

3D PRINTING AT THE DABBLE BOX

The Dabble Box uses a Flashforge Creator Pro 3D printer with dual extruders. For details on what you can accomplish with dual extruders, please read this article from All3DP (all3dp.com/2/dual-extruder-extrusion-3d-printer-simply-explained).

COMMERCIAL RESOURCES

SHAPEWAYS (WWW.SHAPEWAYS.COM)

Shapeways allows users to upload their own models, use its model generators, or buy pre-made models. You can sell your own models on Shapeways or you can order 3D prints of the models by mail.

SCULPTEO (WWW.SCULPTEO.COM/EN)

Sculpteo works similarly to Shapeways in regards to uploading and selling models. There are no model generators, but Sculpteo has more tools for model preparation. You can pay to print and mail the models.

SKETCHFAB (SKETCHFAB.COM)

You can share and sell models on Sketchfab. It provides various methods for sharing content including embedding your examples in your own website.

MAKEPRINTABLE (MAKEPRINTABLE.COM)

This is a great alternative to trying to prepare your own complicated models if you are willing to spend the money. You can either have the model fixed and pay to download the fixed version for \$2 or have them print it for a price.

CRAFTCLOUD3D (CRAFTCLOUD3D.COM)

A fairly straight forward service created by All3DP that lets you upload a model and order a print of it. Offers a price comparison from various providers including some listed here such as Sculpteo and i.Materialise.

I.MATERIALISE (I.MATERIALISE.COM/EN)

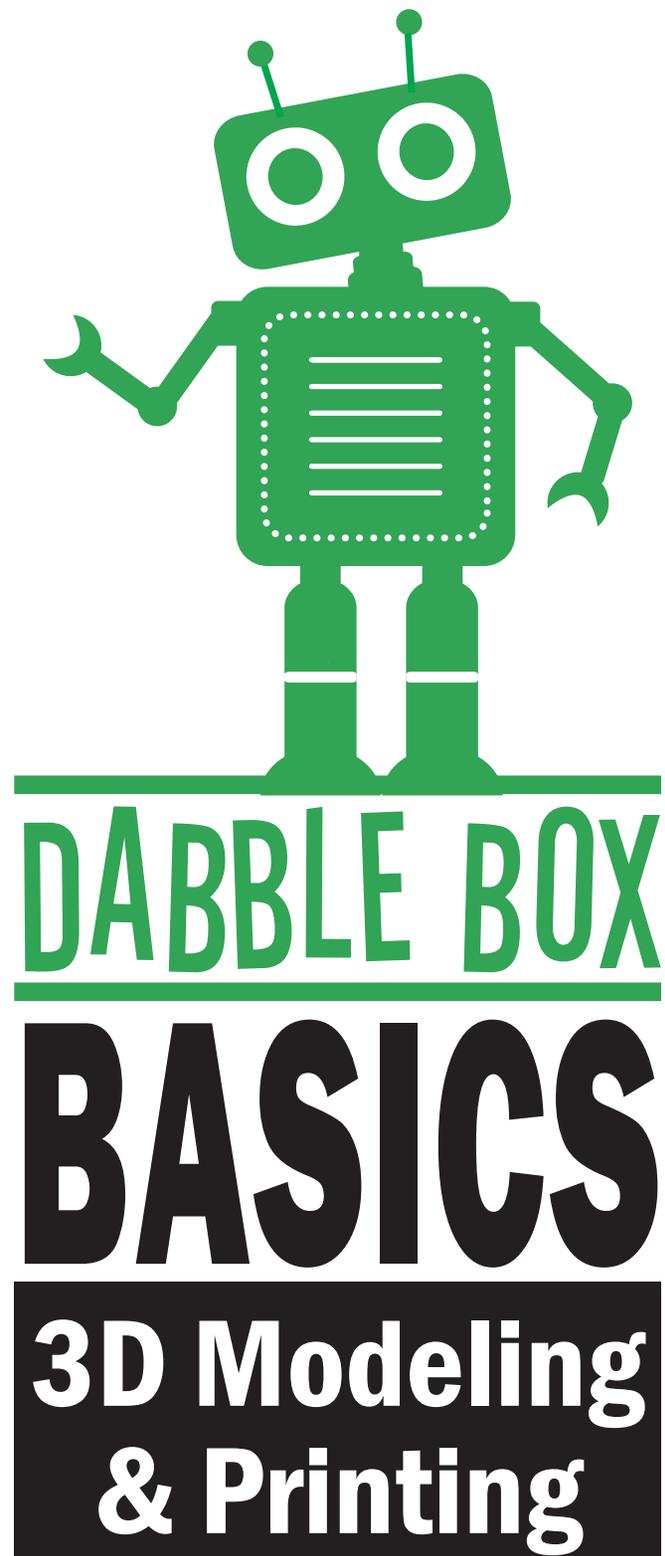
A long-running (25 years) upload-print-mail option with many options for materials and printing methods.



