



## 3D Printer Cheat Sheet for Customers

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### At Home:

- Find an object you want to print at [Thingiverse.com](http://Thingiverse.com). Make sure the object is in .STL format.
- Download it to your portable USB drive.
- Book a future appointment by calling the library at (905) 683-4000 ext. 8813. Explain that you are a “graduate” of Larry’s 3D Printer workshop and you would like to do a 3D print on your own. You will then be able to choose from available time slots.
- Make sure you bring both your portable USB drive and your library card when you come to do your 3D print session.

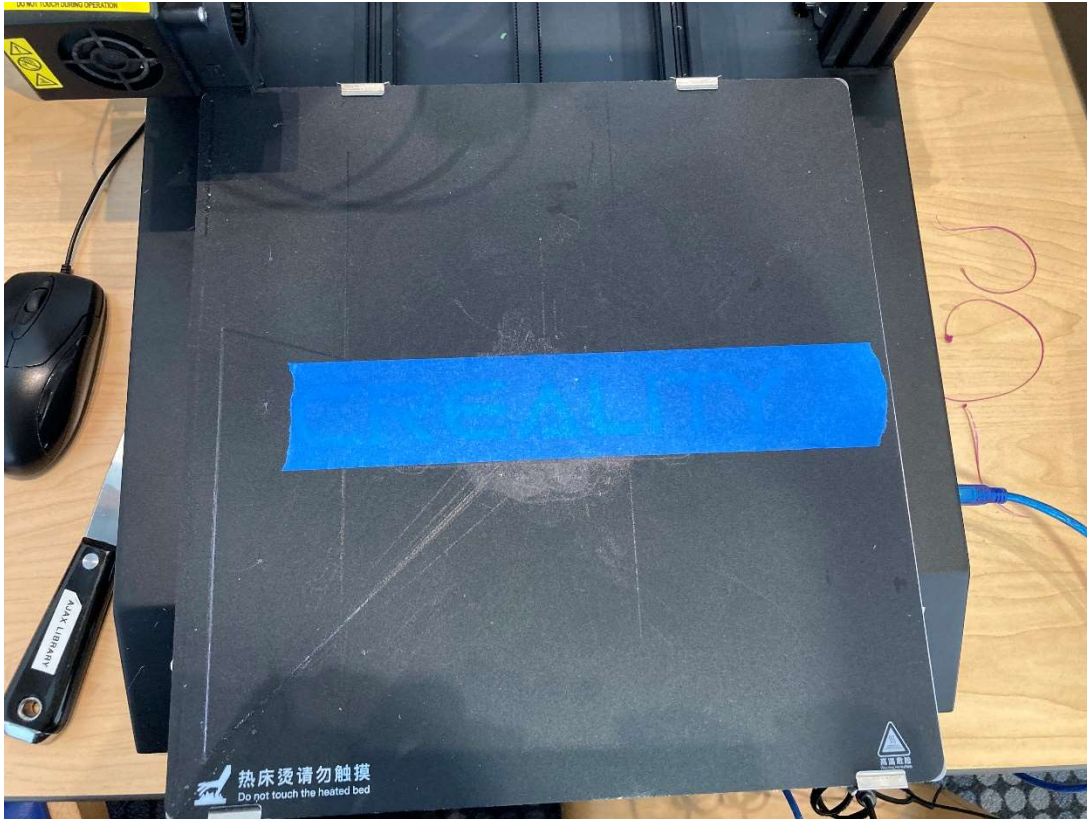
### At the library:

1. Have your card scanned at the Service Desk to verify that you are a 3D printer workshop graduate and pay \$3.00 for your session.
2. Sign the 3D Terms and Conditions Agreement (1<sup>st</sup> time only).
3. Ask for 3D printer tools and filament.

### At the 3D printer:

1. Clean the print bed.
2. Make sure the blue USB wire (from the toolbox) is connected to the 3D printer and the computer.
3. Add enough blue tape to the print bed. Do not overlap, make sure it is completely flat on the print bed, and make sure you have enough for your 3D object that you wish to print.

