

3D Printer - Da Vinci Jr. 1.0



XYZ- Ware


Type of File Supported: STL

When you first open the software you will be prompted to login to your XYZ printing account. You setup this account in order to download the software.

The first time it's used you will need to select the printer type in the settings menu (gears) – select *da Vinci Jr. 1.0*

	Import Export Save Export Settings Help
	<ul style="list-style-type: none"> • Look at the object from different views • Move the position the object will print on the print bed • Rotate the object • Resize or scale up/down the object • Look at basic dimensions of how the object will print
Exporting File	<p>When you export the file the software will format a .3w file. This is the file that can be printed on the Da Vinci printer. You can save this file on your computer or directly to the SD card that will be inserted into the printer.</p> <p>When you select export you can select adding <i>rafts</i>, <i>supports</i>, or <i>brims</i> – they can be removed after the object prints. Thingiverse file notes will often indicate when you need to use these (but not always).</p> <p>Raft - horizontal latticework of filament that is located underneath your print. They are used to create stability and should be used when printing thinner and longer objects to help hold them to the print bed or for larger objects to avoid warpage during prints.</p>

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	<p>Support - create structural strength by printing columns. Used for objects with overhangs or material suspended in air.</p> <p>Brim – similar to purpose of a raft in that it allows users to enlarge the range of contact with the print bed. The brim is only around a model, a raft is also under it. The brim is easier to remove than a raft.</p>
	<p>After the file is exported you have the option to determine the estimated length of time for print by selected the “I” button.</p>

Tinkercad

<https://www.tinkercad.com/>

Signup for a free account! All work is done and saved on the web – nothing to install on your computer.

- The “Learn” tab takes you to a series of lessons. Fun and short, guided projects in which you follow directions in Tinkercad to create, move, and modify shapes.
- The “Gallery” tab shares models that you can view, modify, and download to print.
- The “Teach” tab allows you to set up a class account for students to join.

Techniques to transform an image file to STL for 3D printing

1. Find images on the Internet that can be converted to SVG files and imported into Tinkercad. Images should be black and white. Searches with terms like "silhouette" and "black and white clip art" can usually find an appropriate image. Online Image Converter can be used to change the image into an SVG file.

<http://image.online-convert.com/convert-to-svg>

2. Draw the image using Google Draw. With this method only the outline of the shape needs to be draw. You can then download the drawing as an SVG and import into Tinkercad.
3. Draw the image on paper with a black marker. The image can then photographed with the camera on the student's chromebooks (or other digital camera) and converted to an SVG file and imported into Tinkercad.