Resources For 3D Printing

Models

Printables.com: Relatively new but growing fast, to encourage growth has incentives where you can earn rewards such as free filament

thingiverse.com: Literally has millions of models, was considered the "go to" site for models for many but falling out of favor somewhat. With their focus on quantity, quality isn't always there. Still millions of great models there, just need to be aware that some will not be as great (reading the comment section helps)

thangs.com: Very powerful search engine that not only searches its own repository but others as well such as thingiverse and printables. Also can show related items based on geometry.

Cults3d.com: Curated and generally very high quality models. Some are free, but the majority on this site have a small cost to them

Myminifactory.com: Similar in many ways to culst3d.com

Grabcad.com: All of the previous sites offer primarily saved designs in an .stl file format. This format is ready to go into slicing software, but isn't the best for tweaking the design to your own needs. Grabcad, on the other hand offers files in a cad program format (.step for example) which can easily be used in design software.

Design Software

Fusion360: Powerful parametric CAD/CAM program very popular with 3d printer enthusiasts. Free for personal use (must be renewed annually) and several hundred dollars a year for commercial use. Somewhat of a steep learning curve, but there are thousands of on-line tutorials for it. Can work off-line but primary use model is to be connected to the internet and files are stored in the cloud.

Freecad: Very similar to Fusio360 in it's CAD capabilities and as the name implies it's totally free. Perhaps not as robust as fusion360 (save often to avoid data loss if it crashes) but it is also parametric making future edits to projects easier.

OpenSCAD: Somewhat niche in that it is geared toward programmers; the user writes a program which in turn creates the model. This does have the advantage to make and publish designs that are easily customizable by the end user. For example, one popular design is for pegboard holders and the user can select overall size, number of holes or slots, etc. Free

TinkerCad: Web based (need an internet connection) and geared toward beginners but many experienced users stay with it and produce stunning results with it. Free to use

Blender: Not specifically for 3d printing, rather a general 3d program where one could create a pixar style animated movie with enough time, effort, and skill. Steep learning curve but lots of tutorials available including ones specific to 3d printing. Free.

Slicing Software

Note: Some printers are "closed" in which the user must use the printer company's provided slicer. While their slicer may work fine it may lack some features available elsewhere; something to consider when choosing a printer. The two slicers listed below are free and work for all printers that are not restricted in this way.

PrusaSlicer: From the same folks the make the excellent Prusa printers. Feature rich, robust, and updated frequently. As mentioned above it is not restricted to working on just Prusa brand printers.

Cura: From the people who make the Ultimaker printer. While the Ultimaker printer is a bit of a "closed" system (must use their filament for example) they have made the slicer available to the broad community. Just like the PrusaSlicer it's feature rich, robust, and frequently updated.

While both of these will perform the same tasks the user experience is quite different between the two. A good approach for new users would be to try both and see which one seems to be the best fit.

On-line merchants and learning resources

These two are grouped together because an on-line merchant often has a lot of helpful information as well

Web Site	Sells	Info	Notes
Matterhackers.com	Yes	Yes	Sells printers (from basic to pretty high end) and filaments (including some exotic filaments). Lots of helpful articles and videos
All3dp.com	No	Yes	Printer reviews, getting started guides, buying guides, etc.
Printedsolid.com	Yes	No	Printers, accessories, their own line of filament and a selection of enclosure solutions. Recently acquired by Prusa to give the Czech Republic based company a sales and distribution center in the US.
Prusa3d.com	Yes	Yes	Printers, accessories, their own line of filament (Prusament). A frequently updated blog and many articles in their knowledge base both Prusa specific and for 3d printing in general.

YouTube Channels

There may be 47 billion YouTube channels related to 3d printing (searching may prove or disprove this), but the following are certainly ones worth a look

3D Printing Nerd: Always entertaining, features reviews, trade show visits and trends. One highlight is his series of videos where the host introduces Neal Patrick Harris to 3d printing.

Teaching Tech: Reviews, how to do printer modifications, safety videos, etc. His video on "thermal runaway" is helpful on potential safety issues with some printers and how to correct them.

Uncle Jessie: Reviews, projects, etc.

Makers Muse: Reviews, projects, safety, etc

Zack Freedman: Not for everyone – over caffeinated highly sarcastic host but usually good value somewhere in the energetically delivered content.

A few others of note – CNC Kitchen, CHEP, Thomas Sanladerer, and Prusa 3D by Josef Prusa