

# 3D Printing at The Wayland Free Public Library

## What is 3D Printing

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- 3D printing is the process of creating physical objects from a three dimensional digital model. This technology has been around for a while, but has typically been used by engineers and industry designers.
- 3D printing technology is quickly evolving and therefore public printing is becoming more common. **Note that our current printer is the Makerbot Replicator 2.**

## Preparing Your 3D File for Printing

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- You can use a 3D modeling program to create your own file. [Tinkercad.com](http://Tinkercad.com) is free and browser based, and programs like [Blender](http://Blender) and [Sculptris](http://Sculptris) are entirely free to use.
- Make sure to save or export your file in '.STL' format.
- If you are not familiar with 3D modeling software, you can browse and download 3D files from a few different websites. [Thingiverse.com](http://Thingiverse.com), [yeggi.com](http://yeggi.com), [myminifactory.com](http://myminifactory.com), and [youmagine.com](http://youmagine.com) are your best options. **Maximum allowed print time is 5 hours per job.**
- Your end product cannot exceed the maximum build plate size of the **Replicator 2**. If it does, we will let you know. Be aware that it is very easy to scale models down in size. The library reserves the right to refuse any 3D print request.

## Printing Your 3D File

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Please email all '.STL' files, or any additional questions to: [tkenney@minlib.net](mailto:tkenney@minlib.net)

## A Few Things to Keep in Mind

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- 3D printing works from the bottom up. If there are overhangs or arms etc, they will not print very well. We may have to include supports so the printer can print the object correctly. This can occasionally leave a burr-like feel where the supports were removed.

- You may have to play with your file if the print does not print properly. Was it too complex? Was it too thin or have too much overhang? We are more than willing to assist and advise should this be the case, but please be aware that in some instances a model may just not be printable on our current printer as you envisioned it.
- Printing time will depend on how complex the file is for the printer, as well as print settings. *Our default print settings that effect time are:* .2mm layer height, 10% infill, 1mm shell thickness or 1 perimeter, Rafts ON. If you need these changed just let us know.

## Instructions

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1. Download or export your file as '.STL'
  2. Attach the '.STL' to an email, and send to: [tkenney@minlib.net](mailto:tkenney@minlib.net)
  3. We will then let you know when/how you can pick up your object, or if any changes need to be made to make it printable.
  4. Staff will remove the print when it is finished printing. We will not assemble multi part prints that need to be glued or jointed together.
  5. Pick up the completed print at the Reference Desk. 3D printing at the Wayland Library is free.
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