



## Glowforge Laser Engraver/Cutter Workshop

### **What is a Glowforge?**

Glowforge Promo Video: <https://www.youtube.com/watch?v=ysCaqh38JVQ>

The Glowforge “uses a beam of light the width of a human hair to cut and engrave with incredible accuracy within a thousandth of an inch.” The machine will “cut wood, fabric, leather, paper, Plexiglas (acrylic), Delrin (acetal), mylar, rubber, Corian, foods and more. Glowforge can also engrave all of the above, plus glass, coated metal, marble, anodized aluminum, titanium, some phones, tablets, and laptops and more laser safe materials.”

***The Glowforge is made possible from funding from the Clarinda Public Library Foundation and the Page County Community Foundation.***

### **How does it work?**

Glowforge uses subtractive manufacturing while traditional 3D printers use additive manufacturing. A 3D printer builds up material, like plastic filament, layer by layer. With Glowforge, you'll put a piece of material like leather, wood, or acrylic in the machine and it carves out your product using laser light.

### **What can I do with it?**

Possibilities are almost endless!

### **What it can cut and engrave?**

<b><u>Cuts &amp; Engraves</u></b>	<b><u>Engraves Only</u></b>	<b><u>NOT Permitted</u></b>
<ul style="list-style-type: none"> <li>• Acrylic/Plexiglas</li> <li>• Cardboard</li> <li>• Cork</li> <li>• Delrin (acetal)</li> <li>• Fabric</li> <li>• Leather</li> <li>• Mylar</li> <li>• Paper</li> <li>• Rubber (non-chlorine-containing)</li> <li>• Sandpaper</li> <li>• Wood (unstained/unpainted ONLY)</li> </ul>	<ul style="list-style-type: none"> <li>• Anodized Aluminum</li> <li>• Ceramic Tile</li> <li>• Corian</li> <li>• Glass</li> <li>• Marble</li> <li>• Stone</li> <li>• Titanium</li> </ul>	<ul style="list-style-type: none"> <li>• Stained Woods</li> <li>• MDF</li> <li>• Vinyl</li> <li>• Plastic</li> <li>• Polycarbonate/LEXAN</li> <li>• Foam</li> <li>• Fiberglass</li> <li>• Food</li> </ul>

### **Where do I find materials to use?**

The library has a limited number of materials on hand to purchase and prices generally range from \$7-\$21. You can supply your own materials but the library cannot guarantee a successful ‘print’ and suggest that a sample or test be tried before fulling cutting or engraving your product.



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### **What is the cost for materials or use the machine?**

The cost of use the Glowforge is \$1.00 per use, meaning each time the button is pressed.

### **Where do I find designs?**

There are a number of websites that have share or sell their designs

- <https://community.glowforge.com/>
- <https://www.epiloglaser.com/>
- <https://www.instructables.com/>
- <https://www.pinterest.com/glowforge/>

### **How do I create my own designs?**

- Free Vector Software: Inkscape - <https://inkscape.org/>
- Make Custom Boxes: MakerCase - <https://en.makercase.com>
- Glowforge App – You can create your own Glowforge Account

### **What Files do I need?**

- Cutting: .SVG or .PDF
- Engraving: .JPG or .PNG

### **How long does it take?**

The length of time is dependent upon the size and complexity of the print. The Glowforge software will provide an estimated print time.

### **How do I use or have access to the Glowforge?**

Currently access to the machine is limited to trained staff. The library hopes to work with volunteers who can become trained on the machine to print their own materials and those of others that are submitted. Only a few staff members are trained on the machine so printing time and access may be limited to certain time and days.

If you are interested in become a trained Glowforge users please visit with library staff.

### **Glowforge APP login**

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makerspace