We have a [Bambu Lab X1 Carbon](https://bambulab.com/en/x1%22%20%5Ct%20%22_blank%22%20%5Co%20%22https%3A//bambulab.com/en/x1) 3D printer with the AMS add-on, which allows us to print 4 different colors in one project.  I believe it was somewhere in the neighborhood of $1500, and it is by far our most popular piece of equipment. I cannot speak highly enough of this printer - it levels itself, which makes it much less frustrating than other 3D printers we've had, and has a built-in enclosure which makes it ideal for taking on outreach visits.  We have a [60-watt CO2 laser by Omtech](https://omtechlaser.com/products/af2028-60-60w-co2-laser-engraver-cutting-machine-with-20-x-28-working-area) that is a close second; it's very big, though, fairly expensive, and you will need to be able to vent it. (We bought ours 4-ish years ago, and I think it was about $5000.)  Our sewing machines are [all Brother brand](https://www.amazon.com/Brother-Project-CS5055PRW-Electric-Machine/dp/B005GXPOCK), and are a pretty good basic machine for beginners and pros. I will say, they are a little difficult to thread, but other than that, very easy to use.

Our library has a Glowforge engraver. We have a lot of programming surrounding it. It is heavily used. You will need special ventilation for it, but it is so well worth it in our community. :)

Also, don't skimp out and go cheap for 3D printers. Ours break a lot, and I think ends up costing more money to fix and replace. We need to get commercial printers. We have resin and filament 3D printers. The resin printers seem to hold up better for us

I can strongly recommend the Prusa 3D printers. We have 4 of them here at Northvile and they are extremely reliable, even if they are a little but on the expensive side.

You might also want to reach out to the Guild of Library Makers (https://www.guildoflibrarymakers.com/) for tons of info. We are also holding a free convention day at Rochester Hills Library in September with lots of Makerspace discussion, equipment and demonstrations :)

We have a BOss Laserr LS-1420 at Northville for a laser engraver. It is exceptional, but definitely high end. I'm not sure we'd make the same decision on that simply because of cost.

We have a Sawgrass Sublimation printer, and it works great. The downside is the ink is extremely expensive \*IF YOU BUY IT FROM SAWGRASS\*. You can buy oiffbranded ink for it that work just as well, but using the off brand ink invalidates any warranty. We have a standard basic heatpress purchased from Amazon. It works just great.

Also, give a lot of through to the space, and making sure it has ventilation and safety in place in addition to the equipment.

Finally, make sure you have staff who are fully engaged, great teachers, and willing to go the extra mile. It makes a huge difference for a Makerspace!

We got our laser cutter in 2019 and it is by far the most popular piece of equipment.  We have a glowforge, which was really the only home laser cutter at the time.  I'm generally satisfied with it, however there are some other competitors out there now.  I've heard good things about the Xtool, which also has a rotary attachment so you can engrave round objects like glasses and tumblers.

We also just got a new 3d printer

<https://us.store.bambulab.com/products/p1s?gad_source=1&gad_campaignid=20326984537&gbraid=0AAAAAo9so7MzRs3Bb-oBfBnIWr9xDemhe&gclid=Cj0KCQjwndHEBhDVARIsAGh0g3Dfwp9-ZP7qsOlTOdaZPYf8izIvLAlLEYmMMqJXx6UHiksgAyOdGYEaAvROEALw_wcB>

It is less expensive than our old one, prints 3x as fast, and can do multicolor prints.  I am shocked at the high quality of this specific printer (it's our 3rd in 6 years).

Look at the Makerspace at Sterling Heights and Birmingham's Makerspace websites to see what might work for Roseville. I know Royal Oak offered two types of laminate: a basic one and an large one for posters. They also offered an embroidery sewing machine. Royal Oak also has a Memory Lab (to convert videos, photos, tapes and more). Troy has this too.

Here is an overview of our current equipment and some personal recommendations based on experience.

**Current Equipment Inventory**

**3D Printers:**

2x Prusa MK4s

    1x Prusa MK4S

    1x Prusa MK4 MMU3

**3D Scanner:**

1x Revopoint Miraco Structured Light Scanner

**Printers & Cutters:**

1x Sawgrass SG500 Sublimation Printer

1x Cricut Maker 3

1x Cricut Maker

1x Cricut Explore Air 2

1x Silhouette Cameo

**Heat Press Equipment:**

1x 15" Clamshell Heat Press

1x Cricut Mug Press

**Other Tools:**

2x Button Makers

1x Glowforge Laser Cutter

5x Rug Tufting Machines

1x Brother PE900 Embroidery Machine

Multiple Sewing Machines

1x Brother 1034D Serger

1x Scotch Portable Laminator

**My Recommendations**

**3D Printers:**

I highly recommend Prusa printers. Their customer support is top-tier. They’ll walk you through most issues step-by-step. While Bambu Labs is popular for its sleek, user-friendly machines, their upgrade model requires purchasing entirely new hardware. Prusa, on the other hand, offers upgrade kits, making it easy and cost-effective to keep your machines current. Every part is replaceable via their store, and if I have parts on hand, I can usually repair a down machine the same day. It’s a more hands-on experience, but I appreciate knowing the machines inside and out.

**Laser Cutter & Engraver:**

The Glowforge Pro or Plus is an excellent choice. It’s incredibly user-friendly and intuitive. Perfect for patrons learning to use laser cutters for the first time. The initial cost ($6k) can be intimidating, but if your budget allows, it’s well worth the investment.

**Embroidery Machine:**

The Brother PE900 is fast, reliable, and beginner-friendly. My only critique is that its design software, Artspira, is only available on mobile. If you're planning to do custom designs, make sure you have a dedicated mobile device for that purpose.

**Rug Tufting Machines:**

These were funded by our Friends of the Library, and we’ve hosted year-round programming with them for kids, teens, and adults. Despite looking complex, the tufting process is surprisingly accessible. The most challenging part was designing frames that are both large enough for medium projects and easy to store. My advice: only invest in tufting machines if there's genuine passion behind it. They shine best during community events and hands-on programs.

Sublimation printer! If you already have a heat press, I would highly recommend it. It is my FAVORITE item in our makerspace, since it can truly personalize so much. We do monthly programs with sublimation blanks.

Suggestion: We have two 3-D printers here at the library and while their use is requested, they can be a pain. If you are planning on having a 3-D printer I would recommend having someone who is fully dedicated to the upkeep, and maintenance of the machine. They can be finicky machines, and sometimes you can do everything right and it still won't print well.