

3D PRINTER 1 (UNICORN) - DETAILED PRINTS

3D Printing with the Lulzbot Taz Workhorse

WARNING

THE 3D PRINTER IS EXTREMELY HOT. DO NOT TOUCH ANY PART OF THE PRINTER ONCE HEATING HAS STARTED OR WHILE THE PRINTER IS IN MOTION.

BY USING THE EQUIPMENT YOU ARE CONFIRMING THAT:

- YOU HAVE PERMISSION TO REPRODUCE THE MODEL YOU ARE PRINTING.
- THE LIBRARY WILL TAKE NO RESPONSIBILITY FOR ANY COPYRIGHT VIOLATIONS YOU MAY INCUR AS A RESULT OF USING THE ROOM, ITS EQUIPMENT AND/OR SOFTWARE.

IMPORTANT TERMS:

PLA Filament: The printer's 'ink'.

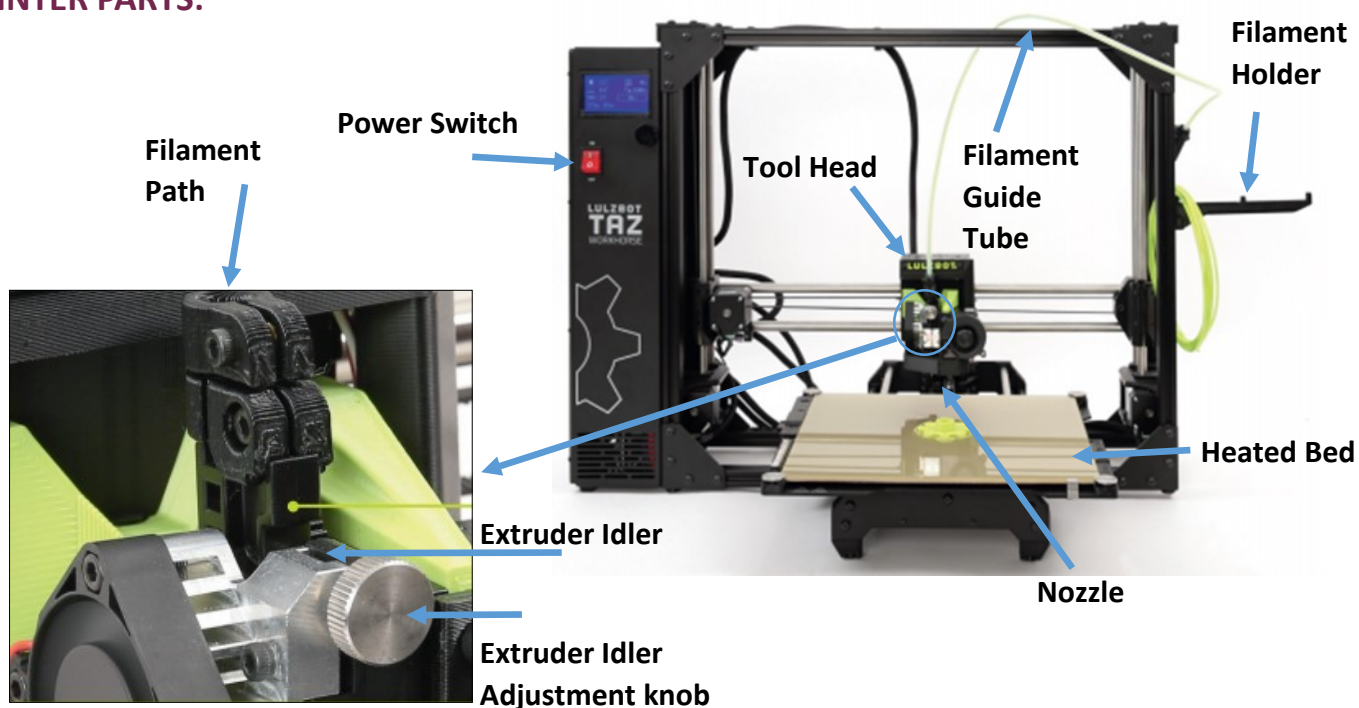
Slicing: The process of preparing your 3D model to print.

Filament Support: Extra filament to hold up or support parts of the print, especially overhanging parts.

Raft: A layer of filament at the base of your print that helps with stabilization and bed adhesion.

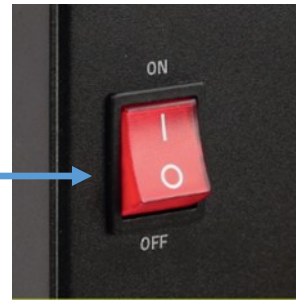
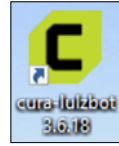
Brim: Holds down the edges of your print to prevent warping. Brim uses less filament than raft.

