

HOW A STAINED GLASS WINDOW IS MADE

By Chris Jeffrey

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A stained glass window starts out as an idea. Sometimes a customer will have seen some stained glass, or a painting or image from the real world, and will ask me to make a window using those as inspiration. Other times, customers don't have any real idea of what they want, other than that they want stained glass. In those cases I show them various examples of my own work as well as examples taken from books.

This helps them frame what they are looking for; a traditional Victorian decorative design?

A Tiffany inspired landscape? A wild, colorful abstract? A Frank Lloyd Wright inspired Prairie-style piece? The sometimes overwhelming options are narrowed down to come up with just the right design, which is often something the customer had never thought of before starting the process.

Once the design is decided upon, the colors and types of glass are usually chosen at that point. It is helpful when the customer has definite ideas of what they want, but sometimes they leave the exact choices to me, based on my experience and understanding of the materials. It is then time to build the window.

STEPS IN BUILDING A STAINED GLASS WINDOW

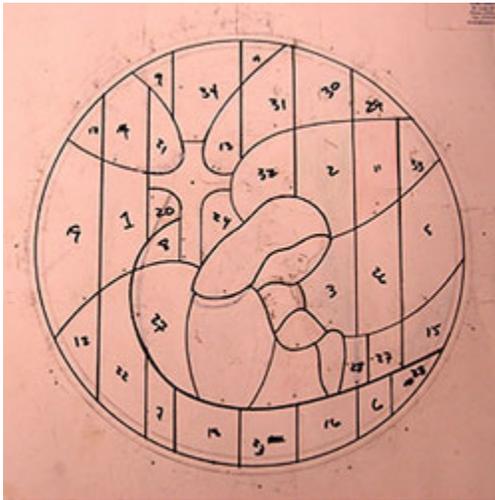


Figure 1

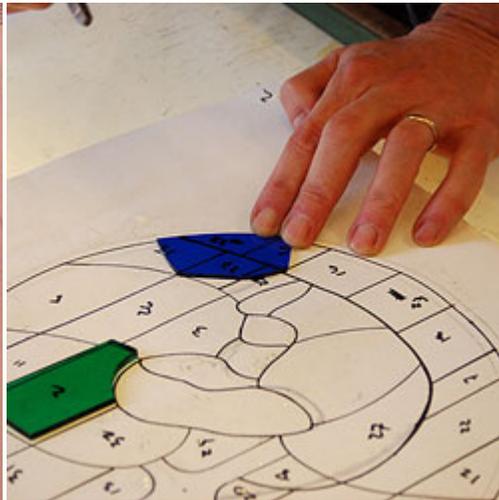


Figure 2

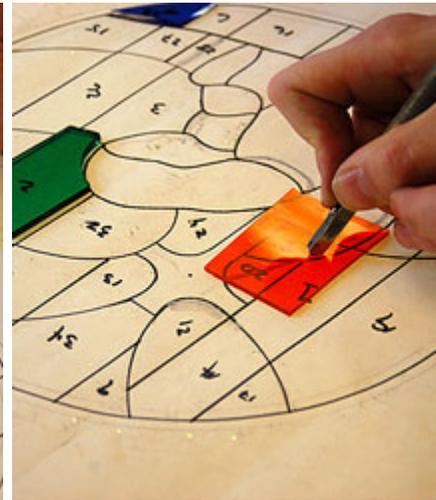


Figure 3

Once the design and glass are decided upon, I make a full-sized drawing of the window, called a "cartoon." **(Figure 1)**. The cartoon shows each individual piece of glass in its exact shape and size.

The cartoon is then put on a glass-topped table that is lit from underneath. This makes it possible to see the lines of the cartoon even when a piece of glass is placed over it. **(Figure 2)**.

The glass is cut on top of the light table **(Figure 3)**. Using a carbide-tipped cutter, a small scratch is made on the surface of the glass, following the lines of the cartoon. Each piece of glass can require numerous cuts, in shapes ranging from straight lines to deep curves.



Figure 4



Figure 5

After the glass has been scratched (or “scored”) with the cutter, it is picked up with both hands. By applying upward pressure on either side of the scored line the glass (usually) breaks along the score. **(Figure 4)**.

The cut pieces of glass are then laid out side by side in their correct alignment to allow me to determine whether the colors and shapes work well together.

(Figure 5). At this point, I make whatever changes may be necessary to improve the final product. Note – in this example – the blue cross, which I etched with a sandblaster.



Figure 6



Figure 7

After all of the glass is cut it is time to assemble the window. Most of my windows are put together with lead channel that has grooves on either side for glass to fit in. Lead is very strong, but so pliable that it can be bent to fit around almost any shape of glass. **(Figure 6)**. It can also be cut with a simple razor knife, allowing me to make very close fitting joints. **(Figure 7)**. The tighter the joint, the neater the overall finished appearance of the window will be. Note the painting of the two figures in this window. I use several extremely talented glass artists for those windows that require painting. This beautiful, sensitive rendering of the mother and child was done by Victoria Kearney.



Figure 8



Figure 9

After the window has been completely leaded up (**Figure 8**), I melt a drop of solder on each of the lead joints to hold the panel together. I then brush a wet putty mix over the entire window. The putty gets under the lead channel, and when it dries it makes the window weather-tight and keeps the glass from rattling. It also gives the lead a pleasing, dark patina. The putty is cleaned off the window by brushing dry powder all over it. (**Figure 9**).

After two or three days, once the putty has dried, the window is given a final cleaning and is then ready to install. (**Figure 10**).



Figure 10