Basic
STAINED GLASS MAKING

All the Skills and Tools You Need to Get Started

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Foiled Glass Panel

Time investment: 6–8 hours total

So far you have practiced scoring glass to achieve different shapes and curves, you have grinded glass to smooth it, and you have become comfortable applying copper foil to edges of cut pieces of stained glass. It's now time to put those new skills to use on your first complete project: a foiled glass panel.

In doing this project you will also learn techniques for making and cutting out a paper pattern and template; soldering pieces of glass together with a soldering iron; adding a lead border; and attaching hardware needed to hang the piece when it is finished.

This panel, also called a "window" by hobbyists, is a classic that can be hung in front of a regular window so sunlight streams through it and produces a lustrous glow. With a bit of practice and care, you can even build a panel to customized dimensions to fit into an existing window or door, such as a transom.

SHOPPING LIST: Foiled Glass Panel

This project requires a total of about 1 square foot of glass for each of the four different colors. Please note that glass estimates factor in some excess material to allow for a few mistakes.

| Item		Quantity
❏ Glass cutter	(pages 3–4)	
❏ Cutting oil	(page 4)	One bottle
❏ Soldering iron	(page 5)	
❏ Solder	(page 5)	One spool
❏ Flux	(page 6)	One bottle
❏ Flux brush	(page 6)	
❏ Ruler	(page 6)	
❏ Pattern shears	(page 7)	
❏ Grozing/breaking pliers	(page 7)	
❏ Needle-nose pliers	(page 8)	
❏ Carborundum stone	(page 8)	
❏ Copper foil	(page 9)	One spool
❏ Lead came	(page 10)	A strip at least 6 feet long
❏ Lead cutters	(page 11)	
❏ Horseshoe nails	(page 11)	About a dozen
❏ Safety goggles	(page 11)	
❏ Lead board	(page 12)	
❏ Wooden or plastic fid	(page 13)	
❏ Patina	(page 14)	One bottle
❏ Rubber gloves	(page 14)	
❏ Paper towels/cleaning rag	(page 15)	
❏ Flux remover	(page 14)	
❏ Finishing compound	(page 14)	One bottle
❏ Carbon paper	(page 16)	At least one large sheet
❏ Oak tag	(page 16)	At least one large sheet
❏ Tracing paper	(page 16)	At least one large sheet
❏ Plastic basin and sponge	(page 15)	
❏ Thumbtacks and jig material	(page 15)	One complete kit
❏ Rubber cement	(page 16)	One bottle
❏ Colored pencils	(page 16)	
❏ Dustpan and brush	(page 11)	

If you have difficulty locating materials or equipment in your local craft store or stained glass shop, you can find them easily on the Internet. All of the items needed to make the projects in this book can be found at www.rainbowvisionsg.com, or you can log on to your favorite search engine and type "stained glass making" + "supplies" to contact hundreds of other online retailers.