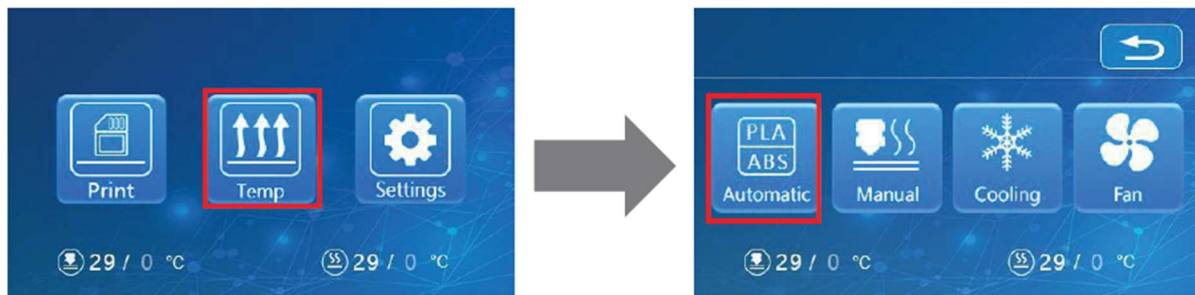
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4. Turn on the 3D printer.
5. Load filament (see pre-heat and feeding below).

### ◆ Preheat

Method 1、

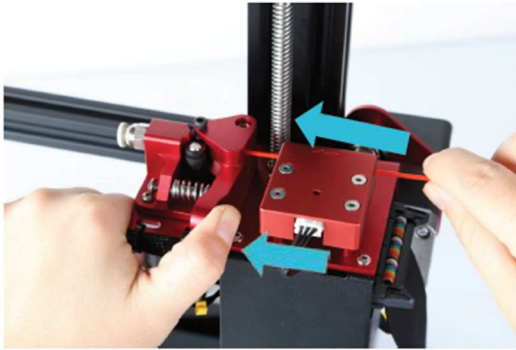


**Choose PLA. When the machine says “Heating Done”, insert the filament as described below.**

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### ◆ Feeding



Press and hold the extruder lever and insert the 1.75mm filament through the filament detector and through the extruder motor. Continue feeding until you see filament extrude from the nozzle.

#### **6. Open Cura on the computer.**

- The left tab should say “Creality CR-10S Pro”.
- The middle tab should say “Generic PLA”.
- The right tab will be updated as needed.

