

LEARNING LAB: 3D PRINTING

- 3D printing basics
- FDM vs SLA
- CFI equipment
- Materials
- Costs
- User responsibly
- Resources





But first...

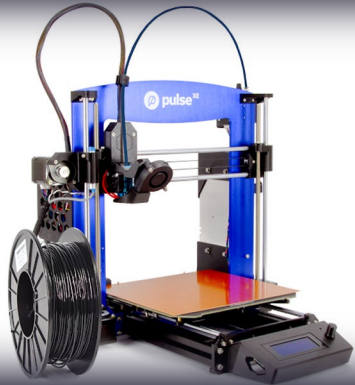
How do these Learning Labs work?

We give you the basics and resources, you do the deep dives.

More information on the [Fabrication and Robotics Lab page](#)

What do we have here?

FDM



Filament

- \$.07/g or \$.10/g
- PLA
- HOT PARTS
- No post-processing

SLA



Filament

- \$.07/ gram OR MORE!!
- Photopolymer Resins
- Toxic
- Use PPE
- Must process/cure print



Always clean up after yourself: clean print bed, put away materials, process print and clean up workspaces.

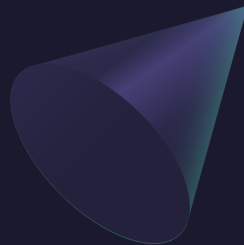
Getting started with FDM Printing

Resources are your friend!!

- Fayetteville Public Library on YouTube > [Center for Innovation playlist](#)



1. Prep file
2. Adjust settings and supports
3. Load filament
4. Prep bed
5. Send to printer
6. Watch first few layers
7. Note time to complete



Getting started with SLA Printing

Don't forget the [website](#).

Prep the printer

Step 1: wear gloves/glasses

Step 2: run a vat cleaning/clear bed

Step 3: check resin level

Prep your file

Step 1: upload your model

Step 2: add rafts/supports

Step 3: edit resin details

Step 4: send to printer and write down print weight



- Do not touch with bare hands
- Avoid inhaling
- SLA prints are done overnight
- Use silicon mats to process
- Wipe down surfaces with IPA



These things will help, please use them

- [Pulse Printer instructions](#)
- [Fusion 3 F410 Printer instructions](#)

- Begin at step 4

- Begin on page 39

[Phrozen Help Center Mega 8K](#)

[Phrozen Mini 4K](#)

[FormLabs 3L](#)

Don't forget the FPL/CFI website!!!