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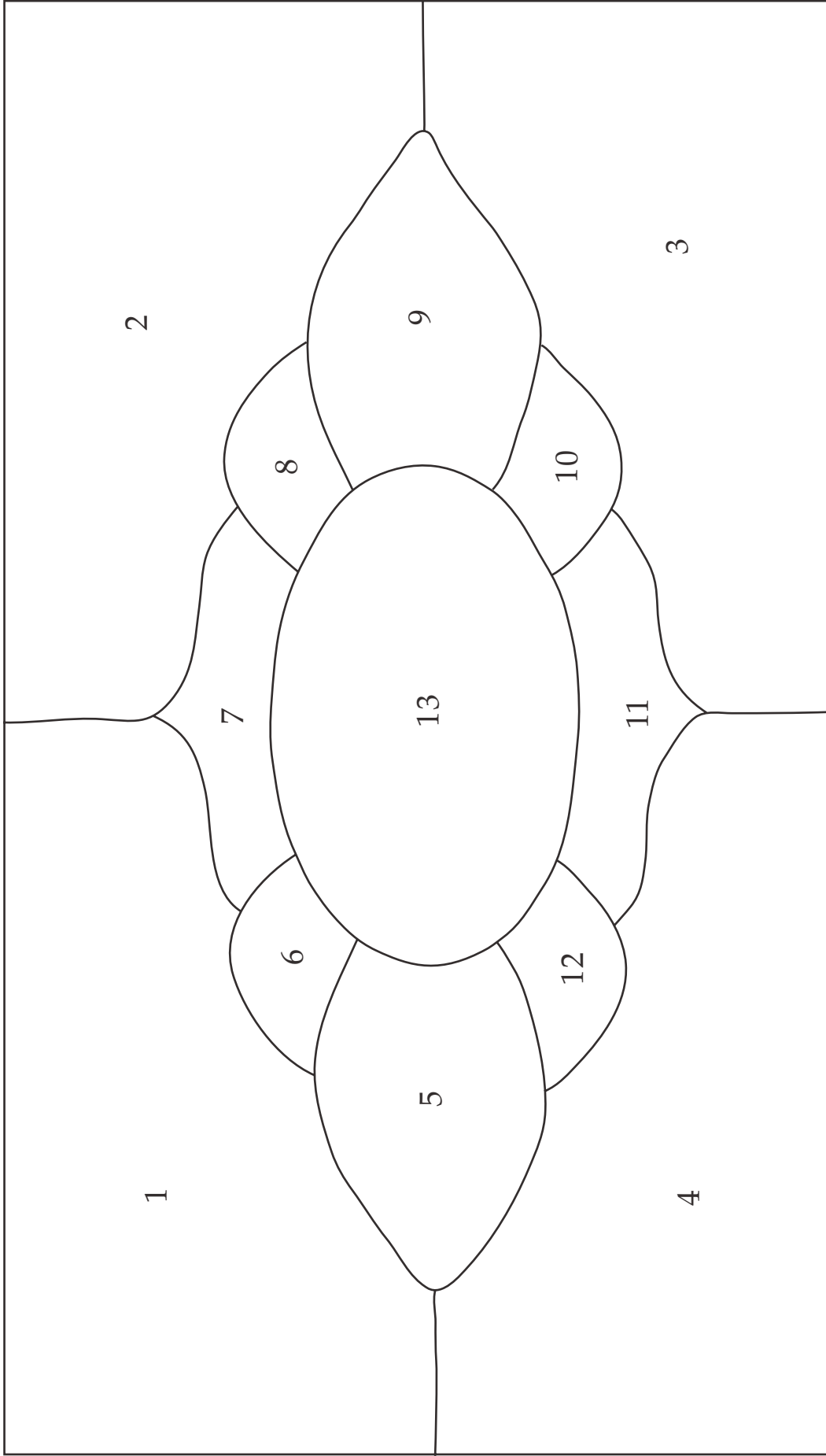
Enlarge 165%

1. Place the pattern from this book on a copier and enlarge by the recommended percentage.

2. Next, you will need three additional sheets of paper, each measuring roughly 24 by 18 inches: 1) a sheet of heavy-stock paper, much like the oak tag paper used in business folders, which will be used as the pattern upon which the project is built; 2) a piece of carbon paper, which will transfer the photocopied pattern when you trace on it; and 3) a piece of tracing paper, which will be used for the templates that are glued to the glass before cutting.

3. You need to arrange the different kinds of paper in the proper order to make a good copy. Make sure the heavy-stock paper is on the bottom of the stack with the carbon paper on top of it, followed by the photocopied pattern and the tracing paper on the very top.
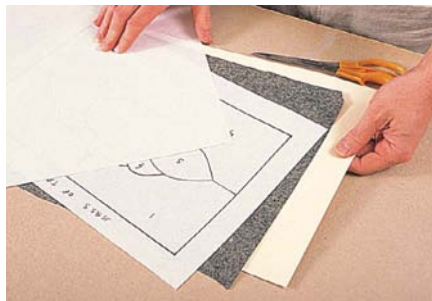
4. Place a Homasote board or preferred surface on your work area. Arrange the papers so they are even, with the pattern directly in the center. Use tacks to hold down the corners of the papers.