#### **7. Load your .STL file.**

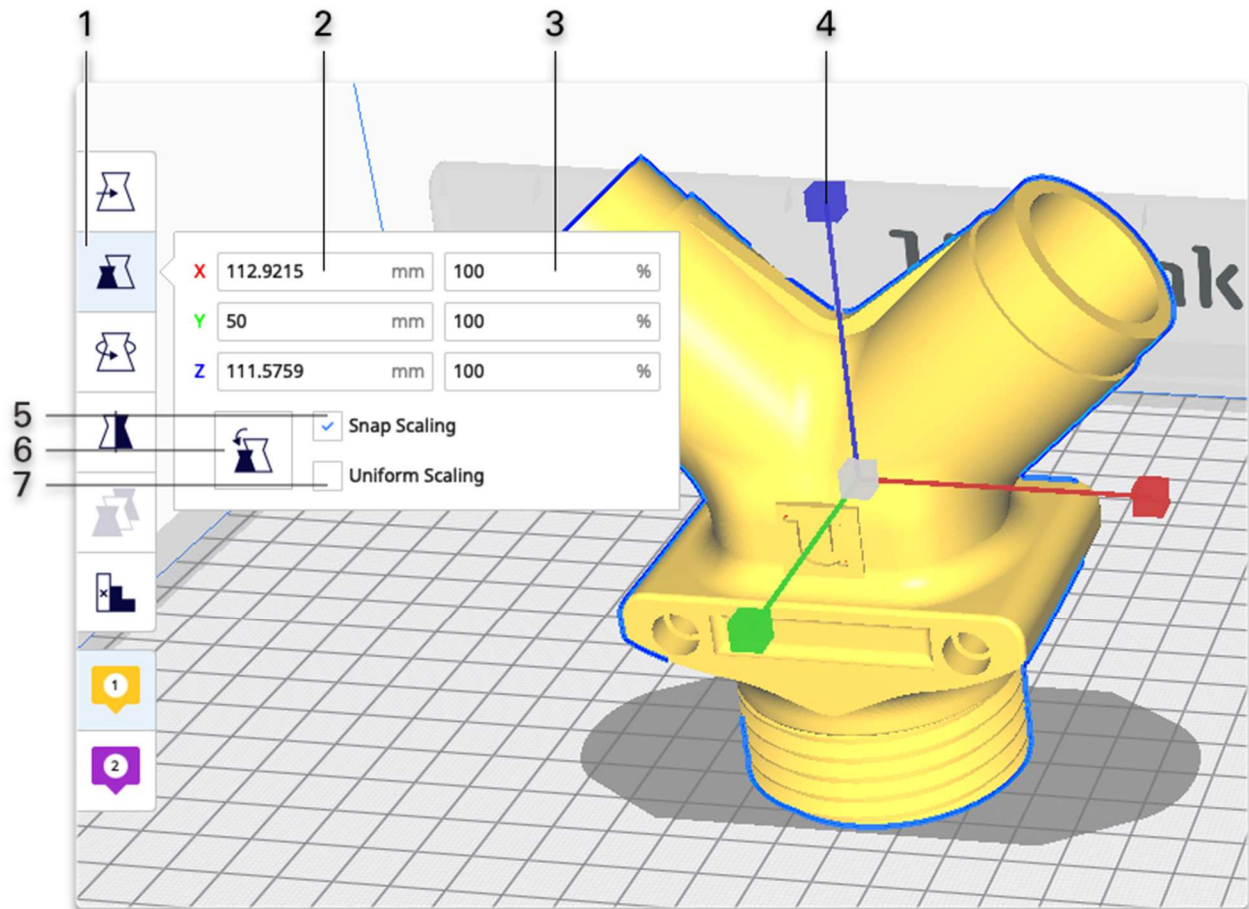
#### **8. Right-click and hold down your mouse to see your object from different angles.**

- Use the middle mouse wheel to bring the object closer to you.

