, Tinkercad.com is a great place to start!
- Digital designs are also available from various file-sharing databases such as Thingiverse.com