

## A Recipe for 3D Printing 101 (outside your building)

This program is for people who have heard of 3D printing but don't know much about it. Attendees may not ever do any 3D printing themselves, but they're curious!

### To Bring:

- 3D printer
- Extension cord
- Wi Fi hotspot
- Laptop
- Cord to connect laptop to screen at location
- 3D printed giveaways

1. Go over vocabulary (eg: additive manufacturing, fused deposition modeling, nozzle, gantry, build plate, build volume, filament, infill etc.)
2. Go over the process of file - printer - object.
  - a. I used ten minutes of a YouTube video for sections 1 & 2 (How does a 3D Printer Work by Jared Owen) but if you're comfortable, you could just talk.
  - b. The 3D printer was printing a benchmarking boat while the video was playing so that I could point out the things discussed in the video that were also happening on the actual machine.
3. Show design software briefly – the goal is just to show people that CAD software exists, not how to use it.
  - a. I showed TinkerCAD, but you could show something else.
4. Show a model library – the goal is to give people an idea of the breadth of designs that already exist.
  - a. Try asking an attendee about their hobbies and search on that topic.
5. Show the slicer software – the goal is to reinforce what you explained previously about the printing process.
  - a. Send something to print (or print something from on board storage.)
6. Pass around some of the things you pre-printed. Invite people to take something home!
  - a. Ask attendees to look for the layers, the top vs. bottom, or to guess in what direction/orientation something was printed.
  - b. I pre-printed assistive devices, since my audience was seniors. If demonstrating for a different audience, you could print something else to appeal to the demographic you're presenting for!

Answer questions at the end or throughout!



**Clinton-Macomb Public Library**  
*Inspire. Create. Dream. Learn.*