#### **9. Click the “Slice” button to see how long it will take your object to print.**

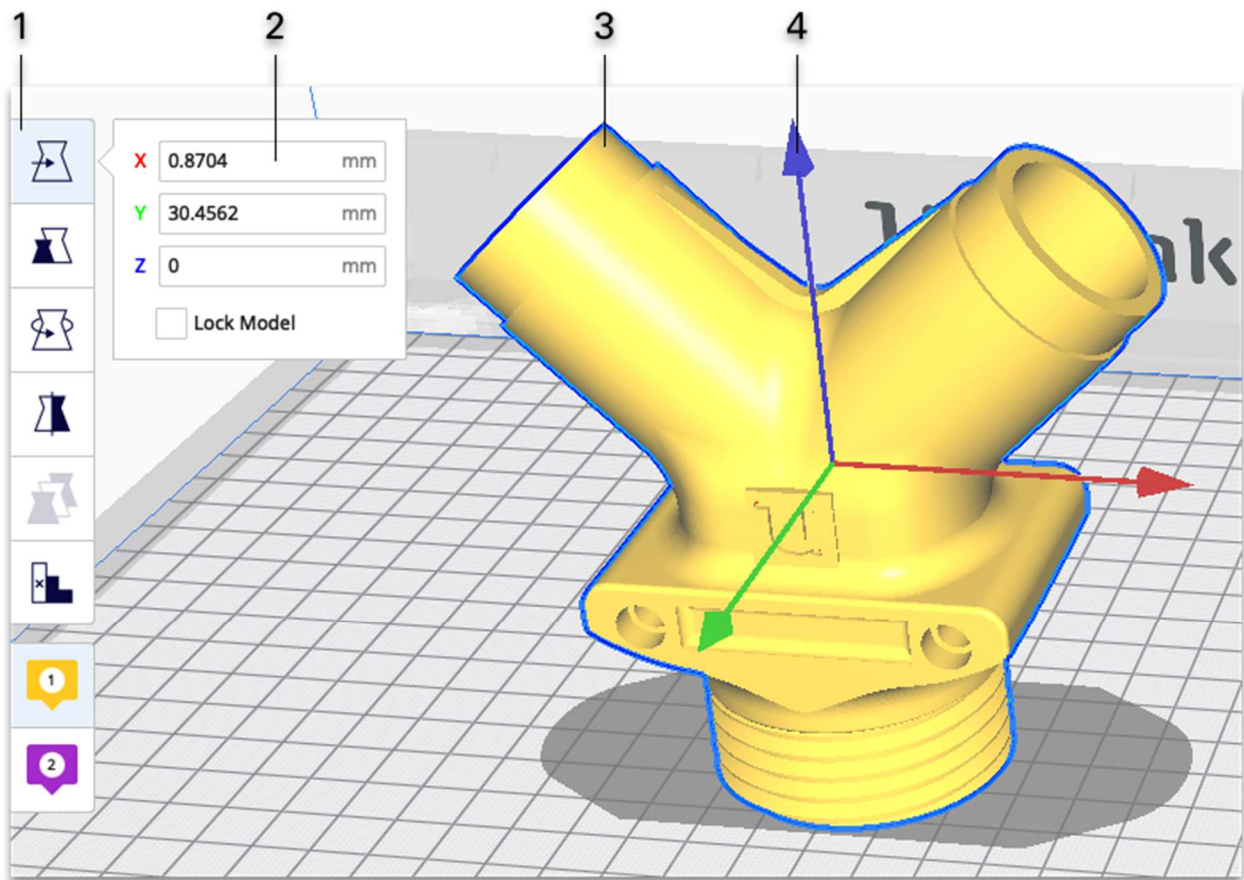
#### **10. Does your object need scaling (shrinking)?**

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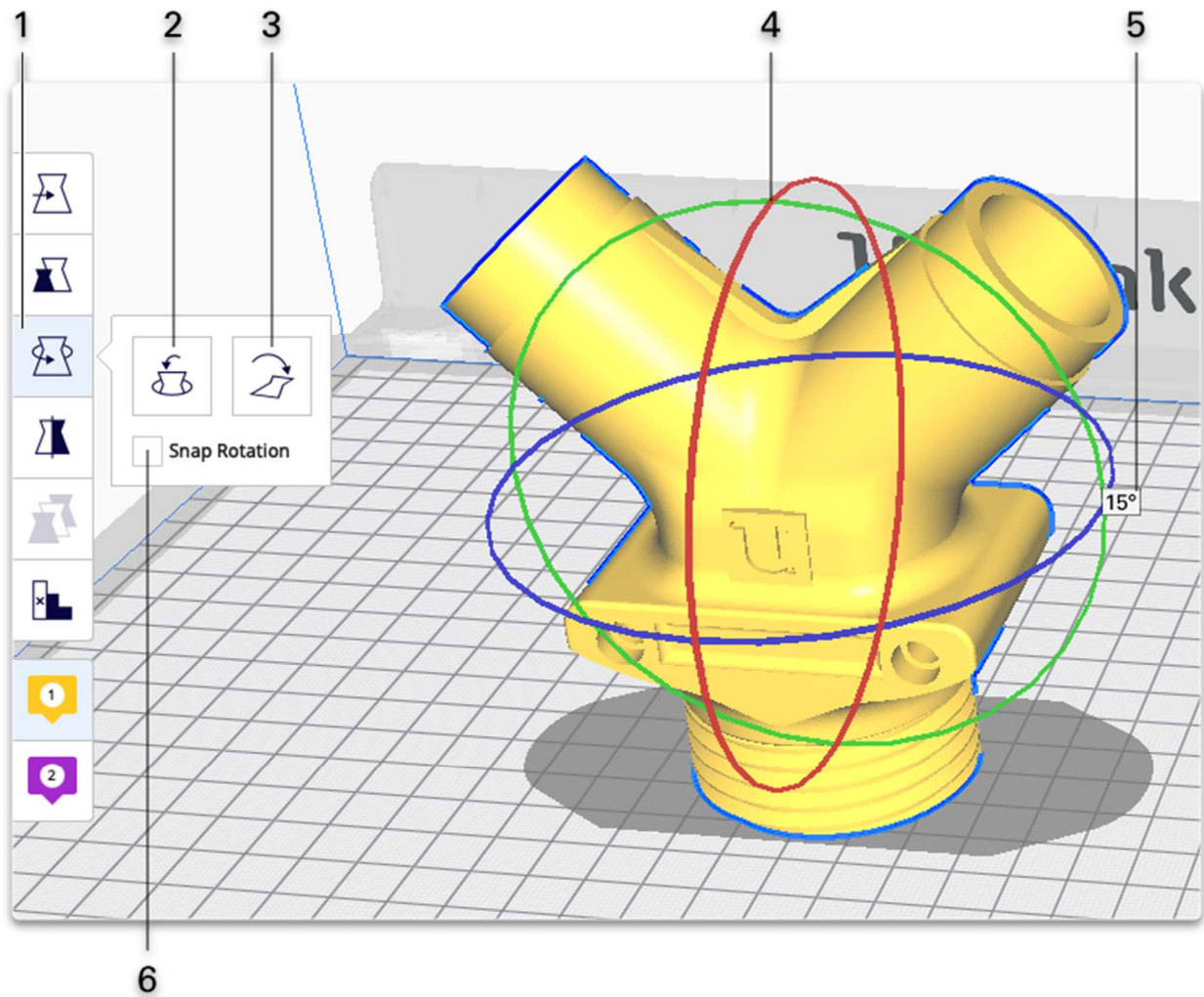
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### 11. Do you need to move your object?