PRINTER PARTS:



PREPARING TO PRINT

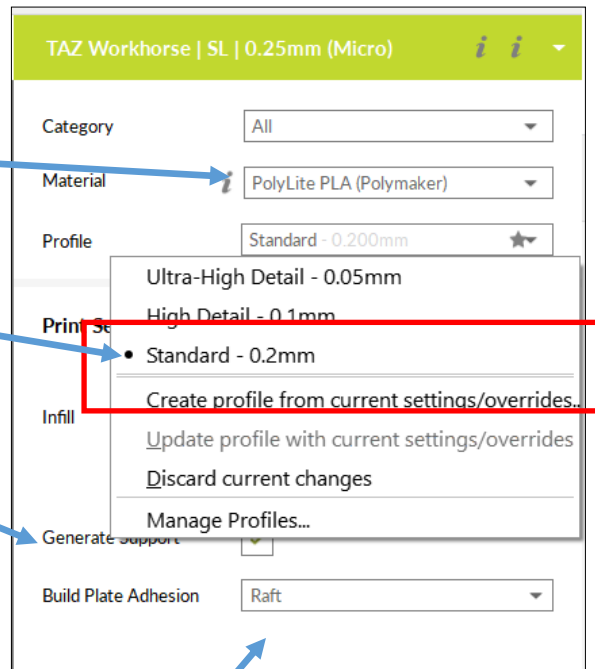
1. **Log in** to your booked computer using your library card and PIN.
2. **Turn on** the 3D printer.
3. Launch **Cura Lulzbot Edition**.



Tip: If you have not selected a 3D print model yet:

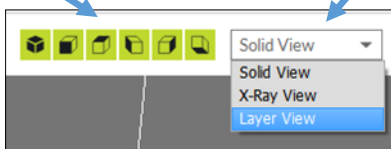
- Visit www.thingiverse.com to download a model.
- Design a model using 3D modeling software such SketchUp, Tinkercad or Rhinoceros.

4. **Open your model** in Cura. Multiple models can be opened and printed at the same time.
5. **Choose PolyLite PLA (Polymaker)** as the Material.
6. **Choose Standard** as the Print Profile. High detail takes longer to print.

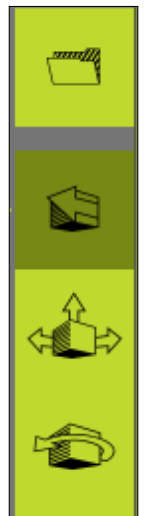


7. If your model has overhanging parts, check **Generate Supports** (supports increase print time).

- *Change to **Layer View** to see supports
- *View your model from different angles



8. If your model is small or makes very little contact with the print bed, add a **raft** or **brim**.



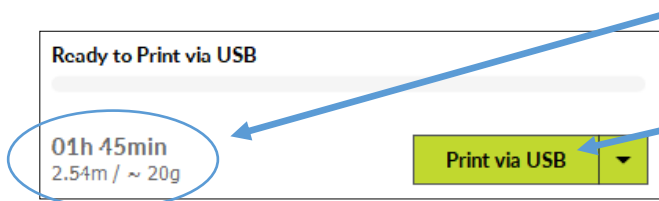
Tip: We advise using the **Recommended Settings** unless you are very familiar with Cura.



Tip: Use quick tools on Cura to :

- **Open** a file
- **Move** model
- **Increase or decrease** model size
- **Rotate** model

- After each adjustment made to your 3D model, Cura automatically performs **slicing**. Check the bottom right corner of Cura for print time and filament usage estimates.



- When you are ready to print, click on **Print via USB** and then **Start Print**.

Please note: printing via SD card is unavailable at this time



Tip: If you notice that the print job is clumping, lifting or printing incorrectly in any way, click on **Abort Print**.

You may need to add supports or a raft, and restart your job.

LIBRARY COMPUTERS AUTOMATICALLY LOG OUT AFTER 15 MINUTES OF INACTIVITY. IF THE COMPUTER LOGS OUT DURING AN ACTIVE PRINT, THE PRINT JOB WILL STOP.

When waiting for your print job, please ensure that the attached computer is active and in use at least once every 15 minutes.

RETRIEVING YOUR FINISHED PRINT JOB



When your print job is complete, the heated print bed **slides backward** to cool.

Do not reach in for your print job.

Once the printer is cooled, the print head will raise and the print bed will slide forward.

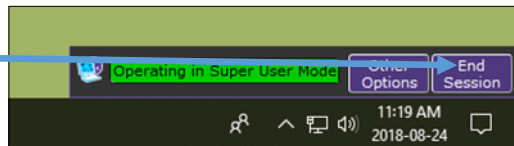
It is now safe to remove your 3D model.

Please bring your completed print model to the Help Desk to be weighed. 3D print jobs cost ten cents (10¢) per gram plus a \$1.00 usage fee per item.

SHUTTING DOWN

Save your work! Once the session ends, files saved to the computer are deleted and unrecoverable.

- Wait for the printer to cool. If you cannot wait, please leave the printer on and notify staff at the Help Desk.
- Click on End Session.
- Tidy up your 3D printer station work area.
- Close the Innovation Hub door and make sure it is locked behind you. Please alert Library staff if the door is unlocked.



Have a question? Need help?

Book a one-on-one session with a Librarian

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604-937-4141 (Poirier) | askalibrarian@coqlibrary.ca

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