5. Begin tracing the pattern. Because this particular pattern uses straight lines to form a rectangle along the outside edges, use a ruler for accuracy. Use a ballpoint pen or other writing instrument with a hard tip for tracing; keep in mind that you must press down firmly on the top layer of tracing paper, leaving enough of an impression to transfer the pattern's image through the carbon paper and onto the heavy paper on the bottom. Felt-tipped markers are not recommended because they typically are too soft to leave the needed impression.


6. Continue carefully tracing the lines. Very slight alterations from the original pattern will not affect the project, but you should retrace the pattern if lines appear to be off by more than a $1/4$ inch or so.


7. When you finish tracing, number each separate piece of the project. This will help to avoid confusion later on with pieces of similar shapes. Use a numbering system that you find logical and easy to understand, such as a clockwise one.
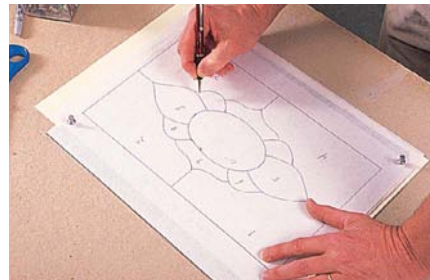

8. Use a pair of regular household scissors to trim excess paper from the edges of the pattern.
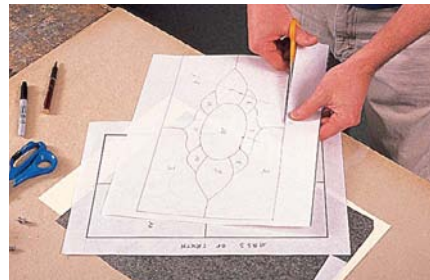

9. Switch to a pair of pattern shears designed for foiled glass projects to cut out all of the other pieces.
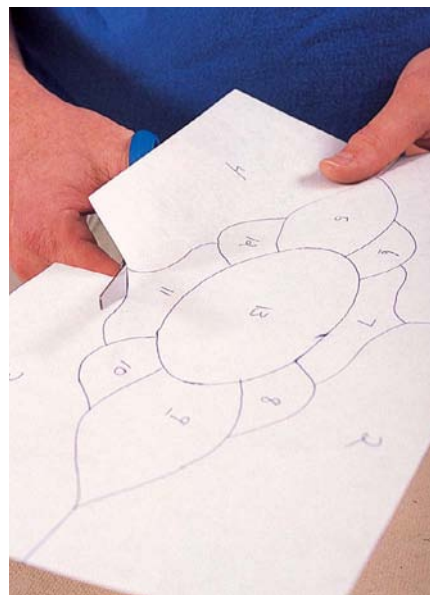
10. Pattern shears for foil projects remove a strip of paper $1/32$ inch wide, a space allowance that will accommodate the foil used to hold pieces of stained glass together. Finish cutting out the shapes from the pattern.
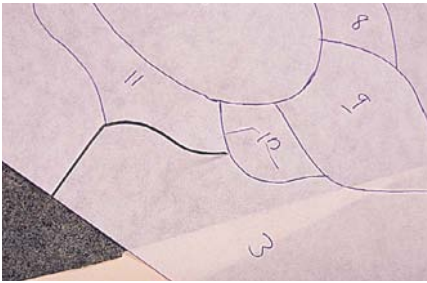
11. It is a good idea to reassemble the pieces of the pattern to make sure they were cut out accurately with no wide gaps between pieces.
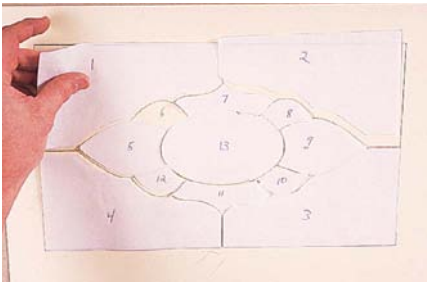
12. Use colored pencils to mark an arrow on each piece to indicate the direction you want the pattern or texture in the stained glass to run on the project.
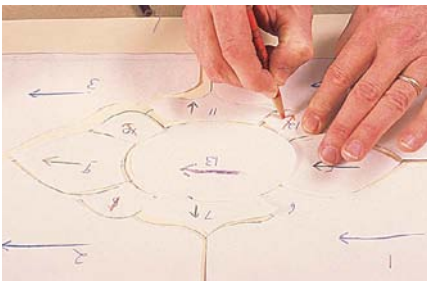
13. Use rubber cement to glue each paper shape onto the stained glass sheets you have chosen.
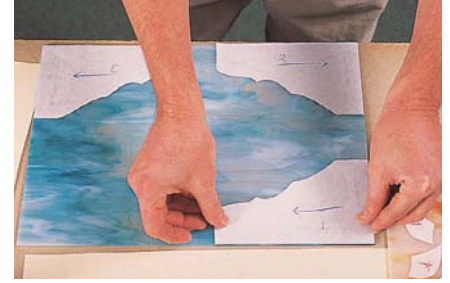