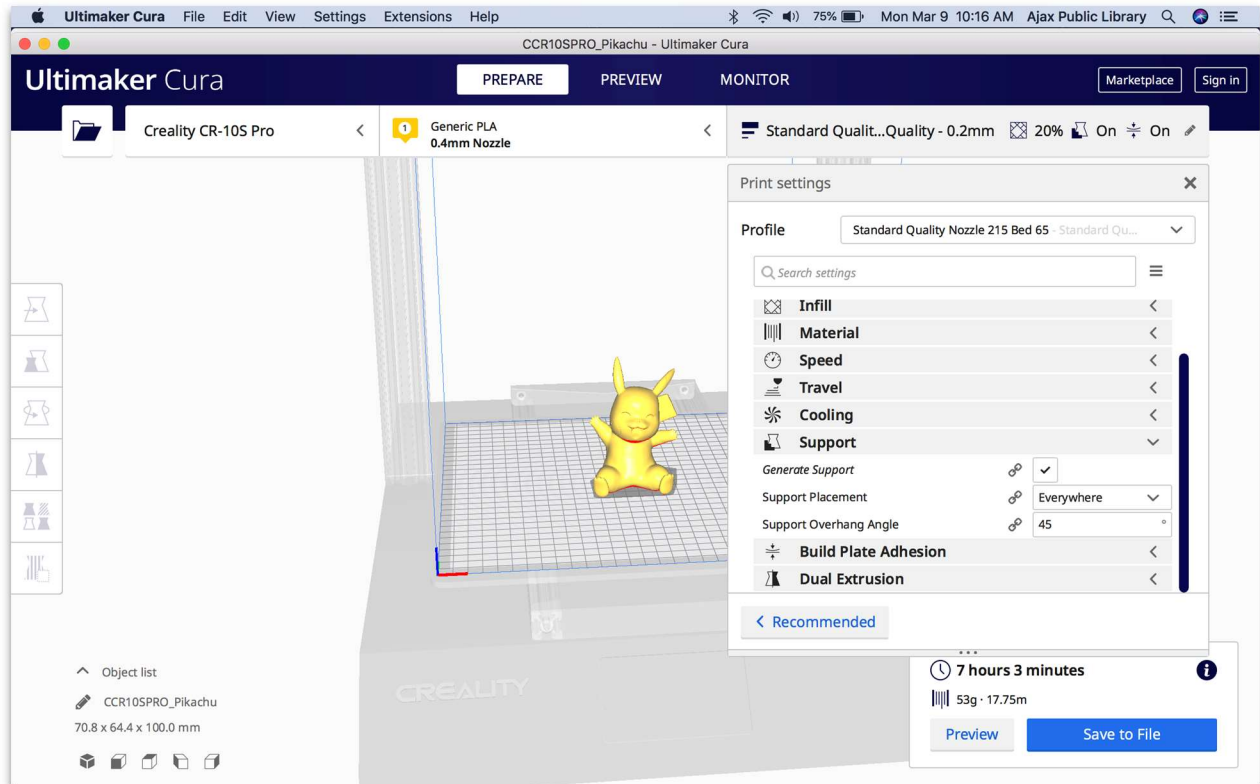
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### 12. Do you need to rotate your object?



