3D Printing at the Sunnyvale Library: Frequently Asked Questions

What kind of 3D printers does the Library have?
We have a MakerBot Replicator 2 and an Afinia H-Series. Both printers use PLA plastic filament.

What is the cost for printing?
3D printing at the Library is currently free, thanks to a grant from the Library Services and Technology Act, administered in California by the State Librarian.

How do I sign up to print?
Visit sunnyvalelibraryappts.youcanbook.me to schedule your 3D Printing appointment.

What software do I need to design my 3D object?
Any 3D drafting software will work, as long as you can convert your file to the .stl format before you send it to the Library. We recommend Trimble SketchUp, a free online download at sketchup.com. Also consider Tinkercad.com, software that works in a browser without the need to download an application.

A free plugin that allows you to export .stl files from SketchUp can be found here: http://extensions.sketchup.com/en/content/sketchup-stl. (You may need to create a free Google account.)

Files are readied for printing in MakerWare, another free online download. MakerWare can be used to change the size of an object, adjust the object's location on the build plate, and add 'rafts,' 'supports,' and other printing aids. The Library will view all files in MakerWare before printing your job.

Where can I learn about designing 3D objects?
Check our calendar of events for classes on 3D design or printing. Or, request a book-a-librarian appointment for one-on-one help. For SketchUp help, visit help.sketchup.com/en.

Where can I find 3D object design and inspiration?
Try Thingiverse.com or sketchup.google.com/3dwarehouse. These sites also have designs you can download and print.

Do you have any tips for object design?
3D printers don't like files that have large overhangs. Things in the shape of a tree, with wide tops and narrow bottoms, are more difficult to print.

I just sent you my file. Do I need to come in to the library to print my object?
Yes. You must request an appointment and be present to start your print job. Library staff will be available to assist you.

Do I need to be present the whole time my object is printing?
No. Most jobs are quick, but for longer jobs, we understand you may need to go and come back. We do recommend you either stay for the length of your print, or check in with your print periodically. Errors in printing are common, and if they occur while you are not present to fix them, you may need to reschedule your print job for another day.

How long will my job take to print?
It is sometimes difficult to estimate exact print times. Library staff will make an educated guess about the length of your job. We will only print objects that estimate to take less than 4 hours. If you have an evening appointment, the Library will only be able to accommodate a 2-hour print job.

Where does the printing take place?
Your object will be printed behind the Information Desk at the Library.

Will you hold my object for me if I cannot be there to see it finish?
Yes. The Library will hold your print jobs for 7 days. You may collect them at the Information Desk.

Can I choose my filament color?
Yes. The Library currently has many colors available, including orange, yellow, blue, light blue, green, light green, pink, black, clear, purple and red.

Can my job use more than one color?
No. Our printers can only print in one color at a time.

Can I print more than one object?
Currently, the Library will only schedule one print per day. If possible, the Library will accommodate multi-part jobs as long as you are present in the Library to oversee the different parts.

Can I print something else later if I want to?
Yes. You can sign up to use the printer multiple times. Only one appointment per person may be scheduled at a time.

How dense can I make my object?
All jobs are printed at medium density setting.

How large can my object be?
The Library will only print objects that will take less than 4 hours.

Is it possible to print weapons at the Library?
No. The Library will not schedule print jobs for dangerous objects. We reserve the right to refuse any print request. Additionally, the PLA filament used by the MakerBot Replicator 2 is not the type used for some of the dangerous prints you may have seen on the news.

What happens if my file doesn't print correctly?
Errors with 3D printing are common. If the error can't be fixed on the spot, you may need to reschedule your job for another day.

Are 3D printed objects 'food safe?'
No.

I am under 13 years old. Can I use the 3D printer?
Yes. All ages can use the Library's printer.