14. Make sure you follow the arrows regarding the direction of the pattern or texture in the stained glass.

**15.** Arrange pieces on the stained glass to reduce unnecessary waste.

16. With the four bigger corner pieces, use a full sheet of stained glass and take advantage of the right-angle corners already present.

This will save you a lot of meticulous cutting!

17. Begin cutting out the pieces with your glass cutter. Score the big sheet of glass down the middle and separate it into two pieces.
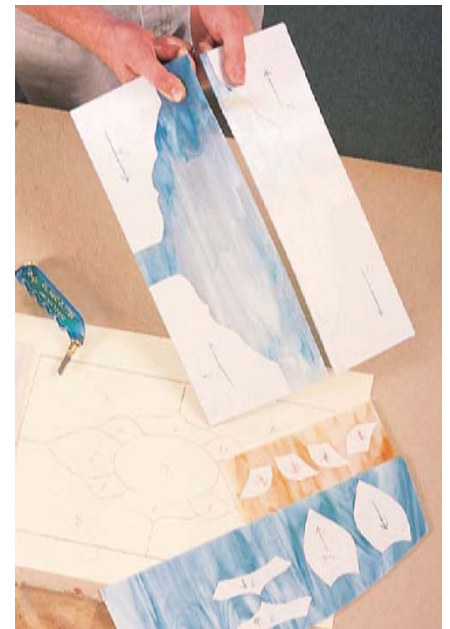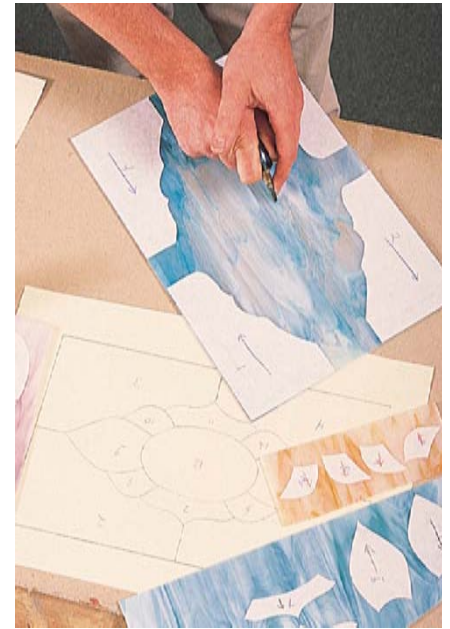
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Tiffany-Style Lampshade

Time investment: About 6–8 hours total

This gorgeous lampshade will serve as the focal point of any room in the house, illuminated as it is by an incandescent bulb that makes the stained glass glisten—giving it a timeless quality that transcends eras.