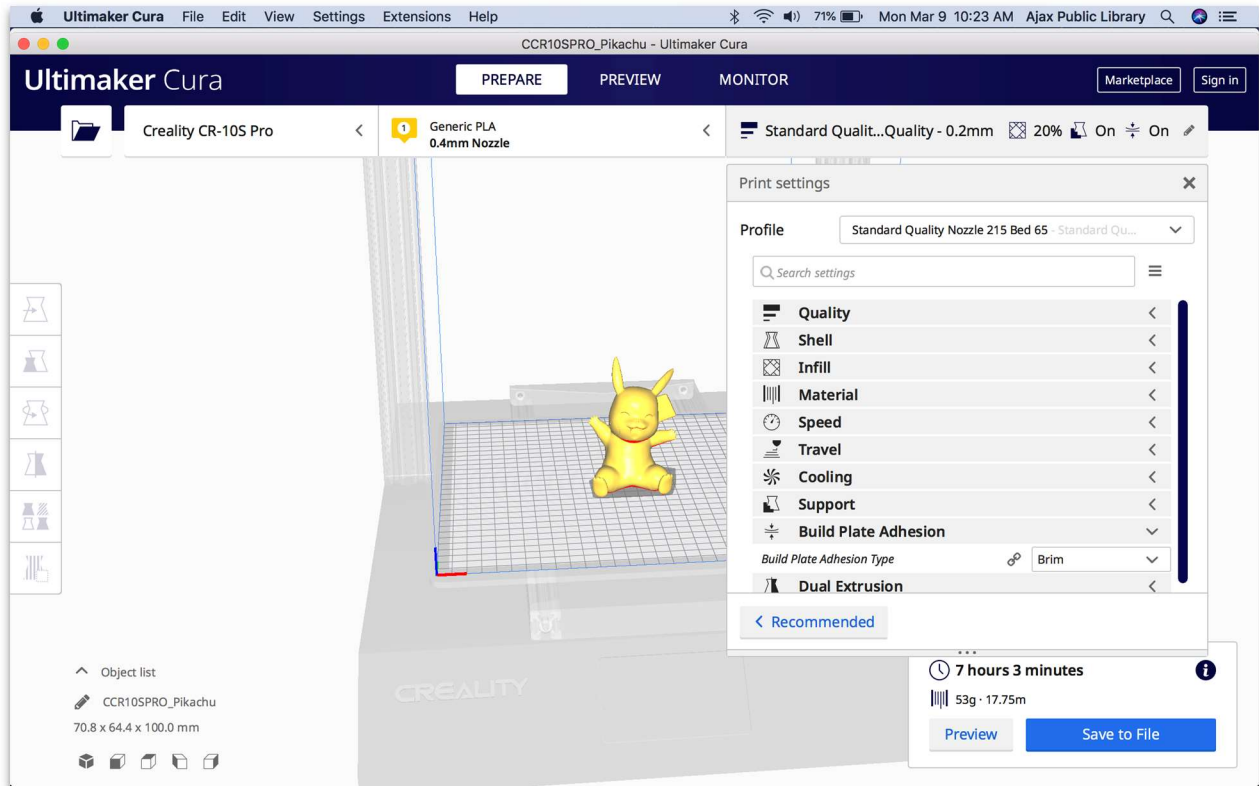
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## 13. Does your object need support?