CONTACT THE DABBLE BOX MAKERSPACE
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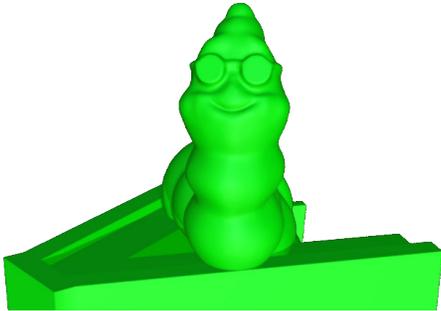


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WHY MAKE A MODEL?

3D modeling is a skill that has many uses, including animated video, advertising, video games, architectural design, interior design, landscape planning, and more. Most of the models made in the Dabble Box are intended for printing. A few of the more common uses for 3D prints are prototyping, miniature models (e.g. gaming miniatures), and practical objects like replacement parts or life hacks.



PROTOTYPING

You might be interested in designing a new product but haven't had the opportunity to test it or make a prototype. With 3D modeling and printing, you have the resources to create your own prototypes. Computer-Aided Design (CAD) is your best option.

MINIATURES/MODELS

There are many reasons to create models or miniatures. You might need scale models for architecture, interior design, or landscaping. Maybe you need to create pieces for a board game. CAD or sculpting software are both viable options depending on your needs.

PART REPLACEMENT OR LIFE HACKING

Everyone can relate to needing a part for something and not having it. Parts can be no longer manufactured, too expensive, or difficult to obtain. Maybe you need a solution to a storage dilemma. Whatever the reason, you might be able to find or create a part using 3D modeling. The precision necessary for making these parts usually requires CAD software.

FREE MODELING SOFTWARE

This is a list of free-to-use CAD and Sculpting software. These applications may all be used for either personal or commercial purposes.

TINKERCAD (CAD)

Tinkercad is a web-based application that requires a free account to use with models stored right on the website. Owned by 3D industry giant, Autodesk, Tinkercad provides users with an outstanding beginner-level experience.

BLENDER (MODELING & SCULPTING)

Blender, the premier open-source 3D modeling software, is becoming an industry standard. Blender is highly recommended for both modelers and sculptors who do not have thousands of dollars to invest in commercial software.

SCULPTGL (SCULPTING)

SculptGL is a web-based application that allows the user to mold a clay-like sphere into a model. It's a basic software with few features as compared to Blender, but it's enough to create a basic model.

SKETCHUP (CAD)

SketchUp is an easy-to-use software for beginners that provides a completely free version of their software with nearly full capability. It's a web-based application but requires an add-on to be installed within the browser. Paid subscription-based versions add more features such as augmented reality, virtual reality, more advanced toolsets, and a locally installed application.

VECTARY (CAD)

Vectary is a fairly recent web application used right in the browser. It is most easily described as a more advanced Tinkercad. Like SketchUp, they have a free version as well as a subscription model for advanced features.

FREE EDITING SOFTWARE

This is a list of model editing software to optimize 3D models for printing. These applications may all be used for either personal or commercial purposes.

INSTANT MESHES (RETOPOLOGY)

Some models are too complex for 3D printing or other practical uses. Retopology is often necessary and Instant Meshes does this well.

MESHMIXER (MESH EDITING)

Meshmixer provides a variety of tools for mesh editing. Meshmixer was bought out by Autodesk and is no longer updated but continues to function and remains a popular tool for editing meshes.

MESHLAB (MESH EDITING)

Meshlab is a competitor to Meshmixer that helps optimize 3D models for 3D printing. It's often considered more complicated than Meshmixer but is still receiving regular updates.

INDUSTRY STANDARDS

3D STUDIO MAX (\$1700/YR)

3D Studio Max, a.k.a. 3DS Max, is a popular application for 3D modeling, texturing, and animation from Autodesk.

ZBRUSH (\$895 OR \$360/YR)

Pixologic's Zbrush is arguably the leading application for digital sculpting and painting.

MUDBOX (\$90/YR)

Mudbox, ZBrush's main competitor, is Autodesk's sculpting and painting software.

MAYA (\$1700/YR)

Maya is another Autodesk application that lies somewhere between Mudbox and 3DS Max.

SOLIDWORKS STANDARD (\$3995 OR SUB)

Solidworks is a CAD software often used for academic and industrial use.