Patterned after the famed Tiffany style, this project appears at first to be more complex than it actually is. Rest assured that the basics you have learned in this book so far have prepared you to successfully craft this lampshade. The real key to the project is consistency: you must build six identical stained glass panels, and then fasten them together to form a lampshade with pleasing balance and symmetry. Take your time and treat each panel as a separate project, focusing on uniformity in glass cutting, grinding, and soldering.

You will learn a few new techniques in this project as well, such as reinforcing joints with stout wire and adding a lamp base and cap to hold the shade in place properly. Keep in mind that do-it-yourself electrical wiring of any kind is beyond the scope of this book and is not discussed here.

If you plan to display the lamp in a particular room, it is suggested that you choose stained glass colors that will complement the look and feel of the room. A lamp like this can help to accent many types of décor. Take some time to consider what will look appropriate to you.

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Basic Stained Glass Repair

If you make enough stained glass projects, there inevitably will come a time when one of your creations falls on hard times—or actually, a time when something hard falls on one of your creations.

It is disheartening to see one of your projects sustain damage, but there is usually no need to trash the entire piece—especially when only one or two pieces of glass are cracked. A beginner can effect minor stained glass repairs such as the one detailed here. Keep in mind that some repairs should not be tackled by amateurs; heavily damaged pieces should be handled by an expert.

Replacing Broken Glass

1. The best way to begin repairing a piece of stained glass with a single broken panel is to score it repeatedly with a glass cutter, making sure to run the cutting wheel edge to edge in a cross-hatch pattern.

2. Use the ball of the cutter or some other breaking tool to gently tap out loose pieces. Be careful not to strike with too much force. Pieces along the edge may be firmly held by the solder, and impact could break adjoining pieces.

3. Take a piece of steel wool and rub it along the soldered seam of the broken piece to remove oxidized material from it.
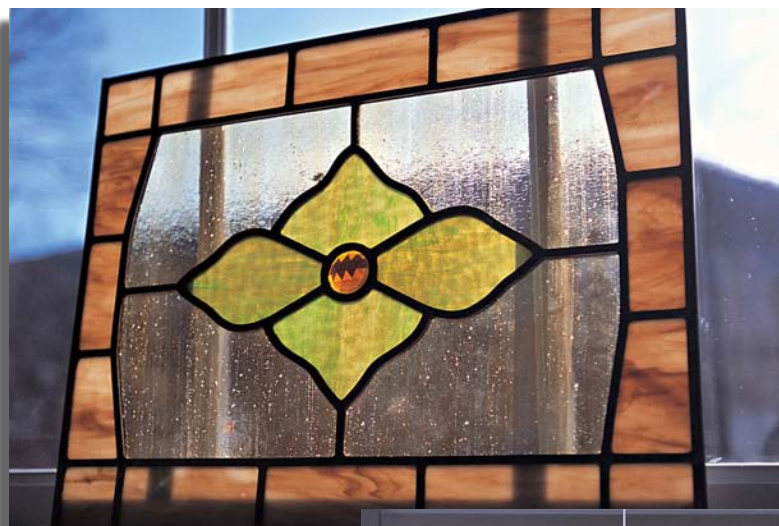
4. Apply flux to the seam.

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- **Complete guide to equipment and materials**
- **Skills and projects fully illustrated with color photos**
- **Basic repair techniques included**

Precise, step-by-step instructions teach basic techniques

Contributors

Michael Johnston is a stained glass expert who has been perfecting his craft for years in the central Pennsylvania region, where he owns and operates Rainbow Vision Stained Glass. He is an accomplished teacher of stained glass techniques and artistry for all skill levels.

Alan Wycheck is an award-winning photographer based in Harrisburg, Pennsylvania.