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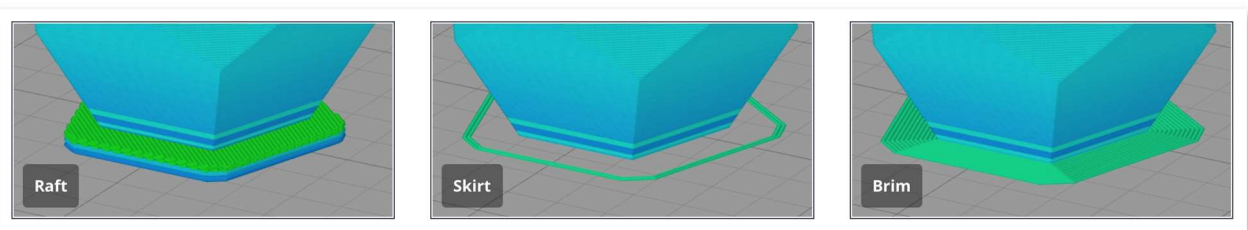
## 14. Does your object need Brim, Raft or Skirt?



**Rafts help stabilize objects with small footprints, or to create a strong foundation.**

**Brim**s are often used to hold down the edges of your object, which can prevent warping and help with bed adhesion.

**Skirts** surround the object you are printing, and establish a smooth flow of



**filament.**

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15. When all of the above is complete, click the “Slice” button and then click the “Print to USB” button.

- In Cura the temperature of the machine will begin to rise.

### During printing:

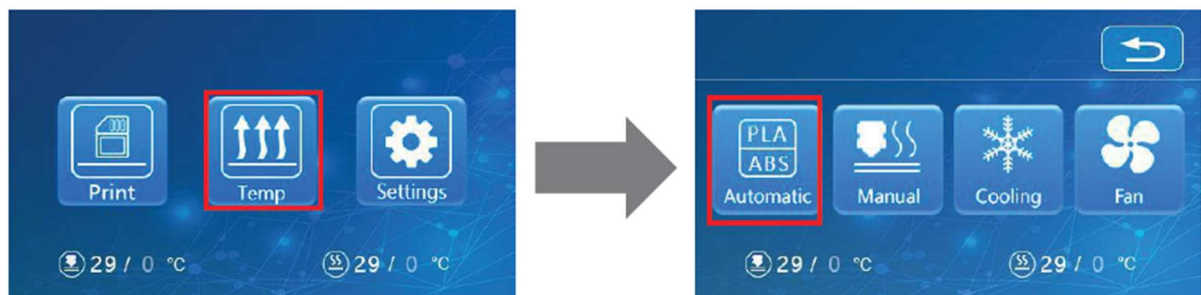
- Please remain at the 3D printer at all times during printing.
- If you need to pause or stop during printing, press the pause or stop buttons.
  - If you cannot see the pause or stop buttons, take Cura out of “full-screen” mode.

### After printing:

1. Machine will automatically start to cool.
2. Remove filament by doing the following (you may already be at the “PLA Automatic” screen...

### ◆ Preheat

Method 1、



**Choose PLA.** When the machine says “Heating Done”, push the tension arm and the push forward a bit to extrude some of the plastic through the nozzle, then pull the filament out. Pushing forward and then pulling back removes the “bulb” that formed after the plastic cooled.

3. After the filament has been removed, on the machine press “Temp” then “Cooling”. When it says “Cool Down” then the object can be removed.
4. Please remove blue tape and clean the print bed.
5. Turn off the 3D printer.
6. Close Cura on the computer and log out.
7. Make sure ALL tools and the blue USB wire are returned to the service desk.

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### **Please note:**

- Time limits (2 hour print-time maximum) + 30 minutes before and 30 minutes after.
- Age requirements (10 and under requires parent during entire session).
- All participants must stay near the printer at ALL times.
- The library does not guarantee a successful print job. Unless the print fails to finish, customers will be expected to pay for the full cost of the completed print, regardless of quality. We will do our best to help you have a successful 3D print session.